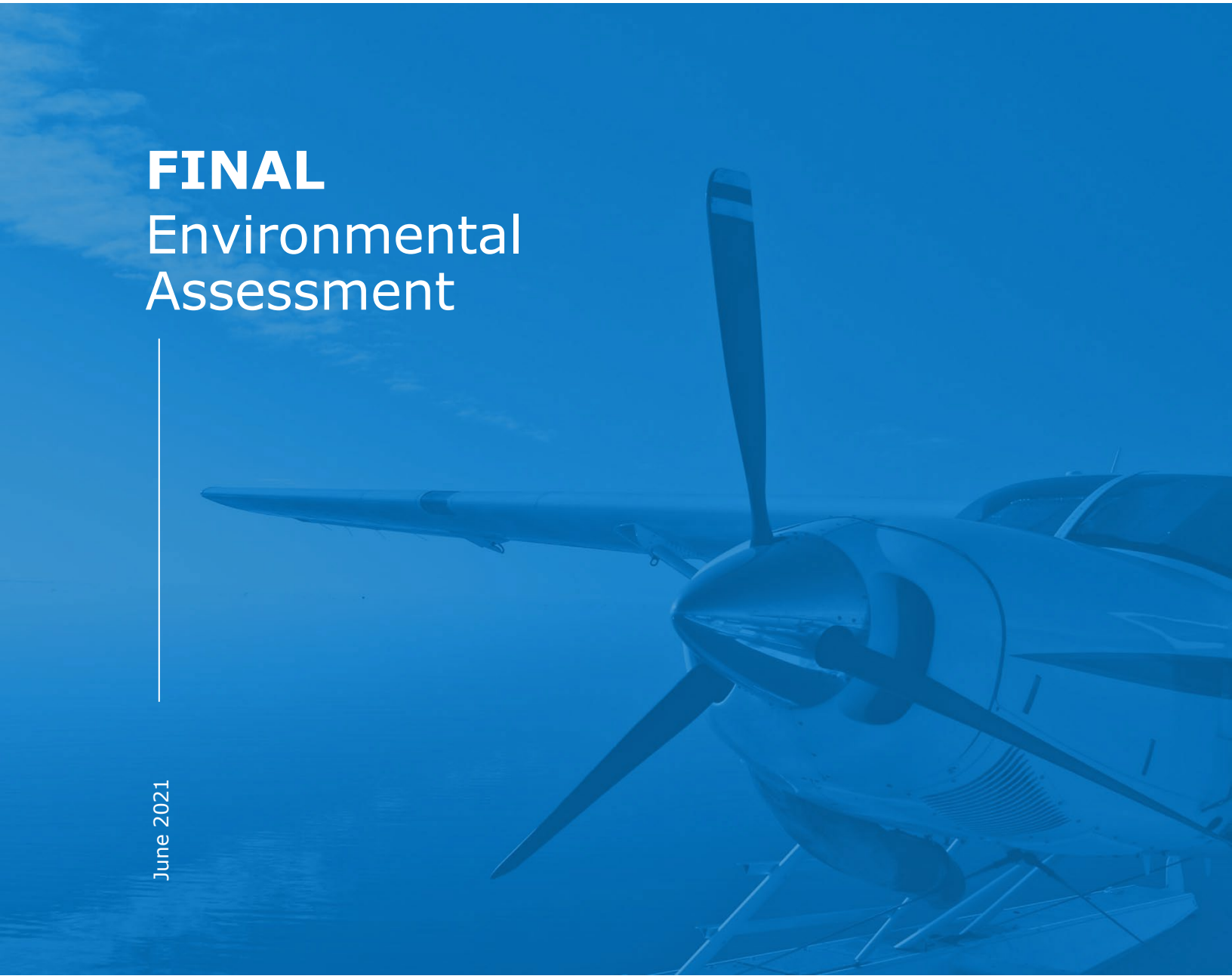
CITY & BOROUGH OF SITKA



FINAL
Environmental Assessment

June 2021

PREPARED FOR:
U.S. Department of Transportation
Federal Aviation Administration
Alaskan Region, Airports Division
222 West 7th Avenue
Anchorage, AK 99513

ON BEHALF OF THE SPONSOR:
City and Borough of Sitka
100 Lincoln Street
Sitka, AK 99835

PREPARED BY:
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Anchorage AK 99508

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Federal Aviation Administration
Airports Division

Finding of No Significant Impact
For
Sitka Seaplane Base

Summary

On behalf of the Federal Aviation Administration, the City and Borough of Sitka prepared the attached Final Environmental Assessment to analyze the potential environmental effects of construction and operation of a new seaplane base on Japonski Island in Sitka, Alaska. The new seaplane base would replace an existing deteriorating seaplane base that has been in operation for 65 years and is at the end of its useful life. The existing seaplane base location across Sitka Channel on Baranof Island has no potential for expansion.

The EA was prepared in accordance with the National Environmental Policy Act of 1969, as amended (42 United States Code § 4321 et seq.); Council on Environmental Quality National Environmental Policy Act implementing regulations (40 Code of Federal Regulations parts 1500 to 1508); Federal Aviation Administration Order 5050.4B, National Environmental Policy Act Implementing Instructions for Airport Actions; and Federal Aviation Administration Order 1050.1F, Environmental Impacts: Policies and Procedures.

After reviewing and analyzing available data and information on existing conditions and potential impacts, and the mitigation measures incorporated into the project, the Federal Aviation Administration has determined that, with the conditions contained in this document, the Proposed Action would not significantly affect the quality of the human environment. Therefore, the preparation of an Environmental Impact Statement is not required, and the Federal Aviation Administration is issuing this Finding of No Significant Impact. The Federal Aviation Administration has made this determination in accordance with applicable environmental laws and Federal Aviation Administration regulations. The Final Environmental Assessment is incorporated by reference and is attached to this Finding of No Significant Impact.

For any questions contact:

Jack Gilbertsen, Lead Environmental Protection Specialist, Federal Aviation Administration, 222 Seventh Avenue, Anchorage, AK, 99502, jack.gilbertsen@faa.gov, (907) 271-5453.

Purpose and Need

The purpose of the proposed Project is to address capacity, safety, and operational and condition deficiencies at the existing Sitka Seaplane Base. Seaplanes provide essential transportation services for Sitka residents and regional communities in Southeast Alaska where communities are scattered among a number of islands with no road access or land airports. The current base has insufficient capacity and space to accommodate current and future demand; a congested location with conflicting adjacent uses; poor, unsafe dock conditions for fueling and maneuvering on the docks; and congested sea lane and bird hazard conditions.

Proposed Action

The new Sitka seaplane base would be located on a 2.02-acre parcel at the end of Seward Street on the northeast end of Japonski Island. The upland parcel where the facility is proposed would be acquired from the Alaska Department of Education and Early Development and is adjacent to the U.S. Coast Guard Air Station Sitka.

The marine area for the seaplane base would be acquired from the Alaska Department of Natural Resources. The CBS has submitted to the Alaska Department of Natural Resources an application for conveyance of submerged and tidelands and received a preliminary approval for conveyance of tidelands adjacent to the upland parcel to accommodate seaplane floats and operations areas. The marine component of the facility would include a pile-supported trestle, a gangway, a landing float, a transient float, a based seaplane float, and, if needed, a floating wave attenuator north of the floats to attenuate waves from the main harbor entrance gap in the existing breakwater or southeast of the floats to attenuate waves from the channel to the south.

The proposed facility would include:

- Seaplane float (350 feet by 46 feet) with ramps for 14 based seaplanes (4 DE Havilland Beavers and 10 Cessna 206s)
- Transient seaplane float (220 feet by 30 feet) with capacity for four transient seaplanes (sized for DE Havilland Beavers)
- Drive-down gangway (120 feet by 16 feet) and landing float (120 feet by 46 feet) for access to seaplane floats
- Pile-supported trestle (240 feet by 16 feet) with 50-foot turn-out lane at gangway
- Wave attenuators on the north and southeast (if required)
- Vehicle parking area (15 parking spaces)
- Electricity, water, and lighting for the seaplane floats
- Covered waiting area and eventual terminal area
- Safe access between the parking positions and the water operating area
- Fuel storage and access facilities
- Upland seaplane parking areas and maneuvering room
- Seaplane haul out ramp
- Security fencing
- Landscape buffer along southern boundary
- Accommodations for future expansion, including aircraft maintenance facilities

Alternatives

The Sitka Seaplane Base Environmental Assessment analyzed two alternatives in detail, the Proposed Action and the No Action Alternative. Under the No Action Alternative, the new seaplane base would not be constructed and seaplane operations in Sitka Channel would continue to be based at the deteriorated seaplane base. Seaplane operations would continue to be limited by the existing site's deteriorated facility, the lack of support services, and the bird hazards related to seafood processing facilities adjacent to the site.

The No Action Alternative would not meet the purpose and need for the project.

Other alternative sites were evaluated but not carried forward for detailed analysis in the Environmental Assessment. These sites were primarily determined to have greater environmental effects, have more safety hazards associated with open waters and waves, or be too far from the community to be operationally feasible.

Environmental Impacts

The potential environmental impacts from the Proposed Action and No Action Alternative were evaluated in the attached Final Environmental Assessment for the relevant environmental impact categories identified in Federal Aviation Administration Order 1050.1F. Chapter 3 of the Final Environmental Assessment describes the affected environment and regulatory setting and identifies those impact categories not analyzed in detail. Chapter 4 of the Final Environmental Assessment analyzes the potential environmental impacts and the proposed mitigation measures and documents the finding that no significant environmental impacts would result from the Proposed Action. In addition, Chapter 4 addresses the requirements of special purpose laws, regulations, and executive orders.

A summary of the documented findings for each relevant impact category, including requisite findings with respect to relevant special purpose laws, regulations, and executive orders, follows.

Biological Resources: Approximately 1.64 acres of Essential Fish Habitat and endangered species habitat permanently filled to expand upland site, overwater structures would affect 1.34 acres of marine waters. Direct effects to humpback whales and Steller sea lions has the potential to result in Level B (behavioral) harassment (via disturbance reactions and/or masking). Humpback whales and Steller sea lions could experience a temporary loss of suitable habitat in the Project area due to elevated noise levels associated with in-water construction causing their displacement from the area. Displacement of either mammal by noise would not be permanent and would not result long-term effects to the local population. Impacts to marine mammal prey species are expected to be minor and temporary. Mitigation measures would be implemented to reduce impacts of noise on habitat. Therefore, indirect effects on Mexico distinct population segment of humpback whales or Western distinct population segment of Steller sea lions from prey effects from the Project are not expected to be substantial. Incidental Harassment Authorizations would be required from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for the take of marine mammals under the Marine Mammal Protection Act. The Project is not anticipated to have an effect on bald or golden eagles.

Consultation in accordance with Section 7 of the Endangered Species Act is underway with the National Marine Fisheries Service for listed marine species.

