

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Alaskan Region, Airports Division**

**Finding of No Significant Impact
and
Record of Decision**

**Final Environmental Assessment and Section 4(f) Evaluation for
Barter Island Airport Improvements
Kaktovik, Alaska**

March 16, 2009

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**DEPARTMENT OF TRANSPORTATION
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**FINDING OF NO SIGNIFICANT IMPACT
and
RECORD OF DECISION**

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1.0 Introduction

The Federal Aviation Administration (FAA) Alaskan Region, Airports Division prepared this Finding of No Significant Impact/Record of Decision (FONSI/ROD) for proposed improvements to the Barter Island Airport, Kaktovik, Alaska, per Order 5050.4B, paragraph 805. In preparing this FONSI/ROD, the FAA used applicable information in Chapter 13 of Order 5050.4B as guidance for the content of this decision document.

The FONSI/ROD includes:

- a description of the project proposed by the Airport Sponsor;
- reasonable alternatives to the proposed project;
- environmental impacts associated with the action and alternatives; and
- mitigation measures required to avoid or minimize environmental harm.

This FONSI/ROD provides the FAA's final determinations and approvals for the federal actions needed to construct a new land-based airport to serve the community of Kaktovik, Alaska. The North Slope Borough (the Sponsor) is the Airport Sponsor.

The federal actions identified in this FONSI/ROD are:

- the FAA's conditional approval of the Sponsor's proposed Airport Layout Plan (ALP); and
- the FAA's approval of federal funds from the Airport Improvement Program (AIP) to partially finance some of the proposed project components described Section 3.0 of this document.

The Sponsor prepared the Final Environmental Assessment (Final EA) supporting this FONSI/ROD. The Final EA presents an evaluation of the environmental consequences of constructing and operating the Sponsor's proposed airport facility and its reasonable alternatives. The evaluation follows the requirements of the National Environmental Policy Act (NEPA) of 1969, as amended, and FAA Order 5050.4B, effective April 28, 2006. The evaluation also complies with Section 4(f) of the Department of Transportation Act of 1966, as amended by SAFETEA-LU. The FAA is responsible for the accuracy of all information contained in the Final EA. The FAA

finds that the Final EA meets the requirements of the applicable FAA Orders and of the Council of Environmental Quality (CEQ) and accepts it. The information contained in the Final EA is hereby incorporated into this FONSI/ROD by reference.

This FONSI/ROD discloses the federal, state, and local actions needed before the project may be implemented and provides findings, certifications, and determinations concerning resources of special concern. The FONSI/ROD lists the conditions of approval the Sponsor must meet and identifies the FAA's Preferred Alternative and the environmentally preferable alternative.

For more information concerning the contents of this FONSI/ROD or the Final EA, please contact:

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2.0 Location

The FAA's Preferred Alternative, which entails construction of a new airport, would be located on Barter Island, approximately 1 mile southwest of the community of Kaktovik, Alaska. Barter Island is located along the north coast of Alaska, on the Beaufort Sea. It is separated from the Alaska mainland by Kaktovik Lagoon.

The new airport would replace the existing Barter Island Airport located on Barter Island, immediately north of Kaktovik. Development of the proposed project would necessitate relocation of the existing community landfill and sewage lagoon to a location near the southern end of Barter Island and extension of the existing access roads and overhead utility line to the new airport and relocated landfill/lagoon. Fill material for the proposed project would be obtained from a source on the mainland southeast of Barter Island.

3.0 Proposed Federal Actions

The Proposed Action and reasonable alternatives considered to meet the defined purpose and need are described in detail in Chapter 2 of the Final EA. They are summarized in this FONSI/ROD. A full description of the FAA's Preferred Alternative is provided below.

As noted previously, the federal actions identified in this FONSI/ROD are the conditional approval of the Sponsor's proposed ALP and the approval of federal funds from the AIP to partially finance the proposed airport project.

The Sponsor's Proposed Action, which is the FAA's Preferred Alternative, includes the following elements:

- A 4,500-foot runway;
- Compacted gravel surfacing of the runway requiring the extraction and placement of approximately 873,000 cubic yards of fill material;
- Medium-intensity runway, taxiway, and apron lighting;
- A small protective shelter for passengers;
- A new 0.4-mile long graded access road from the current landfill access road to the new airport location;
- A new 1.1-mile long graded access road from the current landfill to the relocated landfill site;
- 1.5 miles of overhead powerlines, within the access road right-of-way, from the existing wastewater treatment plant to the airport lighting system and emergency shelter;
- An ice road across Kaktovik Lagoon from the material source to the existing Barter Island road system for transport of fill material to the construction site;
- Closure of the existing landfill and sewage lagoon; and
- A new landfill and sewage lagoon.

4.0 Purpose and Need

It is the FAA's mission to plan and develop a safe and efficient national airport system that satisfies the needs of the aviation interests of the United States. The purpose of this project is to provide a flood-resistant airport consistent with the FAA's mission and design standards that safely meets the aviation needs of the community for the next 20 years while minimizing operational and maintenance costs for the Sponsor.

Beaufort Sea storms often result in surges that flood the airport, damaging airport runway infrastructure and interrupting air service. Kaktovik is not connected by road to any other community or airport. The nearest public airport is Deadhorse, located approximately 115 miles west of Kaktovik. Seasonal barge service, available two months out of the year, is inadequate to meet year-round fuel or freight operations. Replacement of key City infrastructure components such as electrical generators, boilers, power poles, equipment engines, and maintenance vehicles requires access by large cargo planes when the Beaufort Sea is frozen.

Recent warming trends are causing a retreat of the arctic ice pack, which has significantly increased the airport's exposure to flooding from wind-generated waves and storm surges. The existing airport's elevation is listed in the ALP at 2 feet above mean sea level (MSL). Normal tides are less than 1 foot, but storm surges can raise the sea level by nearly 6 feet. Barrier shoals absorb some of the wave energy from storms, but the airport has direct exposure to ocean waves from the northwest. Interviews with community leaders indicate that in the last two decades, the runway has flooded approximately every two years. In the past four years, however, the runway has flooded every year, and in 2002, the runway flooded twice. The saltwater from floods is causing significant corrosion problems with electrical components in the airport lighting system. In July 2008, the Borough's mayor issued a declaration of emergency for the Barter Island Airport flooding when a high-wind storm destroyed the sea wall along the airport, submerged half the runway, and exposed buried wiring for runway lighting.

The Sponsor proposes to construct a flood-resistant airport that provides year-round passenger and cargo services with a runway length of 4,500 feet and width of 100 feet at an elevation above the 100-year floodplain that accommodates forecast aviation activity through 2025.

5.0 Project Background

In the fall of 2002, the Sponsor began an airport planning project that included project scoping, public meetings, preliminary geotechnical investigations, a Phase I environmental site assessment, landfill siting reports, cultural resources investigations, wind studies, mapping, the development of four airport alternatives (including the No Action Alternative), and preparation of an Airport Master Plan (AMP) for Barter Island. Community support was split among the three action alternatives described in the AMP. In October 2006, the alternative relocating the airport to a new site on Barter Island (Alternative 2) was identified as the Preferred Alternative in the AMP and subsequently identified as the Sponsor's Proposed Action. The ALP details the features of this alternative. The Sponsor presented their Preferred Alternative/Proposed Action to the FAA for consideration in the Draft EA. The FAA subsequently identified the Sponsor's Proposed Action as the FAA's Preferred Alternative in the Final EA. The FAA's Preferred Alternative is the alternative the agency believes best meets project purpose and need while addressing resource conflicts to the extent possible. The FAA identified its Preferred Alternative based on agency and public input and the analysis disclosed in the Draft EA, which was published March 7, 2008.

The Sponsor and the FAA received numerous comments on the Draft EA and incorporated those comments into revisions made in preparation of the Final EA. The FAA also took these comments into account when making its final decision regarding the project alternatives. The Proposed Action/Sponsor Preferred Alternative (Alternative 2) was analyzed along with the No Action Alternative (Alternative 4) and other action alternatives (Alternatives 1 and 3) in the Final EA. This decision document discloses which alternative the FAA will fund through the Airport Improvement Program. The Sponsor will also seek out other sources to help fund the airport. If the Sponsor concurs with the alternative selected by the FAA, preliminary design activities for the selected alternative will begin.

6.0 Alternatives Considered

In accordance with the federal guidelines implementing NEPA and FAA Order 1050.1E (and its implementing guidelines in Order 5050.4B), a range of reasonable alternatives was identified to meet the project purpose and need. The Barter Island AMP (HDL 2006a) identified alternative airport infrastructure improvements to address the problems resulting from repeated flood damage at the existing facility. Initial alternatives were developed to address these problems while avoiding, if possible, impacts to human and natural resources. These initial alternatives identified in the AMP were considered by the FAA in the Draft EA and Final EA. These include three "action" alternatives and one "no action" alternative. These alternatives are described in detail in Chapter 2 of the Final EA and summarized below. A fourth action alternative was considered in the airport master planning process but was eliminated from further detailed analysis due to the prevalence of lakes and wetlands at the site.

The Beechcraft 1900 Beechliner was identified in the AMP as the design aircraft used for alternatives consideration (HDL 2006a). The current runway at Barter Island is 4,818 feet long (see Figure 1-2 of the Final

EA). All three action alternatives propose a 4,500-foot runway, which could accommodate the design aircraft as well as occasional operations by C-130s and DC-6s for fuel deliveries, and the Borough's Beech Super King Air B200 for medical evacuations.

6.1 Alternative 1: Reconstruct the Existing Airport

This alternative would reconstruct the existing runway above the 100-year flood elevation (see Section 2.5.1 of the Final EA for more details). Erosion control would include armoring side slopes with either riprap or articulating concrete mats. The runway, taxiway, apron, and access road surfaces would be capped with crushed gravel, and new airport lighting would be installed to replace unreliable existing lighting. To eliminate potential airspace obstructions in the runway protection zone (RPZ), the runway's west threshold would be shifted 760 feet to the east, and the east threshold would be shifted 442 feet to the east. This would reduce the length of the existing runway by 318 feet but would remove obstructions (vehicles on the access road) from the threshold siting surface. This alternative would require the Sponsor to acquire ownership of (or acquire a long-term lease on) 30 acres of land currently owned by the United States Air Force (USAF). Figure 2-2 of the Final EA highlights the main features of Alternative 1.

6.2 Alternative 2: Construct a New Airport on Barter Island (FAA's Preferred Alternative)

Alternative 2 would relocate the airport approximately 1 mile southwest of the community to a site near the existing landfill and sewage lagoon (see Section 2.5.2 of the Final EA for more details). The site was deemed suitable for an airport partly because it is at the island's highest elevation and is therefore less susceptible to flooding. This alternative has been selected as the FAA's Preferred Alternative.

Under Alternative 2, the runway would be located approximately 2,000 feet south of Fresh Water Lake, the sole source of drinking water for the residents of Kaktovik. The airport apron would be constructed over the existing Kaktovik landfill. Prior to airport construction, a new landfill and lagoon would have to be permitted and constructed, and the existing landfill and sewage lagoon would be closed. The Sponsor has selected a new landfill and lagoon site approximately 2,700 feet south of the runway's western end. This location was modified slightly from the Sponsor's preferred location identified in the Landfill Siting Report (HDL 2006b; see Appendix D of the Final EA) and represents a change from the Draft EA in response to public concern over impacts to popular waterfowl hunting areas. This alternative would require the Sponsor to acquire ownership of (or a long-term lease on) 70 acres of land. A new 0.4-mile road would be constructed to connect the airport to the current landfill access road. Additionally, the existing road to the current landfill would have to be extended 1.2 miles to reach the new landfill site. Finally, 1.5 miles of power lines would be extended from the wastewater treatment plant to connect the Kaktovik power grid to the airport lighting system and emergency shelter. Power lines would be placed within the right-of-way (ROW) dedicated for the existing and proposed access roads (see Figure 2-3 of the Final EA).

6.3 Alternative 3: Construct a New Airport on Mainland

Alternative 3 would relocate the airport to the mainland approximately 6 miles south of the community (see Section 2.5.3 of the Final EA for more details). A new 5.4-mile access road, including one bridge and another bridge or culvert, would connect the airport to the community's road system. The site was selected due to its suitability as an airport and because it would be above the 100-year floodplain.

This alternative would require the Sponsor to acquire ownership of (or a long-term lease on) 96 acres of land, including the property needed to build the new road. A 1,200-foot bridge would be constructed to cross the navigable channel separating Barter Island from the mainland. A 200-foot bridge or multi-plate culvert would be constructed to allow vehicles to cross an unnamed anadromous fish stream northwest of Alternative 3. A 6.6-mile overhead power line would connect the airport's lighting system and emergency shelter to Kaktovik's power grid. Power lines would be placed within the ROW dedicated for the existing and proposed access roads (see Figure 2-4 of the Final EA).

6.4 Alternative 4: No Action

40 CFR 1502.14(d) require consideration and analysis of conditions if no action is taken toward meeting the purpose and need for the Proposed Action. Under Alternative 4, no improvements would be made to the existing airport. The airport would continue to operate in its current configuration. This alternative would likely result in continued intermittent flooding of the airport, which would be especially problematic in Kaktovik due to its dependence on air transportation. Past experience indicates that this would require expensive resurfacing projects as flooding washes the fine material out of the runway surface. Additionally, the Sponsor would be forced to continue replacing electrical and lighting systems that are prematurely corroded by saltwater flooding. Finally, the community's desire to regain ownership of a historic village site located on the existing airport property would be blocked by the continued use of the airport.

