

***Addendum 1 to Biological Assessment
of Effects of Modified Akutan Airport
Design on Northern Sea Otters and
Steller's Eiders***

***Prepared for
Kiewit Infrastructure West***

***January 11, 2011
12732-01***

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ADDENDUM 1 TO BIOLOGICAL ASSESSMENT OF MODIFIED AKUTAN AIRPORT DESIGN ON NORTHERN SEA OTTER AND STELLER'S EIDERS

INTRODUCTION AND BACKGROUND

The Alaska Department of Transportation and Public Facilities, the Aleutians East Borough, and the City of Akutan have proposed to build an airport runway and support facilities on Akun Island and to transport passengers and cargo to/from Akutan via hovercraft across Akutan Bay. The Akutan Airport project was originally approved by the Federal Aviation Administration (FAA) on December 26, 2007 with a Finding of No Significant Impact (FONSI)/Record of Decision (ROD) that was based on the Environmental Assessment (EA) approved December 21, 2007. The airport access road, hovercraft ramps, pads, and maintenance/storage facility to be funded by the Federal Highway Administration (FHWA), required a separate FONSI that was approved by the FHWA on December 15, 2008.

Consultation with the federal wildlife services, U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), regarding the potential effects of this proposed federal action on species listed as threatened or endangered under the Endangered Species Act (ESA) was concluded in late 2007. Primary listed species of concern for USFWS were the southwest Alaska distinct population segment of the northern sea otter (*Enhydra lutris kenyoni*) and the Alaska breeding population of Steller's eider, (*Polysticta stelleri*) both designated as threatened species. For NMFS, the primary species of concern were threatened Steller sea lion (*Eumetopias jubatus*) and endangered humpback whale (*Megaptera novaeangliae*). The applicant prepared Biological Assessments (BAs) for sea otter and Steller's eider (HDR 2006a, b), and the USFWS issued a Biological Opinion (BiOp) for project effects on both species on May 30, 2007 (USFWS 2007). Both services concurred that, with proposed conservation measures, the proposed action would sufficiently avoid, minimize, or mitigate the anticipated effects of take and harassment of listed species in the project area.

Prior to the award of the design-build contract, a Supplemental Environmental Assessment (SEA) was initiated for modifications to the project that included additional material sites and a sand storage building. A Supplemental FONSI/ROD was then approved by the FAA on July 2, 2010, based on the SEA approved on July 1, 2010. Those project modifications did not result in significant change in the effects of the proposed action on ESA-listed species and therefore consultation with the services was not re-initiated.

As the project has proceeded toward final design, three significant modifications have been made to the project description as it was permitted and considered in previous assessments of impacts on listed species. The proposed modifications were presented in a SEA scoping document (FAA 2010a) and include:

- Airport Runway Realignment
- Existing Akutan Seaplane Ramp Expansion
- Temporary Construction Facilities

USFWS (2010) has indicated that these modifications warrant re-initiation of the consultation process regarding potential effects on the two species under USFWS responsibility that are listed as threatened under the ESA: the northern sea otter and the Alaska breeding population of Steller's eider. The project action area is also within an area of designated critical habitat for Northern sea otter. Accordingly, the FAA (2010b) has formally requested that USFWS re-initiate consultation to address any potential changes in the nature and severity of effects on those listed species.

This Addendum describes aspects of those three project modifications that may affect those two species, their designated critical habitat, and the potential for take or harassment of the species. Further, the Addendum analyzes the potential effects on the species and reaches a conclusion regarding any changes from the conclusions reached in the BiOp and Incidental Harassment Authorization (IHA) regarding the nature and severity of those effects. We have determined the proposed modifications will not affect the humpback whale and Stellar sea lion and will request concurrence with this determination in a separate letter to the NMFS.

PROJECT NEED AND DESCRIPTION

The purpose of and need for the project has not changed from the approved 2007 EA and FONSI. The purpose of the this project, as described in the 2007 EA, is to construct a land-based airport to provide safe and reliable access to the City of Akutan, Alaska before aircraft currently providing service to this location are no longer operational (i.e., the Grumman Goose, an aging amphibious aircraft).

General Project Description

The new airport would be located on Akun Island which is located approximately 7 miles east of the community of Akutan (Figure 1). The project sponsor's proposed action, as described in the FONSI/ROD included

the following elements that are relevant to assessment of effects on ESA-listed species:

- Construct a paved runway, runway safety area, apron, and taxiway.
- Construct needed airport support structures, lighting, safety facilities, and backup utilities.
- Purchase a hovercraft and bus to provide transportation to the airport.
- Construct a hovercraft landing pad at Surf Beach.
- Construct a two-lane, all-weather gravel road for travel between the hovercraft landing site at Surf Beach and the proposed airport facilities.
- Construct a hovercraft storage and maintenance facility at the head of Akutan Bay.

The original approved EA and the first SEA were based on an initial project plan with design developed to 30 percent completion. The design/build contractor, Kiewit Infrastructure West Co., in advancing the design, identified three recommended design modifications that are the subject of this Addendum:

- A new alignment for the runway that better met the purpose and need of the project, improved operational safety, and reduced wetland and Essential Fish Habitat impacts.
- A need to expand the existing seaplane ramp in Akutan to increase its functionality and safety.
- Temporary construction facilities necessary to complete the construction of the project.

These significant modifications to the project, as it was described in the existing and approved EA and ESA consultation documents, are described in greater detail in the following sections.

Runway Realignment

The proposed modification to the runway alignment is a counterclockwise rotation of approximately 20 degrees from a heading of 11-29 (110° to 290°) to 9-27 (90° to 270°; Figures 1 and 2). This modification would:

- Increase safety for aircraft operations by improving approach and departure slopes, allowing for non-precision approaches in either direction, and providing better crosswind landing conditions.
- Reduce earthwork quantities and project footprint.
- Reduce the amount of wetlands permanently filled by approximately 5.8 acres, and avoid filling Pond #2, a high value wetland habitat.

- Reduce the amount of Essential Fish Habitat impacted by approximately 6.7 acres.
- Reduce the length of the proposed fish stream culvert from 750 linear feet to 450 linear feet, which would greatly improve this culvert's fish passage capabilities.
- Direct deicing runoff from aircraft parking apron to flow through the maximum practicable pathway through a grass swale and natural drainage channel approximately 900 feet to the nearest anadromous fish stream. It is not expected that aircraft deicing would be required except during infrequent instances where weather delays mandate re-application. Runway deicing is expected to be required. Again, drainage of runoff would be directed through a maximum pathway of constructed and natural drainage channels into nearby streams. Urea and ethylene glycol are the primary deicing products that would be used.

Most of the proposed runway alignment would be situated outside of the previously-approved and permitted cut and fill limits. All of the material needed to construct the proposed alignment would be obtained from within the proposed construction footprint.

Existing Akutan Seaplane Ramp Expansion

The existing amphibious seaplane ramp at Akutan would serve as the hovercraft terminal for loading and unloading passengers in the community. This ramp is located in an area of high activity between the community of Akutan and a nearby seafood processing facility. However, 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.

The existing 40-foot wide by 43-foot long seaplane ramp would be extended to be approximately 100 feet wide and 112 feet long (Figures 3 and 4). Generally, the ramp expansion would consist of concrete slabs or panels that would be either slid or lowered into place. The concrete panels would be placed on an aggregate or gravel pad to provide uniform support. The scour apron and side protection adjacent to the concrete slabs/panels would be riprap similar to that surrounding the existing ramp. The 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. The proposed hovercraft route would not be modified from that originally proposed.

Temporary Construction Facilities

The approved EA and BO did not address the specific location of the required temporary construction facilities necessary to build the Akutan Airport. Project development has led to the identification of three potential locations for the following required temporary construction facilities (Figures 5 and 6):

- Surf Beach Access
- Personnel Camp
- Fuel Storage

Surf Beach Access

The planned and permitted hovercraft landing pad area on Surf Beach on Akun Island (Figures 1 and 2) is not safe for use by marine construction equipment (fixed hull landing craft) due to the adjacent in-water rock formations and shallow draft conditions. A preferable temporary access route for use during construction is proposed approximately 1,000 feet north of the hovercraft landing pad (Figure 5).

