

Blue Goose Alliance Bulletin

#75 – May 18, 2012

Izembek National Wildlife Refuge Update

The Blue Goose Alliance was one of 22 groups participating in the Izembek Coalition. The coalition provided comments on the Draft Environmental Impact Statement (DEIS) for the Izembek National Wildlife Refuge (Izembek Refuge) proposed land exchange and road corridor, which the U.S. Fish and Wildlife Service (Service) released for public comment March 19, 2012. The 22 undersigned organizations strongly opposed a land exchange to facilitate the construction of a permanent gravel road between King Cove and Cold Bay, Alaska – a road that would slice through the ecological heart of Izembek Refuge and sacrifice high-quality Refuge and Wilderness lands. These actions, which are the foundation for Alternatives 2 and 3, would have profound negative impacts far beyond the footprint of the road. This EIS, required under the provisions of the 2009 Omnibus Public Land Management Act, must analyze these impacts, as well as inform the Secretary of the Interior's decision regarding whether the proposed land exchange and road corridor are in the public interest. We urge the Service to choose Alternative 1, the No Action Alternative, as its preferred alternative in the Final EIS and Record of Decision. We believe the No Action Alternative best embodies the Service's responsibility to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people, and best serves the public interest.

The full text of the Izembek Coalition's comments follow:

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**The mission of the Blue Goose Alliance is to promote
the establishment of a National Wildlife Refuge Service as
a separate agency within the U.S. Department of the Interior.**

Ronald Fowler
President
Blue Goose Alliance
rfowler@bluegoosealliance.org
<http://www.bluegoosealliance.org>

**Alaska Center for the Environment • Alaska Wilderness League
American Birding Association • American Rivers • Audubon Alaska
Blue Goose Alliance • Center for Biological Diversity
ConservAmerica • Cook Inletkeeper • Defenders of Wildlife
Friends of Alaska National Wildlife Refuges • League of Conservation Voters
National Wildlife Refuge Association • Natural Resources Defense Council
Northern Alaska Environmental Center • Sierra Club • The Wilderness Society
The Wildlife Society • Western Lands Project • Wilderness Watch
Wildlands CPR • World Wildlife Fund**

May 18, 2012

Mr. Geoff Haskett, Alaska Regional Director
U.S. Fish and Wildlife Service
1011 East Tudor Road, MS-231
Anchorage, AK 99503

Via U.S. and Electronic Mail (izembek_eis@fws.gov)

**Re: Draft Environmental Impact Statement for the Izembek National Wildlife Refuge
Proposed Land Exchange/Road Corridor**

Dear Mr. Haskett:

Thank you for the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) for the Izembek National Wildlife Refuge (Izembek Refuge) proposed land exchange and road corridor, which the U.S. Fish and Wildlife Service (Service) released for public comment March 19, 2012. The 22 undersigned organizations strongly oppose a land exchange to facilitate the construction of a permanent gravel road between King Cove and Cold Bay, Alaska – a road that would slice through the ecological heart of Izembek Refuge and sacrifice high-quality Refuge and Wilderness lands. These actions, which are the foundation for Alternatives 2 and 3, would have profound negative impacts far beyond the footprint of the road. This EIS, required under the provisions of the 2009 Omnibus Public Land Management Act,¹ must analyze these impacts, as well as inform the Secretary of the Interior’s decision regarding whether the proposed land exchange and road corridor are in the public interest. We urge the Service to choose Alternative 1, the No Action Alternative, as its preferred alternative in the Final EIS and Record of Decision. We believe the No Action Alternative best embodies the Service’s responsibility to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people, and best serves the public interest.

In 1997, the Service determined that a road through Izembek Refuge was not in the public interest, stating that “[t]he Service finds the road alternative contrary to the purposes of the refuge and foresees unacceptable environmental impacts if a road is constructed on refuge lands through the

¹ P.L. 111-11, Title VI, Subtitle E.

wilderness area.”² Congress subsequently rejected the road proposal through its 1998 passage of the King Cove Health and Safety Act, which appropriated \$37.5 million to develop an alternative solution to King Cove’s health and safety concerns – one that “[i]n no instance may...enter or pass over any land within the Congressionally-designated wilderness in the Izembek National Wildlife Refuge.”³ As was the case 15 years ago, the current road and land exchange proposal is not in the public interest. Adoption of either DEIS Alternative 2 or 3 would:

- undermine long-standing congressional and administrative protections – setting a harmful precedent for de-designating Wilderness and allowing for harmful ecological impacts that compromise Refuge purposes,
- exchange incomparable refuge habitat for lands of lower ecological value,
- add millions more dollars to the \$37.5 million price tag that taxpayers have already spent on this issue;
- unnecessarily replace an effective and workable solution to the stated problem that already exists; and
- fail to provide year-round, reliable access.

Our comments describe these impacts, and subsequently identify deficiencies in the DEIS that must be addressed to ensure a thorough and objective analysis of the proposed land exchange and road corridor in the final document.

I. THE PROPOSED LAND EXCHANGE AND ROAD CORRIDOR ARE NOT IN THE PUBLIC INTEREST

The proposed land exchange would disconnect Izembek Refuge from its ecological heart and subject the area to the disturbance and degradation of subsequent road construction and use, resulting in the loss of a globally significant wetland wilderness. Alternatives 2 and 3 would result in a variety of harmful legal, ecological, and economic impacts that clearly demonstrate that the proposed land exchange and road corridor are not in the public interest.

A. The Proposed Land Exchange and Road Would Compromise Long-held Administrative and Congressional Protections

The proposed land exchange and road corridor would permanently destroy fragile wetlands, wilderness, and wildlife habitat, as well as undercut public trust in long-established congressional and administrative safeguards and obligations. Good stewardship practices require that the integrity and protection of our nation’s public lands are upheld and that conservation decisions are based on sound science, not short-term profit or politics. Long and careful consideration was given to selecting the boundary of the Izembek Refuge and to identifying the purposes for which the Refuge was established. Similarly, the National Wildlife Refuge System Improvement Act of 1997, adopted with bipartisan input and support, established a unified mission for the Refuge System, as well as standards for compatible uses. The land exchange and the road corridor proposal not only

² U.S. Fish and Wildlife Service, King Cove road briefing report, Izembek National Wildlife Refuge (1997).

³ Omnibus Consolidated and Emergency Supplemental Appropriations Act of 1999, Public Law 105-227 § 353.

jeopardizes Izembek Refuge and puts the entire National Wildlife Refuge System at risk, the proposal also undermines the protections provided by the Wilderness Act of 1964. Circumvention of the act puts at risk designated Wilderness areas throughout the National Wilderness Preservation System.

1. The Proposed Action Would Erode the Original and Historic Boundary of the Refuge

Izembek National Wildlife Range was established by Executive Order 2216 in 1960, during the Eisenhower administration. The boundary was carefully drawn to protect the integrity of the entire watershed of Izembek Lagoon and associated lands for "a refuge, breeding ground, and management area for all forms of wildlife." The very high quality of lands within the Izembek National Wildlife Range were already well known for their exceptional value for waterfowl and many other species of migratory birds, fish, and mammals. The newly established area represented a cohesive unit of lands, waters, and habitats necessary to achieve the conservation objectives of the Range. In 1980, the Alaska National Interest Lands Conservation Act (ANILCA) strengthened our nation's commitment to protecting the area by changing its name to the Izembek National Wildlife Refuge.

Passage of ANILCA was a decade-long process that included town meetings, hearings, debates, numerous editorials and opinion pieces, outreach to multiple Native organizations, and state, federal, and joint governmental proposals spanning several congressional sessions. Throughout the many House and Senate hearings leading to passage of ANILCA, the road issue was not raised nor was it advocated by the members of the Alaska congressional delegation.

At that time, there was overwhelming support for the Refuge Wilderness, including a letter from the Governor of Alaska. Section 702 of ANILCA designated approximately 300,000 of the Refuge's 417,533 acres as Wilderness, to be administered under the provisions of the Wilderness Act of 1964 and ANILCA. In adopting Section 702, Congress provided the highest possible level of protection for most of the area within Izembek Refuge that would be affected by the current land exchange and road corridor proposal. This level of protection is well deserved, and the following excerpt from the 1979 House Report clearly states that "[t]he Izembek Wilderness possesses outstanding scenery, key populations of brown bear, caribou and other wilderness-related wildlife, and critical watersheds to Izembek Lagoon. About 68 percent of the total lands in Izembek Lagoon are covered with the largest eelgrass beds in the world. These beds are utilized by millions of waterfowl for migration and wintering purposes. A wilderness designation will protect this critically important habitat by restricting access to the Lagoon."⁴ The original boundary deliberately included the lagoon complex.

In 1986, the Izembek Refuge received global attention as the first U.S. site to be designated a "Wetland of International Importance" by the Ramsar Convention on Wetlands of International Importance. Another recognition occurred in 2001, when the Refuge was recognized as a Globally Important Bird Area by the American Bird Conservancy.

The DEIS affirms the high value of wetlands in the proposed road corridor.⁵ Furthermore, the high habitat values of the isthmus region where the proposed road would be built are properly described

⁴ House Report No. 96-97, Part II (p. 136), 1979.

⁵ DEIS at 3-89.

in several sections of the DEIS that note the importance of the Wilderness lands to several species of wildlife.

The value of Izembek Refuge has been recognized since its original establishment in 1960 and further reinforced through additional legislation and designations as a discrete area of national and international significance for its wildlife, fish, and habitat as well as a wilderness resource. The ecological quality of its lands and waters is of the greatest magnitude. The paramount conservation goal is to preserve the ecological integrity, wilderness character, and other establishing purposes of Izembek Refuge.

2. The Proposed Action Is Incompatible with the Purposes for Which Congress Established the Refuge

In 1980, ANILCA designated approximately 105 million acres of federal land in Alaska for the protection of natural resource values by permanent federal ownership and management.⁶ Izembek Refuge was included among the lands designated for environmental protection under ANILCA. Congress specifically stated in ANILCA that Izembek Refuge was protected for the following purposes:

- (i) To conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, waterfowl, shorebirds, and other migratory birds, brown bears, and salmonoids;
- (ii) To fulfill the international treaty obligations of the U.S. with respect to fish and wildlife and their habitats;
- (iii) To provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and
- (iv) To ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the refuge.

Since 1985, when the Bristol Bay Regional Management Plan noted the King Cove road project,⁷ the Service has consistently found that a road across the narrow isthmus between Izembek and Kinzarof lagoons would be incompatible with the purposes for which Congress established the Izembek Refuge and that a road would cause significant, long-term damage to important fish, wildlife, habitat, and wilderness values of the Refuge. For example, in an August 1997 King Cove Road Briefing Report, the Service found the “road alternative contrary to the purposes of the refuge” and anticipated “unacceptable environmental impacts if a road is constructed on refuge lands through

⁶ S.Rep. No. 413, 96th Cong., 2d Sess. 126, reprinted in 1980 U.S. Code Cong. & Ad. News 5070, 5071.

⁷ U.S. Department of the Interior, BRISTOL BAY REGIONAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT, Prepared under the direction of the Assistant Secretary of the Fish and Wildlife Service with assistance from the Alaska Land Use Council and its Bristol Bay Study Group (1985).

the wilderness area.”⁸ A 2003 EIS on the King Cove Access Project, prepared by the Army Corps of Engineers in cooperation with the Service and funded by Aleutians East Borough, examined the potential threats of the proposed road and found the all-road alternative to be the most damaging of all the alternatives evaluated.⁹ The report cited direct, indirect, and cumulative impacts on the lands and on wildlife.

All of the stated purposes for Izembek Refuge pertain to the conservation of its unique ecological characteristics and species.¹⁰ By cutting out the Refuge’s ecological heart through a land exchange and subjecting the area to the disturbance and degradation of subsequent road construction and use, this proposal would severely compromise the Service’s ability to carry out each of these purposes across the Refuge as a whole.

a. Conserving Fish and Wildlife Populations and Habitats in their Natural Diversity

The Izembek watershed surrounding the lagoons abounds with brown bear, caribou, and wolves and is rich in anadromous fish streams. The pristine nature of Izembek Refuge and its critical importance for wildlife led to 95 percent of its area being designated Wilderness under ANILCA.

A road through this ecologically sensitive habitat would fragment and degrade the integrity of the lagoon complex. This would result in impacts that extend well beyond the road and affect the integrity of the entire refuge. Birds and mammals use the lagoons, isthmus wetlands, tundra, and tidal flats to nest, feed, transit, and forage. The species hardest hit will be those whose essential habitat would be directly or indirectly impacted by road construction, maintenance, and traffic. In particular, Pacific brant, Steller’s eiders, emperor geese, caribou, tundra swans, brown bears, sea otters, sea lions, seals and whales would be impacted. Several of these species are rare, declining, or listed as threatened under the Endangered Species Act.

The Izembek Refuge supports two subpopulations of tundra swans; one is migratory and part of the relatively large western population, while a much smaller, distinct resident population is also present. (See climate change below for comments regarding black brant, Steller’s eider, and caribou.)

