

**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](mailto: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,<sup>1</sup> 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

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<sup>1</sup> P.L. 111-11, Title VI, Subtitle E.

wilderness area.”<sup>2</sup> 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.”<sup>3</sup> 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

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

<sup>3</sup> 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."<sup>4</sup> 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.<sup>5</sup> Furthermore, the high habitat values of the isthmus region where the proposed road would be built are properly described

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

<sup>5</sup> 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.<sup>6</sup> 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,<sup>7</sup> 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

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

<sup>7</sup> 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.”<sup>8</sup> 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.<sup>9</sup> 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.<sup>10</sup> 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.<sup>11</sup> 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).”<sup>12</sup>

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,

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

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

<sup>10</sup> ANILCA, Section 303(3)(B).

<sup>11</sup> DEIS at 4-139.

<sup>12</sup> 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.<sup>13</sup> 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.<sup>14</sup> Studies have demonstrated a strong relationship of road construction to increased bear mortality on northeastern Chichagof Island,<sup>15</sup> an increasing probability of brown bears killed in DLP with increasing road density on the Kenai Peninsula.<sup>16</sup>

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.<sup>17</sup> According to the US Forest Service:

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<sup>13</sup> 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).

<sup>14</sup> 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).

<sup>15</sup> 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).

<sup>16</sup> 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).

<sup>17</sup> 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.<sup>18</sup>

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.<sup>19</sup>

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.

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

<sup>19</sup> 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.”<sup>20</sup> 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...”<sup>21</sup> Given the admitted lack of recent data on subsistence use, the expected reliance of communities on subsistence activities and the fact

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<sup>20</sup> DEIS at ES-23.

<sup>21</sup> 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.<sup>22</sup> 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.<sup>23</sup> 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.<sup>24</sup> 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.<sup>25</sup>

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,<sup>26</sup> and 2.4 acres under Alternative 3,<sup>27</sup> 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

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<sup>22</sup> DEIS at 4-107.

<sup>23</sup> DEIS at 4-107.

<sup>24</sup> DEIS at 4-110.

<sup>25</sup> DEIS at 4-4.

<sup>26</sup> DEIS at 4-122.

<sup>27</sup> DEIS at 4-236.

groundwater may be the primary source of water in a lowland wetland.<sup>28</sup> 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.<sup>29</sup> 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.<sup>30</sup>

### **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."<sup>31</sup> 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...<sup>32</sup>

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

<sup>29</sup> DEIS at 3-57.

<sup>30</sup> 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).

<sup>31</sup> 16 U.S.C. § 1131(a).

<sup>32</sup> Id.

Permanent roads and commercial enterprises are expressly prohibited in designated Wilderness.<sup>33</sup> 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

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<sup>33</sup> 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...”<sup>34</sup> 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.”<sup>35</sup> 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).<sup>36</sup> 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.<sup>37</sup> 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

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<sup>34</sup> DEIS at 3-140.

<sup>35</sup> DEIS at 3-90.

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

<sup>37</sup> 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.<sup>38</sup>

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.

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<sup>38</sup> 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.<sup>39</sup> 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.<sup>40</sup> 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.<sup>41</sup> 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

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<sup>39</sup> E.g., DEIS at 4-73.

<sup>40</sup> DEIS at 4-75.

<sup>41</sup> 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.<sup>42</sup>

The proposed land transfer and subsequent road corridor falls within the extremely broad definition of “refuge use” found in federal regulations.<sup>43</sup> 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.”<sup>44</sup> 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.”<sup>45</sup> 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.”<sup>46</sup>

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.”<sup>47</sup> 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.”<sup>48</sup> 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

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

<sup>43</sup> 50 C.F.R. § 25.12.

<sup>44</sup> *Id.*

<sup>45</sup> Pub. L. No. 105–57 § 6(3)(A)(i).

<sup>46</sup> *Id.* at § 5(1).

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

<sup>48</sup> *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.<sup>49</sup> The valuation exception is the only exception contained in the Act.<sup>50</sup> 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.<sup>51</sup>

The DEIS correctly cites regulations that preclude consideration of the Refuge System mission for uses of 22(g) lands in compatibility determinations.<sup>52</sup> 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.<sup>53</sup> These data make it possible to identify approximate stream locations and the surface flow hydrologic boundary between Izembek and Kinzarof lagoons,<sup>54</sup> 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

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<sup>49</sup> Pub. L. No. 111-11 § 6402(b).

<sup>50</sup> *Id.*

<sup>51</sup> *Id.* at 6402(d).

<sup>52</sup> DEIS at 3-193. 50 C.F.R. § 25.21.

<sup>53</sup> DEIS at 3-17 to 3-22.

<sup>54</sup> 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.<sup>55</sup> 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.<sup>56</sup> 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

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<sup>55</sup> 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).

<sup>56</sup> Robinson, R. and B. Thagesen. 2004. Road Engineering for Development, 2<sup>nd</sup> 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.<sup>57</sup> 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.<sup>58</sup> 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.<sup>59</sup> 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.<sup>60</sup>

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

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<sup>57</sup> DEIS at 4-111 to 4-113, and 4-230.

<sup>58</sup> 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).

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

<sup>60</sup> 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.<sup>61</sup> 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.

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<sup>61</sup> 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.<sup>62</sup> 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.<sup>63</sup> 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.<sup>64</sup> 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.<sup>65</sup> 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 (CO<sub>2</sub>) emissions from fossil fuel combustion over the first several decades of the 21<sup>st</sup> century, followed by a gradual decline in emissions as low-carbon energy alternatives become more prevalent.<sup>66</sup>

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.

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<sup>62</sup> 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).

<sup>63</sup> 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: CO<sub>2</sub> and Nutrient-driven Change in Subtidal Rocky Habitats, 15 GLOBAL CHANGE BIOLOGY 2153-2162 (2009).

<sup>64</sup> 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).

<sup>65</sup> Id.

<sup>66</sup> 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 Ecam5, 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,<sup>67</sup> and the ice extent has not recovered. Overall, September sea-ice extent during 1979 to 2010 declined at a rate of 81,400 km<sup>2</sup> (31,400 mi<sup>2</sup>) per year, or 11.5 percent per decade relative to the 1979 to 2000 average.<sup>68</sup> Many studies now project that arctic summer sea ice will disappear almost completely in the 2030s.<sup>69</sup> Winter sea ice is also declining faster than Intergovernmental Panel on Climate Change (IPCC) climate models projected.<sup>70</sup> 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.<sup>71</sup> 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.<sup>72</sup> Increasing coastal erosion jeopardizes species that use coastal habitats such as the Izembek Refuge.

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<sup>67</sup> 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](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).

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

<sup>69</sup> 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).

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

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

<sup>72</sup> 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.<sup>73</sup> Although the IPCC Fourth Assessment Report projected a global mean sea-level rise in the 21<sup>st</sup> 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.<sup>74</sup> Recent studies documenting the accelerating ice discharge from the Greenland and Antarctic ice sheets indicate that the IPCC projections are a substantial underestimate.<sup>75</sup> 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.<sup>76</sup> 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.<sup>77</sup>

Also of great concern is that the oceans are acidifying at an alarming rate. Ocean acidification is a predictable consequence of rising atmospheric CO<sub>2</sub>;<sup>78</sup> 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.<sup>79</sup> 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.<sup>80</sup> 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,

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

<sup>74</sup> IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT, An Assessment of the Intergovernmental Panel on Climate Change, Available at [www.ipcc.ch](http://www.ipcc.ch) (2007).

<sup>75</sup> 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).

<sup>76</sup> 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'Neil, 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).

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

<sup>78</sup> Feely, R. A., S. C. Doney, and S. R. Cooley, Ocean acidification: present conditions and future changes in a high-CO<sub>2</sub> world, 22 OCEANOGRAPHY 36-47 (2009).

<sup>79</sup> 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).

<sup>80</sup> 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-CO<sub>2</sub> world, 22 OCEANOGRAPHY 36-47 (2009).

and photosynthesis, which can thwart their growth and lead to higher mortality.<sup>81</sup> 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.<sup>82</sup> Current global warming projections indicate that the rate of change is likely to accelerate, which will further impact black brant.<sup>83</sup> 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.<sup>84</sup> Black brant depend heavily on a species of eelgrass, *Zostera marina*, as a primary food source.<sup>85</sup> 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.<sup>86</sup> 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*.<sup>87</sup>

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

<sup>82</sup> 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).

<sup>83</sup> IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT, An Assessment of the Intergovernmental Panel on Climate Change, Available at [www.ipcc.ch](http://www.ipcc.ch) (2007).

<sup>84</sup> 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).

<sup>85</sup> 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).

<sup>86</sup> Id.

<sup>87</sup> 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.<sup>88</sup> 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.<sup>89</sup> 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.<sup>90</sup> 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.<sup>91</sup> 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.<sup>92</sup> 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.<sup>93</sup> 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.<sup>94</sup>

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.<sup>95</sup> This sensitivity to human disturbance is especially relevant when discussing impacts on black brant from the DEIS's road alternatives (Alternative 2

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<sup>88</sup> 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).

<sup>89</sup> 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).

<sup>90</sup> 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).

<sup>91</sup> Id.

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

<sup>93</sup> IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT, An Assessment of the Intergovernmental Panel on Climate Change, Available at [www.ipcc.ch](http://www.ipcc.ch) (2007).

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

<sup>95</sup> 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.<sup>96</sup> Increased activity in response to disturbance may restrict the ability of waterfowl to acquire sufficient nutrition for successful migration and influence winter survival.<sup>97</sup> 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.<sup>98</sup>

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.<sup>99</sup>

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.<sup>100</sup> 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.<sup>101</sup> 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.

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<sup>96</sup> 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).

<sup>97</sup> Id.

<sup>98</sup> 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).

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

<sup>100</sup> 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).

<sup>101</sup> 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.<sup>102</sup> 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.<sup>103</sup> 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.<sup>104</sup> 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.<sup>105</sup> 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.

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

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

<sup>104</sup> 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).

<sup>105</sup> 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.<sup>106</sup> 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.<sup>107</sup> 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.<sup>108</sup>

Steller's eiders are sensitive to human disturbance.<sup>109</sup> 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.<sup>110</sup> 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.<sup>111</sup> 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

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

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

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

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

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

<sup>111</sup> 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.<sup>112</sup> 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.<sup>113</sup> 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.<sup>114</sup>

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."<sup>115</sup> 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.<sup>116</sup> 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.