Hazardous Materials, Solid Waste, and Pollution Prevention: The Proposed Action does not involve a property on the National Priorities List and hazardous waste generation is not anticipated. Construction generated solid waste is not expected to exceed available landfill capacities.

Historical, Architectural, Archaeological, and Cultural Resources/Section 4f: The Proposed Action would adversely affect a historic structure that is recommended as eligible to the National Register as part of the Sitka Naval Operating Base and U. S. Army Coastal Defenses National Historic Landmark. Consultation is underway in accordance with Section 106 of the National Historic Preservation Act on appropriate mitigation to address this adverse effect. The Proposed Action would also impact an area historically used by the Tlingit and by tribal members for subsistence harvests.

Section 4f: The Proposed Action would result in adverse effects to an observation post located on the proposed site that is recommended as eligible for the National Register of Historic Places as a contributing element to the Sitka Naval Operating Base and U. S. Army Coastal Defenses National Historic Landmark. There are no feasible and prudent alternatives to the use of the site and all appropriate planning is being conducted to address the adverse effects of the use. Consultation is underway with interested parties to determine appropriate mitigation to address this adverse effect.

Land Use: Undeveloped land would change to aviation use at the seaplane base. This would increase the use intensity of the land, but is consistent with the adjacent U.S. Coast Guard air base and historic military aviation use of the area. Impacts to adjacent land uses from noise and traffic are described below.

Noise and Noise-Compatible Land Use: Aviation use would result in more noise generated from seaplane operations and traffic but noise levels would not exceed land use compatibility standards. Adjacent land uses consist of educational, health care, and residential areas for students and faculty. These areas are currently subject to aircraft noise from seaplane takeoffs in Sitka Channel as well as aviation operations related to the state airport and U.S. Coast Guard operations on Japonski Island. Individual seaplane operations may result in noise levels that are annoying on properties adjacent to or in close proximity to Sitka Channel. There may be more of these annoying noise events as a result of the improved facilities provided with the new seaplane base. These facilities are located in the 55 to 65 decibel Day-Night Level noise contours for the seaplane departure area in the channel, and therefore are considered to be compatible land uses under the Federal Aviation Administration's land use compatibility guidelines.

Traffic would increase on Seward Avenue increasing traffic noise levels at facilities along Seward Avenue. Seaplane base generated traffic is estimated at an average of 21 one-way trips per day, with up to 136 one-way trips on the peak season peak day.

Natural Resources and Energy Supply: No impacts to existing infrastructure (water, sewer, electric grid) are anticipated. Sufficient capacity for utilities and fill materials.

Socioeconomics: The project would have positive impacts on the Sitka economy and transportation system.

Environmental Justice: No disproportionately high and adverse effects on protected populations.

Children's Health and Safety Risks: Adjacent uses include clinical facilities for outpatient behavioral health treatment. Maximum noise levels inside clinics are unlikely to change substantially but noise annoyance may occur more often. Noise levels at the school and clinical facilities would remain within land use compatibility standards. Vehicle traffic would increase but unlikely to result in any substantial increase in safety risks.

Visual Effects: View from adjacent uses would change. Lowering the site elevation, buffering landscape at the cul-de-sac, and reorientation of floats to the north reduces visual impacts to adjacent uses.

Wetlands: Site development would result in fill of .06 acres of terrestrial wetlands, 0.17 acres of intertidal waters, and 1.47 acres of marine waters, for a total fill of 1.7 acres. A Clean Water Act Section 404 wetland fill permit would be required from the U.S. Army Corps of Engineers prior to construction.

Floodplains: The Project would result in 3.03 acres of fill in the Coastal High Hazard Area and would require a Development Permit under Sitka floodplain regulations.

Surface Waters: Approximately 2.98 acres of Sitka Channel would be affected by the Project. Approximately 1.64 acres of fill would be placed in Sitka Channel, and approximately 1.34 acres of Sitka Channel would be affected through construction of pile-supported trestles or shaded by floating or anchored elements (wave attenuator, floats). A Section 10 Rivers and Harbors Act would be required from the U.S. Army Corps of Engineers prior to construction and would include a U.S. Coast Guard navigation hazard review to minimize the potential for adverse effects to navigation in Sitka Channel.

Please refer to Chapter 5 for a full discussion of each of the environmental impact categories. Chapter 5 also addresses the potential for cumulative impacts of the Proposed Action when added to other past, present, and reasonably foreseeable future actions. The Federal Aviation Administration has determined that the Proposed Action would not result in significant cumulative impacts in any environmental impact category.

Mitigation Measures and Environmental Commitments

The City and Borough of Sitka has committed to the following mitigation measures and environmental commitments as part of the Proposed Action listed in this Finding of No Significant Impact.

Environmental Resource	Mitigation Measure/Environmental Commitments
Biological Resources	
Essential Fish Habitat	• Minimize the areal extent of fill in Essential Fish Habitat to the extent practicable, especially in areas that support managed species (eelgrass). • Slope fill to maintain shallow water, photic zone productivity; allow for unrestricted fish migration; and provide refuge for juvenile fish. • Use the fewest number of pilings necessary to support the dock structure and to allow light into under-pier areas, minimizing impacts to the substrate. • Require aircraft to operate at sufficiently low speeds to reduce wake energy, and follow no-wake zones designated near sensitive habitats.

	• Develop operations protocols to minimize contamination from bilge waters, seaplane accidents, general maintenance, fueling, and nonpoint source contaminants from upland facilities related to vessel operations and navigation. • Implement practical measures to reduce, contain, and clean up petroleum spills. • Pile installation and removal timeframes would be negotiated with the Alaska Department of Fish and Game and the National Marine Fisheries Service to minimize impacts during sensitive time periods when larval and juvenile stages of Essential Fish Habitat fish species are present. Pile installation will not occur during Herring spawning periods. • Minimize use of impact hammer; drive piles as deep as possible with vibratory hammer and socketing prior to impact hammer use. • Surround pile driving areas with a silt curtain during pile driving and temporary pile removal. • Remove temporary piles slowly to allow sediment to slough off at or near the mudline to reduce suspended sediment and turbidity. • Develop BMPs to prevent or minimize contamination from seaplane fueling, general maintenance, and non-point source contaminants from upland facilities.
Marine Mammals	• An Incidental Harassment Authorization and a finding of No Jeopardy will be obtained from the National Marine Fisheries Service for impacts to humpback whales and seals prior to any ground disturbance on the site. • An Incidental Harassment Authorization will be obtained from the U.S. Fish and Wildlife Service for impacts to sea otters prior to any ground disturbance on the site. • Minimize fill in marine waters, do not use dredging or in-water blasting during construction or operations. • Use the smallest-diameter and number of piles practicable. • Surround pile driving areas with a silt curtain during pile driving and temporary pile removal. • Do not ground floats or barges at any tidal stage. • Require construction contractor to maintain a spill cleanup kit on-site at all times and regularly check equipment for drips or leaks. • Make oil spill prevention and response equipment readily available for oil or other fuel spill containment and response. • Implement Best Management Practices to prevent petroleum products, cement, chemicals, or other deleterious materials from entering surface waters. • Implement a National Marine Fisheries Service-approved marine mammal monitoring plan during construction activities. The plan would include the following: ▪ Implement a 10-meter shutdown zone for construction-related activity when marine mammals are present. For activities that could cause acoustic injury, monitor beginning

	15 minutes prior to initiation of the activity until the activity is complete. ▪ Have Protected Species Observers (PSOs) present during pile driving and removal. Do not begin pile driving/removal until PSO gives notice to proceed. ▪ Use pile caps (pile softening material) to minimize the noise generated during pile installation. ▪ Use a "soft start" technique for impact pile driving with an initial set of three strikes from the impact hammer at 40 percent energy, followed by a one-minute waiting period, then two subsequent three-strike sets. ▪ Survey the shutdown zone for marine mammal presence for 30 minutes prior to pile driving. Delay pile driving/removal until marine mammals are confirmed to have moved outside of and on a path away from the area, or until 15 minutes (for pinnipeds or small cetaceans) or 30 minutes (for large cetaceans) have elapsed since the last sighting of the marine mammal within the shutdown zone. ▪ Implement a shutdown if a marine mammal appears likely to enter a shutdown zone. ▪ Perform all work during daylight hours and under appropriate weather conditions to allow for visual monitoring.
Invasive Species	• Pressure wash construction equipment to remove soil, seed, and plant material prior to moving onto or off the project site. • Use clean fill material, native plants, and certified native seed mixes to reduce risk of introducing invasive species. • Stabilize disturbed areas as soon as practicable.
Hazardous Materials, Solid Waste & Pollution Prevention	• Require construction contractor to have a Hazardous Materials Response Plan and Spill Prevention, Control, and Countermeasures plan. • Manage and dispose of construction waste in accordance with all state and federal solid-waste-management laws and regulations. • Require contractor to stop work and immediately notify City and Borough of Sitka and Alaska Department of Environmental Conservation if contaminated soil or groundwater is encountered during construction.
Historical, Architectural, Archaeological & Cultural Resources and Section 4(f)	• Execute a Memorandum of Agreement with the State Historic Preservation Officer, the National Park Service, the Sitka Tribe of Alaska, and the Sitka Historic Preservation Committee to document appropriate mitigation to resolve adverse effect on the observation post (SIT-01115) on site. • Lower the site elevation and use landscaping on the south side of the facility to minimize direct views of upland facility from National Historic Landmark.

	• Coordinate with National Park Service, Southeast Alaska Regional Health Consortium, and Mount Edgecumbe High School on blast plan to address minimization of blast impacts and monitoring. • Develop an Inadvertent Discovery Plan in coordination with the State Historic Preservation Officer and Sitka Tribe of Alaska with notification protocols for any discoveries. • Stop work if any human remains or archaeological artifacts are discovered and implement Inadvertent Discovery Plan notification process. • Provide archaeological and tribal monitoring for ground disturbing activities as coordinated with the Sitka Tribe of Alaska and the State Historic Preservation Officer.
Noise & Noise-Compatible Land Use	• Coordinate with National Park Service, Southeast Alaska Regional Health Consortium, and Mount Edgecumbe High School on blast plan to address minimization of blast impacts and monitoring. • Coordinate with seaplane pilots, Sitka Tribe of Alaska, Southeast Alaska Regional Health Consortium, and Mount Edgecumbe High School to develop a Fly Friendly noise minimization plan for the seaplane base.
Visual Impacts	• Lower the site elevation and use landscaping on the south side of the facility to minimize direct views of upland facility from National Historic Landmark.
Water Resources	
Wetlands	• A U.S. Army Corps of Engineers Section 404 permit would be obtained prior to any disturbance of or fill in Waters of the U.S. Appropriate compensatory mitigation for wetland and marine impacts, if required, would be determined during 404 permitting.
Floodplains	• A development permit would be obtained from the Building Official prior to site development.
Surface Waters	• A Section 10 permit would be obtained from the U.S. Army Corps of Engineers and the U.S. Coast Guard prior to construction in marine waters. The U.S. Coast Guard may require lighting on the wave attenuators and floats to minimize potential navigation hazards in low light conditions. • Construction activities would be conducted according to the Alaska Pollutant Discharge Elimination System General Permit for Discharges from Large and Small Construction Activities. • The construction contractor will be required to prepare a Stormwater Pollution Prevention Plan that identifies receiving waters and appropriate Best Management Practices to prevent erosion and to prevent untreated runoff from reaching nearby waterbodies during construction. • Any new fuel systems would have a spill prevention and response plan and oil spill cleanup supplies on site.