The beach would be accessed daily using a shallow draft barge grounded perpendicular to the shoreline with a ramp to provide beach access. A second barge would be moored at the seaward end of this barge to act as a temporary floating dock (Figure 6) during the scheduled construction seasons (currently March to November 2011 and March to September 2012). There would be no change from the original proposed approach in the number of vessel trips needed to support construction. Supplies, equipment, and personnel would be routed from the proposed beach access site to the hovercraft landing area in order to access the airport construction area via the previously approved access road. The routing would occur below the driftwood line and above the low-tide line on compacted sand. No gravel or fill is proposed on the gradually sloping beach, however routine maintenance grading and stabilization mats would be used as needed. A temporary bridge would be constructed over Stream #1, which would require coordination and permitting from the Alaska Department of Fish and Game. Upon completion of the project, the temporary bridge and stabilization mats would be removed.

Personnel Camp

A temporary construction camp is proposed in an area designated for a temporary construction easement in the approved SEA (Figure 7). The camp would need to support up to 60 construction personnel for the two construction seasons. Of the camp locations considered, the proposed location was identified as the preferred location considering the following factors:

- Proximity to the airport and approved access road: no additional access roads or bridges required.
- Protection from the harsh elements of the Aleutian Islands (other locations considered were subject to high winds).
- Protection from explosives: meets the requirements for setback from blasting zones as well as distance from stored explosives.
- No relocation required for construction of permanent facilities.
- Within the area addressed in previous Section 106 consultation.
- Located within approved temporary construction easement.

To construct the camp pad at the preferred location, 1 acre of wetlands would be temporarily filled using standard methods. Restoration of the wetlands area upon removal of the camp would meet U.S. Army Corps of Engineers (USCAE) permit requirements. Camp infrastructure facilities, including fuel for heat, water, wastewater, solid waste, etc., would be managed in accordance with Alaska Department of Environmental Conservation regulations and permitting requirements.

The septic systems for both the temporary personnel camp and the permanent facilities have been designed as subsurface systems by licensed professional engineers and will meet the requirements for wastewater systems per the Alaska Department of Environmental Compliance. The temporary system will be located approximately 300 feet from the nearest anadromous fish stream and approximately 1800 feet from Surf Bay. The permanent system will be located adjacent to the aircraft parking apron, approximately 450 feet from the nearest anadromous fish stream and then approximately 2100 feet from Surf Bay. These separation distances between both the permanent and temporary septic systems and the anadromous fish stream and Surf Bay exceed the DEC requirements of 100 feet.

Fuel Transport and Storage

A temporary fuel storage facility is necessary to meet the construction needs of the project. The proposed location of this facility would meet all

requirements defined in the Stormwater Pollution Prevention Plan, Spill Prevention Control and Countermeasure Plan and Hazardous Materials Control Plan as regulated by the Environmental Protection Agency and the Alaska Department of Environmental Conservation.

The fuel storage facility would be located near Surf Beach (Figure 6) in an area addressed in the previous Section 106 consultation. The proximity of the facility to the beach would facilitate marine fuel transfers and would meet the environmental requirements of the approved EA by allowing for at least 100 feet between the facility and any bodies of water. In addition, wave run-up elevation on Akun Island was considered in siting the facility to ensure that it would be protected from storm surges.

A fuel storage capacity of 70,000 gallons was determined necessary based on availability and frequency of fuel service providers. It was determined that a storage length of 45 days would be necessary to support fuel needs of the project between fuel deliveries. Fuel would be brought to the island using an experienced commercial fuel barging company whose business is to complete this type of marine fueling work throughout coastal Alaska.

Two approaches may be used for fuel delivery. Under one approach, a commercial fuel barge would anchor off Surf Beach and a fuel line would be floated to shore to deliver fuel to storage tanks. Best Management Practices (BMPs) for marine fuel transfer would be used to fuel the storage tanks. Additional BMPs would be used for fueling equipment from the storage facility. This common and customary fueling approach is used throughout Alaska. Under the second approach, a fuel truck would be loaded in Akutan, brought to Akun via a construction barge, and driven off the barge to the temporary fuel storage area. Under either approach, spill response and cleanup supplies would also be available on site.

EXISTING ENVIRONMENTAL CONDITIONS

Detailed information on local environmental conditions is provided in Section 2 and elsewhere in each BA and will not be repeated here. However, a focused look at marine habitats in areas that will be affected by proposed project design amendments is needed for evaluation of the potential effects of these amendments on listed species. The action area for this project is defined as all of Akutan Harbor, Akun Strait, and Surf Bay on the northwest side of Akun Island.

Akutan Ramp Vicinity

Approximately 0.20 acres of existing riprap and natural bottom will be covered by concrete panels and facing (rock/riprap) placed to expand the existing seaplane ramp in Akutan Harbor. This area is within designated critical habitat for the Northern sea otter. New hard substrates placed in the area, below about mean sea level, are expected to develop a rich growth of epibiota including kelp, numerous red algae, and many invertebrates similar to those now resident on the existing ramp and riprap and on natural rock around Akutan Harbor (Pentec 2004). Below and around the ramp, the subtidal substrate is generally clean sand with dense beds of tube building polychaetes. Additional bottom types that may be covered are currently a mixed habitat of sand, cobbles, and boulders typical of the lower intertidal and shallow subtidal zone in the inner portions of Akutan Harbor.

Surf Beach

Construction equipment and materials would access Akun Island via a temporary barge landing approximately 1,000 feet west of Stream #1 (Figure 5). 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 acres of relatively low productivity sandy subtidal habitat. A limited additional bottom area would be temporarily disturbed by propeller wash during tug handling of barges. Snorkel surveys conducted in 2005 in similar habitat several hundred feet to the east of this site showed a dynamic sandy seafloor with ripple marks indicating high wave energy. Limited obvious macrobiota were present including a few hermit crabs, a sun star, and Irish lords (Houghton and Lindstrom 2006). 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 expected to fully 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 (e.g., talitrid and haustoriid amphipods, and mysids) 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.

LISTED SPECIES BIOLOGY

Detailed information on local stocks, distribution, abundance, and critical habitat of each species is provided in Section 4 of each BA and in the BiOp and will not be repeated here.

Northern Sea Otter

Sea otters are common in the project action area and are year-round residents throughout Akutan Harbor, Akun Strait, and Surf Bay (Figure 3 in HDR 2006a). HDR (2006a) 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).

The USFWS designated 15,164 square kilometers of Critical Habitat for the northern sea otter in Alaska (74 FR 194 November 9, 2009). Critical Habitat for the southwest Alaska DPS extends from the western Aleutian Islands east to Redoubt Point, divided into five units. The proposed project is located in the Eastern Aleutian Unit. Designated Critical Habitat includes nearshore marine waters ranging from the mean high tide line seaward for a distance of 100 meters, or to a water depth of 20 meters (74 FR 194).

The USFWS identified four primary constituent elements (PCEs) for critical habitat designated for the southwest Alaska DPS of northern sea otter. The four PCEs are as follows:

- Shallow, rocky areas where marine predators are less likely to forage, which are waters less than 2 m (6.6 feet) in depth.
- Nearshore waters that may provide protection or escape from marine predators, which are those within 100 meters (328.1 feet) from the mean high tide line.
- Kelp forests that provide protection from marine predators which occur in waters less than 20 meters (65.6 feet) in depth.
- Prey resources within the areas identified by PCEs 1, 2, and 3 that are present in sufficient quantity and quality to support the energetic requirements of the species.

The rocky embayment in Surf Bay from the proposed hovercraft location to the east and other portions of the action area with rocky islets and reefs supporting kelp beds would appear to provide all of these PCEs.

The project sponsors have begun funding spring surveys in Akutan Harbor and Surf Bay (Akun) as required in the IHA. Preliminary analysis of the April/May data from 2010 does not show changes in population distribution and abundance from those seen in earlier surveys (L. Spencer, HDR, Personal Communication). These surveys will be conducted each year through the spring following the year that construction is completed.

Survey data confirm that otters may be present in the two areas of where project design modifications would impact marine habitat: the Akutan ramp, and the Surf Bay temporary shoreline facilities for construction.

