



Izembek

National Wildlife Refuge

Land Exchange/Road Corridor

Final Environmental Impact Statement

Appendix D ANILCA Section 810

Analysis of Subsistence Impacts





U.S. Fish and Wildlife Service Mission Statement

The Mission of the U.S. Fish & Wildlife Service is working with others to conserve, protect and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people.



Refuge System Mission Statement

The Mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

—National Wildlife Refuge System Improvement Act of 1997

APPENDIX D
ANILCA Section 810 Analysis of Subsistence Impacts

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ANILCA Section 810 Analysis of Subsistence Impacts

The U.S. Fish and Wildlife Service (Service), is required by Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA) to evaluate the effects on subsistence uses and needs in determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands on National Wildlife Refuges in Alaska. The evaluation of effects of the alternatives identified in the *Izembek National Wildlife Refuge Land Exchange/Road Corridor Environmental Impact Statement* (Land Exchange EIS) on subsistence uses and needs is documented below. The term subsistence is often used to refer to the culturally significant practices of relying on local fish and wildlife resources for food, whether harvested on state, federal, or private lands. This Section 810 analysis focuses on the subsistence uses and needs on federal lands.

If this evaluation concluded with a finding that the Proposed Action or its alternatives would result in a significant restriction to subsistence uses and needs, and we wish to proceed, then the Service would be required to conduct hearings and to meet additional procedural requirements of Section 810. However, this analysis concluded that the Proposed Action and the alternatives would not result in a significant restriction of subsistence uses and needs on federal lands.

The Service is considering a proposal to exchange certain lands within the Izembek National Wildlife Refuge (Refuge) for lands owned by the State of Alaska and the King Cove Corporation. The purpose of the exchange, as identified in the *Omnibus Public Land Management Act of 2009* (Public Law 111-11, Title VI, Subtitle E) (the Act), for construction and operation of a single lane gravel road between the communities of King Cove and Cold Bay, Alaska that would provide King Cove residents with road access to the Cold Bay airport for health and safety purposes.

In the Act, Congress directed the Secretary of the Interior to prepare an Environmental Impact Statement (EIS) in accordance with the terms of the Act, as well as the *National Environmental Policy Act* (NEPA) of 1969, as amended (42 USC 4321 et. seq.), and its implementing regulations (40 CFR parts 1500-1508). Congress specified that the EIS must analyze the land exchange, potential road construction and operation, and a specific road corridor through the Izembek National Wildlife Refuge and the Izembek Wilderness that is to be identified in consultation with the State of Alaska, the City of King Cove, and the Agdaagux Tribe of King Cove (Section 6402(b)(2)). Upon completion of the EIS, the Secretary of Interior will determine whether or not the proposed land exchange is in the public interest.

In the Act, Congress identified the federal and non-federal lands involved in the exchange and provided guidance regarding the administration of the exchanged lands (Sections 6401 and 6404). Details of acreages affected by the proposed land exchange under each of the alternatives are provided in Table D-1.

- Approximately 206 acres of federal land (surface and subsurface estate) of the Izembek National Wildlife Refuge would be conveyed to the State under the land exchange¹. The boundary of the Izembek Wilderness would be modified to exclude the land exchanged

¹ Alternative 2 would exchange approximately 201 acres of land from the Izembek National Wildlife Refuge, and Alternative 3 would exchange approximately 227 acres of land from the Izembek National Wildlife Refuge.

for the road corridor. (The specific lands to be exchanged for the road corridor were not identified in the Act; two road corridor alternatives are evaluated in this EIS.)

- Approximately 1,600 acres (surface and subsurface estate) in the Alaska Maritime National Wildlife Refuge on Sitkinak Island, which is withdrawn for use by the U.S. Coast Guard, would be transferred to the State.
- Approximately 43,093 acres of land (surface and subsurface estate) owned by the State of Alaska adjacent to the North Creek and Pavlof Units of the Alaska Peninsula National Wildlife Refuge, would be conveyed to the United States (U.S.) and added to the Izembek Wilderness or the Alaska Peninsula National Wildlife Refuge as wilderness.
- Approximately 13,300 acres of land owned by King Cove Corporation (surface estate), located near Mortensens Lagoon and the mouth of Kinzarof Lagoon, would be conveyed to the U.S. and added to the Izembek National Wildlife Refuge. The exchange includes 5,430 acres in Izembek Wilderness on the east side of Cold Bay for which the King Cove Corporation would relinquish its selection under the Alaska Native Claims Settlement Act. [If the land exchange and the relinquishment are executed, then the King Cove Corporation is entitled to an alternate selection of 5,430 acres within Alaska Peninsula National Wildlife Refuge (see Section 3.3.1 and Figure 3.3-1).]

The Act directed that the exchange could not be finalized before the parcel of State land located in Kinzarof Lagoon had been designated as part of the State of Alaska's Izembek State Game Refuge. The Alaska Legislature passed and the Governor signed the *Izembek State Game Refuge Land Exchange Bill* into law (HB 210 Chapter 119 SLA 10) satisfying this requirement (see Section 1.6.3.1 of this EIS).

Chapter 2 describes the development of a reasonable range of specific alternatives, as required for an EIS. Two road alternatives are examined: Alternative 2 includes the land exchange as a southern road alignment (Figure 2-2) and Alternative 3 includes the land exchange and a central road alignment (Figure 2-3). The No Action alternative (Alternative 1), a hovercraft alternative (Alternative 4), and a ferry alternative (Alternative 5) are also reviewed. With both land exchange alternatives, an administrative adjustment of the boundary between the Izembek National Wildlife Refuge and the Alaska Peninsula National Wildlife Refuge in the vicinity of Blinn Lake would also be completed. See Table D-1 for a summary of acreage affected by the alternatives.

Chapters 3 and 4 of the Land Exchange EIS provide a detailed description of both the affected environment of the project area and the potential effects to subsistence of the alternatives. This Section 810 analysis uses the detailed information presented in the Land Exchange EIS to evaluate the potential impacts to subsistence on federal land pursuant to Section 810(a) of ANILCA.

