Environmental Resources Section

Public Notice

Alaska District
U.S. Army Corps of Engineers

Date **7 July 2023** Identification No. **ER-PN-23-003**
Please refer to the identification number when replying.

The U.S. Army Corps of Engineers (USACE) Alaska District has prepared an Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) for the following project:

Limited Removal Action
Containerized/Hazardous, Toxic, & Radiological Waste (CON/HTRW)
Amaknak-Unalaska FUDS (F10AK0841)
Amaknak & Unalaska Islands, Alaska

The USACE Alaska District proposed project is authorized under the Department of Defense (DoD) Environmental Restoration Program – Formerly Used Defense Sites (ERP-FUDS), which provides the means to clean up waste materials, contaminated soil, and unsafe structures and debris from areas formerly used by the DoD.

Information on the proposed project and anticipated environmental effects are discussed in the enclosed EA and draft FONSI. It may also be viewed on the USACE Alaska District's website at: www.poa.usace.army.mil. Click on the "Reports and Studies" button, look under "Documents Available for Public Review", and then click on the "Environmental Cleanup" link.

The EA and draft FONSI are available for public review and comment for 30 days from the date of this notice. All comments received on or before this date will become part of the official record. The FONSI will be signed upon review of comments received and resolution of significant concerns.

To obtain a printed copy of the EA and draft FONSI, please send a request via email to: Christopher.B.Floyd@usace.army.mil or send a request to the address below. Please submit comments regarding the proposed project to the above email or to the following address:

U.S. Army Corps of Engineers, Alaska District
ATTN: CEPOA-PM-C-ER (Floyd)
P.O. Box 6898
Joint Base Elmendorf-Richardson, Alaska 99506-0898

For information on the proposed project, please contact Chris Floyd of the Environmental Resources Section at the above email or Corps postal address.

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Date: 2023.07.06 14:02:44 -08'00'

Michael B. Rouse
Chief, Environmental Resources Section
USACE, Alaska District

US Army Corps of Engineers
Alaska District

Environmental Assessment and Finding of No Significant Impact

2023 CON/HTRW Limited Removal Action Amaknak-Unalaska FUDS (F10AK0841) Unalaska Island, Alaska

(McKenney 2020; photo courtesy of Tacho)

July 2023

FINDING OF NO SIGNIFICANT IMPACT

2023 CON/HTRW Limited Removal Action
Amaknak-Unalaska FUDS (F10AK0841)
Unalaska Island, Alaska

I. In accordance with the National Environmental Policy Act, I have reviewed and evaluated the documents concerning planned environmental cleanup activities at Amaknak and Unalaska Islands, Alaska:

As part of my evaluation, I have considered:

a. Existing resources and the No-Action Alternative.

b. Impacts to existing resources from the Preferred Alternative.

II. The possible consequences of these alternatives have been studied for physical, environmental, cultural, and social effects. My evaluation of significant factors has contributed to my finding:

a. No significant impacts to federally listed endangered or threatened species are anticipated.

b. No significant impacts are anticipated to natural resources, including fish and wildlife. There would be no appreciable degradation to the physical environment (e.g., water quality and air quality) as a result of the proposed activities.

c. The work at the three UST sites Summer Bay-Humpy Cove Power Plant UST, Little South America Latrine 1 UST, and Little South America Bldg 1154 Mess Hall will have no adverse effect on historic properties under Section 106 of the National Historic Preservation Act. For the following areas: Pyramid Valley-Port Levashef, Museum of the Aleutians, Margaret Bay-Airport, and Mount Ballyhoo RmAs; work will be completed over the next several years.

d. The No-Action Alternative was evaluated and determined to be unacceptable, as the US Army Corps of Engineers is authorized and responsible for implementing the cleanup of Former Used Defense Sites under the applicable State and Federal statutes and regulations.

III. Based on the evaluation and disclosure of impacts contained within the Environmental Assessment, I find no significant impacts to the human environment are likely to occur as a result of the Proposed Action. Therefore, an Environmental Impact Statement will not be prepared prior to proceeding with the proposed environmental cleanup actions at Amaknak and Unalaska Islands, Alaska.

_____ _____

JEFFREY S. PALAZZINI
COL, EN
Commander, Alaska District
U.S. Army Corps of Engineers

Date

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ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADCRA	Alaska Division of Community and Regional Affairs
ADEC	Alaska Department of Environmental Conservation
ADFG	Alaska Department of Fish and Game
AHRS	Alaska Heritage Resources Survey
AKNHP	Alaska Natural Heritage Program
ANSCA	Alaska Native Claims Settlement Act
APDES	Alaska Pollutant Discharge Elimination
AWC	Anadromous Waters Catalog
BGEPA	Bald and Golden Eagle Protection Act
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and total Xylenes
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CHU	Critical Habitat Unit
CON/HTRW	Containerized Hazardous, Toxic, and Radioactive Waste
CWA	Clean Water Act
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DPS	Distinct Population Segment
DPW	Department of Public Works
DRO	Diesel Range Organics
DRO	Diesel-Range Organics
E.O.	Executive Order
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPP	Environmental Protection Plan
ESA	Endangered Species Act
FOE	Finding of Effect
FONSI	Finding of No Significant Impact
FR	Federal Register
FUDS	Formerly Used Defense Sites
GRO	Gasoline-Range Organics
LSA	Little South America
MBTA	Migratory Bird Treaty Act
mg/kg	Milligrams per Kilogram
MLLW	Mean Lower Low Water

MMPA	Marine Mammal Protection Act
MSA	Magnuson-Stevenson Fishery Conservation and Management Act
NAAQS	National Ambient Air Quality Standards
NALEMP	Native American Lands Environmental Mitigation Program
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NMFS	National Marine and Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOB	Naval Operating Base
NRHP	National Register of Historic Places
NWP	Nationwide Permit
PA	Programmatic Agreement
PAH	Polycyclic Aromatic Hydrocarbons
PCE	Primary Constituent Element
PCN	Preconstruction Notice
POL	Petroleum, Oil, Lubricants
PTS	Permanent Threshold Shift
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RMS	Root-mean-square
ROI	Region of Influence
RRO	Residual Range Organics
SARA	Superfund Amendments and Reauthorization Act
SHPO	State Historic Preservation Officer
SWPPP	Storm Water Pollution Prevention Plan
TSCA	Toxic Substances Control Act
TTS	Temporary Threshold Shift
USC	United States Code
US	United States
UAA	University of Alaska Anchorage
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
WMP	Waste Management Plan
WWII	World War II

ENVIRONMENTAL ASSESSMENT

2023 CON/HTRW Limited Removal Action
Amaknak-Unalaska FUDS (F10AK0841)
Unalaska Island, Alaska

1.0 PURPOSE AND NEED

1.1 Introduction

The United States Army Corps of Engineers (USACE) prepared this Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to address the investigation, excavation, and removal of containerized waste and associated contaminated soil located on Amaknak and Unalaska Islands, along the Aleutian Island archipelago of Alaska (Figure 1-1). The Proposed Action is authorized under the Defense Environmental Restoration Program (DERP) for Formerly Used Defense Sites (FUDS), which authorizes the cleanup of contamination resulting from past military activities at real property previously under the jurisdiction of the Secretary of Defense and owned by the United States, and now no longer owned by the Department of Defense (DOD) per 10 USC §2701-2707. Most FUDS projects follow Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) processes, which would not include preparation of an EA under NEPA. However, the proposed project involves the excavation and removal of soils contaminated only with petroleum, which falls outside the purview of CERCLA.

The Proposed Action includes the management, planning, mobilization, demobilization, and reporting requirements associated with the performance of containerized hazardous, toxic, and radioactive waste (CON/HTRW) FUDS projects with a limited removal action (RmA) at Amaknak and Unalaska Islands (F10AK0841). The RmA shall include field work to recover, remove, and dispose of contaminated soil. The objective of the Proposed Action is to bring contamination at three sites to within regulatory cleanup levels (ADEC, 2020; ADEC, 2023) using focused resampling of soil and groundwater, removal of contamination hotspots, and the development of institutional controls. The region of influence (ROI) of the Proposed Action at three sites at two of the project areas is shown in Figure 1-2. At present, two FUDS RmA projects have received funding; Summer Bay-Humpy Cove and Little South America. If future funding is made available, four of the other FUDS projects shown in Table 1-1 and Figure 1-2 will also be conducted: Pyramid Valley-Port Levashef, Museum of the Aleutians, Margaret Bay-Airport, and Mount Ballyhoo RmAs.

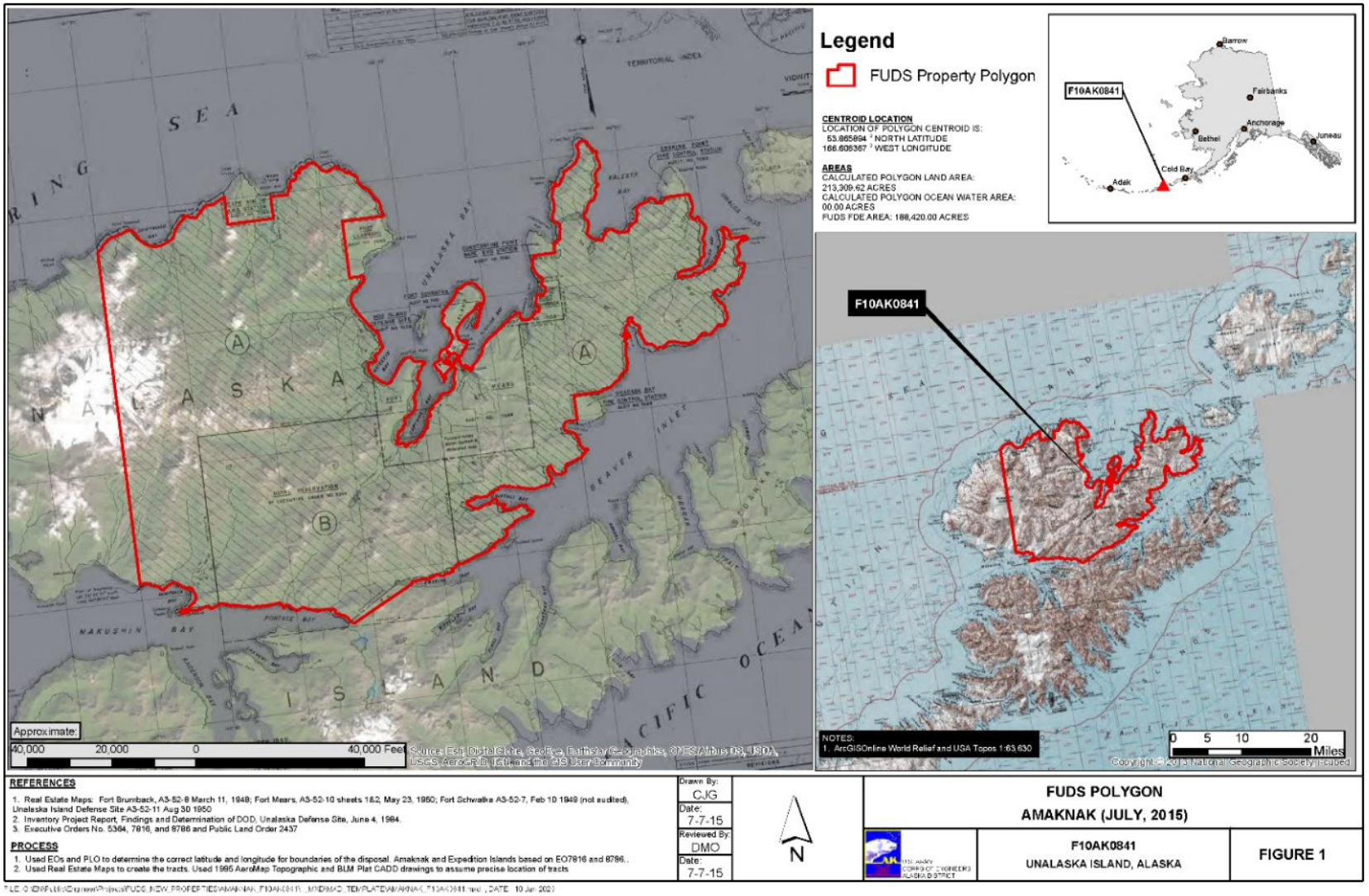

Figure 1-1. Location and vicinity of the Proposed Action.

FUDS property polygon (F10AK0841, red) encompasses both Amaknak Island and Unalaska Island, which are located on the Aleutian Island archipelago of Alaska.

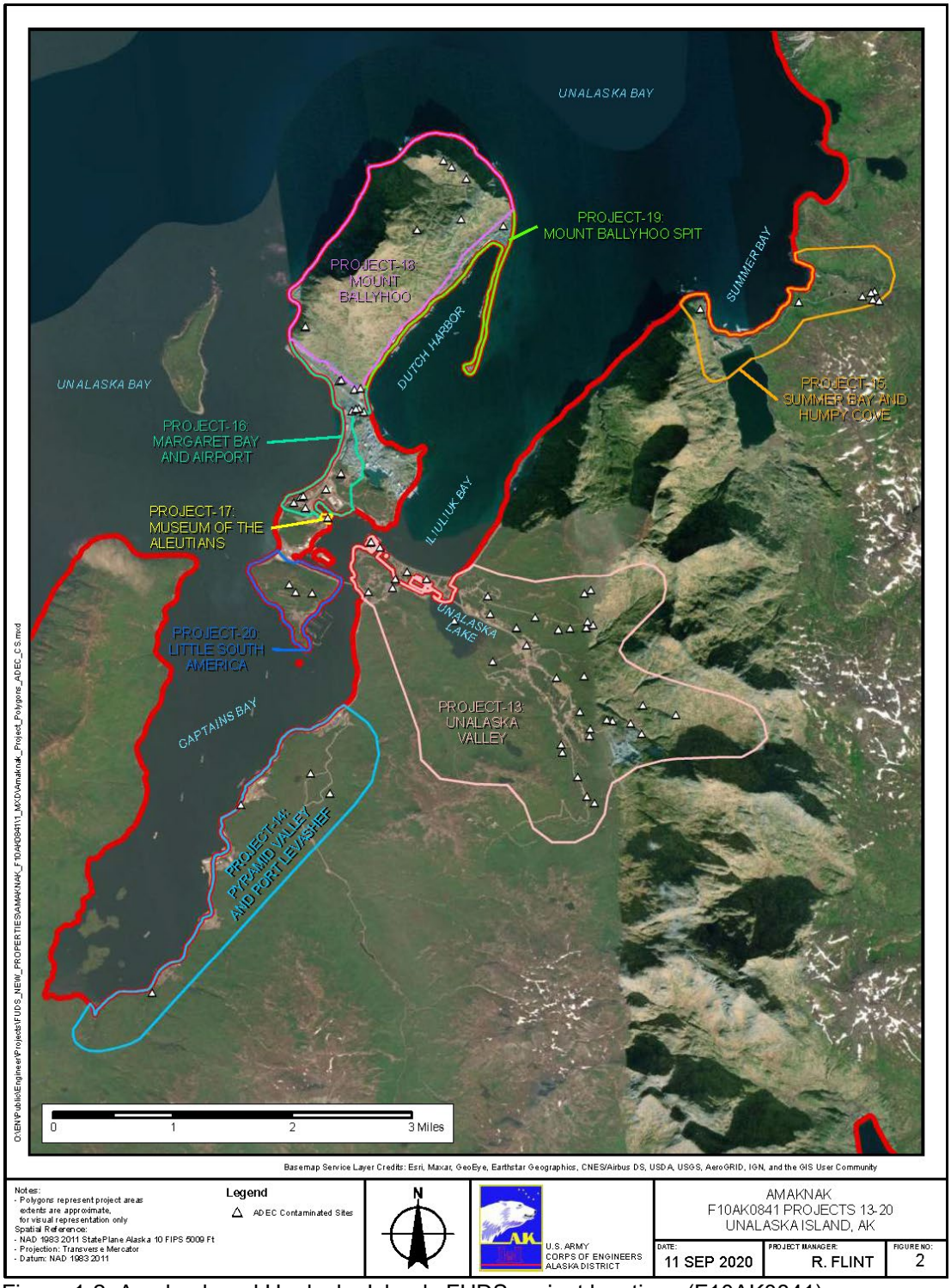

Figure 1-2. Amaknak and Unalaska Islands FUDS project locations (F10AK0841).

FUDS project boundaries are shown for each location. Locations for 2023 and future RmA include Pyramid Valley-Port Levashef (F10AK0841-14, light blue), Summer Bay-Humpy Cove (F10AK0841-15, orange), Margaret Bay Airport (F10AK0841-16, green), Museum of the Aleutians (F10AK0841-17, yellow), Mount Ballyhoo (F10AK0841-18, pink), and Little South America (F10AK0841-20, dark blue).

1.2 Project Site Description and History

The Proposed Action would follow several previous investigations, removal actions, and remedial efforts for World War II (WWII) era military sites on Amaknak and Unalaska Islands at Summer Bay-Humpy Cove and Little South America (Figure 1-3 and Figure 1-4, respectively). The objectives of these previous investigations were to identify and confirm unknown source areas, delineate known source areas, perform large-scale WWII building demolition and debris removal, and perform remedial actions to mitigate or clean up contamination. The current objective of the Proposed Action will bring contamination at three sites within regulatory cleanup levels. If future funding is made available, contamination will be brought to within regulatory cleanup levels at four of the other FUDS projects: Pyramid Valley-Port Levashef, Museum of the Aleutians, Margaret Bay-Airport, and Mount Ballyhoo. The regulatory cleanup criteria are summarized below.

Petroleum hydrocarbon soil cleanup levels shall be in accordance with 18 AAC 75, *Table B2. Method Two - Petroleum Hydrocarbon Soil Cleanup Levels* (ADEC, 2023) over 40-inch zone migration to groundwater pathway. Other soil cleanup levels shall be in accordance with *Table B1. Method Two – Soil Cleanup Levels* (ADEC, 2023) over 40-inch zone migration to groundwater pathway. Groundwater cleanup levels shall be in accordance with 18 AAC 75, *Table C. Groundwater Cleanup Levels* (ADEC, 2023). Surface water discharge shall be in accordance with 18 AAC 70 Water Quality Standards (ADEC, 2020).

1.2.1 Summer Bay-Humpy Cove (F10AK0841-15)

Summer Bay-Humpy Cove is located on the eastern shore of Unalaska Bay (Figure 1-2; Figure 1-3). The area is currently uninhabited and used primarily for recreational and subsistence type activities.

