

# STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

CENTRAL REGION DESIGN AND CONSTRUCTION  
PRELIMINARY DESIGN AND ENVIRONMENTAL SECTION

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January 21, 2011

## VIA ELECTRONIC MAIL

Suzann Speckman  
U.S. Fish and Wildlife Service  
AFES/MMM  
1011 East Tudor Road  
Anchorage, AK 99503

Re: Application for Renewal of Incidental Harassment Authorization for Northern Sea Otters (*Enhydra lutris kenyoni*), Akutan Airport Project (IHA-10-01)

Dear Ms. Speckman:

The Alaska Department of Transportation & Public Facilities (DOT&PF) hereby requests that the U.S. Fish and Wildlife Service (USFWS) renew the incidental harassment authorization (IHA) issued for the above-referenced project under Section 101 of the Marine Mammal Protection Act (MMPA).

By way of background, on July 9, 2008, the DOT&PF and Aleutians East Borough (AEB) filed a joint application with USFWS for the taking by harassment of northern sea otters under the MMPA. On November 10, 2008, USFWS issued an IHA to the applicants authorizing Level B harassment of northern sea otters. The term of the IHA commenced on May 1, 2009, and expired April 30, 2010. On January 21, 2010, the applicants submitted an application for renewal of the IHA which was issued on July 12, 2010 for the period of July 1, 2010 and ending on June 30, 2011. Through this letter, DOT&PF requests the renewal of its existing IHA for the period of July 1, 2011 to June 30, 2012.

As we have discussed with USFWS, no construction activities occurred in 2010 as previously contemplated in the application submitted by the applicants. The applicants now anticipate that construction-related harassment associated with the proposed project will commence in March 2011, and will cease in October 2012. In addition, AEB anticipates that hovercraft testing and related operations may occur in the Spring of 2011, prior to completion of airport construction as part of initial hovercraft testing, configuration, and crew training.

The DOT&PF appreciates your involvement in the development of this IHA application. Please contact either Jim Lynch at (206) 370-6587 or myself at (907) 269-0537 if you have any questions about the contents of this application or related issues.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Golden", with a long horizontal flourish extending to the right.

Dan Golden  
Environmental Analyst

Enclosures: IHA Application for Renewal  
2010 Sea Otter Survey Field Report  
Addendum to Biological Assessment

CC: Sharon Boyette, AEB  
Patti Sullivan, FAA

**JOINT APPLICATION FOR RENEWAL OF  
INCIDENTAL HARASSMENT AUTHORIZATIONS  
Akutan Airport, Alaska - Airport Construction and Hovercraft Operation**

**Applicants**

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- (2) Aleutians East Borough  
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**Background**

On May 30, 2007, the U.S. Fish and Wildlife Service (FWS) issued a Biological Opinion (BiOp) under section 7 of the Endangered Species Act (ESA) analyzing the effects of (1) the proposed construction of a new airport, access road, and hovercraft landing area on Akun Island and a hovercraft landing and storage area on Akutan Island; and (2) the issuance of a Clean Water Act section 404 permit permitting project construction on species and habitat under your jurisdiction. The May 30, 2007, BiOp concluded, among other things, that the proposed action was not likely to jeopardize the Southwest Alaska Distinct Population Segment of northern sea otters (*Enhydra lutris kenyoni*; USFWS 2007).

The Federal Aviation Administration (FAA), as the lead federal action agency in this proceeding, completed informal consultation with FWS concerning the effects of the proposed action on northern sea otters. The results of this informal consultation are summarized in letters dated September 27, 2007, and September 28, 2007. These letters describe in detail (1) proposed conservation measures the Applicants have incorporated into the proposed action to avoid, minimize, and mitigate the effects of the proposed action on listed northern sea otters; and (2) procedural agreements between project sponsors, FAA, and FWS to collaboratively develop and submit an application for an Incidental Harassment Authorization (IHA) pursuant to Section 102 of the Marine Mammal Protection Act (MMPA).

On November 8, 2009, FWS issued IHAs to the Alaska Department of Transportation and Public Facilities (DOT&PF) and the Aleutians East Borough (the Borough) (collectively, the Applicants) for the Southwest Alaska Distinct Population

Segment of northern sea otters. Those IHAs expired on April 30, 2010, and were renewed in anticipation that airport construction would commence May 1, 2010. The current IHAs expire on June 30, 2011. For a variety of factors, construction is now expected to actually start in early March 2011 and to be completed in late 2012.

The following constitutes the joint application of the Applicants for an additional renewal of the IHAs covering the Applicant's respective activities.