Conditional Finding of No Significant Impact (FONSI)

The Sitka Seaplane Base Finding of No Significant Impact (FONSI) is conditioned upon successful completion and acquisition of the follow process approvals and permits.

Approval Process/Permit	Legal Authority	Condition
Incidental Harassment Authorization – NMFS	Marine Mammal Protection Act	CBS must obtain an IHA from NMFS before any construction begins.
Incidental Harassment Authorization - USFWS	Marine Mammal Protection Act	CBS must obtain an IHA from USFWS before any construction begins.
No Jeopardy Finding	Endangered Species Act, Section 7 Consultation	CBS must obtain a finding of No Jeopardy from the NMFS for listed species.
Memorandum of Agreement	National Historic Preservation Act, Section 106 Consultation	CBS must complete the Section 106 consultation process and obtain a signed MOA documenting how the adverse effect on the observation post will be addressed.
		The MOA must also address inadvertent discovery of human remains and notification procedures.
Section 404 Permit	Clean Water Act	The CBS must obtain a Section 404 permit from the U.S. Army Corps of Engineers prior to any fill in Waters of the U.S.
Section 401 Water Quality Certificate	Clean Water Act	The CBS must obtain a Section 401 certificate from the State Department of Environmental Conservation prior to any fill in Waters of the U.S.
Section 10 Permit	Rivers and Harbors Act	The CBS must obtain a Section 10 permit from the U.S. Army Corps of Engineers (with review from the U.S. Coast Guard) prior to any construction in or over Sitka Channel.

Federal Finding and Approval:

I have carefully and thoroughly considered the facts contained in the attached EA. Based on that information, I find the proposed Federal Action is consistent with existing national environmental policies and objectives of Section 101(a) of the National Environmental Policy Act of 1969 (NEPA). I also find that proposed Federal Action with the environmental commitments and required

mitigation referenced above will not significantly affect the quality of the human environmental or include a condition requiring any consultation pursuant to Section 102(2) (C) of NEPA. As a result, FAA will not prepare an Environmental Impact Statement for this action.

Signed,

KRISTI A WARDEN Digitally signed by KRISTI A WARDEN
Date: 2021.06.09 15:25:32 -08'00'

Kristi A. Warden
Director
FAA Alaskan Region, Airports Division

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Figures

Tables

Appendices

Acronyms

AAC	Alaska Administrative Code
AC	Advisory Circular
ACZA	ammoniacal copper zinc arsenate
ADEC	Alaska Department of Environmental Conservation
ADEED	Alaska Department of Education and Early Development
ADF&G	Alaska Department of Fish and Game
AKEPIC	Alaska Exotic Plant Information Clearinghouse
APDES	Alaska Pollutant Discharge Elimination System
AWC	Anadromous Waters Catalog
BMPs	Best Management Practices
CBS	City and Borough of Sitka
CWA	Clean Water Act
dB	Decibel
DCRA	Department of Community and Regional Affairs
DNL	Day-Night Average Sound Levels
DNR	Alaska Department of Natural Resources
DPS	distinct population segment
EA	Environmental Assessment
EFH	Essential Fish Habitat
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FMP	Fisheries Management Plans
HMRP	Hazardous Materials Response Plan
IC	institutional controls
IHA	Incidental Harassment Authorization
IPaC	Information for Planning and Conservation
MHW	mean high-water
MMPA	Marine Mammals Protection Act
MSL	Mean sea level
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOB	Naval Operating Base
NPFMC	North Pacific Fishery Management Council
NPS	National Park Service
NRHP	National Register of Historic Places
PSOs	Protected Species Observers
RFFA	reasonably foreseeable future actions
SCAP	Sitka Climate Action Plan
SEARHC	Southeast Alaska Regional Health Consortium
SHPO	State Historic Preservation Officer
SolsticeAK	Solstice Alaska Consulting Inc.
SPCC	Spill Prevention, Control, and Countermeasures
UAA	University of Alaska Anchorage
U.S.	United States
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDPS	Western DPS
WOUS	Waters of the United States
WWII	World War II

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Executive Summary

The City and Borough of Sitka, in cooperation with the Federal Aviation Administration, is proposing a new seaplane base on Japonski Island in Sitka, Alaska. The new seaplane base is needed because the existing seaplane base is deteriorating and in poor condition. The existing seaplane base has been operating at its current location on the west shore of Baranof Island for 65 years and is at the end of its useful life and the site location has no potential for expansion.

The new seaplane base would be located near 1190 Seward Avenue on the northwest side of Japonski Island, approximately 1.4 miles west of downtown Sitka and approximately 600 miles from Anchorage at 57.055418 North Latitude; -135.363889 West Longitude (Sec. 34 and 35, T55S, R63E, Copper River Meridian, United States Geological Survey Quadrangle Sitka A5).

Purpose & Need

The purpose of the proposed Project is to address capacity, safety, and operational and condition deficiencies at the existing Sitka Seaplane Base. Seaplanes provide essential transportation services for Sitka residents and regional communities in Southeast Alaska where communities are scattered among a number of islands with no road access or land airports. The current base has insufficient capacity and space to accommodate current and future demand; a congested location with conflicting adjacent uses; poor, unsafe dock conditions for fueling and maneuvering on the docks; and congested sea lane and bird hazard conditions.

CBS worked with aviation stakeholders to identify the facilities needed to support safe and efficient seaplane operations. Facility needs identified were:

- A seaplane float for based seaplanes;
- A transient seaplane dock for loading unloading, and mooring without removing the aircraft from the water;
- A haul-out ramp to allow based seaplanes to be removed from the water for long-term parking, storage, washing, and maintenance;
- On-site aircraft maintenance facilities;
- Gangways with handrails for safe passenger and freight loading;
- A covered passenger waiting area with restrooms,
- A fuel storage and delivery system,
- A landside vehicle parking area, and
- Potential for lease lots for support services (such as repairs and maintenance).

Alternatives Considered

The City and Borough of Sitka has evaluated over a dozen sites over the last 20 years to address the need for a new seaplane base. Three siting studies have been completed, all of which recommended the Japonski Island site. Other sites were not able to meet the Project needs from a safety, environmental, or capacity perspective. Therefore, this Environmental Assessment addresses only the Proposed Alternative and the No Action Alternative.

Final Environmental Assessment

This Environmental Assessment and the Finding of No Significant Impact has been reviewed and approved by the responsible Federal Aviation Administration official as documented in the attached Finding of No Significant Impact signed by Kristi A. Warden on June 9, 2021.

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1.0 Introduction

The City and Borough of Sitka (CBS) owns and operates the Sitka Seaplane Base (Federal Aviation Administration [FAA] identifier A29). A29 is located on Sitka Channel between Thomsen and ANB harbors (Figures 1 and 2); it has been operating at its current site for 65 years and is at the end of its useful life. Despite the poor condition of the existing facilities and the lack of support infrastructure, seven of the seaplane base's eight slips are currently leased, and operations (takeoffs and landings) were estimated at 1,043 for 2018 (CBS 2020a). CBS, in cooperation with FAA, is proposing a new seaplane base on Japonski Island.

Sitka, Alaska is located on Baranof Island on Sitka Channel approximately 600 air miles from Anchorage at 57.0527 North Latitude; -135.3311 West Longitude (Sec. 36, T55S, R63E, Copper River Meridian, United States Geological Survey [USGS] Quadrangle Sitka A5). Sitka is accessible only by air or water. It is approximately 95 miles from Juneau and 150 miles from the nearest Alaska road system at Haines.

The Island was home to the Tlingit Indians before its settlement by Russians in the mid-eighteenth century and they continue to live in the area and continue their traditions and subsistence harvests. It served as the capital of the Russian America Territory and was a major center for the United States military during World War II. Sitka now serves as a hub for health care, goods distribution, and transportation for neighboring communities. Most of the smaller communities using Sitka as a hub are accessible only by seaplane. The availability of floatplane transportation is critical to the Sitka economy and to medical, personal, and tourism transportation. Sitka's seaplanes are important to the social and economic fabric of this coastal region's remote communities, lodges, recreation areas, hatcheries, and fishing fleets. Government agencies including the U.S. Forest Service, U.S. Fish and Wildlife Service (USFWS), Alaska Department of Fish and Game (ADF&G), Alaska State Troopers, and the Civil Air Patrol require seaplanes to access remote communities and resources.

Because a new seaplane base would require FAA Alaskan Airports Division approval and funding of the Proposed Action Alternative (a federal nexus as defined under the National Environmental Policy Act [NEPA]), an Environmental Assessment (EA) is required. This document serves to evaluate the environmental effects of the proposed action, which is discussed further in Chapter 3.0 (Proposed Action).