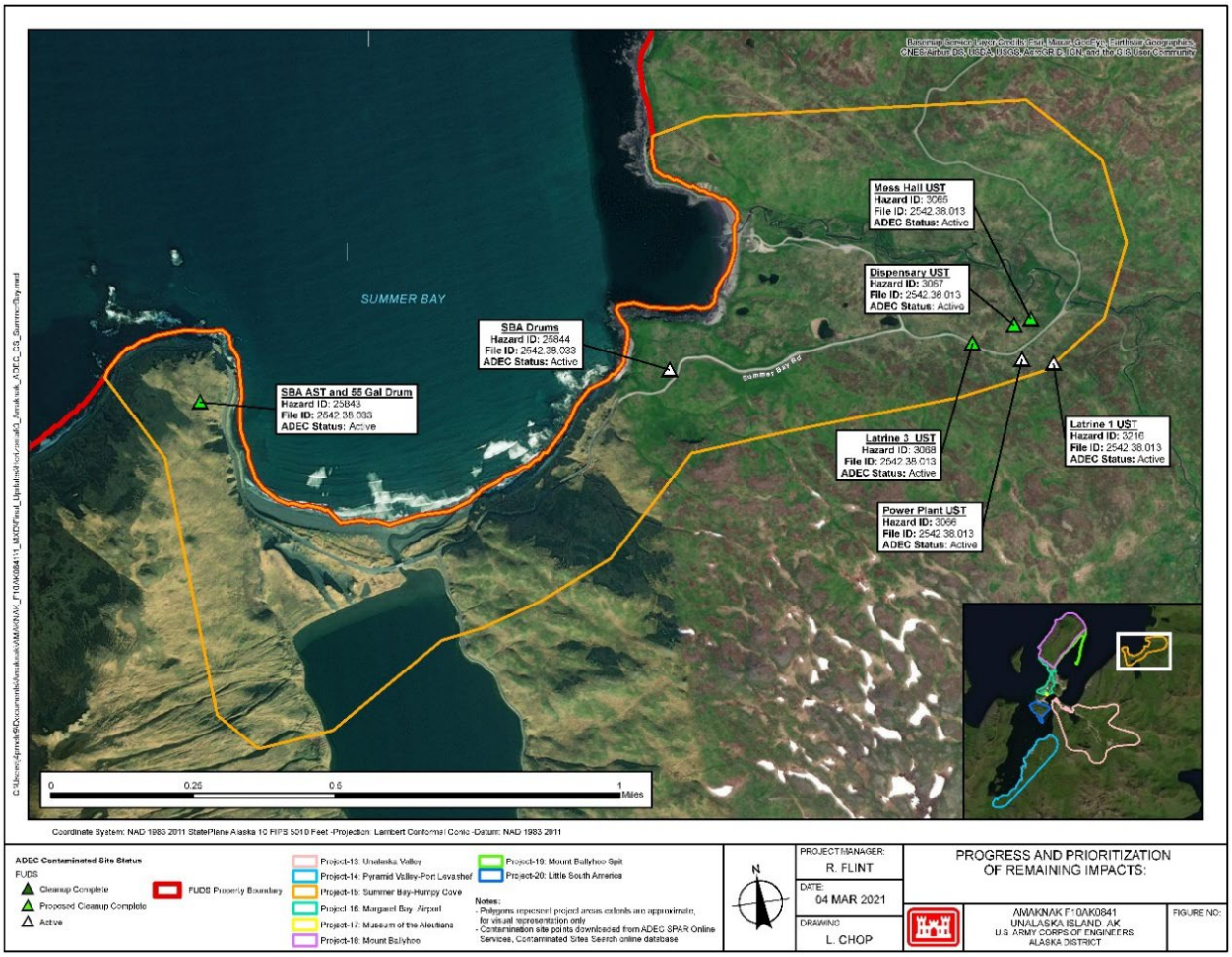

Figure 1-3. Summer Bay-Humpy Cove (F10AK0841-15).

1.2.1.1 Humpy Cove Power Plant

The Humpy Cove site is located on Unalaska Island approximately eight miles north of the City of Unalaska. The site is situated 1,200 feet east of Humpy Cove on both sides of Summer Bay Road in rolling terrain. The site is part of the former Fort Brumback which was a tactical artillery area and contained troop housing, a mess hall, latrines, power generation facilities, a dispensary, and utility systems.

The Humpy Cove Power Plant UST site is associated with ADEC Hazard ID 3066 (Figure 1-3). In 1998, a UST was discovered at the former power plant site. Investigation activities at Humpy Cove occurred in July 1998. During these activities, USTs were discovered at the former power plant, During the removal of the former Humpy Cove Power Plant UST, approximately 540 cubic yards of contaminated soil was transported off site for treatment. Confirmation samples collected from the excavation sidewall revealed residual DRO concentrations. The highest remaining DRO concentration, 11,000 mg/kg, was collected from the center of the northwest wall at a depth of 14 feet below ground surface, just above the groundwater level.

In 2000, two soil borings were drilled at the former power plant location. No contaminants were detected in the site's groundwater that exceeded ADEC cleanup criteria.

1.2.2 Little South America (F10AK0841-20)

The Little South America area (also known as Hill 400) is located at the southern end of Amaknak Island (Figure 1-2; Figure 1-4). The Little South America (LSA) area includes the upper defensive positions on Hill 400, lower service facilities related to the Fort Mears Naval Operating Base (NOB), and munitions storage magazines.

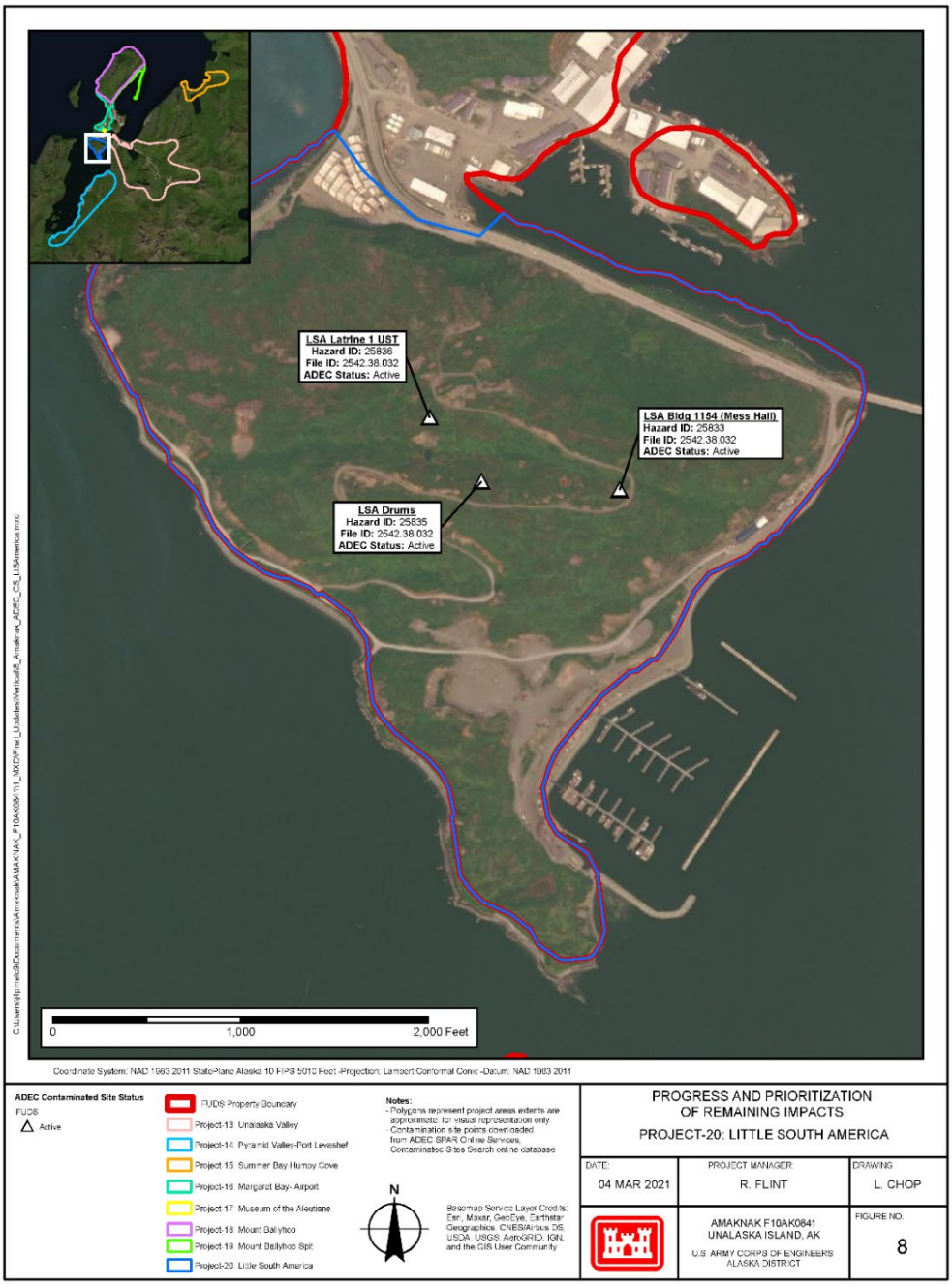

Figure 1-4. Little South America (F10AK0841-20).

1.2.2.1 LSA Building 1154 (Mess Hall)

LSA Building 1154 (Mess Hall) is associated with ADEC Hazard ID: 25833 (Figure 1-4). During the 1998 site reconnaissance, an intact 3-foot diameter, 5-foot long UST and associated pipeline was discovered southwest of the regraded location of former Building 1154.

In 2000, the tank was relocated, and approximately 110 gallons of rusty/turbid water was pumped out of it. No fuel was noted in the tank; however, a fuel odor emanated from the tank. A 150-square-foot area was excavated while removing the tank. The depth of the excavation was limited by bedrock that was encountered at 5 feet below ground surface. No groundwater was encountered. Approximately 10 cubic yards of contaminated soil were removed from the excavation and transported offsite; the site was backfilled with clean soil after removing the tank and the site was graded and seeded.

Six soil samples (four sidewall samples and two floor samples) were collected from the excavation along with a sludge and water sample from the UST. One floor sample, which was collected where the excavation was terminated at contact with fractured bedrock contained DRO above the ADEC *Method Two* cleanup level at 1,810 mg/kg.

1.2.2.2 LSA Latrine 1 UST

LSA Latrine 1 UST is associated with ADEC Hazard ID: 25836 (Figure 1-4). A partially buried, 2-foot wide, 3-foot high, and 6-foot long oval-shaped fuel tank was observed next to the ruins of a Quonset-style latrine. The tank was perforated with rust, contained 50 to 100 gallons of water, and was not easily accessible by vehicle.

In 2000, water and sludge were removed using buckets because the tank was too far downhill to pump. The water had a fuel odor and sheen. Approximately 10 gallons of sludge were then removed from the tank using sorbent wipes. The sludge had a noticeable fuel odor and contained significant amounts of organics. The tank was filled with clean soil and closed in place. One soil sample was analyzed for DRO, RRO, PAH, and BTEX and revealed DRO concentrations up to 66,700 mg/kg and RRO concentrations up to 9,300 mg/kg.

In 2001, further investigation was done to determine if contaminants have migrated downgradient of the UST. A hand auger was advanced downgradient of the Latrine 1 UST building foundation in two locations. Two samples were collected from each borehole. DRO and RRO results were below ADEC *Method Two* cleanup levels, and it was determined that contamination was not migrating from the site.

1.3 Project Purpose and Need

The objective of the Proposed Action at Amaknak and Unalaska Islands is to bring contamination at three former UST sites to within State of Alaska regulatory cleanup levels. This will be achieved by using focused resampling of soil and groundwater, and potentially developing institutional controls. Each of the sites are expected to have a mix of investigation and remedial actions to accomplish the objective. At present, two FUDS projects have received funding; Summer Bay-Humpy Cove and Little South America. If future funding is made available, the four other RmA FUDS projects will also be conducted: Pyramid Valley-Port Levashef, Museum of the Aleutians, Margaret Bay-Airport, and Mount Ballyhoo.

2.0 ALTERNATIVES

2.1 No-Action Alternative

The No-Action Alternative would avoid the short-term disruptions to the local environment caused by the excavation and removal of contaminated soil. However, under the No-Action Alternative, contaminated soil would remain in place. This would potentially allow the migration of chemical contaminants into adjacent wetland habitat.

2.2 Preferred Alternative

The Removal Action Alternative to remove contaminated soil is the Preferred Alternative. Further environmental sampling, accompanied by excavation of contaminated soil and removal of contaminated sources at the locations of the Proposed Action is the only action alternative presented in this EA. The USACE experience with environmental cleanup projects in Alaska has shown that in situ remediation or natural attenuation strategies at remote contaminated sites in the Aleutian Islands tend not to be practicable or economically feasible due to inclement weather and high costs of maintenance and monitoring. Although the City of Unalaska is economically developed, it is still susceptible to higher costs due to its remoteness. In such situations, direct removal and treatment of contaminated soil is generally the fastest, surest, and most economical means of eliminating or reducing environmental contamination. The project scope (USACE, 2023) includes the following site-specific objectives outlined in Table 1-1.

Table 1-1. Site specific objectives for FUDS projects on Amaknak and Unalaska Islands (F10AK0841).

At present, two FUDS projects have received funding; Summer Bay-Humpy Cove and Little South America. If future funding is made available, four FUDS RmA projects at other locations, indicated with an asterisks (*) will also be conducted.

PROJECT AREA	SITE NAME	HAZARD ID	LATITUDE	LONGITUDE	OBJECTIVE	APPROACH
SUMMER BAY-HUMPY COVE	Humpy Cove Power Plant UST	3066	53.899568	-166.431990	Remove residual Diesel Range Organics (DRO) soil contamination above ADEC *Method Two* migration to groundwater cleanup level. Excave below groundwater	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area.
LITTLE SOUTH AMERICA	LSA Building 1154 (Mess Hall)	25833	53.873235	-166.553979	Determine whether the residual DRO soil contamination is impacting the groundwater.	Drill to fractured bedrock at source area. Inspect for groundwater. If groundwater is present, install, develop, and sample temporary well. Decommission well.
LITTLE SOUTH AMERICA	LSA Latrine 1 UST	25836	53.874648	-166.558398	Remove residual DRO and Residual Range Organics (RRO) soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area.
*PYRAMID VALLEY-PORT LEVASHEF	Pyramid Valley USTs 1	2867	53.8490	-166.5558	Remove residual petroleum, oil, lubricants (POL) soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2024, *unless* the City of Unalaska via Brownfields Grant addresses the Pyramid Valley USTs 1 site.

PROJECT AREA	SITE NAME	HAZARD ID	LATITUDE	LONGITUDE	OBJECTIVE	APPROACH
*PYRAMID VALLEY-PORT LEVASHEF	Drum Dump and WW2 Debris Pile	25719	53.8490	-166.5741	Remove residual petroleum, oil, lubricants (POL) soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2024.
*PYRAMID VALLEY-PORT LEVASHEF	Port Levashef Dump	2869	53.8278	-166.5972		Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2024.
*MARGARET BAY AIRPORT	UST at the Aerology Bldg	25829	53.8947	-166.5401	Remove residual POL soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2025. The UST at the Aerology Bldg is a candidate for Institutional Controls; *however*, should the building be moved as in, for example, part of the Airport Master Plan, the site may be a candidate for Limited Soil Removal Action and Soil Sampling.

PROJECT AREA	SITE NAME	HAZARD ID	LATITUDE	LONGITUDE	OBJECTIVE	APPROACH
*MARGARET BAY AIRPORT	UST 28 (Bldg 884)	25822	53.8851	-166.5531	Remove residual POL soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2025.
*MARGARET BAY AIRPORT	Fort Mears Landfill (North)	25819	53.8850	-166.5538	Remove residual POL soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2025.
*MUSEUM OF THE ALEUTIANS	Fort Mears UST 820	25823	53.8821	-166.5488	Known Cultural Resources present in the area. If possible, *Potentially* remove residual POL soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2024.
*MOUNT BALLYHOO	Transformer Vaults	25714	53.9232	-166.5156	Remove residual petroleum, oil, lubricants (POL) soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2025.

PROJECT AREA	SITE NAME	HAZARD ID	LATITUDE	LONGITUDE	OBJECTIVE	APPROACH
*MOUNT BALLYHOO	Mt. Ballyhoo 01	1349	53.9159	-166.5136	Remove residual petroleum, oil, lubricants (POL) soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2025.
*MOUNT BALLYHOO	Batteries and Stand-Alone Transformer	25717	53.9153	-166.5228	Remove residual petroleum, oil, lubricants (POL) soil contamination above ADEC migration to groundwater cleanup level.	Perform removal action. After completion of removal action, install, develop, and sample one temporary well in source area and two wells downgradient. Decommission wells. Restore area. Apply Institutional Controls. USACE anticipates being able to initiate a contract in June 2025.

2.3 General Work Practices

Physical tasks of the Proposed Action would generally include:

- Excavating, containerizing, and properly disposing of contaminated soil.
- Collecting subsurface soil samples.
- Installing groundwater monitoring wells and collecting groundwater samples.
- Collect surface water samples.

Unlike many other FUDS projects, the proposed activities would take place in a developed community with existing transportation, lodging, and construction infrastructure. The contractor would minimize costs by using equipment and facilities already present on Unalaska, or through shipping via scheduled cargo vessels. Containerized contaminated soil to be removed from Unalaska would also be shipped via commercially scheduled vessel. This is in contrast to most FUDS removal actions in the Aleutian Islands, where a dedicated barge must deliver all necessary equipment and supplies to a remote, uninhabited location, often landing on an unimproved beach.

2.3.1 Environmental Protection Plan

The contractor shall prepare a comprehensive Environmental Protection Plan (EPP) detailing measures to avoid and minimize environmental impacts. The EPP shall include, but shall not limited to, the following (as applicable):

- A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control, and pollution abatement that are applicable to the contractor's proposed operations and the requirements imposed by those laws, regulations, and permits.
- Methods for protection of features (i.e., vegetation, landscape, environmental, and archaeological) to be preserved within authorized work areas, as applicable.
- Procedures to provide the required environmental protection, to comply with the applicable laws and regulations, and to correct pollution due to accident, natural causes, or failure to follow the procedures of the EPP.
- Plan showing the proposed activity in each portion of the work area and identifying the areas of limited use or non-use. Plan should include measures for marking the limits of use areas and drawings showing locations of all proposed sampling, excavations, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil material.
- Methods of protecting surface water and groundwater during construction activities, including storm water management and storm water pollution prevention. The EPP shall provide methods to manage water during and after a rain event.
- Daily inspections of vehicles, fuel containers, and other potential contaminant sources for leaks, and maintenance of spill-response equipment and materials in accordance with the project accident prevention plan (appended to the work plan).