6.5 FAA's Preferred Alternative

As per NEPA Section 102(2)(e) and FAA Order 5050.4B 200(a)(1), the alternatives considered in the Final EA represent a range of alternatives that attempt to meet the project purpose and need while minimizing resource impacts or conflicts. Based on the Draft EA analysis, subsequent agency and public comment, and additional analysis and detail on alternative impacts, the FAA has identified Alternative 2, the Sponsor's proposed action, as its Preferred Alternative. This decision is based on several factors related to reducing impacts on specially protected resources protected under the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884); the Clean Water Act of 1977 (33 U.S.C 1251); the Wilderness Act of 1964 (16 U.S.C 1131-1136); and Section 4(f) of the Department of Transportation Act of 1966 (23 U.S.C 138; 49 U.S.C. 303). These protected resources include: (1) the federally listed polar bear; (2) Section 4(f) properties; (3) resources associated with the Arctic National Wildlife Refuge (the Refuge); and (4) wetlands.

6.6 Environmentally Preferred Alternative

The FAA has considered public and agency comments received in response to the Draft EA and the additional analysis contained in the Final EA. After reviewing these materials and the administrative record for the project, the FAA concludes that Alternative 1, reconstructing the existing airport, is the Environmentally Preferred Alternative.

Alternative 1 would require the least amount of direct and indirect disturbance to natural resources and would avoid known historic properties. This alternative would require the least amount of fill material, thereby reducing disturbance in the area of the material source on 22(g) lands within the Refuge. It would minimize construction disturbance to caribou and polar bear and limit operational disturbances to those commensurate with existing conditions. This alternative would, however, prevent the Alaska Native community in Kaktovik from reclaiming

their historical village site, which is located on the existing airport property and to which access for cultural and other uses is restricted.

The FAA believes the Environmentally Preferred Alternative would promote national environmental policies, cause the least damage to the environment, and will best protect, preserve, and improve cultural and natural resources. However, the long-term viability of this alternative renders this alternative imprudent. Although the runway and related facilities would be reconstructed to raise them above the U.S. Army Corps of Engineers (the Corps) 100-year floodplain, they would still be within the Sponsor's flood hazard zone and susceptible to continued, though less frequent, damage from sea storms. Current climate projections anticipate continued rising of sea levels, which would shorten the life-span of the airport under Alternative 1 when compared to the other action alternatives (Alternatives 2 and 3).

7.0 Environmental Impacts

The potential environmental effects from the Proposed Action/Preferred Alternative and its alternatives on each of the environmental impact categories identified in Appendix A of FAA Order 1050.1E were analyzed in the Final EA. The analysis in the Final EA indicates, that when considered in light of necessary mitigation, the impacts associated with the Proposed Action/Preferred Alternative are not expected to have any significant adverse environmental consequences on or in the vicinity of the airport, access road, material source, or relocated landfill/sewage lagoon.

Chapter 3 of the Final EA discusses anticipated environmental impacts from all reasonable alternatives carried forward for detailed analysis, as well as the No Action Alternative. The Final EA also analyzes the anticipated effects of the Proposed Action/Preferred Alternative on the human and natural environment. This analysis is incorporated by reference into the decision outlined in this FONSI/ROD. Table 1 provides a summary of the potential effects from all alternatives, including the Preferred Alternative, by resource impact category. A written summary of anticipated impacts from the FAA's Preferred Alternative is provided in Section 7.1.

Table 1. Summary of Impacts from All Alternatives Considered

| Resource | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 (No Action) |
|---|---|---|--|---|
| Construction Impacts | Short-term noise, dust, water quality, waste, and exhaust emissions impacts would occur from construction activities. | Same as Alternative 1 with the exception that noise and air quality impacts to Kaktovik would be negligible due the additional distance between Kaktovik and construction activities. | Same as Alternative 2 with the exception that short-term construction noise would be more likely to temporarily impact caribou calving, insect relief, and migratory habitat. | No construction-related impacts would occur. |
| <i>Significance</i> | Construction activities would cause impacts related to noise, fugitive dust and construction vehicle/equipment emissions, disposal of construction debris, and potential impacts to water quality. However, these impacts would not be significant with effective implementation of mitigation. | | | |
| Biotic Resources (Wildlife, Fisheries, and Vegetation) | Removal of 26 acres of freshwater emergent wetland habitat and 2 acres of estuarine and marine wetland habitat | Removal of 143 acres of freshwater emergent wetland habitat | Removal of 201 acres of freshwater emergent wetland habitat, 1 acre of estuarine and marine wetland habitat, and 2,000 square feet of anadromous fish habitat. | No habitat removal. |
| <i>Significance</i> | No significant impacts are expected to biotic resources due to low proportional surface disturbance impact to wildlife habitat combined with the effective implementation of mitigation measures to minimize noise disturbance impacts from construction and airport operation. | | | |
| Federally Listed Threatened and Endangered Species (TES) | <u>Spectacled and Steller's Eider</u> Removal of 2 acres of foraging habitat and 26 acres of nesting habitat. <u>Polar Bears</u> Potential blasting and excavation disturbance to denning bears. | <u>Spectacled and Steller's Eider</u> Removal of 143 acres of nesting habitat. <u>Polar Bears</u> Same as Alternative 1. | <u>Spectacled and Steller's Eider</u> Removal of 1 acre of foraging habitat and 201 acres of nesting habitat. <u>Polar Bears</u> No impact to denning polar bears from blasting and excavation. | <u>Spectacled and Steller's Eider</u> No removal of foraging habitat or nesting habitat. <u>Polar Bears</u> Same as Alternative 3. |
| <i>Significance</i> | No significant impacts are expected to TES from any of the alternatives because of the combination of their low proportional surface disturbance impact to TES habitat and effective implementation of mitigation measures to minimize short-term construction disturbance. | | | |

Table 1. Summary of Impacts from All Alternatives Considered

| Resource | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 (No Action) |
|---------------------|--|---|---|---|
| Wetlands | Removal of 26 acres of moderate to low-value freshwater emergent wetlands, and 2 acres of moderate to low-value estuarine and marine wetlands. | Removal of 143 acres of moderate to low-value freshwater emergent wetlands. | Removal of 201 acres of moderate to low-value freshwater emergent wetlands, and 1 acre of moderate to low-value estuarine and marine wetlands. | No removal of freshwater emergent wetlands. |
| <i>Significance</i> | No significant wetland impacts are expected from any of the alternatives because of their low proportional surface disturbance impact, combined with the implementation of mitigation measures to minimize indirect short-term construction-related impacts. | | | |
| Subsistence | Removal of 28 acres of habitat available for subsistence resources. No change in availability and competition for subsistence resources with the exception of a reduction in fishing access adjacent to airport. | Removal of 143 acres of habitat available for subsistence resources. Relatively minor change in availability and competition for subsistence resources. | Removal of 202 acres of habitat for subsistence resources. Relatively minor change in availability of subsistence resources and a shift in resource use due to improved access to mainland for subsistence activities. | No removal of habitat. No change in subsistence resources. |
| <i>Significance</i> | No significant impacts are expected to subsistence resources from any of the alternatives due to their low proportional surface disturbance impact to habitat used for subsistence activities, relocation of the landfill (in Alternative 2) away from identified subsistence locations, and implementation of mitigation measures to minimize short-term construction-related impacts to subsistence resources. | | | |
| Air Quality | Violation of National Ambient Air Quality Standards (NAAQS) unlikely. Short-term construction haul truck traffic through Kaktovik would cause airborne dust that would impact residents along route. | Violation of NAAQS unlikely. There would be no haul truck route through Kaktovik. Additionally, the distance between Kaktovik and construction activities would minimize short-term air quality impacts. | Violation of NAAQS unlikely. Same as Alternative 2. | No violations of NAAQS. No haul truck routes required |

Table 1. Summary of Impacts from All Alternatives Considered

| Resource | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 (No Action) |
|----------------------|---|---|---|--|
| <i>Significance</i> | <p>No long-term increases in emissions from airport operations.</p> <p>Short-term airborne dust impacts would not be significant with effective implementation of dust control measures. There would be no long-term increases in emissions from airport operations.</p> | <p>Same as Alternative 1.</p> <p>No significant air quality impacts are expected from Alternatives 2 and 3 due to their greater separation between construction and crushing activities and Kaktovik residents, prevailing east-west winds, lack of haul route through Kaktovik, and implementation of mitigation measures to minimize dust and emissions. Additionally, there would be no long-term increases in emissions from airport operations under these alternatives. Alternative 4 would have no construction impacts and no increases in emissions from airport operations.</p> | <p>Same as Alternative 1.</p> | <p>Same as Alternative 1.</p> |
| Noise | <p>Short-term construction noise of 70 – 90 dB from haul truck route through Kaktovik. No change in long-term airport operational noise.</p> <p>Wildlife species may be initially impacted by both short-term construction and long-term airport operational noise but impacts would likely result only in temporary displacement until wildlife acclimate.</p> | <p>Minimal impacts to Kaktovik from short-term construction noise. Decrease in long-term impacts to Kaktovik from airport operational noise due to the distance of the relocated airport from the city.</p> <p>Wildlife species may be initially impacted by both short-term construction and long-term airport operational noise but impacts would likely result only in temporary displacement until wildlife acclimate.</p> | <p>Same as Alternative 2 with the exception that short-term construction noise is more likely to temporarily displace caribou from calving, insect relief, and migratory habitat.</p> <p>Same as Alternative 2 with the exception that long-term airport operational noise is more likely to periodically disturb caribou in calving, insect relief, and migratory habitat.</p> | <p>Same as Alternative 2.</p> <p>Same as Alternative 2.</p> |
| <i>Significance</i> | <p>Impacts would not be significant with effective implementation of noise mitigation for short-term construction activities.</p> | | | |
| Water Quality | <p>Minimal short- and long-term alteration of existing surface water drainage or water quality.</p> | <p>Same as Alternative 1.</p> | <p>Same as Alternative 1.</p> | <p>No change in short- or long-term surface water drainage or water quality.</p> |
| <i>Significance</i> | <p>No significant water resource impacts are expected under any of the alternatives due to the low proportional amount of surface disturbance and limited flood abeyance and recharge functions of wetlands in the area, relatively low amount of sedimentation in relation to that occurring to the shoreline and the Beaufort Sea, and effective implementation of mitigation measures to manage construction-related water</p> | | | |

Table 1. Summary of Impacts from All Alternatives Considered

| Resource | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 (No Action) |
|--|---|---|---|--|
| <p>quality impacts.</p> <p>Light Emissions and Visual Effects</p> | <p>Airstrip, landing lights, nav aids, and buildings would be visible from Kaktovik. No visual impacts to the Refuge.</p> | <p>Same as Alternative 1.</p> | <p>Only the emergency shelter and any parked aircraft or aircraft storage would be visible from Kaktovik. Minimal visual impacts to mainland of Refuge.</p> | <p>Same as Alternative 1.</p> |
| <p><i>Significance</i></p> | <p>No significant light emissions or visual impacts are expected since the alternatives would not create a visual impact that would be objectionable from Kaktovik or cause light emissions that would interfere or preclude normal activity in the area.</p> | | | |
| <p>Socioeconomics and Environmental Justice</p> | <p>No resident displacement, changes in business or economic patterns, or changes in current community standard of living.</p> <p>Short-term reduction in existing road level of service in Kaktovik during construction. With effective implementation of Dust Control Plan and a Traffic Safety Plan, no children's health and safety risks or Environmental Justice impacts are anticipated.</p> | <p>Same as Alternative 1.</p> <p>No reduction in road level of service, no impacts to children's health and safety, and no Environmental Justice impacts.</p> | <p>Same as Alternative 1.</p> <p>Same as Alternative 2 with the exception that there would be a potential long-term decrease in airport road level of service in poor weather conditions due to long airport access road.</p> | <p>Same as Alternative 1.</p> <p>Same as Alternative 2 with the exception that the current condition of the runway would continue to require expenditures for repairs when the runway is flooded or damaged by storm events.</p> |
| <p><i>Significance</i></p> | <p>Haul truck traffic through Kaktovik represents a potential adverse impact to residents due to air quality impacts and increased traffic and noise. Impact would be short-term and not significant with effective implementation of a Dust Control Plan and a Traffic Safety Plan.</p> | <p>No significant impacts are expected due to minimal socioeconomic changes, movement of the landfill away from subsistence use areas (in Alternative 2), and mitigation for construction worker impacts.</p> | <p>No significant impacts are expected.</p> | <p>No significant impacts are expected.</p> |

Table 1. Summary of Impacts from All Alternatives Considered

| Resource | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 (No Action) |
|---|---|---|---|--|
| Coastal Barriers And Coastal Resources | Public access to, from and along coastal waters would be maintained and there would be no blockage to existing or traditional access, water drainage or wildlife transit. | Public access to, from and along coastal waters would increase. There would be no blockage to existing or traditional access, water drainage or wildlife transit. | Same as Alternative 2. | Same as Alternative 1. |
| <i>Significance</i> | No significant impacts are expected due to the alternatives' consistency with applicable Alaska Coastal Management Program (ACMP) state standards. | | | |
| Floodplains | Potential interruption of airport service as access road in floodplain represents a potentially significant encroachment on floodplains for transportation purposes, not a significant impact to floodplain values. | No significant encroachment on floodplains for transportation purposes. No significant impact to natural and beneficial floodplain values. | Potential interruption in airport service due to placement of access road in floodplain represents a potentially significant encroachment on floodplains for transportation purposes. No significant impact to floodplain values. | Same as Alternative 1. |
| <i>Significance</i> | Alternatives 1, 3, and 4 represent potentially significant encroachment on floodplains for transportation purposes. However, none of the alternatives would have a significant impact on floodplain values. | | | |
| Compatible Land Use | No change in land use designation. Airport would be within 5,000 feet of the existing landfill and sewage lagoon. Would impact 22(g) lands, but would not impact the 17(b) trail. | Airport would be within 5,000 feet of the relocated landfill and sewage lagoon. Would impact both 22(g) lands and the 17(b) trail. | Airport would be over 5,000 feet from the existing landfill and sewage lagoon. Would impact both 22(g) lands and the 17(b) trail. | Same as Alternative 1, except would not impact 22(g) lands or the 17(b) trail. |
| <i>Significance</i> | No use of 4(f) resources. Implementation of mitigation for the landfill and sewage lagoon and relocation of the 17(b) trail would prevent significant adverse impacts under Alternatives 1 and 2. | Same as Alternative 1. | Requires physical use of 4(f) resources. | Same as Alternative 1. No significant impacts are expected. |