Given that this is a renewal of existing IHAs, the Applicants have commenced developing plans and measures contemplated under the previous IHA. During the pendency of this IHA application for renewal, the Applicants intend to continue implementing the measures described in detail below in consultation with FWS.

**1. A detailed description of the specific activity or class of activities that can be expected to result in incidental taking of marine mammals.**

A detailed description of the initially proposed action and an evaluation of alternatives considered are contained in an Environmental Assessment (EA) prepared by the Applicants for FAA and the FONSI/ROD was signed on December 26, 2007. A BiOp for the proposed Akutan Airport Project was issued by FWS in May, 2007 (USFWS 2007). The proposed action has been subsequently modified as described in a Supplemental EA (SEA) prepared by the Applicants for FAA and issued on July 1, 2010. The FONSI for that modified action was signed by FAA on July 2, 2010. In addition, the significance of those modifications on ESA-listed species considered in the BiOp has also been analyzed in an Addendum to the BA. Further modifications are proposed and analyzed in a second SEA that is currently under preparation by DOT&PF. A BA Addendum that assesses the effects of these modifications on ESA listed species will be included as an appendix in the second SEA and was submitted to USFWS-AFWFO to re-initiate Section 7 consultation on January 14, 2011.

A brief summary of the currently proposed action based on the EA, SEA, BiOp, and BiOp Addendum follows:

Under the proposed action, a new airport to serve the community of Akutan would be constructed on the southwestern portion of Akun Island, approximately 7 miles east of the community. Investigation of the proposed action began in March, 2005, due to concerns that other alternatives would not provide reliable access from the City of Akutan. Based on planning analyses that were completed commencing in 2000 that evaluated a number of airport locations, the proposed action, in combination with the avoidance, minimization, and mitigation measures identified below in ES.4, is the alternative that best meets the purpose and need to provide safe and reliable access for the community of Akutan due to its close proximity and visibility to the community, dual runway approach, and minimal Part 77 surface penetrations.

The existing amphibious seaplane ramp at Akutan would serve as the hovercraft terminal for loading and unloading passengers in the community. Due to operational

limitations of the hovercraft, improvements to the ramp are needed. Specifically, a hardened ramp is needed to safely approach the shore, particularly in the tight area at Akutan Harbor. The current ramp is narrow and, without improvements, the hovercraft could lose its cushion of lift on this ramp which could greatly affect maneuverability, vessel integrity, and passenger safety. Thus, under the modified design, the existing 40-foot wide by 43-foot long seaplane ramp would be extended to be approximately 100 feet wide and 112 feet long. The ramp expansion would consist of concrete slabs or panels that would be either slid or lowered into place. The scour apron and side protection adjacent to the concrete slabs/panels would be riprap similar to that surrounding the existing ramp. This expanded concrete ramp area would impact approximately 0.13 acre of intertidal/sub-tidal area. The adjacent scour apron would impact an additional intertidal/sub-tidal area of approximately 0.07 acre.

Under the current design, a 4,500 ft runway will be constructed on Akun Island and will allow the SAAB 340 to fly without weight restriction, accommodating a maximum of 30 passengers per flight. This design will also allow direct emergency evacuations to Anchorage and nearby locations. A proposed modification would rotate the runway alignment counterclockwise by approximately 20 degrees from a heading of 110°/290° to 90°/270°. This modification would increase safety for aircraft operations, reduce the amount of wetlands permanently filled, reduce the amount of Essential Fish Habitat impacted, and reduce the length of a proposed fish stream culvert, which would greatly improve this culvert's fish passage capability.

Under the modified design described in the SEA, equipment and materials necessary to construct the airport would access Akun Island via a temporary barge landing approximately 1,000 feet west of Stream #1 in Surf Bay. A shallow draft barge would be grounded perpendicular to the shore and a ramp extended from the shoreward barge to provide vehicle access to the beach. The grounded barge would impact approximately 0.3 acre of relatively low productivity sandy subtidal habitat. A limited additional bottom area would be temporarily disturbed by propeller wash during tug handling of barges. The barge(s) would be in place for approximately 6 to 8 months during each construction season and would be removed during the stormier winter months (November to March). From the temporary barge landing site to the terminus of the permanent access road to airport site, equipment and supplies would be driven along the beach in the mid to upper intertidal zone.

A range of alternatives was considered and multiple marine landing sites were evaluated to provide long-term access to this airport site. The selected marine landing site will be at the eastern edge of Surf Beach in Surf Bay. This location can be accessed without transiting the narrow Akun Strait and offers a protected hovercraft landing area. Marine service by hovercraft between the community of Akutan and Surf Bay on Akun Island satisfies passenger comfort and weather operability goals. When not in use, the hovercraft would be stored in a building at the head of Akutan Harbor. Staff would access the hovercraft storage area at the head of the harbor by traveling in a skiff.