- Watching for possible ground-nesting birds near the work sites and following EPP procedures to protect any nests discovered.
- Implementing invasive species control measures, specifically the prevention of transporting rats into the project areas and/or spreading the existing Unalaska Island rat population.
- If, during work activities, the contractor observes items that might have historical or archaeological value, such observations shall be reported immediately to the USACE so that the appropriate authorities may be notified and a determination can be made as to their significance and what, if any, special disposition of the finds should be made. The contractor shall cease all activities that may result in the destruction of these resources and shall prevent its employees from trespassing on, removing or otherwise damaging such resources.

2.3.2 Storm Water Pollution Prevention Plan

USACE believes the removal action can be completed without triggering the requirements of an Alaska Pollutant Discharge Elimination (APDES) permit and a Storm Water Pollution Prevention Plan (SWPPP). If the contractor can complete work without triggering the requirements of an APDES permit, then no APDES permit will be required, otherwise it is required. For Humpy Cove Power Plant UST and Little South America Latrine 1 UST sites the Alaska Department of Natural Resources SWPPP template and SWPPP checklist forms will be completed and incorporated into the EPP.

2.3.3 Waste Management Plan

The contractor will also prepare a Waste Management Plan (WMP) detailing how wastes will be managed both onsite and offsite. As appropriate and as applicable, this plan shall include any wastewater generated, pumped, or collected as part of any field activities. The plan shall propose facilities to be used for treatment, storage, and/or disposal; shall identify whether transfer facilities are to be used; and how the wastes will be tracked to ultimate disposal.

The contractor shall provide for the legal transportation, tracking and disposal of all solid wastes, investigation derived wastes, and contaminated soil in accordance with their accepted Waste Management Plan.

2.3.4 Site Restoration and Cleanup

Excavations shall be backfilled with clean sand and gravel, and contoured to match the surrounding grade and existing drainage and then reseeded with an approved seed mix appropriate for the local environment.

The contractor shall provide a signed certification by the Contract Manager, in the Removal Action Report, that the backfill provided did not exceed the most stringent ADEC and Environmental Protection Agency (EPA) soil cleanup levels.

Upon completion of field work activities, the contractor shall remove all debris, waste, and excess material from the site. Borrow areas, stockpile areas, temporary roads, and other construction-related support areas shall be restored to their pre-existing condition

or to the conditions detailed in the accepted planning documents. Contaminated equipment shall be decontaminated prior to leaving the site. Contractor-utilized decontamination areas shall be restored. Decontamination-area liners and decontamination soil/sediment shall be containerized and disposed offsite. Decontamination water shall be containerized and disposed offsite unless an alternative is approved by ADEC. Decontamination and waste management activities shall be conducted in accordance with the accepted planning documents.

3.0 AFFECTED ENVIRONMENT

3.1 General

The Aleutian Island archipelago forms a great arc that spans across the northern seas for about 1,500 miles. This arc forms a barrier that separates the Bering Sea from the North Pacific ocean (Murie, 1939). Amaknak and Unalaska Islands are in the Aleutian Island archipelago, located approximately 850 miles southwest of Anchorage (Figure 1-1). These two islands make up the protected deep-water anchorage of Dutch Harbor and Iliuliuk Bay.

3.2 Community and Land Use

On Unalaska Island, the City of Unalaska overlooks Iliuliuk Bay and Dutch Harbor. The city includes Amaknak Island and the port at Dutch Harbor. The 2020 census showed a population of 4,561 full-time residents. The original village and town site faces Iliuliuk Bay, while newer construction has spread up Unalaska Valley. The sites are in a low-density mixture of residential, commercial, and industrial properties. Most of the sites are in areas modified and developed since the sites were first installed (Figure 1-3; Figure 1-4).

The economy is based on commercial fishing, seafood processing, fleet services, and marine transportation. The influx of non-resident seasonal workers peaks during commercial fishing seasons. Subsistence and recreational activities occur within the area, though fishing is the principal subsistence activity undertaken by local residents. Salmon is the predominant subsistence resource; however, other subsistence resources include marine mammals, groundfish, birds (including eggs), marine invertebrates, and edible plants (USACE, 2001).

3.3 Climate

Amaknak and Unalaska Islands are within the southwest maritime climate zone, characterized by persistently overcast skies, high winds, and frequent cyclonic storms (ADCRA, 2022). Winter squalls can produce wind gusts in excess of 120 miles per hour. The surrounding marine waters of Amaknak and Unalaska Island generally remain free of sea ice during the winter months. During the summer, extensive fog forms over the Bering Sea and North Pacific ocean. The temperature is fairly moderate and uniform, averaging 41˚F to 56˚F in summer and 31˚F to 40˚F in winter. Total precipitation is approximately 60 inches annually with about up to 90 inches of snow, which typically melts soon after falling due to the warm winter temperatures.

3.4 Topography, Soils, and Hydrology

The geology of Amaknak and Unalaska Islands is predominantly volcanic, and the terrain was heavily shaped by glaciers from the Pleistocene Epoch. Lowlands generally have slight slopes while mountains tend to be steep with gradients of more than 5 degrees. Most soils are expected to be relatively shallow organics and marine sediments overlaying volcanic material or basaltic bedrock (Gallant et al., 1995). Vegetation on Amaknak and Unalaska Islands consists of mainly ericaceous shrubs e.g., dwarf birch (*Betula nana*), alder (*Alnus* spp.), willow (*Salix* spp.); and herbaceous communities (USACE, 2001).

Groundwater likely occurs in areas of high permeability areas of artificial, alluvial, and pyroclastic deposits and less so in localized deposits and fractured bedrock. The water tends to flow towards discharge areas as surface water runoff, stream flow, or as shallow groundwater flow. Prominent surface water within or near the Proposed Action ROI includes Iliuliuk River, Unalaska Lake, Captains Bay, Iliuliuk Bay, and Summer Bay. The predominant drainage system within the Proposed Action ROI is the Iliuliuk River and Iliuliuk Lake, which have numerous creeks and drainages running through them (USACE, 2001).

3.5 Air Quality and Noise

Limited industrial development, low population density, and strong meteorological influences combined lead to excellent air quality throughout the entire Aleutian Island archipelago. Amaknak and Unalaska Islands are presumed to have good air quality because of the low density of pollutant emission sources and persistent winds from the adjacent ocean. The City of Unalaska operates two diesel-powered generating power plants, under a Title V permit from the ADEC (permit numbers 215TVP01 and 216GP101). Other emission sources include incinerating solid wastes; exhaust from combustible engines (i.e., vessel, motor vehicle, and aircraft); motor vehicle traffic in dusty or unpaved areas; fuel evaporation; generator facilities, and construction equipment. Air quality generally improves with distance from sources of pollution. Potential volcanic eruptions along the Aleutian Island archipelago may influence air quality as well.

There is no established ambient air quality monitoring program on Amaknak or Unalaska Island, however, and little existing data to compare with the National Ambient Air Quality Standards (NAAQS) established under the Clean Air Act (CAA). These air quality standards include concentration limits on the “criteria pollutants” carbon monoxide, ozone, sulfur dioxide, nitrogen oxides, lead, and particulate matter. The island is not in a CAA “non-attainment” area, and the “conformity determination” requirements of the CAA do not apply to the Proposed Action.

No specific noise data exists for Amaknak and Unalaska Islands, but a mixture of natural and anthropogenic background noise would consist of noise generated by local vehicle traffic, light industrial activities, wildlife, and wind.

3.6 Wildlife and Habitat

A variety of nearshore marine, stream, and estuarine environments on Amaknak and Unalaska Island provide habitats for a diversity of fishes, wildlife, and invertebrates.

Marine macrophytes are common in nearshore waters, and include rockweed (*Fucus* spp.), brown kelp (*Laminaria* spp.), and green algae (*Ulva* spp.). See the Essential Fish Habitat section for salmon and marine fishes important in commercial fisheries, and the Endangered Species section for discussion of endangered marine mammals and other wildlife.

Many resident and migratory North American avian species reside on Amaknak and Unalaska Island (Murie, 1939). Several Asian lineages of Holarctic avian species, such as the common teal (*Anas crecca crecca*) and Eurasian wigeon (*Mareca penelope*), are casual vagrants to Unalaska Island (Murie, 1939; Carboneras et al., 2020; Johnson et al., 2020; UAM, 2023). Historic survey data from the USFWS noted colonies of seabirds present within Unalaska Bay (USFWS, 1982). Endemic avian species to Beringia also reside within this area, which include three auklet species: the least auklet (*Aethia pusilla*), whiskered auklet (*Aethia pygmaea*), crested auklet *(Aethia cristatella*); and the emperor goose (*Anser canagicus*) (Winker et al., 2023). The Endangered Species Act (ESA) species listings from USFWS in Appendix A contains a list of migratory birds of particular concern as well as a timeline showing the probability of their presence and breeding season.

Native terrestrial mammals present on Unalaska Island are limited to the collared lemming (*Dicrostonyx groenlandicus unalascensis*) and root vole (*Microtus oeconomus unalascensis*) (Murie, 1939; Peterson, 1967). Introduced mammals include the house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), arctic ground squirrel (*Urocitellus parryii*), red fox (*Vulpes vulpes*), and various species of domesticated livestock (USACE, 2001).

3.7 Protected Resources

3.7.1 Endangered Species Act

Jurisdiction under the ESA of 1973 is divided by species between the USFWS and the National Marine Fisheries Service (NMFS). Through informal consultation with the USFWS and the NMFS (Appendix A; NMFS, 2022), the USACE has identified the ESA-listed species that may be present in the Proposed Action ROI on Amaknak and Unalaska Islands (Table 3-1). ESA-listed species are expected to occur in waters and shorelines adjacent to the Proposed Action ROI; however, none are expected to occur near the sites themselves.

Table 3-1. ESA-listed species with ranges within near the Proposed Action ROI.

Species	Population	Status	Agency Jurisdiction
Steller sea lion *(Eumetopias jubatus)*	western DPS	Endangered	NMFS
Humpback whale *(Megaptera novaeangliae)*	western North Pacific DPS Mexico DPS	Endangered Threatened	NMFS NMFS
North Pacific right whale *(Eubalaena japonica)*	All	Endangered	NMFS
Sperm whale *(Physeter macrocephalus)*	All	Endangered	NMFS
Fin whale *(Balaenoptera physalus)*	All	Endangered	NMFS
Blue whale *(Balaenoptera musculus)*	All	Endangered	NMFS
Gray whale *(Eschrichtius robustus)*	western North Pacific DPS	Endangered	NMFS
Beluga whale *(Delphinapterus lecucas)*	Cook Inlet DPS	Endangered	NMFS
Northern sea otter *(Enhydra lutris kenyoni)*	southwest Alaska DPS	Threatened	USFWS
Steller's eider *(Polysticta stelleri)*	All	Threatened	USFWS
Short-tailed albatross *(Phoebastria albatrus)*	All	Endangered	USFWS

DPS – Distinct Population Segment.
NMFS – National Marine Fisheries Service.
USFWS – US Fish and Wildlife Service.

Western DPS Steller Sea Lions

The Steller sea lion (*Eumetopias jubatus*) is the largest member of the family Otariidae, the “eared seals,” which includes all sea lions and fur seals. In 1997 NOAA Fisheries recognized two distinct population segments (DPS) of Steller sea lion in Alaska, listing the eastern distinct population segment (DPS) as threatened and the western DPS as endangered (55 FR 12645, 62 FR 24345; Figure 3-1).

The eastern DPS, which includes Steller sea lions originating from rookeries east of Cape Suckling (144°W longitude). The eastern DPS retained its threatened listing status under the ESA when it was established. By 2013, it demonstrated 30 years of recovery leading NOAA Fisheries to delist it. The western DPS, which includes all Steller sea lions originating from rookeries west of Cape Suckling (144°W longitude). The western DPS’s ESA listing status was elevated to endangered when it was established, due to lack of recovery; it remains listed as endangered today. Western DPS Steller sea lions also occur east of 144°W longitude in a “mixing zone” in central and northern Southeast Alaska. The western DPS is listed as depleted under the Marine Mammal Protection Act (MMPA) as well.

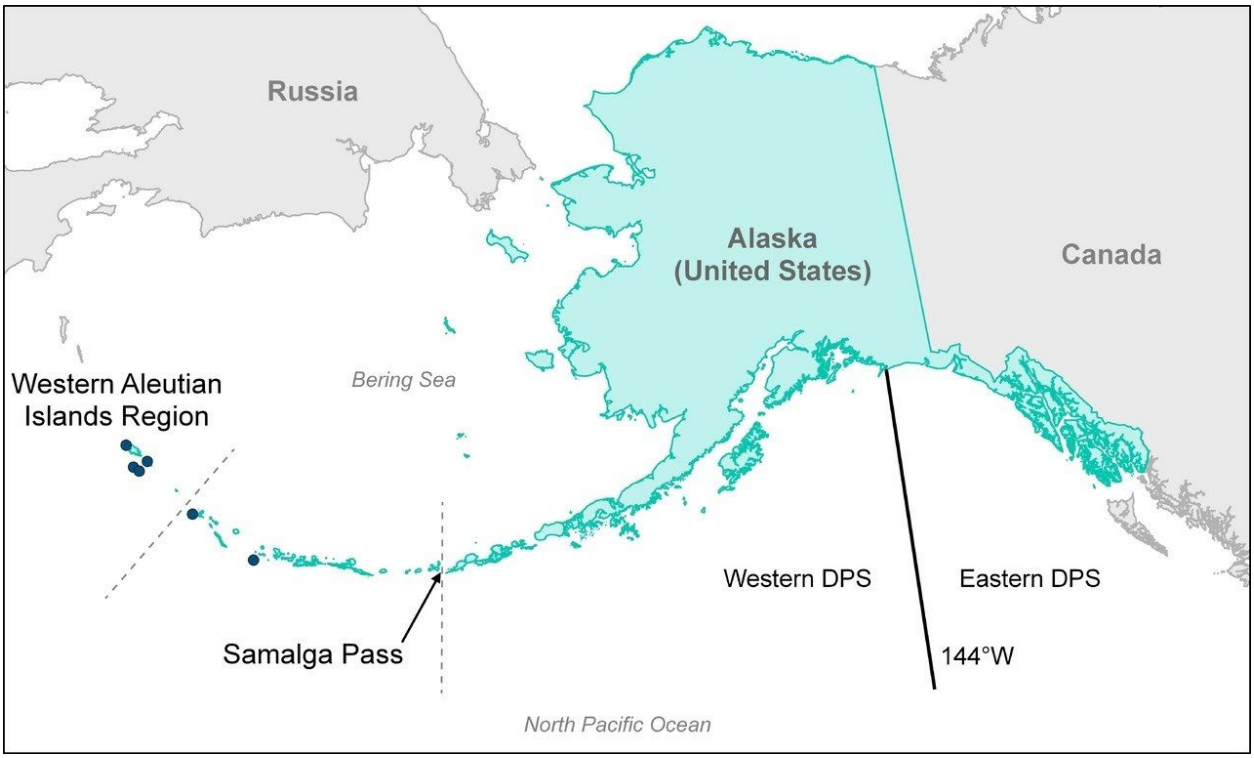

Figure 3-1. Boundary between Steller sea lion eastern DPS and western DPS.

Map depicting 144°W longitude line separating the Steller sea lion endangered western DPS from the eastern DPS (NOAA Fisheries).

NOAA Fisheries designated critical habitat for Steller sea lions (58 FR 45269), which included all Steller sea lion rookeries and major haulouts (i.e., haulouts supporting more than 200 Steller sea lions) located within state and federally managed waters off Alaska; a terrestrial zone that extends 3,000 feet (0.9 kilometers) landward from the baseline or base point of each major rookery and major haulout in Alaska; an air zone that extends 3,000 feet (0.9 kilometers) above the terrestrial zone of each major rookery and major haulout in Alaska, measured vertically from sea level; an aquatic zone that extends 3,000 feet (0.9 kilometers) seaward in State and Federally managed waters from the baseline or basepoint of each major rookery and major haulout in Alaska east of 144°W longitude; an aquatic zone that extends 20 nautical miles (37 kilometers) seaward in State and Federally managed waters from the baseline or basepoint of each major rookery and major haulout in Alaska that is west of 144°W longitude; and three special aquatic foraging areas in Alaska, including the Shelikof Strait area, the Bogoslof area, and the Seguam Pass area.

The Proposed Action ROI on Amaknak and Unalaska Islands are within the range of the Steller sea lion western DPS (Figure 3-2). The marine waters of Iliuliuk Bay and Captains Bay (offshore from the Amaknak and Unalaska Island FUDS property boundaries), falls within the Bogoslof foraging area and the 20 nautical mile aquatic zones for two major rookeries (Figure 3-2). However, there are no major haulouts or rookeries in the vicinity of Iliuliuk Bay or Captains Bay. Known and observed Stellar sea lion use areas on Unalaska Island have been identified by NOAA Fisheries (Figure 3-2).

Though there are no haulouts or rookeries present within Captains Bay or Iliuliuk Bay on Unalaska Island, Steller sea lions use marine waters adjacent to the Proposed Action ROI on Amaknak and Unalaska Islands year-round for feeding and movements between feeding and breeding areas. In past winter surveys, (from the years 2000 to 2006), there were two areas where large aggregations of Steller sea lions (around 50 to 60 individuals) were common (USACE, unpublished data). Stellar sea lions are opportunistic predators, and consume a wide variety of fishes and cephalopods in marine environments and estuaries. Their diet varies in different parts of their range and at different times of the year, depending on the abundance and distribution of prey species (NMFS, 2008).