Steller's Eider

HDR (2006b) reports that at least 716 Steller's eiders forage and rest in the project action area from November through March. Only a small percentage (estimated 1 percent, approximately 7 birds; USFWS 2007) of these overwintering birds is assumed to be from the listed Alaska breeding population. No designated critical habitat is located within the action area. As a result of this timing, it is expected that there would be only limited overlap between project construction timing (in March and November 2011, and March 2012) and the presence of overwintering Steller's eiders.

EFFECTS ANALYSIS

This effects analysis covers only aspects of project effects that differ from those addressed in the previous BAs and the BiOp. The only aspect of the three significant changes in the project design that has a potential to change project effects during operation is the realignment of the runway. Therefore, other aspects of project operation with a potential to affect listed species (e.g., hovercraft transit and maintenance) will not differ from those considered in the earlier documents and consultation process and are not considered further in this Addendum.

Northern Sea Otter

Direct Effects

Construction

Impacts of noise from the proposed modifications would not differ greatly from those analyzed in the BA and BiOp (HDR 2006a, USFWS 2007). That assessment assumed that construction equipment and materials would be brought to Surf Beach in a landing craft, beaching near the location of the

proposed Surf Bay hovercraft ramp. Under the revised construction approach, the temporary construction landing barge would be located approximately 1,000 feet to the west. This location is 1,000 feet farther from higher use areas for sea otters that are along more rocky shores east of the hovercraft landing site (see BiOp Figure 4). Noise signatures of landing craft versus tug and barge combinations are not expected to differ greatly. The number of barge trips needed under the revised proposal is likely to be similar to the number of landing craft trips originally planned. Thus, impacts of noise and disturbance during construction at Surf Beach would not be different under the amended construction approach from those originally analyzed. Movement of construction equipment and supplies along the upper beach is not expected to impact sea otters or their critical habitat; otter densities in waters along this beach are relatively low (BiOp Figure 4).

For the Akutan ramp expansion, construction activity, lasting approximately 2 months, would potentially cause 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 hard substrate and algal growth. Thus, there would be no long-term degradation of sea otter habitat from the ramp expansion and long-term effects on otters would not differ from those analyzed in the BA (HDR 2006a) and BiOp (USFWS 2007).

In summary, there would be a small, incremental increase, relative to that predicted in the 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.

Operation

Disturbance or displacement of otters by hover craft operation during project operation would not differ from the project as analyzed in the BiOp. 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 than previously assumed. 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. Also, this slight increase in disturbance potential would be experienced by the same otters already within the area experiencing behavioral effects from the project.

The probability or severity of fuel spills during facility operation would not differ from the project as analyzed in the BA and BiOp. Available information on the potential use of deicers on the runway and on aircraft indicates that use is expected to be similar in nature to but substantially lower in magnitude and frequency to that at Dutch Harbor. The types of deicers that would be used include urea (both as a fluid and as dry pellets) and ethylene glycol. These materials would run off the airport surfaces during melting and rain events and would ultimately enter Surf Bay via Stream #1. While some stimulation of primary productivity is probable in the drainage system leading to Stream #1, and in Stream #1 itself, it is unlikely that amounts used would cause any measurable effect on primary productivity in Surf Bay. Therefore, no effect on sea otters or their critical habitat is expected.

Indirect Effects

Indirect effects on sea otters could result from an increase in the release of petroleum hydrocarbons to marine waters. The proposed changes in the construction approach and the proposed expansion of the Akutan ramp will not change the potential for hydrocarbon releases or chronic hydrocarbon exposure from those analyzed in the BiOp.

Disturbance or displacement of sea otters from their normal feeding and resting areas because of noise or visual activity associated with the project modifications will not differ significantly from those analyzed in the BA and BiOp, except as noted during the Akutan ramp expansion.

Effects of the Action on Sea Otter Critical Habitat

Critical habitat for the sea otter occurs in Akutan Harbor and Akun nearshore marine waters. Impacts to sea otter critical habitat from proposed modifications include: fill in nearshore waters and potential fuel spills. There will be approximately 0.2 acres of fill in sea otter critical habitat. Fill will not occur in areas of kelp forests, but will reduce some low or moderate value designated critical habitat for sea otters. The additional rocky substrate created by the riprap protection of the expanded ramp is expected to support new kelp growth along with species (urchins, abalones) that are known prey of otters.

A fuel spill in or near sea otter critical habitat, in addition to the potential for direct fouling of the animals themselves, could impact the quality of the habitat. Such an event could foul the marine habitat and contaminate sea otter prey species. Petroleum products will be handled in accordance with Alaska Department of Environmental Conservation and EPA regulations. In addition, spill response supplies adequate in type and quantity for the equipment and fuel storage volumes being used on the property would be on-site and readily accessible at all times. Therefore, fuel spills are not expected to reduce the value of sea otter critical habitat.

Water quality effects from runoff of deicing materials are not expected to significantly affect primary productivity in Surf Bay and no effects on sea otter or their critical habitat are expected.

Effects from Interrelated and Interdependent Actions

The only interrelated and interdependent action analyzed in the BiOp is the development of a quarry site on Akun Island. That action is unchanged from that analyzed in the BiOp and there would be no difference in effects on sea otters from that described in the BiOp.

Cumulative Effects

A number of cumulative effects associated with the completion of the Akutan Airport project and the completion of the planned new Akutan Harbor project by the USACE were analyzed in the original BiOp. None of those effects would differ under the planned modified design from those analyzed in the BiOp.

Steller's Eider

Direct Effects

Construction

Impacts of noise from the proposed modifications would not differ greatly from those analyzed in the BA and BiOp (HDR 2006b, USFWS 2007). That assessment assumed that construction equipment and materials would be brought to Surf Beach in landing craft, beaching near the location of the proposed Surf Bay hovercraft ramp. Under the revised construction approach, the temporary construction landing barge would be located approximately 1,000 feet to the west. This location is 1,000 feet farther from higher use areas for Steller's eider that are along more rocky shores east of the hovercraft landing site (see BiOp Figure 3). Noise signatures of landing craft versus tug and barge combinations are not expected to differ greatly. The number of barge trips needed under the revised proposal is likely to be similar to the number of landing craft trips originally planned. Thus, impacts of noise and disturbance during construction at Surf Beach would not be different under the amended construction approach from those originally analyzed. Movement of construction equipment and supplies along the upper beach is not expected to impact eiders or their habitat; eider densities in waters along this beach are relatively low (BiOp Figure 3).

It should be noted that Steller's eiders are only present in the action area between November and March in any year. Project construction activity will thus, be coincident with eider presence only in March and November 2011 and in March 2012.

For the Akutan ramp expansion, construction activity is likely to be completed in April through October, when activity at the Trident Seafood plant is at a lower level and when Steller's eider are not present in Akutan Harbor. Construction will last approximately 2 months. If construction, were to be undertaken in March or November, it would potentially cause eiders 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, especially during the period of eider presence in the harbor, overwintering eiders may be accustomed to a level of noise and activity comparable to that involved in ramp expansion. The number of eiders potentially subject to this harassment cannot be reliably predicted but would

not likely exceed, or add to the numbers of eiders calculated in the BiOp to be harassed during hovercraft operation.

The change in the nature of the benthic habitat at the Akutan ramp would have a negligible impact on the habitat function for eiders. The new ramp would provide less habitat for clams and small crustaceans which may be an important food for eiders, other favored prey such as limpets, chitons, and mussels would be favored by the hard substrate and algal growth as a result of the ramp expansion. Thus, there would be no long-term degradation of eider habitat from the ramp expansion and long-term effects on Steller's eiders would not differ from those analyzed in the BA (HDR 2006b) and BiOp (USFWS 2007).

In summary, depending on construction timing, there may be a small, incremental increase, relative to that predicted in the BiOp, in the potential for sublethal harassment of Steller's eiders for up to 1 month during the expansion of the Akutan ramp. This incidental take would affect a portion of the same overwintering eiders predicted to be affected by hovercraft operation during the life of the project. It is unlikely that any eiders not already experiencing the increased construction vessel traffic noise considered in the BA and BiOp, would experience increased noise during ramp expansion.