Figure 1: Location and Vicinity Map

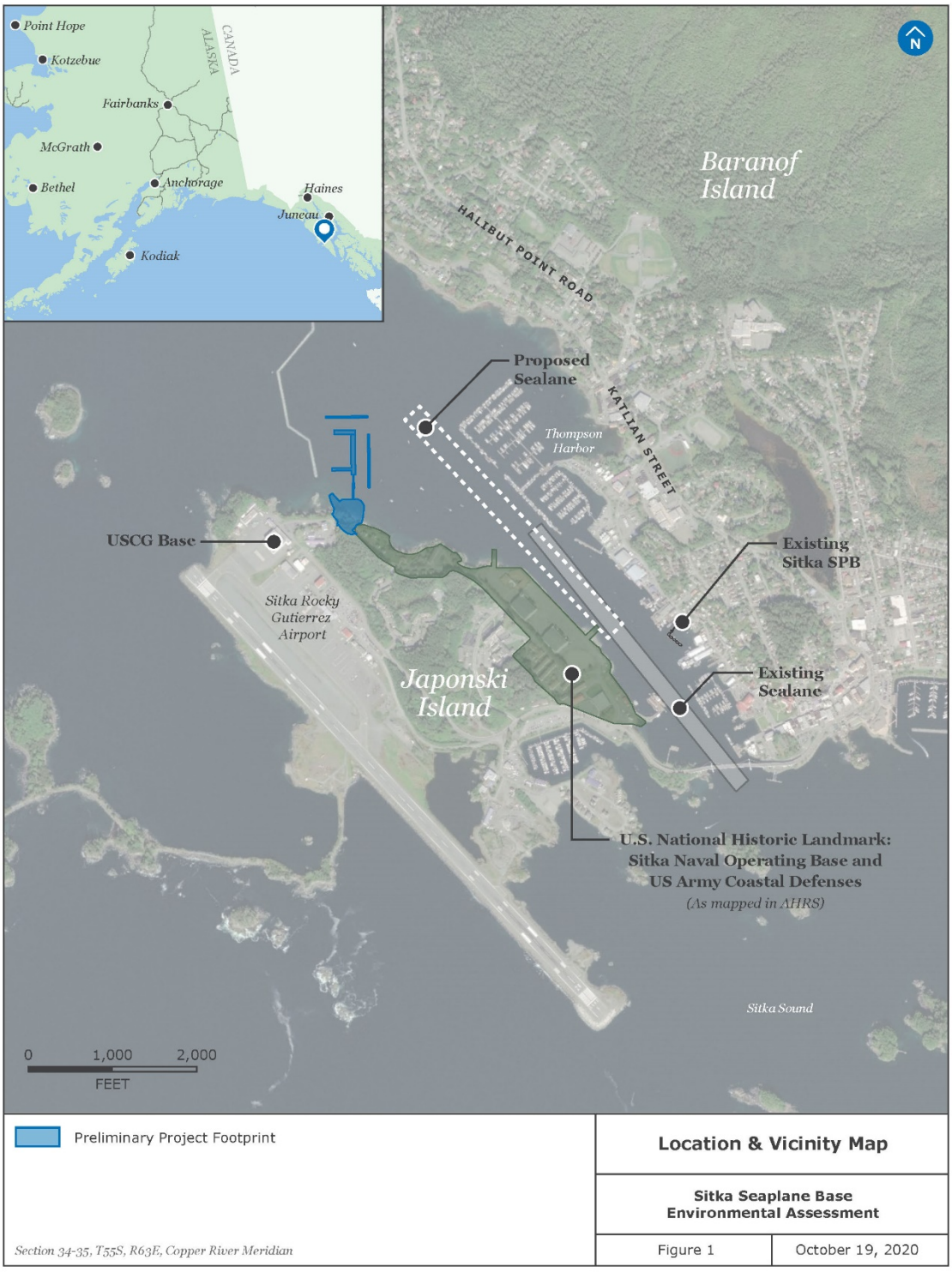
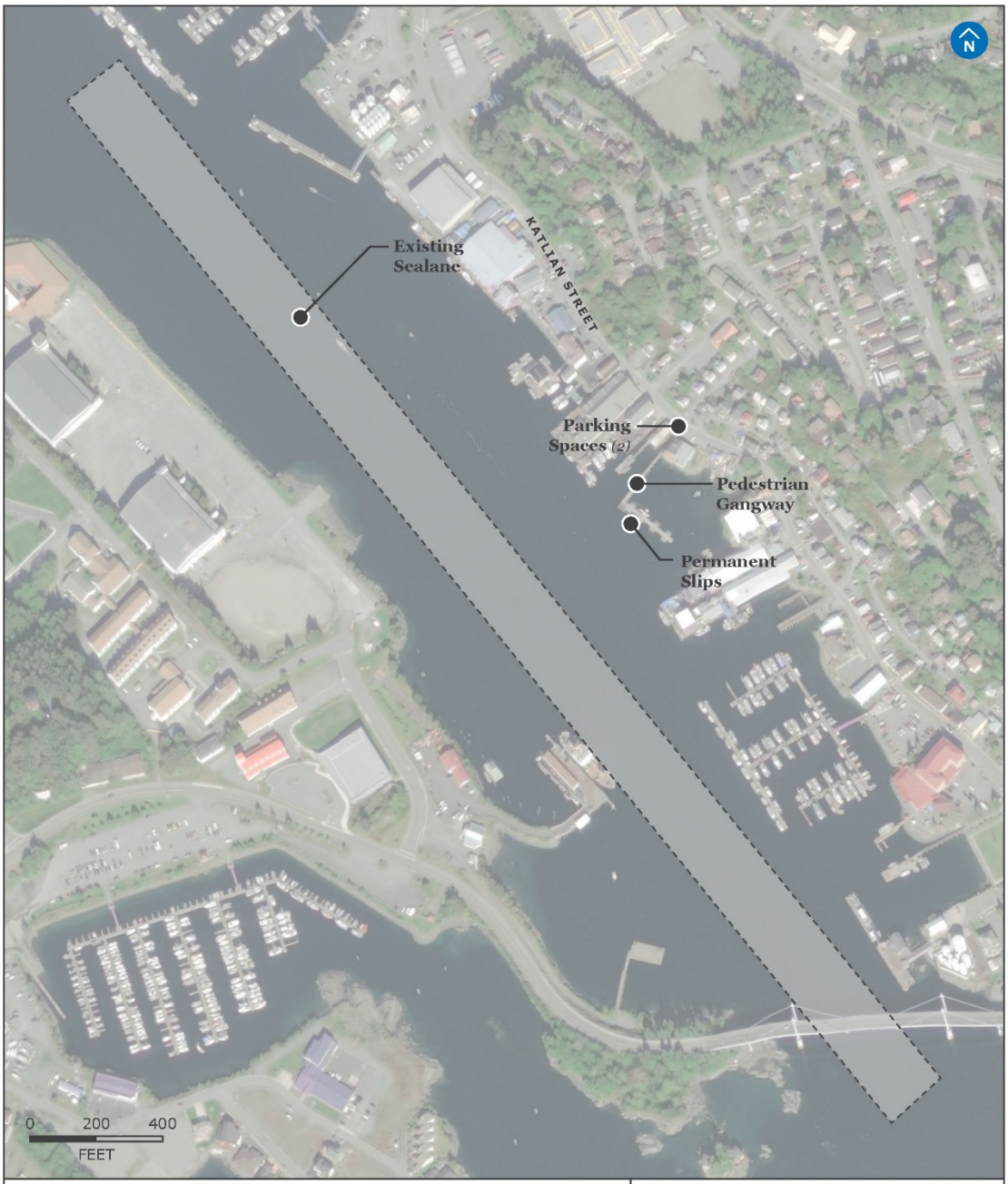


Figure 2: Existing Site Facilities



	Existing Site Facilities
	Sitka Seaplane Base Environmental Assessment
Section 34-35, T55S, R63E, Copper River Meridian	Figure 2 | October 19, 2020

2.0 Purpose & Need

The purpose of the proposed Project (Project) is to construct a new seaplane base in Sitka to address capacity, safety, and operational and condition deficiencies at the existing Sitka Seaplane Base (A29). The condition of the A29 facilities have deteriorated and the site has insufficient capacity and the inability to expand due to site constraints. The timber floats are weathered, have lost their preservative treatment, and are losing their floatation capability. In January 2016, A29 was temporarily closed because one pile supporting the transient float collapsed, damaging the transient float. A dive inspection showed significant pile section loss for another three piles. CBS made emergency temporary repairs to allow A29 to reopen in Fall 2016. Repairs included sleeving piles with larger diameter piles, structural float repairs, and additional floatation for the floats. These repairs have a limited useful life, and complete reconstruction would be required to maintain this seaplane base for long-term use. In addition to needing substantial repairs, A29 has insufficient capacity and the inability to expand due to the constraints of the current location, congested sea-lane, and conflicts with boat traffic and birds. A new seaplane base is needed to address the unsafe and hazardous conditions at the existing facility and to provide needed air transportation facilities for Sitka residents and surrounding communities.

Three studies have evaluated solutions to address the deficiencies at the existing location (HDR 2002, DOWL 2012, DOWL 2016). The 2016 Siting Analysis (DOWL 2016) states:

> "Capacity concerns are evidenced by A29's recent full occupancy, a waiting list of seaplane owners who had been waiting two years or more to rent a slip, and interviews of seaplane pilots and businesses wanting to use a public seaplane base in Sitka. Safety concerns include concentrations of seabirds in and around A29's operating area, conflicts with boat traffic, lack of adequate taxi lane clearance between the seaplane base floats and neighboring Sitka Sound Seafoods facility, and submerged rock obstructions adjacent to the floats. Operational concerns include the lack of fueling facilities that requires seaplane operators to carry and dispense fuel from small containers, and inadequate vehicle parking. A29 is also unable to adequately serve commercial traffic because it lacks enough vehicle parking, on-site aircraft maintenance, a drive-down ramp to the floats, a passenger shelter, and equipment storage."

CBS worked with aviation stakeholders during the seaplane studies to identify the facilities needed to support safe and efficient seaplane operations and to provide a financially self-supporting transportation facility. Facility needs identified were:

- A seaplane float for based seaplanes;
- A transient seaplane dock for loading, unloading, and mooring without removing the aircraft from the water;
- A haul-out ramp to allow based seaplanes to be removed from the water for long-term parking, storage, washing, and maintenance;
- On-site aircraft maintenance facilities;
- Gangways with handrails for safe passenger and freight loading;
- A covered passenger waiting area with restrooms,
- A fuel storage and delivery system,
- A landside vehicle parking area, and
- potential for lease lots for support services (such as repairs and maintenance).

3.0 Proposed Action

This Chapter identifies the proposed action, as well as a No Action alternative, and a discussion of other site location and site design alternatives that were considered but dismissed as the Project evolved over the last 20 years.

NEPA requires agencies to consider the environmental effects of their actions and to evaluate reasonable alternatives that would meet the purpose and need for the Project with less adverse environmental impacts. The basic criteria for alternatives to be considered are that the alternative must be reasonable, feasible, and achieve the Project's purpose. Not every alternative must be evaluated in detail in an EA, but alternatives dismissed from further analysis should be described with the rationale for their dismissal.

CBS has evaluated twelve potential seaplane base locations over the last 20 years. Siting studies conducted in 2002, 2012, and 2016 all identified the proposed Japonski Island location as the preferred site for the new seaplane base (HDR 2002, DOWL HKM 2012, DOWL HKM 2016). Section 3.3 (Alternatives Considered but Dismissed) describes the sites that were evaluated in earlier studies but were dismissed from detailed analysis.

3.1. Identification of Federal Action

The CBS requests FAA Alaskan Airports Division to approve and fund the Proposed Action Alternative and an Airport Layout Plan.

3.2. Public Scoping for the Proposed Federal Action

A public scoping meeting was held on December 11, 2019 at Harrigan Centennial Hall with 25 people in attendance. Most comments were related to the site selection process, the financing of the Project, and the urgent need for the Project. More details are provided in Chapter 6.3 (Public Scoping). As part of the Project scoping process, the CBS considered public and agency comments received during scoping meetings and used the information to inform the proposed action and key issues evaluated.