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<sup>112</sup> Id.

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

<sup>114</sup> Id.

<sup>115</sup> DEIS at 4-154 and 4-155.

<sup>116</sup> 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.<sup>117</sup> 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.<sup>118</sup> 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.<sup>119</sup> 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 untrammelled quality of wilderness character..."<sup>120</sup> The Wilderness Act does not invoke "intentionality" into the untrammelled concept. Any action that manipulates or controls ecological systems inside Wilderness, intentional or unintentional, degrades the untrammelled 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.

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<sup>117</sup> DEIS at 1-11 to 1-18.

<sup>118</sup> DEIS at 3-342 to 3-350.

<sup>119</sup> DEIS at 3-344 to 3-347.

<sup>120</sup> 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.”<sup>121</sup> 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.

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<sup>121</sup> 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."<sup>122</sup> 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

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

better quality of life.”<sup>123</sup> 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,”<sup>124</sup> 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.<sup>125</sup> The majority of planned users of the road are fishery-related passengers.<sup>126</sup> 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,<sup>127</sup> 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

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<sup>123</sup> 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](http://izembek.fws.gov/pdf/community_scoping_meeting_sand_point.pdf) (April 26, 2010).

<sup>124</sup> DEIS at 1-5.

<sup>125</sup> DEIS at 4-64.

<sup>126</sup> DEIS at 4-68 (Table 4.2.3-7).

<sup>127</sup> 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.<sup>128</sup>

The Omnibus Public Land Management Act of 2009 includes restrictions to prohibit commercial use of the proposed road,<sup>129</sup> 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

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<sup>128</sup> 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).

<sup>129</sup> P.L. 111-11, Title VI, Subtitle E.

lands, “which would fragment the wilderness and impact natural quality, undeveloped quality, and opportunities for solitude.”<sup>130</sup> 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.”<sup>131</sup>

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,

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<sup>130</sup> DEIS at ES-22.

<sup>131</sup> Public Law 105-277 Sec. 353(a).

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## 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

Paul requested the Administrator review the hovercraft. The Administrator said no revised numbers into Fund 21, Cold Bay King Cove Road. \$162,000 is year to date revenue and still have about \$19,000 to collect in receivables on hovercraft. \$24,000 expenditure was not a supply item but a spare part for bow thruster and P&I insurance will reimburse. The next month you should see expenditures decreasing around \$60,000 since no new spare parts and no insurance for a couple of months. We also cancelled out the Anchorage office and harbor house office closing as much as we can in expenditures. Other revenue is money collected in form of fees and interest money.

ROLL CALL

Marvin-yes, Paul-yes, Tara-yes, Joe-yes, Ernie-yes, Ken-yes, Carol-yes. Advisory: Justine-yes. Passed.

CONSENT AGENDA

- Introduction Ordinance 08-04, Introduction Advisory Seats.

MOTION

Ken moved to adopt and second by Tara.

DISCUSSION

Paul said during the workshop we discussed the difference between Assembly and School Board advisory representation in that the School Board would have three advisory members and Assembly two advisories. The Administrator explained that the school board can adopt a different policy than what the Borough does. Paul added, for the record, that this is the first reading and he still has not come to a conclusion on this issue yet. Ernie stressed the importance of each community always having a seat at the table and believes it is important they remain at a seat at the table. Tara agrees with Ernie.

ROLL CALL

Carol-yes, Tara-yes, Paul-yes, Ken-yes, Joe-yes, Marvin-yes, Ernie-yes. Advisory: Justine-yes. Passed.

RESOLUTIONS

Resolution 08-14, Removing Funds from the Permanent Fund:

MOTION

Ernie moved to adopt and second by Tara.

DISCUSSION

Paul said during the workshop the Assembly discussed at length the \$644,000 the Borough has available. As to the distribution he supports the idea of half of money distributed equally between communities and other half distributed per capita.

Ken supports the value of having a good portion distributed to meet immediate needs of the communities as they see fit and a portion to go into a Capital Improvement Project (CIP) fund to allow it to grow to meet CIP needs in the future.

Mayor Mack recommended approving resolution to give the Borough authority to use the money and then debate the options discussed at workshop to disburse either shared equally, per capita, half and half, or CIP fund.

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ROLL CALL

Ernie-yes, Paul-yes, Tara-yes, Carol-yes, Marvin-yes, Joe-yes, Ken-yes. Advisory: Justine-yes. Passed.

FURTHER DISCUSSION

Ernie noted that a lot of different ideas came forth at workshop, but there are also immediate needs of some communities. Joe said that amount is not going to meet everyone's needs.

MOTION

Joe moved that we distribute equally between all communities. Second by Marvin.

AMENDMENT

Paul moved to amend the motion to split 50/50, 50% dispersed equally and 50% distributed per capita. Second by Ernie.

Marvin said at workshop he suggested the idea of 50/50 split with 50% of money going into the saving fund for CIP although supports splitting the full amount equally. Joe does not want to decide what the community wants to do with it. He said if distributed per capita basis the Assembly would then discuss communities population and does not want to get into that discussion. Depending on how it is determined might not be fair so will vote against it. Paul explained that he feels Akutan, King Cove, and Sand Point are almost equal in size and a per capita split would benefit Akutan. Tara does not support the amendment.

ROLL CALL ON AMENDMENT

Paul-yes, Joe-no, Tara-no, Carol-no, Ernie-yes, Marvin-no, Ken-no. Advisory: Justine-no. Failed.

Joe requested that the Borough begin creating a CIP fund to start helping the communities with the big dollar projects by supporting some of the big projects one at a time. Dividing a small amount is not that much so recommends creating a different fund to fix long term.

ROLL CALL ON MOTION

Ken-yes, Marvin-yes, Paul-yes, Tara-yes, Joe-yes, Ernie-yes, Carol-yes. Advisory: Justine-yes. Passed.

OLD BUSINESS

Hovercraft Operations:

The Administrator reported that one of the spare engines has been sold and shipped to Seattle. The second spare engine is at Pacific Diesel. They are willing to work with us to get that engine sold, which will allow us to recapitalize the program for a few months. The hovercraft will continue to stand down for the remainder of the month of March. The hovercraft crew will be reduced and on stand by 40 hours a week. Hovercraft pilot, Gary Mack, will be leaving for vacation soon. Hovercraft engineer, Paul "Toby" Tobin, will be back on March 22<sup>nd</sup> so there will be about one week the hovercraft will be unavailable for medevacs. He plans to contact John Wagner who has expertise in running vessels to see if he has suggestions to get some life in this project. There are big problems, we are taking some affirmative steps and will continue to take some affirmative steps.

Ernie requested we add the hovercraft's rescue of captain and crew from burning vessel onto the plaques that the Borough displays in offices acknowledging rescues. Mayor Mack thanked Captain Gary Mack for going out and conducting the rescue and said that it does prove that the hovercraft is a life saving machine. He added that it is doing what it is suppose to do, but that it is financially draining until we can accomplish the road. May need to find a way to supplement the hovercraft until the road is accomplished. Captain Mack acknowledged the great job the rest of his crew also did during the rescue. Tara is concerned about not having medevac service for that week and supports talking with the crew so that there is no lapse in medevac service.

MOTION

Tara moved that the Borough support the operation of the hovercraft for emergency purposes only during the stand down, if possible. Second by Ernie.

Carol said we want the hovercraft for emergencies but if Gary Mack is going on vacation and Paul Schaack is not available does not know how we can make a motion when we don't have a crew available. Tara does not want to worry about staff issues but would like to make sure that it is available for medevacs.

ROLL CALL

Carol-yes, Tara-yes, Paul-yes, Ernie-yes, Ken-yes, Marvin-yes, Joe-yes, Advisory: Justine-yes. Passed.

King Cove Land Exchange:

Mayor Mack stated that he is feeling very optimistic about the land exchange possibility and have to just wait now. Paul asked the Administrator when we might expect a mark up on the bill. The Administrator said probably in April after Congress gets back to Washington D.C. on April 1.

Boys & Girls Club Funding Request:

The Mayor said the Borough donation policy says a donation has to benefit the entire AEB. This would benefit King Cove and Sand Point only. Both communities have stepped forward to financially help the Boys & Girls Club which has been a beneficial program in the communities. Ernie said the King Cove funding was moved to the summer program. The program in King Cove has been shut down and will be until the summer program. Della said initially Boys & Girls Club in King Cove, which is available for elementary age, had \$15,000 and the community has to come up with some of the funds. Mayor Mack said the tribes have also been helpful in funding.

MOTION TO TABLE

Ernie moved to table until next meeting and second by Carol. Hearing no objections motion passed.

The Clerk will include the last funding request letter from Boys & Girls Club in next packet.

NEW BUSINESS

Discussion of FY09 Budget Priorities:

The Administrator said time to think about whether we are going to have changes in staff and what to do with False Pass School. His intention in light is subsequent to memo is to

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create a lean budget to have money left over to appropriate next year. The Assembly has pointed out numerous comments on cost for people to live out here. COLA (cost of living adjustment) has increased 7.5% this year so could be an increase there.

Paul recommended keeping Sam Colton on contract under the Resource Dept. Under Education he supports keeping False Pass School open. Oil & gas will mean perhaps a good future for the Borough, but he believes there is a fine line of reporting facts and selling it to people. He also believes the Borough should close our Juneau resource office.

Mayor Mack said he is trying to be as proactive as he can. A resolution was introduced for offshore oil & gas revenue sharing, although was not introduced early enough for action. Committee may take action on it telephonically. This would give the state some revenue to be distributed to the communities, which is long over due. Not sure where oil & gas development is going to go but optimistic enough to be ready for and is looking to be proactive ahead of time.

Carol said some staff salaries need to be looked at and some of the staff has not received a raise in a long time. She said in regards to the hovercraft believes we are right on track at this time. Boys & Girls Club is something we should assist with on the next budget and maybe the smaller communities can get something start also. She agrees that schools should remain open. Regarding the Juneau resource office does not support closing and also supports Sam Colton being kept on contract. Carol said she has not paid much attention with oil & gas, but it is coming along real soon.