Table 1. Summary of Impacts from All Alternatives Considered

| Resource | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 (No Action) |
|---|---|--|---|---|
| Historic, Archaeological, And Cultural Resources | Would avoid all identified NRHP-eligible historic, archaeological, and cultural sites. | Same as Alternative 1. | significant land use impacts. Same as Alternative 1. | Historic, archaeological, and cultural sites would not be impacted. |
| | Historic village would remain within current airport boundaries. | Abandonment of existing airport would allow residents of Kaktovik to reclaim the historic village. | | |
| <i>Significance</i> | No significant impacts are expected since no historic, archaeological, or cultural resources would be affected by any of the alternatives. Additionally, Alternatives 2 and 3 would allow the residents of Kaktovik to reclaim the historic village under and adjacent to the current runway. | | | |
| Farmlands | No conversion of important farmlands to non-agricultural use. | Same as Alternative 1. | Same as Alternative 1. | Same as Alternative 1. |
| | No significant impacts are expected because no unique farmlands or farmlands of statewide importance have been designated in Alaska. | | | |
| Wild And Scenic Rivers | No change to characteristics of any National Rives Inventory (NRI) designated wild and scenic river. | Same as Alternative 1. | Same as Alternative 1. | Same as Alternative 1. |
| | No significant impacts are expected because alternatives would not directly or adversely affect the characteristics of any NRI designated wild and scenic river. | | | |

Table 1. Summary of Impacts from All Alternatives Considered

| Resource | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 (No Action) |
|---|--|--|---|---|
| Energy Supplies, Natural Resources, and Sustainable Design | 660,000 gallons of fresh water for ice road construction and maintenance. 236,000 cubic yards (CY) of gravel from materials source (MS) 4. | Same as Alternative 1. 873,000 CY of gravel from MS4. | Same as Alternative 1. 1.10 million CY of gravel from MS5. | No fresh water supply required. No gravel mining required. |
| <i>Significance</i> | No significant resource impacts are expected because there is adequate electrical energy capacity, gravel source availability, and sources of fresh water to supply the proposed improvements for all alternatives. | | | |
| Hazardous Materials And Solid Waste | Short-term construction-based spills, emissions, and dust would have temporary, direct impacts to surface waters if not mitigated by best management practices (BMPs). There are identified contaminated sites present in project area, but none that qualify for the National Priority List (NPL). | Same as Alternative 1. | Same as Alternative 1. Same as Alternative 2. | No construction-based hazardous material impacts. Same as Alternative 1. |
| <i>Significance</i> | No lands on or that qualify for the NPL would be impacted by any of the alternatives. Additionally, effective mitigation would minimize impacts from hazardous materials. Accordingly, the alternatives would have no significant hazardous material impacts. | | | |
| Cumulative Impacts | Project alternatives would not contribute to potentially significant cumulative impacts. | | | |

7.1 Anticipated Effects of the Preferred Alternative

Alternative 2, the Preferred Alternative, would generally have the second lowest impact on most resource categories of all of the action alternatives. This alternative would affect approximately 143 acres of wetlands. Of this, approximately 51 acres would be affected by airport, landfill, and access road construction, and 92 acres would be disturbed as a result of gravel-mining operations. Impacts to these wetland habitats would not have a significant impact on wildlife or any threatened and endangered species and would have low overall effects on subsistence resources and uses. The proposed site for the relocated landfill under this alternative was modified from that proposed during the Draft EA in order to address concerns raised during comments on the Draft EA and during subsequent interviews with local subsistence users.

Overall, Alternative 2 is compatible with existing land uses; however, the relocated landfill would be closer to the new airport runway than is recommended by FAA and Alaska Department of Environmental Conservation (ADEC) policy. The FAA and ADEC both make allowances for landfills within the required separation distance so long as effective wildlife hazard abatement measures are implemented at the landfill. Alternative 2 is located above the 100-year floodplain and designated flood hazard zone. Alternative 2 would necessitate abandonment of a portion of a 17(b) trail, similar to Alternative 3; however, access to the remaining portions of the trail and continuity of access would be maintained through existing and newly-constructed access roads (see Figure 3-8 of the Final EA).

Alternative 2 would have no significant impact on visual resources, water quality, or coastal resources and would not exceed significance thresholds for light emissions or noise, though there would be temporary, short-term impacts during actual construction. This alternative would reduce aircraft operational noise for residents of Kaktovik as the new airport would be located farther from the community than the existing airport. There would be no change in aircraft operations or types of aircraft using the airport under this alternative. As such, there would be no change in the expected overall noise levels associated with airport operations as compared to Alternatives 1 and 4. Alternative 2 would not affect any known historic, archaeological, or cultural sites. Alternative 2 would result in higher short-term emissions of CO₂, hydrocarbons, nitrous oxides (NO_x), and particulate matter (PM₁₀ and PM_{2.5}) than Alternatives 1 and 4 but the same emissions as Alternative 3. Alternative 2, like Alternative 3, has the potential to exceed NO_x emission standards during the first season of construction. However, these emissions would be short-term, would not be located near any sensitive receptors, and prevailing winds would transport them away from the populated area of Kaktovik and the community's freshwater source. Therefore, Alternative 2 would not result in any significant air quality impacts.

Alternative 2 would require use of energy sources and natural resources such as gravel during construction of the airport, access roads, and new landfill. Alternative 2 would require the second least amount of gravel fill material (873,000 cubic yards) of all action alternatives. Additionally, Alternative 2 would result in a short-term, temporary increase in the production of solid waste from construction debris. However, the majority of waste associated with construction would either be taken out of the community by the contractor or disposed of in the existing landfill, which has sufficient capacity to accept disposal of these materials. Alternative 2 is not expected to result in any long-term changes to quantities of hazardous wastes produced in the area.

Alternative 2 would have minor, short-term positive socioeconomic impacts from employment and commercial opportunities associated with construction. This alternative would also have positive socioeconomic and environmental justice impacts by eliminating those instances in which the community's airport would be closed due to flooding. Over the long term, Alternative 2 would be less susceptible to future flooding and damage than

Alternatives 1 and 4 because of its location on the highest spot of Barter Island, above the designated 100-year floodplain and flood hazard zones.

Numerous past, present, and reasonably foreseeable projects have been identified for the study area. These include partial development and intended future development of a residential subdivision south of Kaktovik, construction of the existing airport and USAF facilities, offshore petroleum exploration, and oil and gas development. The Preferred Alternative (Alternative 2), when considered with other past, present, and reasonably foreseeable projects, would not cause significant impacts on the natural and human environment in the general vicinity of Barter Island or the adjacent mainland.

7.1.1 ANILCA Section 810

Section 810(a) of the Alaska National Interest Lands Conservation Act (ANILCA) states:

In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands . . . the head of the Federal agency . . . over such lands . . . shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency - (1) gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805; (2) gives notice of, and holds, a hearing in the vicinity of the area involved; and (3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.

As part of the Final EA, the FAA prepared an evaluation of potential impacts to subsistence uses, access, and competition on public lands from the Proposed Action/Preferred Alternative and other alternatives (see Appendix E of the Final EA). This evaluation found that Alternative 2 (the Proposed Action/Preferred Alternative) would not significantly restrict subsistence resources and uses on public lands, including access to and competition for those resources, as no federal public lands are within the area affected by this alternative.

7.1.2 Section 4(f) Use

Section 4(f) of the Department of Transportation Act (as amended by SAFETEA-LU) affords special consideration to publicly owned wildlife/waterfowl refuges and recreational areas, as well as historic, archaeological, and cultural sites that are listed on or have been determined eligible for listing on the National Register of Historic Places (NRHP). Section 6(f) of the Land and Water Conservation Fund Act (LWCF) affords special consideration to properties and projects developed with LWCF funds. There are no Section 6(f) properties in the study area. The FAA identified the Refuge and the historic village site for Kaktovik as the only Section 4(f) resources in the project area.

The Preferred Alternative would not use any Section 4(f) resources. The Preferred Alternative would result in temporary occupancy of 4(f) lands within the Refuge for construction of an ice road to transport fill material to

the construction sites, but such occupancy does not constitute a use under Section 4(f). The U.S. Fish and Wildlife Service (USFWS), which is the agency with jurisdiction over the Refuge, concurred with the FAA's finding that the Preferred Alternative would result in temporary occupancy of Refuge lands and that this occupancy does not constitute a Section 4(f) use.

8.0 Minimization and Mitigation Measures Contained in the Final EA

This section summarizes minimization and mitigation measures that would be incorporated into the Preferred Alternative in order to reduce environmental impacts below the level of significance. These measures include BMPs and minimization/mitigation efforts for reducing both short-term construction and long-term operational impacts.

In accordance with 40 CFR § 1505.3, the FAA would take appropriate steps through federal funding grant assurances and conditions, conditional ALP approvals, and contract plans and specifications to ensure that the following authorizations and mitigation monitoring and enforcement measures are implemented during project development. The Sponsor would implement of minimization and mitigation actions. These minimization and mitigation measures would be made subject of a special condition included in future federal airport grants to the Sponsor. Table 2 summarizes the minimization and mitigation measures to be implemented as part of the Preferred Alternative. Adherence to the permits and approvals listed in Table 3 (in Section 9.0 of this FONSI/ROD) would further lessen potential construction impacts. In implementing the measures identified in Table 2, the FAA has adopted all practicable means to avoid or minimize the environmental impacts of the Preferred Alternative.

Table 2. Summary of Minimization and Mitigation Measures

| Resource | Minimization and Mitigation Measures | |
|-----------------------------|--|---|
| Construction Impacts | Would minimize short-term construction impacts to: Water Resources, Floodplains, Wetlands, and Biotic Resources | <ul style="list-style-type: none"> • All work would be done in compliance with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit requirements for construction activities for Alaska and FAA AC 150/5370-10B, Standards for Specifying Construction for Airports. • A minimum 200-foot setback from water channels and standing water would be enforced for refueling and vehicle maintenance activities. • Construction vehicles would be required to stay within the project boundaries. • Culverts and ditching would be installed along the access road and runway embankment to maintain natural drainage patterns to the extent practicable. • The airport access road, apron, runway, and taxiway side slopes would be stabilized as soon as practical after construction to minimize erosion. Stabilization would include seeding of airport embankment fills and other disturbed areas. • Silt fencing would be installed along embankment toe-of-slope to limit sediment runoff into the wetlands. • Structural BMPs, including diversion ditches, rock flumes, or stormwater conveyance channels, would be used to divert flows and pollutant discharge away from waterbodies. • Fuel, lubricants, and other substances would be stored in double-walled tanks or lined containment berms with 110% storage capacity more than 200 feet from streams or bodies of water. |

Table 2. Summary of Minimization and Mitigation Measures

| Resource | Minimization and Mitigation Measures | |
|--|---|---|
| | | <ul style="list-style-type: none"> • Development would be phased to minimize the amount of disturbed area exposed during construction. • All gravel mining activities would be done at least 500 feet from both freshwater and saltwater water bodies. |
| | <p>Would minimize short-term construction impacts to: <i>Air Quality, Noise, Socioeconomics, Hazardous Materials and Solid Waste</i></p> | <ul style="list-style-type: none"> • Before starting work the first year, the contractor would prepare and implement a formal Dust Control Plan, with the plan approved by the air quality division of the Alaska DEC. • Dust on roads in town would be controlled through the use of spray trucks or an approved palliative. • Avoidable or controllable airborne toxics (DPM) from diesel exhaust would be mitigated through implementation of an equipment emission control plan. • Best available technology (BAT) for noise mufflers would be used on all construction equipment to minimize noise emissions. • When possible, vehicles would not be idled at night. Block heaters powered by existing power sources for Kaktovik, or by generators, would be used to avoid the necessity of idling diesel engines. • Before hauling material, the contractor would prepare a Traffic Safety Plan in coordination with the City of Kaktovik to determine protocol for operation of haul trucks through Kaktovik. This safety plan would use traffic control personnel, speed limitations, markers for potential sensitive traffic areas such as schools, and restrictions on equipment usage (such as transmission brakes) as appropriate to minimize truck noise, dust emissions, and ensure the safety of Kaktovik residents. • A construction worker housing plan would be implemented that identifies where workers would live during the entire construction period. • Waste associated with airport construction such as material containers, engine oils, lubricants, filters, and used tires would be removed from the project area by the contractor and disposed of in an appropriate location. Used engine oil may be used as fuel for oil heaters. |
| | <p>Would minimize short-term construction impacts to: <i>Biotic Resources</i></p> | <ul style="list-style-type: none"> • Monitoring for caribou presence/absence and behavior within 3,200 feet of construction and material extraction site would occur during equipment operations. If caribou calving is occurring within this distance and calf abandonment is observed, construction will be curtailed for a period of one week or until caribou have moved out of the area. • Construction of bridge or culvert over the stream would be precluded or minimized during spawning periods. |
| <p>Biotic Resources (Wildlife, Fisheries, and Vegetation)</p> | <ul style="list-style-type: none"> • Gravel material sources would be rehabilitated to provide open water and shoreline habitat for waterfowl. • The anadromous fish stream would be crossed with a bridge or culvert to minimize loss of spawning habitat and to allow spawning fish adequate passage upstream. • Mitigation for potential biotic resource impacts would also include the best BMPs described for Construction Impacts. | |
| <p>Federally Listed Threatened and Endangered Species (TES)</p> | <ul style="list-style-type: none"> • Pre-construction surveys would be conducted during the spring/summer construction season for any breeding concentrations or nesting spectacled or Steller's eiders within areas immediately adjacent to construction areas. • Before blasting or extraction of material from MS4, a survey for denning polar bears would be conducted out to 200 meters on either side of MS4. This survey could be conducted with either Forward Looking Infrared (FLIR) or trained Karelian bear dogs. • The Bear-Human Interaction Plan would be implemented during construction and | |