A 1,6000 foot-long road would connect the hovercraft landing pad on Surf Beach to the runway located on the bench above the beach. A diesel bus would be used to transport passengers between the hovercraft and aircraft. The bus would be fueled onsite and stored at the airport when not in use.

Avoidance, minimization, and mitigation measures developed in consultation with state and federal resource agencies reduce the potential environmental impacts associated with this alternative. Specifically, such measures address impacts to cultural and natural resources, and help ensure that sensitive areas, species, and their habitats will be avoided to the extent feasible. Such measures will also help mitigate the effects of project construction on the environment while allowing the airport to be constructed in a manner that is consistent with the Purpose and Need for action.

**2. The date(s) and duration of such activity and the specific geographical region where it will occur.**

a. Timing of Construction and Hovercraft Operation

Construction of the airport and related transportation of construction materials will commence during March 2011 and continue until the 4<sup>th</sup> quarter of 2012. Hovercraft testing may commence as early as the 2<sup>nd</sup> quarter of 2011, with sustained operations commencing in the 4<sup>th</sup> quarter of 2012, after completion of construction.

b. Geographic Location of Action

The community of Akutan is located on a small bay on Akutan Island in the eastern region of the Aleutian Islands. The City of Akutan has a population of about 741. About 16.4 percent of the population is Alaskan Natives, and about 45 percent of the residents are below the poverty level. The community is located 35 miles east of Unalaska and 766 miles southwest of Anchorage.

The proposed location for the new airport to serve the community of Akutan is on the southwestern portion of Akun Island, approximately 7 miles east of the community. Investigation of the proposed action began in March 2005 due to concerns that all other alternatives would not provide reliable access from the City of Akutan.

To access the proposed airport site, multiple marine landing sites were evaluated. Community input and engineering analysis indicated that the best marine landing site would be at Surf Bay.

**3. The species and numbers of marine mammals likely to be found within the activity area.**

Sea otters have been observed in the project area during biological surveys, beginning in 1983. LGL observed sea otters in Akutan Harbor during their winter 1999/2000 surveys conducted in November, January, February, and March. Approximately 30 sea otters were observed at the head of the bay in January 2001. At least 29 sea otters were observed in near-shore environments, generally as singles or

pairs. A raft of 18 individuals was observed at the northwest corner of the harbor. FWS surveys in February, 2001, observed two relatively large groups of sea otters, one group of seven at Akutan Point and one group of 12 near the mouth of South Creek.

In July, 2004, FWS performed aerial surveys of Akutan and Akun Islands. Two sea otters were observed near-shore and directly south of the City of Akutan; 11-20 were observed approximately 2.5 kilometers west of the proposed hovercraft landing; and three were observed two kilometers north of the hovercraft landing. A second aerial survey was performed in August and three sea otters were spotted along southern shore of Akutan Harbor, and one sea otter was seen in Akutan straight. Additional sea otters were observed on both islands, and between 121 and 168 individuals were spotted around the shoreline of Akun Island. Recent surveys by USGS (Estes et al. 2010) identified less than 500 animals in the Akutan/Akun area.

Surveys for sea otters were conducted in winter 2006 as part of the field investigations for the Akun Alternative. These surveys were conducted by HDR Alaska, Inc. in January, February, and March 2006 in Akutan Harbor, Akun Strait, and Surf Bay along the proposed Akun airport hovercraft route. Sea otter numbers were highest in January (22), with declines in February (17), and by March only 7 otters were observed. Preferred habitat appeared to include protected areas in Akutan Harbor near the community of Akutan and along nearshore habitats at Akun and Green Island. HDR (2006) reports seeing as many as 36 otters in a single day in the project action area. This was assumed to be the number of otters that would be exposed to project effects (USFWS 2007). Most of the otters sighted were individuals and only one female with a pup was observed during the winter surveys.

In April and May 2010, HDR conducted a pre-construction survey of sea otters in Akutan Harbor and Surf Bay. Preliminary analysis of the data from 2010 does not show any significant changes in population distribution or abundance. The areas of highest density were (1) the head of Akutan Harbor where there was a large raft sheltering from the weather; and (2) the haul out on the east side of Akun Strait just south of Green Island (HDR 2010 unpublished). These two areas were also identified as sea otter concentration areas in previous surveys by HDR (2006) and by the USGS in 2008. These surveys will be conducted each year through the spring following the year that construction is completed. Completion of construction is now planned for the fall of 2012.