The resident swan population is less stable than migratory populations and has declined steadily over the past twenty years. Tundra swans are very sensitive to human disturbance, especially during nesting and molting periods. Therefore, we generally concur with findings presented in the DEIS, which states that a new road would lead to an effective loss of habitat much larger than the footprint of the road.¹¹ The DEIS acknowledges that the unique resident population of tundra swans of the Izembek Refuge has abandoned habitat adjacent to existing roads and trails near Cold Bay. We concur with the general finding that Alternatives 2 and 3 would result in impacts with “medium to high intensity with long-term (behavioral disturbance) to permanent (habitat loss).”¹²

The narrow isthmus between Izembek and Kinzarof lagoons is a crucial travel corridor—the only path between the west and east sides of the Refuge—for wide-ranging species such as bears,

⁸ U.S. Fish and Wildlife Service, King Cove road briefing report, Izembek National Wildlife Refuge (1997).

⁹ U.S. Army Corps of Engineers, King Cove Access Project, Final and draft environmental impact statements, Alaska District (2003).

¹⁰ ANILCA, Section 303(3)(B).

¹¹ DEIS at 4-139.

¹² DEIS at 4-140 and 4-242.

caribou, and wolves. The Alaska Peninsula Caribou Herd, a population that has declined from about 10,000 to fewer than 1,000 in the last 10 years, uses the isthmus as the only migration corridor between calving and wintering grounds. The isthmus is also an important winter foraging area for these animals. Moreover, the caribou are known to spend the entire winter on the isthmus.

Some of the highest densities of brown bears on the Lower Alaska Peninsula are found in the Joshua Green River Valley, an area within three miles of the isthmus and proposed road corridor. Bears frequently use the isthmus to forage and roam in search for food. While the low levels of human disturbance have helped maintain the high habitat value of this area for brown bears, roads generally have harmful impacts on large carnivores.¹³ The construction of roads in what had been roadless brown bear habitat has been shown by many investigators to have significant adverse impacts on bear populations by increasing human access, which results in displacement of bears or the direct mortality of bears through legal hunting, defense-of-life-or-property (DLP) kills, illegal killing, and road kills.¹⁴ Studies have demonstrated a strong relationship of road construction to increased bear mortality on northeastern Chichagof Island,¹⁵ an increasing probability of brown bears killed in DLP with increasing road density on the Kenai Peninsula.¹⁶

Harbor seals, sea otters, Steller sea lions, and whales frequent the productive waters surrounding the Refuge. Sea otters, seals, and sea lions spend time along the coast and in the lagoons. Especially noteworthy is the fact that large numbers of threatened northern sea otters and harbor seals can be found near the entrance to Kinzarof Lagoon, while Steller sea lions use the barrier islands on the outside of Izembek Lagoon. Sea otters and Steller sea lions are federally protected under the Endangered Species Act. Additionally, numerous small streams along the north shore of Kinzarof Lagoon provide access routes to upland lakes for spawning sockeye salmon.

Many scientific studies have implicated roads as having negative effects on terrestrial and aquatic ecosystems.¹⁷ According to the US Forest Service:

¹³ Noss, R., et al., Conservation biology and carnivore conservation in the Rocky Mountains, 10 CONSERVATION BIOLOGY 949–963 (1996). Trombulak, S., and C. Frissell, Review of ecological effects of roads on terrestrial and aquatic communities, 14 CONSERVATION BIOLOGY 18–30 (1999).

¹⁴ McLellan, B. and D. Shackleton, Immediate reactions of grizzly bears to human activities, 17 WILDLIFE SOCIETY BULLETIN 269-275 (1989). McLellan, B., Relationships between human industrial activity and grizzly bears, 8 INTERNATIONAL CONFERENCE ON BEAR RESEARCH AND MANAGEMENT 57-64 (1990). Mattson, D., Human impacts on bear habitat use, 8 INTERNATIONAL CONFERENCE ON BEAR RESEARCH AND MANAGEMENT 33–56 (1990). Schoen, J., et al., Habitat-capability model for brown bear in Southeast Alaska, 9 INTERNATIONAL CONFERENCE ON BEAR RESEARCH AND MANAGEMENT 327–337 (1994). Mace, R., et al., Relationships among grizzly bears, roads and habitat in the Swan Mountains, Montana, 33 JOURNAL OF APPLIED ECOLOGY 1395-1405 (1996).

¹⁵ Titus, K., and L. Beier, Population and habitat ecology of brown bears on Admiralty and Chichagof islands, Federal Aid in Wildlife Restoration, Research Progress Report W-23-4, Alaska Department of Fish and Game, Juneau, AK (1991).

¹⁶ Suring, L., and G. Del Frate, Spatial analysis of locations of brown bears killed in defense of life or property on the Kenai Peninsula, Alaska, USA, 13 URSUS 237–245 (2002).

¹⁷ E.g., Trombulak, S., and C. Frissell, Review of ecological effects of roads on terrestrial and aquatic communities, 14 CONSERVATION BIOLOGY 18–30 (1999). U.S. Forest Service, FOREST ROADS: A SYNTHESIS OF SCIENTIFIC INFORMATION, General Technical Report PNW-GTR-509, Pacific Northwest Research Station (2001).

Undesirable consequences [of roads] include adverse effects on hydrology and geomorphic features (such as debris slides and sedimentation), habitat fragmentation, predation, road kill, invasion by exotic species, dispersal of pathogens, degraded water quality and chemical contamination, degraded aquatic habitat, use conflicts, destructive human actions (for example, trash dumping, illegal hunting, fires), lost solitude, depressed local economies, loss of soil productivity, and decline in biodiversity.¹⁸

The proposed road is within a confined isthmus that is ecologically intact and serves as vital habitat for a number of vulnerable species; mitigation elsewhere is not possible. Over the long term, impacts associated with the road alternatives will likely generate population sinks or constitute ecological traps for many species that rely on this special place.

b. Fulfilling International Treaty Obligations with Respect to Fish, Wildlife, and Their Habitats

The Izembek Lagoon area of the Refuge is internationally recognized for its tremendous wildlife diversity, wilderness values, and critical wetlands. The lagoon complex and isthmus make up the ecological heart of the Refuge. For migratory birds, this relatively small area is unquestionably of global significance and has been repeatedly recognized as such. For example, in 1986, President Reagan named Izembek as the first Wetland of International Importance in the United States under the Ramsar Convention on Wetlands. In 1991, Izembek was named a “sister refuge” with Russia’s Kronotskiy State Biosphere Reserve under the U.S.–Russian Governmental Agreement on Cooperation in Environmental Protection. BirdLife International, in cooperation with the National Audubon Society, recognized Izembek as an Important Bird Area of global significance. The Refuge supports internationally important migratory birds that the U.S. has helped to protect in treaties such as the Migratory Bird Treaty Act.¹⁹

Hundreds of thousands of migratory waterfowl traveling the Pacific flyway use the Izembek and Kinzarof lagoon complex and its rich eelgrass beds as a fall staging area and as wintering grounds. The lagoons complex provides wintering, breeding, molting, refueling, staging, or resting grounds for:

- nearly the entire Pacific population of brant, including birds from Canada, Russia, and Alaska;
- more than half the world population of emperor geese, which have a range limited to Alaska and parts of Russia;
- up to 70 percent of the world population of Steller’s eiders, including birds from Russia and Alaska, and many species of other shorebirds, including Pacific golden-plovers, rock sandpipers, dunlins; and
- a resident population of tundra swans.

¹⁸ U.S. Forest Service, *FOREST ROADS: A SYNTHESIS OF SCIENTIFIC INFORMATION*, General Technical Report PNW-GTR-509, Pacific Northwest Research Station (2001).

¹⁹ 16 U.S.C. § 703, et seq.

Brant fly back and forth between the lagoons to forage; emperor geese use Kinzarof Lagoon while often foraging in the upland tundra area of the isthmus for crowberries; and the threatened Steller's eiders prefer Kinzarof. Both lagoons are essential to wildlife, and the lagoon complex comprises vital, high-quality habitat for many species due to the presence of some of the world's largest eelgrass beds. More than 98 percent of the world's Pacific black brant converge on Izembek Lagoon each year to feed on the eelgrass in preparation for their 3,000-mile, 55-hour non-stop flight to wintering grounds in Mexico. The birds feed on eelgrass for approximately eight weeks before their long flight south, which usually begins in early November. Emperor and Canada geese rely on the eelgrass and intertidal mudflats in the lagoons for nutrients, as do invertebrates and marine mammals. Many of the avian species using Izembek, including the dunlin, black brant, and Steller's eider, are recognized on Audubon's Alaska WatchList of declining and vulnerable bird populations. Eelgrass also provides food and cover for commercially important fish and shellfish. The enormous productivity of the eelgrass beds in Izembek Lagoon and other lagoons on the north side of the Alaska Peninsula is a key element in maintaining the productivity of the larger Bering Sea ecosystem. Degradation or loss of this complex could result in substantial population declines for species that rely on the area, as distant uplands or other lands offered in exchange do not offer comparable habitat components that these species need.

c. Providing the Opportunity for Continued Subsistence

Construction and use of the proposed road would impact a wide range of avian species year-round, with major effects on nearly the entire brant population of the Pacific Flyway, more than half the global population of emperor geese, and tundra swans and common loons.

Concern about impacts on subsistence harvests extends beyond the Izembek area to the Yukon-Kuskokwim (Y-K) Delta, where many Alaska Native residents are dependent on brant as a key subsistence resource. It is for this reason that the Association of Village Council Presidents (AVCP), the recognized tribal organization and non-profit Alaska Native Regional Corporation for 56 member Native villages in western Alaska, has consistently opposed the King Cove Road. In 1998, the AVCP passed a resolution opposing the road, and this opposition was reaffirmed in 2007 and again in 2008. It is noteworthy that many residents of the Y-K Delta live in communities with fewer and less reliable options for transportation and medical care than are found in King Cove.

The DEIS notes that subsistence use, the harvesting of natural resources, is central to the livelihood of many Alaska Native communities and other rural residents. However, this section falls short of providing a thorough analysis as to how the road will impact subsistence use. In fact, the report notes that the authors only reviewed the regulatory framework for subsistence uses in the project areas, that major studies on subsistence are over two decades old, and that the harvest survey and resource mapping for some communities require additional analysis for inclusion in the DEIS. However, the DEIS points out that “[i]ncreased harvesting pressure on streams could result from increased access, which could have a major adverse effect on fish resources.”²⁰ The DEIS further states that “[r]oad construction and operation would have a major adverse effect on Tundra Swan, Brant, Emperor Goose and Common Loon populations...”²¹ Given the admitted lack of recent data on subsistence use, the expected reliance of communities on subsistence activities and the fact

²⁰ DEIS at ES-23.

²¹ DEIS at ES-23.

that the road will have major adverse impacts on wildlife, there is a compelling case to reject the proposed road and recommend the No Action Alternative.

d. Ensuring Water Quality and Quantity

Izembek and Kinzarof lagoons, their watersheds, and the isthmus which the proposed road would transect make up the ecological heart of the Refuge. The DEIS notes that direct effects from construction activities would increase the sediment load into surrounding streams that would continue to move throughout the system.²² Further, it states that indirect effects on hydrologic resources would occur as the increase in sediment load from road runoff would impact the quality of receiving surface water bodies.²³ The report concludes that construction, operation, and maintenance of a road would permanently result in direct and indirect impacts to hydrologic resources and water quality of medium to high intensity and permanent duration.²⁴ The DEIS notes that if a spill were to occur on land, the impact would be high in intensity, and if the spill occurred in the wetlands or a water body, the impact would be long-term and high-intensity.

The impacts of the proposed road on the isthmus wetland complex of Izembek Refuge are underestimated in Alternatives 2 and 3. Although impacts are characterized as High for delineated wetlands, the overall impact to the complex is characterized as Medium. We believe that the impacts described in the DEIS and additional impacts we here describe would result in potentially high-level, permanent impacts across the region. As a Ramsar Wetland of International Importance, an Important Bird Area, federally designated Wilderness area, and national wildlife refuge, there is no question that this is a unique wetland complex. We therefore recommend that the summary for indirect effects from operation and maintenance for Section 4.3.2.2 Wetlands (Alt 2) and Section 4.4.2.2 (Alt 3) be modified to reflect that impacts are Medium to High.²⁵

The DEIS reasonably assesses the value of the lower quality lands proposed for exchange. It is noteworthy that the wetlands that would be transferred to the Refuge System would likely remain wetlands without transfer for the next 35 years (the timespan for consideration of costs in the DEIS) based on the projected population and economic factors in the region. These wetlands might also be protected in the future as part of the Refuge System under other wetland mitigation programs resulting from compensatory mitigation under the Clean Water Act Section 404(b)(1), although we are not aware of specific intent to do so at this time.

While the direct impacts of the road are estimated to be only 3.8 acres of wetlands under Alternative 2,²⁶ and 2.4 acres under Alternative 3,²⁷ considering only the areas delineated on a map (and a low-resolution one at that) is contrary to the original intent of designating the entire isthmus region as Izembek Refuge to protect an intact watershed. Wetlands do not function as discreet features on the landscape, and the isthmus in Izembek Refuge is a wetland complex that includes the interaction between uplands where the water table may be higher than the adjacent lowland containing a wetland. Disruption of surface water flow in uplands may impact both surface and subsurface flows, with the latter being an equally important component of wetland hydrology in that

²² DEIS at 4-107.

²³ DEIS at 4-107.

²⁴ DEIS at 4-110.

²⁵ DEIS at 4-4.

²⁶ DEIS at 4-122.