Table 2. Summary of Minimization and Mitigation Measures

| Resource | Minimization and Mitigation Measures |
|----------------------|---|
| | <p>operation of the airport. This plan would provide relevant information on bear behavior, describe methods of detecting and deterring bears, and include guidelines on how personnel should be trained and operations designed to avoid undesirable encounters. The plan would include, but would not be limited to the following:</p> <ul style="list-style-type: none"> ○ Training for all personnel on bear behavior, detection, and avoidance. ○ Bear-proof fencing around the relocated landfill. ○ A detection protocol that emphasizes detection of a bear long enough before it arrives at construction sites or airport areas where travelers are debarking or embarking to allow people to seek refuge or evacuate the area. Detection techniques include (1) a designated person trained as a bear monitor at construction sites, in communication with the existing Kaktovik Bear Patrol regarding bear locations and movement; (2) electrical trip wires placed in a perimeter around construction sites, connected to central alarm; and (3) microwave detection systems involving a beam perimeter with a central alarm that is set off when the beam is broken. ○ A deterrence protocol that includes designated security staff trained in bear deterrence methods. The staff would first identify escape corridors for intruding bears, then conduct a step-wise escalation as necessary for noise deterrence, and then finally engage in physical deterrence. Examples of deterrence escalation include honking horns and flashing high-intensity lights from vehicles; using lights on vehicles to drive bears toward the identified escape corridor; using cracker shells fired from shotguns; and, if needed, using bean bags fired from shotguns. ○ A refuge protocol that identifies safety areas for construction workers and other personnel while bears are being deterred from the area. This refuge protocol would range from workers retreating to designated vehicles at construction sites to evacuating the area depending on the potential for a conflict. ○ A reporting system to track all human-bear interactions and to allow quick notification of the ADF&G and USFWS in the event of human-bear conflict. |
| Wetlands | <ul style="list-style-type: none"> • Winter ice roads would be used to transport gravel from the mine to the road system. • Conservation easements would be designated on land owned by the Sponsor to preserve and protect existing wetland values or habitat deemed of high value to wildlife or TES. • Educational programs would be developed through the Sponsor and/or the City of Kaktovik to educate both residents and visitors on wetland and habitat resources and values in the area. • Coordination with the Kaktovik Polar Bear Committee on strategies to manage or move the whale carcass location from Barter Island to locations offshore or away from Kaktovik would take place to minimize the potential for human-bear conflicts. • In-lieu fee mitigation would be implemented where money would be deposited in a mitigation fund to be used by the Sponsor to enhance, protect, or preserve wetland and other habitat values in and around the proposed project area. • Mitigation for potential wetland impacts would also include the BMPs described above for Construction Impacts. |
| Subsistence | <ul style="list-style-type: none"> • Mitigation for potential subsistence impacts would include the BMPs described in Construction Impacts. • The Sponsor would work to implement refuse disposal methods, such as reducing or eliminating open box burning, to further minimize impacts to waterfowl hunting. |
| Air Quality | <ul style="list-style-type: none"> • Mitigation for potential air quality impacts would also include the BMPs described above for Construction Impacts. |
| Noise | <ul style="list-style-type: none"> • Mitigation for potential noise impacts would consist of the BMPs described above for Construction Impacts. |
| Water Quality | <ul style="list-style-type: none"> • Mitigation for potential water resource impacts would include the BMPs described above for Construction Impacts. • A Stormwater Pollution Prevention Plan (SWPPP) would be required for operation of the airport. |

Table 2. Summary of Minimization and Mitigation Measures

| Resource | Minimization and Mitigation Measures |
|---|---|
| Light Emissions and Visual Effects | <ul style="list-style-type: none"> • Operating land lights only when needed (e.g., using a light system that could be turned on by pilots by keying the handset on their radios). • Mitigation for potential light emissions and visual effect impacts would also include the dust-related BMPs described above for Construction Impacts. |
| Socioeconomics and Environmental Justice | <ul style="list-style-type: none"> • Provision of equipment and personnel for long-term consistent winter snow removal and winter maintenance of the road to the airport by the City of Kaktovik. During airport operations when there are extremely poor weather conditions, periodic patrols of the road by appropriate municipal personnel to assist stranded travelers would also reduce the potential safety impact. |
| Coastal Barriers and Coastal Resources | <ul style="list-style-type: none"> • Mitigation for potential coastal zone impacts would consist of the BMPs described above for Construction Impacts. |
| Floodplains | <ul style="list-style-type: none"> • Mitigation would include the BMPs described in Water Quality and Wetlands. |
| Compatible Land Use | <ul style="list-style-type: none"> • Mitigation for compatible land use would consist of the BMPs described in Subsistence. • Specific wildlife hazard mitigation for the relocated landfill under Alternative 2: <ul style="list-style-type: none"> ○ Stockpiling gravel at the landfill to allow for frequent burying of unburned waste so that it is not left on the surface to attract wildlife. ○ Potentially installing an overhead wire grid to deter birds if necessary. ○ Installing perimeter fences to deter small mammals and bears. ○ Installing an enclosed "wildlife proof" burn box. |
| Historic, Archaeological, and Cultural Resources | <ul style="list-style-type: none"> • No mitigation measures required. • FAA's standard protocols for addressing inadvertent discoveries of archaeological resources or human remains during construction would be included in all construction contracts. |
| Farmlands | <ul style="list-style-type: none"> • No mitigation measures required. |
| Wild and Scenic Rivers | <ul style="list-style-type: none"> • No mitigation measures required. |
| Energy Supplies, Natural Resources, and Sustainable Design | <ul style="list-style-type: none"> • Ice road crossing tundra would be made of fresh water to protect the tundra from excessive salinity. |
| Hazardous Materials and Solid Waste | <ul style="list-style-type: none"> • Contractors would employ the BMPs described above for Construction Impacts for spill prevention and control and disposal of construction waste. • Spills or discovery of unanticipated contamination sites would require immediate notification to ADEC by the construction contractor. |

8.1 Compensatory Mitigation for Long-Term Impacts

Throughout the preparation of the Final EA, the FAA and Sponsor consulted with the Corps regarding the potential need for and nature of on-site mitigation in conjunction with long-term impacts to wetlands from the Preferred Alternative. During that consultation, the Corps indicated its support for Alternative 2 as the Least Damaging Practicable Alternative (LEDPA).

The following steps were taken to avoid or minimize impacts to wetlands and ensure that the LEDPA to wetlands was chosen as the Preferred Alternative:

1. All alternatives were analyzed based on the total wetlands acreage they would disturb. For this criteria, it was determined that Alternative 4 had the fewest impacts to wetlands, followed by Alternative 1 (28 acres), Alternative 2 (143 acres), and Alternative 3 (202 acres).
2. Disturbed wetland acreage was evaluated based on the hydrological and habitat values it provides, including value to wildlife and TES. In this case, all wetlands impacted by the alternatives were either marine estuarine wetlands or freshwater emergent wetlands of moderate to low value.
3. Each alternative was evaluated on how well it met project purpose and need, its long-term sustainability, and its overall impact to other sensitive resources such as TES, cultural resources, public health and safety, and Section 4(f) lands.

Using these criteria, Alternative 4 (No Action) was not considered a practicable alternative because it would not meet project purpose and need.

Alternative 1 was not a practicable alternative because of its inability to meet the long-term purpose and need for the project. This concern is associated with (1) the consistent erosion that would continue to occur at the site, and (2) the uncertainty of the long-term sustainability of this airport site considering potential rises in sea level associated with global climate change.

Alternative 3 was determined to have the highest impact to wetlands. Additionally, Alternative 3 is not practicable because it would impact Section 4(f) lands and cannot be used if there is a practicable alternative that does not impact Section 4(f) lands (Alternative 2 is a practicable alternative that does not impact Section 4(f) lands). Alternative 3 also has the highest potential impacts to mainland wildlife habitat, including calving, insect relief, and migratory habitat for caribou.

Alternative 2 was determined to be the LEDPA that best avoids or minimizes impacts to wetlands while meeting project purpose and need.

The Corps came to a similar conclusion. In a 2003 letter, the Corps indicated that Alternative 3 "does not appear to represent the least environmentally damaging practicable alternative" (see Appendix A). Additionally, the USFWS ranked the alternatives in an October 2006 letter that stated "Alternative 1 would likely be the least environmentally damaging approach...because it would involve less natural-land alteration and gravel fill, and would occur on an already developed site... Next to improving the airport at its current location, (Alternative 2) would be the least environmentally damaging construction alternative" (see Appendix A of the Final EA).

The consultation with the Corps resulted in the general mitigation requirements proposed in the Final EA and described below. These mitigation requirements would compensate for the long-term impacts to wetlands from relocation of the airport under Alternative 2.

During construction, contractors would implement the BMPs and mitigation described above to minimize short-term construction impacts. In addition to these BMPs, other mitigation measures may be required by the Corps through the 404 permitting process. These measures will be designed to minimize overall impacts to the extent practicable. As part of this permitting process a functional assessment of impacted wetlands will be conducted and appropriate mitigation measures will be implemented to minimize or mitigate for project wetland impacts. Based on input from the Corps, these mitigations could take the form of:

- designation of conservation easements on land owned by the Sponsor to preserve and protect existing wetland values or habitat deemed of high value to wildlife or TES;

- an education program through the Sponsor and/or the City of Kaktovik to educate both residents and visitors on wetland and habitat resources and values in the area;
- coordination with the Kaktovik Polar Bear Committee on strategies to manage or move the whale carcass location from Barter Island to locations offshore or away from Kaktovik, thereby minimizing the potential for human-bear conflicts; and
- implementation of in-lieu fee mitigation where money would be deposited in a mitigation fund to be used by the Sponsor to enhance, protect, or preserve wetland and other habitat values in and around the proposed project area.

9.0 Summary of Necessary Federal and State Approvals

The FAA has statutory authority to ensure the safe operation of the proposed airport and the nation's airport and airway system is the highest aviation priority (49 U.S.C. 47101(a)(1)). In carrying out its responsibilities, the FAA is also responsible for ensuring that its actions comply with NEPA and any applicable local, state, and federal laws. Additionally, the Sponsor must obtain all necessary permits and approvals before implementing the Preferred Alternative. Table 3 summarizes these permits and approvals. Table 3 is followed by a discussion of the consistency of the Preferred Alternative with applicable local, state, and federal laws, regulations, and Executive Orders (EOs).

Table 3. Permits and Approvals

| Permit or Approval Title | Responsible Agency | Notes |
|--|---|---|
| Section 404 Nationwide Permit | U.S. Army Corps of Engineers | None |
| Section 401 Water Quality Certification | Alaska Department of Environmental Conservation | None |
| Stormwater NPDES General Permit for Construction | U.S. Environmental Protection Agency | To be completed by contractor prior to construction. Requires Stormwater Pollution Prevention Plan. |
| NPDES Dredging Permit | U.S. Environmental Protection Agency | Not needed if gravel is mined. May fall under General Permit for Alaska Placer Miners. |
| Development Permit | North Slope Borough | None |
| Coastal Zone Consistency Determination | Alaska Department of Natural Resources | The enforceable policies of the Coastal Zone Management Plan (CZMP) are evaluated in the Final EA and in Section 9.1 below. |
| Determination of No Historic Properties Affected | Alaska State Historic Preservation Office | Completed for all three action alternatives on 07/18/2007. See Appendix A of the Final EA. |
| Special Use Permit | U.S. Fish and Wildlife Service | Would be required if there is encroachment or temporary occupancy on the Refuge. |
| Polar Bear Interaction Plan | U.S. Fish and Wildlife Service | Activities occurring from late August through April would require this plan as stipulation to USFWS Special Use Permit. |
| Mining Reclamation Plan | Alaska Department of Natural Resources | Needed if the material source is mined. |
| Placer Mining Application | Alaska Department of Natural Resources | \$150 fee; required for gravel mining only. |

Table 3. Permits and Approvals

| Permit or Approval Title | Responsible Agency | Notes |
|---|---|---|
| Mining License | Alaska Department of Natural Resources | This is a license to pay taxes (Department of Revenue), not a license to mine. But it is required for mining. |
| Temporary Water Use Permit | Alaska Department of Natural Resources | If the material source is mined, ice roads would be needed to cross the tundra in winter. The State of Alaska would have to approve the use of the freshwater required for the ice roads. |
| 17(b) Trail Corrections | Bureau of Land Management | The trail easement would be terminated between the town and the landfill once a road has been constructed because alternate public access would exist. The 25-foot-wide trail would need to continue southerly to public lands. |
| Arctic National Wildlife Refuge Compatibility Determination | U.S. Fish and Wildlife Service | This determination would review whether activities on 22(g) lands would impair the Refuge's ability to achieve its purposes. |
| Landfill Closure Plan | Alaska Department of Environmental Conservation | Landfill relocation would have to be complete before airport construction is complete. |
| Class III Solid Waste Disposal Permit | Alaska Department of Environmental Conservation | Landfill relocation would have to be complete before airport construction is complete. |
| Exemption from landfill-airport separation requirement | Federal Aviation Administration | Exemption issued from 49 U.S.C. § 44718(d); not needed if an FAA-approved wildlife hazard management plan is developed. |
| Waiver of landfill-airport separation requirement | Alaska Department of Environmental Conservation | Waiver issued under Alaska Administrative Code 18 AAC 60.305, which identifies a separation of 5,000 feet between landfills and runways used by piston-type aircraft. |

9.1 Consistency and Compliance with Applicable Laws, Statutes, and Regulations

As illustrated by Table 6-1, there are a number of federal, state, and local agency approvals and permits that would have to be issued before the Preferred Alternative (Alternative 2) could be implemented. There are also EOs such as those concerning floodplains (EO 11988) and wetlands (EO 11990), that would apply to the actions associated with the Preferred Alternative. The following sections summarize the degree to which the Preferred Alternative described in Section 2.4 is consistent with the laws, regulations, and EOs not specific to the FAA's regulatory authority.