Marvin agrees with Carol on hovercraft, however, if land exchange goes through we are still looking at five years before the road is complete. Need to look for more revenue opportunities and look for subsidies. He is confident it can work. Juneau resource office is important to have. Regarding Boys & Girls Club he said anything for kids is important.

Justine agreed with Marvin. She also supports keeping the Juneau resource office. She supports being proactive on oil & gas development onshore and offshore. She supports moving forward in trying to get the land exchange and supports the hovercraft. She also supports Boys & Girls Club noting the importance of having things for children to do.

Ken also supports keeping Sam Cotton on contract. He supports keeping False Pass School open. He noted the oil & gas fisheries workshop next week and wants to make sure what ever happens is in our best advantage to our communities. Capital projects need to continue in our communities. Regarding the hovercraft, some sort of transportation is needed and hope we can make the land exchange happen. If it does not happen will still need a transportation link and some believe the hovercraft is workable. Ken supports Boys & Girls Club adding that the youth belong to the whole Borough and are our future.

Joe supports a CIP fund started out of permanent fund. He wants to continue discussing a port authority and he is still interested to see where the Borough will go with that.

Tara agrees with what others are saying. She supports keeping the school open. Regarding the hovercraft does not want to go back to not having an emergency way of getting medevacs over from King Cove. She supports keeping staff in their positions. She said it is essential to continue with onshore/offshore oil & gas development, she also supports funding Boys & Girls Club and supports continuing to look at a port authority.

Akulani airport update: Joe said airport project is moving along quicker than boat harbor project. Need to find more funding saying that the airport has become much more critical because of the Grumman Goose landing gear problems occurring.

Senator Stevens website: Senator Stevens now has his earmarks listed on his website.

Cold Bay terminal: National Weather Service section should be completed in early May. FAA has \$500,000 to commit. Sharon talked to contractor and worked up change order for less than \$500,000. FAA has now requested a complete material list. Alaska Airlines also likes progress we have made. They have applied for the Essential Air Service in Adak.

#### PUBLIC COMMENTS

Theo Chesley asked if the Borough is still considering a mentoring program. The Administrator said he would like to see something like that happened but does not believe there is time to do that. He mentioned previous False Pass Advisory member, Jonathan Nelson, having left to continue his education is in a natural resource program back east and suggested to him how he might be able to do an energy project in the Borough. Maybe looking at how geothermal might work in one community. Mayor Mack said not much time now, but feels it is a good idea through out all the AEB offices to do some kind of program to encourage some young students to seek out higher education.

Gilda Shellikoff thanked the Assembly for supporting to keep the False Pass School open.

Della Trumble said the medevac piece is really important and the training is continually important. She fully understands the frustration and suggests getting the revenue loss down saying that the hovercraft will never be able to operate at a profit since our communities are so small.

Paul Schaack wanted to clarify with Assembly members he has been trying to get over to King Cove on Thursday and reminded them that he is just part time. If there are any younger generations that would like the opportunity, he would be willing to step down. The plans initially were to have the hovercraft building at the surveyed location at NE corner but we ended up at Leonards Harbor with tent building. That is just how it worked out and no one predicted it.

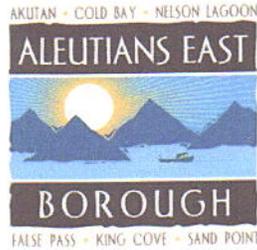
Eastern Aleutian Tribes Practitioner, Anne Perry, is finishing up 6 months in King Cove. She has sent half a dozen patients out on medevacs. She said it is real important to be able to get people out. There is a lot of room on the hovercraft allowing as many staff members as needed. The drive on a road might restrict them some feeling that you really can't put a price on the life of a person.

King Cove Fire Chief and EMT, Chris Babcock, takes his hat off to crew of hovercraft. He is one of the main people on medevacs and is an advocate for the road. He knows it is still a ways down the line and thanked the Borough for the hovercraft and glad the Borough is going to try to fund it.

#### ASSEMBLY COMMENTS

#### NEXT MEETING AND LOCATION

April 10 in Cold Bay.



February 24, 2012

Kevin Morgan  
Division Chief  
Alaska District; Regulatory Division  
US Army Corps of Engineers  
P.O. Box 6898 (CEPOA-RD)  
JBER , Alaska 99506-0898

Dear Mr. Morgan,

This letter will provide information to the Corps of Engineers (COE) about the recent announcement by the Aleutians East Borough (AEB) regarding its decision not to operate the hovercraft between the Northeast Corner and Cross Wind Cove or other Cold Bay location. As the COE is aware, the AEB has struggled to run a hovercraft between King Cove and Cold Bay. 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 operations. These hovercraft operations have resulted in annual losses of over \$1 million, which have been borne by all AEB residents.

Although we had hoped to reduce costs and increase revenues using the new hovercraft terminal at the Northeast Corner of Cold Bay, our cost projections still do not justify re-starting hovercraft operations. Based on anticipated high net costs -- still near the \$1.0 million mark annually -- with only slightly better performance, the AEB reached its decision not to operate the hovercraft between the Northeast Corner and Cold Bay in the future.

The Alaska Department of Transportation & Public Facilities has entered into a binding contract to complete all the elements of the current road project (i.e. King Cove Access Project) to the Northeast Corner as authorized in the King Cove Health & Safety Act. This project is COE Permit number #2-2000-0300; Cold Bay 12. The permitted construction activities will be completed as required under the Permit with completion planned by the end of the 2012 field season. We believe that our decision regarding the hovercraft does not affect this contract.

Additionally, the AEB is working diligently with the Corps, other federal agencies, the State of Alaska, the City of King Cove, King Cove Corporation, and the Agdaagux and Belkofski Tribes as cooperating agencies in the current Environmental Impact Statement (EIS) process directed by the Izembek National Wildlife Refuge Land Exchange Act of 2009. This EIS is being prepared under the direction of the U.S. Fish and Wildlife Service (USFWS) as the lead agency. The USFWS has recently stated its intention to complete the EIS and provide its Record of Decision document by late summer (2012) to the Secretary of Interior for his decision on the land exchange, as required by this Act.

It is the fervent hope of the AEB, the City, King Cove Corporation and the Agdaagux and Belkofski Tribes that the Secretary will approve the land exchange. If so, the road to the Northeast Corner will become a key element in the implementation of the Izembek National Wildlife Land Exchange Act which will authorize the construction of additional road mileage from the Northeast Corner to connect the City of King Cove with the Cold Bay Airport.

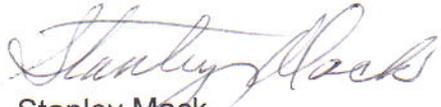
If the Secretary does not approve the land exchange, the AEB will develop an alternative transportation link between King Cove and Cold Bay. Any alternative we develop will include the utilization of the road to Northeast Corner and associated facilities, now being constructed under the King Cove Health and Safety Act and COE Permit # 2-2000-0300 Cold Bay 12.

On-going transportation research and development in the Aleutians East Borough is important as all our communities are small, remote, isolated, and marine dependent. A transportation link the Borough is exploring (and we believe holds promise) is an aluminum landing craft/passenger ferry. Please see the attached conceptual drawing. The Borough hopes that this type of a transportation link could be more technically and financially viable than a hovercraft. Such a landing craft/passenger ferry vessel could be designed to carry approximately 30 passengers, occasional wheeled vehicles (in particular an ambulance) and limited cargo. It could use the same route as has been described for the hovercraft in the past. We are looking at building materials and techniques, such as hardening the vessel bottom with replaceable UHMW wear pad to prevent damage to the hull from abrasion on the landing pad, that allow the vessel to use the landing pad at the Northeast Corner which is to be constructed in accordance with the existing plans, specs and permits.

The completion of the current construction as described in the existing COE 404 permit is critical to the overall King Cove Access Project. A landing craft/passenger ferry vessel landing ramp could meet the purpose and need of this Permit.

The AEB thanks the COE staff for all of their work and understanding of the King Cove Access Project and looks forward to continuing our working relationship.

Sincerely,

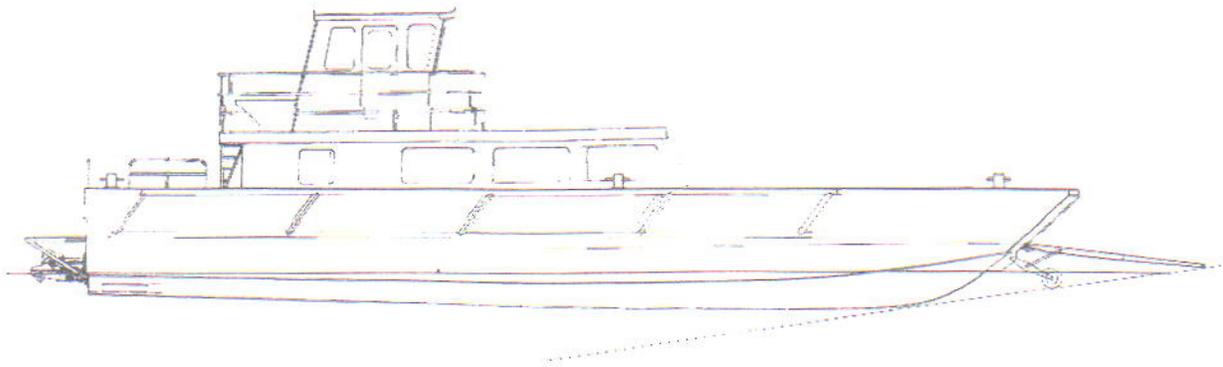
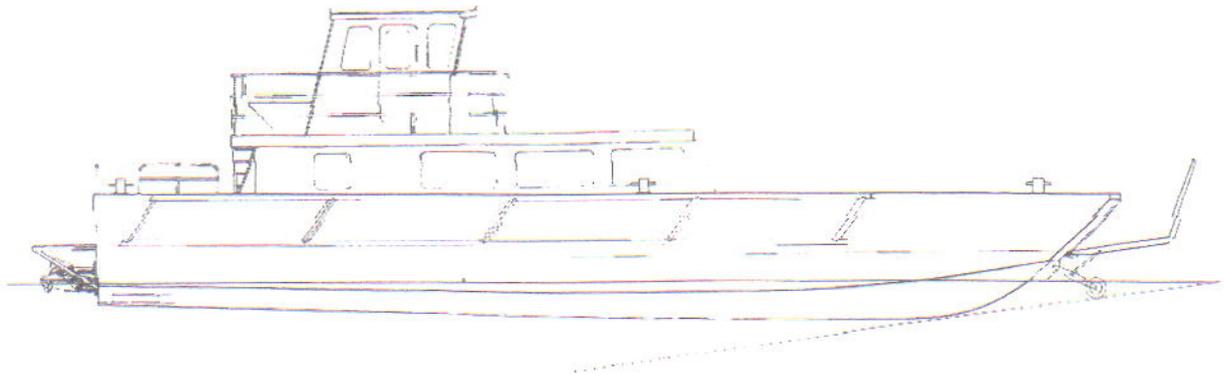
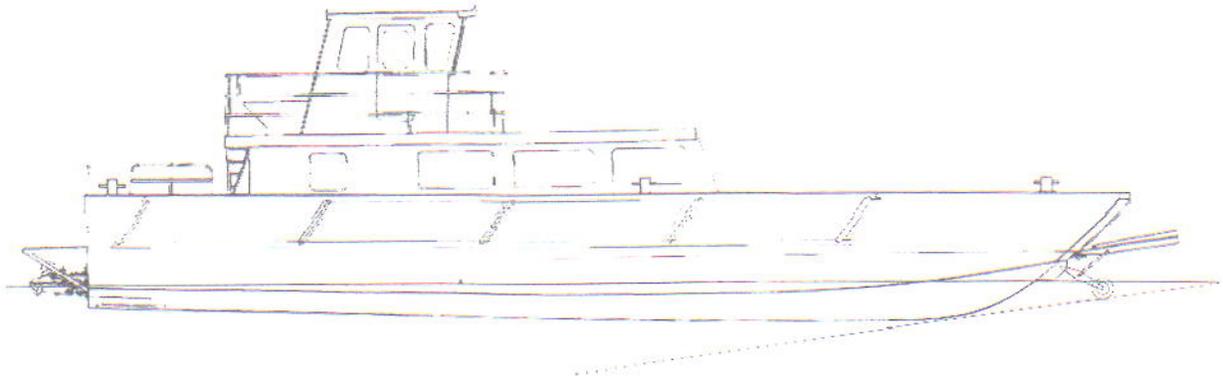
A handwritten signature in cursive script, appearing to read "Stanley Mack".