²⁷ DEIS at 4-236.

groundwater may be the primary source of water in a lowland wetland.²⁸ Although the DEIS states that culverts are used to mitigate road impacts, there are still significant, even visible, impacts to wetlands when hydrologic flows are disrupted. Thus, it is unclear why the DEIS considers a 400-foot corridor for analysis, given the lack of characterization of the hydrology and thus wetland system function.²⁹ The impacts may extend far beyond this corridor in some areas and the uplands, especially within the vegetation classes identified, are an integral part of the structure and function of the wetland complex on the isthmus. Further if off-road vehicle or snow-machine use occurs off the road, there is potential for further disruption of hydrologic processes in this wetland complex.³⁰

3. The Proposed Action Is Incompatible with the Mission of the Refuge System

The National Wildlife Refuge System, established in 1903 and managed by the Service, is comprised of 556 refuges and 38 wetland districts. The Refuge System's unified mission, co-authored by Representatives Don Young (R-AK) and John Dingell (D-MI), while similar to that of the Service's, emphasizes administering a *national network of lands and waters* for the conservation, management, and where appropriate, the restoration of fish, wildlife, and plant resources and their habitats within the U. S. for the benefit of present and future generations of Americans. Within that network, located on the Alaska Peninsula is the Izembek Refuge; its wild lands and waters sustain a rich diversity of species. An essential anchor of biodiversity and wildness within the Refuge System, the Izembek Refuge's conservation benefits extend beyond its boundaries. Not only do the Refuge lands contribute to the subsistence lifestyle of Alaska Natives and other rural residents, but its wetlands and wildlife habitat are also nationally and internationally recognized natural resources. The Service has a duty to uphold the Refuge System's mission to conserve fish, wildlife, and plant resources and their habitats, and administer a network of land. The land exchange and road construction would undermine this mission.

4. The Proposed Action Erodes Wilderness Protection

Congress passed the Wilderness Act "to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition."³¹ Federal agencies must manage Wilderness areas:

for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness...³²

²⁸ Winter, T.C., A Conceptual Framework for Assessing Cumulative Impacts on the Hydrology of Nontidal Wetlands, 12 ENVIRONMENTAL MANAGEMENT 605-620 (1988).

²⁹ DEIS at 3-57.

³⁰ Arp, C.D. and T. Simmons, Analyzing the impact of Off-Road Vehicle (ORV) Trails on Watershed Processes in Wrangell-St. Elias National Park and Preserve, Alaska, Environmental Management, DOI 10.1007/s00267-012-9811-z (2011).

³¹ 16 U.S.C. § 1131(a).

³² Id.

Permanent roads and commercial enterprises are expressly prohibited in designated Wilderness.³³ Therefore, to build a road as outlined in Alternatives 2 and 3 in the DEIS, the affected areas must be “de-designated” and removed from the Wilderness System. This end-run around the prohibition against permanent roads in designated Wilderness is clearly not in the public interest, as it sets a precedent for de-designating Wilderness areas when development pressures arise, essentially relegating Wilderness to an ephemeral rather than permanent status. The first sentence of the Wilderness Act clearly states: “An Act to establish a National Wilderness Preservation System for the permanent good of the whole people and for other purposes.” The proposed land exchange and road undermine the purpose and intent of the Wilderness Act and would threaten the viability of—and the public’s confidence in—the Wilderness System as a whole. In fact, the proposed land exchange would be the first “de-designation” of Wilderness for the sake of allowing a development project to proceed. Such an action is antithetical to Wilderness designation and the protections afforded by the Wilderness Act.

Because approximately 95 percent (approximately 300,000 acres) of Izembek Refuge is designated Wilderness, the Refuge’s Comprehensive Conservation Plan (CCP) directs that the area be managed to maintain wilderness resources and values, preserve the wilderness character of the Refuge, and provide opportunities for research and recreation. The CCP explicitly notes that the designated Wilderness of the Refuge contains many of the Refuge’s special values, including pristine streams, extensive wetlands, steep mountains, tundra, and sand dunes. A road corridor threatens these values and undermines the purposes for which Izembek Refuge was established, including as a designated Wilderness.

B. The Proposed Land Exchange and Road Would Sacrifice Land Quality for Land Quantity

An objective evaluation of the land exchange and road proposal cannot be achieved by considering only the amount of land that would be removed from the Refuge versus the amount that would be added. Rather, consideration must be given to the quality of the lands to be exchanged; the total impacts of road construction, operation, and maintenance, as well as the individuals or entities who will bear these costs; and the effects of increased public use, both legal and illegal, that would occur within the most vital area of the Izembek Refuge and Wilderness. These impacts must be considered together with the lower quality of the lands that would be added, the lack of credible threats to these lands for the foreseeable future, existing protective benefits of Section 22(g) that would continue if the King Cove Corporation lands and selections were not transferred, and the fact that some of the lands to be added would come with less than ideal capability for protection, such as submerged lands remaining in State ownership and some lands with the subsurface remaining in Aleut Corporation ownership. Thus, any benefits that might occur from this land exchange are far outweighed by the impacts of a road in the heart of the most important and vulnerable wildlife habitat within Izembek Refuge’s Wilderness.

The proposed land exchange would add approximately 43,093 acres of land owned by the State of Alaska to the Alaska Peninsula National Wildlife Refuge and designate these lands as Wilderness. The State of Alaska would retain ownership of submerged lands including tidelands, lakes, rivers, and streams. These lands are located to the north of the Izembek Refuge and were not included within the original boundary for obvious reasons: they do not contribute in a significant manner to

³³ See 16 U.S.C. § 1133(c).

the habitat values and conservation purposes of the Izembek Refuge. The DEIS acknowledges the lower habitat values of these lands: “The southern half is primarily upland habitat and includes areas at higher elevations than any other parcels discussed in the EIS. It likely does not provide much habitat for waterfowl or other waterbirds...”³⁴ The value of wetlands associated with the State lands are also rated lower: “this value is somewhat less than wetlands that are in closer proximity to Izembek and Kinzarof lagoons, which are used more extensively by migratory birds and designated as Internationally Important Wetlands.”³⁵ These lands would in no way “compensate” for the lands and habitats lost to road construction should Alternative 2 or 3 be implemented.

Also proposed in the land exchange is the addition of approximately 13,300 acres of land (surface estate, but not tidelands, and submerged land of rivers, streams and lakes) owned by King Cove Corporation to the Refuge. The King Cove Corporation would also relinquish its selection of 5,430 acres in the Izembek Wilderness. While these lands are recognized for having some habitat values, any additional contribution they would make to the Refuge is of questionable merit. For example, a significant portion of the King Cove Corporation lands and selection lands were formerly part of the Izembek Refuge and are therefore subject to the protective provisions of Section 22(g) of the Alaska Native Claims Settlement Act (ANCSA). A U.S. District Court ruling that nullified the St. Matthew Island land exchange centered on the failure of the government to properly weigh the conservation value of Section 22(g).³⁶ Failure to properly assess the implications of Section 22(g) creates an exaggeration of potential benefits to conservation from exchange of King Cove lands, at the expense of accurately describing the consequences.

The DEIS acknowledges that some of the King Cove lands that would be transferred to the Refuge have been managed for shareholder use, especially the Kinzarof Lagoon and Mortensen’s Lagoon parcels, which have various cabins and old military structures present.³⁷ However, the document fails to clearly indicate that these lands, which would become Wilderness under the proposed land exchange, have lower wilderness quality than the existing Wilderness lands that would be lost to road construction. This is yet another example of the DEIS providing an incomplete evaluation of the proposed exchange and creating the false impression that net benefits to Wilderness would occur. In fact, the opposite is true.

The value of the land exchange for conservation is further reduced because the King Cove Corporation lands previously conveyed from the Alaska Peninsula National Wildlife Refuge are not subject to the benefits of Section 22(g), and the subsurface estate of these lands will remain under the ownership of the Aleut Regional Corporation. Development rights of subsurface resources by the Aleut Regional Corporation at any time would result in significant impact to refuge resources and values. This legal reality greatly diminishes the actual conservation value that might be available to the Alaska Peninsula National Wildlife Refuge from the proposed land exchange.

We understand that King Cove Corporation intends to take its 5,430-acre entitlement from lands currently in the Alaska Peninsula National Wildlife Refuge that are located east of Frosty Peak. These lands would not be subject to Section 22(g) of ANCSA and thus would lose any resource protections that had been afforded by remaining within the Alaska Peninsula National Wildlife

³⁴ DEIS at 3-140.

³⁵ DEIS at 3-90.

³⁶ *National Audubon Society v Hodel*, 606 F. Supp. 825 (D. Alaska 1984).

³⁷ DEIS at 3-350.

Refuge. Before a complete and accurate analysis of the environmental impacts of the proposed action can be made, information regarding the specific lands to be reclaimed by King Cove must be presented to the public. Taking of other lands from the Alaska Peninsula National Wildlife Refuge will significantly reduce any perceived benefits that may be associated with the proposed land exchange, road construction, operation, and maintenance.

If Alternative 2 or 3 is authorized, there will be many significant impacts to Izembek Refuge, including lands that would be acquired by the Refuge. The DEIS correctly identifies increased impacts of all-terrain vehicle trails within the existing Wilderness and adjacent lands that are apparently a direct consequence of recent road construction on King Cove Corporation lands.

In addition, since 2006, after the partial completion of the road along the east side of Cold Bay, numerous all-terrain vehicle tracks have been observed and documented (Sowl 2011f) extending out from the hovercraft terminal site and approximately 4 miles inland from the coast. This recent all-terrain vehicle use has been concentrated on wet or moist graminoid areas, likely due to ease of travel on these cover types. Multiple tracks indicating frequent passages are concentrated within the Izembek Wilderness along the east side of Kinzarof Lagoon and extending to the northeast into the Joshua Green River watershed.³⁸

It is entirely likely that expansion of such impacts will occur on the King Cove Corporation lands proposed to be added to the Refuge and that these impacts will extend over time to broader areas of the Refuge and Wilderness if a land exchange and road are approved. This would significantly negate many of the claimed benefits that would result from an exchange of lands.

In short, the Refuge and Wilderness area presently support globally significant populations of migratory birds, as well as other wildlife. The proposed exchange lands in Alternatives 2 and 3 would not provide comparable habitat nor compensate for the loss or degradation of the lagoon complex. This is not an issue that can be resolved on the basis of acreage: no amount of exchange lands can compensate for the unacceptable and irreversible impacts of a road on globally significant and unique wildlife habitats, which are the very heart of Izembek Refuge. Removing these protections is clearly not in the public interest.

C. The Congress and Taxpayers Provided a Solution to the Health and Safety Concerns

The King Cove Health and Safety Act appropriated \$37.5 million of federal funds to improve King Cove's medical facilities and create a reliable marine link between the village and Cold Bay. After passage of the King Cove Health and Safety Act, Alaska Senator Ted Stevens sponsored a rider on an appropriations bill that directed a 17-mile road be built from King Cove to a hovercraft terminal. Construction for this road began in March 2004. More than \$25 million dollars have been spent for this road, which remains unfinished, and it is estimated that a completed road would eventually cost \$50 million. Construction costs continued to escalate as crews confronted numerous obstacles, including unstable volcanic soils in the area. Avoiding the unstable soils required rerouting the road onto Cold Bay's sensitive shoreline, where winter ice scouring and spray will increase road maintenance costs, especially as sea levels rise.

³⁸ DEIS at 3-42.

D. The Proposed Land Exchange and Road Are Unnecessary

The funds appropriated under the King Cove Health and Safety Act allowed Aleutians East Borough (AEB) to purchase a \$9 million state-of-the-art hovercraft, capable of carrying 50 passengers and an ambulance and traveling in wave heights up to 10 feet and in winds over 45 miles per hour. The hovercraft began operating in 2007 and performed successfully in each of the more than 30 medical evacuations for which it was used. According to the attached AEB meeting minutes from March 13, 2008, the AEB mayor stated that the hovercraft is a “lifesaving machine” and “is doing what it is supposed to do.” The hovercraft is one of the multiple options King Cove residents have for emergency medical response.

E. The Proposed Land Exchange and Road Would Not Guarantee Year-round, Reliable Access between the King Cove and Cold Bay Communities

Throughout the DEIS, the Service states that King Cove residents are seeking affordable and reliable emergency transportation.³⁹ However, the proposed road would not ensure year-round, safe access between King Cove and Cold Bay. At times when the weather is harshest, including high winds, low visibility, and heavy precipitation, a road is unlikely to be a reliable or safe alternative.

The statement in the DEIS that “road transportation is almost always available, assuming regular and timely maintenance” does not appear to be substantiated for this region and should be revised.⁴⁰ The Service should explain and/or document the likely reliability of road transportation based on observed conditions in the region, such as high winds, fog, reduced visibility, snow squalls, the ability of local road maintenance equipment to keep a new road open in addition to maintaining existing transportation corridors (airports, existing roads, public parking, etc.).

A road should not be constructed through fragile rolling tundra dotted with wetlands, prone to high snowdrifts. The road would also traverse areas of steep slopes and unstable volcanic soils prone to avalanches. Travel time between the two communities is expected to take more than two hours in the best circumstance.⁴¹ The road would be totally impassable during frequent icing, blowing snow, and slides that are common on the proposed route. Severe winter storms and high waves would likely produce serious damage that would close it for long periods of time and result in exorbitant repair and maintenance costs for the life of the road. In a medical emergency, the 20-minute ride in the hovercraft would be shorter and more reliable.