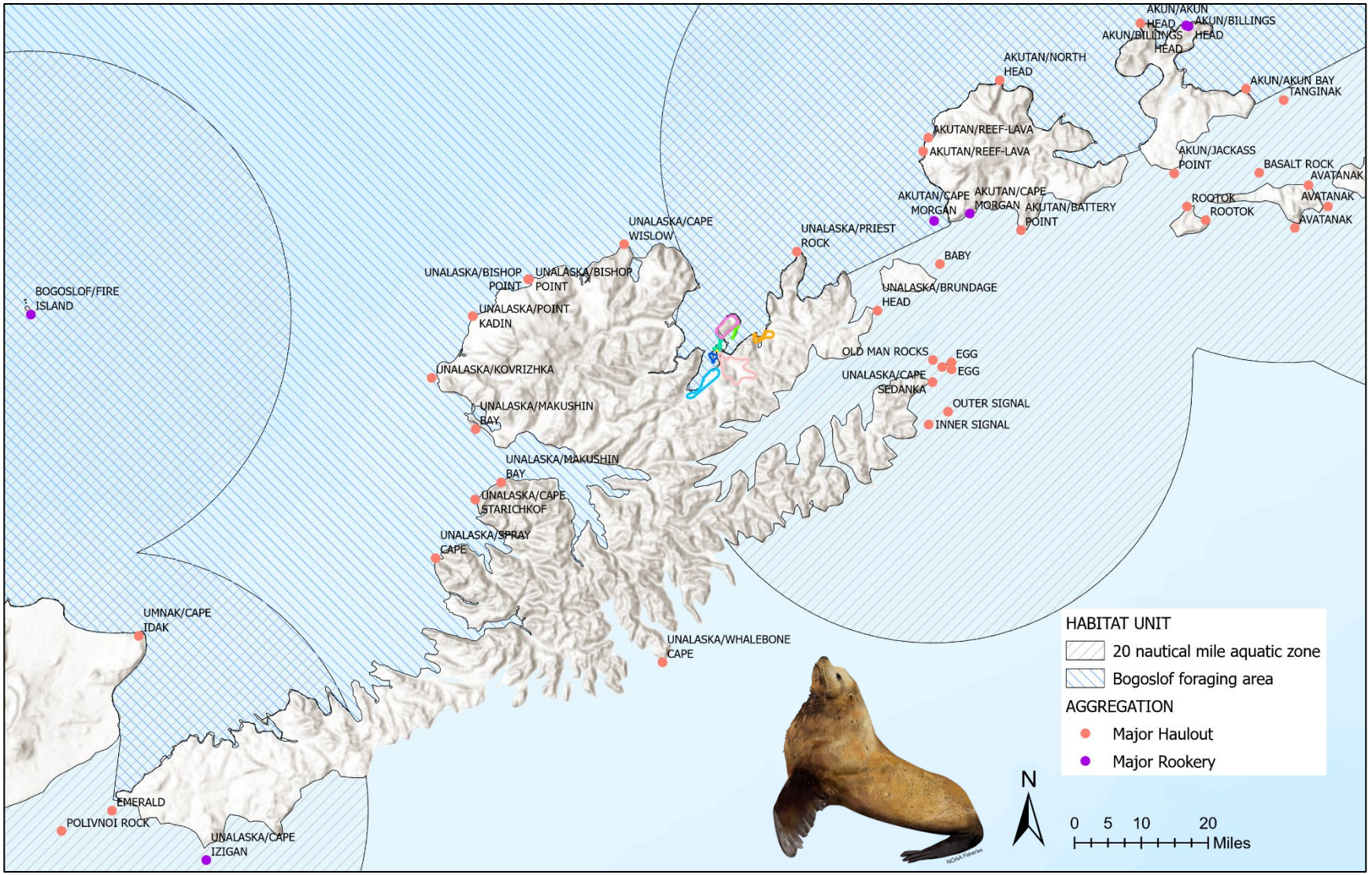

Figure 3-2. Steller sea lion use areas on Unalaska Island.

Steller sea lion use areas, such as foraging areas, major haulout, and major rookery sites are shown with respect to the Amaknak and Unalaska Island FUDS project boundaries. Illustration of Steller sea lion was obtained from the species profile from NOAA fisheries.

Great Whales

Large great whales are infrequent visitors to nearshore waters, and most are found in deeper waters off the Gulf of Alaska, the North Pacific, and Bering Sea. Species of threatened and endangered great whale that may be present in marine waters near the Aleutian Islands include the humpback whale (*Megaptera novaeangliae*), North Pacific right whale (*Eubalaena japonica*), sperm whale (*Physeter macrocephalus*), fin whale (*Balaenoptera physalus*), blue whale (*Balaenoptera musculus*), and gray whale (*Eschrichtius robustus*). These species encompass a large geographical range, and would only be encountered incidentally by the scheduled vessels the contractor would use for transportation of equipment and materials to and from Amaknak and Unalaska Islands.

Of these endangered and threatened great whale species, only the North Pacific right whale and humpback whale have designated critical habitat (Figure 3-3). The North Pacific right whale has designated critical habitat in two large offshore areas in the southeastern Bering Sea and Gulf of Alaska (78 FR 19000). These areas are located roughly 120 miles to the northeast of Unalaska Island and the Proposed Action ROI (Figure 3-3). Critical habitat for humpback whale was designated for the threatened Mexico DPS, endangered western North Pacific DPS, and endangered Central America DPS (86 FR 21082). Critical habitat for humpback whale western North Pacific DPS and Mexico DPS includes the waters surrounding Unalaska Island adjacent to the Proposed Action ROI (Figure 3-3). Both the North Pacific right whale and humpback whale are protected under the MMPA.

Given that these species occupy offshore marine waters, they would not be present in the area of the Proposed Action. However, these species have the potential to be encountered by ocean vessels sailing to or from Amaknak and Unalaska Islands, and are therefore considered by NOAA Fisheries to be within the Proposed Action ROI.

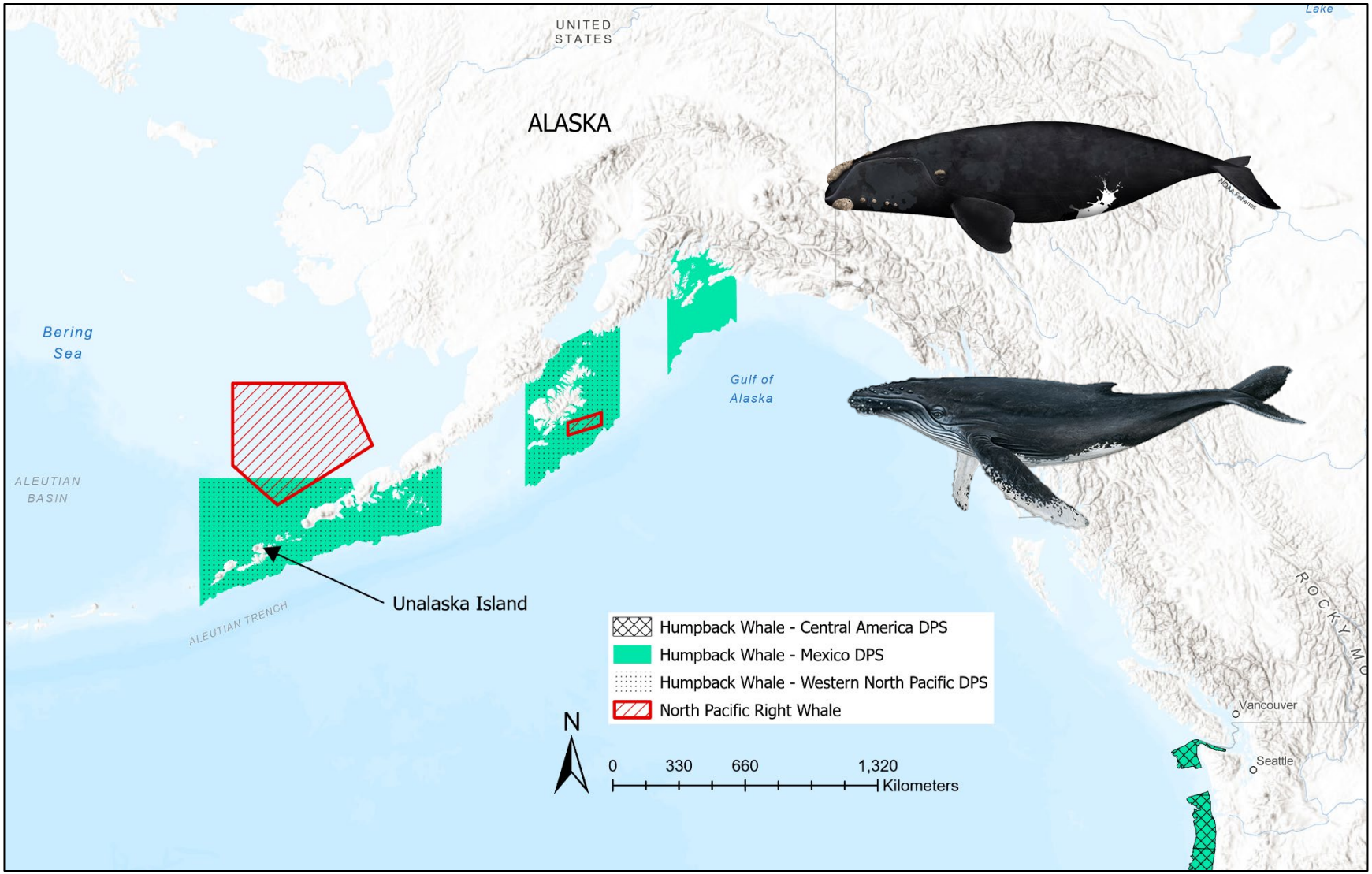

Figure 3-3. Critical habitat areas for North Pacific right whale and humpback whale.

Illustrations of North Pacific right whale and humpback whale were obtained from the species profiles from NOAA Fisheries.

Cook Inlet Beluga Whale

In 2008, NOAA Fisheries listed the Cook Inlet beluga whale (*Delphinapterus leucas*) population as endangered under the ESA (73 FR 62919). NOAA Fisheries designated critical habitat for the Cook Inlet beluga whale in 76 FR 20180, which is divided into two areas (Figure 3-4). All beluga whale populations are protected under the MMPA. NOAA Fisheries has designated the Cook Inlet beluga whale population in Alaska as depleted under the MMPA.

The Cook Inlet beluga whale does not occur within the Proposed Action ROI or Unalaska Island. However, it has the potential to be encountered by ocean vessels sailing to or from the Cook Inlet, and are therefore considered by NOAA Fisheries to be within the Proposed Action ROI of this project.

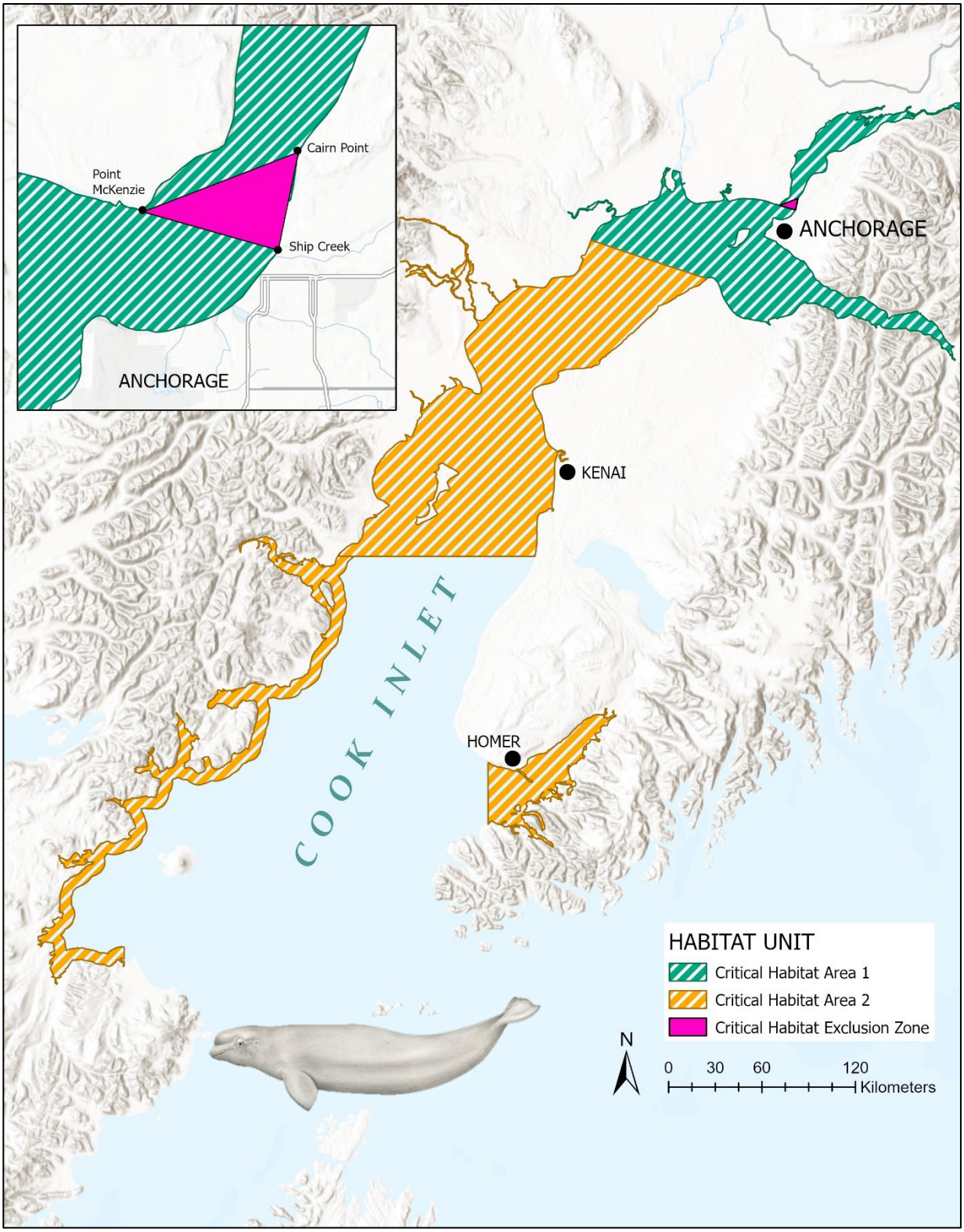

Figure 3-4. Cook Inlet beluga whale critical habitat areas.

Critical Habitat Area 1 is the spring-through-autumn concentration area important for calving and foraging. Critical Habitat Area 2 is the known fall and winter use. Illustration of beluga whale was obtained from the species profile from NOAA Fisheries.

Northern Sea Otter

The northern sea otter (*Ehydra lutris kenyoni*) is found in the Aleutian Islands, southern Alaska, British Columbia, and Washington. In Alaska, there are three northern sea otter DPS: southwest, southcentral, and southeast. The southwest Alaska DPS is relevant to this project, and it was designated as a threatened species in 2005 (68 FR 6600). The northern sea otter, unlike most other mammals, is managed and under the jurisdiction of the USFWS.

The critical habitat of the northern sea otter in Alaska is identified by USFWS and is designated in 74 FR 51988. There are five critical habitat units for the southwest Alaska DPS of northern sea otters as shown in Figure 3-5. The critical habitat pertaining to this EA falls within the Eastern Aleutian critical habitat unit (unit 2); which consists of an estimated 832 kilometer^2 (321 mile^2), collectively, of the nearshore marine waters ranging from the mean high tide line to the 20-meter (65.6-feet) depth contour as well as waters occurring within 100 meters (328.1 feet) of the mean high tide line. This unit ranges from Samalga Island in the west to Ugamak Island in the east. All the critical habitat within this unit is located within State of Alaska waters.

Based on the current knowledge of the life history, biology, and ecology of the species, the southwest Alaska DPS of the northern sea otter's primary constituent elements (PCEs) includes:

1. Shallow, rocky areas where marine predators are less likely to forage, which are waters less than 2 meter (6.6 feet) in depth;
2. Nearshore waters that may provide protection or escape from marine predators, which are those within 100 meter (328.1 feet) from the mean high tide line;
3. Kelp forests that provide protection from marine predators, which occur in waters less than 20 meter (65.6 feet) in depth; and
4. 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.

Given that this species resides in nearshore marine waters, they would not be present in the area of the Proposed Action. However, it has the potential to be encountered by ocean vessels sailing to or from Amaknak and Unalaska Islands, and are therefore considered by NOAA Fisheries to be within the Proposed Action ROI.

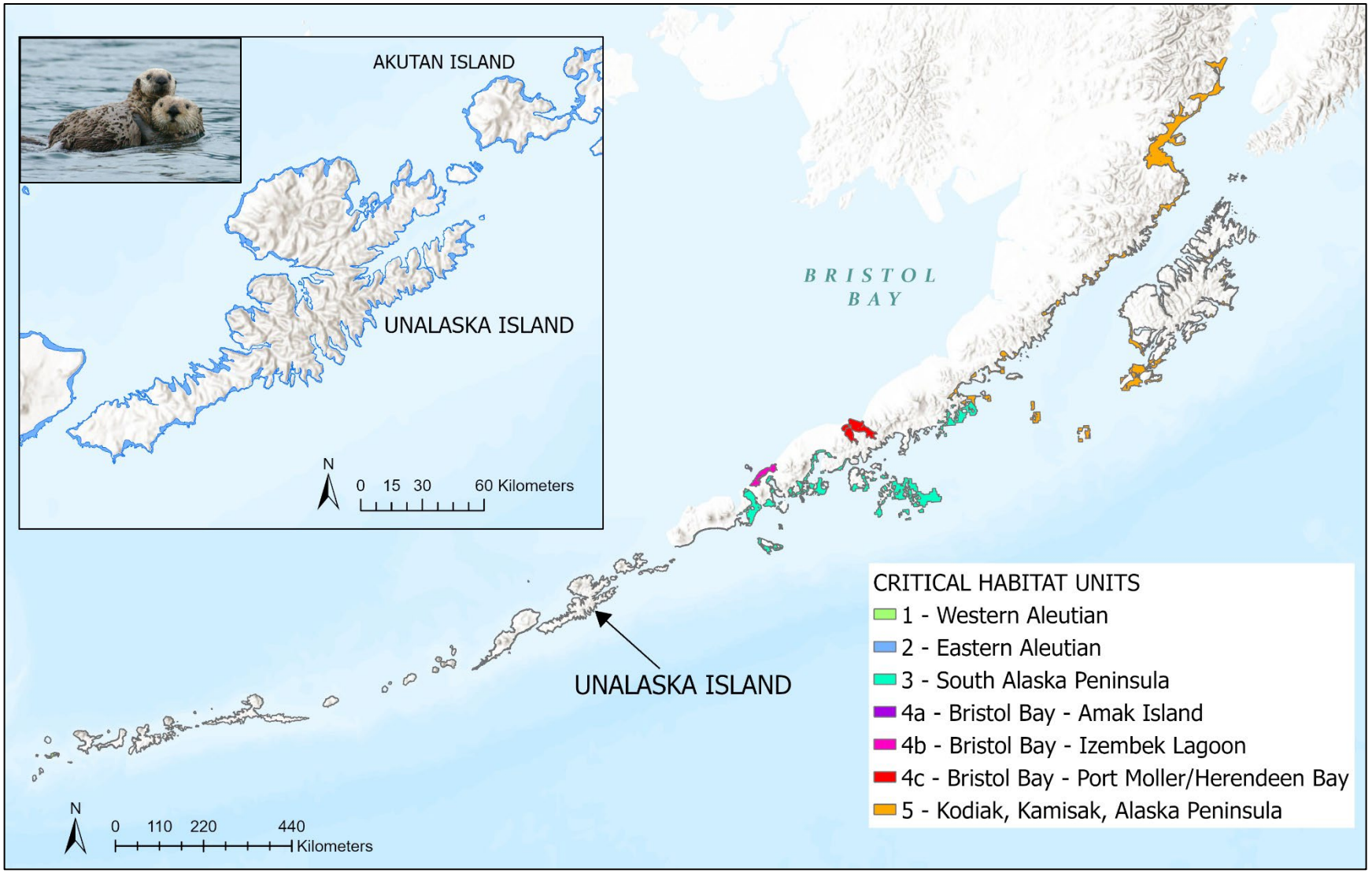

Figure 3-5. Northern sea otter southwest Alaska DPS with critical habitat units.