Table D-1. Summary of Acres Affected by Alternatives

	Alternative 1: No Action	Alternative 2: Land Exchange and Southern Road Alignment	Alternative 3: Land Exchange and Central Road Alignment	Alternative 4: Hovercraft Operations (No Land Exchange)	Alternative 5: Lenard Harbor Ferry with Cold Bay Dock Improvements (No Land Exchange)
New Footprint in Acres	0	107	100	0	1.9
Acres Removed from Izembek Wilderness by Land Exchange	0	131	152	0	0
Acres Added to Wilderness by Land Exchange	0	44,491 (includes State parcel and Kinzarof parcel)	44,491 (includes State parcel and Kinzarof parcel)	0	0
Acres of Land Selection Relinquished in Wilderness	0	5,430	5,430	0	0
Acres of Land Selection Conveyed	5,430 (in Wilderness)	5,430 (non-Wilderness)	5,430 (non-Wilderness)	5,430 (in Wilderness)	5,430 (in Wilderness)
Estimated Area of Exchange Parcel for Road Corridor	0	201	227	0	0
Acres Removed from Alaska Maritime National Wildlife Refuge (Sitkinak Island)		1,619	1,619		

1.1 Subsistence Evaluation Factors

Section 810(a) of ANILCA requires that an evaluation of subsistence uses and needs be completed for any Federal determination to “withdraw, reserve, lease, or otherwise permit the use, occupancy or disposition of public lands.” As such, an evaluation of potential impacts to subsistence on federal lands under ANILCA Section 810 must be completed for this EIS. ANILCA requires that this evaluation include findings on three specific issues:

- The effect of such use, occupancy, or disposition on subsistence uses and needs;
- The availability of other lands for the purpose sought to be achieved; and
- Other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes (16 United States Code [USC] Section 3120).

The evaluation and findings required by ANILCA Section 810 for each of the five alternatives in the Land Exchange EIS (including the No Action alternative and the cumulative case) are considered in this ANILCA Section 810 analysis.

A finding that the proposed land exchange and associated road or other alternatives may significantly restrict subsistence uses imposes additional requirements, including provisions for notices to the State and appropriate regional and local subsistence committees, a hearing in the vicinity of the area involved, the making of a determination as required by Section 810(a)(3), or prohibition of the action. If a determination is made it shall show that:

- Such a significant restriction of subsistence uses is necessary, and consistent with sound management principles for the utilization of the public lands;
- The proposed activity would involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition; and
- Reasonable steps would be taken to minimize adverse effects upon subsistence uses and resources resulting from such actions.

To determine if a significant restriction of subsistence uses and needs may result from any one of the alternatives discussed in this EIS, including their cumulative effects, the following three factors in particular are considered:

- A reduction in subsistence uses due to factors such as direct impacts on the resource, adverse impacts on habitat, or increased competition for the resources;
- A reduction in the subsistence uses due to changes in availability of resources caused by an alteration in their distribution, migration, or location; and
- A reduction in subsistence uses due to limitations on the access to harvestable resources such as physical or legal barriers.

A significant restriction to subsistence may occur in at least two instances: (1) when an action substantially may reduce populations or their availability to subsistence users, and (2) when an action may substantially limit access by subsistence users to resources. Chapter 3 (Affected Environment) of the Land Exchange EIS provides information regarding areas and resources important for subsistence use, and the degree of dependence of affected villages on different subsistence resource populations. Chapter 4 (Environmental Consequences) provides an analysis of the effects on subsistence under each alternative, and was used to determine whether the action would cause a significant restriction to subsistence. The information contained in the Land Exchange EIS is the primary data used in this analysis.

A subsistence evaluation and findings under ANILCA Section 810 also must include a cumulative impacts analysis. Section 1.2, below, begins with an evaluation and finding for each of the five alternatives discussed in the Land Exchange EIS. Finally, the cumulative case, as discussed in Chapter 4 of the Land Exchange EIS (Environmental Consequences), is evaluated. This approach helps the reader to separate the subsistence restrictions that would potentially be caused by activities proposed under the five alternatives from those that would potentially be caused by past, present, and future activities that could occur, or have already occurred in the surrounding area.

When analyzing the effects of the alternatives, the analysis includes 5 villages associated with subsistence use of the proposed project area: King Cove, Cold Bay, False Pass, Nelson Lagoon, and Sand Point. These are the 5 villages with federally recognized customary and traditional, or

subsistence uses for key subsistence species in Game Management Unit 9D which includes the Cold Bay area.

1.2 ANILCA 810(a) Evaluations and Findings for the Five Alternatives and the Cumulative Case

The following evaluations are based on information relating to the environmental and subsistence consequences of the five alternatives described in Chapter 2 of the EIS. These include a No Action alternative, 2 alternatives in which the land exchange and associated road corridors are reviewed, and 2 alternatives which would not require the land exchange and other marine modes of transportation are considered. The subsistence impacts of each alternative are analyzed in Chapter 4, including review of the cumulative effects. The evaluations and findings focus on potential impacts to the subsistence resources themselves and access that relates to subsistence use.

Subsistence activities and uses could be directly and indirectly affected by the proposed land exchange and associated road corridors or marine transportation options. Direct effects on subsistence uses, which are “caused by the action and occur at the same time and place” (40 Code of Federal Regulations [CFR] 1508.8), would result from changes in resource availability, access, or competition. Indirect effects include subsistence users’ response to direct effects, contamination concerns, and changes in culturally significant activities associated with subsistence practices. These include harvesting, processing, transferring knowledge, autonomy, traditional diet, and integrity of culturally significant places. Indirect effects on subsistence users also could result from indirect effects on resources, such as responses to potential habitat fragmentation, disturbance, or changes in movement patterns.