II. THE DEIS FAILS TO PROVIDE A THOROUGH AND OBJECTIVE ANALYSIS OF THE PROPOSED ACTION

A thorough and objective evaluation of the proposed land exchange and road corridor alternatives will clearly show that such actions would weaken the Service’s ability to fulfill its statutory responsibilities and are not in the public interest. Unfortunately, such an evaluation cannot be found in the DEIS. The current analysis relies on incomplete, outdated, and biased information that cannot reasonably be expected to inform a decision that fulfills agency mandates and serves the

³⁹ E.g., DEIS at 4-73.

⁴⁰ DEIS at 4-75.

⁴¹ DEIS at 4-74 (Table 4.2.3-8).

public interest. The Service must ensure that any inadequacies with the draft document are remedied in the Final EIS. Described below are just a few of the issues that must be resolved.

A. The Service Must Prepare a Compatibility Determination

The Service must prepare a compatibility analysis and determination for the proposed land transfer and road corridor. Compatibility determinations are used to ensure that the purposes of the Refuge and the mission of the National Wildlife Refuge System are met. According to Refuge System policy,

[u]ses that we reasonably may anticipate to conflict with pursuing this directive to maintain the ecological integrity of the System are contrary to fulfilling the National Wildlife Refuge System mission and are therefore not compatible. Fragmentation of the National Wildlife Refuge System's wildlife habitats is a direct threat to the integrity of the National Wildlife Refuge System, both today and in the decades ahead. Uses that we reasonably may anticipate to reduce the quality or quantity or fragment habitats on a national wildlife refuge will not be compatible.⁴²

The proposed land transfer and subsequent road corridor falls within the extremely broad definition of “refuge use” found in federal regulations.⁴³ These regulations define a refuge use as “a recreational use [], refuge management economic activity, or other use of a national wildlife refuge by the public or other non-National Wildlife Refuge System entity.”⁴⁴ Under the 1997 National Wildlife Refuge System Improvement Act, “[t]he Secretary shall not initiate or permit a new use of a refuge or expand, renew, or extend an existing use of a refuge, unless the Secretary has determined that the use is a compatible use and that the use is not inconsistent with public safety.”⁴⁵ A compatible use is “a wildlife-dependent recreational use or any other use of a refuge that, in the sound professional judgment of the Director, will not materially interfere with or detract from the fulfillment of the mission of the System or the purpose of the refuge.”⁴⁶

A previous EIS prepared for a land exchange on Yukon Flats National Wildlife Refuge indicated that the Service was not required to prepare a compatibility determination because the land exchange was considered a refuge management activity, rather than a refuge use. A refuge management activity is defined as “an activity conducted by the Service or a Service-authorized agent to fulfill one or more purposes of the national wildlife refuge, or the National Wildlife Refuge System mission.”⁴⁷ Examples of refuge management activities include “prescribed burning; water level management; invasive species control; routine scientific monitoring, studies, surveys, and censuses; historic preservation activities; law enforcement activities; and maintenance of existing refuge facilities, structures, and improvements.”⁴⁸ The land transfer at issue cannot be considered a refuge management activity because the proposed land exchange and road corridor do not fulfill either the purposes of Izembek Refuge or the Refuge System mission. As demonstrated by the examples listed

⁴² U.S. Fish and Wildlife Service, 603 FW 2.5 Compatibility (2000).

⁴³ 50 C.F.R. § 25.12.

⁴⁴ *Id.*

⁴⁵ Pub. L. No. 105–57 § 6(3)(A)(i).

⁴⁶ *Id.* at § 5(1).

⁴⁷ U.S. Fish and Wildlife Service, 603 FW 2 Compatibility (2000).

⁴⁸ *Id.* at 2.10.

in Service policy, management activities are those activities necessary to maintain the purpose of the Refuge, not undermine it. Altering the boundaries of the Refuge and constructing a road corridor through ecologically sensitive habitat is a major decision with significant ecological consequences, one that is not akin to the types of activities described in the policy.

Furthermore, the fact that the Secretary of the Interior is required to prepare a public interest determination does not relieve the Service of the requirement to prepare a compatibility determination for this action. The 2009 Omnibus Public Lands Management Act requires the Secretary to comply with the National Environmental Policy Act (“NEPA”) and any other applicable laws and regulations, except for valuation requirements.⁴⁹ The valuation exception is the only exception contained in the Act.⁵⁰ The provision requiring a public interest determination does not state or imply that a compatibility determination will no longer be required or that it is being replaced with a public interest determination; the public interest is merely an additional consideration.⁵¹

The DEIS correctly cites regulations that preclude consideration of the Refuge System mission for uses of 22(g) lands in compatibility determinations.⁵² However, the lands that would be transferred from Izembek Refuge and directly impacted by the proposed road are not 22(g) lands, and the compatibility determination must therefore consider whether the use is compatible both with the Refuge’s purposes and the Refuge System mission.

For these reasons, the proposed land transfer and road corridor are not exempt from a compatibility determination. Compatibility determinations are essential for actions, such as this one, that will have significant ecological consequences and that may be inconsistent with the Refuge’s purposes.

B. The Final EIS Must Fully Assess the Impacts to Wetlands, Hydrology, and Soils

The impacts to wetlands and hydrologic processes projected for Alternatives 2 and 3 have been significantly underestimated. We attribute this underestimation to a lack of information about the hydrology of the isthmus, especially subsurface conditions, and its soils. It is not in the public interest to build a road through the Izembek Wilderness and wetlands when the impacts cannot be reasonably determined. Allowing a road in the absence of the information necessary for the Service to properly evaluate the environmental consequences is in violation of the National Environmental Policy Act (NEPA).

Information presented on “Hydrology/Hydrologic Processes” is derived from topographical maps prepared by the USGS at a 1:63,360 scale.⁵³ These data make it possible to identify approximate stream locations and the surface flow hydrologic boundary between Izembek and Kinzarof lagoons,⁵⁴ but are inadequate for characterizing the integrated ground and surface hydrology of the isthmus. The isthmus region is within one hydrologic unit (HU 1930101), which suggests that the hydrology across the isthmus is interconnected, likely at the subsurface level. The Final EIS should

⁴⁹ Pub. L. No. 111-11 § 6402(b).

⁵⁰ *Id.*

⁵¹ *Id.* at 6402(d).

⁵² DEIS at 3-193. 50 C.F.R. § 25.21.

⁵³ DEIS at 3-17 to 3-22.

⁵⁴ DEIS at 3-20 (Figure 3.1-3).

clarify this, as well as more clearly project the implications of bisecting the Kinzarof Lagoon sub-watershed under Alternative 2 and of impacting both Izembek Lagoon and Kinzarof Lagoon sub-watersheds under Alternative 3.

Discrepancies regarding soil type exist between the 1979 National Cooperative Soil Survey (NCSS) information provided in the DEIS and information collected by consultants on behalf of the Aleutians East Borough (AEB). The AEB consultant reports describe the soil type as gravelly sands and sandy silts overlain by soft organic peat and silt.⁵⁵ The NCSS describes the soils as Fibrists (peats) overlying volcanic ash. Volcanic ash soils can be unstable not only during seismic activity as stated in the DEIS, but also when agitated, such as during construction and operation of roads. Ashes that weather into allophanic clays are highly sensitive to disturbance and heavy compaction, such as occurs when roads are constructed. These materials should be avoided and are generally not recommended for road construction.⁵⁶ Classification of soils is important, as soil type will affect both the stability and lifespan of the road, as well as interpretation of the impacts to hydrology, especially groundwater recharge and water quality impacts, and wetland function. To better assess the impacts of a road across the isthmus in Alternatives 2 and 3, a more comprehensive soil study is needed.

C. The Final EIS Must Fully Assess the Impacts to Wildlife

The Final EIS should acknowledge that habitat loss resulting from the road alternatives cannot be mitigated because such losses are permanent and new habitat cannot be created or enhanced elsewhere without displacing other swans or impacting other species using the confined isthmus area. Much of the impact to tundra swans associated with the road alternatives is due to inherent sensitivity of these birds to human disturbances and the strong likelihood that the road will bring increased human activities such as wildlife viewing, sport and subsistence hunting, as well as expanded use of ATVs for subsistence access in spite of attempts to prevent such access. Given these circumstances, the Final EIS must reaffirm the finding that the impacts to tundra swans that are associated with the road alternatives will be major and highly significant.

Further, we disagree that the mitigation measures identified in the Omnibus Public Land Management Act of 2009 will minimize the adverse impacts of the road corridor on adjacent refuge lands, especially a cable barrier or other physical barrier on each side of the road as a mitigation measure to avoid impacts to wildlife and to mitigate wetland loss. Because it is highly likely that if a road is built some users will attempt to leave the road to access wildlife on the Refuge, a barrier is intended to keep vehicles on the road, thus preventing disturbance to wildlife and destruction of wetlands and vegetation. However, a barrier along the road will also serve as a movement barrier to wildlife such as bears and caribou, and thus may have an equal impact as off-road vehicle use on wildlife. Further, anyone driving roads where there is snow removal and maintenance equipment in use, or in rural areas where there is little traffic enforcement available, knows that maintaining the

⁵⁵ Miller, Duane and Associates, Geotechnical Exploration, King Cove to Cold Bay Access, King Cove, Alaska, report prepared for Aleutians East Borough (2000). Miller, Duane and Associates, Geotechnical Exploration-Supplement, Access Road King Cove, Alaska, report prepared for Aleutians East Borough, (December 18, 2003). Golder Associates, Draft Final Data Report for Geotechnical Investigations, Rock Mapping and Potential Quarry Site Evaluations, King Cove Access Road Completion, King Cove, Alaska, prepared for USKH, Inc. (July 30, 2010).

⁵⁶ Robinson, R. and B. Thagesen. 2004. Road Engineering for Development, 2nd Edition. CRC Press, 544p,(see p. 175).

integrity of a barrier is a significant challenge. Because the maintenance will not be the responsibility of the USFWS, it will be difficult to ensure this mitigation measure is enforced or achievable. This barrier will also have significant impacts on the wilderness values of Izembek as it would be visible from the Refuge, although not having it would also result in significant impacts. Due to the magnitude of significant unavoidable impacts that cannot be effectively mitigated, the proposed land exchange should not be completed.

D. The Final EIS Must Fully Assess Other Impacts of the Proposed Action

In discussing the environmental consequences of Alternatives 2 and 3, the DEIS fails to consider the potential for spills of hazardous materials that may be transported on the road once it is open to access.⁵⁷ These materials may include not only fuels, but also chemicals transported for use in municipal and commercial operations, and other hazardous materials.

Similarly, the DEIS fails to account impacts from off-road vehicles (ORVs) to the vegetation, wildlife and other refuge resources. The DEIS should include information from and reference to the impact analysis of off-road vehicles for subsistence purposes on refuge lands and resources prepared by Sowl and Poetter.⁵⁸ This analysis and the references within is critical for evaluating the potential impacts of ORVs traveling on and adjacent to a road corridor through the isthmus, not just for subsistence use but in case of trespass into refuge lands as well. This report concluded that:

Allowing use of ORVs off established roads and trails within Izembek Refuge is unwarranted and could be detrimental to key fish and wildlife species found within the Refuge. Unregulated ORV access would significantly increase consumptive use of fish and wildlife resources, significantly expand the portion of the Refuge experiencing human disturbances, substantially increase damage to habitats, increase displacement of animals from preferred habitats, disrupt animal movements, and put extra stress on populations that are engaged in energetically demanding activities such as breeding, molting, migration, and overwintering.

Further, noise disturbance from ORVs, including ATVs and motorcycles, and snow machine use on the road must be considered. ATVs and motorcycles have noise emissions near 100 dB immediately next to the vehicle and decrease to approximately 80 dB 50 feet away.⁵⁹ Snow machines produced after 1976 that are in good working order and certified by the Snowmobiles Safety and Certification Committee's independent testing company emit no more than 73 dB(A) at 50 feet while traveling at 15 mph when tested under SAE J-1161 procedures, but the disturbance may still be harmful to wildlife.⁶⁰

Although different species react differently to human presence, it is safe to say that the effects of the road will extend well beyond the physical road footprint. Increased human presence, particularly during times of the year when wildlife is especially sensitive and their energetic needs are high

⁵⁷ DEIS at 4-111 to 4-113, and 4-230.

⁵⁸ Sowl, K. and R. Poetter, Impact Analysis of Off-Road Vehicle Use for Subsistence Purposes on Refuge Lands and Resources Adjacent to the King Cove Access Project (2004).

⁵⁹ Wayle Laboratories, CALIFORNIA OFF-HIGHWAY VEHICLE NOISE STUDY, Prepared for the State of California Department of Parks and Recreation (2005).

⁶⁰ Id.

(molting, nesting, and migration staging for birds; calving season for caribou) would have negative impacts on these populations.

It is insufficient to list direct or indirect effects; the Service must consider the cumulative impacts of *all* of the impacts from road-building. These include not only impacts from human activities, but also the increase of predators that tend to thrive near human activity, such as common ravens and foxes, which would increase predation pressure on birds during nesting season when eggs and chicks are vulnerable, as well as during molting season when waterfowl are flightless as they grow new feathers.