Critical habitat units for the southwest DPS include Western Aleutian (1); Eastern Aleutian (2); South Alaska Peninsula (3); Bristol Bay (4, further subdivided into three subunits: Amak Island (4a), Izembek Lagoon (4b), and Port Moller/Herendeen Bay (4c)), and Kodiak, Kamisak, Alaska Peninsula (5). Photograph was obtained from the northern sea otter species profile from the Alaska Department of Fish and Game.

Steller's Eider

The Alaska breeding population of Steller's eider (*Polysticta stelleri*) was listed as threatened in 1997 (62 FR 31748), and critical habitat for Steller's eider was designated by USFWS in 2001 (66 FR 8850). The Pacific population of this species breeds primarily in northeastern Siberia and the Arctic Coastal Plain of Alaska, and winters in coastal Pacific waters along the Aleutian Islands and Alaska Peninsula (Fredrickson, 2020). Given the breeding and wintering range of this species, they would not be present at Amaknak or Unalaska Island during spring-summer Proposed Action activities. Steller's eiders are known to occur on Unalaska Island in shallow nearshore waters on the outside of the Dutch Harbor spit during the winter months (November to March).

The critical habitat for the Alaska breeding population of Steller's eider encompasses approximately 7,300 kilometers^2 (2,800 miles^2), and includes the Yukon-Kuskokwim Delta, Kuskokwim Shoals, Seal Islands, Nelson Lagoon, and Izembek Lagoon (Figure 3-6). The areas of critical habitat for Steller's eiders are more than 161 kilometers (100 miles) east of Amaknak and Unalaska Island and the Proposed Action ROI.

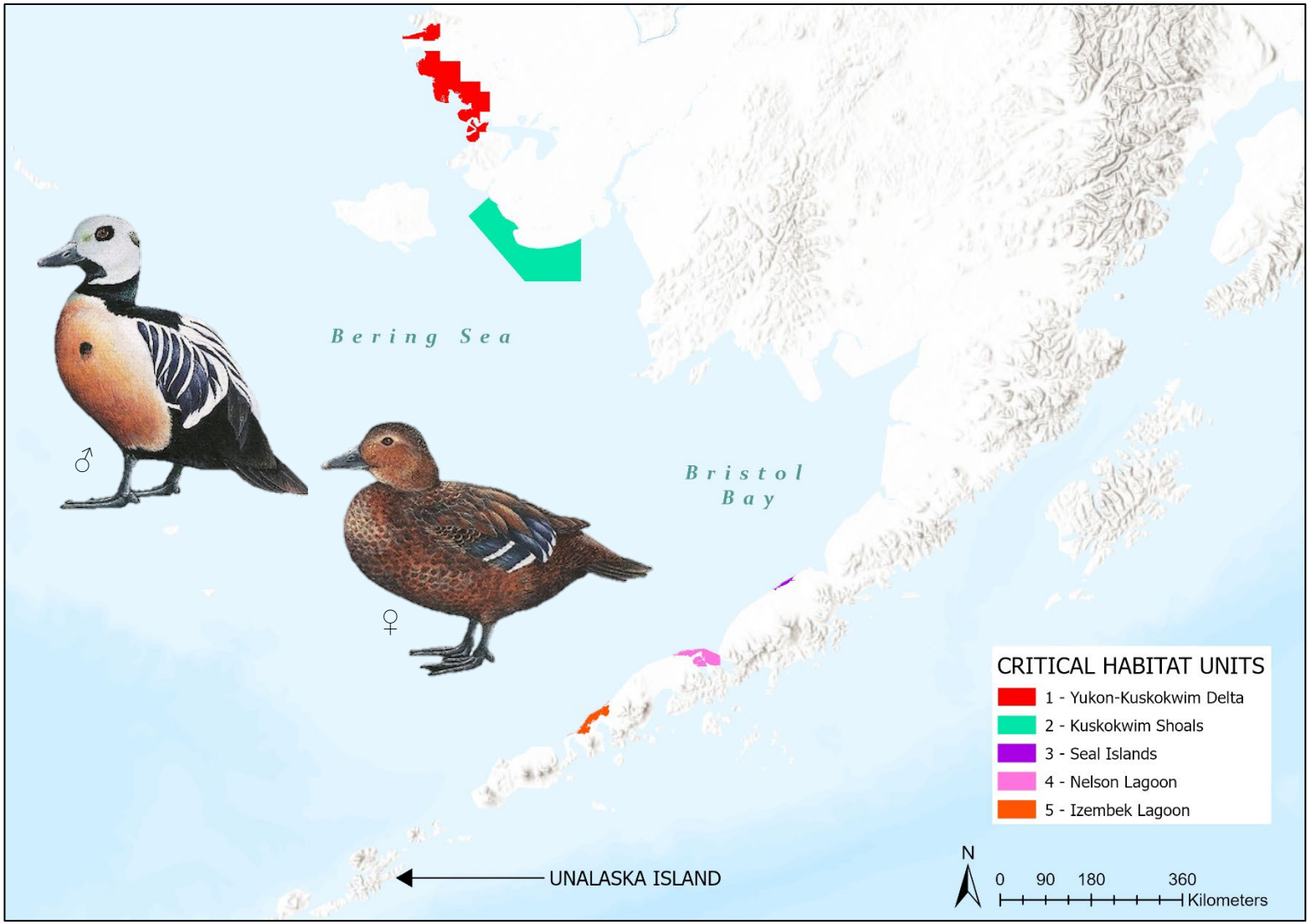

Figure 3-6. Steller's eider Alaska population critical habitat units.

Critical habitat units include the Yukon-Kuskokwim Delta (1); Kuskokwim Shoals (2); Seal Islands (3); Nelson Lagoon (4), and Izembek Lagoon (5). Illustrations of the male and female Steller's eider were obtained from the species profile on *Birds of the World*.

Short-tailed Albatross

Short-tailed albatross breed on several remote islands off the coast of Japan in the western Pacific, except for a recent nesting on Midway Island in the Hawaiian Island chain (USFWS, 2021). This species is widely dispersed, foraging across the northern Pacific Ocean and throughout the Gulf of Alaska, Aleutian Islands, and Bering Sea (Caboneras et al., 2020). In the marine environment, the species tends to concentrate in regions where upwelling and high primary productivity result in zones of abundant food resources, namely squid and pelagic fishes. The short-tailed albatross spends the non-breeding season within operational zone of Alaskan longline commercial fisheries, which can result incidental bycatch of the species. The occurrence of short-tailed albatross on Unalaska Island would be unlikely given that it is pelagic. Unalaska Island is within its range of occurrence; however, this species would only occur offshore. No critical habitat is currently designated for this species.

3.7.2 Marine Mammal Protection Act

The MMPA provides protection for all marine mammals regardless of a species' listing under the ESA. The NMFS ESA/MMPA mapper identifies Baird's beaked whale (*Berardius bairdii*), Dall's porpoise (*Phocoenoides dalli*), harbor seal (*Phoca vitulina*), killer whale (*Orcinus orca*), minke whale (*Balaenoptera acutorostrata*), northern fur seal (*Callorhinus ursinus*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), ribbon seal (*Histriophoca fasciata*), and Stejneger's beaked whale (*Mesoplodon stejnegeri*) as non-ESA marine mammals that potentially may be found within or immediately offshore of Amaknak and Unalaska Island in waters adjacent to the Proposed Action ROI (NMFS, 2022). These waters include Captains Bay, Dutch Harbor, Iliuliuk Bay, and Summer Bay.

3.7.3 Migratory Bird Treaty Act

The list of avian taxa known in Alaska include 541 naturally occurring species in 67 families and 21 orders (UAM, 2023). Except for the state-managed game bird species, all native birds in Alaska, including active nests, eggs, and nestlings, are protected under the Federal Migratory Bird Treaty Act (MBTA; USFWS, 2022b). Bird species that can be found on Unalaska Island at or around the Proposed Action ROI can be found in Appendix A. To avoid disturbance of nesting species while clearing vegetation on Unalaska Island, the USFWS timing recommendations are shown in Table 3-3.

Table 3-2. Timing recommendations to avoid disturbance of nesting birds.

Alaska Habitat Type	Shrub/Open	Seabird Colonies	Eagles
Aleutian Islands	April 25 – July 15	May 1 – September 15	March 1 – August 31

3.7.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) prohibits takings such as killing eagles or destroying nests, as well as regulates human activity or construction that may interfere with eagles' normal breeding, feeding, or sheltering habits. In the absence of trees, bald eagles (*Haliaeetus leucocephalus*) in the Aleutian Islands typically nest at

the tops of sea-stacks or cliffs (Byrd & Williams, 2008). At sites within areas of Proposed Action on Unalaska Island, sea-stacks and cliffs do not exist given that sites are inland from the coast. Bald eagles on Unalaska Island may be seen foraging anywhere along the coastline. This species tends to congregate around the port at Dutch Harbor, the dump, and on harbor infrastructure (i.e., stacked crab pots). No bald eagle surveys were conducted at the sites since bald eagles are not expected to nest in the Proposed Action sites. Golden eagle (*Aquila chrysaetos*), range includes most of Alaska, but the density of breeding territories varies greatly, and are probably highest in the mountainous regions of interior and northern Alaska and lowest in coastal areas including, but not limited to, the eastern Aleutians (Gibson & Byrd, 2007; Katzner et al., 2020). The USFWS species list in Appendix A does not include them at the Proposed Action site.

3.7.5 Anadromous Waters and Essential Fish Habitat

The Alaska Department of Fish and Game (ADFG) identifies anadromous waters within the FUDS property boundaries within its Anadromous Waters Catalog (AWC; Giefer and Graziano, 2022) (Figure 3-6). There have been no anadromous waters catalogued on Amaknak Island, though many anadromous streams have been identified on Unalaska Island. In general, the Iliuliuk River (AWC: 302-31-10500) is the largest anadromous stream with the greatest number of nominations across all FUDS properties on Unalaska Island (Figure 3-6). Anadromous fish species that occur on Unalaska Island include chum salmon (*Oncorhynchus keta*), coho salmon (*Oncorhynchus kisutch*), pink salmon (*Oncorhynchus gorbuscha*), sockeye salmon (*Oncorhynchus nerka*), and Dolly Varden (*Salvelinus malma*).

Captains Bay and Iliuliuk Bay are the waters immediately adjacent to the Proposed Action area. Both are within areas NMFS designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) as essential fish habitat (EFH). This includes all five species of Pacific salmon and numerous groundfish species. The total species list for Captains Bay and Iliuliuk Bay are in the EFH Reports of Appendix B. The EFH Reports were produced from the National Oceanic and Atmospheric Administration (NOAA) EFH Mapper.

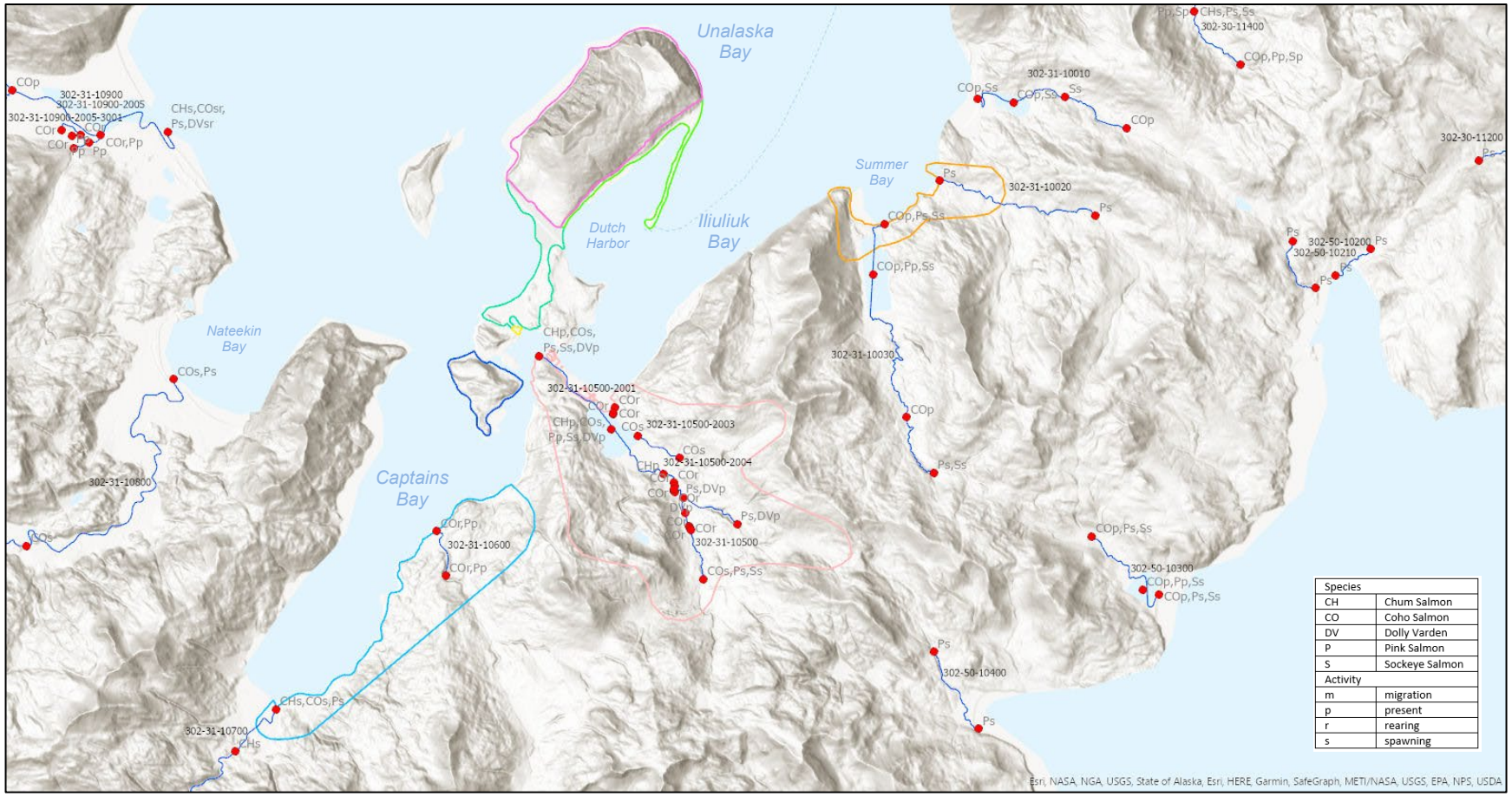

Figure 3-6. Anadromous waters within the Amaknak and Unalaska Island FUDS property boundaries.

The FUDS project boundaries are shown with respect to anadromous waters and nominations identified within the ADFG Anadromous Waters Catalogue (AWC). The AWC codes for anadromous streams are shown with respect to the nominations (red points), which are labeled with species present and activity.

3.7.6 Special Aquatic Sites

Special aquatic sites, identified as part of the Clean Water Act (CWA), are waters of the US possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general environmental health or vitality of the entire ecosystem of a region. The following ecosystems are considered to be special aquatic sites:

- Wetlands
- Coral reefs
- Sanctuaries and refuges
- Mudflats
- Vegetated shallows
- Riffle and pool complexes (in freshwater streams)

The wetlands within the Proposed Action ROI and future RmAs are most likely present and concentrated along the tributaries, streams, and surrounding waterbodies near Iliuliuk River, Unalaska Lake, and Summer Bay Lake. However, most of the area within the Proposed Action ROI and future RmAs is uplands, developed, or historically had high levels of anthropogenic disturbance. Detailed wetland delineation has not been conducted at any of the sites, which have been disturbed due to prior remediations and development (USACE, 2001).

Portions of Unalaska Island are part of the Alaska Maritime National Wildlife Refuge, administered by the USFWS (USFWS, 2022a). Within the Proposed Action area, Unalaska Lake, a portion of Iliuliuk River, and Summer Bay Lake are part of this refuge (Figure 3-7).