#### **4. A description of the status, distribution, and seasonal distribution of the affected species or stocks of marine mammals likely to be affected by such activities.**

FWS listed the northern sea otter as threatened under the ESA on August 9, 2005 (70 Fed. Reg. 46,366). Three stocks of northern sea otters are recognized in Alaska: the southwestern, southcentral and southeastern stocks. The southwestern stock ranges from the Alaska Peninsula to the end of the Aleutian Chain and Kodiak Island Archipelago and the Pribilof Islands. Otters prefer a protected inshore area with a rocky bottom and an

abundance of kelp, especially giant kelp, which are used for rest and provide the ideal foraging grounds.

Sea otters usually remain within a few kilometers of their established feeding grounds, however, translocated populations are known to shift and expand their distribution in favorable habitats. Local and temporary shifts of sea otter distribution to avoid heavy sea ice along the northern shore of the Alaska Peninsula are known to occur.

A detailed description of the status, distribution, and seasonal distribution of northern sea otters is contained in the Biological Assessment for the proposed IHA, and the BiOp (FWS 2007) for the proposed Akutan Airport Project.

**5. The type of incidental taking authorization that is being requested (i.e., takes by harassment only; takes by harassment, injury and/or death) and the method of incidental taking.**

FWS has indicated in previous correspondence and its BiOp (USFWS 2007) that take in form of harassment may occur as a result of noise or other disturbance associated with airport construction, airport and hovercraft operations, and related support activities. Subsequent analyses of the modified project as provided in the SEA and BiOp Addendum have not altered that conclusion.

**6. By age, sex, and reproductive condition (if possible), the number of marine mammals (by species) that may be taken by each type of taking identified in paragraph (a)(5) of this section, and the number of times such takings by each type of taking are likely to occur.**

a. Age, sex, and reproductive condition

Consultations with FWS indicate that it is not possible to identify the age, sex, or reproductive conditions of northern sea otters that may be taken.

b. Amount or extent of taking

It is difficult to measure the amount of take or harassment that is likely to occur as a result of hovercraft operation or low altitude aerial overflights because (1) no published scientific information exists regarding sea otter hearing sensitivity; and (2) available data suggest sea otter habituation may occur over the course of the proposed action, thus making it difficult to calculate declining levels of take and harassment on an annual basis (USFWS 2007). The proposed modifications in project design would not alter the nature, extent, or effects of hovercraft operations on sea otters from those previously reviewed and authorized in the existing IHA. The adjusted runway alignment would put the path of aircraft landing and takeoff more directly over Green Island and adjacent rocky islet and reef habitat frequented by sea otters. Estimated elevation of these aircraft as they pass near Green Island would be approximately 350 feet or higher. This would place aircraft approximately 5 feet vertically closer to the haul out. This is approximately 1.4 percent

difference. Noise from the over flights thus would not significantly differ and would not significantly increase the level of harassment from that predicted in the BiOp. This slight increase in disturbance potential would be experienced by the same otters already within the area experiencing behavioral effects from the project.

Using noise disturbance criteria which assume that northern sea otters will be harassed if they encounter noise levels in excess of 60 dB (ambient conditions), the Applicants state that an average of 3 otters may be taken per hovercraft transit, with a range of 0-10 per transit. Assuming 4 transits per day to account for January activity, potential emergencies, and other unplanned trips, including related maintenance activities, the Applicants estimate that an average of 12 otters may be taken on a daily basis as a result of hovercraft operation. An average of 1 otter may be taken on a daily basis during project construction, with a range of 0-3 per construction day. It is important to note that these estimates of potential harassment are conservative, and assume that take in the form of harassment may occur if any northern sea otter encounters sound levels above ambient sound conditions.

Take estimates were derived by overlaying northern sea otter observation data on currently-planned hovercraft route maps. A 60 dB noise contour was then constructed around the hovercraft route using noise attenuation factors derived from the BiOp. Sea otter sightings that occurred within this contour were then used to construct take estimates, accounting for daily and seasonal travel schedules, project construction, and emergency events. The Applicant believes this approach to estimating take is a conservative one for the reasons outlined above, and because it assumes that sea otters will in fact experience sound levels above background conditions if they occur within the 60 dB noise contour. In addition, use of the 60 dB contour is a conservative approach, as ambient noise could be higher than that level during high wind conditions or due to other weather variables. As discussed above, available information indicates that sea otters are likely to habituate to hovercraft noise over time, thus reducing the likelihood that such noise will result in any biologically-significant impacts to the species.

Since issuance of the IHAs in November 2008, and the subsequent renewal of the IHAs, additional sea otter distribution information has become available (e.g., Estes et al. 2010; HDR unpublished data). Sea otter distribution remained consistent over the period of review, in 2004, 2006, and 2008, 2010. Areas around Green Island appear to contain relatively large numbers of sea otters, suggesting that disturbances in this area should be minimized during construction and hovercraft operation.