Executive Order 11988: Floodplain Management and U.S. DOT Order 5650.2: Floodplain Management and Protection

Of the four alternatives under consideration, only Alternative 2, the Preferred Alternative, avoids encroachment into the base floodplain. Alternatives 1 and 4 are located entirely within the base floodplain and would, therefore, have the greatest encroachment of all alternatives. Approximately 1.4 miles of the access road to the Alternative 3 airport site, including the bridge spanning Kaktovik Lagoon, would be located in the base floodplain.

Alternative 2 would not adversely impact water resource, living resource, or cultural resource floodplain values. The airport, access road, and relocated landfill and sewage lagoon proposed under Alternative 2 would have no impact on the base floodplain or floodplain habitat as they are located at an elevation of approximately 30 feet above MSL, are outside the 100-year base floodplain, and are surrounded by low-lying topography bordered on three sides by the Kaktovik Lagoon. High water levels due to a flood event would flow around the landfill and would not be impounded or impeded. Additionally, the proposed new lagoon location would not impede subsistence hunting activities occurring in the south part of Barter Island.

Executive Order 11990: Protection of Wetlands

In accordance with EO 11990, the Final EA considers impacts to a) public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion; (b) maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and (c) other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

Given the pervasive extent of wetlands in the Barter Island area, there are no practicable alternatives to avoid impacts to wetlands still meet the Purpose and Need. All alternatives incorporate all measures to minimize harm to wetlands. Alternative 4, the No Action Alternative, would have the least anticipated impact to wetlands; however, this alternative would not provide a flood-resistant airport, as identified in the project Purpose and Need.

Alternative 1 would impact an estimated 28 acres of wetlands, the least of all action alternatives. Alternative 1 is not considered prudent as it does not address the long-term flooding concerns associated with the existing airport location. Additionally, Alternative 1 would result in substantial short-term increases in traffic, noise, and dust from haul truck traffic through the City of Kaktovik. Alternative 2, the Preferred Alternative, would impact an estimated 143 acres of wetlands, the second least of all action alternatives. Alternative 3 would impact an estimated 202 acres of wetlands, the most out of all action alternatives. The Preferred Alternative (Alternative 2) is the only alternative that meets the long-term Purpose and Need of providing a flood-resistant airport while minimizing, to the extent practicable, impacts on wetlands.

National Historic Preservation Act (NHPA) (16 U.S.C. §470)

The FAA carried out consultation with the State Historic Preservation Officer (SHPO) and Alaska Native groups as required by 36 CFR 800.2. The SHPO concurred with the FAA's finding of No Historic Properties Affected under any of the alternatives. As such, the Preferred Alternative (Alternative 2) is consistent with the NHPA.

Clean Water Act (33 U.S.C. § 1344) Sections 401 and 404 and the Federal Water Pollution Control Act (33 U.S.C. §§ 1251-1387)

The Preferred Alternative (Alternative 2) incorporates all practicable measures to minimize harm to wetlands. In the case of unavoidable impacts to wetlands, a mitigation plan has been developed through consultation with the Corps and other state and federal agencies and will be a requirement of project implementation. Additionally, the Sponsor has submitted a Section 404 permit application to the Corps. This application includes the minimization measures incorporated into the Preferred Alternative for discharge of fill into waters of the U.S. Issuance of the permit by the Corps will demonstrate the FAA's compliance with Section 404 of the Clean Water Act.

Under the Preferred Alternative, wastewater discharge from the new lagoon would be managed by a new storm water pollution prevention plan (SWPPP) and NPDES permit and would flow to the south into existing vegetation before release into receiving waters. The lagoon's design would follow the design of the current, ADEC-approved sewage lagoon.

The Preferred Alternative is not expected to increase pollutant discharge amounts in the project area since the level of airport activity would remain the same, regardless which alternative was implemented. Additionally, the Preferred Alternative's distance from Barter Island's Fresh Water Lake and from the coast would reduce the likelihood of flooding and erosion-related water quality impacts to coastal waters, as well as minimize emissions and dust impacts to Kaktovik's primary drinking water supply. Any potential short-term negative impacts to water quality from construction would be mitigated through the use of BMPs and proposed mitigation and would not be significant. The Sponsor will apply for certification of compliance with state water quality standards to the ADEC. Issuance of this permit will demonstrate the FAA's and Sponsor's compliance with the state requirements for water quality.

Endangered Species Act (16 U.S.C. §460 et seq.)

The FAA engaged in Section 7 consultation with the USFWS and the National Marine Fisheries Service (NMFS) to determine if any federally-listed species were present or had the potential to be present in the immediate vicinity of the Airport. USFWS and NMFS identified three species: Steller's and spectacled eiders, polar bears, and bowhead whales. The USFWS has concurred with the Final EA analysis, which indicates that the Preferred Alternative (Alternative 2) is not likely to adversely affect any of the identified species. Accordingly, the USFWS did not require preparation of a Biological Assessment; however, it did request preparation of a bear-human interaction plan to minimize potential human-bear conflicts. The plan includes detection, avoidance, and deterrence strategies and instructions, as well as a protocol for surveys for denning bears prior to blasting and excavation from material sources.

Rivers and Harbors Act (33 U.S.C. §403)

This act requires approval from the Corps for any structures to be placed in navigable waters of the U.S. or for work affecting navigable waters of the U.S. The Preferred Alternative (Alternative 2) would not place any structures in or require any work affecting navigable waters of the U.S. and is therefore consistent with the Rivers and Harbors Act.

Marine Protection, Research and Sanctuaries Act (33 U.S.C. §1413)

This act is not relevant to the Preferred Alternative (Alternative 2).

Magnuson-Stevens Act (16 U.S.C. §1855(b))

This act requires consultation with the NMFS and identification of measures to minimize harm to Essential Fish Habitat (EFH). The Preferred Alternative would not impact any EFH and is therefore consistent with this act.

Marine Mammal Protection Act (MMPA) (16 U.S.C. §1361-1421, Public Law 92-522)

There would be no impacts on marine mammals from the Preferred Alternative (Alternative 2). As such, the Preferred Alternative is consistent with the MMPA. The USFWS, Marine Mammals Division, has concurred with the Final EA analysis, which indicates that the Preferred Alternative (Alternative 2) is not likely to adversely

affect any of the identified species. Accordingly, the USFWS did not require preparation of a Biological Assessment; however, it did request preparation of a bear-human interaction plan to minimize potential human-bear conflicts. The plan includes detection, avoidance, and deterrence strategies and instructions, as well as a protocol for surveys for denning bears prior to blasting and excavation from material sources.

Migratory Bird Treaty Act (regulations at 50 CFR Part 21.43) and Executive Order 13186

The Final EA has considered impacts to migratory birds and, in particular, birds of conservation concern to the State of Alaska. No significant adverse effects on migratory birds would occur as a result of implementing the Preferred Alternative (Alternative 2).

Bald and Golden Eagle Protection Act (regulations at 50 CFR Part 22.23)

There would be no effects on Golden or Bald Eagles as a result of the Preferred Alternative (Alternative 2). As such, the Preferred Alternative is consistent with this act.

Fish and Wildlife Coordination Act (16 U.S.C. §661-667e)

In accordance with this act, the USFWS, NMFS, and the Alaska Department of Fish and Game (ADFG) have been consulted throughout the preparation of the Final EA.

Clean Air Act (42 U.S.C. § 7401 et seq.)

With effective implementation of proposed mitigation measures for entrained dust, air quality impacts under the Preferred Alternative (Alternative 2) would not exceed state or federal standards for criteria pollutants. The Preferred Alternative would conform to the Alaska State Implementation Plan for meeting NAAQS standards.

U.S. Department of Transportation Section 4(f) (Public Law 109-59)

The Preferred Alternative (Alternative 2) would not use any Section 4(f) resources.

Executive Order 12898: Environmental Justice

There would be no disproportionate impacts to any minority or low income population as a result of the Preferred Alternative (Alternative 2).

Executive Order 13045: Children's Environmental Health and Safety Risks

There would be no risk to health or safety of children as a result of the Preferred Alternative (Alternative 2).

Anadromous Fish Act (AS §41.14.870)

The Preferred Alternative (Alternative 2) would not affect any anadromous fish waterways or habitat.

Fishway Act (AS §41.14.840)

The Preferred Alternative (Alternative 2) would not affect any fisheries.

Alaska National Interest Lands Conservation Act of 1980 (ANILCA; Public Law 96-487)

As described in Section 7.1.1 of this FONSI/ROD, ANILCA Section 810 requires that the lead Federal agency evaluate the potential effects of a proposed undertaking on federal lands on subsistence resources, uses, access, and competition and to avoid or minimize the impact on these resources and related elements. The Preferred Alternative would not use any public lands.

Alaska Coastal Management Program (11 AAC 112)

The Barter Island Airport Final EA project area is located within the coastal zone. As such, the Sponsor must submit a Coastal Zone Project Questionnaire for consistency review by the State of Alaska Coastal Zone Management Program (CZMP). The Sponsor will submit the questionnaire with the Final EA. As such, the CZMP has not yet issued a consistency determination, and implementation of the Preferred Alternative (Alternative 2) is contingent upon issuance of a finding of consistency by the CZMP. Issuance of consistency finding by the CZMP and adherence by the Sponsor to any conditions of approval would demonstrate compliance with this program. Pending issuance of a consistency finding by the CZMP, the FAA has conducted an independent review of the consistency of the Preferred Alternative with the CZMP enforceable policies. The following summarizes the FAA's findings relative to each enforceable policy:

11 AAC 112.200. Coastal development. The Preferred Alternative would not significantly decrease or displace any existing uses that are economically or physically dependent on a coastal location.

11 AAC 112.210. Natural hazard areas. There are no designated natural hazard areas in the vicinity of the Preferred Alternative.

11 AAC 112.220. Coastal access. The Preferred Alternative would maintain existing levels of access to coastal waters and would improve access to such water along the southern coast of Barter Island, near Kaktovik Lagoon, by extending the access road to the relocated landfill.

11 AAC 112.230. Energy facilities. The Preferred Alternative would not result in any new energy facilities.

11 AAC 112.240. Utility routes and facilities. Under the Preferred Alternative, utility lines would be extended to the airport and relocated landfill. These lines would be sited inland from all beaches and shorelines and would not alter surface or groundwater drainage patterns, disrupt wildlife transit, or block existing or traditional access.

11 AAC 112.250. Timber harvest and processing. The Preferred Alternative would not involve any timber harvest or processing.

11 AAC 112.260. Sand and gravel extraction. Fill material for the Preferred Alternative would be extracted from an existing gravel pit within the coastal zone. No dredging in coastal waters would be undertaken. The existing gravel pit is located outside of coastal waters and intertidal areas.

11 AAC 112.270. Subsistence. There are no subsistence use areas designated under 11 AAC 114.250(g) in the vicinity of the Preferred Alternative. However, the entire Barter Island and mainland study area is used for subsistence purposes by members of the Kaktovik community; avoidance of all areas used for subsistence purposes is not practicable. The analysis in Section 3.6.4 of the Final EA indicates that the Preferred Alternative will have low overall impact on subsistence resources and uses. The location of the

relocated landfill under the Preferred Alternative was adjusted between the Draft EA and the Final EA in order to minimize impacts on waterfowl hunting, the key subsistence activity identified within the vicinity of the Preferred Alternative.

11 AAC 112.280. Transportation routes and facilities. The airport and access roads associated with the Preferred Alternative would not significantly alter surface or groundwater drainage patterns and would not disrupt any known or reasonably foreseeable wildlife transit routes. Construction of the airport would require vacating a section of an existing 17(b) trail. Access to the remaining portions of the trail would be maintained through the new airport and landfill access roads; the remaining portions of the trail would be connected to the new access road, allowing continued use of the trail system with minimal change.

11 AAC 112.300. Habitats. The Preferred Alternative would not be located in any offshore areas, estuaries, tideflats, rocky islands or sea cliffs, barrier islands or lagoons, exposed high-energy coasts, or rivers, streams, and lakes and their riparian areas, and important habitats. The Preferred Alternative is also located outside the active floodplain identified by the Corps and the flood hazard zone identified by the Sponsor. Approximately 143 acres of low- to moderate-value wetlands would be impacted. There are no practicable alternatives that can entirely avoid impacts to wetlands. The Preferred Alternative incorporates all measures to minimize significant adverse impacts to the natural drainage patterns and competing uses of those wetlands. Unavoidable impacts will be mitigated according to the plan outlined in Section 3.5.4.6 of the Final EA and agreed upon with the Corps.

11 AAC 112.310. Air, land, and water quality. The Preferred Alternative would not have any significant impacts on air, land, or water quality. It would have short-term, temporary impacts on air quality from airborne dust and emission during construction; however, these levels are well below regulatory thresholds.

11 AAC 112.320. Historic, prehistoric, and archaeological resources. There are no areas designated as important to the study, understanding, or illustration of national, state, or local history or prehistory in the vicinity of the Preferred Alternative. The Preferred Alternative would not impact any known historic properties. The federally recognized tribe, the Native Village of Kaktovik (NVK), has identified important cultural resources, including sod houses and human burials to the west of the Preferred Alternative, but these resources would not be altered by implementation of the Preferred Alternative.

North Slope Borough Coastal Management Plan

The North Slope Borough Coastal Management Plan had not been approved by the State of Alaska at the time the Final EA was issued. As such, the Sponsor has no enforceable policies for the coastal zone.

10.0 Summary of Public and Agency Involvement

Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) require that federal agencies provide meaningful opportunities to the public and stakeholders to provide input into the process and identify their concerns. Special purpose laws, such as the Endangered Species Act (ESA), the Clean Water Act (CWA), and the National Historic Preservation Act (NHPA), mandate public involvement and consultation with agencies or federally recognized tribal governments. The Sponsor and the FAA have taken steps to inform the public, special interest organizations, and local, state and federal agencies about the proposed action and alternatives for the Barter Island Airport Project. The Sponsor and the FAA solicited feedback from these interested parties to help shape the alternatives and scope of this project. The

following sections summarize the efforts taken to consult and coordinate with all interested persons, agencies, and organizations.