Operation

Disturbance or displacement of Steller's eiders during project operation would not differ from the project as analyzed in the BiOp. As described of se otters, reorientation of the runway would not significantly alter the potential for low flying aircraft on approach or takeoff to disturb eiders resting or feeding in Surf Bay. Their most probable response would be to swim or fly away from the noise and/or to dive. Probability or severity of fuel spills during facility operation would not differ from the project as analyzed in the BA and BiOp. Water quality effects from runoff of deicing materials are not expected to significantly affect primary productivity in Surf Bay and no effects on Steller's eider or their critical habitat are expected.

Indirect Effects

Indirect effects on Steller's eider could result from an increase in the release of petroleum hydrocarbons to marine waters. The proposed changes in construction approach and the proposed expansion of the Akutan ramp will not change the potential for hydrocarbon releases or chronic hydrocarbon exposure from those analyzed in the BiOp.

Disturbance or displacement of Steller's eiders from their normal feeding and resting areas because of noise or visual activity associated with the project modifications will not differ significantly from those analyzed in the BA and BiOp, except as noted during the Akutan ramp expansion.

Effects from Interrelated and Interdependent Actions

The only interrelated and interdependent action analyzed in the BiOp is the development of a quarry site on Akun Island. That action is unchanged from that analyzed in the BiOp and there would be no difference in effects on Steller's eiders from that described in the BiOp.

Cumulative Effects

A number of cumulative effects associated with the completion of the Akutan Airport project and the completion of the planned new Akutan Harbor project by the USACE were analyzed in the BiOp. None of those effects would differ under the planned modified design from those analyzed in the BiOp.

SUMMARY OF AVOIDANCE AND MINIMIZATION MEASURES

In addition to the avoidance and minimization measures listed and discussed in the BAs and BiOp, the modified project approach will include the following measures that may reduce or minimize the effects on listed species:

- The temporary construction landing site will be 1,000 feet away from a rock reef near the proposed hovercraft landing site, thereby reducing the risk of vessel accidents in handling and offloading equipment and materials.
- The temporary construction landing site will be 1,000 feet to the west of that originally planned and thus 1,000 feet farther from known areas of sea otter and Steller's eider concentrations.
- The expanded ramp in Akutan will allow for safer hovercraft operations, thereby reducing the potential for accidental releases of fuels.
- Design measures and best management practices (BMPs) will be put into place in accordance with Alaska Department of Environmental Conservation and the Environmental Protection Agency, both during construction and operation of the Akutan Airport, to ensure the preservation of water quality.
- Construction BMPs will include standard erosion control measures such as silt fence and straw wattles; a Storm Water Pollution Prevention Plan (SWPPP) will be developed and approved prior to the start of any

construction. In addition, an operational SWPPP will be developed prior to the start of any discharge at the facility.

- Use of deicers will be held to the minimum necessary for safe operation; it is not expected that aircraft de-icing will be required except during infrequent instances where weather delays mandate re-application.
- The aircraft parking apron has been designed to direct de-icing runoff away from anadromous fish streams; the de-icing runoff will flow from aircraft parking apron through the maximum practicable pathway including a vegetated swale and natural drainage channel to provide bio-filtration approximately 900 feet to the nearest anadromous fish stream and additional 1600' to Surf Bay.
- Runway de-icing is expected to be required; again, drainage of runoff will be directed through a maximum pathway of constructed and natural drainage channels into nearby streams.
- All de-icing operations will meet the requirements of the airport's operational Storm Water Pollution Prevention Plan and will be managed with best management practices including a clear demarcation of de-icing area to ensure design path of fluid is followed.
- In summary, runoff of deicers from the runway and apron area will be directed through the maximum practicable pathway in constructed and natural drainage pathways to Stream #1. No measurable effect on Surf Bay water quality or primary productivity is expected.

EFFECTS DETERMINATION

Northern Sea Otter

The southwestern Alaskan population of northern sea otter is listed as threatened under the ESA. The original project BiOp estimated that project construction and operation would result in a take of all 36 otters presumed to be resident in the action area all or some of the time. Based on the analyses in this Addendum, any **change in this level of take would be insignificant and unmeasurable**. The only change from the predicted impact might occur in the vicinity of the Akutan ramp expansion. Any take, through disturbance during construction that was not considered in the original BiOp would impact a small number of the 36 otters presumed to represent the entire subpopulation of otters in the action area. Since these animals are already assumed to have been taken, there would be no measurable increase in take. The proposed modifications within the critical habitat area for the northern sea otter are not likely to adversely modify the designated critical habitat.

This Addendum therefore concludes that the proposed modifications, like the originally evaluated project as a whole would not jeopardize recovery of the species, nor would it result in the adverse modification of sea otter habitat.

Steller's Eider

Over the life of the project, the USFWS has estimated that project construction and operation as originally described might result in the non-lethal take of 20 members of the ESA-listed Alaska breeding population of Steller's eiders. Based on the analyses in this Addendum, any **change in this level of take would be insignificant and unmeasurable**. One change from the predicted impact might occur in the vicinity of the Akutan ramp expansion if that construction were under taken during March or November when eiders may be present. Any take, through disturbance during construction that was not considered in the original BiOp would impact a small number of the eiders that might be present along the Akutan waterfront. Because, March and November are months of high activity at the Trident Fisheries plant, it can be presumed that the few eiders that might be present along the waterfront during project construction, would be accustomed to noise disturbance and vessel traffic. Any small increase in the displacement take of listed Steller's eiders over that in the original analysis (0.72 eiders in any one season) due to hovercraft interactions) would be unmeasurable and would not significantly add to the assumed (rounded) number of 1 listed eider lost per year of project life.

At the Surf Bay landing, construction activity in March and November would be focused on the temporary barge landing site approximately 1,000 feet farther from reported areas of Steller's eider concentration than those activities, as described in the originally proposed project. Thus, construction disturbance at Surf Beach would be equal or less than that considered in the original BiOp.

This Addendum therefore concludes that the proposed modifications, like the originally evaluated project as a whole would not jeopardize recovery of the species, nor would it result in the adverse modification of sea otter habitat.

LITERATURE CITED

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Houghton, J.P, and S.C. Lindstrom. 2006. Marine Environmental Survey July 31, 2005, Akun, Alaska. Prepared for HDR Alaska, Inc. by Pentec Environmental. Pentec No. 12214-11. February 23, 2006.