## **7. The anticipated impact of the activity upon the species or stock.**

Based upon information contained in the Biological Assessment (HDR 2006) and BiOp (USFWS 2007), as well as information provided to FWS by FAA and the Applicants during formal and informal consultation, FWS determined the originally proposed action was not likely to jeopardize listed sea otters (USFWS 2007). FWS has likewise indicated through consultation with FAA that the effects of anticipated take or harassment will not result in significant adverse impacts to northern sea otters (USFWS

2007). The proposed modifications to the project have been described in the SEA and BA Addendum and found not to differ substantively from those described in the original project documents.

Sea otters may habituate to the presence and operations of the hovercraft in the action area. In the event monitoring information developed during the first year of hovercraft operation indicates that sea otter habituation has occurred, the need to obtain a take or harassment authorization may no longer exist. Consistent with applicable agency regulations, FWS will reevaluate the need for an IHA prior to the submission of any future IHA application.

**8. The anticipated impact of the activity on the availability of the species or stocks of marine mammals for subsistence uses.**

The Applicants do not anticipate any impact of the activity on the availability of the species for subsistence uses. FWS has indicated through previous consultations that northern sea otters are not harvested for subsistence purposes in the action area. The proposed project modifications do not alter these conclusions.

**9. The anticipated impact of the activity upon the habitat of the marine mammal populations, and the likelihood of restoration of the affected habitat.**

As described above, based upon information contained in FWS' BiOp, as well as more recent information provided to FWS by FAA and the Project Sponsors during formal and informal consultation, FWS has concluded the proposed action as modified herein is not likely to jeopardize listed sea otters and concurs the effects of anticipated take or harassment associated with the proposed action will not result in significant adverse affects on northern sea otters (USFWS 2007). The project modifications described in the SEA and analyzed in the BA Addendum and in Section 10 below, do not alter these conclusions.

**10. The anticipated impact of the loss or modification of the habitat on the marine mammal populations involved.**

As described above, based upon information contained in FWS' BiOp, as well as more recent information provided to FWS by FAA and the Project Sponsors during formal and informal consultation, FWS has concluded the originally proposed action is not likely to jeopardize listed sea otters and concurs the effects of anticipated take or harassment associated with the proposed action will not result in significant adverse affects on northern sea otters (USFWS 2007). Project modifications detailed in the SEA and BA Addendum would result in additional short and long-term alterations of nearshore habitat that differ as described below from those resulting from the original project design.

**Construction Access:** Construction equipment and materials is now proposed to access Akun Island via a temporary barge landing approximately 1,000 feet west of

Stream #1. A grounded barge and ramp would provide vehicle access to the beach. The grounded barge would impact approximately 0.3 acre of relatively low productivity sandy subtidal habitat. A limited additional bottom area would be temporarily disturbed by propeller wash during tug handling of barges. The barge(s) would be in place for approximately 6 to 8 months during each construction season and would be removed during the stormier winter months (November to March). The area where the barge would be grounded is a dynamic sand bottom that is subject to periodic disturbance by storms. Benthos in the disturbed area is expected to recover to have benthic productivity and diversity similar to the present condition within one winter following removal of the barge.

From the temporary barge landing site to the permanent access road up to airport site, equipment and supplies would be driven along the beach in the mid to upper intertidal zone. This area has relatively minimal macro-biological activity however, there is an abundance of very mobile small crustaceans grazing on bits of drift algae or bacterial films on the wet sand (Houghton and Lindstrom 2006). Any disturbance to this community will be insignificant and short term with populations returning to pre-project levels within a few tide cycles following completion of vehicle movements.

Under the revised construction approach, the temporary construction landing barge would be located approximately 1,000 feet farther from higher use areas for sea otters that are along more rocky shores east of the hovercraft landing site. Past surveys have shown only relatively low densities of sea otters in the area of central and western Surf Beach. Thus, fewer sea otters would be subject to disturbance from construction equipment under the proposed modification to the construction approach previously analyzed.

**Akutan Ramp Expansion:** The existing amphibious seaplane ramp at Akutan would be extended to be approximately 100 feet wide and 112 feet long. The ramp expansion would consist of concrete slabs or panels that would be either slid or lowered into place. The scour apron and side protection adjacent to the concrete slabs/panels would be riprap similar to that surrounding the existing ramp.