3.3. Proposed Action Alternative

The new Sitka seaplane base would be located on a 2.02-acre parcel at the end of Seward Street on the northeast end of Japonski Island (Figure 3). The upland parcel where the facility is proposed would be acquired from the Alaska Department of Education and Early Development (ADEED) and is adjacent to the U.S. Coast Guard (USCG) Air Station Sitka.

The marine area for the seaplane base would be acquired from the Alaska Department of Natural Resources (DNR). The CBS has submitted to DNR an application for conveyance of submerged and tidelands and received a preliminary approval for conveyance of tidelands adjacent to the upland parcel to accommodate seaplane floats and operations areas[1]. The marine component of the facility would include a pile-supported trestle, a gangway, a landing float, a transient float, a based seaplane float, and, if needed, a floating wave attenuator north of the floats to attenuate waves from the main harbor entrance gap in the existing breakwater or southeast of the floats to attenuate waves from the channel to the south.

[1] *The orientation of the seaplane floats was changed during concept development. CBS would work with DNR to reflect the current tideland conveyance area during the required tideland survey.*

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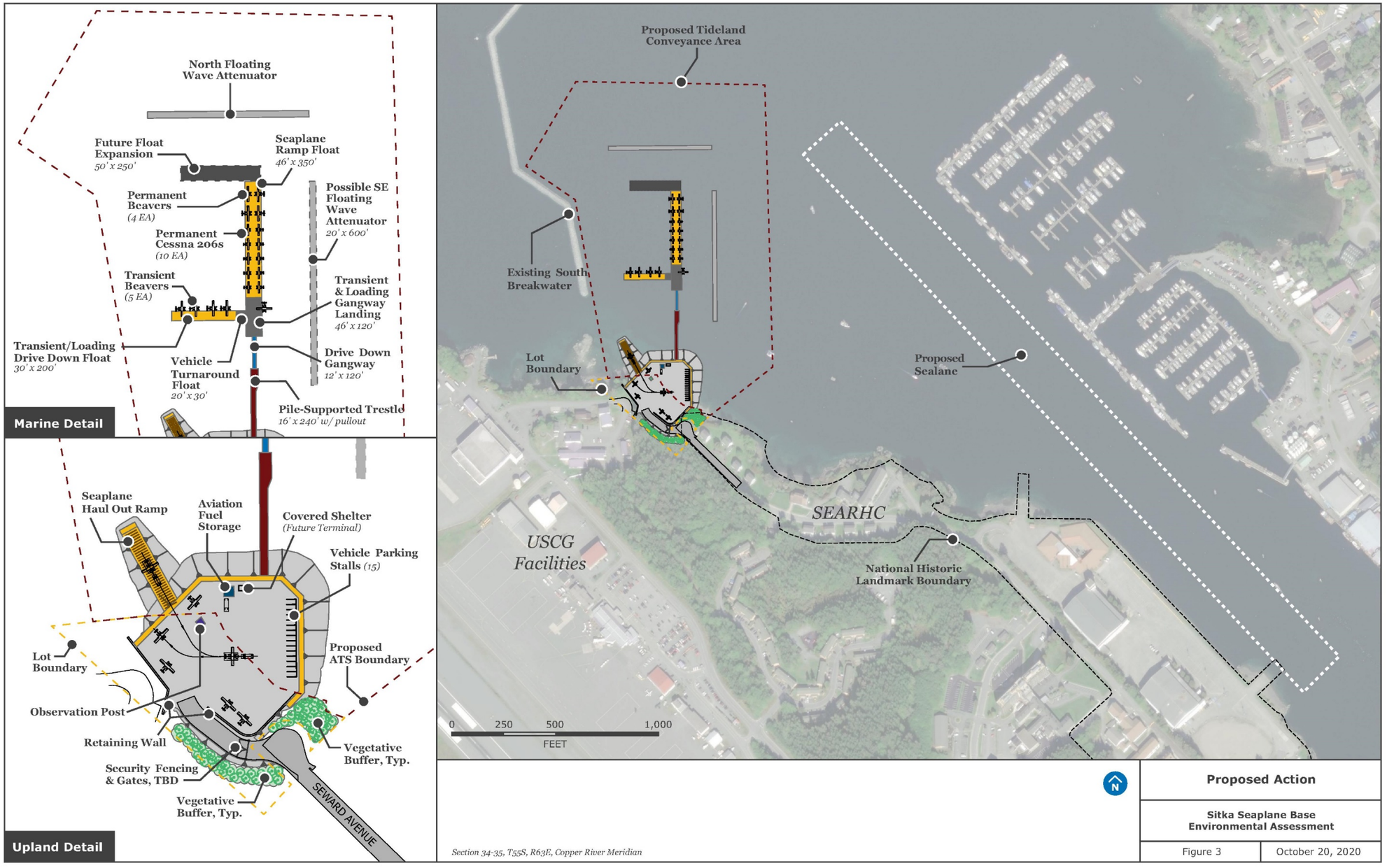
Figure 3: Proposed Action



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The 2016 Siting Analysis identified a potential demand for up to 19 based aircraft and 15 transient aircraft if all of the desired support facilities were available at a new seaplane base. Given that CBS may need to construct the new seaplane base in phases and may not be able to accommodate all facilities requested initially, it was determined that the proposed site would accommodate 14 based aircraft and four transient aircraft.

The proposed facility would include:

- Seaplane float (350 feet by 46 feet) with ramps for 14 based seaplanes (4 DE Havilland Beavers and 10 Cessna 206s)
- Transient seaplane float (220 feet by 30 feet) with capacity for four transient seaplanes (sized for DE Havilland Beavers)
- Drive-down gangway (120 feet by 16 feet) and landing float (120 feet by 46 feet) for access to seaplane floats
- Pile-supported trestle (240 feet by 16 feet) with 50-foot turn-out lane at gangway
- Wave attenuators on the north and southeast (if required)
- Vehicle parking area (15 parking spaces)
- Electricity, water, and lighting for the seaplane floats
- Covered waiting area and eventual terminal area
- Safe access between the parking positions and the water operating area
- Fuel storage and access facilities
- Upland seaplane parking areas and maneuvering room
- Seaplane haul out ramp
- Security fencing
- Landscape buffer along southern boundary
- Accommodations for future expansion, including lease lots for support services (such as repairs and maintenance).

3.3.1. Facility Design and Elements

The new seaplane base concept was developed using safety and planning criteria in FAA's Advisory Circular (AC) 150/5395-1B Seaplane Bases. The facility design is based on expected use by aircraft similar to the more common aircraft used in Southeast Alaska (DE Havilland Beavers and Otters, and Cessna 206s) to accommodate the operational needs of current and future seaplane base users.

The seaplane floats assume a design length of 42 feet for a DE Havilland Otter, 30 feet for a DE Havilland Beaver, and 20 feet both fore and aft of each position where transient aircraft would be moored parallel to the dock.

The seaplane floats would be constructed of treated timber and galvanized steel fasteners. The submerged timber structural elements of the floats would be pressure treated with creosote because it is the only effective preservative for wood that would remain wet at all times. All other timber components that would not be fully submerged would be pressure treated with ammoniacal copper zinc arsenate (ACZA). All preservative treatment would be in accordance with best management practices (BMPs) as set forth by the Western Wood Preservers Institute. The timber framing connections would be reinforced with galvanized steel fastening components. Floatation would consist of closed cell expanded polystyrene billets covered with a robust application of 100 percent solid polyurethane and/or polyethylene floatation tubs. The billets would be sized and shaped as necessary prior to the spray application of the polyurethane coating. The coating would protect the billets from physical damage, water absorption, colonization by encrusting organisms, and other factors.

The seaplane floats would be accessed from shore via a pile-supported trestle and drive-down gangway that hinges from the trestle and lands on the floats. The trestle would be 16 feet wide by 240 feet long with a 24-foot widened area at the

top of the gangway to allow vehicles to safely pass while concurrently entering and departing the floats. The trestle surface would be either galvanized steel grating or treated timber decking and would allow rain to pass through.

Electric power is currently available to the Project site. Power would be run underground across the site and then placed in a utilidor conduit that would be hung from the float facility to provide power to individual seaplane ramps. Water and sewer service are also available at the site edge. These would be run to the shelter area for restroom facilities and water would be run down onto the floats in the utilidor conduit. A sewage lift station would be required to pump sewage up from the lower site elevation to the sewer main located along Seward Avenue.

Lighting would be provided in the parking area, at the covered shelter area, and on the floats. Detailed lighting plans would be developed as part of Project design, and will evaluate measures to focus light on specific use areas and minimize unnecessary light pollution. Lighting may also be placed on the floating wave attenuators, in coordination with the USCG to minimize potential hazards for boats operating during low light conditions.

The upland area would be designed to accommodate vehicle parking spots, a covered shelter (to eventually become a terminal), five seaplane tiedown spaces, room for a fuel storage tanks and fueling facilities, and room for maneuvering aircraft to and from the seaplane ramp.

The fueling facility would consist of an above-ground storage tank placed within a secondary containment facility. Fuel would flow by gravity in steel piping hung from the trestle and float facility. A fuel pump and flexible fuel hose and reel would be located on the seaplane float to allow seaplane fueling. A spill containment kit would be placed near the storage tank and on the float, including absorbent materials to be used during fueling to catch drips.

A seaplane ramp would be constructed to facilitate seaplane removal from the water. The proposed concrete ramp would be located near the northwest corner of the upland area.

FAA planning criteria for seaplane bases recommends a water lane for takeoffs and landings of at least 3,500 feet by 200 feet with a 20:1 approach surface, and a depth of at least 4 feet. The water lane area should avoid established shipping and boating lanes, areas that attract birds, and populated areas along the shore. The proposed water lane area would be further north of the existing water lane. While the takeoff and landing area would still be in an area with substantial boat activity, it would be away from the O'Connell Bridge connecting Baranof Island to Japonski Island, farther from the seafood processing facilities that attract gulls and other birds, and farther away from the more commercial and institutional area of the islands' shorelines.

The new seaplane base would have the potential to be expanded in the future to include additional based and transient aircraft and other needed facilities as shown in Figure 3. The existing seaplane base (A29), would not be demolished as part of the Project. The CBS would determine the appropriate reuse or removal of the facility in the future.

3.3.2. Construction

The parcel proposed for the new seaplane base has steep slopes and little level ground. The existing site elevation ranges from 60 feet above mean sea level (MSL) on the hill on the west side, to 30 feet above MSLat the cul-de-sac on the south, and down to below MSL on the channel side. The seaplane base would be constructed by clearing and grading the Japonski Island site, lowering the overall upland site elevation to approximately 22 feet MSL. An access road would be constructed from the cul de sac on Seward Avenue into the site with retaining walls to support the proposed site elevation. The existing hill at the southeast end of the site would be blasted and excavated and the rock material generated used as fill to extend the seaward portion of the site offshore by approximately 200 feet. Additional material needed for the fill footprint would be generated from existing private quarries located four to six miles north of the City of Sitka on Halibut Point Road and barged to the site. It is anticipated that the material needed would be delivered in approximately 20 barge loads, assuming a barge capacity of 1,500 cubic yards per barge. Some areas may be paved.