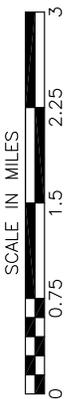
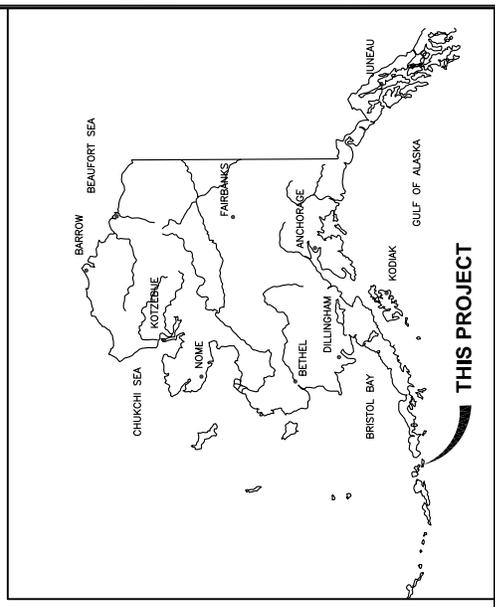
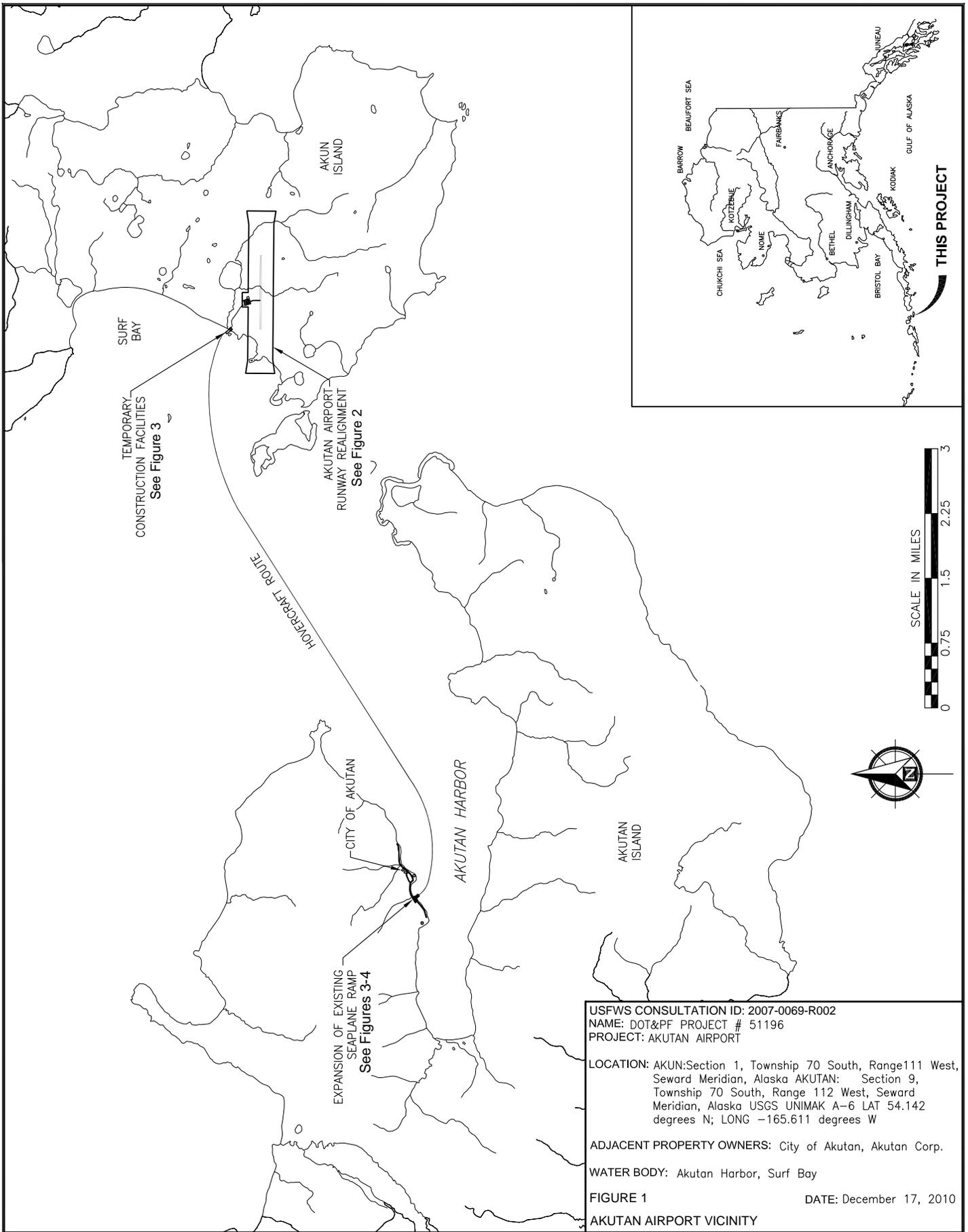
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USFWS 2010. Akutan Airport SEA Scoping Comments (Consultation number 2007-0069-R002). Letter from K. Klein, USFWS to B. Elliot, ADOT&PF, November 26, 2010.

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FIGURES



USFWS CONSULTATION ID: 2007-0069-R002
 NAME: DOT&PF PROJECT # 51196
 PROJECT: AKUTAN AIRPORT

LOCATION: AKUN:Section 1, Township 70 South, Range111 West, Seward Meridian, Alaska AKUTAN: Section 9, Township 70 South, Range 112 West, Seward Meridian, Alaska USGS UNIMAK A-6 LAT 54.142 degrees N; LONG -165.611 degrees W

ADJACENT PROPERTY OWNERS: City of Akutan, Akutan Corp.

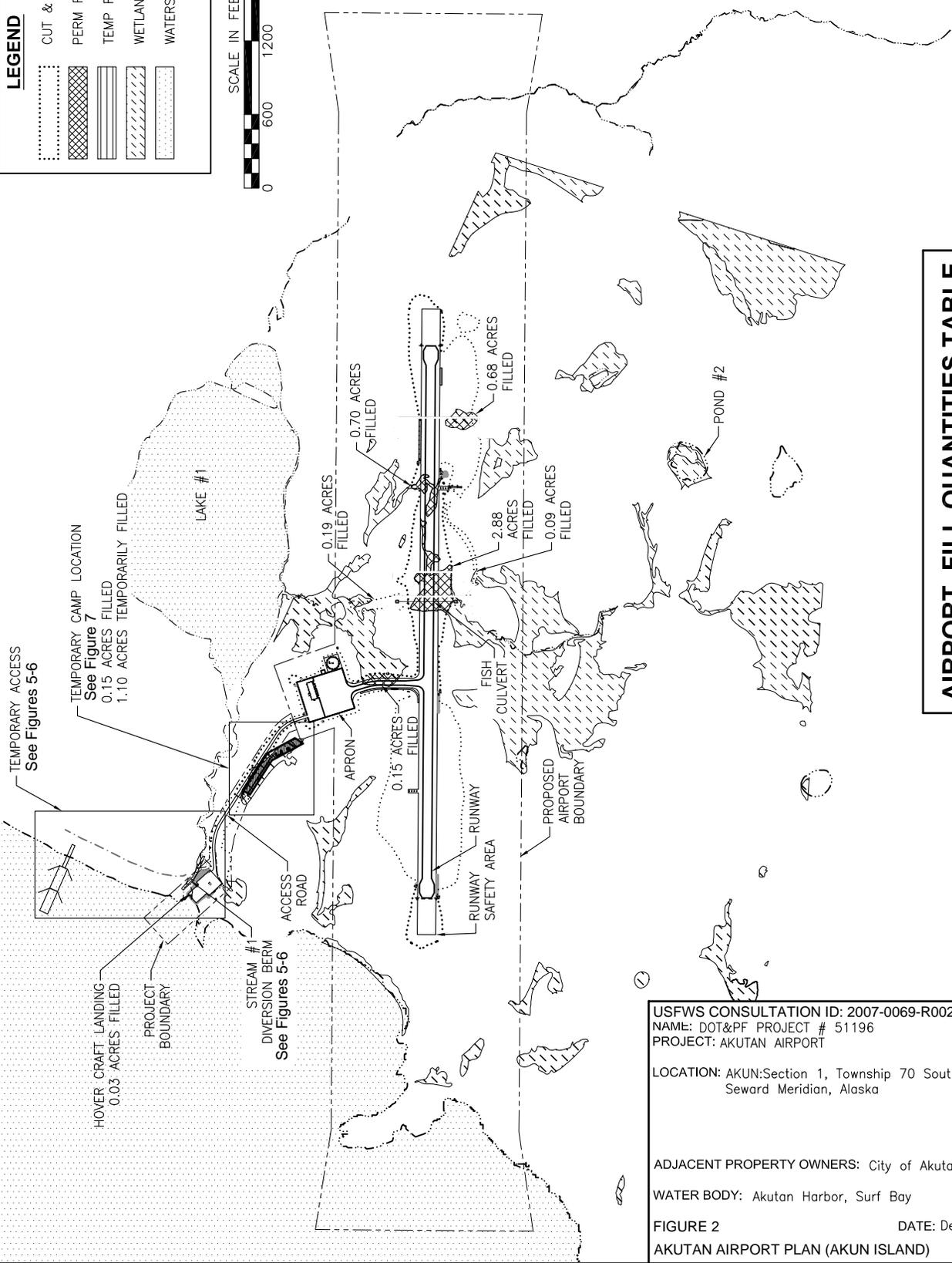
WATER BODY: Akutan Harbor, Surf Bay

FIGURE 1
 DATE: December 17, 2010

AKUTAN AIRPORT VICINITY

LEGEND

- CUT & FILL AREA
- PERM FILL IN WETLANDS
- TEMP FILL IN WETLANDS
- WETLANDS
- WATERS OF THE U.S.