1.2.1 Evaluation and Findings for the Alternative 1 – No Action

Under Alternative 1, the Service would not enter into a land exchange with King Cove Corporation and the State of Alaska for the purpose of constructing a road between King Cove and Cold Bay, Alaska. Current modes of transportation between the cities of King Cove and Cold Bay would continue to operate. These include:

- **Air:** Regularly scheduled commercial air flights between the cities of King Cove and Cold Bay. The Coast Guard would continue to provide occasional medical evacuations via helicopter when Coast Guard assets are in the vicinity and not committed to other assignments.
- **Marine:** Personal transit and medevac transport by local fishing vessels between the cities of King Cove and Cold Bay. The Alaska Marine Highway System would continue to provide seasonal ferry service between the communities of King Cove and Cold Bay approximately twice a month as part of the Southwest Alaska and Aleutian Chain schedule. The Cold Bay dock would not be modified and a harbor would not be constructed.
- **Marine-Road Link:** Hovercraft service provided by the Aleutians East Borough from Lenard Harbor to the City of Cold Bay hovercraft site at Cross Wind Cove ended in November 2010. In correspondence with the U.S. Army Corps of Engineers, the Aleutians East Borough indicated it is exploring an aluminum landing craft to provide a

marine-road link between the Northeast Terminal and Cross Wind Cove if the Secretary of Interior does not find a land exchange and road corridor to be in the public interest. This could be a 59-foot by 16-foot landing craft, consistent with correspondence from the Aleutians East Borough (AEB 2012). The vessel would accommodate approximately 30 passengers, occasional wheeled vehicles/ambulances and limited cargo. No frequency of service or other operational characteristics are currently available for analysis.

1.2.1.1 Evaluation of the Effect of Such Use, Occupancy or Disposition on Subsistence Uses and Needs

Under Alternative 1, the land exchange would not be authorized, and there would be no new construction of a road from the Northeast Terminal to the Cold Bay Airport. As a result, there are no new direct effects introduced by the No Action alternative to subsistence uses, subsistence access, or competition for subsistence resources.

As an indirect effect, the transfer of the land currently selected by the King Cove Corporation, and located within the Izembek Wilderness to the east of Cold Bay, may proceed under Alternative 1. Under the federal subsistence management regulations, selected but not conveyed lands are considered federal public lands subject to federal subsistence management, so conveyance to the King Cove Corporation would remove 5,430 acres of selected lands from the current status of federal management and application of the federal subsistence program to a new status as private lands, managed by the King Cove Corporation. The selected lands, when patented, would be subject to the provisions of ANCSA Section 22(g), as described in Section 3.3.1.1 and would no longer qualify for the federal subsistence priority under Title VIII of ANILCA.

Federal lands within Izembek National Wildlife Refuge and Izembek Wilderness and in Alaska Maritime National Wildlife Refuge on Sitkinak Island would remain in federal ownership. Title to State of Alaska land and King Cove Corporation land would be unchanged.

Land ownership has an important implication for subsistence management, as separate subsistence management programs apply on federal lands on the one hand, and state and private lands on the other (for a fuller discussion see Section 3.3.7 1). The Title VIII provisions of ANILCA only apply to federal public lands as defined in ANILCA and interpreted in various court decisions.

The only change in land status and therefore in subsistence management under Alternative 1 is the conveyance of the King Cove selected lands, east of Cold Bay (see Figure 1.1), which would move from status of federal management as part of the Izembek Wilderness to private land ownership and management by the King Cove Corporation. If these lands are conveyed to the King Cove Corporation, it is anticipated that the corporation would restrict access to this parcel to shareholders, with non-shareholder access by permit only. This is how the King Cove Corporation currently manages public access to other corporation lands. Geographically, the selected parcel is adjacent and east of current King Cove Corporation lands. It is likely very few residents from Cold Bay or the other regional communities currently access this remote parcel, as this would require crossing King Cove Corporation lands from the road to the Northeast Terminal. Thus, conveyance of this parcel to the King Cove Corporation is expected to have a minor effect on subsistence access, particularly because most subsistence users in this area would

be shareholders of the King Cove Corporation, and shareholder access would be unaffected by the change in land ownership.

In regard to subsistence resources, Alternative 1 would introduce no new incremental environmental direct effects. Alternative 1 introduces no new direct effects on the user groups competing to harvest subsistence resources. The indirect effect of conveyance of selected lands to the King Cove Corporation could result in minor effects on subsistence use patterns if non-subsistence users of the parcel are displaced and compete with subsistence users for access to resources. This impact would be anticipated to be very minor as there is likely little, if any, non-subsistence use of the parcel.

1.2.1.2 Evaluation of the Availability of Other Lands for the Land Exchange and Associated Roads

In contrast to the No Action alternative, Alternatives 2 and 3 propose a land exchange and two different road corridors to provide for the purpose and need of safe and reliable transportation between the communities of King Cove and Cold Bay primarily to address health and safety.

1.2.1.3 Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

In addition to the No Action alternative, Alternatives 4 and 5, reviewed in subsequent sections of this Appendix, would rely on marine transportation, and would not require a land exchange. These alternatives would nearly eliminate the use, occupancy, or disposition of federal public lands needed for subsistence purposes. As with Alternative 1, these alternatives would have the indirect effect that the King Cove Corporation selected parcel would likely be conveyed. The conveyance of the King Cove Corporation selected lands is unlikely to displace many non-local hunters and create increased competition on other federal lands.

1.2.1.4 Findings

Under Alternative 1, the existing conditions include improved access by road to subsistence resources in the northeast corner of Cold Bay, and the alternative introduces no new direct effects to subsistence resources or uses. While the conveyance of King Cove Corporation selected lands would have a minor indirect effect on subsistence use patterns, including subsistence access, and competition for subsistence resources, this action would proceed even if the land exchange were not under consideration. In all, Alternative 1 would introduce no new incremental direct effects and minor indirect impacts on subsistence. Implementation of Alternative 1 would introduce no new direct impacts and minor indirect impacts. These would make a minor contribution to cumulative effects on subsistence resources, access to subsistence resources, or competition for subsistence resources. In summary, implementation of Alternative 1 would not significantly restrict subsistence uses.