The expanded concrete ramp area would impact approximately 0.13 acre of intertidal/sub-tidal area. The adjacent scour apron would impact an additional intertidal/sub-tidal area of approximately 0.07 acre. In total, the ramp expansion would impact approximately 0.20 acre of intertidal/sub-tidal area. Construction of the ramp expansion would last approximately 2 months, and would potentially cause sea otters in the immediate vicinity to move away from the work area. While this would constitute a take in that behavioral patterns would be altered, it would be considered a Level B, non-lethal harassment. Because of continuing industrial activities and vessel movements at the nearby Trident Seafood facility, local otters are expected to have become accustomed to a level of noise and activity comparable to that involved in ramp expansion. The number of otters potentially subject to this harassment cannot be reliably predicted but would be a subset of the same 36 animals assumed to be subjected to Level B harassment from vessel movements during construction and operation.

The change in the nature of the benthic habitat at the Akutan ramp would have a negligible impact on the habitat function for sea otters. Although the new ramp would provide less habitat for clams and crab which are an important food for otters, other favored prey such as urchins, mussels, and abalone would be favored by the new hard substrate and associated algal growth. Thus, there would be no significant long-term degradation of sea otter habitat from the ramp expansion and the BA Addendum concludes that the long-term effects on otters would not differ from those analyzed in the BA (HDR 2006) and BiOp (USFWS 2007).

**Runway Realignment:** There is a potential that the re-oriented flight path from the runway realignment would disturb a greater number of otters resting or feeding in the area around Green Island. This slight increase in disturbance potential would not significantly increase the level of harassment from that predicted in the BiOp; and would be experienced by the same otters already within the area experiencing behavioral effects from the project.

**Summary:** There would be a small, incremental increase, relative to that predicted in the original BiOp, in the potential for sublethal harassment of sea otters for approximately 2 months during the expansion of the Akutan ramp. This incidental take would affect a portion of the same 36 otters predicted to be affected by the project. It is unlikely that any otters not already experiencing the increased construction noise considered in the BA and BiOp, would experience increased noise during ramp expansion.

**11. The availability and feasibility of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, their habitat, and on their availability for subsistence uses, paying particular attention to rookeries, mating grounds, and areas of similar significance.**

As described in correspondence between FAA and FWS (FAA 2007; FWS 2007), the Applicants propose to implement the following measures to avoid, minimize and mitigate the effects of the proposed action on northern sea otters:

- a. A hovercraft will be used to transport passengers to and from the airport.

As described in the Biological Assessment, hovercrafts produce less of a wake and less underwater noise than other marine vessels. Peer-reviewed scientific literature concludes that a hovercraft is considerably quieter underwater than a similar-sized conventional vessel, and that hovercraft may be an attractive alternative to where there is concern over underwater sounds. In-air sound may constitute a source of disturbance for listed sea otters.

- b. Hovercraft landings will be located to minimize impacts to intertidal and subtidal areas.

Construction of hovercraft landings will occur primarily in areas away from intertidal and subtidal areas to avoid adverse affects on northern sea otters and their habitat. Construction of the Surf Beach landing site would impact about 0.4 intertidal acre and about 0.01 subtidal acre. Construction at the head of Akutan Harbor would impact about 0.1 intertidal acre and about 0.6 subtidal acre. Expansion of the Akutan Ramp would alter the nature of an additional 0.2 acre of intertidal and subtidal habitat. Such construction is likely more environmentally-sensitive than construction of fixed, in-water docks or other related facilities.

- c. No dredging or pile driving are anticipated during the construction of the hovercraft landings.

Both dredging and pile driving possess the potential to harass northern sea otters due to habitat or noise disturbance. We anticipate that the use of a hovercraft will avoid the need to construct in-water facilities such as moorings, piers, or docks that could require dredging or pile driving.

- d. The hovercraft will be operated pursuant to a Route Operational Manual which will dictate the avoidance of sensitive areas and species.

As discussed in the Biological Assessment, a Route Operational Manual will be developed in consultation with the FWS. The purpose of the Route Operational Manual is to develop hovercraft routes and operational procedures that avoid and minimize the likelihood of northern sea otter disturbance. As described below, the Borough proposes to develop a Route Operational Manual to insure hovercraft operations avoid adverse affects to listed northern sea otters and other protected marine mammals.

- e. All fueling will be conducted to the maximum extent feasible at least 100 feet away from Akutan Harbor and Surf Bay, and fuel storage will be at least 100 feet away from Akutan and Surf Bay.

As discussed in the Biological Assessment, northern sea otters are susceptible to oiling due to fuel spills because they depend on their insulation of dense fur to keep warm. They likewise may ingest oil during grooming and feeding. To address this issue, the Applicants propose to conduct fueling activities to the maximum extent feasible at least 100 feet away from Akutan Harbor and Surf Bay. Fuel storage will also occur at least 100 feet away from these locations. The Applicants will comply with all applicable Federal and State fuel handling and storage requirements, further reducing the risk that any spill reaches sensitive northern sea otter habitat.