All seaplane floats would be anchored by steel piles socketed into bedrock. Socketing involves drilling into the bedrock to create a socket that is slightly larger than the pile. The piles would be installed through the sediment with vibratory

pile-driving equipment and then socketed into the bedrock with down-the-hole drilling and driving equipment. The void between the pile and the socket edge would be filled with aggregate or grout, usually Portland cement or an ultra-high strength grout. Preliminary socket depths of 10 feet to 20 feet into competent bedrock are anticipated. The socketed pile provides stability by resisting lateral loads and uplift forces. The elevation of the floats would rise and fall with the tide. Socketing is anticipated due to presumed shallow bedrock conditions at the site based on historical site investigations in the vicinity (DOWL 1989).

Temporary steel piles, likely 16-18 inches in diameter, would be installed during construction of the approach trestle leading from shore to the gangway. The piles would be vibrated into the mud to support steel templates that will position the permanent piles. Three to five temporary piles would be used to support templates at each pile bent. After the permanent piles are driven, the temporary piles will be removed and relocated to the next pile bent and the process repeats. Roughly 30 temporary piles would be driven to complete the trestle.

Table 1 provides an estimate of socketed piles needed to anchor the seaplane floats and to support the access trestle. These estimates would be confirmed following a future Project-specific geotechnical investigation at the Project site.

Table 1. Piles Required by Element

Float Element	Steel Pile Diameter	Number of Piles Required
Based Seaplane Float	24 Inch	18
Transient Seaplane Float	16 Inch	8
Gangway Landing Float	24 Inch	14
Trestle (permanent)	16 Inch	28
Trestle (temporary)	16-18 Inch	30

Preliminary wave analysis was done as part of concept site planning (PND 2020). Further wave studies would be conducted to determine whether either or both of the proposed wave attenuators are required and whether they could be constructed and maintained with anchors as opposed to socketed piles. Approximately 25 24-inch diameter socketed steel piles or 25 heavy anchors and chains would be required for each wave attenuator. Piles would be constructed as described above. Anchors would be placed by a crane stationed on a barge. The crane would lower the anchor to the seafloor using a cable or strap assembly.

Construction of the ramp would require grading of about 0.4 acres of sloping intertidal beach area, constructing the ramp with clean shot rock embankment and armor rock materials placed directly over the existing ground during low tidal stage. Precast concrete panels would be placed directly on treated timbers set to design grade over the crushed rock aggregate base course. Each concrete panel will be connected to an adjacent plank with a bolted end plate assembly to prevent movement during wave and tidal current activity. Armor rock and underlayer rock will be placed by conventional excavators on all exposed embankment slopes to protect against coastal erosion. Based on preliminary wave studies, maximum armor rock size is estimated to be 3 tons.

Blasting and rock excavation would be required along the southern hillside. Blasting would likely take one month during which there could be several small blasts followed by rock removal and placement for proposed embankments.

Construction access to the site would primarily be along Seward Avenue, with the exception of material barging as noted above. The construction period would be up to 16 months long with six to eight months for the upland activities and six to eight months for the marine facilities, some of which could occur concurrently. Marine construction would be timed to avoid the March herring spawning period and other sensitive periods as directed by the National Marine Fisheries Service (NMFS). Construction staging for marine elements would be on floating barges. Upland construction staging would

initially occur in the Seward Street cul de sac and existing graded areas on the site and then move completely on-site as the uplands are cleared and graded. Pile driving for the marine facilities could occur concurrently to the upland grading.

Additional information on construction activities in the marine area is included in the Essential Fish Habitat (EFH) Assessment included as Appendix B.

3.3.2. Permits and Approvals Required

The following permits would be required:

- DNR (Tideland conveyance)
- United States Army Corps of Engineers (USACE) (Section 404 Clean Water Act [CWA] and Section 10 of the Rivers and Harbors Act Permit)
- Alaska Department of Environmental Conservation (ADEC) (Section 401 CWA; Alaska Pollutant Discharge Elimination System [APDES] General Permit for Discharges from Large and Small Construction Activities/National Pollutant Discharge Elimination System Section 402 Permit)
- CBS (Floodplain Regulation Development Permit)

Additional required consultations and approvals include:

- Alaska State Historic Preservation Officer (SHPO) and Local Indian Tribes, Alaskan Native Villages and Native Hawaiian organizations (National Historic Preservation Act [NHPA] and US Department of Transportation Act Section 4(f))
- NMFS (Endangered Species Act [ESA], Magnuson-Stevens Fishery Conservation & Management Act, Marine Mammal Protection Act [MMPA])
    - *Biological Opinion, Incidental Harassment Authorization, EFH Assessment*
- USFWS (ESA, MMPA, Fish & Wildlife Coordination Act)

3.4. Alternatives Dismissed from Further Consideration

Using FAA seaplane base planning criteria and aviation user input, 12 other sites were evaluated in 2002 for their ability to accommodate safe takeoff, landing, taxiing, and docking operations and to accommodate the facilities needed to adequately address forecast operations capacity (See Table 2 and Figure 4). Appendix A (Alternatives Considered) contains additional information on the seaplane base location alternatives evaluated during the seaplane base siting studies conducted over the last 18 years.

3.5. No Action: No-Build Alternative

The No Action Alternative is used as a baseline against which to compare the Proposed Action. The No Action Alternative would result in continued use of the existing seaplane base, which is at diminished capacity. No new seaplane base would be constructed. None of the following deficiencies identified at the existing seaplane base would be addressed.

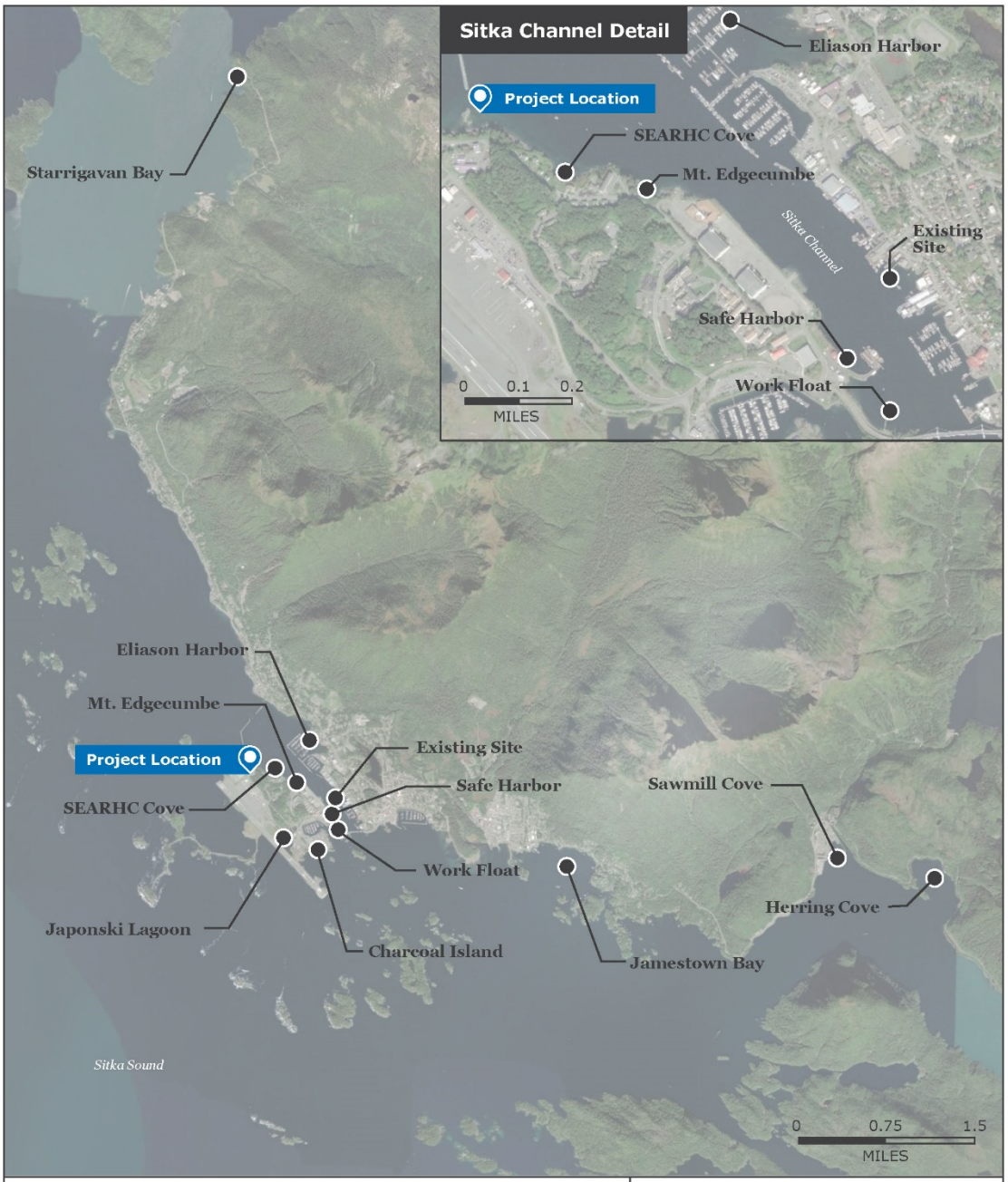
- Seaplane operations would continue to have conflicts with boat traffic and face hazards from birds attracted to seafood processing plant outfalls.
- The takeoff and landing area in the narrow channel would continue to require operations under the O'Connell Bridge.
- The Sitka Seaplane Base would continue to have a limited number of accessible seaplane slips and would not be able to accommodate De Havilland Otters and Beavers, which are best suited for providing commercial and recreational transportation services in the area.
- Parking would remain limited and no support facilities, such as aircraft fueling facilities or maintenance areas would be available.

Table 2. Sites Evaluated in 2002 Seaplane Base Siting Study[2]

Site Evaluated	Reason for Dismissal from Detailed Analysis
Starrigavan Bay	Safety: adverse wind and wave conditions
Existing Site (A29)	Existing uses would constrain maneuvering; minimal area for expansion; bird hazards from fish processing facility
Eliason Harbor	Existing use by small boats would lead to congestion; shallow water would require dredging; cost prohibitive
Mount Edgecumbe	Noise impacts to school; proximity to wildlife attractants; insufficient area for future expansion
SEARHC Cove	Noise impacts to clinic/residential areas; shallow coves and low waterline at low tide; insufficient development potential
Japonski Lagoon	Conflicts with Sitka Rocky Gutierrez Airport Master Plan; proximity to wildlife attractants; excessive wind exposure
Safe Harbor	Adverse wind and wave conditions; proximity to U.S. Coast Guard vessels and dock; noise
Charcoal Island	Adverse wind and wave conditions
Sawmill Cove	Adverse wind and wave conditions
Work Float	Adverse wind and wave conditions; proximity to U.S. Coast Guard vessels and dock; insufficient development potential
Jamestown Bay	Adverse wind and wave conditions
Herring Cove	Adverse wind and wave conditions

[2] *Source: HDR 2002*

Figure 4: Alternatives Dismissed from Detailed Analysis



- Use of the seaplane base would likely continue to decline as aircraft operations look for safer and more efficient facilities with more support services.
- The cost to maintain the facility would continue to increase as the facilities are beyond their useful life and in poor condition.