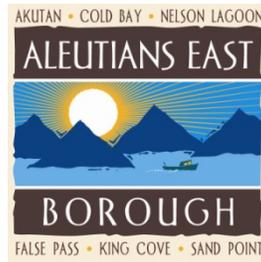
Stanley Mack  
Mayor

Cc: Steve Meyers, Army Corps of Engineers (via email)  
Heather Boyer, Army Corps of Engineers (via email)

# 59' X 16' Landing Craft / Passenger Ferry

Shown with landing ramp in three positions





TO: Mayor Mack and Assembly Members

DATE: December 5, 2011

FROM: Sharon Boyette

RE: Administrator's Report

King Cove Land Exchange and Road Corridor Environmental Impact Statement eats up a lot of my time but I believe we are making good progress. The hovercraft operations in King Cove were "taken off the table" as the no-action alternative in a letter from the Mayor to the FWS dated November 15<sup>th</sup>. We hope that by the time the final EIS is issued everyone will understand that the AEB can't afford to and will not re-start hovercraft operations between Cold Bay and King Cove.

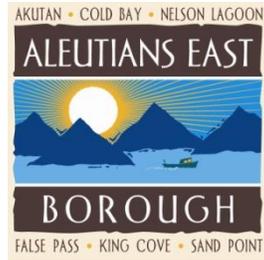
This may present a problem for the Road to the Northeast Corner project which was to provide the facilities for somewhat less costly hovercraft operations. But we are dealing with that fall-out as best we can now.

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 re-deployment 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. With assistance from Kvichak Marine and our consultant, Paul ("Toby") Tobin, we will be ready.

We had some excellent meetings in Seattle during Fish Expo. Our relationship and communications with Peter Pan Seafoods continues to improve with each meeting. We enjoyed a frank discussion about the airport and harbor projects with Trident Seafoods. We met with Kvichak to do the planning mentioned above as well. I thought the fishermen's meeting went well. We also talked with Larry Cotter, CEO of APICDA, about Akutan, False Pass and Nelson Lagoon projects and some of the goals we share for those communities. The AEB booth was great, as usual, manned by AEB and City of King Cove staff.

All our construction projects are on winter break. I'll let you know as they start up again.

As always, I appreciate your questions and suggestions. Please call or email me anytime.



TO: Assembly Members

THROUGH: Mayor Mack

FROM: Sharon Boyette

DATE: March 19, 2012

RE: Sand Point Request for Funding

I would like to offer my opinions regarding the City of Sand Point Request for funding from the AEB's permanent fund.

The AEB owns new harbors in Sand Point, King Cove, False Pass and Akutan and the public docks in Cold Bay, False Pass and Nelson Lagoon. These are facilities that the AEB has agreed in writing (except Akutan Harbor which is in process) to provide for major repairs. Some of the facilities that the AEB owns are in terrible condition and pretty soon there will be no choice but to start repairing them --- or stop using them. The Cold Bay dock will be the first to go down; it is well on its way now.

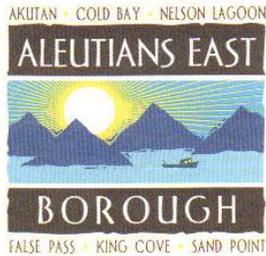
We are about to start running a hovercraft operation in Akutan that --this is just my opinion the business plan has not been updated-- could cost over \$1 Million/year over revenues at least for the first five or so years. The AEB is committed in writing to running and paying for the marine link between Akutan village and Akun airport for the next twenty years.

If you look at the revenue and expenses of the administrative budget, you will see that we budget to spend every nickel that comes in each year.

So, it is pretty easy math. If the assembly intends to keep its permanent fund and even grow it, we cannot pull millions of dollars out for projects and for education and for the hovercraft deficit each year.

Sand Point says the city can't afford a major contribution to repair and renovate the old harbor. I would recommend they speak to the City of King Cove where they went through similar funding pains with their old harbor.

A quick little research produced the following: North Slope Borough has over \$300 M and Valdez has over \$100 M in their permanent funds. Fairbanks North Star Borough has over \$100 M in investment accounts for their various "reserve funds."



TO: Mayor Mack and Assembly Members

DATE: March 14, 2012

FROM: Sharon Boyette

RE: Administrator's Report

Spring must have sprung although you wouldn't know it by looking at the amount of accumulated snow in Anchorage. But I know it has because the construction projects are showing signs of life. The Akutan Harbor construction and the Akutan Airport construction have started up again. Kiewit has 25 people working on Akun Island when I last heard from them with a total of 40 people expected by the end of the month. Knik will be starting up dredging to finish that part of harbor construction as soon as weather allows.

AIC is held back from working the material pit by bear denning/ noise restrictions but the King Cove road to the northeast corner may get going soon without blasting, if rock is already available.

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. HoverLink, a subsidiary of Kvichak, is working on the permit stipulations, development of safety, operations and route manuals and operations planning. HoverLink has hired a full-time manager in Seattle, Marty Robbins, for his project. He will be in Anchorage to meet with us, Fish and Wildlife and PenAir the first week of April. We anticipate the Suna-X will be in Cold Bay until the first of August when it will head to Akutan.

The King Cove Land Exchange and Road Corridor Draft Environmental Impact Statement was due to be released the end of February – then the first week of March – then mid-March. Well, it is mid-March and we are thinking it may be very soon. The Tribe and City have invited Dan Ashe, lead dog at Fish and Wildlife

Service to King Cove April 2-4. The dates are not confirmed. Stay tuned for news regarding the Draft EIS and KC-CB Road news. . . . .

Legal Matters: I am to be deposed on the terminal construction lawsuit on March 20<sup>th</sup>; others who were involved are also scheduled for depositions this week. I hope that goes well. We are meeting with AML/JIA to discuss the hovercraft shelter; lawyers will be present. We would like to settle that matter without a full-blown legal battle. You will be hearing more about the hovercraft shelter, too. The King Cove School is still leaking – maybe worse than ever. Ray Wetherholdt will be conducting a “leak test” in June which should give us information about the cause of the leaks. Then we will decide how to fix the leaks and how much the repair will cost.

When I have a spare moment or two, I am trying to organize my office for the new administrator. Linda is helping but it is going slowly. It is looking like I will not have time with the new administrator so I am meeting with the staff regularly to talk about what I have learned over the past 21 years, what I know about active projects and where all the bodies are buried. They will help bring him up to speed and avoid all those corpses.

As always, I’m happy to provide more details or hear your concerns. Please call or email me anytime.

## Akutan – Akun Hovercraft Ferry Service Plan

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### I. Summary of the Service

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#### A. The Route

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The ferry route shall be served by a single hovercraft owned by the Aleutians East Borough (AEB) and operated under contract by HoverLink, LLC (HoverLink).

HoverLink is a wholly owned subsidiary of Kvichak Marine Industries, Inc. (KMI). The service route shall be from an improved sea plane ramp located on Akutan Island near the village, to the new airport being constructed on Akun Island. The landing on Akun Island will be via the beach at Surf Bay. There will also be a hovercraft hangar built at the head of Akutan Harbor.

#### B. Service Schedule

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The ferry service will provide the marine link between the new airport and Akutan. Flight schedules to Akun have not been established. HoverLink has already met with Peninsula Airways (PenAir) and they have not yet finalized their schedules. Other airlines may also choose to provide scheduled or chartered service to Akun with passengers and/or freight. HoverLink will respond to the PenAir schedule, and coordinate with other airline arrivals as necessary, to provide the marine link in an efficient manner.