1.2.2 Alternative 2 – Land Exchange and Southern Road Alignment

Under Alternative 2, the southern road alignment, direct impacts would occur to subsistence resources and uses as a result of construction of the 18.5-mile single lane gravel road segment from the Northeast Terminal to the state land boundary just north of the community of Cold Bay. Approximately 6.0 miles of road construction on the western portion of the alignment would

include existing roads and trails. Legal descriptions for exchange parcels are provided in Appendix B and an overview of parcels proposed for exchange is presented in Section 2.4.6. The estimated amount of federal land exchanged in this alternative for the road corridor would be 201 acres.

Construction of the road under this alternative would likely extend over 2 seasons. The road construction could occur between May and November, with specific construction windows dictated by permit stipulations and mitigation requirements. During construction, subsistence resources (especially waterfowl and caribou) could potentially be displaced by the presence of heavy equipment and construction noises. Salmon could be temporarily displaced during culvert placement. Access to subsistence resources for harvest could be limited during construction to protect public safety. However, mitigation measures could allow for specific days to be established when construction activities are limited to allow for subsistence harvests. Alternatively, a safety guard could be used to ensure safe access to resources during construction.

As a result of the proposed land exchanges that would be implemented under this alternative, approximately 52,583 acres of former state and King Cove Corporation owned lands would be placed under federal management subject to the provisions of ANILCA Title XIII, and 201 acres would be removed from federal management, for a net change of 52,382 acres added to federal management. Federal subsistence management under these provisions of ANILCA Title VIII provides a priority for harvesting subsistence resources on federal lands to rural residents from the communities of King Cove, Cold Bay, False Pass, Nelson Lagoon, and Sand Point. Not all of the incoming parcels are used by the five communities, according to the subsistence use area maps displayed in Section 3.3.7. For the King Cove corporation parcels (Kinzarof Lagoon, Mortensens Lagoon) the communities of King Cove, Cold Bay, False Pass (in the 2007 data displayed in Figure 3.3-25) and Sand Point have mapped uses. For the King Cove Corporation relinquished parcel, the residents of King Cove, False Pass (based in 2007 data in Figure 3.3-25) have mapped subsistence uses. For the large State of Alaska parcel to the northeast of the Izembek National Wildlife Refuge (41,887 acres), the most recent subsistence maps show that none of the 5 communities have mapped subsistence uses. An earlier map for False Pass (Figure 3.3-25) shows a very extensive area for trapping, vegetation gathering, and caribou hunting, including the southern half of the large State of Alaska parcel. A historic cabin, the Buddy Bendixen Camp (Figure 3.3-22) was also located within this parcel. The more recent map (Figure 3.3-26) depicts use patterns that extend only as far to the northeast as the waters offshore of Izembek Lagoon. The net beneficial effect of these changes in ownership would be negligible.

The southern road alignment (Figure 2-2) would originate at the terminus of the King Cove Access Road (currently under construction) in the vicinity of the Northeast Terminal. The initial 6 miles are co-located with the central alignment (Alternative 3). At a point 6 miles north of the Northeast Terminal, the southern alignment would depart from the central alignment in a westerly direction, and stay south of the ridge line that separates the watersheds of the Kinzarof and Izembek lagoons. The road corridor would generally be located approximately ½ mile to 1 mile north of Kinzarof Lagoon (Figure 2-2). At about 12.4 miles from the start, the southern alignment would again be co-located with the central alignment and follow Outpost Trail (which transitions to Outpost Road) in a southwesterly direction to a point just north of Blinn Lake. At that point, the southern alignment would depart from the central alignment, following an existing

primitive road for approximately 1.4 miles around the east and south side of Blinn Lake to intersect with Outer Marker Road. The route would continue south along Outer Marker Road to its intersection with St. Louis Road, and then follow St. Louis Road to terminate at the refuge/state boundary.

Under this alternative, the Service would execute an administrative boundary adjustment in the vicinity of Blinn Lake in accord with ANILCA Section 103(b) (Figure 2-6). An area that is currently designated as Alaska Peninsula National Wildlife Refuge, but administered by Izembek National Wildlife Refuge, would become part of Izembek National Wildlife Refuge. This would not change the application of the subsistence priority under Title VIII of ANILCA for these lands.

Agencies specifically consulted in the development of this alternative include the Alaska Department of Natural Resources, Alaska Department of Fish and Game, Alaska Department of Transportation and Public Facilities, the Service, Agdaagux Tribe, Belkofski Tribe, Aleutians East Borough, and City of King Cove. The U.S. Army Corps of Engineers, Federal Highway Administration, and the Environmental Protection Agency also participated in the general development of alternatives, as described in Section 2.2.

1.2.2.1 Evaluation of the Effect of Such Use, Occupancy or Disposition on Subsistence Uses and Needs

Under Alternative 2, the southern road alignment, direct impacts would occur to subsistence resources as a result of construction of the 18.5-mile single lane gravel road segment from the Northeast Terminal to the state boundary north of the community of Cold Bay (Table 2.4-2). Approximately 6.0 miles of road construction on the western portion of the alignment would include existing roads and trails. Construction of the road under this alternative would likely extend over two seasons. The road construction could occur between May and November, with specific construction windows dictated by permit stipulations and mitigation requirements. During construction, subsistence resources (waterfowl and caribou) could potentially be displaced by the presence of heavy equipment and construction noises. Salmon could be temporarily displaced during culvert placement. The scale of the proposed road is such that a small workforce, assumed to include local hires as much as possible, would not be expected to bring a new permanent workforce to the region. The proposed road construction would not be expected to increase competition for subsistence resources; however, construction activities are likely to displace subsistence users during the construction period.

Access to subsistence resources for harvest could be limited during construction to protect public safety. However, mitigation measures could allow for specific days to be established when construction activities are limited to allow for subsistence activities. Alternatively, a safety guard could be used to ensure safe access to resources during construction.