AIRPORT FILL QUANTITIES TABLE

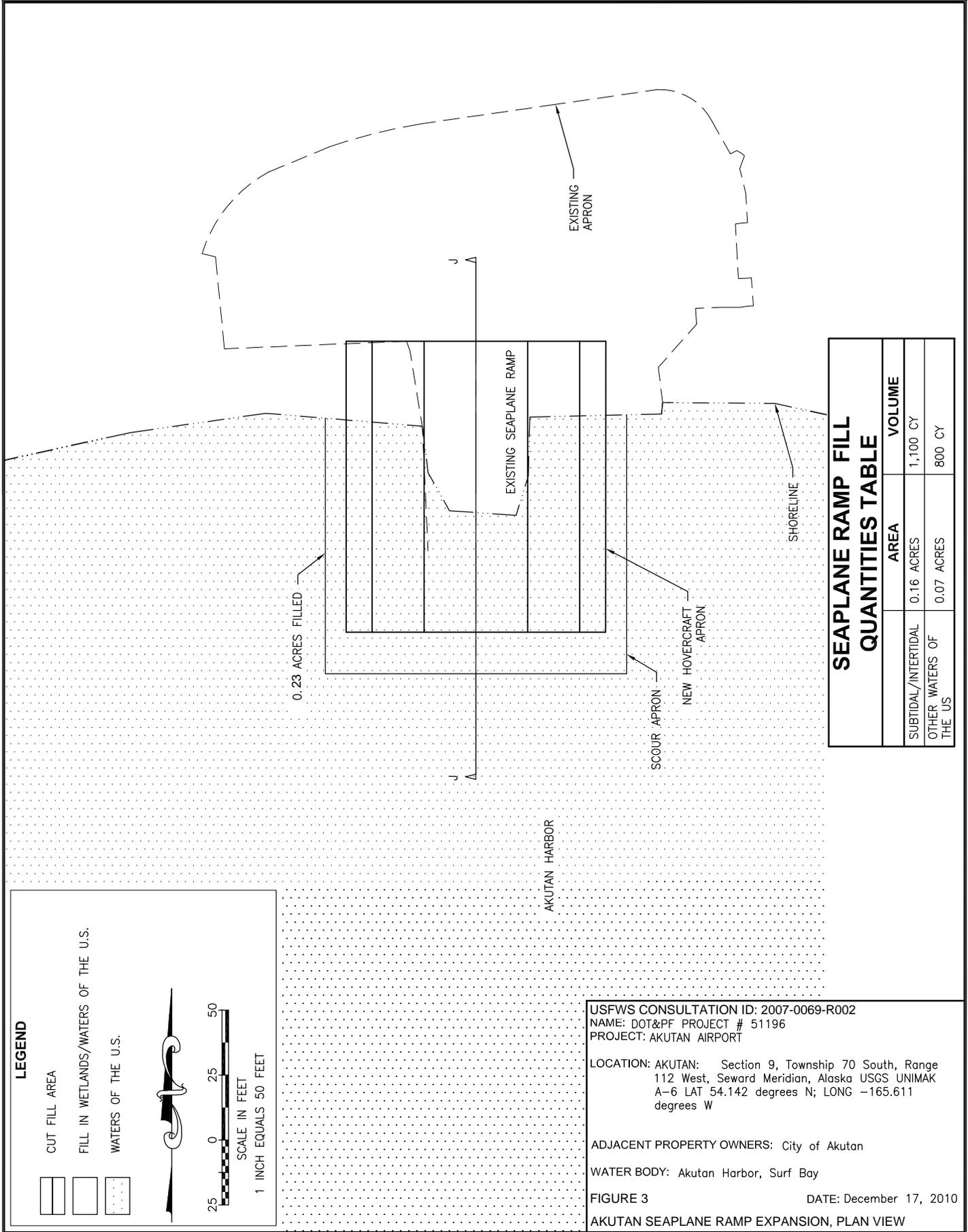
	PERMITTED	PROPOSED
PERMANENT	10.81 ACRES	5.07 ACRES
TEMPORARY	0	1.10 ACRES

USFWS CONSULTATION ID: 2007-0069-R002
 NAME: DOT&PF PROJECT # 51196
 PROJECT: AKUTAN AIRPORT

LOCATION: AKUN:Section 1, Township 70 South, Range111 West, Seward Meridian, Alaska

ADJACENT PROPERTY OWNERS: City of Akutan, Akutan Corp.
 WATER BODY: Akutan Harbor, Surf Bay

FIGURE 2 DATE: December 17, 2010
 AKUTAN AIRPORT PLAN (AKUN ISLAND)



LEGEND

-  CUT FILL AREA
-  FILL IN WETLANDS/WATERS OF THE U.S.
-  WATERS OF THE U.S.



SCALE IN FEET
1 INCH EQUALS 50 FEET

SEAPLANE RAMP FILL QUANTITIES TABLE	
AREA	VOLUME
SUBTIDAL/INTERTIDAL	1,100 CY
OTHER WATERS OF THE US	800 CY

USFWS CONSULTATION ID: 2007-0069-R002
 NAME: DOT&PF PROJECT # 51196
 PROJECT: AKUTAN AIRPORT

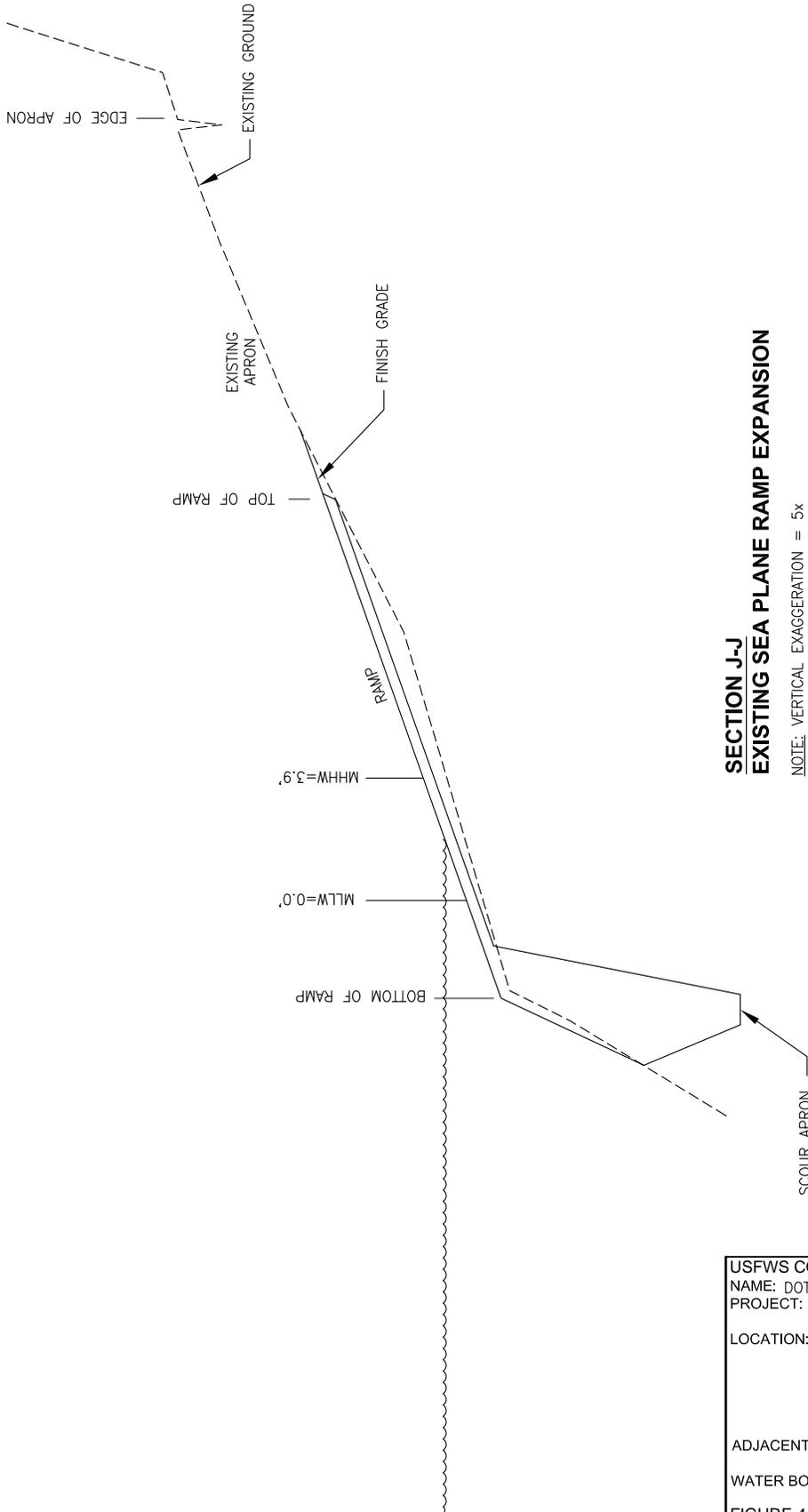
LOCATION: AKUTAN: Section 9, Township 70 South, Range 112 West, Seward Meridian, Alaska USGS UNIMAK A-6 LAT 54.142 degrees N; LONG -165.611 degrees W