The ferry service may consist of one or two daily scheduled round trips between Akutan Island and Akun Island. The schedule will integrate with future air service into Akun Island by all airlines that establish such service. For example, PenAir currently offers direct service from Dutch Harbor (DUT) to Akutan Island (KQA) using the Grumman G21 Goose sea plane. It is could be anticipated that the new fixed wing service to Akun Island will roughly follow the current schedule, and that is the current assumption of this Plan. The following flight schedule is currently in effect and is operated seven days per week:

- Flight 322 Depart DUT 11:00 Arrive KQA 11:20
- Flight 323 Depart KQA 11:40 Arrive DUT 12:00
- Flight 324 Depart DUT 15:45 Arrive KQA 16:05
- Flight 325 Depart KQA 16:25 Arrive DUT 16:45

The PenAir schedule is subject to seasonal and demand changes, as well as weather limitations on the existing aircraft and facilities. Direct service from Anchorage (ANC) to Akun Island bypassing DUT is also a possibility. PenAir may serve the route with Saab 340 or 340B model aircraft that will have a greater passenger capacity than the Grumman Goose. During peak personnel changes at the Trident Seafood plant in Akutan, additional sailings may be required. Those peak travel times are mid-December to mid-January, mid-March to late April, and late May to late June. Based on the current pattern of flights, a nominal ferry timetable is proposed as follows:

Action	Time	Action	Time
Crew On at Hangar	8:30	Depart Hangar	9:30
Arrival Akutan Village – Load Outbound Pax	9:45	<b>Depart Akutan Trip #1</b>	<b>10:00</b>
Arrive Akun Island – Surf Bay	10:30	Unload Pax	10:45
PenAir Flight Arrives with Inbound Pax	11:20	Shuttle Pax to Surf Bay	11:45
Load Inbound Passengers	11:45	Depart Surf Bay	12:00
<b>Arrive Akutan Trip #1</b>	<b>12:30</b>	Unload Pax	12:45
Depart for Hangar	12:45	Arrive Hangar	13:00
Crew Break at Hangar	13:00	Depart Hangar	14:15
Arrival Akutan Village – Load Outbound Pax	14:30	<b>Depart Akutan Trip #2</b>	<b>14:45</b>
Arrive Akun Island – Surf Bay	15:15	Unload Pax	15:30
PenAir Flight Arrives with Inbound Pax	16:05	Shuttle Pax to Surf Bay	16:30
Load Inbound Passengers	16:30	Depart Surf Bay	16:45
<b>Arrive Akutan Trip #2</b>	<b>17:15</b>	Unload Pax	17:30

Fuel Vessel	17:45	Depart for Hangar	18:15
Arrive Hangar	18:30	Crew Off at Hangar	19:30

The assumed schedule is based on two flights per day, and will be adjusted to any seasonal or timetable adjustments made by the air carriers. The hovercraft crew operating day is therefore 11 hours in duration, with a one hour mid-day break. The vessel will be underway for three hours per day, with two of those hours in revenue service.

### C. The Vessel

The route will be served by the SUNA X, Official Number 1190205 owned by AEB. SUNA X is a BHT-130WD hovercraft and she currently holds a United States Coast Guard Certificate of Inspection (COI) as a Subchapter T vessel. The vessel admeasures at 92 gross tons.

SUNA X and will carry up to 49 passengers with luggage, with an operating crew of up to four, maximum of 53 persons allowed onboard. The vessel can also accommodate one heavy duty pickup truck as cargo. The current COI is attached as Appendix A to this Plan.

### D. The Facilities

AEB is in the process of carrying out all capital improvements at the following hovercraft sites with other agencies; and is responsible for any future or ongoing maintenance needed at these sites as they pertain to hovercraft operations. HoverLink’s role will be to provide operational guidance to AEB as requested for all facilities; and to keep AEB informed as to the status of these facilities regarding state of good repair.

- Akutan Village Sea Plane Ramp – RESERVED, pending receipt of information on construction activities, most recent information received from Alaska Department of Transportation (ADOT) is completion of the ramp by August 20, 2012.
- Hovercraft Hangar Site – same as above. We will need to arrange for storage of spare parts, tools, materials, and consumables at this site either in a permanent facility or using shipping containers.

- Surf Bay Landing Area – RESERVED, most recent information from ADOT indicates ramp completion near the end of July 2012.

Additionally, HoverLink’s crew will require shore side logistical and infrastructure support in order to carry out the service. Following is a brief summary of these items; the status of each will be updated as more information becomes available during Phase 2 and an addendum (and possibly a revised budget) to this plan will be issued.

- Utilities – RESERVED, pending information on the utilities (if any) that are available at each of the hovercraft sites listed above. It is assumed that AEB will pay for all utilities at the sites (power, sewage, water, trash disposal, recycling, et cetera). If necessary HoverLink can pay for these items and they would be added to the budget via an addendum.
- Telecommunications – RESERVED, ideally there would be cellular service, land line, and high-speed internet access available at both the sea plane ramp and the hangar. In the event that HoverLink ends up paying for telecommunications, a placeholder value has been included in the proposed budget. There will be a marine band radio installed at the Snow Removal Equipment Building (SREB) at the airport. Additionally, SUNA X is equipped with an aviation band radio for direct communication with arriving aircraft. SUNA X is also equipped with a satellite telephone.
- Housing – RESERVED, suitable accommodation is required for a minimum of four (but ideally six) crew members either in the village or at the hangar site. If suitable accommodation is unavailable, HoverLink is prepared to procure and set up a modular trailer living compound for the crew to support the service (perhaps as a capital cost item versus operating cost). Sleeping accommodations for each crew member are required along with modest living space, basic kitchen and laundry facilities, and a small office space. Information was recently received regarding possible motel/inn space in Akutan via the Akutan Corporation, or the use of construction camp units as that work completes ... more information needs to be developed and the suitability of these options needs to be determined.
- Groceries – RESERVED, it is preferred that the crews provide for their own meal preparation much like a typical firehouse. HoverLink will be seeking information on this regarding the practicality of the approach, and the supply chain logistics. The GSA per diem rate for Dutch Harbor was used to establish a budget for this cost item, see Appendix B. The City of Akutan does have a fully stocked store and meals may be available at the Trident cafeteria.
- Transportation – AEB will be providing a 21 foot Workskiff, Inc. M-Series skiff, with a S-Series cabin and full outfit, for HoverLink’s use for crew transportation between the village and the hangar. The hovercraft itself will be used to shuttle heavy freight or bulky items (oil drums, spare parts, et cetera). Further, AEB will be providing a pickup truck for the crew’s use at Akutan, and a bus will be provided on Akun for shuttling passengers between

the hovercraft and the airport. HoverLink will provide bus driving services to support the marine link.

- Weather Data – RESERVED, data may be available from the airport on Akun for the Surf Bay landing conditions; this would require coordination with the FAA. Ideally we can get wind speed and direction at three points along the proposed route. We are also checking into the feasibility of deploying a wave rider buoy to monitor wave height along the route.

## E. Plan Implementation

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The work to develop this Plan is a deliverable item under HoverLink’s RFEI letter and the resultant letter agreement between AEB and HoverLink as executed on February 21, 2012. Those documents further describe Phase 2 and Phase 3 of this project as follows:

### For Phase 2 (Planning):

- hire all staff;
- finalize operations and safety plans and procedures as contained in this Plan;
- train and certify all staff for the operation;
- develop and finalize the go and no-go protocols;
- finalize maintenance procedures;
- provide demonstrations for United States Fish & Game, United States Coast Guard and other agencies as required or requested;
- all as outlined and described in this Plan, its appendices, and any agreed upon addendums.

### For Phase 3 (Operations):

- provide twelve months of safe, reliable, and efficient hovercraft ferry service;
- be prepared to do any other missions as requested by AEB;
- explore options for other revenue streams such as fuel and vehicular transportation, freight, mail, SAR, medical evacuation;
- all as outlined and described in this Plan, its appendices, and any agreed upon addendums.

## II. Operations

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### A. Route Manual & Wildlife Protection

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The hovercraft ferry service will be operated in a safe and environmentally responsible manner.

These operating requirements are paramount. HoverLink will train the operating crews during

Phase 2 of the project; and the crews will ultimately be qualified to operate and navigate SUNA X on the prescribed route in strict accordance with the AEB approved Route Plan.

Additionally, the crews will be thoroughly trained on all aspects for the protection of the environment, wildlife, marine mammals, fish, and bird resources. In particular, the operating crews will be trained regarding the proper treatment of threatened and endangered species; and their respective habitats. All federal and state laws regarding protection of the environment, wildlife, marine mammals, fish, and bird resources will be strictly followed.

See Appendix C of this Plan for the particulars and details of the *Akutan – Akun Route Plan* and *Wildlife, Marine Mammal, Fish, and Bird Resource Protection Plans*.

## B. Vessel Crewing

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For the Akutan to Akun Island hovercraft ferry route the vessel will normally operate with a fully qualified four person crew consisting of:

- One 100 Ton Master (minimum) – holding a radar observer qualification and hovercraft endorsement;
- One 100 Ton Master as First Officer (minimum) – holding a radar observer qualification and hovercraft endorsement;
- One Hovercraft Engineer/Deckhand – with radar observer qualification; and
- One Qualified high speed deckhand; at all times.

The decision to carry a four person crew is based on relative increase in risk arising from change in operating environments between Cold Bay and Akutan. The decision is also importantly based on the lack of operational data and history on which to conclude that risks maybe acceptable operating with a three person crew.

The strategy regarding USCG minimum manning will be to pursue a new COI that allows for operation of the hovercraft with a crew of only three. Given that the Master and First Officer are

both licensed to fully operate the craft; this will allow for hovercraft operations to continue without interruption should any one member of the crew be unavailable for duty.

Additionally, in this case the start-up costs to the project are relatively unaffected by the increase in student numbers (for example from two to four). The start-up training costs will yield four licensed operators – giving the project some capacity to immediately deal with unplanned personnel turnover or absences in first year.

Note: The COI will require only one hovercraft endorsed pilot onboard – the second license need only provide radar guidance.

Future risk analysis may conclude the route can be served with a three person crew at which point HoverLink and AEB can analyze the risk/benefit of making that change; versus ramping up with a second pilot training scheme in future.

Therefore, it is proposed that the service will be staffed by two four person operating crews, each consisting of one Captain (or Master), one First Officer, one Hovercraft Engineer, and one Deckhand. Each crew will work a shift rotation of three weeks on and three weeks off the vessel. All eight crew members will be direct employees of HoverLink and will report directly to the General Manager.

The oncoming crew will assemble in Seattle, WA on the day prior to their rotation date and will meet with the General Manager. This crew will then travel together from Seattle to Akutan on the scheduled rotation date. Once on-site both crews will participate in a turnover period where operational, maintenance, and logistical details will be shared with the oncoming crew. Once turnover of the route to the oncoming crew is complete, the off going crew will return to Seattle and meet with the General Manager prior to starting their three week off period.