Under this alternative, operation and maintenance of the road could result in displacement of subsistence resources, and reduced availability for subsistence harvest (less abundant and dislocation of resources) in this area for residents of the King Cove, Cold Bay, False Pass, Nelson Lagoon, and Sand Point communities. Road traffic and increased use of the area could displace subsistence resources such as caribou and waterfowl. The displacement of these subsistence resources could have a negative impact to the concentrated subsistence use areas for

caribou and waterfowl, which are known to be used by residents of the King Cove, Cold Bay, False Pass, and Sand Point communities.

A barrier is required by the Act to be installed along the length of the roadway on both sides to prevent vehicles from accessing the Izembek National Wildlife Refuge and Izembek Wilderness lands adjacent to the road. Two barrier types are being analyzed for this project: a chain barrier and a bollard barrier. The barriers could alter the movement of caribou within the project area and this could result in changes in subsistence harvest areas. It is likely that subsistence harvest areas would see only slight alteration. There would not be a noticeable change in rates of harvest to an extent that would make resources unavailable for harvest.

During the operation of the road, increased competition for resources from non-subsistence users (sport hunters) who could now also more easily access the area via the road could occur. Waterfowl hunting by residents of the cities of King Cove and Cold Bay and by non-local waterfowl hunters could increase. Kinzarof Lagoon is known as a concentrated subsistence use area for waterfowl harvesting by residents of King Cove, False Pass, and Sand Point. At present under ANILCA Section 811, subsistence access to this area includes boat, foot, snowmachines, or other surface transportation means traditionally used; however, the barriers along the proposed road would restrict use of vehicles. If increased harvest by sport hunters occurs, waterfowl and caribou subsistence harvests by local residents could be negatively impacted. The barriers are intended to keep vehicles on the road. As there has not been road access to much of the area, limiting vehicles to the road would not likely restrict subsistence access. Continued access to established trails where subsistence use of vehicles has been allowed near the community of Cold Bay will likely continue unless the off road use of vehicles is determined to be causing or likely to cause unacceptable impacts to refuge resources.

The refuge boundary adjustment in the vicinity of Blinn Lake would have no effect on subsistence as the provisions of ANILCA Title VIII would continue to apply and the refuge purpose regarding subsistence opportunity is identical for both refuges. No changes in management would be attributed to changing the boundary.

Implementation of Alternative 2 would result in direct and indirect impacts to subsistence resources that include displacement of resources, increased competition for resources, and improved access to subsistence use areas. These impacts would be of low intensity (perceptible, but at a low level), long-term duration (through the life of the project), and local to regional extent (from discrete portions of the project area to extending throughout the project area), and affecting resources that are common to important in context. The resources that are important in context include the migratory waterfowl and wetlands/habitat values of Izembek and Kinzarof lagoons that led to the establishment of the Izembek National Wildlife Refuge and the designation as a Wetland of International Importance under the Ramsar Convention in 1986. The summary impact on subsistence uses of implementing Alternative 2, including construction, operation, and maintenance would be minor.

1.2.2.2 Evaluation of the Availability of Other Lands for the Land Exchange and Associated Roads

Alternative 3, reviewed below, represents a road corridor occupying other lands, although these too, are federal public lands, within the Izembek National Wildlife Refuge. Given the

topography and land status, there is no potential road corridor between King Cove and Cold Bay that would avoid federal public lands currently used for subsistence purposes.

1.2.2.3 Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

In addition to the No Action alternative which requires no additional land, Alternatives 4 and 5, reviewed in other sections of this Appendix, would rely on marine transportation, without a land exchange. These alternatives would eliminate the use, occupancy, or disposition of federal public lands needed for subsistence purposes.

1.2.2.4 Findings

The only reasonably foreseeable future actions that would affect subsistence in the project area are likely additional closures of refuge lands to subsistence use of all-terrain vehicles. Closures, if any, would be implemented following the process outlined in ANILCA with additional analysis and opportunities for public hearings and comments. Even with potential closures, implementation of Alternative 2 would contribute little to cumulative effects on subsistence resources, access to subsistence resources, or competition for subsistence resources as subsistence activities are unlikely to increase above present levels. Implementation of Alternative 2 would result in minor direct and indirect effects on subsistence resources, access to subsistence resources, or competition for subsistence resource as subsistence activities are unlikely to increase above present levels. As a result, the project components of this alternative would make a minor contribution to cumulative effects on subsistence resources or harvest patterns.

In summary, implementation of Alternative 2 would have minor direct and indirect impacts on subsistence uses, and would make a minor contribution to cumulative effects on subsistence resources or harvest patterns. No significant restriction to subsistence uses would occur under Alternative 2.

1.2.3 Alternative 3 – Land Exchange and Central Road Alignment

Alternative 3 proposes a land exchange between the federal government, State of Alaska, and King Cove Corporation, as described in the Proposed Action (Section 1.2). Legal descriptions for exchange parcels are provided in Appendix B and an overview of parcels proposed for exchange is presented in Section 2.4.6. The estimated amount of federal land exchanged in this alternative from Izembek National Wildlife Refuge would be 227 acres, including 152 acres in Izembek Wilderness, assuming a 100-foot corridor average width.

As a result of the proposed land exchanges that would be implemented under Alternative 3, approximately 52,583 acres of former state and King Cove Corporation owned lands would be placed under federal management subject to the provisions of ANILCA Title XIII, and 227 acres would be removed from federal management, for a net change of 52,356 acres added to federal management. Federal subsistence management under these provisions of ANILCA Title VIII provides a priority for harvesting subsistence resources to rural residents from the communities of King Cove, Cold Bay, False Pass, Nelson Lagoon, and Sand Point. Not all of the incoming parcels are used by the five communities, according to the subsistence use area maps displayed in Section 3.3.7. For the King Cove corporation parcels (Kinzarof Lagoon, Mortensens Lagoon)

the communities of King Cove, Cold Bay, False Pass (in the 2007 data displayed in Figure 3.3-25) and Sand Point have mapped uses. For the King Cove Corporation relinquished parcel, the residents of King Cove, False Pass (based in 2007 data in Figure 3.3-25) have mapped subsistence uses. For the large State of Alaska parcel to the northeast of the Izembek National Wildlife Refuge (41,887 acres), none of the 5 communities have mapped subsistence uses activities. The net beneficial effect of these changes in ownership would be negligible.