ADJACENT PROPERTY OWNERS: City of Akutan

WATER BODY: Akutan Harbor, Surf Bay

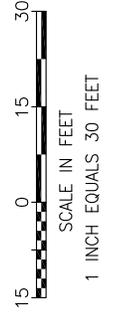
FIGURE 3 DATE: December 17, 2010

AKUTAN SEAPLANE RAMP EXPANSION, PLAN VIEW



**SECTION J-J
EXISTING SEA PLANE RAMP EXPANSION**

NOTE: VERTICAL EXAGGERATION = 5x



THERE ARE TWO VALUES FOR MHHW
 -The historic US&GS tidal benchmark list, MHHW is 3.90' (pg 63 Survey Report).
 -The ATWC Gage MHHW is 3.81' (pg 96 Survey Report).

USFWS CONSULTATION ID: 2007-0069-R002
 NAME: DOT&PF PROJECT # 51196
 PROJECT: AKUTAN AIRPORT

LOCATION: AKUTAN: Section 9, Township 70 South, Range 112 West, Seward Meridian, Alaska USGS UNIMAK A-6 LAT 54.142 degrees N; LONG -165.611 degrees W

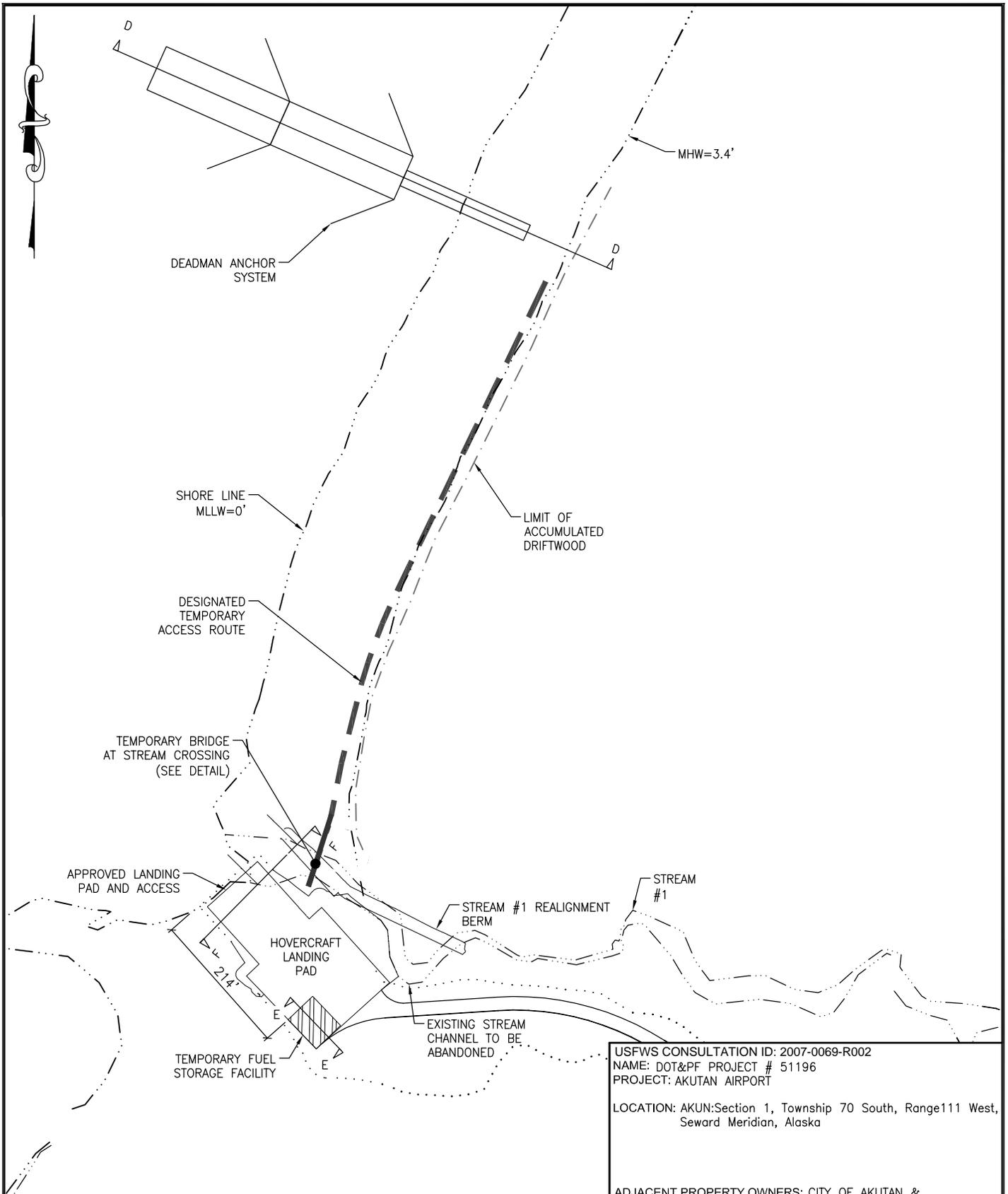
ADJACENT PROPERTY OWNERS: City of Akutan

WATER BODY: Akutan Harbor, Surf Bay

FIGURE 4 DATE: December 17, 2010

AKUTAN SEAPLANE RAMP EXPANSION, SECTION VIEW

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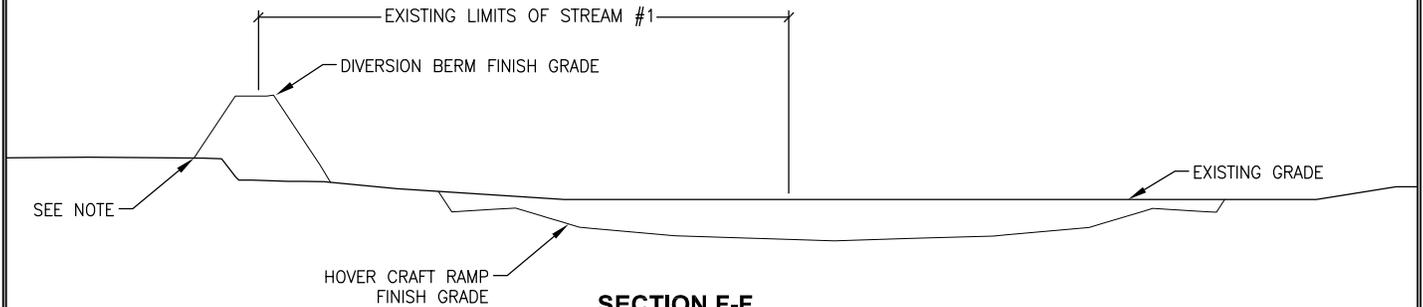
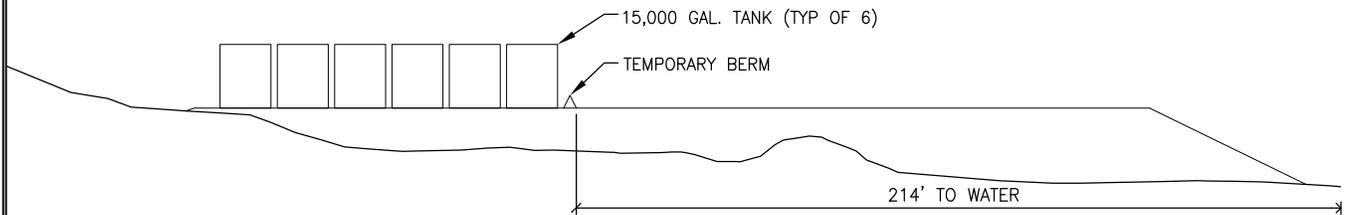
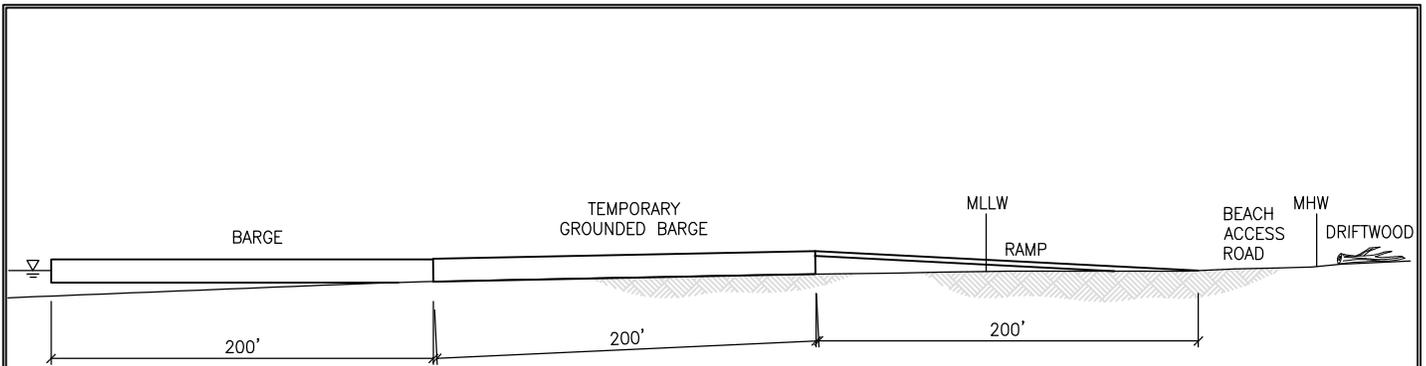