E. The Final EIS Must Consider and Analyze the Impacts of Climate Change

Secretarial Order 3289 states that “[e]ach bureau and office of the Department [of the Interior] must consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, developing multi-year management plans, and making major decisions regarding potential use of resources under the Department’s purview.” However, the DEIS’s consideration of climate change and its impact on the Izembek Refuge is woefully inadequate. The sub-Arctic is experiencing a cascade of related impacts from climate change that are altering the nature and function of the ecosystem. In addition to atmospheric warming, greenhouse gas emissions are leading to warmer waters, rapidly melting sea ice, increased frequency of extreme weather events, and ocean acidification, all of which have negative impacts on the Izembek environment and wildlife. Rising sea levels will have substantial impacts on the maintenance and viability of the proposed road system, especially those sections that must be located near tidewater. Without considering these changes and how they will interact with the proposed alternatives, the Service cannot make an informed decision about the relative impacts of the various alternatives.

1. The EIS Must Consider the Viability of a Road Corridor in the Context of Sea-Level Rise

Alternatives 2 and 3 propose road corridors through a narrow isthmus between Izembek and Kinzarof lagoons; however, the DEIS fails to consider potential inundation and erosion of this land due to the very real and measurable threat of sea-level rise. The Final EIS should include data pertaining to land elevation, rate of sea-level rise, and tectonic subsidence and uplift to evaluate risks to the road and surrounding land. Given that construction of a road is the underlying reason for developing this EIS, it is essential that Service analyze the long-term viability of such a road.

The DEIS asserts that the lifecycle of the road, in both Alternatives 2 and 3, is expected to be greater than 50 years.⁶¹ If a road is likely to be inundated or experience erosion due to sea-level rise in that timeframe, Alternatives 2 and 3 as described in the DEIS would provide only a short-term and unreliable link between the Cold Bay and King Cove communities. Questions then arise as to if and how the road would be maintained as inundation or erosion occur, whether the road would be preserved through the construction and long-term maintenance of sea walls or other structures, how such actions would further impact the ecosystem, and how much these would add to the true cost of these alternatives.

⁶¹ DEIS at 2-32 and 2-39.

2. The EIS Must Consider the Ecological Impacts of Climate Change

Although the Service makes some attempt to consider the greenhouse gases that will be produced by the various alternatives, it does not consider how the climatic changes already occurring will interact cumulatively with the proposed road and land exchange to impact Izembek Refuge. While natural systems and organisms exhibit a certain level of resiliency in the face of such disturbances, the additional pressure of climate change threatens to push them toward thresholds beyond which they will be unable to recover.⁶² Examples of the synergistic effects of climate and other stressors have already been documented, and there is evidence that multiple stressors can produce ecosystem change of a greater magnitude than would be expected by summing their individual effects.⁶³ Limiting such stressors, as in Alternative 1, would preserve the ecological integrity and resiliency of Izembek Refuge's relatively undisturbed habitat, which will help vulnerable species that depend on it adapt to the drastic climatic changes they face.

Climate change and ocean acidification represent significant long-term threats to the survival of many of the species in Izembek Refuge. Climate change is affecting the far northern latitudes at a greater rate than the rest of the world. Over the past 50 years, Alaska has warmed at more than twice the rate of the rest of the national average.⁶⁴ Annual average temperature in Alaska has increased 1.9°C, while winters have warmed by 3.5°C, which has contributed to earlier spring snowmelt, sea-ice loss, widespread glacier retreat, and permafrost warming.⁶⁵ This trend is expected to continue.

Climate projections prepared for Izembek Refuge by The Wilderness Society based on data from a composite of five down-scaled global circulation models were used to estimate average future temperature and precipitation. These models assume a steady increase in carbon dioxide (CO₂) emissions from fossil fuel combustion over the first several decades of the 21st century, followed by a gradual decline in emissions as low-carbon energy alternatives become more prevalent.⁶⁶

Average temperature in the region is projected to increase at a rate of about 1°F per decade. Average annual temperature is expected to rise by about 5°F by 2040 and as much as 8°F by 2080. A likely outcome of these changes is a lengthening of the growing season by up to a month, a change that could have profound effects on wildlife mating cycles, plant growth and flowering, water availability in soil and rivers, and hunting and fishing.

⁶² Fagre, D.B., et al., THRESHOLDS OF CLIMATE CHANGE IN ECOSYSTEMS, A REPORT BY THE U.S. CLIMATE CHANGE SCIENCE PROGRAM AND THE SUBCOMMITTEE ON GLOBAL CHANGE RESEARCH, U.S. Geological Survey, Reston, VA (2009).

⁶³ Przeslawski, R., et al., Synergistic Effects Associated with Climate Change and the Development of Rocky Shore Molluscs, 11 GLOBAL CHANGE BIOLOGY 515-522 (2005). Russell, B.D., et al., Synergistic Effects of Climate Change and Local Stressors: CO₂ and Nutrient-driven Change in Subtidal Rocky Habitats, 15 GLOBAL CHANGE BIOLOGY 2153-2162 (2009).

⁶⁴ Karl, T.R., J.M. Melillo, and T.C. Peterson (eds.), GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES, U.S. Global Change Research Program, Cambridge University Press (2009).

⁶⁵ Id.

⁶⁶ This emissions outlook is the "A1B" scenario from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment, published in 2007. The models used in this analysis included Echem5, Gfdl2.1, Miroc3.2MR, HadCM3, and CGCM3.1 and data are available through the Scenarios Network for Alaska and Arctic Planning at the University of Alaska Fairbanks.

Average winter temperatures are projected to change the most, producing more ice and rain-on-snow events, which would be detrimental for over-wintering species. Mean winter temperatures are likely to cross the freezing threshold, increasing from an historical average of ~31°F to well above freezing (38°F). Growing season precipitation is unlikely to change much, resulting in drier conditions. Although summer rainfall is expected to rise by 10%, this increase is unlikely to be enough to offset an increase in water losses due to evapotranspiration caused by warmer temperatures and a longer growing season. Ultimately, the timing and intensity of precipitation will determine how the landscape and hydrology of the Refuge will be affected. These temperature changes will result in a variety of additional impacts to the vegetation and wildlife in Izembek Refuge.

The rapid decline in arctic sea ice is one of the most striking and visible indicators of global climate change, and sea-ice loss is having profound impacts on wildlife in the sub-Arctic and Arctic. Sea ice is critically important for numerous species including ice seals, sea ducks, whales, and invertebrates, all of which depend on sea ice for important life processes such as feeding, breeding, giving birth, rearing young, resting, and sheltering. In 2007, summer sea ice reached a stunning record minimum,⁶⁷ and the ice extent has not recovered. Overall, September sea-ice extent during 1979 to 2010 declined at a rate of 81,400 km² (31,400 mi²) per year, or 11.5 percent per decade relative to the 1979 to 2000 average.⁶⁸ Many studies now project that arctic summer sea ice will disappear almost completely in the 2030s.⁶⁹ Winter sea ice is also declining faster than Intergovernmental Panel on Climate Change (IPCC) climate models projected.⁷⁰ In the Bering Sea, winter (March and April) sea-ice cover is expected to decline by approximately 43 percent by 2050 under a mid-range A1B emissions scenario.⁷¹ Arctic and sub-arctic shorelines are eroding at an accelerating rate due to the combined effects of sea-ice loss, increasing sea-surface temperatures, increasing terrestrial permafrost degradation, rising sea levels, and increases in storm power and corresponding wave action.⁷² Increasing coastal erosion jeopardizes species that use coastal habitats such as the Izembek Refuge.

⁶⁷ National Snow and Ice Data Center, Arctic sea ice shatters all previous record lows, Press release, Boulder, CO, available at http://www.nsidc.org/news/press/2007_seaiceminimum/20071001_pressrelease.html (October 1, 2007). Comiso, J. C., et al., Accelerated decline in the Arctic sea ice cover, *GEOPHYSICAL RESEARCH LETTERS* 35, L01703, doi:10.1029/2007GL031972 (2008).

⁶⁸ National Snow and Ice Data Center, Weather and feedbacks lead to third-lowest extent, available at <http://nsidc.org/arcticseaicenews/2010/100410.html> (2010).

⁶⁹ Stroeve, J., et al., Arctic sea ice extent plummets in 2007, *EOS TRANSACTIONS, AGU* 89:13-14 (2008). Lindsay, R. W., et al., Arctic sea ice retreat in 2007 follows thinning trend, *22 JOURNAL OF CLIMATE* 22:165-176 (2009). Wang, M., and J. E. Overland, A sea ice free summer Arctic within 30 years? *JOURNAL OF GEOPHYSICAL RESEARCH* 36, L07502, doi:10.1029/2009GL037820 (2009). Zhang, X., Sensitivity of arctic summer sea ice coverage to global warming forcing: towards reducing uncertainty in arctic climate change projections, *62A TELLUS SERIES A-DYNAMIC METEOROLOGY AND OCEANOGRAPHY* 220-227 (2010).

⁷⁰ Stroeve, J., et al., Arctic sea ice decline: Faster than forecast, *GEOPHYSICAL RESEARCH LETTERS* 34, L09501, doi: 10.1029/2007GL029703 (2007).

⁷¹ Wang, M., J. E. Overland, and N. A. Bond, Climate projections for selected large marine ecosystems, *79 JOURNAL OF MARINE SYSTEMS* 258-266 (2010).

⁷² Jones, B. M., et al., Increase in the rate and uniformity of coastline erosion in Arctic Alaska, *GEOPHYSICAL RESEARCH LETTERS* 36, L03503, doi:10.1029/2008GL036205 (2009).

Sea-level rise in many regions of the Arctic and sub-Arctic is advancing much faster than the global average, with particularly rapid increases in sea level occurring in recent years.⁷³ Although the IPCC Fourth Assessment Report projected a global mean sea-level rise in the 21st century of 18-59 cm, the IPCC acknowledged that this estimate did not represent a “best estimate” or “upper bound” for sea-level rise because it assumed a negligible contribution from the melting of the Greenland and west Antarctic ice sheets.⁷⁴ Recent studies documenting the accelerating ice discharge from the Greenland and Antarctic ice sheets indicate that the IPCC projections are a substantial underestimate.⁷⁵ Recent studies have attempted to improve upon the IPCC estimates and have found that a mean global sea-level rise of at least one to two meters is highly likely within this century.⁷⁶ Studies that have reconstructed sea-level rise based on the geological record, including oxygen isotope and coral records, have found that larger rates of sea-level rise of 2.4-4 m per century are possible.⁷⁷

Also of great concern is that the oceans are acidifying at an alarming rate. Ocean acidification is a predictable consequence of rising atmospheric CO₂;⁷⁸ and the waters of the high-latitude Pacific-Arctic region are among the most vulnerable to ocean acidification because mixing and lower temperatures create conditions with lower pH and saturation state values.⁷⁹ A primary impact of ocean acidification is that it depletes seawater of the carbonate compounds—aragonite and calcite—that many marine creatures need to build shells and skeletons.⁸⁰ As a result, ocean acidification hinders organisms such as corals, crabs, seastars, sea urchins, and plankton from building the protective armor they need to survive. Rising acidity also affects the basic functions of fish, squid, invertebrates, and other marine species, including detrimental effects on metabolism, respiration,

⁷³ Richter-Menge, J., et al., Arctic Report Card 2008, <http://www.arctic.noaa.gov/reportcard> (2008).

⁷⁴ IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT, An Assessment of the Intergovernmental Panel on Climate Change, Available at www.ipcc.ch (2007).

⁷⁵ Hansen, J., et al., Global temperature change, 103 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 14288-14293 (2006). Pritchard, H. D., et al., Extensive dynamic thinning on the margins of the Greenland and Antarctic ice sheets, NATURE doi:10.1038/nature08471 (2009).

⁷⁶ Rahmstorf, S., A semi-empirical approach to projecting future sea-level rise, 315 SCIENCE 368-370 (2007). Pfeffer, W. T., J. T. Harper, and S. O'Neel, Kinematic constraints on glacier contributions to 21st-century sea-level rise, 321 SCIENCE 1340-1343 (2008). Vermeer, M., and S. Rahmstorf, Global sea level linked to global temperature, 106 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 21527-21532 (2009). Grinsted, A., J. C. Moore, and S. Jevrejeva, Reconstructing sea level from paleo and projected temperatures 200 to 2100 AD, 34 CLIMATE DYNAMICS 461-472 (2010). Jevrejeva, S., J. C. Moore, and A. Grinsted, How will sea level respond to changes in natural and anthropogenic forcing by 2100, GEOPHYSICAL RESEARCH LETTERS 37:L07703, doi:07710.01029/02010GL042947 (2010).

⁷⁷ Milne, G. A., et al., Identifying the causes of sea-level change, NATURE GEOSCIENCE 2 (2009).

⁷⁸ Feely, R. A., S. C. Doney, and S. R. Cooley, Ocean acidification: present conditions and future changes in a high-CO₂ world, 22 OCEANOGRAPHY 36-47 (2009).

⁷⁹ Fabry, V.J., et al., Ocean acidification at high latitudes: the bellweather, 22 OCEANOGRAPHY 160-171 (2009). Mathis, J.T., The Extent and Controls on Ocean Acidification in the Western Arctic Ocean and Adjacent Continental Shelf Seas [in ARCTIC REPORT CARD 2011], <http://www.arctic.noaa.gov/reportcard> (2011).