The central road alignment (Figure 2-3) would originate at the terminus of the King Cove Access Road (currently under construction) in the vicinity of the Northeast Terminal. The initial 6 miles would be co-located with the southern alignment (Alternative 2). At a point 6 miles north of the Northeast Terminal, the central alignment would depart from the southern alignment and wind north and then westerly through steep hills and around lakes of the isthmus divide to Outpost Trail. The alignment would be co-located with the southern alignment, along Outpost Trail (which transitions to Outpost Road) to an intersection north of Blinn Lake. The central alignment would depart from the southern alignment north of Blinn Lake, continuing along Outpost Road to intersect with Outer Marker Road to the west of Blinn Lake. The route would continue south along Outer Marker Road to intersect with St. Louis Road, terminating at the refuge/state boundary.

Under this alternative, the Service would execute an administrative boundary adjustment in the vicinity of Blinn Lake in accord with ANILCA Section 103(b). An area that is currently designated as Alaska Peninsula National Wildlife Refuge, but administered by Izembek National Wildlife Refuge, would become part of Izembek National Wildlife Refuge. This would not change the application of the subsistence priority under Title VIII of ANILCA for these lands.

Agencies specifically consulted in the development of this alternative included U.S. Geological Survey, National Park Service, Alaska Department of Natural Resources, Alaska Department of Fish and Game, the Service, Agdaagux Tribe, Aleutians East Borough, and City of King Cove. The U.S. Army Corps of Engineers, Federal Highway Administration, and the Environmental Protection Agency also participated in the general development of alternatives, as described in Section 2.2.

1.2.3.1 Evaluation of the Effect of Such Use, Occupancy or Disposition on Subsistence Uses and Needs

Alternative 3, the central road alignment, was designed to avoid or minimize impacts to wetlands and high value habitat for breeding, nesting, and migrating waterbirds, and to reduce disturbance or impacts to species and habitat in both Izembek and Kinzarof lagoons, while also considering land mammal (caribou, bear, furbearers) movement and habitat values of the isthmus. This alignment seeks to minimize impacts to wetland and lake-dependent resources, by avoiding or minimizing stream crossings. As a result, direct effects to these subsistence resources would be lessened and the effects from construction activities to subsistence would be similar to Alternative 2, discussed above. The scale of the proposed road is such that a small workforce, assumed to include local hires as possible, would not be expected to bring a new permanent workforce to the region. The proposed road construction would not be expected to increase competition for subsistence resources.

The effects from construction and operation of the central road alignment would be the similar to those of Alternative 2, the southern road alignment, discussed above. Operation and maintenance of the road could result in displacement of subsistence resources, and reduced availability for subsistence harvest (less abundant and dislocation of resources) in this area for residents of the King Cove, Cold Bay, False Pass, and Sand Point communities. Road traffic and increased use of the area could displace subsistence resources such as caribou and waterfowl. The displacement of these subsistence resources could have a negative impact to the concentrated subsistence use areas for caribou and waterfowl, which are known to be used by residents of the King Cove, Cold Bay, False Pass, and Sand Point communities. A barrier is required by the Act to be installed along the length of the roadway on both sides to prevent vehicles from accessing the Izembek National Wildlife Refuge and Izembek Wilderness lands adjacent to the road. Two barrier types are being analyzed for this project: a chain barrier and a bollard barrier. The barriers could alter the movement of caribou with in the project area and this could result in changes in subsistence harvest areas. It is likely that subsistence harvest areas would see only slight alteration. There would not be a noticeable change in rates of harvest to an extent that would make resources unavailable for harvest.

During the operation of the road, increased competition for resources from non-subsistence users (sport hunters) who could now also more easily access the area via the road could occur. Waterfowl hunting by residents of the cities of King Cove and Cold Bay and by non-local waterfowl hunters could increase. Kinzarof Lagoon is known as a concentrated subsistence use area for waterfowl harvesting by residents of King Cove, False Pass, and Sand Point. At present under ANILCA 811, subsistence access to this area includes boat, foot, snowmachines, or other surface transportation means traditionally used; however the barriers along the proposed road would restrict use of vehicles. If increased harvest by sport hunters occurs, waterfowl and caribou subsistence harvests by local residents could be negatively impacted. The barriers are intended to keep vehicles on the road. As there has not been road access to much of the area, limiting vehicles to the road would not likely restrict subsistence access. Continued access to established trails where subsistence use of vehicles has been allowed near the community of Cold Bay will likely continue through breaks in the barrier unless the off road use of vehicles is determined to be causing or likely to cause unacceptable impacts to refuge resources.

The refuge boundary adjustment in the vicinity of Blinn Lake would have no effect on subsistence as the provisions of ANILCA Title VIII would continue to apply and the refuge purpose regarding subsistence opportunity is identical for both refuges. No changes in management would be attributed to changing the boundary.

Implementation of Alternative 3 would result in impacts to subsistence resources that include displacement of resources, increased competition for resources, and improved access to subsistence use areas. These impacts would be of low intensity (perceptible, but at a low level), long-term duration (through the life of the project), and local to regional extent (from discrete portions of the project area to extending throughout the project area), and affecting resources that are common to important in context. The resources that are important in context include the migratory waterfowl and wetlands/habitat values of Izembek and Kinzarof lagoons that led to the establishment of the Izembek National Wildlife Refuge and the designation as a Wetland of International Importance under the Ramsar Convention in 1986. The summary impacts on

subsistence uses of implementing Alternative 3, including construction, operation, and maintenance, would be minor.