10.1 Public Involvement

Public involvement in the preparation of the Draft and Final EA was composed of four distinct activities: scoping, public informational meetings, public review of the Draft EA, and public review of the Final EA. This section outlines the steps that the Sponsor and the FAA took to ensure that for these activities maximized disclosure to the public and agencies and facilitated the public/agency input process.

10.1.1 Scoping

Project scoping letters were mailed to agency representatives and individuals in September 2006. Comments received in response to the scoping letters were used to refine the alternatives considered in the Draft EA and to identify potential resource conflicts to be assessed. Responses in full and other correspondence are included in Appendix A. Table 5-1 of the Final EA summarizes agency and community representatives specifically contacted during scoping, as well as those contacted during preparation of the Draft EA.

10.1.2 Public Informational Meetings

Between the development of the AMP, which first identified the three airport alternatives, and the Final EA, several public meetings were conducted in Kaktovik or via teleconference. Separate government-to-government meetings were also held between the FAA and NVK. This consultation is discussed in more detail in Section 5.2 (Government-to-government and Section 106 Consultation) of the Final EA. The public informational meetings held in conjunction with the Draft and Final EA are summarized below. Meeting notes/summaries are provided in Appendix B of the Final EA.

December 10, 2002: This meeting at the Kaktovik Community Center introduced the three alternatives later described in the AMP and sought public comment. Comments were wide-ranging and have been addressed in the Final EA.

May 20, 2003: This meeting, also in Kaktovik, followed up on some of the concerns expressed in the 2002 meeting. The site for Alternative 3 was moved west and south approximately 1.5 miles to shorten the access road. Alternative 3 began to emerge as a community favorite.

October 14, 2003: This meeting was held in Kaktovik and announced the intent to prepare the Airport Master Plan and solicit input on the project options available at that time. A flyer-comment form was distributed.

September 13, 2005: This meeting was in Kaktovik as part of the regularly scheduled city council meeting. Representatives from the Sponsor, the FAA, and the consultant to the Sponsor attended. At this meeting the FAA committed to not identifying a preferred alternative in the Draft EA and to analyzing all three alternatives equally. The FAA also committed to pursue resurfacing of the existing runway in the interim because it would be some time before the completion of the Final EA and implementation of whichever alternative was selected. The city council passed a resolution stating their preference for Alternative 3 but supporting selection of Alternative 2 by the Sponsor as the Preferred Alternative.

November 15, 2005: This was a workshop to involve the community in selecting a location for a new landfill in the event that Alternative 2 was selected. Meeting participants put their support behind Landfill Site B, which is the proposed site under Alternative 2 in the Draft EA. The Alternative 2 landfill site proposed in the Final EA is a modification of Site B, which was adjusted to minimize potential impacts to subsistence hunting of waterfowl.

February 14, 2006: Sponsor, HDL, and FAA representatives attended a regularly scheduled Kaktovik City Council meeting where they updated attendees on the master planning process and conducted another community landfill siting workshop. One NVK representative present at the meeting stated his preference for Alternative 3 because the other action alternatives would be subject to fog. Another meeting participant spoke out against Alternative 2, because a useable landfill would have to be moved. The Sponsor and HDL representatives also met with the NVK for a non-government-to-government meeting.

July 18, 2006: This was the official scoping meeting for the Draft EA, during which the four alternatives analyzed in the Final EA were described. A summary of the meeting is included in Appendix B of the Final EA.

10.1.3 Public Comment on the Draft EA

The Draft EA was made available to the public on March 7, 2008 and its publication was announced using several public announcement strategies. Display ads were placed in the *Anchorage Daily News* newspaper on March 7, 8, and 9, and April 4, 5, and 6, 2008, and legal ads were placed in the *Fairbanks Daily News Miner* at that same time. Display ads were published in the *Arctic Sounder*, the newspaper of record for the Borough, on March 13 and April 3, 2008. Flyers were also posted at specific locations in Kaktovik. The comment period initially ended on April 11, 2008; however, it was subsequently extended until April 26, 2008, resulting in a 50-day comment period. Legal advertisements announcing the extension of the comment period were published in the *Anchorage Daily News* and the *Fairbanks Daily News Miner* on April 15, 19, and 20, 2008. Individual reviewing parties, including agencies and the NVK, were notified via phone and in writing of the extension of the comment period.

Beginning on March 7, 2008, hard copies and CDs of the Draft EA were available to the public for library checkout or viewing at the Kaktovik mayor's office, the Borough Public Works office, the Borough CIP office, and the office of the Borough Village Liaison. An electronic copy of the document was available for download at www.hdlalaska.com/currentprojects.htm.

As advertised, a formal public hearing was conducted in Kaktovik on April 11, 2008 to provide an overview of the NEPA process, answer any questions related to the alternatives and impact analysis, and receive formal public comment on the Draft EA. The meeting was attended by 29 members of the public, 8 of whom gave formal testimony. Public testimony at the hearing was recorded on tape by the Borough's project administrator, Laura Strand, and then sent to Computer Matrix Court Reporters, LLC for transcription. An Inupiat translator was present at the meeting.

In addition to providing testimony at the formal public hearings, members of the public were afforded other methods for providing comments on the Draft EA, including mailing or emailing them to the Sponsor or the FAA.

10.1.4 Public Comment on the Final EA and ANILCA Section 810 Evaluation

Because of the controversy surrounding a decision regarding selection of an alternative and in light of the inclusion of additional impacts analysis in the Final EA, including an ANILCA Section 810 Evaluation, the FAA held a public hearing and comment period on the Final EA. The Notice of Availability for the Final EA, public hearing, and public comment period was published in the Federal Register on January 13, 2009. Notices were also published in the *Anchorage Daily News*, *Fairbanks Daily News Miner*, and *Arctic Sounder* on January 16-18, 30, and 31 and February 1, 2009. Flyers announcing the public hearing were posted in Barrow and Kaktovik, and an electronic version of the Final EA was made available on the project website.

The public comment period for the Final EA began on January 20, 2009 and closed at 5:00 pm on February 24, 2009. The public informational meeting, Final EA hearing, and ANILCA Section 810 hearing was held on February 17, 2009 in Kaktovik. An Inupiat translator was present at the hearing. The FAA took comments received on the Final EA in writing and during the public hearing into consideration when issuing this FONSI/ROD. Please see Appendix A for public comments and responses.

10.2 Government-to-Government and Section 106 Consultation

In addition to public and agency coordination, the FAA engaged in formal government-to-government and Section 106 consultation with several parties throughout the Draft and Final EA preparation. Specifically, government-to-government consultation was carried out with the Tribal Council of the NVK. Government-to-government consultation took place through meetings (in-person and via teleconference) and written correspondence (see Appendix A of the Final EA). The NVK provided formal and recorded comment on the Draft EA, but did not provide formal or recorded comment on the Final EA.

10.2.1 Government-to-Government Consultation

The government-to-government consultation with the NVK is detailed below. Meeting notes/summaries are provided in Appendix B of the Final EA.

December 21, 2004: This was the first government-to-government meeting with the NVK. Issues that were raised have been discussed throughout the Final EA. Concerns included the cultural significance of the existing airport location, potential Alternative 2 impacts to Fresh Water Lake, site selection for the relocated Alternative 2 landfill, and potential Alternative 2 or 3 conflicts with traditional trails.

April 5, 2005: This was the second government-to-government meeting with the NVK. The major issues discussed were the feasibility of paving the selected alternative and the potential for shifting Alternative 2 to the west. HDL's subsequent government-to-government consultation report explained the rationale for not paving the runway (value added would not justify the additional cost) or shifting the Alternative 2 runway west (it would require additional gravel and cost more than the current alignment).

May 18, 2005: This was the third government-to-government meeting with the NVK. The major issue was concern over the potential for Alternative 2 to restrict city expansion to the west. Expansion concerns are addressed in Section 3.14 (Compatible Land Use) of the Final EA.

September 13, 2005: This was the fourth government-to-government meeting with the NVK. It was primarily an informational meeting during which representatives from the FAA met with NVK representatives to provide an update on the status of the Final EA.

April 10, 2008: This was the most recent government-to-government meeting held with the NVK Council. The FAA met with the Council and solicited and recorded comments and testimony on the Draft EA. Testimony at this meeting was recorded on tape by the Borough's project administrator, Laura Strand, and then sent to Computer Matrix Court Reporters, LLC for transcription. The testimony and response to those comments are included in Draft EA Appendix E.

January 5, 2009: The FAA sent a letter to the NVK notifying them of the status of the Final EA, the public comment period on the Final EA, and the upcoming public hearing on the Final EA and ANILCA Section 810 Evaluation. The letter also notified the NVK of the FAA's identification of Alternative 2 as the agency's Preferred Alternative.

10.2.2 Section 106 Consultation

Section 106 consultation with the State Historic Preservation Officer (SHPO) was done with written correspondence. This consultation was formally initiated via letter in April 2007. Through the consultation process, the SHPO issued her concurrence with the FAA's finding of *no historic properties affected* for the Preferred Alternative. Appendix A of the Final EA contains a copy of the correspondence with the SHPO.

Additional Section 106 consultation was carried out with the Inupiat Community of the Arctic Slope (ICAS), Kaktovik Inupiat Corporation (KIC), and the Arctic Slope Regional Corporation (ASRC). This consultation was primarily conducted through written correspondence (see Appendix A of the Final EA).

10.3 Agency Consultation

In addition to the public and government-to-government and Section 106 consultations, the Sponsor and their NEPA and resource specialty consultants have engaged several state and federal agencies throughout the preparation of the Draft EA and Final EA. State agencies, including divisions of the Alaska Department of Natural Resources, the ADFG, and the ADEC were contacted for resource data, input on resource identification and analysis methods, and initiation of the coastal zone consistency review. Federal agencies including the Corps, NMFS, the USFWS, and the BLM were also consulted extensively through the NEPA process.

The Sponsor and the FAA solicited input from the Corps and the USFWS on resource issues and permitting requirements for resources under their respective jurisdiction or for which they had special expertise. This included input on alternatives development and the scope of the impacts analysis in the Draft EA. After publication of the Draft EA, the Sponsor and the FAA solicited comments on the Draft EA from both agencies.

During preparation of the Final EA, the FAA identified the Preferred Alternative, at which time the Sponsor contacted the Corps to discuss Section 404 permitting requirements and mitigation commitments and engaged the USFWS in informal Section 7 consultation. The USFWS, who manages the Refuge and with whom the FAA is required to consult under the ESA, indicated the need for a Polar Bear-Human Interaction Plan for the Preferred Alternative, and determined that formal Section 7 consultation and the preparation of a biological assessment were not necessary. The Draft EA was prepared and submitted to the USFWS in November 2008. The USFWS also provided input on the potential compatibility of the various alternatives with the key activities, attributes, and features of the Refuge as well as on potential impacts to caribou, polar bears, and eiders. See Appendix A of the Final EA for copies of correspondence with the USFWS regarding the potential compatibility of the alternatives with the features, attributes, and activities of the Refuge.

11.0 Summary of Required Environmental Determinations

In accordance with applicable law, the FAA makes the following determinations for this project based upon the appropriate information and data contained in the Final EA and the administrative record:

1. The Preferred Alternative is reasonably consistent with the existing plans of public agencies responsible for development in the area (49 U.S.C. § 47106(a)(1)). The determination prescribed by this statutory provision is necessary for FAA approval of airport project funding applications. To make this determination, the FAA considered the following local land use and development plans:
 - North Slope Borough Comprehensive Plan, adopted by the Borough Assembly on October 11, 2005, which identified airport runway and flood improvements as a priority project on the Borough's Capital Improvement Projects list pending funding. The Plan also identified a need for a new airport but noted disagreement about where it should be located;
 - Alaska Coastal Management Program enforceable policies at 11 AAC 112;
 - Final Draft North Slope Borough Coastal Management Plan Amendment dated June 2007. This plan had not received approval from the State of Alaska at the time the Final EA and this FONSI/ROD were prepared;
 - Alaska Department of Environmental Conservation policies for siting landfills near airports. The relocation of the community landfill under the Preferred Alternative would be closer to the new airport runway than is mandated by FAA and ADEC policy. The FAA and ADEC both make allowances for landfills within the required separation distance so long as effective wildlife hazard abatement measures are implemented at the landfill; and
 - Arctic National Wildlife Refuge Comprehensive Conservation Plan issued in September 1988.

In light of the above, the FAA finds that the project is consistent with the existing land use and development plans of public agencies in the area of the proposed airport.

2. The Secretary of Transportation is satisfied that the interests of the communities in or near the project location have been given fair consideration (49 U.S.C. § 47106(b)(2)). The determination prescribed by this statutory provision is necessary for FAA approval of airport development project funding applications. The local planning process over the last 7 years, beginning with the start of the Airport Master Plan process in 2002 and including preparation of the Draft and Final EA documents, provided numerous opportunities for the affected community and individual residents to voice concerns and specific interests. See the section of this FONSI/ROD titled "Summary of Public and Agency Involvement" for a detailed description of public involvement opportunities afforded throughout the planning process.
3. To the extent reasonable, the Sponsor has taken or will take actions to restrict land uses in the airport vicinity to ensure the uses are compatible with airport operations (49 U.S.C. § 47107(a)(10)).
4. In accordance with FAA Order 5050.4b § 1203(b)(1)-(2) and ANILCA Section 810, the Sponsor has certified that it has provided opportunity for a public hearing regarding the Preferred Alternative (constructing a new airport) and other alternatives considered as well as the ANILCA Section 810 evaluation. A public hearing was held for the Draft EA on April 11, 2008 and on the Final EA and ANILCA Section 810 evaluation on February 17, 2009 in Kaktovik, Barter Island, Alaska. More information about these hearings is provided in Section 10 of this FONSI/ROD. Further, the Sponsor's decision-making board, the North Slope Borough Assembly, includes representatives from the community of Kaktovik.