Note: In the event that hovercraft ferry operations are reduced to one scheduled trip per day, a two day split crew turnover will be utilized to preclude a situation where one crew hands off to

the other at Surf Bay with minimal turnover time. Examples of these crew swap scenarios are included as Appendix D.

See Appendix E of this Plan for complete crew position descriptions, including key activities, responsibilities, job content knowledge, and required communication skills. The Captain, First Officer, and Deckhand will also assist the Hovercraft Engineer as required for preventative maintenance and repair activities; exercising the “total team” approach to operational safety, reliability, and service efficiency.

### C. Maintenance Crewing

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As outlined above in Section II.B, it is proposed that each crew include a Hovercraft Engineer to provide for proper daily vessel preventative maintenance and repairs.

See Appendix E of this Plan for a complete position description, including key activities, responsibilities, job content knowledge, and required communication skills. The Hovercraft Engineer will also assist the Captain, First Officer, and Deckhand as required for vessel navigation and underway operations.

HoverLink proposes to augment the skill set and experience of the Hovercraft Engineers with the consulting services of Hovertek (Mr. Paul Tobin). These services will be provided on an as needed basis and will be overseen by the General Manager. Specific ongoing support will be provided in these areas:

- audits and inspections of maintenance reports, records, and procedures;
- audit of craft technical and master log books;
- provide advice and recommended solutions to HoverLink personnel upon request with 24/7 telephone support;
- provide additional specific hovercraft maintenance training as requested;
- provide on-site certified hovercraft engineer to assist or augment the crew if required and subject to availability; and

- provide on-site BHT 130 experienced Pilot in Command (as an advisor to the crew) on an as required basis.

#### D. Preventative Maintenance & Repair Plan

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Hovercraft SUNA X shall be maintained in accordance with the manufacturers recommended service schedule and approved maintenance manual and procedures.

##### References:

DOC.066 BHT130WD Maintenance Manual  
DOC.065 BHT130WD Type Operating Manual  
CFR 46 Subchapter T parts 175 thru 185  
Hoffmann - Propeller Operation and Maintenance Manual No - E765A

Suitable maintenance and operation of this type of hovercraft includes:

1. Ensuring that up to date records are maintained, to include the following:
  - A) Operating hours
  - B) Any damage or defects which may affect the safe operation of the craft
  - C) Any incidents or unusual occurrences, including particularly severe weather conditions
  - D) All modifications or design changes approved by the manufacturer and USCG MSO
  - E) All service bulletins issued by the manufacturer
2. Daily Inspections:
  - A) Daily inspections are conducted by maintenance staff on a pre and post flight basis.
    - All defects are recorded in a craft technical log and are signed off as rectified or as a deferred defect
    - Craft is certified as *serviceable* by maintenance personnel and all findings, rectifications and signatures are noted in the technical log book
  - B) The Daily Inspection consists of inspecting and recording the following items pre flight:
    - All Fluid Levels - engine oils, coolant, hydraulic fluid etc. level and any addition
    - Engine hours – pre and post flight
    - Craft Hour Totals
    - Structure
    - Electrics
    - Engines
    - Propellers
    - Lifts Fans & shaft components
    - Control Systems
    - Skirt Systems
3. Major Inspections and Preventative Maintenance/Service:

Preventative maintenance and service shall be accomplished in a block check methodology consisting of inspection and servicing at every 50 hour interval of craft operations. The block check method consists of 20 separate checks and service over 1000 hrs of craft operations and is a proven technique adapted from the aircraft industry with the focus on safety and ensuring reliability.

Maintenance personnel refer to the block check service schedule and sign off on the related tasks as completed. This procedure occurs @ every 50 hours of craft operations until 1,000 hours is achieved. Once a particular block check is completed it is noted in the craft master and technical log book. At every 1,000 hour milestone the block check method defaults to Block 1 check 1 and the process repeats. See Appendix F and table below for *current* SUNA X schedule and block check sign off sheets, as an example:

**Block Check Service Schedule**  
**SUNA X BHT 150WD**

	Check 1	Check 2	Check 3	Check 4
Block 1	1050 hrs <i>Complete</i>	1300 hrs	1550 hrs	1800 hrs
Block 2	1100 hrs <i>Complete</i>	1350 hrs	1600 hrs	1850 hrs
Block 3	1150 hrs <i>Complete</i>	1400 hrs	1650 hrs	1900 hrs
Block 4	1200 hrs	1450 hrs	1700 hrs	1950 hrs
Block 5 *	1250 hrs (oils)	1500 hrs (oils)	1750 hrs (oils)	2000 hrs (oils)

\* - indicates oil changes every 250 hours

**E. Safety Management**

The United States Coast Guard recommends the use of Safety Management Systems in all commercial passenger carrying services – irrespective of vessel size or class of voyage. HoverLink endorses this recommendation fully and has as a consequence developed a comprehensive suite of

standing orders, instructions and guidelines as operators of the SUNA X for the Akutan to Akun hovercraft ferry service. The documents are a Safety Management System (SMS) and provide guidance and direction for all employees to safely and effectively deliver the marine link connecting Akutan with Akun Island. The SMS is constituted of ten chapters – commencing with Standing Orders, and concluding with the vessel manufacturer’s type operating manual. These documents are “controlled” in that each chapter is assigned an alpha numeric designation with an approved company signature band and date. In this way Captains and crews can and should help “evolve” the safety management system based upon their operational experiences in and around the passenger service. Suggestions for change which have been approved by the company are in turn issued or re-issued with new tracking numbers. Operational crews will review parts of the SMS during each Occupational Safety Meeting – which are typically held once every 3 weeks. HoverLink will be tailoring the existing SMS for SUNA X to the Akutan to Akun route as part of Phase 2. The tailored SMS will become Appendix G (currently RESERVED) of this Plan when it is complete.

## F. Security

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The SMS for this hovercraft ferry service contains specific and detailed information regarding safety and security procedures to be followed by the HoverLink crews in carrying out the service.

As this is a USCG Subchapter T vessel, HoverLink believes that we will not be required to operate under an approved vessel or facility security plan, as would be required under the Marine Transportation Security Act (MTSA). Regardless, HoverLink will coordinate with USCG personnel and confirm this assumption.

Currently there is no TSA screening process out of ANC and onwards to AEB on flights operated by PenAir. There is some information out there that indicates that this practice may be changing. HoverLink will meet with the air carrier and discuss any issues. For the purpose of this Plan and proposal we assume that there will be no security requirements enforced upon the ferry service.

## G. Operating & Environment Permits

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Any and all permits required for the service shall be paid for and secured by AEB. HoverLink will assist AEB as requested with technical and operational data. AEB shall communicate any future operating or environmental permit requirements to HoverLink for inclusion in future addenda to this Plan.

HoverLink will incorporate all known permit requirements into the respective operational and route manual documents.

## III. Management & Administration

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### A. Organization Chart

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An organizational chart for the service is provided as Appendix H.

### B. Position Descriptions

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Position descriptions for all HoverLink staff are contained in Appendix C of this Plan.

### C. Communications

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The General Manager will bear the primary responsibility for all communications between HoverLink and AEB; and prospective partners such as PenAir, other airline partners, and Trident. When completed, the SMS (Appendix G) will provide further details on communications internal to the HoverLink staff; and for notifications to outside agencies necessitated by ferry operations that are typically made by the crew.

HoverLink commits to providing the required communication links on a 24/7/365 basis in support of the hovercraft ferry service. The General Manager will nominally be available at all times and serve in an on-call status. During times of vacation, illness, or while otherwise out of cellular phone range, the General Manager will delegate the on-call responsibility to one of the off-duty Masters or First Officers, or to another person knowledgeable of the service (e.g., KMI management staff).

## D. Reports

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HoverLink will provide the following routine administrative reports to AEB, and will keep copies on file. These data reports will be generated by the crews, and the back office staff at KMI as part of the General & Administrative effort:

- monthly ridership and freight data, cumulative and by airline
- monthly fuel consumption
- monthly spare parts usage
- monthly emergent repair activity
- monthly vessel and machinery hour summary
- quarterly preventative maintenance summary
- quarterly budget update and true up
- quarterly Army Corps of Engineers ridership data
- annual Army Corps of Engineers vessel summary
- annual Drug & Alcohol Testing results to the USCG and FTA
- any inspection reports or other correspondence received from outside regulatory agencies (USCG 835)
- any complaints received from ferry customers or service partners, along with HoverLink's resolution of same
- AEB will be copied on all HoverLink outgoing correspondence to outside regulatory agencies
- any reportable marine casualties or incidents (USCG 2692)

In addition, the Masters will be responsible for maintaining all required logs and records on the vessel and at the Akutan office facilities; and for generating any required reports per the SMS.

## E. Insurance

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RESERVED - KMI is currently working with AEB and its insurance brokers on the insurance coverage issues. The efforts at this point are twofold: a) ensure that the AEB provided coverages are appropriate and offer the best insurance value for AEB, and b) ensure that all parties are fully insured and protected for the services being rendered. It is hoped that a single policy can be assembled to provide the total depth and breadth of insurance required. In the event that gap insurance coverage is required to fully insure both AEB and HoverLink for ferry operations, we propose that those premiums be billed to AEB directly. Therefore we have not included any provision in the budget for insurance premiums.

## F. Invoicing & Payment Procedures

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### 1. Invoicing

HoverLink shall invoice AEB once per month, at the end of each calendar month based on budgeted amounts as mutually approved. Within 45 days of the end of each calendar quarter a “true-up” invoice shall be submitted to adjust for the difference between budgeted (pro-forma) costs previously invoiced and actual costs incurred. Invoices will be electronically mailed to AEB by the General Manager in the form of a PDF file on the last weekday of each month. Books and records in support of actual costs for the cost plus portion of invoices shall be available at the corporate headquarters of KMI in Seattle, Washington. These records may be reviewed by the AEB in Seattle at a prearranged time of mutual convenience. See Section V and Appendix B of the Plan for more detailed information and budgets and monthly pro-formas for Phases 2 and 3.

### 2. Payments to HoverLink

Payment for each invoice sent to AEB shall be due within 15 calendar days of the date of the invoice. Payment shall be via wire transfer directly into the bank account of HoverLink. HoverLink will provide bank wire instructions under separate cover.