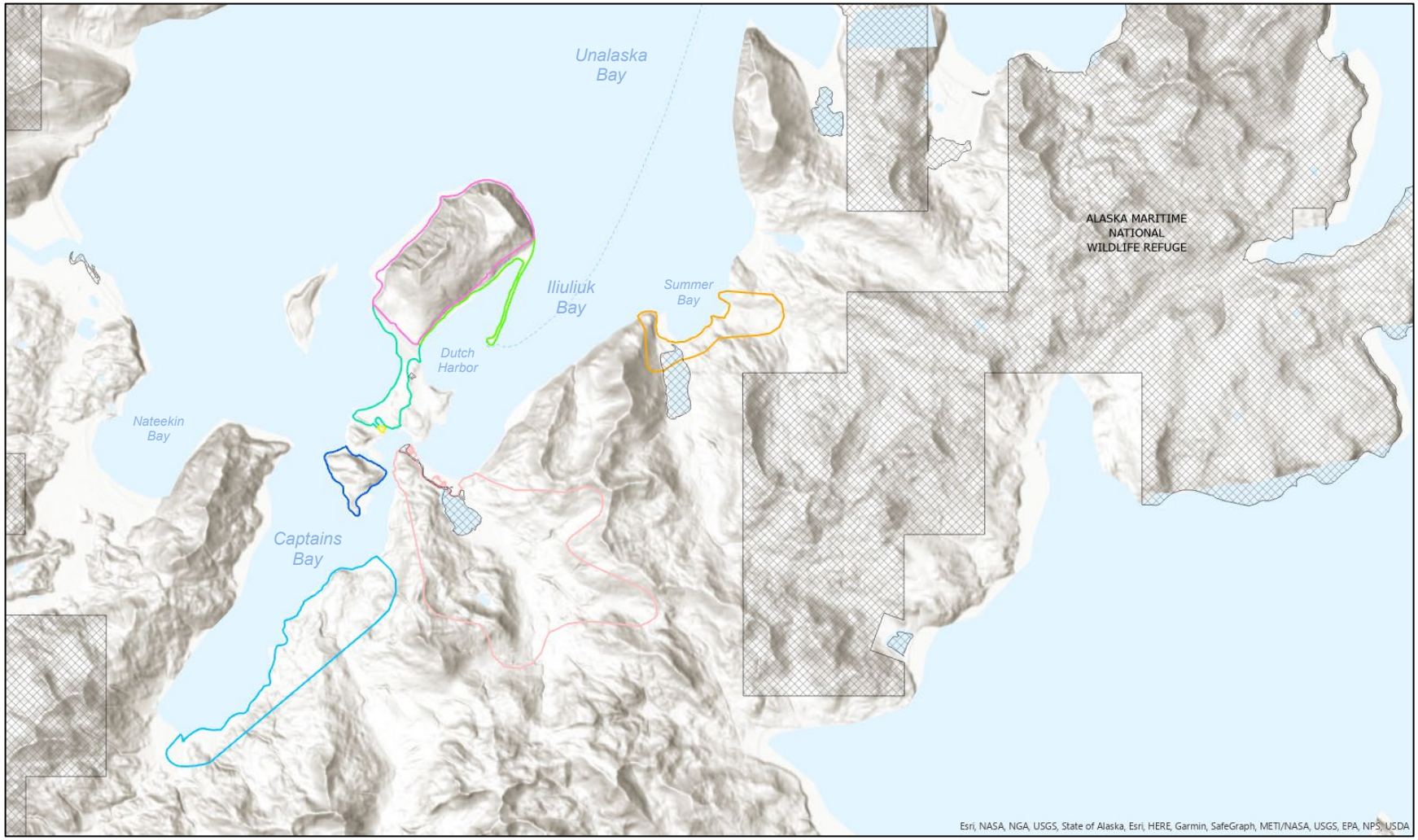

Figure 3-7. Alaska Maritime National Wildlife Refuge within the Amaknak and Unalaska Island FUDS project boundaries.

3.7.7 Cultural and Historic Resources

Amaknak Island and northeastern Unalaska Island is rich in cultural and historic resources. The eastern Aleutian Islands have been continuously occupied by Unangaŷ people since at least 9,000 precontact. The earliest known Unangaŷ sites are found on Hog Island in Unalaska Bay, just west of Amaknak Island. Unalaska Island has over 150 known precontact village sites. The earliest documented Russian contact with Unangaŷ of the Aleutian Islands occurred in 1741; the Russians first arrived on Unalaska Island in 1759. The first Russian Orthodox chapel at Unalaska was constructed in 1808. The existing Church of the Holy Ascension was built in 1896, and is a National Historic Landmark (NHL).

In 1902, an Executive Order set aside 23 acres on Amaknak Island for use as a U.S. Navy coaling station; however, the Navy did not use the land until they installed a radio station there in 1911. Although the Washington Naval Treaty outlined a need for the fortification of the Aleutian Islands in 1922, this need was not seriously taken into consideration until 1938. A Navy aerology station was established on Amaknak Island in July 1939. Construction of both Navy and Army installations began at Dutch Harbor in July 1940. By early 1941, a Navy Medical Detachment and a Marine Defense Force were barracked on Amaknak Island, while the U.S. Coast Guard maintained a station at Unalaska. Following a Japanese air attack in September 1942, the Army decided to disperse the congested Amaknak Island Fort Mears garrison into Unalaska Valley and Pyramid Valley, spurring new construction.

On January 1, 1943, the Dutch Harbor Naval Operating Base was commissioned, expanding the Naval Air Station with a newly constructed air operations building, antisubmarine net and boom depot, submarine base, and ship repair facility. At that time, the military structures in Unalaska Valley included mess halls, cabanas, Quonset huts, Armco huts, maintenance facilities, gasoline stations, laundries, barracks, underground storage tanks, and power generation equipment. In August 1944, Fort Mears was placed in housekeeping status. The naval submarine facility was decommissioned in 1945, and the Dutch Harbor Naval Operating Base was decommissioned on May 1, 1947. When the military officially ended its tenure on Unalaska Island in 1948, much of the infrastructure and many of the facilities that had been maintained by the military, including power plants, water and sewage pipes, and water treatment facilities, were abandoned. The remaining structures and lands associated with Fort Mears, including those in Unalaska Valley, were declared excess in 1952 (Kranda 2023).

Summer Bay-Humpy Cove and Little South America Sites

This EA will only directly address cultural resources in the areas scheduled for work in 2023: the Summer Bay-Humpy Cove and Little South America project sites. These sites have been formally evaluated for potential effects of the proposed actions, under Section 106 of the National Historic Preservation Act (NHPA). Similar evaluations of the

other sites discussed in this EA will be performed and coordinated with the State Historic Preservation Officer (SHPO) prior to the beginning of field work.

A USACE archaeologist conducted a site visit of Summer Bay-Humpy Cove and Little South America in 2021, and reviewed the Alaska Historic Resource Survey (AHRS) for documented cultural resources that may be within or near the area of potential effect (APE) of the proposed actions. Table 3-4 and Table 3-5 list these resources, along with their status with regards to the NHPA.

Table 3-4. Known cultural resources in the general vicinity of Summer Bay-Humpy Cove APE (Kranda 2023).

AHRS No.	Site Name	NRHP Status	In APE?
UNL-00009	Morris Cove	DOE-S	No
UNL-00092	Summer Bay Site	DOE-S	No
UNL-00193	UNL-00193 (Small Midden)	Unevaluated	No
UNL-00208	Summer Bay Flake Scatter	Unevaluated	No
UNL-00314	Humpy Cove Village	Unevaluated	No
UNL-00315	Morris Cove Lake Site	Unevaluated	No
UNL-00329	Fort Brumback Historic District	DOE-S	No
UNL-00332	Summer Bay Bridge	DREJ-X	**Yes**
UNL-00467	WWII Quonset Hut, Elephant Steel Magazines	Unevaluated	No
UNL-00547	Selendang Ayu Spill Related Site	Unevaluated	No
UNL-00548	Selendang Ayu Spill Related Site	Unevaluated	No
UNL-00576	Second Priest Rock, Ft. Brumback Searchlights #7 and #8	NXS	No

DOE-S — Property determined eligible for NHR by SHPO and Public Agency.
DREJ-S — Property determined not eligible for NHR by SHPO and Public Agency.
DREJ-X — Property determined eligible for NHR, but later determined not eligible for NHR.
NXS — Contributing site within a NHR, NHL, NHM, NHP district.
NHL — Property listed on the NHR and designated a National Historic Landmark.

Table 3-5. Known cultural resources in the general vicinity of Little South America APE (AHRS 2023).

AHRS No.	Site Name	NRHP Status	In APE?
UNL-00050	Amaknak Bridge Site	DOE-K	No
UNL-00052	UNL-00052 (Small remnant of midden)	Unevaluated	No
UNL-00053	UNL-00053 (Disturbed midden)	Unevaluated	No
UNL-00120	Dutch Harbor NOB and Ft. Mears US Army NHL	NHL	**Yes**
UNL-00122	Hill 400 Defenses	NXS	**Yes**
UNL-00125	Submarine Dock “Site” (disturbed midden)	Unevaluated	No
UNL-00469	UNL-00469 (Lithic Scatter and Site)	DOE-S	No
UNL-00597	Elephant Steel Magazines	DOE-S/NXS	No
UNL-00598	Magazine-Igloo Type	DOE-S/NXS	No
UNL-00599	Magazine-Igloo Type	DOE-S/NXS	No

DOE-S — Property determined eligible for NHR by SHPO and Public Agency.
DREJ-S — Property determined not eligible for NHR by SHPO and Public Agency.
DREJ-X — Property determined eligible for NHR, but later determined not eligible for NHR.
NXS — Contributing site within a NHR, NHL, NHM, NHP district.
NHL — Property listed on the NHR and designated a National Historic Landmark.

The one site identified within the Summer Bay-Humpy Cove APE is the Summer Bay Bridge, which will also be used to access the area for the proposed remedial activities. The Summer Bay Bridge was determined eligible for listing in the NRHP in 2002, but subsequently re-evaluated in 2011 and found to be not eligible for listing and no longer contributing to the Fort Brumback Historic District (UNL-00329) due to lack of integrity (Kranda 2023).

The Little South America Building 1154 UST (Mess Hall) and Latrine 1 UST cleanup sites are both within broad historic districts: the Dutch Harbor Naval Operating Base and Fort Mears United States Army National Historic Landmark (UNL-00120) which encompasses all Amaknak Island and some of Unalaska Island; and the Hill 400 Defenses Site (UNL-00122) which encompasses Little South America and is within the polygon for UNL-00120. The Building 1154 structure was torn down in the 1980s; the UST was removed in 2000 under a NHPA Programmatic Agreement (PA). The LSA Latrine 1 UST was also removed in 2000 under the same PA. Remains of the latrine structure are still present, including a sink, lengths of pipe, and camouflage netting.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 No-Action Alternative

The No-Action Alternative would avoid the short-term disruptions to the local environment that would be caused by the operation of heavy equipment and excavation of soil. However, the contaminated soil and waste materials would remain in place,

where it will continue to present a chemical hazard to human health and potentially allow the migration of chemical contaminants to the nearby environment.

4.2 Preferred Alternative

Under the Preferred Alternative, contaminated soils and waste materials would be removed from the site as described in Section 2.3. The potential environmental consequences are discussed in Sections 4.2.1 through 4.2.7.Effects on protected species, cultural and historic resources, and environmental justice and protection of children will use statutory language for the assessments of potential effects. All other resource categories' the magnitude of the effects will be evaluated using best professional judgement and these criteria that are tiered as follows (Doub, 2014):

- Minor: effects are not detectable or are so minor that they would neither destabilize nor noticeably alter any important attribute of the resource.
- Moderate: effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.
- Major: Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

4.2.1 Effects on Community and Land Use

The Proposed Action sites are in or near locations of human activity. At most, the Proposed Action can cause inconvenience and increased noise that would reduce the quality, of but not the prevention of outdoor subsistence and recreational activities within the immediate areas of the sites. The Proposed Action of cleaning up waste and contaminated soil would lead to the Project Site areas becoming safer for humans and wildlife, and although the FUDS removal projects do not include the demolition and removal of the large, deteriorating former military structures at the site, the cleanup of the various sites would encourage development of the area. Economically, the residents would benefit from the Proposed Action due to the temporary increase of business from project work and workers and to the long-term result of a cleaner environment. The magnitude of effects of the Proposed Action activities on community and land use would be minor.

4.2.2 Effects on Climate

The Proposed Action activities would be too limited in physical scope or duration to have any discernable effect on climate; the magnitude of effects would be minor.

4.2.3 Effects on Topography, Soils, and Hydrology

The small areas of excavation and backfill will not significantly alter the area topography or patterns of overland water flow in the area; the magnitude of effects would be minor.

4.2.4 Effects on Air Quality and Noise

Air quality may be affected during the project period from the use of construction equipment, vehicles, and generators. The USACE assesses that any increase in pollutant emissions caused by the project would be transient, highly localized, and

would dissipate entirely at the completion of the project. The area is not in a CAA "non-attainment" area, and the conformity determination requirements of the CAA would not apply to the Proposed Action at this time. The magnitude of effects on air quality would be minor.

The project activities would likely generate airborne noise higher than ambient levels for the project area, which may be noticeable to wildlife or any people in the area. Any disturbances would be short-lived and sporadic. The magnitude of effects from increased airborne noise would be minor.

4.2.5 Effects on Wildlife and Habitat

Because the Proposed Action activities would be highly localized in impacts and affect an area already altered by the former military construction, past cleanup efforts, and area development, the activities would have little effect on local wildlife and no long-term negative impact on their habitat. The Proposed Action ROI is surrounded by areas of similar, higher-quality habitat, and any wildlife displaced from the project area by noise and activity should be able to quickly resume their natural behavior. Ground-nesting birds are likely to be the most vulnerable animal species at the site. The destruction of active nests, eggs, or nestlings is a violation of the MBTA and/or the BGEPA. Therefore, field workers will need to check Proposed Action areas for nests or evidence of nests (e.g., adult birds exhibiting distraction displays, but staying in the immediate area). The magnitude of effects of Proposed Action activities on habitat and wildlife would be minor.

4.2.6 Effects on Protected Resources

4.2.6.1 Effects on Endangered and Threatened Species

The Proposed Action area is defined in the ESA regulations (50 CFR 402.02) as the area within which all direct and indirect effects of the project will occur. The Proposed Action area is distinct from, and larger than the project footprint. This is because some elements of the project may affect listed species some distance from the project footprint. The Proposed Action area, therefore, extends out to a point where no measurable effects from the project are expected to occur. All ESA-listed species that may be found in the Proposed Action area would be expected to be present in the marine environment.

NMFS defines the Proposed Action area for these projects to include the project cleanup site, and the vessel transit route between Anchorage and the project cleanup landing site, bounded by a 2 kilometers (1 nautical mile) buffer on each side of the route. Exact routes of project vessels cannot be precisely specified; however, it will be assumed the vessels will follow standard commercial shipping routes as depicted in Figure 4-1, Figure 4-2, and Figure 4-3 from Appendix D.

The standard commercial shipping routes through Cook Inlet travel through the Cook Inlet beluga whale critical habitat (Figure 3-4). Outside of Cook Inlet, it is likely that the route will be within Steller sea lion critical habitat, and will pass numerous Steller sea lion haulouts and rookeries (Figure 3-2; Figure 4-4). If the vessels travel along typical shipping routes; through Shelikof Strait and through Unimak Pass to travel north of the Aleutian Islands, the transit route would likely be through the Shelikof Strait, Bogoslof,

and Seguam Pass designated Steller sea lion special foraging areas (Figure 4-4). Although the vessels are less likely to travel east and south of Kodiak Island, weather conditions could necessitate that the vessels take this route, it is possible that the vessels would transit through the Gulf of Alaska portion of North Pacific right whale and humpback whale critical habitat (Figure 3-3).

This project would use scheduled vessels, not project-dedicated vessels, for transport of equipment and materials. Therefore, although effects from transit on ESA-listed species are anticipated, the Proposed Action should not cause any additional effects or impacts due to extra vessel transit routes. Additionally, because work will be conducted on land away from the shore, the most likely potential effect to endangered marine mammal species occurring in or near the Proposed Action ROI would be in-air noise and disturbance. Nonetheless, for this Proposed Action, noise and disturbance and physical strikes by water vessels will be assessed for the commercial shipping transit use.

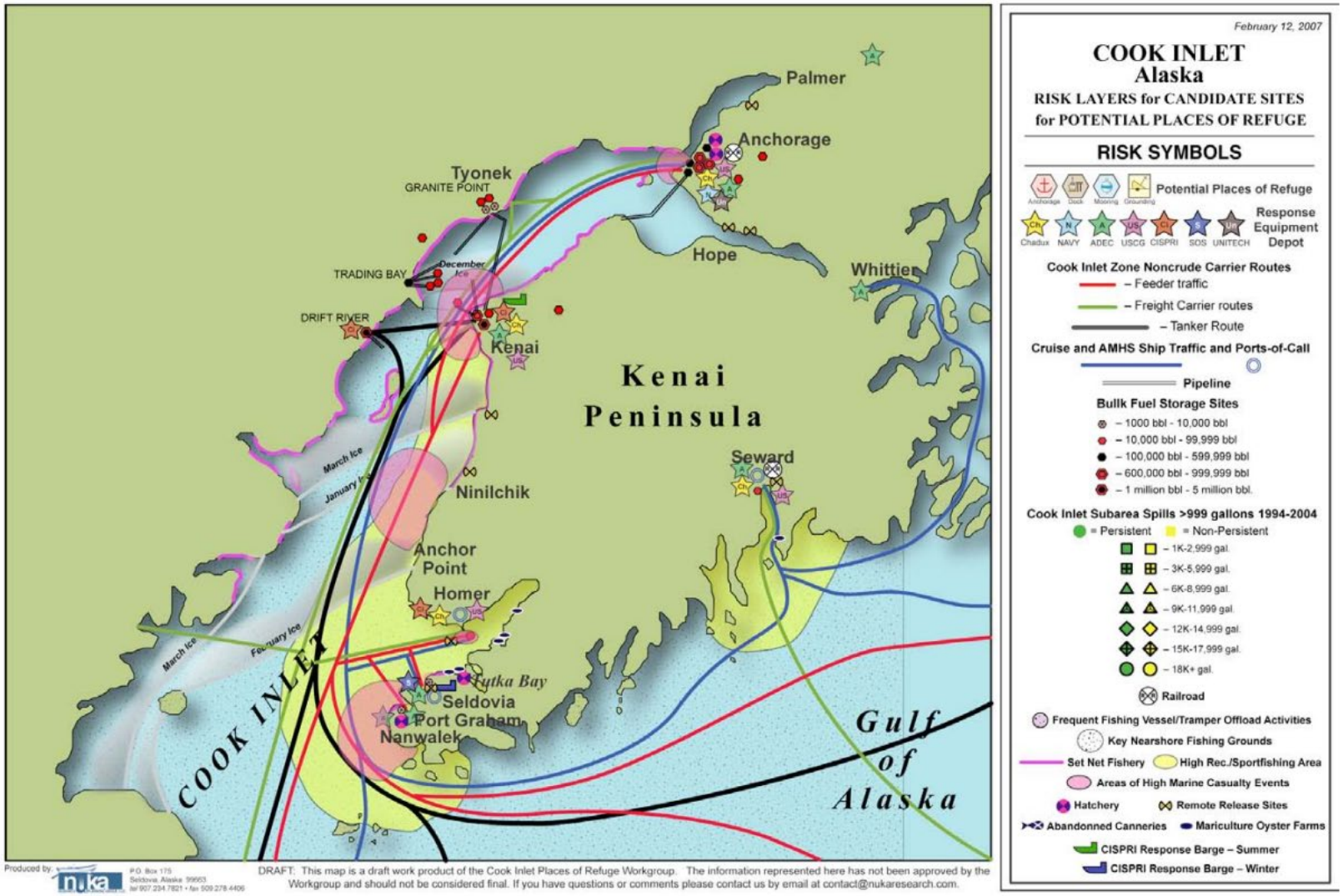

Figure 4-1. Standard commercial shipping routes through Cook Inlet.

Traffic type through Cook Inlet is depicted with the route lines: typical feeder traffic (red lines), tanker (black lines), and freight carrier routes (green lines).