1.2.3.2 Evaluation of the Availability of Other Lands for the Land Exchange and Associated Roads

Alternative 2, reviewed above, represents a road corridor occupying other lands, although these too, are federal public lands within the Izembek National Wildlife Refuge. Given the topography and land status, there is no potential road corridor between King Cove and Cold Bay that would avoid federal public lands currently used for subsistence purposes.

1.2.3.3 Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

In addition to the No Action alternative, Alternatives 4 and 5, reviewed in other sections of this Appendix, would rely on marine transportation, without a land exchange. These alternatives would largely eliminate the use, occupancy, or disposition of federal public lands needed for subsistence purposes. Alternatives 1, 4, and 5, would have the indirect effect that the King Cove Corporation selected parcel would likely be conveyed. The conveyance of the King Cove Corporation selected lands is unlikely to displace many non-local hunters to other federal lands, resulting in increased competition.

1.2.3.4 Findings

The only reasonably foreseeable future actions that would affect subsistence in the project area are likely additional closures of refuge lands to subsistence use of all-terrain vehicles. Closures, if any, would be implemented following the process outlined in ANILCA with additional analysis and opportunities for public hearings and comments. Even with potential closures, implementation of Alternative 3 would contribute little to cumulative effects on subsistence resources, access to subsistence resources, or competition for subsistence resources as subsistence activities are unlikely to increase above present levels. As a result, the project components of this alternative would make a minor contribution to cumulative effects on subsistence resources or harvest patterns. Implementation of Alternative 3 would result in minor direct and indirect effects on subsistence resources, access to subsistence resources, or competition for subsistence resource as subsistence activities are unlikely to increase above present levels. As a result, the project components of this alternative would make a minor contribution to cumulative effects on subsistence resources or harvest patterns.

In summary, implementation of Alternative 3 would have minor direct and indirect impacts on subsistence uses, and would make a minor contribution to cumulative effects on subsistence resources or harvest patterns. No significant restriction to subsistence uses would occur under Alternative 3.

1.2.4 Alternative 4 –Hovercraft Operations from the Northeast Terminal to Cross Wind Cove (Six days per Week)

Alternative 4 (see Figure 2-10) was the Proposed Action in the 2003 EIS. This alternative, as proposed in the 2003 EIS, has not been fully implemented to date. However, actions authorized by the Record of Decision are ongoing. Development of the access road and the Northeast

Terminal infrastructure continued in 2012. The alternative considered in this EIS would not require further construction activities; the alternative will consider operations of the hovercraft, as described in the 2003 EIS, for service 6 days per week between the northeast corner of Cold Bay and the hovercraft terminal in Cross Wind Cove. As with Alternative 1, conveyance of the King Cove Corporation selected lands would result in minor indirect effects.

1.2.4.1 Evaluation of the Effect of Such Use, Occupancy or Disposition on Subsistence Uses and Needs

Alternative 4 would provide for hovercraft service. It would not require additional facilities or ground disturbing activities beyond what was authorized in the 2003 EIS and subsequent permits. This would be low in intensity, temporary in duration and local in extent, affecting resources that are common in context. As with Alternative 1, conveyance of the King Cove Corporation selected lands would have minor indirect effects on subsistence.

The hovercraft terminals would be operated in subsistence use areas for waterfowl, salmon, and other marine fish. The hovercraft would transit between the Northeast Terminal and Cross Wind Cove on the west side of Cold Bay. Neither terminal would be located in a concentrated waterfowl subsistence use area. Operation of the hovercraft could displace subsistence resources in a limited area, thus affecting resource availability to subsistence harvesters in the immediate area of the terminal. Bird, marine, and terrestrial subsistence resources could be displaced temporarily in the vicinity of the operating hovercraft. Increases in transportation activities along the access road to the Northeast Terminal are considered part of the existing conditions, as noted in the analysis of Alternative 1. Under Alternative 4, the hovercraft would operate 6 days per week throughout the year. So some increase in traffic to the hovercraft terminal would occur, and this could result in a minor new effects on resource availability (resource displacement or contamination concerns). Road maintenance activities would be limited to snow removal and grading and are unlikely to displace subsistence resources longer than the duration of the specific maintenance activity.

For the purposes of this analysis, it is assumed that operation of the hovercraft and maintenance of the associated roads to the terminals would be performed by residents of the Aleutians East Borough and nearby communities. Implementation of hovercraft operations under Alternative 4 is not expected to result in an increase in commercial and sport harvest to such an extent that subsistence uses by community residents of King Cove, Cold Bay, False Pass, and Sand Point would be restricted.

Under Alternative 4, access to subsistence resources would not be restricted and could be positively affected by operation and maintenance of road access to the Northeast Terminal year round. Alternative 4 would provide opportunities for continued subsistence uses by local residents of the King Cove, Cold Bay, False Pass and Sand Point communities. Road access to the Northeast Terminal was described as an existing condition under Alternative 1, so no change in road access would result from Alternative 4.

Impacts to subsistence from operation of the hovercraft and year round road access to the Northeast Terminal would include displacement of subsistence resources, and increased subsistence uses in that area. Impacts would be low in intensity (perceptible), long-term (extending up to the life of the project), local (discrete portions of the study area) to regional

(throughout the study area) in extent, and affecting resources that are common to important in context. The resources that are important in context include the migratory waterfowl. The summary impact of operation and maintenance activities to subsistence under Alternative 4 would be considered minor.

1.2.4.2 Evaluation of the Availability of Other Lands for the Land Exchange and Associated Roads

As a maritime mode of transportation, Alternative 4 requires no land exchange and no new occupancy of federal lands used for subsistence purposes.

1.2.4.3 Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

In addition to the No Action alternative, Alternative 5, reviewed in another section of this Appendix, would rely on marine transportation, without a land exchange. These alternatives would largely eliminate the use, occupancy, or disposition of federal public lands needed for subsistence purposes. As with Alternative 1, this alternative would have the indirect effect that the King Cove Corporation selected parcel would likely be conveyed. The conveyance of the King Cove Corporation selected lands is unlikely to displace many non-local hunters to other federal lands, with no likely increase in competition.