- f. To prevent contamination, hovercraft maintenance activities will occur in the hovercraft storage building or on the hovercraft landing.

As discussed above, sea otters are susceptible to oiling due to fuel spills because they depend on their insulation of dense fur to keep warm. They likewise may ingest other compounds during grooming and feeding. To address the risk of spills or

contamination associated with hovercraft maintenance, the Applicants propose to conduct all maintenance activities either on hovercraft landing areas, above inter-tidal or sub-tidal areas; or in the hovercraft storage building. The Applicants will comply with all applicable Federal and State hazardous materials handling and storage requirements, further reducing the risk that any contamination reaches sensitive northern sea otter habitat.

g. Expedite Completion of a Route Operation Manual.

The Borough proposes to expedite completion of a Route Operation Manual in consultation with FWS prior to operation of the hovercraft. The Route Operation Manual will outline specific, detailed procedures to avoid and minimize impacts to sea otters. The Manual will identify hovercraft routes, will provide a clearly-written protocol that all hovercraft operators will be required to follow during hovercraft operations. The Borough will develop the Route Operation Manual in consultation with FWS. The Borough will submit a draft initial Route Operation Manual to FWS for review and approval at least 30 days prior to commencing hovercraft operations. Prior to completion of the Route Operation Manual, the Borough will confer with FWS prior to initial short-term hovercraft trials to insure such trials are conducted in an environmentally-sensitive manner.

During Route Operation Manual development, the Borough proposes to consult with the hovercraft manufacturer to insure that hovercraft operations occur in the most environmentally-sensitive manner possible. Through these discussions the parties and the manufacturer may identify additional, cost-effective measures to further reduce vessel noise.

h. Establishment of Northern Sea Otter Avoidance Areas

The Applicants propose to establish northern sea otter avoidance areas in consultation with the FWS. These avoidance areas will serve to help delineate areas of likely northern sea otter occurrence to allow for their avoidance. Avoidance areas will be established through the use of pre-construction survey data collected by ADOT&PF as outlined below.

i. Hovercraft Speed and Course Alteration

If a northern sea otter is observed within a set distance (e.g., 1,200 feet) of the hovercraft (distances to be determined based on consultation with the FWS), and based on its position and the relative course of travel is likely to approach the hovercraft, the hovercraft's speed or course will, when practicable and safe, be changed to avoid impacts to the species.<sup>1</sup> Northern sea otter activities and movements relative to the hovercraft will be closely monitored to ensure that an animal does not (1) travel within a set distance

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<sup>1</sup> Approach distances referenced in this section are based upon Table 5.2 in the December, 2006, Biological Assessment. These distances were calculated using an assumption that the applicant should use its best efforts to avoid exposing northern sea otters to noise levels greater than about 60-70 dB.

(e.g., 600 feet) of a departing hovercraft; or (2) travel within a set distance (e.g., 300 feet) of an approaching hovercraft (the potential disturbance area or PDA). If either of these events occur, further mitigation measures must be taken (e.g., further course alterations or power down).

j. Power-down Procedures

A power down involves decreasing the speed of the hovercraft to avoid interactions with, and potential disturbance of, northern sea otters. If a northern sea otter is detected (1) within a set distance (e.g., 600 feet) of a departing hovercraft; or (2) within a set distance (e.g., 300 feet) of an approaching hovercraft, and the vessel's course or speed cannot be changed to avoid having the animal enter the PDA, then the hovercraft must decrease its speed to the lowest practicable and safe level before the animal enters the PDA. Power-down procedures will be developed in consultation with the hovercraft manufacturer and FWS to ensure procedures are safe and within the operating parameters of the hovercraft.

k. Ramp-up Procedures

To provide additional protection to northern sea otters located near hovercraft landing areas by allowing individual animals to vacate the area prior to receiving a potential injury, and to further reduce the risk of potentially startling marine mammals with a sudden intensive sound, the applicant proposes to implement ramp-up procedures when starting up a hovercraft. Ramp-up would occur such that the sound associated with hovercraft operations would increase at a rate of about 6 dB per 5 minutes. The Applicants propose to confer with the hovercraft manufacturer to develop ramp-up procedures consistent with this guideline.

l. Low Light Operations

The Applicants propose to work with FWS to develop night-time or low light operating procedures to avoid and minimize impacts to northern sea otters and other species. Such night-time procedures may be best developed after commencing initial hovercraft operations to assess the relative impact of light use on bird species.