⁸⁰ Orr, J.C., et al., Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms, 437 NATURE 681-686 (2005). Fabry, V., et al., Impacts of ocean acidification on marine fauna and ecosystem processes, 65 ICES JOURNAL OF MARINE SCIENCE, 414-32 (2008). Feely, R. A., S. C. Doney, and S. R. Cooley, Ocean acidification: present conditions and future changes in a high-CO₂ world, 22 OCEANOGRAPHY 36-47 (2009).

and photosynthesis, which can thwart their growth and lead to higher mortality.⁸¹ Because of its serious impacts on so many species, ocean acidification threatens to disrupt the entire marine food web.

The impacts from climate change and acidification are not speculative or in the distant future; they are happening now. Virtually no species in Izembek Refuge will be unaffected over the coming decades. Below are examples of three important species of Izembek Refuge – black brant, Steller’s eiders, and caribou – that will be cumulatively impacted by climate change under some of the alternatives being considered in the DEIS.

a. Black Brant

The DEIS acknowledges that climate change is occurring due to greenhouse gas emissions, but it fails to analyze the effects of the alternatives on black brant in the context of a changing and stressed environment. The DEIS’s cumulative analysis is incomplete and inaccurate and makes no mention of climate change impacts to black brant distribution and reproductive success, nor how increased human disturbance may further amplify the negative impacts of climate change on black brant.

Climate change over the last 50 years has impacted wetland habitats in North America, which has in turn impacted black brant. Effects include changes in distribution, survival and fitness, and breeding propensity.⁸² Current global warming projections indicate that the rate of change is likely to accelerate, which will further impact black brant.⁸³ Black brant nest on coastal tundra throughout the Arctic, and typically spend the winter months in bays along the Pacific Coast of Mexico, although they may overwinter anywhere along the Pacific Coast from Alaska to Mexico.⁸⁴ Black brant depend heavily on a species of eelgrass, *Zostera marina*, as a primary food source.⁸⁵ Nearly the entire Pacific population of black brant concentrates in a single area at Izembek Lagoon during the fall migration, prior to its more than 2,000-mile flight to winter habitat.⁸⁶ Currently, black brant are experiencing a distribution shift throughout their migratory flyway that is likely related to climate change influences on the abundance and availability of their primary food source, the eelgrass *Z. marina*.⁸⁷

⁸¹ Fabry, V., et al., Impacts of ocean acidification on marine fauna and ecosystem processes, 65 ICES JOURNAL OF MARINE SCIENCE, 414-32 (2008).

⁸² Ward, D.H., et al., North American brant: effects of changes in habitat and climate on population dynamics, 11 GLOBAL CHANGE BIOLOGY 869-880 (2005).

⁸³ IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT, An Assessment of the Intergovernmental Panel on Climate Change, Available at www.ipcc.ch (2007).

⁸⁴ Ward, D.H., et al., North American brant: effects of changes in habitat and climate on population dynamics, 11 GLOBAL CHANGE BIOLOGY 869-880 (2005). Sedinger, J.S., et al., Carryover effects associated with winter location affect fitness, social status, and population dynamics in a long-distance migrant, AMERICAN NATURALIST, accessed on April 24, 2012 at <http://www.asnamnat.org/node/157?page=1> (2011).

⁸⁵ Ward, D.H., et al., North American brant: effects of changes in habitat and climate on population dynamics, 11 GLOBAL CHANGE BIOLOGY 869-880 (2005).

⁸⁶ Id.

⁸⁷ Ward, D. H., et al., Change in abundance of Pacific brant wintering in Alaska: evidence of climate warming effect? 62 ARCTIC 301-311 (2009).

Increased populations of wintering black brant in the northern end of their flyway is already evident in Alaska.⁸⁸ Over the past 15 years, Alaska populations of wintering black brant have increased, while populations of black brant overwintering in Mexico have decreased, especially at the southernmost sites.⁸⁹ This increase in the number of brant wintering in Alaska coincides with a warming trend in the North Pacific that reduces the period and frequency of ice cover in coastal areas along the Alaska Peninsula.⁹⁰ This increases the food availability and reduces the energy costs for wintering black brant. Effects were exacerbated during historic El Niño events, which resulted in increased sea temperatures and a rise in sea level, simulating the impacts of impending climate change. El Niño events caused a dramatic decline (up to 50 percent) of *Z. marina* abundance at the black brant's southern wintering sites, limiting food availability at these sites, and pushing wintering brant northward.⁹¹ Thus, climate change reduces food availability for brant wintering at the most southern sites, while increasing foraging ability and food availability for brant wintering at more northern sites. This northern shift will likely result in an increased number of black brant wintering at Izembek Refuge.

An increase in the number of wintering black brant at Izembek Refuge means that more of the population will be put at risk should mild winters be punctuated by extended periods of severe cold weather and extreme shorefast ice cover, as occurred in winter of 1991-92.⁹² Extreme storm events and highly fluctuating winter temperature scenarios are likely to become more frequent as climate change leads to greater climate variability and a rise of extreme weather events.⁹³ Any threats to the Alaska wintering population have implications for the entire Pacific Flyway population of black brant. It is important to limit adverse impacts from human development and disturbance, because this species is experiencing a long-term population decline across its range.⁹⁴

Human activity can also lead to shifts in black brant distribution and seasonal use patterns, adding to the impacts of climate change on distribution and population. Brant are extremely sensitive to many forms of human disturbance and may have abandoned former wintering grounds in California and Oregon in favor of Mexico due to this factor.⁹⁵ This sensitivity to human disturbance is especially relevant when discussing impacts on black brant from the DEIS's road alternatives (Alternative 2

⁸⁸ Pacific Flyway Council, PACIFIC FLYWAY MANAGEMENT PLAN FOR PACIFIC BRANT, Pacific Flyway Study Committee, U.S. Fish and Wildlife Service, Portland, OR (2002). Sedinger, J.S., et al., Carryover effects associated with winter location affect fitness, social status, and population dynamics in a long-distance migrant, AMERICAN NATURALIST, Accessed on April 24, 2012 at <http://www.asnamnat.org/node/157?page=1> (2011).

⁸⁹ Ward, D. H., et al., Change in abundance of Pacific brant wintering in Alaska: evidence of climate warming effect? 62 ARCTIC 301-311 (2009). Sedinger, J.S., et al., Carryover effects associated with winter location affect fitness, social status, and population dynamics in a long-distance migrant, AMERICAN NATURALIST, Accessed on April 24, 2012 at <http://www.asnamnat.org/node/157?page=1> (2011).

⁹⁰ Ward, D.H., et al., North American brant: effects of changes in habitat and climate on population dynamics, 11 GLOBAL CHANGE BIOLOGY 869-880 (2005).

⁹¹ Id.

⁹² Ward, D. H., et al., Change in abundance of Pacific brant wintering in Alaska: evidence of climate warming effect? 62 ARCTIC 301-311 (2009).

⁹³ IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT, An Assessment of the Intergovernmental Panel on Climate Change, Available at www.ipcc.ch (2007).

⁹⁴ Ward, D. H., et al., Change in abundance of Pacific brant wintering in Alaska: evidence of climate warming effect? 62 ARCTIC 301-311 (2009).

⁹⁵ Miller, M.W., Route selection to minimize helicopter disturbance of molting Pacific black brant: A simulation, 47 ARCTIC 341-349 (1994).

and 3). Human disturbance of migratory waterfowl may reduce food intake through interruption of foraging bouts or displacement from feeding areas, and may increase energy expenditure from avoidance or flight-related activities.⁹⁶ Increased activity in response to disturbance may restrict the ability of waterfowl to acquire sufficient nutrition for successful migration and influence winter survival.⁹⁷ For example, oyster farming activities at an important spring staging area for black brant in Washington were correlated with reductions in *Z. marina* abundance and a corresponding significant decrease in brant use-days of that area.⁹⁸

Many studies have demonstrated that animals will avoid areas where human-associated disturbances are present, rather than experience the increased stress and associated decline in fitness that results from responding to disturbance. Animals respond to human disturbance with energetically costly behaviors, such as flight and increased alert behavior, which divert time and energy away from other important activities including feeding, parental care, or mating displays.⁹⁹

Over 90 percent of black brant annually migrate to Izembek Lagoon in the fall, making this area critical to migration and overwintering success of black brant. The increased human access afforded by either road alternative to areas of high use by black brant, especially during hunting season, would significantly increase disturbance levels in areas where such access did not previously exist. This would reduce the refugia area that black brant previously used at low or non-existent disturbance levels. Increased direct mortality due to improved access for hunting, avoidance of key habitat, or decreased energy uptake prior to migration due to disturbance could result in significant adverse impacts to the black brant population.

Human disturbance must be kept to a minimum at Izembek Lagoon, but Alternative 2 or 3 would increase human disturbance and habitat degradation. The dependence of black brant on *Z. marina* and the intertidal habitat of Izembek Lagoon leave this species vulnerable to human activities with impacts further compounded by the effects of climate change on food sources and habitat use.¹⁰⁰ Climate change may cause declines in winter food availability by shifting the distribution and integrity of *Z. marina* and other intertidal plants at black brant wintering and migratory stopover sites, including Izembek. With warming temperatures, more black brant are likely to winter at Izembek, as brant wintering at southern sites suffer decreased reproductive success.¹⁰¹ This leaves the brant populations at Izembek especially vulnerable, and human disturbance at this site will have an increasingly more significant impact in the future as the black brant population continues to shift north. Conditions at any site used by brant along the flyway may impact fitness and survival of individual brant.

⁹⁶ Ward, D.H., R.A. Stehn, and D.V. Derksen, Response of staging brant to disturbance at the Izembek Lagoon, Alaska, 22 WILDLIFE SOCIETY BULLETIN 220-228 (1994).

⁹⁷ Id.

⁹⁸ Wilson, U.W. and J.R. Atkinson, Black brant and spring-staging use at two Washington coastal areas in relation to eelgrass abundance, 97 CONDOR 91-98 (1995).

⁹⁹ Frid, A. and L. Dill, Human-caused disturbance as a form of predation risk, 6 CONSERVATION ECOLOGY 11 (2002).

¹⁰⁰ Sedinger, J.S., et al., Carryover effects associated with winter location affect fitness, social status, and population dynamics in a long-distance migrant, AMERICAN NATURALIST, Accessed on April 24, 2012 at <http://www.asnamnat.org/node/157?page=1> (2011).

¹⁰¹ Ward, D. H., et al., Change in abundance of Pacific brant wintering in Alaska: evidence of climate warming effect? 62 ARCTIC 301-311 (2009).

The Service must consider the impacts of the road and land exchange options (Alternatives 2 and 3) on black brant in the context of climate change. Human disturbance, degradation of habitat, and a resulting decreased nutritional intake by black brant using Izembek would have major cumulative impacts on the entire black brant population.

b. Steller's Eider

The DEIS fails to analyze the cumulative impacts on Steller's eiders of the action alternatives in the context of climate change. There is no mention of climate change impact in the environmental effects section, despite the vulnerability of this species to climate change impacts. The Service must take these cumulative impacts into account when deciding among the proposed alternatives.

Steller's eiders are particularly vulnerable in the warming Arctic and sub-Arctic. Warming temperatures and acidifying waters in the Bering Sea threaten the eider's food supply, while at the same time forcing eiders to expend more energy in their search for food and reducing the amount of sea ice available for resting.

The loss of the sea ice in the northern Bering Sea is reducing the abundance of the eider's bottom-dwelling invertebrate prey.¹⁰² As competitors, such as fish and crabs, move northward with warming ocean temperatures, they invade the eider's foraging grounds and consume its food sources. Acidifying waters are making it more difficult for clams and snails to build their calcium carbonate shells, limiting abundance of these species and further reducing availability of the eider's food sources. The disappearance of sea ice may deprive eiders of dry places to rest, causing them to burn more energy.¹⁰³ Climate change also threatens the eider's nesting grounds on the coastal tundra of Alaska and Siberia. Eiders nest in the tundra wetlands near shallow ponds and lakes that provide plentiful insect and plant food. However, rising temperatures are melting the permafrost, which threatens to dry up the eider's nesting grounds and transform the tundra into shrublands and forests.

The majority of the world population of Steller's eider molts along the north side of the Alaska Peninsula, primarily at Nelson and Izembek lagoons during September and October.¹⁰⁴ Following the molt, some eiders move to wintering areas along the south side of the Alaska Peninsula and the easternmost Aleutian Islands, while many remain in the Izembek Lagoon where they molted.¹⁰⁵ These coastal wintering populations of Steller's eiders will be impacted by climate change, as Alaskan coasts are heavily battered by erosion, which is wearing away the eider's coastal habitat and inundating it with saltwater.

Climate change-induced shifts in productivity and food availability at Izembek may substantially decrease available nutrients in the area. Nearly half the population of Steller's eiders is found in Izembek during the molt, at which time the eiders are flightless and have higher energy demands.

¹⁰² Grebmeier, J. M., et al., A major ecosystem shift in the Northern Bering Sea, 311 *SCIENCE* 1461-1464 (2006).

¹⁰³ Lovvorn, J. R., et al., Modeling marine protected areas for threatened eiders in a climatically changing Bering Sea, 19 *ECOLOGICAL APPLICATIONS* 1596-1613 (2009).

¹⁰⁴ Petersen, M.R., Populations, feeding ecology and molt of Steller's Eiders, 83 *CONDOR* 256-262 (1981).
Dau, C. P., P. L. Flint and M.R. Petersen, Distribution of recoveries of Steller's eiders banded on the lower Alaska peninsula, Alaska, 71 *JOURNAL OF FIELD ORNITHOLOGY* 541-548 (2000).