5. In accordance with EO 11990 (Protection of Wetlands), the FAA has determined that there is no practicable alternative that would enable the FAA's Preferred Alternative (or any other alternative considered in the Final EA) to avoid wetlands. As a result, the Preferred Alternative incorporates all practicable measures to minimize unavoidable harm to wetlands. These findings are based upon the analysis contained in the Final EA, as well as correspondence and consultation with the Corps.
6. The Sponsor has certified that it will implement the proposed activities in accordance with the enforceable policies of the State's Coastal Zone Management Plan. The FAA has received certification from the project Sponsor regarding this commitment.
7. The Preferred Alternative would not use and Department of Transportation Act Section 4(f) resources. It would result in temporary occupancy of one 4(f) resource, the Refuge. The FAA has received written concurrence from the agency with jurisdiction over the Refuge, the USFWS, that the actions on the Refuge constitute temporary occupancy and not use.
8. The Preferred Alternative would not have a significant adverse impact on subsistence resources, uses, access, or competition. These findings are based upon information contained in the Final EA, including the ANILCA Section 810 evaluation.

12.0 FAA Findings

Based on the Final EA prepared for this project, the FAA has issued this FONSI/ROD. The information in both the Final EA and the FONSI/ROD is hereby incorporated into the FAA's final decision.

12.1 Finding of No Significant Impact

After careful and thorough consideration of the facts contained herein and in the Final EA, the undersigned finds that the proposed Federal action with the required mitigation discussed in this FONSI/ROD is consistent with existing national environmental policies and objectives as set forth in section 101(a) of the National Environmental Policy Act at 42 U.S.C. §4331(a) and other applicable environmental requirements and that it will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to section 102(2)(c) of the National Environmental Policy Act at 42U.S.C. §4332(2)(c). As a result, the FAA will not prepare an environmental impact statement (EIS) for this action. The FAA also finds that the proposed Federal action will not significantly restrict subsistence resources and uses on public lands as protected by Section 810 of ANILCA, as no Federal public lands are within the area affected by this alternative.

12.2 Record of Decision

I, the undersigned, have carefully considered the FAA's statutory mandate to plan and develop a safe and efficient national airport system that satisfies the needs of the aviation interests of the United States and the other aviation goals discussed in the Final EA. My review included the purpose and need that the project would serve, the alternative means of achieving the purpose and need for the project, the environmental impacts of a range of alternatives, and the mitigation necessary to preserve and enhance the human, cultural, and natural environment. Under the authority delegated to me by the FAA Administrator, I find that Alternative 2 as described in the Final EA is reasonably supported. The undersigned, therefore, directs that action be taken to carry forward the necessary agency actions discussed in the Final EA and in the incorporated FONSI. This consists of:


1. Determinations under 40 U.S.C. §§ 47106 and 47107 pertaining to FAA funding of airport development, including approval of an Airport Layout Plan in accordance with 49 U.S.C. § 47107(a)(16) for Alternative 2 (Preferred Alternative), summarized in Chapter 2 of the Final EA and this FONSI/ROD and including the following elements:
 - project designs;
 - site preparation;
 - runway, apron, and runway safety area construction;
 - aviation facilities development;
 - access road and overhead utility transmission line construction;
 - closure of the existing landfill and sewage lagoon;
 - construction of a new landfill and sewage lagoon; and
 - environmental mitigation.
2. Approval under 49 U.S.C. § 47107 *et seq.* of project eligibility for Federal grant-in-aid funds under 49 U.S.C. § 47104 as well as approval.
3. Determination of actions, through the aeronautical study process of any off-airport obstacles that might be obstructions to the navigable airspace under the standards and criteria of 14 CFR Part 77. In addition, evaluation of the appropriateness of proposals for on-airport development from an airspace utilization and safety perspective based on aeronautical studies conducted pursuant to the process under the standards and criteria of 14 CFR Part 157.
4. Approval of protocols for maintaining coordination among Sponsor offices, construction personnel, and appropriate FAA program offices, ensuring safety during construction and implementation of committed minimization and mitigation measures.
5. Finally, based upon the administrative record of this project, the undersigned certifies, as prescribed by 49 U.S.C. § 4502(b), that implementation of the proposed project is reasonably necessary for use in air commerce.

13.0 Approved and Ordered



Byron K. Huffman

Airports Division Manager, Alaskan Region



Date

14.0 Right of Appeal

This FONSI/ROD is the FAA's final decision and approval for the actions identified as the Preferred Alternative in the Final EA. This FONSI/ROD is a decision document and constitutes a final order by the FAA Administrator. Under 49 U.S.C. § 46110(a), this FONSI/ROD is subject to the exclusive judicial review by either (1) the United States Court of Appeals for the District of Columbia Circuit, or (2) in the court of appeals of the United States for the circuit in which the person who seeks review resides or has its principal place of business. Under 49 U.S.C. § 46110(a), a petition for review of this FONSI/ROD must be filed no later than 60 days after this FONSI/ROD is issued absent reasonable grounds. A petitioner who seeks to stay implementation of this FONSI/ROD must, per Fed. R. App. P. 18(a), first move the FAA for a stay pending review.

15.0 References Cited

Hattenburg Dilley & Linnell (HDL). 2006a. *Barter Island Airport Master Plan*. Anchorage.

_____. 2006b. *Barter Island Landfill Siting Criteria Report*. Anchorage.

APPENDIX A

**Response to Comments on the Final
Environmental Assessment and Section 4(f)
Evaluation for Barter Island Airport
Improvements, Kaktovik, Alaska**

Response to Comments Received During the February 17, 2009 Public Hearing on the Final Environmental Assessment and Section 4(f) Evaluation for Barter Island Airport Improvements, Kaktovik, Alaska

Carla Sims-Kayotuk: I oppose your preferred Alternative 2 location for the reasons, I think it's too close to the lake. I'm worried about the contamination that will happen to our only freshwater source on the island.

Response: *Alternative 2's distance from Barter Island's Freshwater Lake, combined with prevailing east-west winds, and the implementation of Best Management Practices to control erosion, would result in minimal risk of contamination of this water supply (pages 3-69 through 3-71 of the Final Environmental Assessment and Section 4(f) Evaluation for Barter Island Airport Improvements, Kaktovik, Alaska, January 2009; hereafter referred to as "Final EA").*

Carla Sims-Kayotuk: I'm also concerned about the relocating of the dump. I think our island is too small as it is, that if we close up the dump that we have now and have to move it here, then when that one fills up where else are we going to move it just because of the location of our lake?

Response: *The new landfill would have a minimum of a 20 year capacity (page 3-135 of the Final EA). Its location would allow the existing landfill to be closed and rehabilitated resulting in no net loss of land on Barter Island.*

Carla Sims-Kayotuk: I'm also concerned about the amount of land that the city of Kaktovik will be losing. The Alternative 2 location would cause the city of Kaktovik to lose 4(f) lands that they fought very hard to obtain from KIC, they had a very long battle trying to obtain those lands under ANCSA 14(c). We just recently received copies of those plats not too long ago, so we're concerned about that.

Response: *FAA is sensitive to the citizens of Kaktovik and their concerns regarding ANCSA 14(c) lands. In response to these concerns, Section 4.0 of the Final EA (page 4-1) includes an evaluation of the project alternatives' respective impacts on 4(f) lands.*

Section 4(f) applies to "publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site or national, State, or local significance (as determined by federal, State, or local officials having jurisdictions over the park, recreation area, refuge or site)" (page 4-2 of the Final EA). However, officials with jurisdiction over those lands "must have formally designated and determined the land in question to be significant for park, recreation area, wildlife and waterfowl refuge purposes", and furthermore, "evidence of formal designation would be the inclusion of the publicly owned lands, and its function as a 4(f) resource, into a city or county Master Plan" and that "a mere expression of interest or desire is not sufficient" (Page 4-6 of the Final EA). A review of property deeds, the ANCSA conveyance, and the Final Kaktovik Municipal Land Settlement Agreement indicated that none of the lands that would be impacted by Alternative 2 met the criteria of receiving a level of planning for development into parks or recreational facilities sufficient for the lands to qualify for classification as a Section 4(f) property (pp 4-7 and 4-8 of the Final EA).

Carla Sims-Kayotuk: I feel that the best location to benefit our community in the long run, if you look in the way future, I think the best location for a new airport for our community and that would best benefit our community would be Alternative 3, somewhere on the mainland. Where it shows on the map, that's too far, we're willing to negotiate another location on the mainland that would best benefit everybody but the community as a whole,

from the people that I've spoken with, prefer Alternative 3. And I just wanted to go on the record one more time saying that, please, listen to the community, we know what's best for ourselves.

Response: *In the Final EA (page 4-12) the FAA determined that since feasible and prudent alternatives that avoid the use of Section 4(f) resources are available, and Alternative 3 would involve the non-de minimis use of Section 4(f) resources, specifically the Refuge, that alternative could not be selected. Any site on the mainland would impact 4(f) lands; specifically, the footings of the bridge across Kaktovik Lagoon Channel, would directly impact the Refuge as well as the 22(g) lands.*

Carla Sims-Kayotuk: Also I just wanted to go on record saying Annie Titluk, the Mayor of the City of Kaktovik, wanted to come and speak on behalf of the City, but she's stranded in Barrow due to the weather, so she may be having to write something and sending it in since she was unable to come and say something for the city.

Response: *Thank you for your input.*

Ida Angasan: I too do not like the idea of using Alternative 2 for our community. We live on this island here. And where you're going to put the airport, where you're proposing to put the airport is not the ideal thing for this community because it's too close to our water lake, it's our only source of drinking water. It'll affect our community with the dust and the health of our children, especially our babies, and you hear about all this asthma and all the health problems and the pneumonia that people die of, recently, it's just, you know, the health problems of our community, not just this community but throughout the nation is getting worse than what it's been for years. And the dust that's going to come with by building Alternative 2 up here, the airport, will really affect our community.

Response: *Alternative 2 would relocate the airport farther from Kaktovik than the current airport. This would keep construction traffic out of Kaktovik as well as substantially reducing the likelihood of any pollutants from the airport impacting the community (page 3-52 of the Final EA). The distance of the airport from Freshwater Lake, combined with prevailing east-west winds, would also minimize the risk of contamination to Freshwater Lake (page 3-69 of the Final EA).*

Ida Angasan: And then also when you're changing that landfill from down there to farther up here, isn't there a regulation to where you have to put the landfill from one place to another so far away from the community and from the air field? I think we need to check into that also.

Response: *The Final EA discloses land use regulations regarding landfill location (pages 3-115 and 3-116 of the Final EA).*

Ida Angasan: Alternative 4, when I read the summary, it said, there would be no changes to Alternative 4, no upgrades and no modifications, isn't that wrong?

Response: *Alternative 4 is the No Action Alternative, which means that no project elements would be constructed under Alternative 4, and the current airport would remain as is with the exception of normal current maintenance activities (page 2-12 of the Final EA).*

Ida Angasan: Before we were given this thing saying you have to select Alternative 2 or else we're going to take the money elsewhere, you cannot do that to us. I know the money's tight and everything now but – and we want a new airport, but Alternative 3 would be the best for our community, our subsistence, the growth of our village and community. We had 10 babies last year, 2008 we had 10 babies, you know. Our community is

growing. You can't just put an airstrip in the middle of our community and the lake water over here and we need to grow, our community is growing.

Response: *The Final EA analysis disclosed that Kaktovik is growing at an average rate of 2% a year. Under this growth scenario, an existing proposed 140-lot platted subdivision south of the City would accommodate growth until the year 2043. This does not take into account other existing land available for community growth on Barter Island (pages 3-116 and 3-117 of the Final EA). The airport, relocated landfill, and proposed access road would impact approximately 51 acres, or about 1.3% of Barter Island (page 3-6 of the Final EA). Accordingly, Alternative 2's location on Barter Island would not restrict community growth in the foreseeable future.*

Adam Linn: I'm going to be realistic and comment on that proposed landfill on Number 2. You know if you take a good look at Number 2, where that existing landfill is now, there's a lot of trash all over and if it's going to be on Number 2 there should be a better system to contain that waste.

Response: *Operations of the landfill are not under the jurisdiction of the FAA. However, the Final EA does include recommended mitigation to fence the landfill, as well as stockpiling gravel to allow the frequent burying of waste. These mitigation measures would help contain waste in the landfill (pages 2-15 and 2-16 of the Final EA).*

Adam Linn: I prefer Alternative 1 because it probably would help with our erosion problem. You know I don't think you guys put much effort into looking at Number 1. Because even if it was good for 30 years that probably would have been another 30 years that would help stop most of the erosion around the island.

Response: *Alternative 1 was analyzed at the same level of detail as the other alternatives. It was not picked as the FAA's Preferred Alternative because of concerns regarding its air quality and noise impacts to Kaktovik, as well as its vulnerability to continued erosion from sea storms and potentially rising sea levels (page 2-13 of the Final EA).*

George Killeak: I am not for Alternative 2, I am not for it because of the subsistence trail and with the runway being there and the subsistence trail is going to be lost due to a fence that goes around the runway, around the whole existing runway if it was Alternative 2.

Response: *Alternative 2 would not fence the runway. Access to the 17(b) trail you are referring to would be maintained through the road system (page 3-117 of the Final EA).*

George Killeak: The landfill is in a bad situation, whether it's further in or closer, it's in a bad, bad place. The landfill we have now, we can expand it if needed and that landfill has lasted better than 15 years and it still has a lot of life left. And my only decision I make for myself is Alternative 3, going with the runway on the mainland.