**12. Where the proposed activity would take place in or near a traditional Arctic subsistence hunting area and/or may affect the availability of a species or stock of marine mammal for Arctic subsistence uses, the applicant must submit either a plan of cooperation or information that identifies what measures have been taken and/or will be taken to minimize any adverse effects on the availability of marine mammals for subsistence uses.**

The proposed activities will not take place in or near a traditional Arctic subsistence hunting area and it will not affect the availability of any species of marine mammal for Arctic subsistence uses.

**13. The suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species, the level of taking or impacts on populations of marine mammals that are expected to be present while conducting activities and suggested means of minimizing burdens by coordinating such reporting requirements with other schemes already applicable to persons conducting such activity.**

As described in correspondence between FAA and FWS dated September 27, 2007, the Applicants propose to implement the following monitoring and reporting program to increase knowledge regarding the species, and to assess the level of taking caused by the proposed action:

a. Vessel-based Monitoring During Initial Trial Operations

Vessel-based monitoring during initial hovercraft operations will be conducted by an FWS-approved observer. Methods for observing, estimating distances to northern sea otters and other marine species, and recording data quickly and accurately will be tested prior to hovercraft operations at Akutan. Reticle binoculars (e.g., 7 x 50 Bushnell or equivalent) and laser range finders (Leica LRF 1200 laser range finder or equivalent) are considered standard equipment for observers on board ships with marine mammal observers. Final observation methods will be approved by the FWS.

Vessel-based observers will begin monitoring at least 30 minutes prior to the planned start of the hovercraft and during all periods of hovercraft operations to ensure the effectiveness of ramp-up as a mitigation measure. Observers will also observe the safety areas prior to hovercraft operation. If northern sea otters are observed within the safety areas, hovercraft operations would be altered in accordance with procedures contained in the Route Operation Manual to avoid or minimize noise-related disturbance to animals occurring in the area.

Data for each northern sea otter, other marine mammals, and Steller's eiders observed in the action area during the period of hovercraft operations will be collected and provided to FWS in GIS format for mapping and analysis. Numbers of northern sea otters observed, frequency of observation, sea state, any behavioral changes due to hovercraft operations, and other pertinent variables will be recorded and entered into a custom database using a notebook computer. The accuracy of the data entry would be verified by computerized validity data checks as the data are entered and by subsequent manual checking of the database. These procedures would allow initial summaries of data to be prepared during and shortly after the field program, and will facilitate transfer of the data to statistical, graphical, or other programs for further processing and archiving.

Results from the vessel-based observations would provide: (1) a basis for real-time mitigation; (2) information needed to estimate the number of northern sea otters that are determined to have been harassed; (3) data on the occurrence, distribution, and activities of marine mammals in the area where hovercraft operations are conducted; and

(4) data on the behavior and movement patterns of northern sea otters seen at times with and without hovercraft activity.

b. Reporting

Reports on land-based activities during construction and vessel-based monitoring will be faxed or emailed to the FWS on a regular basis. Reports will describe hovercraft operations and/ or construction activities and northern sea otter monitoring activities during the reporting period. Frequency and specific content of reports will be determined based on consultation with the FWS.

c. Baseline Skiff Surveys

DOT&PF will conduct baseline surveys in April/May of the year that construction begins. These surveys, begun in April/May 2010, will document pre-activity distribution and abundance of sea otters in the project area prior to the start of construction. A minimum of three skiff-based line transect surveys will be conducted during each survey event. Additionally, a survey event will be conducted each April/May during the construction phase of the project and the first April/May after construction is complete to document distribution and abundance after each construction year. Surveys will be conducted from a skiff or vessel and will encompass marine waters from a depth of 40 meters to Mean High Tide.

**14. The suggested means of learning of, encouraging, and coordinating research opportunities, plans, and activities relating to reducing such incidental taking and evaluating its effects.**

The Applicants propose to form an Akutan marine mammal workgroup in coordination with the City of Akutan, the Aleutians East Borough, the FWS, and NMFS. This workgroup will consist of representatives from affected native organizations, the City of Akutan, FAA, and the Services. The workgroup will provide a forum to discuss hovercraft monitoring results and other issues pertaining to airport operations and northern sea otter conservation.

The workgroup shall discuss, among other things, (1) any proposed changes in hovercraft operations to provide both FAA and the FWS with community perspectives on airport operations; (2) monitoring frequency and duration based upon monitoring results and related factors; and (3) completion of peer reviews for reports that evaluating and interpret monitoring data. The Applicant will coordinate development of the workgroup, and will be responsible for organizing meeting agendas, establishing meeting locations, and facilitating community involvement in such meetings. Workgroup meetings shall commence within 60 days from FAA's approval of airport construction, and shall occur on a quarterly basis for a minimum of 5 years after hovercraft operations commence.

**References**

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