### 3. Payments to HoverLink Employees and Vendors

KMI has set up HoverLink as a completely separate entity in its corporate payroll, accounting software, and related financial systems; including separate bank accounts. HoverLink will be setup to make payments to HoverLink employees and all vendors who provide services directly in support of HoverLink operations for AEB. Strict separation of all financial transactions shall be maintained between KMI and HoverLink.

## G. Fare Revenue & Ticketing

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HoverLink will not collect fares (cash or credit cards) directly from hovercraft ferry passengers or produce tickets. All passenger fare and freight revenues will be collected by the airlines serving the Akun airport. HoverLink operating crews will count passengers, and document the weight and volume of any freight items. We will create and provide the appropriate records so that AEB can be accurately reimbursed for all marine link transportation services provided directly by the airlines serving Akun, see Section III.D.

HoverLink will assist AEB as required to determine tariffs and fee structures (including revenue sharing) for other potential services such as freight, fuel and vehicular transportation, medical evacuation, SAR, mail delivery, et cetera.

HoverLink will coordinate as necessary with partners such as PenAir and any other airline serving Akun to arrange for package deals, and Trident to make any fare revenue or ticketing system work in an efficient and auditable manner. Throughout Phase 2 and Phase 3 HoverLink will take the lead to identify and secure new and/or increased revenues for the service, see Section V.J for additional information regarding this effort.

## IV. Staff

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### A. HoverLink Staff Size

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In 2010 AEB applied for and received an amendment to the USCG COI for crew level on the SUNA X. The original four person crew which included:

- One Master (100Ton minimum);
- One Radar Observer; and
- Two Deckhands at all times.

Permission was received to reduce the crew to a total of three with the following designations:

- One (1) Master;
- One (1) Senior Deckhand (High Speed);

- One (1) Qualified Deckhand (High Speed) at all times;

with Deckhands trained in accordance with NVIC's 5-01, Ch1 and 1-91, CH1 respectively.

For the new hovercraft route from Akutan to Akun Island, HoverLink proposes that the vessel will operate in year one with a crew as detailed in Section II.B of the Plan. For the purposes of this Plan, HoverLink will then consist of nine total direct employees as follows:

- General Manager (GM)
- Two Captains
- Two First Officers
- Two Hovercraft Engineers
- Two Deckhands

Position descriptions for all operating staff are detailed in Appendix E of this Plan. The two operating crews will be designated as Crew A and Crew B. The GM will establish a strong personal presence in Akutan in support of the service, the community, the regulators, and the various partners; generally as follows:

- During Phase 2 planning and training, nominally two weeks per month on-site, and as needed
- During the second half of Phase 3, nominally one week per month in Akutan, and as needed

The GM has already been hired and will start working as a direct HoverLink employee upon AEB approval of this Plan; his first visit to Akutan will occur April 19-20, 2012 weather permitting.

The two hovercraft operating crews will be recruited nationwide. It is anticipated that crew members will live wherever it suits each individual. The crews will travel to Seattle independently and at their own cost; and assemble as a team prior to departure day for Akutan. These operating

crews will go “on the clock” at the time of their on-coming briefing in Seattle, and they will come “off the clock” upon completion of their off-going brief to the GM in Seattle following their three week shift. All vessel crew of HoverLink will be salaried to mitigate overtime labor costs, and all will execute a marine employee contract that covers all aspects of rotational and off-site employment.

Note: If a crew member normally lives between Seattle and Anchorage, or in Alaska; then final crew assembly would occur in Anchorage. That person would go “on the clock” upon crew departure to Akun.

Should it become necessary at some point in the future, HoverLink may hire an administrative assistant to supplement the staff.

## B. Recruitment

HoverLink will advertise for crew positions starting in mid-April; with postings given the widest possible dissemination. HoverLink will also be advertising within the borough for employees. It is anticipated that a short list of interviewees will be determined by the end of April. In person interviews will be held in Seattle during early May and job offers will be made shortly thereafter. In order to support the required training program, the effective hire date for the crews will be early June.

## C. Human Resources

KMI will provide human resource services to HoverLink as necessary to advertise for, recruit, hire, administer, retain, and replace as necessary all HoverLink employees. Employee policies, procedures, administration, and benefits will be generally comparable between employees of KMI and HoverLink. These services are provided as part of the fixed monthly G&A cost; see Section V and Appendix B of this Plan.

## D. Training

The level of training required is very difficult to predict or estimate given the fact that crews have not yet been hired. For example, we could find, recruit, and hire a core group of very experienced hovercraft mariners (ex-US Navy for example) that require only basic familiarization training with SUNA X, and some route specific training at Akutan and Akun. On the other hand we could find ourselves hiring very capable and experienced mariners, but with little or no hovercraft experience at all. So the range in the “training level of effort required” is quite broad. This means that the cost to provide this training is equally hard to predict with any certainty. Another uncertainty and unknown that affects training (and its cost) is the weather factor. Given the weather in King Cove, Cold Bay, and the Akutan area there will be days when instructional staff are on-site but weather conditions preclude underway training time. We propose below that each Captain and First Officer accrue 40 hours of Pilot-In-Control time, and we will have to train and certify four. Additionally, we are building in an additional 40 hours of underway training time for instructor reconnaissance of the Akutan to Akun route; and full development and refinement of the “go/no-go” matrix with each crew.

HoverLink will provide all required training of hovercraft operations personnel during Phase 2 of the contract with AEB; all training will be complete prior to the start of ferry service. The training program summarized below is an example of the training regimen for the Captain (or Pilot) of the vessel, the most arduous and challenging position on the crew. Similar training will be undertaken for all other crew members.

## **PILOT TRAINING - PROGRAM SUNA X**

### **1.0 INTRODUCTION**

Controlled documents have been developed to guide an Air Cushion Vessel Master Instructor – approved by USCG and designated by HoverLink – in the pilot and navigation training evolutions required to make a certified deck officer (here-in-after described as a

Student) competent to serve in commercial operations aboard the hovercraft SUNA X.

Successful completion of this training program will permit the Trainee to safely operate the vessel within the manufacturer’s prescribed operating envelope.

## **2.0 METHODOLOGY**

The course follows a 240 hour training progression from a classroom environment covering ‘ground school’ topics - to final consolidation evolutions requiring real-time pilot and navigation skills at sea. There are four modules to this training scheme:

- 2.1 principles and theory of Air Cushion Vehicles and BHT-130WD SMS;
- 2.2 craft systems and maintenance training;
- 2.3 basic piloting and control of the BHT-130WD;
- 2.4 principles of the safe operational envelope, individual and team high-speed navigation skills under radar guidance.

160 total hours of mission time must be accumulated on the SUNA X as part of the USCG endorsement requirements; this will yield four fully credentialed hovercraft pilots. Forty (40) of these hours will be as “pilot-in-control” with 15 hours providing radar guidance. Trainees will track these hours in a personal pilot logbook which will be made available to USCG examiners upon request. Upon successful completion of the training program the approved instructor authority will issue an “attestation of training completion” to each trainee. The attestation must be presented to the USCG regional examination center in order to obtain a Hovercraft endorsement to their marine certificate – which will authorize them to operate the SUNA X.

## **V. Budget**

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The estimated budget for Phases 2 and 3 is attached as Appendix B of this Plan. The following paragraphs provide a brief narrative of the budgeting thoughts, assumptions, and methodology for

each of the budget line items. The first page of Appendix B is a summary sheet, showing total cost by both line item and phase, and a grand total. The proposed monthly pro-formas for each phase are also shown. Subsequent pages of the budget show details, quantities, unit costs, et cetera.

Careful and prudent management of the budget is critical. It shall be the responsibility of the General Manager to keep AEB completely informed regarding budget performance. Significant budget anomalies will be brought to the attention of AEB immediately for resolution; typically these would involve some mechanical failure necessitating expensive repair services or parts that go well beyond the respective budget line items.

Additionally, the GM will produce a budget update on a quarterly basis along with the true-up budget accounting numbers.

For certain costs items such as the consumables, vendors, and maintenance and repair the costs have been pro-rated across Phases 2 and 3 according the ratio of anticipated vessel hours.

#### A. Labor

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All HoverLink employees are to be salaried to preclude overtime, all will be considered to be employed in Seattle, WA or Alaska for tax and employment law purposes. Detail Sheet 2 shows the estimated direct and indirect labor costs. Salaries for crew, and consultant days required, are best estimates only at this time. During the hiring phase HoverLink will endeavor to deliver highly qualified and experienced crew hires at these rates, or lower if possible. Compensation for the GM is set. For the operating crews, there will be “day-rate” adjustments in their employment contracts to account for extra or fewer days worked in any given payroll period. Provisions will also be made for per diem if crews are stranded in a non-duty status due to weather or transportation delays. To cover this cost we have included a 5% direct labor contingency in the budget; see Sheet 2 of Appendix B. See Section IV.D above for further discussion concerning the broad range of potential

training costs; and their potential impact on overall labor costs. We have aimed near the middle of the range with our estimates.

HoverLink will also be utilizing the services of consultant labor for both phases; these gentlemen are already working on Phase 1 as agreed, and are well known to AEB. There is heavy consultant involvement in Phase 2, and a much reduced role foreseen in Phase 3. They have all indicated a day rate to cover their travel and working time. They will be traveling to Seattle during the crew interview process and possibly for some classroom training, otherwise they will be traveling to Cold Bay or Akutan for on-site and on-vessel work. HoverLink will assist as necessary to ensure that these Canadian citizens have the appropriate credentials to work in the United States.

## B. Travel & Per Diem Costs

Costs for crew, staff, and consultant travel and per diem are detailed on Sheet 3 of the budget, split out for each phase. All costs for airfare and lodging are best estimates or placeholders at this point pending resolution of previously RESERVED items of this Plan.

Regarding airfare, HoverLink has teamed up with US Travel – Fisheries Division in order to procure air travel with the required flexibility and best pricing. We will also speak with PenAir about possible airfare arrangements. As previously mentioned, crews will be responsible for their own travel between the lower 49 and Seattle.

Regarding lodging and accommodation see the discussion in Section I.D of the Plan. Included here as a placeholder we have accommodations both in Cold Bay/King Cove and Akutan for crews, the GM, and the consultant team. For CB/KC we have identified a suitable accommodation at \$4,500 per month. For Akutan we are still researching the options as previously discussed. Once the Akutan picture comes into focus for crew housing, we will prepare a budget addendum for AEB approval.