3.5.1. Permits and Approvals Required

No permits are required under the no action alternative.

3.6. Alternatives Summary

See a summary of the potential effects of the alternatives in Table 3.

Table 3. Comparison of Alternatives

	Proposed Action	No Action
Purpose and Need		
Capacity	The Proposed Action would meet this aspect of the purpose and need	The no action alternative would not meet this aspect of the purpose and need.
Safety	The Proposed Action would meet this aspect of the purpose and need	The no action alternative would not meet this aspect of the purpose and need.
Operations	The Proposed Action would meet this aspect of the purpose and need	The no action alternative would not meet this aspect of the purpose and need.
Environmental Impacts[1]		
Biological Resources	Approximately 1.64 acres of Essential Fish Habitat and endangered species habitat permanently filled to expand upland site, overwater structures would affect 1.34 acres of marine waters. Direct effects to humpback whales and Steller sea lions has the potential to result in Level B (behavioral) harassment (via disturbance reactions and/or masking). Humpback whales and Steller sea lions could experience a temporary loss of suitable habitat in the Project area due to elevated noise levels associated with in-water construction causing their displacement from the area. Displacement of either mammal by noise would not be permanent and would not result long-term effects to the local population. Impacts to marine mammal prey species are expected to be minor and temporary. Mitigation measures would be implemented to reduce impacts of noise on habitat. Therefore, indirect effects on Mexico distinct population segment of humpback whales or Western distinct population segment of Steller sea lions from prey effects from the Project are not expected to be substantial. An Incidental Harassment Authorization application for the Project would be required for take of marine mammals under the Marine Mammal Protection Act. The Project is not anticipated to have an effect on bald or golden eagles.	The No Action Alternative would not affect biological resources beyond existing effects.
Hazardous Materials, Solid Waste, and Pollution Prevention	The Proposed Action does not involve a property on the National Priorities List and hazardous waste generation is not anticipated. Construction generated solid waste is not expected to exceed available landfill capacities.	The No Action Alternative would not result in a change from current conditions.

	Proposed Action	No Action
Historical, Architectural, Archaeological, and Cultural Resources	The Proposed Action would adversely affect a historic structure that is eligible to the National Register as part of the Sitka Naval Operating Base and U. S. Army Coastal Defenses National Historic Landmark. Consultation is underway with interested parties to determine appropriate mitigation to address this adverse effect. The Proposed Action would also impact an area that was historically occupied by the Tlingit. The area was used for subsistence harvests of marine resources by Sitka Tribe of Alaska members. The Proposed Action would develop this area and change the marine habitat along the shoreline. Consultation with Sitka Tribe of Alaska is underway regarding archaeological and tribal monitoring during ground disturbance and inadvertent discovery plan protocols.	The No Action Alternative would not affect cultural resources.
Land Use	Undeveloped land would change to aviation use. This would increase the use intensity of the land, but is consistent with the adjacent U.S. Coast Guard air base and historic military aviation use of the area.	The No Action Alternative would not affect land use.
U.S. Department of Transportation Section 4(f)	The Proposed Action would result in adverse effects to an observation post located on the proposed site that is eligible for the National Register of Historic Places as a contributing element to the Sitka Naval Operating Base and U. S. Army Coastal Defenses National Historic Landmark. There are no feasible and prudent alternatives to the use of the site and all appropriate planning is being conducted to address the adverse effects of the use. Consultation is underway with interested parties to determine appropriate mitigation to address this adverse effect.	The No Action Alternative would not affect Section 4(f) lands.
Natural Resources and Energy Supply	No impacts to existing infrastructure (water, sewer, electric grid) are anticipated. There is sufficient capacity for utilities and fill materials.	The No Action Alternative would not affect these resources.
Noise and Noise-Compatible Land Use	The new facility is likely to result in more aircraft operations in Sitka Channel resulting in more frequent seaplane noise generated. Long-term average noise levels are not expected to exceed land use compatibility standards; maximum noise levels from individual aircraft operations would not increase. The number and frequency of noise events may increase and could increase annoyance in areas near Sitka Channel. A Fly Friendly program would be developed in coordination with adjacent land owners and pilots to minimize noise impacts to the extent practicable. Traffic would increase on Seward Avenue increasing the frequency of traffic noise events at facilities along Seward Avenue. Short-term construction noise would be mitigated through a blasting plan to minimize impacts on adjacent properties and marine transport of fill.	The No Action Alternative would not change noise levels from current conditions.
Socioeconomics	The Proposed Action would have positive impacts on the Sitka economy and transportation system.	The No Action Alternative would not affect socioeconomics.

	Proposed Action	No Action
Environmental Justice	The Proposed Action would not have disproportionately high and adverse effects on protected populations.	The No Action Alternative would not affect environmental justice.
Children's Health and Safety Risks	Adjacent uses include clinical facilities for outpatient behavioral health treatment, including treatment for adolescents. Maximum noise levels inside clinics are unlikely to change substantially but individual aircraft noise events causing annoyance may occur more often. Noise levels at the school and clinical facilities would remain within land use compatibility standards. Vehicle traffic would increase but is unlikely to result in any substantial increase in safety risks.	The No Action Alternative would not affect children's health or safety risks.
Visual Effects	View from adjacent uses would change. Lowering the site elevation, buffering landscape at the cul-de-sac, and reorientation of floats to the north reduces visual impacts to adjacent uses.	The No Action Alternative would not affect visual resources.
Wetlands	Site development would result in fill of .06 acres of terrestrial wetlands, 0.17 acres of intertidal waters, and 1.47 acres of marine waters, for a total fill of 1.7 acres. A Clean Water Act Section 404 wetland fill permit would be required from the U.S. Army Corps of Engineers prior to construction.	The No Action Alternative would not affect wetlands.
Floodplains	The Project would result in 3.03 acres of fill in the Coastal High Hazard Area and would require a Development Permit under Sitka floodplain regulations.	The No Action Alternative would not affect floodplains.
Surface Waters	Approximately 2.98 acres of Sitka Channel would be affected by the Project. Approximately 1.64 acres of fill would be placed in Sitka Channel, and approximately 1.34 acres of Sitka Channel would be affected through construction of pile-supported trestles or shaded by floating or anchored elements (wave attenuator, floats). A Section 10 Rivers and Harbors Act would be required from the U.S. Army Corps of Engineers prior to construction and would include a U.S. Coast Guard navigation hazard review to minimize the potential for adverse effects to navigation in Sitka Channel.	The No Action Alternative would not affect surface waters.
Cumulative Impacts	Past uses include aviation uses at the U.S. Coast Guard air base and past military use of the facilities within the National Historic Landmark. The National Historic Landmark facilities are currently used for primarily institutional (schools, behavioral clinics) and one residential use. Future uses include expansion of health care facilities with a new regional health care facility planned along Seward and Tongass Avenues. Impacts of this action when considered with past, present, and reasonably foreseeable actions are not expected to result in substantial cumulative effects.	The No Action Alternative would not result in a change from current conditions.

4.0 General Setting

Sitka is located in the Alexander Archipelago, which is characterized by temperate rain forests, fjords, prevalence of islands, and maritime climate. This climate experiences little seasonal variation and consistent precipitation, with an annual mean of 30 inches to 220 inches. Mean annual temperatures vary from 33 to 46 degrees Fahrenheit.

Terrain of this ecoregion is a result of intense glaciation during late advances of the Pleistocene. The deep, narrow bays, steep valley walls that expose much bedrock, thin moraine deposits on hills and in valleys, very irregular coastline, high sea cliffs, and deeply dissected glacial moraine deposits covering the lower slopes of valley walls are all evidence of the effects of glaciation. Elevations range from sea level to over 3,000 feet with rounded mountains and steep-sided angular mountains present. Rolling moraine landforms dominate hills and valley bottoms.

Evidence for human habitation of the Northwest Coast dates to 12,500 years before present. Sitka is part of an expansive territory occupied by the Tlingit, and takes its name from Sheey At'iká (or Sheet'tká) Kwaan, whose territory extends the full length of the Pacific coast of Chichagof Island (Point Urey) to the southern tip of Baranof Island (Cape Ommaney), inclusive of small islands off the coast.

The city is located in the coastal maritime rainforest, consisting primarily of western hemlock and Sitka spruce. Brown bears are common and unlike most of Alaska, ADF&G states that there are amphibians (newts, frogs, etc.) present in southeast Alaska. Forests and estuaries provide habitat for birds and fish with Sitka black-tailed deer as the most wide-ranging large mammal in the ecoregion.

The region is free from permafrost. Ash-influenced soils are located on areas of Baranof Island.

The City of Sitka is located on Baranof Island, approximately 93 miles southwest of Juneau and the Project is on Japonski Island, across Sitka Channel from Baranof Island, and adjacent to the USCG Air Station Sitka. The mean high-water (MHW) elevation for Sitka harbor is 9.16 feet. Japonski Island has seven distinct surficial deposits including drift, volcanic ash, muskeg, elevated delta and shore deposits, alluvial deposits, modern beach deposits, and man-made fill (Yehle, 1974). Numerous expanses of subtidal wetlands exist on Japonski Island.

The shores of Sitka Channel between the O'Connell bridge and the USACE break water are developed in a wide variety of commercial, marine, aviation, and institutional uses. CBS operates three marinas in the area with over 500 slips, including Eliason and Thomsen Harbors, directly across the channel from the proposed site. Petro Marine has a fuel storage facility and fuel dock between these marinas and the A29 seaplane base, which has commercial development adjacent to the north and Sitka Sound Seafood processing facility to the south. The ANB harbor is located further south with a marine industrial area and tank farm just north of the bridge. South of the Project site, the shoreline was developed by the military during World War II (WWII). These former military areas along the west shore of the channel have been repurposed for institutional uses, including health care and education. The Southeast Alaska Regional Health Consortium (SEARHC), a non-profit health consortium serving Southeast Alaska residents, has several facilities along Seward Avenue, including behavioral health clinics, administrative facilities, and Mount Edgecumbe Medical Center, the major hospital in the Sitka area and serving much of Southeast Alaska. SEARHC owns much of the land south of the proposed site and is proposing a new hospital on the northwest corner of Seward Avenue and Tongass Drive across the street from the current hospital.