USFWS CONSULTATION ID: 2007-0069-R002
 NAME: DOT&PF PROJECT # 51196
 PROJECT: AKUTAN AIRPORT
 LOCATION: AKUN:Section 1, Township 70 South, Range111 West,
 Seward Meridian, Alaska

ADJACENT PROPERTY OWNERS: CITY OF AKUTAN &
 AKUTAN CORP.
 WATER BODY: Akutan Harbor, Surf Bay
 FIGURE 5 DATE: December 17, 2010
 SURF BAY TEMPORARY ACCESS, PLAN VIEW

100 50 0 100 200
 SCALE IN FEET
 1 INCH EQUALS 200 FEET

J:\2010\101032 Akutan Airport DB\Drawings\Renderings-Concepts-Figures\Permitting\5-Temporary Grounded Barge Detail.dwg, 5/12/17/2010 2:19:11 PM, zachary, 1:1



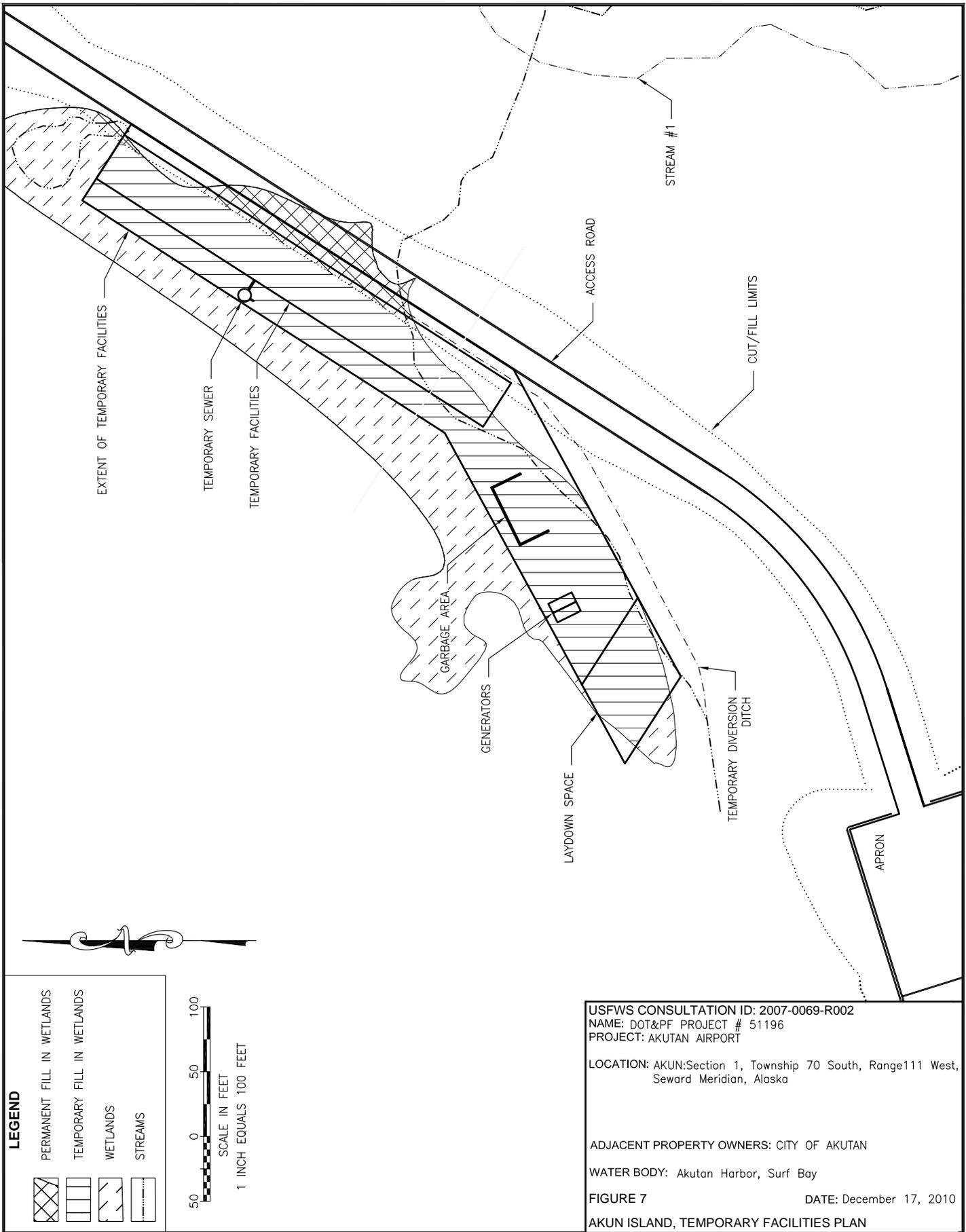
NOTE: WATERS FROM STREAM #1 TO CREATE NEW CHANNEL THIS SIDE OF DIVERSION BERM.
 * VERTICAL EXAGGERATION = 3x

USFWS CONSULTATION ID: 2007-0069-R002
 NAME: DOT&PF PROJECT # 51196
 PROJECT: AKUTAN AIRPORT

LOCATION: AKUN:Section 1, Township 70 South, Range111 West,
 Seward Meridian, Alaska

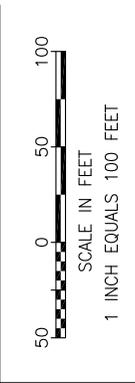
ADJACENT PROPERTY OWNERS: CITY OF AKUTAN &
 AKUTAN CORP.
 WATER BODY: Akutan Harbor, Surf Bay

FIGURE 6 DATE: December 17, 2010
 SURF BAY TEMPORARY ACCESS, SECTION VIEW



LEGEND

	PERMANENT FILL IN WETLANDS
	TEMPORARY FILL IN WETLANDS
	WETLANDS
	STREAMS



USFWS CONSULTATION ID: 2007-0069-R002
 NAME: DOT&PF PROJECT # 51196
 PROJECT: AKUTAN AIRPORT

LOCATION: AKUN:Section 1, Township 70 South, Range111 West,
 Seward Meridian, Alaska

ADJACENT PROPERTY OWNERS: CITY OF AKUTAN

WATER BODY: Akutan Harbor, Surf Bay

FIGURE 7 DATE: December 17, 2010

AKUN ISLAND, TEMPORARY FACILITIES PLAN