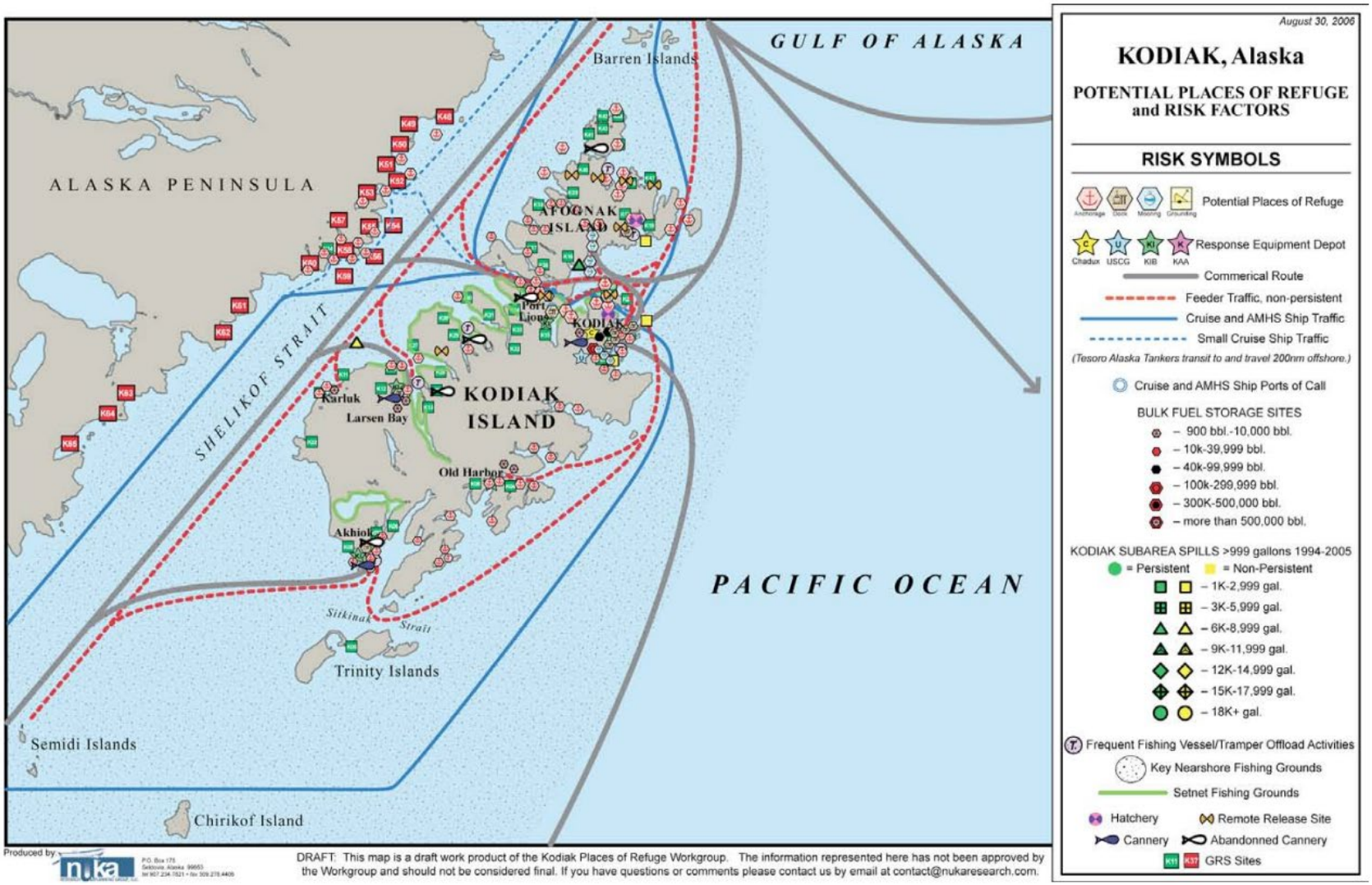

Figure 4-2. Standard commercial shipping routes through Shelikof Strait.

Traffic type through Shelikof Strait is depicted with the route lines: commercial traffic (gray lines), feeder traffic (dashed red lines), and cruise ship and Alaska Marine Highway System traffic (blue).

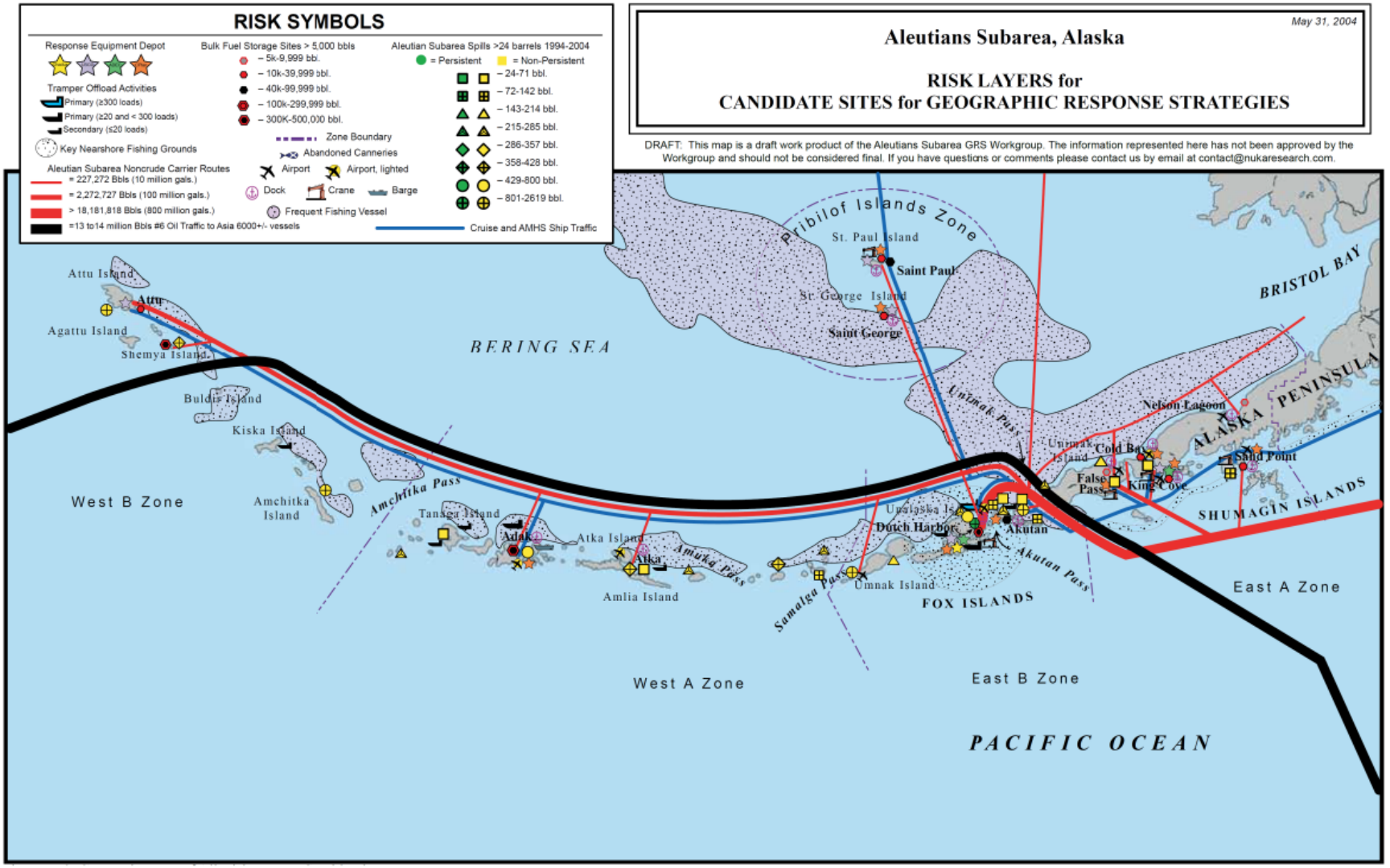

Figure 4-3. Standard commercial shipping routes through Bering Sea.

Traffic type through the Bering Sea is depicted with the route lines: tanker vessel transit (red and black lines), cruise ships or the Alaska Marine Highway System ferry (blue line).

Noise and Disturbance

For marine mammals, the distance that potentially disturbing sounds can carry underwater is an important component of the Proposed Action area. Since 1997, the NMFS has used generic sound exposure thresholds to determine whether an activity produces underwater sounds that might result in impacts to marine mammals (70 FR 1871). NMFS recently developed comprehensive guidance on sound levels likely to cause injury to marine mammals (Level A Harassment) through onset of permanent and temporary threshold shifts (PTS and TTS) (81 FR 51693). NMFS is in the process of developing guidance for behavioral disruption (Level B harassment). However, until such guidance is available, NMFS uses the conservative thresholds in Table 4-1 of underwater sound pressure levels expressed in root-mean-square (RMS), from broadband sounds that cause behavioral disturbance, and referred to as Level B harassment under section 3(18)(A)(ii) of the Marine Mammal Protection Act (MMPA):

Table 4-1. NMFS Level B harassment thresholds.

Sound pressure is the sound force per unit micropascals (µPa), where 1 pascal (Pa) is the pressure resulting from a force of one newton exerted over an area of one square meter. Sound pressure level is expressed as the ratio of a measured sound pressure and a reference level. The commonly used reference pressure level in acoustics is 1 µPa, and the units for underwater sound pressure levels are decibels (dB) re 1 µPa.

Underwater (dB re: 1 µPa)		
Sound Type	*Cetaceans*	*Pinnipeds*
Continuous Sound	120	120
Impulsive Sound	160	160

Airborne (dB re: 20 µPa)		
Sound Type	*Harbor Seals*	*Other Pinnipeds*
All Types	90	100

dB – decibels
re – referenced to [unit]
µPa – microPascal

For the buffers around vessel routes, we relied on empirical measurements of vessel noise from Cook Inlet (Blackwell and Greene, 2003), which suggest that received sound levels associated with project vessels would be expected to decline to 120 dB re 1 µPa RMS within 2 kilometers of the source.

Vessels Strikes

The probability and severity of strike events depends on the frequency, speed, and route of the marine vessels, as well as the distribution of marine mammals in the area. An analysis of ship strikes in Alaskan waters (Neilson et al., 2012) found that whale mortalities are more likely when large vessels travel at speeds greater than 12 knots. Another study (Vanderlaan and Taggart, 2007) used observations to develop a model of the probability of lethal injury based upon vessel speed, projecting that the chance of lethal injury to a whale struck by a vessel is approximately 80% at vessel speeds over 15 knots, but approximately 20% at 8.6 knots. The relatively low speed of a typical ocean-going barge and tug (typically no more than 9 knots), together with a barge's blunt prow and shallow draft, make it far less likely to strike and inflict injury upon a marine mammal than larger, faster ocean-going vessels such as cruise ships and cargo ships. The limited maneuverability and long stopping distance of a barge and tug would make it difficult for the vessels to avoid an observed marine mammal, and in many circumstances, unsafe for them to attempt to do so. Conversely, however, the vessel's low speed and consistent course would enable marine mammals to avoid the path of the barge and tug well before there was a danger of collision.

Mitigation Measures

The following avoidance and mitigation measures will be followed to reduce the risk of adverse effects on endangered and threatened species when the vessel is in transit (Appendix D):

Vessel Transit: These procedures apply to all vessels operating under contract for the Proposed Action.

- Consistent with safe navigation, project vessels will avoid traveling within 3 nautical miles of any of Steller sea lion rookeries or major haulouts (Figure 3-2; Figure 4-4) to reduce the risks of disturbance of Steller sea lions and collision with protected species.

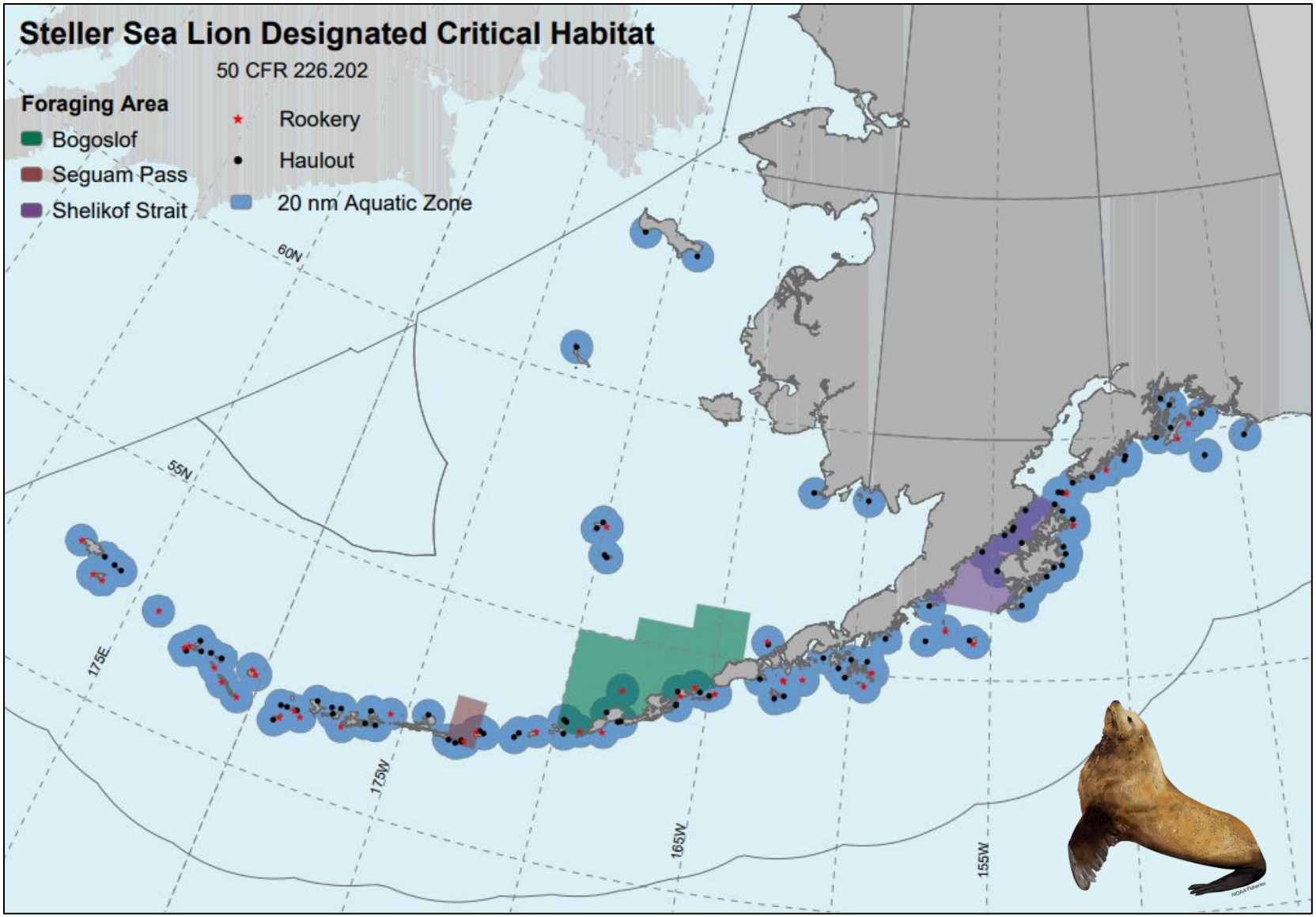

Figure 4-4. Steller sea lion designated critical habitat in southwestern Alaska.

- If travel within 3 nautical miles of major rookeries or major haulouts is unavoidable, vessels will reduce speed to 9 knots (10 miles per hour) or less while within 3 nautical miles of those locations.
- Vessels and barges will not allow tow lines to remain in the water, and no trash or other debris will be thrown overboard, thereby reducing the potential for marine mammal entanglement.
- The transit route for the vessels will avoid known Steller sea lion biologically important areas and designated critical habitat to the extent practicable.
- Vessels may not be operated in such a way as to separate members of a group of marine mammals from other members of the group.
- If a vessel approaches within 1.6 kilometer (1 mile) of observed whales, except in emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the whales by taking one or more of the following actions, as appropriate:
    - Steering around the whale(s) if possible.
    - Reducing vessel speed to less than 5 knots (9 kilometers per hour) and avoiding changes in direction and speed within 300 meters (1,000 feet) of the whale(s).
    - Checking the waters immediately adjacent to the vessel(s) to ensure that no whales will be injured when the propellers are engaged.
- Consistent with NMFS marine mammal viewing guidelines (https://alaskafisheries.noaa.gov/pr/mm-viewing-guide), operators of vessel should, at all times, avoid approaching marine mammals within 100 meters (100 yards) of whales to avoid whale disturbance.
- Vessels should take reasonable steps to alert other vessels in the vicinity of whale(s), and report any stranded, dead, or injured listed whale or pinniped to the Alaska Marine Mammal Stranding Hotline at 877-925-7773.
- When transiting through Cook Inlet, project vessels will maintain a distance of at least 1.5 miles from the mean lower low water (MLLW) line of the Susitna Delta Exclusion Zone (Figure 4-5).