Response: *The new landfill would have a minimum of a 20 year capacity (page 3-135 of the Final EA). Its new location would be further from the City of Kaktovik than the current landfill. Its location would allow the existing landfill to be closed and rehabilitated resulting in no net loss of land on Barter Island.*

George Tagarook: I prefer Alternative 1, if it could be fixed, but Alternative 2 is preferable and Alternative 3 is way too far for emergency vehicle, road maintenance and for storage of equipment if we need to be down there for certain length of time. Plus you need permits for powerlines, unless they put a generator in. And there'll be no building, no hangar, no warm up shack, you know, if people get stuck out there in a storm. And if it would be possible that Alternative 1 be looked at a little bit more. And somebody mentioned something about

contaminating our water lake road, how long has that landfill been there, 15 years and has there been any tests on any contaminants on the lake, and that's one possibility that we could look at and maybe if Alternative 2 fence is put up, I think I read something about Alternative 3 fence being put up instead of Alternative 2, so I didn't read anywhere that it would state that Alternative 2 would have a fence. And being in the medical field all my life driving ambulances and stuff, if there's a storm between here and the runway there'll be a plane will land there but the fire department or if there's a plane crash it'll be too far for emergency equipment and it'll deplete our resources in the local area unless FAA can come up with a hangar where there's a airport fire truck or I heard in the news that any aircraft that's going to be over 30,000 or 20,000 pounds or 20 tons, they'll have to have the security, airport police, the homeland security stuff are getting more strict and if there's no security at the airport what's going to happen. You know TSA's writing this up now, we got, I think to the end of March to comply or comment on.

Response: *The Final EA discloses the potential safety issues due to the distance of Alternative 3 from Kaktovik (page 3-92 of the Final EA).*

Operations of the landfill are not under the jurisdiction of the FAA. However, the Final EA does include recommended mitigation to fence the landfill, as well as stockpiling gravel to allow the frequent burying of waste. These mitigation measures would help contain waste in the landfill (pages 2-15 and 2-16 of the Final EA).

The distance of the airport from Freshwater Lake, combined with prevailing east-west winds, would minimize the risk of contamination to Freshwater Lake (page 3-69 of the Final EA).

George Tagarook: They're going to build a bridge to nowhere if they do it'll be good only in the summer and the road maintenance, who's going to do the road maintenance? Is the North Slope Borough going to be doing the road maintenance or is FAA going to be doing the road maintenance, I know if anybody will contract to bid or if it's going to be out for contract or what not so that's some of the stuff you have to consider, safety of our emergency equipment, safety of the snowplow operators and safety of the people that are being transported while those they're charging \$5 to go from this town to the airport and it's only, what, a half a mile, how much are they going to charge, local, eight miles, five times eight that's quite a bit of money and it with the fuel prices going up everything's going to go up, transportation, gas, diesel, and it'll deplete some of our resources for emergency services.

Response: *Section 3.11.4.4.1 of the Final EA discloses the increased socioeconomic impacts of maintaining the longer access road for Alternative 2 (page 3-92 of the Final EA). The concerns regarding the length of the Alternative 3 access road were considered in identifying Alternative 2 as the FAA's Preferred Alternative (See Section 2.6 of the Final EA, page 2-13). The maintenance of any constructed access roads would not be under FAA jurisdiction, but would be the responsibility of the North Slope Borough.*

Pam Miller: I will say that we definitely do not support No Action, Alternative 4. There's clearly a need for airport work in Kaktovik. And the EA correctly concludes that Alternative 3 would have the highest impacts on most impact categories such as wetlands, fish and wildlife habitats and populations. The mission purpose and key features of the Arctic National Wildlife Refuge and existing land uses in the area, both due to the bridge crossings and to the activities on the mainland. I note that in the EA analysis Alternative 1 would cause the least loss of, permanent loss of habitats. I agree with some of the speakers here that it looks like there wasn't as rigorous analysis of Alternative 1 as Alternative 2, and I think it could be helpful to do additional analysis there of whether it may make sense especially in the economic times that we find ourselves in, in the country and in the state. And the EA didn't address the cost factors, obviously that's not the only important factor for the airport for the community.

Response: *Alternative 1 was analyzed at the same level of detail as the other alternatives. It was not picked as the FAA's Preferred Alternative because of its vulnerability to continued erosion from sea storms and potentially rising sea levels as well as concerns regarding its air quality and noise impacts to Kaktovik, (page 2-13 of the Final EA).*

Pam Miller: We agree with the FAA's analysis regarding the selection of an alternative that meets the village need for airport construction while reducing environmental impact and some of that environmental impact would be to Federal protected resources and four different ones were named in the environmental assessment and our written comments will address that more.

Response: *Thank you for your comment.*

Pam Miller: We disagree with a few of the changes made from the Draft to the FEA regarding conclusions of the degree of impact regarding Alternative 3. and there's ample evidence provided in the EA and in the references cited that there could be significant direct as well as cumulative impacts from Alternative 3.

Response: *Thank you for your comment.*

Pam Miller: There was one part that I thought deserved a little bit more treatment and that had to do with whether there would be impacts from the Shell leases and the other oil and gas leases immediately off shore of the island as well as a little further off shore that would affect subsistence resources, and we're pleased by the court victory that has occurred recently in the case by the North Slope Borough, ICAS, and a number of other groups which has slowed down MMS's action on drilling on Shell Oil leases. There are other leases immediately off shore the coast of Kaktovik and there could be activity going on at the same time, seismic activity or other activity that would affect the village at the same time, concurrent time. So while I'm hopeful that it's not reasonably foreseeable that there would be that off shore oil activity I think I mean I'm optimistic, but I do think that cumulative impact should be addressed in the report.

Response: *Section 3.20.3 of the Final EA (page 3-140) discloses the potential cumulative impacts of offshore oil exploration.*

Ida Angasan: If you did put the airstrip on the Alternative 2 and we have fog on this island, and we have our houses and buildings and everything and it's circling around and it's foggy here, there's also the impact of having a crash.

Response: *Alternative 2 would be less likely to have fog than Alternative 1 since it is not located immediately adjacent to the Beaufort Sea (page 3-90 of the Final EA).*

George Killeak: On the landfill part, it says somewhere that there should not be a landfill within two miles of a runway if I'm correct, I read that somewhere and I just want to go on record that if that was Alternative 2 it would be 1.2 miles from the runway which is not two miles, if they allowed it.

Response: *The Final EA discloses land use regulations regarding landfill location (pages 3-115 and 3-116 of the Final EA).*

George Killeak: And the other part is Alternative 1 should rightfully go to the people because there's grave sites and artifacts and stuff that are still under the existing hangar that they actually put from what the elders say they actually put the tarmac, the apron or the terminal right where there was a gravesite and it should rightfully go back to the people.

Response: *The U.S. Air Force intends to relinquish its control of the land the current airport is located on to the BLM, who then can transfer the land to Kaktovik Inupiat Corporation (KIC) (page 3-109 of the Final EA).*

Response to Comments from Letters Received on the Final Environmental Assessment and Section 4(f) Evaluation for Barter Island Airport Improvements, Kaktovik, Alaska

Summary of Letter Received from City of Kaktovik; dated February 20, 2009: The City of Kaktovik is opposing Option 2 and is supporting Option 3 due to losing Section 4(f) lands and because the majority of Kaktovik residents prefer Option 3.

Response: *FAA is sensitive to the citizens of Kaktovik and their concerns regarding ANCSA 14(c) lands. In response to these concerns, Section 4.0 of the Final EA (page 4-1) includes an evaluation of the project alternatives' respective impacts on 4(f) lands.*

Section 4(f) applies to "publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site or national, State, or local significance (as determined by federal, State, or local officials having jurisdictions over the park, recreation area, refuge or site" (page 4-2 of the Final EA). However, officials with jurisdiction over those lands "must have formally designated and determined the land in question to be significant for park, recreation area, wildlife and waterfowl refuge purposes", and furthermore, "evidence of formal designation would be the inclusion of the publicly owned lands, and its function as a 4(f) resource, into a city or county Master Plan" and that "a mere expression of interest or desire is not sufficient" (Page 4-6 of the Final EA). A review of property deeds, the ANCSA conveyance, and the Final Kaktovik Municipal Land Settlement Agreement indicated that none of the lands that would be impacted by Alternative 2 met the criteria of receiving a level of planning for development into parks or recreational facilities sufficient for the lands to qualify for classification as a Section 4(f) property (pp 4-7 and 4-8 of the Final EA).

Summary of Substantive Comments in Letter Received from Northern Alaska Environmental Center; dated February 24, 2009:

The scientific information from sources in the record support a conclusion that the construction and long-term operation of Alternative 3 airport project would cause permanent loss and degradation resulting in significant impacts to floodplains, wetlands, wilderness, migratory bird habitat, polar bear denning habitat, and fish and wildlife subsistence resources. Notably, the Final EA fails to acknowledge the significance of long-term, permanent loss and degradation of sensitive habitats of the Porcupine Caribou Herd and polar bear denning habitats from the Alternative 3 project. It is insufficient in assessing impacts of Alternative 3 to Arctic Refuge resources and protected species to simply consider the percentage of direct habitat lost for caribou and other species. The Final EA also ignores increased risks from Alternative 3 to mother polar bears migrating from the Beaufort Sea coast to land denning habitats. This is significant due to the threatened status of the bears under the ESA, and because of global warming's loss of sea ice, the Arctic Refuge land area is increasingly being used by S. Beaufort Sea population polar bears for denning.

The Final EA does not fully address the indirect and cumulative effects from Alternative 3 to migratory birds, caribou, polar bears, and subsistence fish and wildlife resources including impacts occurring beyond the direct area of tundra habitat loss. The Final EA correctly concludes that Alternative 3 would have the greatest direct loss of bird habitats (page 3-14 of the Final EA), but it fails to additionally conduct a complete analysis of the permanent loss and degradation of such habitats. It incorrectly concludes Alternative 2 and 3 would have the same level of impact to birds because it fails to address the diversity of the drained lake basin complex wetlands, ponds, and streams, snow goose fall staging habitats, and rich nesting habitats present on the mainland and refuge lagoon that would be affected by Alternative 3.

We disagree with some changes made in the Final EA from the Draft regarding the conclusions of degree of impacts from Alternative 3. There is ample evidence provided here, in EA references and our comments that Alternative 3 would pose significant impacts to the refuge and refuge resources including encroachment into floodplains (Draft EA p.35), damage to tundra (Draft EA, p. 39), negative effects on Porcupine Caribou and polar bears and that these would be felt beyond the project impact (Draft EA, p. 32). We also agree with the earlier statements (Draft EA, p. 25) that Alternative 3 does not appear to minimize impacts to subsistence resources.

Response: *The Final EA does conclude that Alternative 3 would have the highest relative impacts of the action alternatives on most natural resource impact categories (page ES-7 of the Final EA), including wetlands, fish and wildlife habitats and populations, as well as long-term loss of caribou calving, post-calving, insect relief and east-west migration area (page 3-16 of the Final EA). The Final EA included an analysis of percentage of direct habitat lost for caribou and other species, recent calving location data, and existing data regarding caribou noise and development sensitivity, and concluded that because of the short term impact; use of current calving areas and the overall low relative habitat lost compared to available caribou calving and insect relief habitat, anticipated effects were unlikely to impair caribou population viability (page ES-7; pages 3-16 to 3-17 of the Final EA).*

According to habitat maps of the project area, mainland areas where Alternative 3 would be constructed are similar habitat to where Alternative 2 would be constructed. The importance of both Barter Island and the immediately adjacent mainland for nesting and staging areas for several bird species is discussed in Section 3.3.3.2 of the Final EA (page 3-10 of the Final EA).

Section 3.4.4.3.2 of the Final EA discloses impacts to polar bear under Alternative 3. Because of the reduced impacts to polar bears from Alternative 3 in relation to the other alternatives (page 3-27 of the Final EA) and because the material source for that Alternative would be located away from polar bear denning areas (see material source map on page 2-3 and denning area map on 3-22 of the Final EA); the Final EA concluded that impacts would not be likely to adversely affect polar bears. At the time the Final EA was published, there were no recorded incidents of polar bears using denning habitat adjacent to the Alternative 3 site. Nevertheless, the Final EA includes mitigation measures for all alternatives to survey for denning bears near construction sites and to use noise abatement structures if denning bears area found (page 3-28 of the Final EA).

Section 3.13.4.4 of the Final EA discusses impacts of Alternative 3 on floodplains. The Final EA concluded that Alternative 3 could result in a "significant encroachment" to the 100-year floodplain for transportation purposes due to damage resulting in interruption of service of a vital transportation facility (page 3-105 of the Final EA). However, because the airport would only impact about 1 acre of floodplain habitat and because of the surrounding low-lying topography, the Final EA concluded that encroachment would not cause a significant impact to the functional value of a floodplain, and that the installation of culverts along the access road would promote natural drainage and minimize flow restriction.

The Draft EA stated that Alternative 3 could damage the tundra by allowing vehicle access to the mainland, and may result in a significant impact (Draft EA, page 39). The Draft EA offered no data to support this conclusion; thus it was not included in the Final EA. Section 2.5.3 of the Final EA included information regarding a USFWS concern that the bridge to the mainland could result in vehicle-induced tundra damage; however, any vehicle activity on tundra is not part of this proposed project and it was assumed that regulations regarding vehicle use on tundra on the mainland in the Refuge would be enforced. Section 2.4.3 of the Final EA analysis discloses construction impacts on tundra and describes the use of ice roads to reduce compaction impacts to the tundra during construction seasons.

Both the Draft and the Final EAs indicate that impacts to subsistence would be greatest under Alternative 3 (page 3-43 of the Final EA). However, as with the other action alternatives, the relative amount of habitat that provides subsistence uses that would be lost would be relatively small in relation to existing subsistence use areas (page 3-43 of the Final EA).

As per Council on Environmental Quality Regulations (CEQ) for the implementation of NEPA, the Final EA uses the context and intensity of the impact to determine significance (40 CFR 1508.27). While Alternative 3 has a higher intensity of impacts to natural resources than the other alternatives due to the higher number of acres of habitat that would be disturbed, and its location in some key habitat types, the relative context of that impact is still very small in comparison to existing habitat in the project area and immediate vicinity. Accordingly, it was determined that these impacts would not be significant.