1.2.4.4 Findings

Under Alternative 4, a negligible new direct impact to subsistence uses would be introduced by construction of a new hovercraft hangar at the Northeast Terminal site, and minor indirect impacts would be similar to those of Alternative 1. The summary impact of operation and maintenance activities to subsistence under Alternative 4 would be considered minor. No reasonably foreseeable future actions would affect subsistence in the project area.

Implementation of Alternative 4 would contribute little to cumulative effects on subsistence resources, access to subsistence resources, or competition for subsistence resource as subsistence activities are unlikely to increase above present levels. As a result, the project components of this alternative are not expected to contribute to cumulative effects on subsistence resources or harvest patterns.

In summary, implementation of Alternative 4 would have minor direct and indirect impacts on subsistence uses, and would make a minor contribution to cumulative effects on subsistence resources or harvest patterns. No significant restriction to subsistence uses would occur under Alternative 4.

1.2.5 Alternative 5 – Lenard Harbor Ferry with Cold Bay Dock Improvement

Alternative 5 would use a ferry to travel 14 miles between a terminal in Lenard Harbor and a substantially modified Cold Bay dock (see Figure 2-11). This alternative is similar to an alternative that was analyzed in the 2003 EIS, with the exception of project elements that have been permitted or constructed to date, including the access road to the site, a terminal building with associated utility infrastructure, and a parking area.

1.2.5.1 Evaluation of the Effect of Such Use, Occupancy or Disposition on Subsistence Uses and Needs

Under Alternative 5, no land exchange would occur and the alternative would require the construction of a ferry dock and terminal at Lenard Harbor near King Cove. Lenard Harbor is known as an area of concentrated harvest for subsistence marine fishing (crabbing) by users of the communities of King Cove and False Pass. Lenard Harbor terminal construction and related transportation activity would locally displace subsistence resources occasionally when present during construction. This could in turn affect resource availability to subsistence harvesters in the immediate areas of the Lenard Harbor ferry dock and terminal during construction activities.

Modifications to the existing Cold Bay dock would include adding a wave barrier, vehicle ramp system, and a pedestrian walkway. This area near the Cold Bay dock is used for marine invertebrate gathering and salmon fishing. During construction, subsistence harvest of waterfowl, salmon fishing, and marine invertebrate gathering could be disturbed as some resources (waterfowl) could be displaced by the presence of heavy equipment and construction noises.

Access to subsistence resources could be limited during construction to protect public safety. However, mitigation measures could allow for specific days to be established when construction activities are limited to allow subsistence activities, or a safety guard could be used to ensure safe access to resources during construction. Displacement of subsistence resources would be temporary and could occur intermittently for the duration of construction activities (1 to 2 years) at both ferry terminals.

Under Alternative 5, a new ferry would provide year round service between Lenard Harbor and the Cold Bay dock, with the trip originating in Lenard Harbor. Ferry service would include 1 round trip per day, 6 days per week, throughout the year. The ferry would be operated within concentrated subsistence use areas for waterfowl, salmon, and crab in Lenard Bay. During operation, the ferry would transit through a waterfowl concentration area near Delta Point and Nurse Lagoon on the western side of Cold Bay. If icebreaking is required during ferry operation, displacement of subsistence resources (marine mammals) may result if they are present during icebreaking activities. Icebreaking activities are likely to be infrequent and the impact of disturbance to subsistence resources would be considered local and short term (temporary) for the length of this activity. The effect of Alternative 5 on competition for subsistence resources would be similar to those described for Alternative 4, namely minor increased uses due to improved access.

Access to subsistence resources under this alternative for residents of the communities of King Cove, Cold Bay, False Pass, and Sand Point would be the same as described for Alternative 1 and Alternative 4. This includes the change in land status and subsistence management for the King Cove Corporation selected lands, which would result in minor indirect effects. Since road access to Lenard Harbor is part of the existing conditions, Alternative 5 would not establish new access to this location. During operation of the ferry, the placement of crab pots by subsistence users would need to consider the travel routes and terminal facility in Lenard Harbor. A ferry would likely pass over crab pot buoys and leave buoys undisturbed.

Impacts to subsistence would include displacement of subsistence resources, and increased subsistence uses. Impacts would be of low intensity (perceptible), long term in duration (lasting

the life of the project), local (discrete portions of the project area) to regional (throughout the project area) in extent, and affecting resources that are common to important in context. The resources that are important in context include the migratory waterfowl. The summary impact of construction, operation and maintenance activities to subsistence under Alternative 5 would be considered minor.

1.2.5.2 Evaluation of the Availability of Other Lands for the Land Exchange and Associated Roads

As a maritime mode of transportation, Alternative 5 requires no land exchange and no new occupancy of lands used for subsistence purposes.

1.2.5.3 Evaluation of Other Alternatives that would Reduce or Eliminate the Use, Occupancy, or Disposition of Public Lands Needed for Subsistence Purposes

In addition to the No Action alternative and Alternative 4 reviewed in another section of this Appendix, Alternative 5 would rely on marine transportation, without a land exchange. These alternatives would largely eliminate the use, occupancy, or disposition of federal public lands needed for subsistence purposes. Alternatives 1, 4, and 5 would have the indirect effect that the King Cove Corporation selected parcel would likely be conveyed. The conveyance of the King Cove Corporation selected lands is unlikely to displace many non-local hunters to other federal lands, with no likely increase in competition.

1.2.5.4 Findings

No reasonably foreseeable future actions would affect subsistence in the project area. Implementation of Alternative 5 would contribute little to cumulative effects on subsistence resources, access to subsistence resources, or competition for subsistence resource as subsistence activities are unlikely to increase above present levels. As a result, the project components of this alternative would make a minor contribution to cumulative effects on subsistence resources or harvest patterns.

Implementation of Alternative 5 would have minor direct and indirect effects on subsistence; this alternative would make a minor contribution to cumulative effects on subsistence. No significant restriction to subsistence would occur under Alternative 5.

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U.S. Fish & Wildlife Service**

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