¹⁰⁵ Pacific Flyway Council, *PACIFIC FLYWAY MANAGEMENT PLAN FOR PACIFIC BRANT*, Pacific Flyway Study Committee, U.S. Fish and Wildlife Service, Portland, OR (2002).

The molt lasts approximately three weeks. Molting and wintering eiders consume marine invertebrates that occur in the extensive eelgrass beds within Izembek Lagoon channels. Ocean acidification caused by greenhouse gas emissions may reduce the availability of the eider's food source, due to shifts in marine productivity and a decreased ability of invertebrates to form calcium carbonate shells.¹⁰⁶ Sea-level rise due to climate change may eliminate or reduce eelgrass beds, which would further reduce the availability of the small invertebrates that serve as the eider's primary food source. Nutrition obtained during the molt may be vital to long-term energy reserves, and reduced energy intake would impact survival and reproductive success of the Steller's eider.¹⁰⁷ Other studies have found that a decline in availability of preferred foods at wintering locations may have played a role in extinction of other migrating bird species.¹⁰⁸

Steller's eiders are sensitive to human disturbance.¹⁰⁹ The direct effects of unreported subsistence take and indirect disturbances from a road, as proposed in Alternatives 2 and 3, would increase mortality, place further energetic demands on the eiders, or displace them from preferred foraging habitat. This could force Steller's eiders at Izembek into a negative energy state. Because nearly half of the Alaska population uses Izembek as a molting ground, population-level effects on the Steller's eider due to the cumulative impacts of Alternatives 2 or 3 and climate change could be significant.

In the Final EIS, the Service must include analyses of habitat disturbance and degradation due to the road alternatives (Alternatives 2 and 3) in the context of habitat degradation and decreased nutritional availability caused by climate change. Road construction and use along with climate change would have significant long-term synergistic impacts on the future viability of this threatened species.

c. Caribou

The DEIS's current analysis for caribou completely fails to consider climate change. Caribou are vulnerable to climate change in numerous ways, and impacts have already been observed.¹¹⁰ The Final EIS must include an analysis of the cumulative impacts of the action alternatives on this species in the context of climate change.

Caribou time their annual migrations to arrive in an area for calving at spring green-up, when vegetation is at its nutritional peak.¹¹¹ This is when nutritional demands for nursing mothers are highest, and it is a critical time for successful reproduction. Warming temperatures are causing an earlier spring growing season, but caribou are not changing the timing of migration and calving to

¹⁰⁶ Orr, J.C., et al., Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms, 437 NATURE 681-686 (2005).

¹⁰⁷ Kertell, K., Disappearance of the Steller's eider from the Yukon-Kosokwim Delta, Alaska, 44 ARCTIC 177-187 (1991).

¹⁰⁸ Lovvorn, J. R., et al., Modeling marine protected areas for threatened eiders in a climatically changing Bering Sea, 19 ECOLOGICAL APPLICATIONS 1596-1613 (2009).

¹⁰⁹ Kertell, K., Disappearance of the Steller's eider from the Yukon-Kosokwim Delta, Alaska, 44 ARCTIC 177-187 (1991).

¹¹⁰ Vors, L. S., and M. S. Boyce, Global declines of caribou and reindeer, 15 GLOBAL CHANGE BIOLOGY 2626-2633 (2009).

¹¹¹ Post, E., and M. C. Forchhammer, Climate change reduces reproductive success of an Arctic herbivore through trophic mismatch, 363 PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES 2369-2375 (2008).

keep pace with this change. This causes the timing between caribou presence in an area and prime plant growth to be non-synchronous. Because of this timing mismatch and resulting lower food availability, more calves are dying and offspring numbers have dropped fourfold in at least one population.¹¹² Insect harassment has also increased as biting flies and mosquitoes are emerging earlier and increasing in abundance and activity as temperatures warm. These insects severely harass caribou, limiting their time spent feeding and increasing stress-related behaviors. Severe insect harassment can lead to decreased pregnancy rates and increased winter mortality.¹¹³ Caribou are also impacted by severe winter weather, which is increasing in frequency and intensity due to climate change. Freezing rain and ice crusts can lock lichen, caribou's required food, under a layer of impenetrable ice. Deeper snow makes it more difficult for caribou to find lichen, forces caribou to burn more energy for travel, and increases vulnerability to predators.¹¹⁴

Caribou are sensitive to human disturbance, and their movements would be interrupted by the road and road barriers. The DEIS's current analysis for Alternatives 2 and 3 discusses impacts from the road, including human disturbance and limitations to caribou movements across the isthmus, but it makes no mention of climate change. The DEIS states that "even lightly used roads are barriers to caribou movements" and "if the herd did not cross the isthmus to reach their normal wintering/calving areas, it would have a high intensity, long-term, adverse effect on caribou in the whole region."¹¹⁵ However, the cumulative impact analysis completely fails to consider how climate change might increase the vulnerability of these caribou.

Climate change may have significant impacts on the energy demands, survival, and reproduction of the Southern Alaska Peninsula caribou herd. As noted above, climate change-induced impacts to caribou include timing mismatches between migration and parturition and spring green-up, insect harassment, and increased storm and ice events. These impacts lead to decreased body condition, increased stress levels, and reduced individual survival and reproduction. This could have a multitude of effects on caribou at the individual and population level, which would be exacerbated by human disturbance resulting from the use of a road. Lower energy intake and reduced ability to travel may cause caribou to spend more time on the plowed road or limit their ability to travel through energetically demanding conditions, including roadside drifts. Increased stress due to summer insect activity may alter habitat use, possibly causing caribou to spend more time near the road corridor. This increases the caribou's susceptibility to human and animal predation. Caribou are sensitive to human presence and view humans as a predation risk.¹¹⁶ Although the Southern Alaska Peninsula caribou herd is currently closed to sport and subsistence hunting, any increase in human presence originating from either of the proposed road alternatives would elicit a powerful avoidance response in caribou and would likely result in significant displacement from preferred winter habitat in the isthmus area. Caribou already stressed by climate change may suffer increased mortality due to increased energetic demands and decreased feeding when reacting to and running from human disturbance. This type of direct human disturbance would increase with road access into their range.

¹¹² Id.

¹¹³ Vors, L. S., and M. S. Boyce, Global declines of caribou and reindeer, 15 *GLOBAL CHANGE BIOLOGY* 2626-2633 (2009).

¹¹⁴ Id.

¹¹⁵ DEIS at 4-154 and 4-155.

¹¹⁶ Frid, A. and L. Dill, Human-caused disturbance as a form of predation risk, 6 *CONSERVATION ECOLOGY* 11 (2002).

d. Other Species

As the Izembek Refuge ecosystem on which Pacific black brant, Steller's eiders, and caribou depend undergoes drastic climatic changes, these species' survival and adaptive capacity may depend on maximizing the availability of undisturbed habitat. However, these are only a few examples of species in Izembek Refuge that will be impacted by climate change. The Service must analyze the effects of the various alternatives in the context of climate change for the full range of species that rely on Izembek Refuge.

F. The Final EIS Must Fully Consider Pertinent Legislation

In 1998, Congress specifically prohibited a road in this unique landscape. Working with Alaska's Senator Ted Stevens, Congress passed the King Cove Health and Safety Act giving the community \$37.5 million to fund a transportation alternative and make improvements to the local medical facilities. The King Cove Act is central to the history of the actions under consideration in this DEIS, and it is essential for the public to understand this important matter, yet the DEIS's summary of pertinent "Federal Laws, Regulations, and Policies" fails to include this law.¹¹⁷ Furthermore, the presentation given at the beginning of the May 3, 2012, public hearing in Anchorage, Alaska also failed to mention the King Cove Health and Safety Act. We believe this represents a serious omission that has significant implications for assessing the adequacy of the DEIS and associated public process.

With respect to the Wilderness Act, the DEIS fails to discuss the unacceptable precedent that the proposed land exchange would set if approved.¹¹⁸ The DEIS uses the four qualities of wilderness character that are more tangible and more easily measured but fails to acknowledge that there is a suite of intangible qualities that are also associated with wilderness character.¹¹⁹ The Final EIS should include a complete presentation of how the proposed land trade and road would affect these intangible values and set a precedent. The DEIS incorrectly claims that "[a]ctions that intentionally manipulate or control ecological systems inside wilderness degrade the untrammeled quality of wilderness character..."¹²⁰ The Wilderness Act does not invoke "intentionality" into the untrammeled concept. Any action that manipulates or controls ecological systems inside Wilderness, intentional or unintentional, degrades the untrammeled quality. The DEIS should correctly represent this important distinction.

G. The Final EIS Must Provide an Accurate and Thorough Assessment of Costs and Benefits

The DEIS fails to present a benefit-cost analyses (BCA) of the proposed alternatives which is how federal agencies establish whether or not a project generates net public benefits from a social perspective. At the request of The Wilderness Society, The Center for Sustainable Economy completed a BCA for alternatives 2 and 3 which suggests that the costs of a road would be 7-13 times greater than the benefits. This analysis was submitted by The Wilderness Society and The Center for Sustainable Economy and is incorporated here by reference in its entirety.

¹¹⁷ DEIS at 1-11 to 1-18.

¹¹⁸ DEIS at 3-342 to 3-350.

¹¹⁹ DEIS at 3-344 to 3-347.

¹²⁰ DEIS at 3-345.

H. The Final EIS Must Incorporate New Information on Hovercraft Operational Capabilities

AEB suspended hovercraft service in 2010, citing high costs and weather-related operational problems. In the attached letter to the U. S. Army Corps of Engineers dated February 24, 2012, AEB Mayor Stanley Mack stated, “We believe that we have saved lives using the hovercraft during medical emergencies, but at great costs and with limited success in our regular, non-emergency hovercraft operation.” While this statement demonstrates the hovercraft’s success in meeting King Cove’s health and safety needs, it ignores the fact that the \$37.5 million appropriation that allowed for its purchase was never intended to address all of AEB non-emergency transportation problems.

AEB’s actions in recent months to begin using the hovercraft for an unrelated purpose in one of its other villages contradict its previous assertions that the hovercraft is cost-prohibitive and unreliable, and even the claim that the hovercraft was unable to address regular non-emergency operational needs. A KUCB article from March 2012 quotes AEB Administrator Sharon Boyette as stating that “the borough is planning to move the hovercraft down to Akutan for use at the airport that’s scheduled to open in that community this summer.”¹²¹ The attached Administrator’s Report from Ms. Boyette dated December 5, 2011, also references these plans:

And speaking of the hovercraft which now sits in Cold Bay on the hovercraft pad. . . . We have developed a plan for the repair, installation of modifications and redeployment of the Suna-X in Akutan. The date by which we are expected to have the craft and crew ready for the first airport passenger run is September 1, 2012.

While AEB has asserted that it cannot afford to operate the hovercraft between King Cove and Cold Bay, as stated in the attached memo from Sharon Boyette dated March 19, 2012, “AEB is committed in writing to running and paying for the marine link between Akutan village and Akun airport for the next twenty years.” AEB has also cited that operational difficulties in winter weather led to its decision to suspend hovercraft service in 2010. However, the attached Administrator’s Report dated March 14, 2012, reveals that this problem is being addressed:

Work on the Akutan hovercraft has begun in Cold Bay. Mechanics are working to de-winterize the vessel and also to make repairs and renovations. We are trying to provide additional reliability by adding a de-icing package and we will make improvements to the bow ramp system.

In fact, AEB is confident enough with the hovercraft’s new de-icing capabilities to propose that it be used to make 1-2 trips per day, 7 days per week between nearby Akutan and Akun, as noted in the attached Draft Akutan-Akun Ferry Service Plan.

While transferring the hovercraft to Akutan at this time would be in violation of federal regulations governing the use of equipment purchased through agency grant agreements, the vessel is clearly better able to operate between King Cove and Cold Bay than ever before. The Final EIS should include updated information referencing the hovercraft’s new de-icing equipment, as well as AEB’s capacity to cover the cost of operating it.

¹²¹ Stephanie Joyce, King Cove counting on Izembek Road EIS approval, KUCB (March 29, 2012).

I. The Final EIS Should Include Reference to AEB's Landing Craft/Passenger Ferry Option

The attached letter from AEB Mayor Stanley Mack to the U.S. Army Corps of Engineers dated February 24, 2012, indicates AEB's intention to operate an aluminum landing craft passenger ferry between the existing northern hovercraft terminal and Cold Bay in the event that the land exchange and road are not approved. AEB indicated that it would fund the construction and operation of a vessel designed to accommodate 30 passengers, an ambulance, and cargo. This letter reveals that AEB has developed an economically viable alternative to the proposed road. The plan would not require a land exchange and would be far less costly and destructive to the environment than building and maintaining a road that would be extremely difficult to keep open and traverse in severe winter conditions. In addition, the AEB plan would be self-funded and eliminate the additional expenditure of 20-30 million federal taxpayer dollars. Furthermore, this AEB plan could be entirely compatible with the Service's decision to choose the No Action alternative and a finding by the Secretary of Interior that the proposed road and land exchange are not in the public interest. The Final EIS should acknowledge AEB's plan to pursue this option under such circumstances.