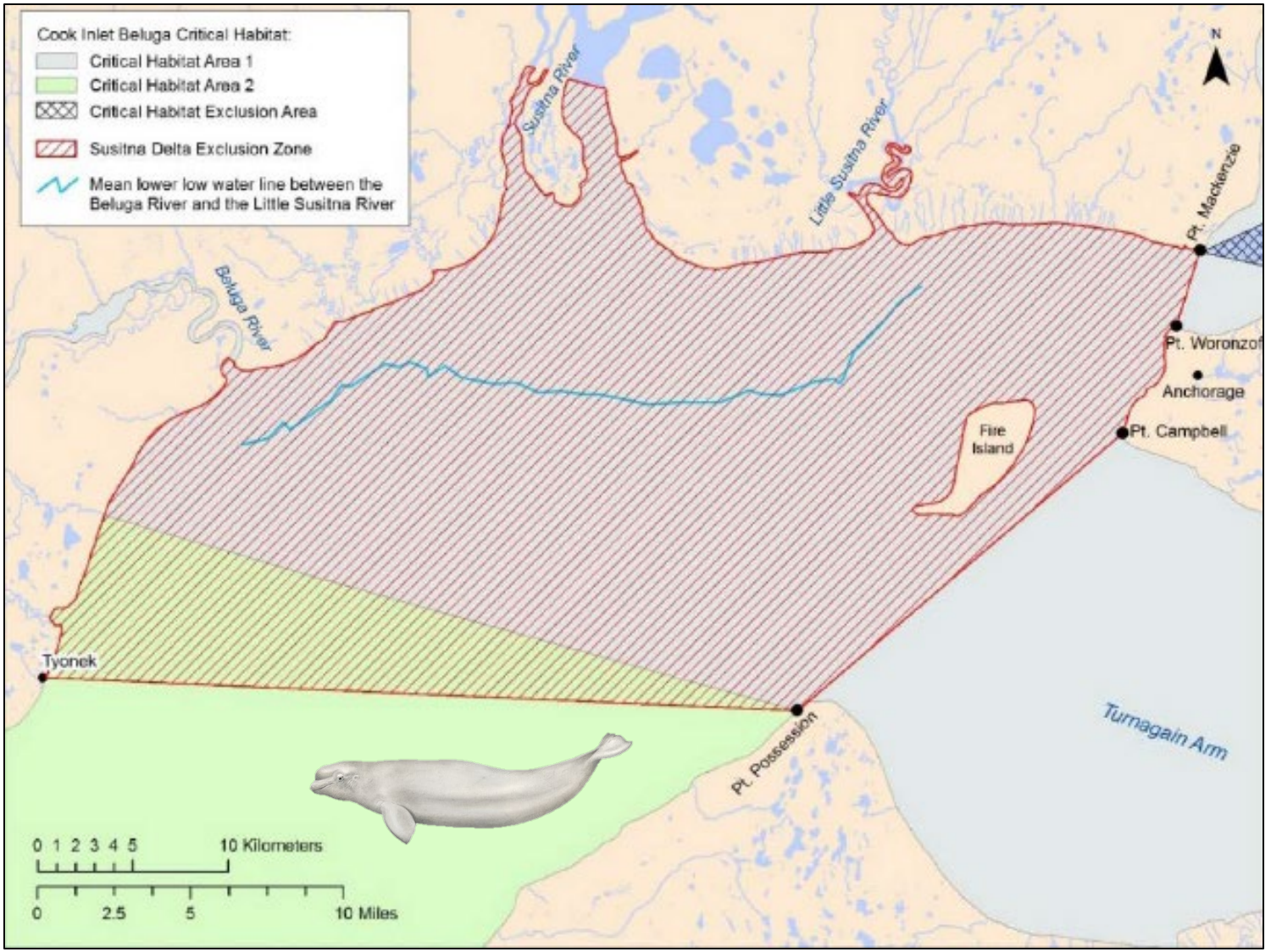

Figure 4-5. Susitna Delta Exclusion Zone for beluga whale.

The Susitna Delta Exclusion Zone (red) is shown with respect to the MLLW line (blue), between the Beluga River and Little Susitna River.

- Vessels will avoid transit within North Pacific right whale critical habitat (Figure 3-3) to the extent practicable. If transit within North Pacific right whale critical habitat cannot be avoided:
    - Vessel operators must reduce speed to 10 knots (19 kilometers per hour) and exercise caution while within North Pacific right whale critical habitat.
    - Vessels will maneuver to keep at least 800 meters (875 yards) away from any observed North Pacific right whale and avoid approaching whales head-on (consistent with vessel safety).
    - Vessels transiting through North Pacific right whale critical habitat must have Protected Species Observers (PSOs) actively engaged in sighting marine mammals.
    - A PSO is not required if vessels reduce speed to 5 knots while within North Pacific right whale critical habitat.
- Although take is not authorized, if a listed marine mammal is taken (e.g., struck by a vessel), it must be reported to NMFS within 24 hours. The following will be included when reporting take of a listed species:
    - Number of listed animals taken.
    - The date, time, and location of the take.
    - The cause of the take (e.g., vessel strike).
    - The time the animal(s) was first observed and last seen.
    - Mitigation measures implemented prior to and after the animal was taken.
    - Contact information for PSO, if any, at the time of the collision, ship's Pilot at the time of the collision, or ship's Captain.

The USACE conducted informal consultation in 2019 with the NMFS for similar FUDS project activities at several Aleutian Island sites. The USACE and the NMFS agreed (Wright, 2022) to leverage the NMFS 2019 Letter of Concurrence (NMFS, 2019) to cover the 2022 FUDS RmA activities on Unalaska and Amaknak Islands. Informal ESA consultation with the NMFS is ongoing for the activities described in this EA. As summarized in Table 4-2, the USACE adopts the same determinations of effect on ESA species and their critical habitat as the NMFS concurred with in 2019 and 2022.

Table 4-2. Summary of determinations for ESA-listed species.

Species	Agency Jurisdiction	USACE Determination of Effect on Species	USACE Determination of Effect on Critical Habitat
Steller sea lion *(Eumetopias jubatus)*	NMFS	May affect, but is not likely to adversely affect	Not likely to adversely modify or destroy
Humpback whale *(Megaptera novaeangliae)*	NMFS	May affect, but is not likely to adversely affect	No effect
North Pacific right whale *(Eubalaena japonica)*	NMFS	May affect, but is not likely to adversely affect	Not likely to adversely modify or destroy
Sperm whale *(Physeter macrocephalus)*	NMFS	May affect, but is not likely to adversely affect	N/A
Fin whale (*Balaenoptera physalus*)	NMFS	May affect, but is not likely to adversely affect	N/A
Blue Whale (*Balaenoptera musculus*)	NMFS	May affect, but is not likely to adversely affect	N/A
Gray whale (*Eschrichtius robustus*)	NMFS	May affect, but is not likely to adversely affect	N/A
Beluga whale (*Delphinapterus lecucas*)	NMFS	May affect, but is not likely to adversely affect	Not likely to adversely modify or destroy
Northern sea otter (*Enhydra lutris kenyoni*)	USFWS	No effect	No effect
Steller's eider (*Polysticta stelleri*)	USFWS	No effect	N/A
Short-tailed albatross *(Phoebastria albatrus)*	USFWS	No effect	N/A

N/A – Not Applicable.

The USACE also determines that the Proposed Action will have no effect on Steller's eider and short-tailed albatross, as they are not expected to be present during the summer nor will these species occur inland where the work will be conducted. Northern sea otters are present in the nearshore waters surrounding Amaknak and Unalaska Island but are unlikely to be affected by project activities. Large slow-moving vessels offer little risk of disturbing or striking sea otters, especially near established harbors and docks; however, skiffs and other small, fast watercraft do pose a risk for harassing, disorienting, and injuring sea otters (USFWS, 2022c). The USACE project will not be operating such small watercraft as part of this project, and therefore determines that the project will have no effect on northern sea otters.

The USACE received concurrence with these determinations from the NMFS for this project site in 2022. Both the NMFS and the USFWS will receive a copy of this EA for review and be notified prior to the start of the project's Proposed Action on Amaknak and Unalaska Island in 2023.

4.2.6.2 Effects on Marine Mammals

The anticipated effects on cetaceans or pinnipeds not listed under the ESA are expected to be the same as described above for the ESA-listed marine mammals. The USACE determines that the Proposed Action will not result in a taking under the MMPA. The magnitude of effects of project activities may affect, but is not likely to adversely affect marine mammals.

4.2.6.3 Effects on Migratory Birds

The USACE determines that the Proposed Action is unlikely to result in the killing of migratory birds, or destruction of active nests. The magnitude of effects of the Proposed Action activities may affect, but is not likely to adversely affect migratory birds.

4.2.6.4 Effects on Eagles

Nesting eagles are not expected at the Proposed Action sites. A few transient adult bald eagles may be seen from the sites and Proposed Action area, but the USACE anticipates a very low risk of a taking under the BGEPA. The magnitude of effects of project activities may affect, but is not likely to adversely affect eagles.

4.2.6.5 Effects on Essential Fish Habitat and Anadromous Waters

The USACE determines that the proposed activity will not alter or adversely affect marine or freshwater EFH and anadromous waters, due to the Proposed Action occurring outside the marine and freshwater environments along with the adoption of the mitigatory measures. The magnitude of effects of the Proposed Action activities on EFH and anadromous waters would be no effect.

4.2.6.6 Effects on Special Aquatic Sites

The Proposed Action area (Figure 1-1) has not been delineated for jurisdictional wetlands, but wetlands are presumed to be present, and there are refuge lands present (Figure 3-7). Much of the area to be excavated is highly localized and affected areas are already disturbed by former military construction, past cleanup efforts, and area development. Since a detailed wetland delineation has not been conducted, there is the potential that work would result in the discharge of fill materials into wetlands, which is subject to regulation pursuant to Section 404 of the CWA. If work necessitates the discharge of fill materials in wetlands or any other special aquatic site, the discharge will comply with the substantive requirements of the Department of the Army Nationwide Permit (NWP) 5 (Scientific Measuring Devices), NWP 6 (Survey Activities), and NWP 38 (Cleanup of Hazardous and Toxic Waste).

The removal of chemical contaminants from the project site is a remedial action in its own right that benefits the overall environment, and the USACE does not intend to mitigate for or attempt to restore the small, discontinuous areas of wetlands that may be

lost in the course of the project excavation and backfilling activities. The magnitude of effect of the Proposed Action activities on special aquatic sites would be minor.

4.2.7 Effects on Cultural and Historic Resources

As described in Section 3.7.7, the proposed remedial activities have the potential to affect historic properties and cultural resources in Summer Bay and on Little South America, some of which are contributing to the Dutch Harbor Naval Operating Base & Fort Mears National Historic Landmark. Removal of contaminated soil and installation of temporary groundwater monitoring wells will occur in areas where previous excavations or groundwater monitoring have occurred; no existing historical structures exist at the project sites in Summer Bay or at the former Building 1154 in Little South America, and removals and groundwater sampling at these sites will not impact any cultural resources or historic properties. Work at Latrine 1 on Little South America will require off road access on the side of a steep grade and on the inside slope of a revetment for the latrine. The USACE proposes to have an archaeological monitor on site for the work at Latrine 1 to guide site access, avoid potential adverse effects, and document the work.

The USACE has determined that the proposed activities at the Powerplant UST site at Summer Bay will result in no historical properties affected, and that the activities at the LSA Building 1154 and Latrine 1 sites will result in no adverse effect on historic properties. The USACE is seeking concurrence from the SHPO on these determinations; the FONSI will not be signed until coordination is complete.

The project will not impact any of the existing foundations or structural elements at any of the sites. There are no known precontact cultural resources at the sites and previous environmental remediation that included excavation at the project sites has not resulted in any post review discoveries of previously undocumented subsurface cultural resources.

4.2.8 Effects on Environmental Justice and Protection of Children

Executive Order (E.O.) 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations was issued in 1994. The purpose of the order is to avoid disproportionate adverse environmental, economic, social, or health effects from federal activities on minority and low-income populations.

USACE anticipates no disproportionate adverse effects on minority or low-income populations. Although Unalaska does have minority and low-income populations, the work will be conducted on previously remediated sites and project work will positively affect the community by increasing potential of bringing business to the local community.

On April 21, 1997, E.O. 13045, Protection of Children from Environmental Health and Safety Risks, was issued to identify and assess environmental health and safety risks that may disproportionately affect children.

There are children in the Proposed Action area; however, USACE anticipates no disproportionate health or safety risks to children as a result of the agency's Preferred Alternative. Rather, the Proposed Action should create a safer environment for children by removing potentially contaminated soil from the area.

5.0 REGULATORY COMPLIANCE AND AGENCY COORDINATION

A checklist of project compliance with relevant Federal, state, and local statutes and regulations is shown in Table 6-1.

National Environmental Policy Act (NEPA)

This EA and unsigned Finding of No Significant Impact (FONSI) were prepared using information gathered during iterations of this project, and the most recent correspondence with State and Federal resource agencies. Consistent with the NEPA process and the USACE regulations and guidance, the EA and unsigned FONSI are made available for a public review period. If requested, a public meeting may be held to discuss project alternatives and ask for public views and opinions.

Clean Water Act (CWA)

Where backfill is placed in excavations that have extended into wetlands, that fill would constitute a discharge under Section 404 of the CWA. The USACE, which is the enforcement authority for Section 404, does not issue itself CWA permits for its activities. However, the USACE incorporates by reference (in accordance with 40 CFR 1502.21) the analyses under NEPA and CWA Section 404(b)(i) performed for the issuance of NWP 38, "Cleanup of Hazardous and Toxic Waste":

> “Specific activities required to effect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority.”

The State of Alaska certified the full list of NWPs issued by the USACE in 2021, so no separate Section 401 Certificate of Reasonable Assurance is required for the Unalaska activities, which falls within the scope and intent of NWP 38. The Pre-Construction Notification (PCN) required under General Condition 31 to this NWP does not apply to this project, as the USACE is adopting the analysis behind the NWP and not the permit itself.

Endangered Species Act (ESA)

Informal ESA consultation with the NMFS is ongoing for the activities described in this EA; the FONSI will not be signed until coordination with NMFS has been completed. The USACE has determined that no ESA-listed species under USFWS jurisdiction will be affected by the proposed activities; therefore, no further consultation with the USFWS is necessary. Both the NMFS and the USFWS will have the opportunity to review this EA.

Marine Mammal Protection Act (MMPA)

The USACE determined that marine mammals identified through USFWS and NMFS online resources may be affected, but unlikely adversely affected by the Proposed Action. Both NMFS and USFWS will have the opportunity to review this EA.

Migratory Bird Treaty Act (MBTA)

The USACE has reviewed information on the migratory birds that may potentially occur in the Proposed Action area (Appendix A) and has made the determination that the planned activities are not likely to adversely affect any migratory birds nor their eggs or nests. No further coordination is required.

Bald and Golden Eagle Protection Act (BGEPA)

The USACE has reviewed information on the eagles that may potentially occur in the Proposed Action area and has made the determination that the planned activities are not likely to adversely affect any eagles nor their eggs or nests. No further coordination is required.

Magnuson-Stevens Fisheries Conservation and Management Act

The USACE has reviewed information on EFH in the Proposed Action area and has made the determination that the planned activities would have no adverse effect on EFH. No further coordination is required, but NMFS Habitat Division will have the opportunity to review this EA.

National Historic Preservation Act (NHPA)

The USACE will submit its determinations of effect to the SHPO in the near future; the FONSI will not be signed until coordination is complete.

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments

The USACE FUDS Program has engaged in activities to promote awareness of agency operations within the Amaknak FUDS through the Amaknak FUDS (now Qawalangin [regional] FUDS) Restoration Advisory Board (RAB) Meetings that occurred on November 17, 2020; March 16, 2021; May 6, 2021; June 28, 2021; August 13, 2021; November 10, 2021; January 19, 2022; May 4, 2022; August 3, 2022; November 9, 2022; March 1, 2023; and May 17, 2023 with the following federally recognized Tribes, Alaska Native Claims Settlement Act (ANCSA) village corporations, and ANCSA regional corporations:

- Qawalangin Tribe of Unalaska
- Ounalashka Corporation
- Aleut Corporation
- Aleutian Pribilof Islands Association

There have been more than 12 correspondences and 12 engagements discussing community priorities and interests for FUDS work on Unalaska and Amaknak Islands. The USACE personnel involved include/included the USACE Alaska District FUDS Project Managers, Environmental Engineers, Archaeologists, Tribal Liaison, and NALEMP Project Manager. These correspondences and engagements resulted in successful hybrid virtual/in-person RAB Meetings and recorded community response. At each meeting, opportunities were also created in the form of identifying additional community members who have interest in future work.

Further notification of FUDS Program actions within the Aleutian Region, to include this Proposed Project, was sent May 30, 2023, to the following entities:

- Native Villages of Akutan, Atka, False Pass, Nelson Lagoon, Unga, Belkofski, Pauloff Harbor, and Nikolski;
- Agdaagux Tribe of King Cove
- Qawalangin Tribe of Unalaska
- Aleut Community St. George Island
- Aleut Community of St. Paul Island
- Aleutian Pribilof Islands Association, Inc.
- The Aleut Foundation

- Aleut, Akutan, Atxam, Belkofski, Chaluka, Isanotski, King Cove, Nelson Lagoon, Ounalashka, Sanak, Shumagin, St. George Tanaq, Tanadgusix, and Unga Corporations

Coastal Zone Management Act

Alaska withdrew from the voluntary National Coastal Zone Management Program on July 1, 2011. Within the State of Alaska, the Federal consistency requirements under the Coastal Zone Management Act do not apply to federal agencies, those seeking forms of federal authorization, and state and local government entities applying for federal assistance.

6.0 CONCLUSION

The completed EA supports the conclusion that the Proposed Actions do not constitute a major Federal action significantly affecting the quality of the human environment. Table 6-1 shows the environmental compliance that these projects will meet in accordance with applicable laws and regulations. An environmental impact statement (EIS) is therefore not necessary for the agency's Proposed Action, and the prepared FONSI may be signed.

Table 6-1. Environmental compliance checklist.

FEDERAL LAW	COMPLIANCE
Clean Air Act	Fully Compliant
Clean Water Act	Fully Compliant
Coastal Zone Management Act	Not Applicable
Endangered Species Act	Fully Compliant
Estuary Protection Act	Fully Compliant
Federal Water Project Recreation Act	Fully Compliant
Fish & Wildlife Coordination Act	Not Applicable
National Environmental Policy Act	Partially Compliant*
Land and Water Conservation Fund Act	Fully Compliant
Marine Protection, Research & Sanctuaries Act	Not Applicable
National Historic Preservation Act	Fully Compliant
River and Harbors Act	Fully Compliant
Magnuson-Stevens Fishery Conservation & Management Act	Fully Compliant
Marine Mammal Protection Act	Fully Compliant
Bald Eagle Protection Act	Fully Compliant
Watershed Protection and Flood Preservation Act	Fully Compliant
Wild & Scenic Rivers Act	Not Applicable
Executive Order 11593, Protection of Cultural Environment	Fully Compliant
Executive Order 11988, Flood Plain Management	Fully Compliant
Executive Order 11990, Protection of Wetlands	Fully Compliant
Executive Order 12898, Environmental Justice	Fully Compliant
Executive Order 13045, Protection of Children	Fully Compliant
Executive Order 13175, Consultation and Coordination with Indian Tribal Governments	Fully Compliant

STATE AND LOCAL LAWS	COMPLIANCE
State Water Quality Certification	Fully Compliant
Alaska Statute 16.20.500 Critical Habitat Areas	Fully Compliant
Alaska Coastal Management Program	Not Applicable

*Full compliance will be attained upon the signing of the FONSI.

7.0 DOCUMENT PREPARATION

This EA was prepared by biologists Chris Floyd and Fern Spaulding from the Environmental Resources Section, Archaeologist Forrest Kranda, and FUDS Project Manager Rena Flint from the Alaska District, USACE.

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