Crew, GM, and consultant per diem is set at the currently approved federal rate of \$102 per day as determined by the GSA for Dutch Harbor. Likewise, we have used the GSA rate as an estimate for any hotel stays that may be incurred. As with airfares, we are working with US Travel to secure better hotel deals in Seattle, Anchorage, and Dutch Harbor. HoverLink will bill for any required hotels at actual cost.

### C. Maintenance & Repairs

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There is no detail sheet for repairs, for preventative maintenance costs the labor is included in crew labor, and the associated consumables are spoken to in Section V.D below. In terms of emergent (unplanned) maintenance and repair work; predicting what might break during any given year of ferry operations is difficult at best. While preventative (planned) maintenance costs are well understood and easy to budget for, emergent repairs are much more random in nature. To mitigate the risk certain spare parts are being procured in support of the service under KMI's separate efforts to prepare the vessel for service, see Section VI.A below. Our philosophy will be to have critical spares on the shelf and to maintain that stock at all times; especially difficult or long lead time items.

As a starting point and place holder, we have examined historical repair cost histories for other ferry services and determined that repairs typically run at about 15% of the total cost of all other direct costs. Therefore we are using that value as a first estimate. As mentioned above, HoverLink will provide AEB immediate notification in the event that the need for expensive repairs becomes apparent. As the craft sees regular service over the first years this number will become somewhat easier to predict.

### D. Consumables

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Sheet 4 of the budget shows the anticipated costs for consumables for the first 1,200 hours of craft operation. In order to get best value for known consumables, we will buy items in bulk out of

Seattle and arrange for cost effective shipping to Akutan and/or Cold Bay. We will purchase a one year supply of given items being mindful of any shelf life limitations. The combined value of consumables and spare parts will necessitate the need for secure and dry storage. All items will be inventory controlled; and we will set up a system to track usage and provide for cost effective replenishment. As with all direct costs, HoverLink will bill only the actual cost incurred and will stretch AEB's budget dollars to the greatest extent possible.

#### E. Vendors

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Sheet 5 of the budget shows estimates for the service of outside vendors in support of hovercraft operations. In some cases these are services that may or may not be required, but we felt it prudent to put some budget in for them regardless. In some cases these are skill sets that the crew will not have, and are best performed by outside repair technicians.

Undoubtedly the need for other vendors or specialized services may arise. Based on details that emerge in Phase 2 regarding facilities and ongoing efforts to prepare SUNA X for training and service, this budget category may be revised via addendum.

#### F. Fuel

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Fuel for the vessel will be provided by Trident and shall be paid for directly by AEB. Information received from Hermann Scanlan has indicated that Trident Seafood is the best source for providing fuel to the operation as the City of Akutan does not have the requisite capacity. We anticipate that the vessel will consume approximately 77 gallons per hour of operation. Given two airline flights per day and the training requirements of the Plan, that works out to approximately 1,200 vessel operating hours total for Phase 2 (training) and Phase 3 (first year of operation). Therefore AEB should plan on purchasing 92,000 gallons of diesel fuel to cover hovercraft operations for the period June 1, 2012 through August 31, 2013. This calculation is shown on Sheet 4 of Appendix B. HoverLink will fully document all fuel deliveries from Trident and provide the requisite reports.

## G. Insurance

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As mentioned in Section III.E, there may be a cost to AEB for any premium associated with gap coverage needed by HoverLink to provide the service. In the event that gap insurance is required, that will be billed directly by the insurance carrier to AEB.

## H. Fixed Fees & Taxes

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KMI has proposed a fixed monthly fee for General & Administrative support of HoverLink at \$12,000 per month for the first year. KMI feels that this value covers the actual efforts for human resources, accounting, accounts payable, logistics, planning, payroll, record keeping, and other administrative costs. AEB should not be exposed to escalating G&A costs that would be calculated on a percentage basis, as the aforementioned efforts should be fixed and independent of the other operational direct costs.

HoverLink will incur business and occupation taxes (B&O) taxes on gross receipts, payable to the State of Washington and the City of Seattle at the rates indicated on the budget summary sheet. These percentages are calculated against the subtotal of direct costs and G&A; but not against profit even though it is taxed as part of the gross receivable.

The budget proposal does not include any other business related taxes; as none are known at this time. However, employer paid taxes, sales tax, and other taxes on airfare, hotels, consumables, et cetera are included in the budget as presented.

## I. Legal

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HoverLink has proposed a placeholder amount of \$10,000 for legal expenses incurred as part of Phase 2 startup. We are retaining legal assistance to create marine employment contracts for the crew, review insurance coverages to ensure no gaps, to prepare a form of contract between AEB and HoverLink, and to ensure any visa requirements are verified regarding use of Canadian consultant services in the United States.

## J. Profit

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HoverLink has established a profit margin of ten percent (10%) taken on all direct costs and fixed fees. *[[ALTERNATE DRAFT LANGUAGE follows: AEB and HoverLink agree that the profit margin will be fixed at ten percent (10%) taken on all direct costs and fixed fees for the Phase 2 planning and training efforts, and for the first six months of Phase 3 ferry service. Both parties further agree that after the first six months of Phase 3, revenue levels and prospects for the marine link we be assessed. At that time, and contingent on mutual agreement, the base profit margin of ten percent (10%) may be reduced concurrent with establishment of a percentage based revenue sharing agreement for new or increased revenues above an agreed upon base revenue number. During Phase 2 and all of Phase 3 ferry service, HoverLink will take the lead on identifying and securing new and/or increased revenue sources to the mutual benefit of all parties.*

## VI. Implementation Schedule

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Separate from this Plan, efforts to make the vessel ready for service are already underway by KMI. AEB has contracted KMI to accomplish the refit effort on SUNA X that is required to put the craft back in to passenger service. The scope of this effort consists of normal maintenance and repair, capital improvements, top-end engine overhaul of all four engines, and provisioning of critical spare parts. Specific work items include complete major overhaul items such as repair of the engines and replacement of the propeller hubs, installation of anti-icing systems, preparation

for USCG inspection, and other needed repairs. KMI will have a crew on station in Cold Bay starting on or about April 30, 2012, and the repair effort is expected to take four to six weeks. The craft will be operational and available for training no later than June 1, 2012 pending any unforeseen circumstances. Any repair efforts that need to carry on past that date will be coordinated between KMI and HoverLink so as not to affect the training schedule.

If HoverLink personnel are available in advance of June 1, 2012, the operating crew could be sent to Cold Bay to assist KMI's mechanical crew, and potentially offset some of the labor required. Participating in the refit would allow the operating crew additional time on the craft and greatly accelerate their familiarization with the operation and repair of the craft systems.

The milestone schedules for Phase 2 and 3 are presented as follows:

#### A. Phase 2

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- HoverLink and KMI begin all processes for Phase 2 – April 2
- HoverLink travel to ANC to meet with AEB, PenAir, USF&G – April 5-6
- This Plan approved by AEB, notice to proceed – April 10
- Finalize position descriptions – April 12
- HoverLink completes form of contract, sends to AEB for review – April 13
- Release advertisements for crew hiring – April 13
- Insurance issues resolved – April 15
- Site visit by GM to Akutan – April 18-20
- Marine employment contracts ready, visa issues for consultants resolved – April 27
- Amend budget and Plan as necessary – April 27
- AEB/HoverLink LLC contract finalized and executed – April 30
- Hiring interviews – May 7-9
- Negotiations with top 12 candidates – May 14-16

- Final crew selections, employment contracts signed – May 18
- Revise budget and Plan as necessary – May 22
- Pre-employment physicals and screening – May 21-25

Crew employment to be effective – on June 1

- SUNA X ready for training – June 1, see Appendix J for more schedule information
- Craft training for Crews of King Cove and Cold Bay – June 6 to July 30 (nominal)
- Update Route Manual and SMS as necessary – July 15
- Reposition SUNA X to Akutan – July 31
- Fish & Game demos and USCG COI efforts finalized – August 3
- Route specific training for Crews out of Akutan – August 1-28
- Finalize Route Manual, Service Matrix, and SMS as required – August 15
- Vessel and crew ready for service – August 29

## B. Phase 3

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HoverLink will have the vessel and the crews ready to begin ferry service on August 29, 2012 and will operate the service in accordance with the contract, this Plan, and its appendices.

END OF THE PLAN

**King Cove to Cold Bay Corridor Road Extension****FY2013 Request: \$4,000,000****Reference No: 49675****AP/AL:** Allocation**Project Type:** Construction**Category:** Transportation**Location:** King Cove**House District:** Bristol Bay/Aleutians (HD 37)**Impact House District:** Bristol Bay/Aleutians (HD 37)**Contact:** Pat Kemp**Estimated Project Dates:** 07/01/2012 - 06/30/2019 **Contact Phone:** (907)465-3900**Appropriation:** Surface Transportation Program**Brief Summary and Statement of Need:**

This project will complete the road from King Cove to the hovercraft terminal on the King Cove side of the King Cove-Cold Bay Connector.

<b>Funding:</b>	<b>FY2013</b>	<b>FY2014</b>	<b>FY2015</b>	<b>FY2016</b>	<b>FY2017</b>	<b>FY2018</b>	<b>Total</b>
Fed Rcpts	\$4,000,000						\$4,000,000
<b>Total:</b>	<b>\$4,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,000,000</b>

<input checked="" type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input checked="" type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
9% = Minimum State Match % Required	<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill		

**Operating & Maintenance Costs:**

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
<b>Totals:</b>	<b>0</b>	<b>0</b>

**Additional Information / Prior Funding History:**

FY11 - \$15,000,000.

**Project Description/Justification:**

In 1998, Congress appropriated funding under the King Cove Health and Safety Act for improvements to the King Cove medical clinic and airport and to fund a marine transportation system link (the hovercraft) between the two cities. Since August of 2007, the Aleutians East Borough has operated commercial hovercraft service between King Cove and Cold Bay. This project would construct a long term, year-round road from the community of King Cove to the new hovercraft landing site that provides a reliable and safe mode of travel for transporting medical emergency patients during adverse weather conditions.

The Aleutians East Borough will own and maintain the road.

This project contributes to the Department's Mission by reducing injuries, fatalities and property damage and by improving the mobility of people and goods.