J. The Final EIS Should Consider How Well Congress' \$37.5 Million Solution Was Implemented

The Stevens' rider and other subsequent actions related to the management of the hovercraft raise questions about how efficiently and effectively the congressional solution provided has been applied. In spite of its medical needs having been met, AEB terminated the hovercraft operation in 2010, claiming it was too costly to operate and unreliable. We are unaware of any steps taken to create a revenue plan for the hovercraft; instead, the success of the hovercraft in meeting every medical emergency has been downplayed or ignored. As early as March 2008, the AEB website posted an article that reported consideration of "selling two hovercraft engines in storage, which would bring in \$150,000 - \$200,000." AEB subsequently sold both engines at a large loss. A public interest determination should be based on a thorough accounting of how \$37.5 million in taxpayer funds were applied to meet the agreement negotiated by Senator Stevens and accepted by King Cove.

A review should include an examination of whether or not the hovercraft has been targeted for failure from the beginning, and the reason why there is no money for the operation of the hovercraft. According to a 2008 article in the *Washington Post*, the community "hired high-powered advocates to help them [build the road], dipping into a \$2.4 million budget over the past two years to spend \$145,000 on lobbying in Washington and another \$136,000 more to fly officials there to push the issue...[t]he borough spent an additional \$72,000 during that period for lobbying in the state capital."¹²² The investigation should look into the sales of spare engines and transfer of the hovercraft to Akutan. Background information on the King Cove Health and Safety Act and the handling of the hovercraft should be included in the Final DEIS.

During the scoping meeting at Sand Point, Alaska, the point of not needing the road for health and safety purposes was captured in the Service transcript, which reported: "Gary Hennigh – after power point presentation – he stated that the King Cove people do not see the proposed road as a primary means of health and safety – the road would be a matter of allowing the King Cove people a

¹²² Matthew Mosk and Marc Kaufman, Proposed road in refuge raises fears about drilling, *The Washington Post* (November 9, 2008).

better quality of life.”¹²³ Such comments indicate that the proposed road is for other purposes, such as personal travel, easier access to the Izembek Wilderness, and commercial interests related to transportation of fish.

The contention that the purpose of the land exchange is to address “health and safety issues, including reliable access to and from the Cold Bay Airport, and only for non-commercial purposes,”¹²⁴ is further refuted by the list of economic groups that travel between King Cove and Cold Bay, including 1) Peter Pan Seafoods fish processing crews, 2) managers and technicians for Peter Pan Seafoods, 3) fishing crew members and other persons not associated with fisheries, and 4) residents and other persons not associated with fisheries.¹²⁵ The majority of planned users of the road are fishery-related passengers.¹²⁶ The true purpose of the proposed road appears to be the transportation of fish industry employees and commercial fish products rather than health and safety.

The assumption that a Peter Pan sport utility vehicle would not use the road, as stated in the DEIS,¹²⁷ is impracticable. If Peter Pan is willing to load an SUV on a hovercraft or ferry, it is reasonable to assume that the company would use it on the road for transportation of managers, invited guests, contractors, workers, etc. As the largest seafood processor in Alaska, Peter Pan has relatively high reported revenues, and it is unlikely that the cost of driving an SUV or other commercial vehicles would serve as a deterrent. Thus, the costs of ground travel for this vehicle should be included in the analysis of these costs.

The hovercraft has successfully operated out of Lenard Harbor and could continue to do so in the future should weather or road conditions dictate. Thus, Table 4.2.3-6 and analyses of these costs should consider hovercraft operation at Lenard Harbor under Alternatives 1 and 4. The costs of road maintenance equipment also appear to be underestimated, not accounting for the likely need for additional equipment, the lifespan and costs associated for acquisition, maintenance, and replacement. We recommend that the cost estimates for Alternatives 2 and 3 be modified to reflect these costs.

III. THE NO ACTION ALTERNATIVE IS THE BEST APPROACH TO AVOIDING MORE BROKEN PROMISES

The AEB’s land exchange and road proposal is one of several recent attempts to allow development within Alaska’s national wildlife refuges. The St. Matthew Island land exchange would have transferred lands owned by Native corporations within the former Clarence Rhode National Wildlife Refuge (now the Yukon Delta National Wildlife Refuge) that were already subject to Section 22(g) of ANCSA, in exchange for lands that are designated as Wilderness within the Alaska Maritime National Wildlife Refuge on St. Matthew Island. Cook Inlet and Calista Regional Corporations would have gained ownership of the St. Matthew Island lands where they planned to lease the lands for on shore facilities supporting oil exploration and development in the Bering Sea. This action

¹²³ U.S. Fish and Wildlife Service, Transcript from public scoping meeting in Sand Point, available at http://izembek.fws.gov/pdf/community_scoping_meeting_sand_point.pdf (April 26, 2010).

¹²⁴ DEIS at 1-5.

¹²⁵ DEIS at 4-64.

¹²⁶ DEIS at 4-68 (Table 4.2.3-7).

¹²⁷ DEIS at 4-65.

was ultimately nullified by a U.S. District Court ruling. Another land exchange scheme was developed, at significant taxpayer expense, to exchange lands on the coastal plain of the Arctic National Wildlife Refuge for various Native Corporation lands in or adjacent to several refuges. This effort was halted by the U.S. Congress. Yet another land exchange deal was finally dropped that would have facilitated oil and gas exploration and development and bifurcated the Yukon Flats National Wildlife Refuge. In each case, the value and quality of lands proposed for exchange were not properly evaluated and the potential impacts to the Refuge purposes and ecological integrity were far greater than any gains that might have occurred.¹²⁸

The Omnibus Public Land Management Act of 2009 includes restrictions to prohibit commercial use of the proposed road,¹²⁹ but like other promised protections they could be overturned in the future. The Japanese-owned Peter Pan fish processing facility in King Cove is the largest in Alaska, and AEB has pursued a major marketing program to sell its Aleutia brand salmon in domestic and Asian markets. This would be greatly facilitated by the proposed road, notwithstanding the current provision in the law that prohibits commercial use of the proposed road. If the road is actually completed, one has only to recall the history of the North Slope Haul Road, which was originally built for the sole purpose of constructing and maintaining the Trans-Alaska Pipeline. Promises to restrict use of the Haul Road were made at that time. Ultimately, the State of Alaska opened what became the Dalton Highway to all types of travel and commercial development. Once built, AEB, fish processors, and others would likely lobby Congress tirelessly with high-paid consultants and lawyers to open the road to commercial activity. In fact, the attached State of Alaska Capital Project Summary FY 2013 Request for the King Cove to Cold Bay Corridor Road Extension states as a purpose of the road “improving the mobility of people and *goods*” (emphasis added).

Another potential lobby for overturning the road restrictions is those supporting oil and gas development in the region. Future natural gas exploration in the area will bring a need to haul heavy equipment and transport materials. Despite the 2011 cancellation of administrative lease sales in the area, it is important to consider the potential for oil companies that have previously secured drilling rights on state lands in the borough and that have a financial investment in the area to press for eliminating road restrictions.

IV. SUMMARY

Izembek Refuge is an essential part of America’s wild legacy protected generations ago by individuals with the foresight to know that this area has national and international conservation significance. The Izembek Refuge Wilderness and wildlife habitat are unique natural resources; it is one of the few remaining wild places in our country not lost to development. These natural resources are critically important to Alaska Native communities and other Alaskans who rely on subsistence activities for their livelihood. The DEIS notes that Alternatives 2 and 3 will have major adverse impacts to Izembek Wilderness. More specifically, it notes that the proposed exchange of federal, State of Alaska, and King Cove Corporation lands would result in the removal of Wilderness

¹²⁸ U.S. General Accounting Office (GAO), Consideration of Proposed Alaska Land Exchanges Should be Discontinued, GAO Report RCED-88-179 (September 1988). GAO, Chandler Lake Land Exchange Not in the Government’s Best Interest, Report RCED-90-5 (October 1989). U.S. Fish and Wildlife Service, Record of Decision, Proposed Land Exchange Yukon Flats National Wildlife Refuge Environmental Impact Statement (April 2010).

¹²⁹ P.L. 111-11, Title VI, Subtitle E.

lands, “which would fragment the wilderness and impact natural quality, undeveloped quality, and opportunities for solitude.”¹³⁰ Given the rapid loss of wildlife habitat worldwide, climate change challenges, and other stressors on wildlife, it is increasingly urgent that the environmental protections bestowed on Izembek Refuge be maintained and the No Action Alternative adopted.

Proponents of the land exchange have argued that additional lands are a fair exchange for the loss of the lagoon complex and designated Wilderness areas, but the value of the Refuge is not measured by acreage alone. The boundary of the Refuge was established because it had the greatest ecological benefits for wildlife. The proposed land exchange and road building in Alternatives 2 and 3 are in direct opposition to the purposes of the Izembek Refuge and should be rejected in the Final EIS. Another reason for rejecting Alternatives 2 and 3 is that they run counter to the King Cove Health and Safety Act, in which Congress clearly states that “in no instance may any part of such road, dock, marine facilities or equipment enter or pass over any land within the congressionally designated Wilderness in the Izembek National Wildlife Refuge.”¹³¹

The proposed road is incompatible with the purposes of the Izembek Refuge and is not in the public interest. The Service should therefore recommend Alternative 1, the No Action Alternative, in the Final EIS. The No Action Alternative will maintain long-standing federal protections that were thoughtfully developed and adopted to benefit Izembek Refuge’s wildlife and their habitat, subsistence users, Wilderness, and future generations.

Sincerely,

Alaska Center for the Environment

Valerie Connor
Conservation Director
807 G Street, Suite 100
Anchorage, AK 99501

Alaska Wilderness League

Kristen Miller
Government Affairs Director
122 C St NW
Washington, DC 20001

American Birding Association

Jeffery A. Gordon
President
4945 N. 30th Street, Suite 200
Colorado Springs, CO 80919

¹³⁰ DEIS at ES-22.

¹³¹ Public Law 105-277 Sec. 353(a).

American Rivers

Christopher E. Williams
Senior Vice President of Conservation
1101 14th Street NW Suite 1400
Washington, DC 20005

Audubon Alaska

Nils Warnock
Executive Director
441 West Fifth Avenue Ste. 300
Anchorage, AK 99501

Blue Goose Alliance

Ronald Fowler
President
10 S. Circle Road
Edgewood, NM 87015-6817

Center for Biological Diversity

Rebecca Noblin
Alaska Director
810 N St # 201
Anchorage, AK 99501

ConservAmerica

David Jenkins
Vice President for Government and Political Affairs
11705 Sumacs Street
Oakton, Virginia 22124

Cook Inletkeeper

Bob Shavelson
Inletkeeper
333 West 4th Avenue, Suite 306
Anchorage, AK 99501

Defenders of Wildlife

Karla Dutton
Alaska Program Director
441 West 5th Avenue, Suite 302
Anchorage, AK 99501

Friends of Alaska National Wildlife Refuges

David C. Raskin
Advocacy Chair
2440 E. Tudor Road, PMB 283
Anchorage, AK 99507-1185

League of Conservation Voters

Tiernan Sittenfeld
Senior Vice President, Government Relations
1920 L Street, NW Suite 800
Washington, DC 20036

National Wildlife Refuge Association

Evan Hirsche
President
5335 Wisconsin Avenue, NW #521
Washington, DC 20015

Natural Resources Defense Council

Charles M. Clusen
Director of the Alaska Project
1152 15th Street NW, Suite 300
Washington, DC 20005

Northern Alaska Environmental Center

Pamela Miller
Arctic Program Director
830 College Road
Fairbanks, AK 99701

Sierra Club

Dan Ritzman
Alaska Program Director
180 Nickerson Street, Suite 202
Seattle, WA 98109

The Wilderness Society

Nicole Whittington Evans
Alaska Regional Director
705 Christensen Drive
Anchorage, AK 99501

The Wildlife Society

Paul Krausman, CWB
President
5410 Grosvenor Lane, Suite 200
Bethesda, MD 20814-2144

Western Lands Project

Janine Blaeloch
Director
P.O. Box 95545
Seattle, WA 98145-2545

Wilderness Watch

George Nickas
Executive Director
P.O. Box 9175
Missoula, MT 59807

Wildlands CPR

Adam Rissen
Policy Specialist
P.O. Box 7516
Missoula, MT 59807

World Wildlife Fund

Margaret Williams
Arctic Program Director
406 G St # 301
Anchorage, AK 99501

Attachments:

- Aleutians East Borough meeting minutes from March 13, 2008.
- Letter from AEB Mayor Stanley Mack to Army Corps of Engineers (February 24, 2012).
- Aleutians East Borough Administrator's Report from Sharon Boyette (December 5, 2011).
- Aleutians East Borough memo from Sharon Boyette (March 19, 2012).
- Aleutians East Borough Administrator's Report from Sharon Boyette (March 14, 2012).
- Draft Akutan-Akun Ferry Service Plan (April 13, 2012).
- King Cove to Cold Bay Corridor Road Extension, FY 2013 Request, Reference No. 49675, State of Alaska Capital Project Summary (March 8, 2012).

cc: Kim Elton, Director of Alaska Affairs, Department of the Interior
Pat Pourchot, Special Assistant for Alaska Affairs, Department of the Interior
Dan Ashe, Director, U.S. Fish and Wildlife Service
Greg Siekaniec, Deputy Director for Policy, U.S. Fish and Wildlife Service
Jim Kurth, Chief, National Wildlife Refuge System