Sitka Channel has extensive marine operations with commercial fishing vessels, cruise ships, USCG cutters, research vessels, private watercraft of various sizes, and human-powered watercraft such as kayaks. The existing Sitka seaplane base is located on the east side of Sitka Channel and seaplanes currently takeoff and land on the channel between the breakwater on the north and McConnell Bridge on the south.

5.0 Impact Comparison of Alternatives

This chapter provides a description of the existing environmental, social, and economic setting for the area that would be affected by construction of the Proposed Action. This chapter also presents the environmental effects that would likely result from the implementation of the alternatives presented in Chapter 2. The two alternatives carried forward for full evaluation in this EA are the Proposed Action and the No Build Alternative.

Environmental consequences are described in terms of direct, indirect, and cumulative impacts. Direct impacts are those that are caused by the action and occur at the same time and place. Indirect impacts are those that are caused by the action, but occur later in time or are further removed in distance, but are still reasonably foreseeable. Cumulative impacts are those that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (see Section 3.15). Cumulative impacts are not discussed for the No Build Alternative, since this alternative would not be expected to contribute to existing cumulative impacts in the Project area.

FAA Order 1050.1F requires that impacts of a proposed federal airport Project be evaluated for specific resource categories (FAA 2020b). This is an issues-based environmental assessment; therefore, only those resource categories where the Project impacts were identified as an issue of concern are evaluated in detail. Other resource categories that were not evaluated in detail and the rationale for determining them non-applicable are provided in Chapter 5.1 (Non-Applicable Categories).

5.1. Non-Applicable Categories

The following impact categories are not considered applicable as either the resource is not present in the area or the resource was not identified as a potential issue of concern during the scoping process for the Project.

5.1.1. Air Quality

Sitka meets the National Ambient Air Quality Standards (NAAQS) for major air pollutants and is not located in a nonattainment area. Per the Alaska Administrative Code (AAC) 18 AAC 50.15, Sitka, Alaska is considered a Class II area. Stringent air quality standards in Class II areas have been established for sulfur dioxide, nitrogen oxides, and particulate matter, and cannot be exceeded. The Project would not be considered a "major source of air pollutants" and would not require an operating permit under Title V of the Clean Air Act. The new seaplane base is expected to be a General Aviation airport and would have fewer than 180,000 annual operations; therefore, air quality analysis is not required. The Erosion and Sediment Control Plan for the Project would address temporary impacts to air quality from construction (dust).

5.1.2. Climate

Climate change refers to a significant change in long-term (decades to millennia) weather patterns as a result of changes in the concentrations of greenhouse gases within the Earth's atmosphere. While aviation contributes to greenhouse gas emission, the new seaplane base is not anticipated to result in a substantial increase of aviation activity or greenhouse gas emissions. The Proposed Action may result in some operations occurring in Sitka Channel that would otherwise occur near other Southeast Alaska seaplane facilities, but is not expected to induce additional Southeast Alaska seaplane operations overall. CBS adopted a Sitka Climate Action Plan (SCAP) in 2011. The SCAP provides planning mitigation measures and suggestions, including partnering with the FAA to discuss impacts to airports regarding runway elevations and sea level change.

5.1.3. Coastal Resources

Alaska's participation with the national Coastal Zone Management Act (known as the Alaska Coastal Management Program) ended on June 30, 2011. There are no coastal barriers (www.fema.gov/nfip/ cobra.shtm) or coral reefs (http://www.reefbase.org/ gis_ maps/ default.aspx) within the State of Alaska.

5.1.4. Farmland

There is no prime or unique farmland, nor farmland of state or local importance in the vicinity of the Project (www.ak.nrcs.usda.gov/technical/soils/soilslocal.html).

5.1.5. Wild and Scenic Rivers

There are no Wild or Scenic Rivers in the vicinity of the Project (www.hps.gov/rivers/ wildriverslist.html).

5.1.6. Groundwater

Limited published data exists regarding groundwater within the Project area. A search of EPA's sole source aquifers indicates there are no such resources in Alaska (https://www.epa.gov/ dwssa/map-sole-source-aquifer-locations).

Below is a discussion of the remaining resource categories that are required by FAA Order 1050.1F to be evaluated in an EA.

5.2. Biological Resources (Fish and Wildlife)

5.2.1. Affected Environment

5.2.1.1. Habitat

Sitka Channel is about 150 feet wide and about 22 feet deep at the narrowest (National Oceanic and Atmospheric Administration [NOAA] 2020a). The mean tide range is 7.7 feet, the diurnal tide range is 9.94 feet, and the extreme range is 18.98 feet (NOAA 2020b).

The Project area has a semi-protected, partially mobile, sediment or rock and sediment habitat class and a sand and gravel flat or fan coastal class (NMFS 2020b). The area has a semi-protected biological wave exposure, a narrow splash zone, and a sheltered tidal flats environmental sensitivity index. According to the website, the oil residency index is month to years (moderate persistence). The intertidal area is semi-protected due to its location inside Sitka Channels' breakwater; however, there is some wave action that comes through the breakwater breaches and onto the shoreline. The substrate varies at the site through the site and shoreline elevation from large boulders and bedrock outcrops to gravel, pebbles, and mud.

The high intertidal zone of the Project area is characterized by boulders and bedrock outcroppings, little algal growth, and some common acorn barnacles (*Balanus glandula*), snails (primarily *Littorina sitkana*), and limpets (*Lottiidae sp.)*. Although the mid-intertidal zone varies somewhat with substrate, most of the area is dominated by rockweed (*Fucus gardneri*) and barnacles (*B. glandula/Semibalanus balanoides*) comprise the second highest cover. A small mussel (*Mytilus trossulus*) bed is found on the eastern edge of the mid-intertidal area of the Project area. The lower intertidal zone, is comprised four different areas including: a small eelgrass bed (*Zostera marina*); an area dominated with mud and sugar kelp (*Saccharina latissimi*); an area characterized by the invasive algal species wireweed (*Sargassum muticum*); and an area dominated by a sugar kelp bed.

The marine area is bounded to the north by the Channel Rock Breakwaters, on the east by Sitka harbors, and on the west by the proposed upland site. While the Project area appears to be previously undisturbed, it is completely surrounded by development. Facilities associated with the Mount Edgecumbe High School, Mount Edgecumbe Medical Center, and the Southeast Alaska Regional Health Consortium (SEARHC) are south of the Project area. The USCG Air Station Sitka is located due west of the Project site, beside the Sitka Rocky Gutierrez Airport Terminal. Eliason and Thomsen Harbors are located across the channel to the northeast, and residential development is directly north of the Project area.

The Project area experiences high levels of marine vessel traffic with highest volumes occurring May through September. Marine vessels that be found in the area include passenger ferries, commercial freight vessels/barges, commercial tank barges, small cruise ships, commercial fishing boats, charter vessels, recreational vessels, kayaks, and floatplanes (Nuka 2019). From analysis of 2018 vessel traffic in Southeast Alaska, Sitka had the second highest number

of commercial vessel port calls (~1,800) following Ketchikan (Nuka 2019). The most common type of vessel traffic was cargo, followed by cruise ships. In 2018, 45.5 million pounds of cargo transited Sitka's port with a $61 million value (NOAA 2020). Much of this traffic travels through Sitka Channel and by the Project area.

5.2.1.2. Fish and Essential Fish Habitat

A review of the ADF&G's Anadromous Waters Catalog (AWC) indicates one anadromous waterway within the action area, which is defined as the area where sound from Project construction could be experienced by fish (Figure 5). Peterson Creek (113-41-10185), located across Sitka Channel directly opposite the Project site, is anadromous for all five species of Pacific salmon and for Dolly Varden (ADF&G 2020b).

The Magnuson-Stevens Fishery Conservation and Management Act (1996) defines EFH as "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". According to NMFS EFH mapper (NMFS 2020a), EFH occurs for all five species of Pacific salmon and 23 species of groundfish in the waterways in and around the Project area, including in Sitka Channel. The NMFS EFH mapper also indicates that Sitka Channel is not a Habitat Area of Particular Concern for EFH.

Table 4 lists salmon species and Table 5 lists groundfish species and the life stages at which they are present.

Table 4. Salmon Species with Essential Fish Habitat in the Project Area

Salmon Species	Juvenile	Immature	Mature	Juvenile Marine Waters	Adult Marine Waters	Spawning Freshwater Only
Coho Salmon (*Oncorhynchus kisutch*)	–	–	–	✓	✓	–
Chum Salmon (*O. keta*)	–	✓	–	✓	✓	–
Pink Salmon (*O. gorbuscha*)	–	–	–	✓	✓	–
Chinook Salmon (*O. tshawytscha*)	–	✓	–	–	✓	–
Sockeye Salmon (*O. nerka*)	–	✓	–	✓	✓	–

*Dash (--) means no data is available on these stages.

Figure 5: Action Area for Marine Mammal Analysis

Table 5. Groundfish Species with Essential Fish Habitat in the Project Area

Ground Fish Species	Egg	Larvae	Late Juvenile	Adult	Spawning
Aleutian Skate (*Bathyraja aleutica*)	–	–	–	✓	–
Pacific Cod (*Gadus macrocephalus*)	–	–	✓	✓	–
Walleye Pollock (*Gadus chalcogrammus*)	✓	–	–	✓	–
Shortspine Thornyhead Rockfish (*Sebastolobus alascanus*)	–	–	–	✓	–
Shortraker Rockfish (*Sebastes borealis*)	–	–	✓	–	–
Pacific Ocean Perch (*S. alutus*)	–	✓	–	–	–
Redbanded Rockfish (*S. babcocki*)	–	–	✓	–	–
Black Rockfish (*S. melonops*)	–	–	–	✓	–
Dusky Rockfish (*S. ciliatus*)	–	–	✓	–	–
Silvergray Rockfish (*S. brevispinis*)	–	–	✓	–	–
Quillback Rockfish (*S. maliger*)	–	–	–	✓	–
Redstriped Rockfish (*S. proriger*)	–	–	✓	–	–
Rosethorn Rockfish (*S. helvomaculatus*)	–	–	✓	✓	–
Sablefish (*Anoplopoma fimbria*)	–	✓	–	–	–
Yellow Irish Lord (*Hemilepidotus jordani*)	–	–	–	✓	–

Ground Fish Species	Egg	Larvae	Late Juvenile	Adult	Spawning
Great Sculpin (*Myoxocephalus polyacanthocephalus*)	–	–	✓	✓	–
Bigmouth Sculpin (*Hemitripterus bolini*)	–	–	✓	✓	–
Arrowtooth Flounder (*Atheresthes stomias*)	–	–	✓	✓	–
Northern Rock Sole (*Lepidopsetta polyxystra*)	–	–	–	✓	–
Dover Sole (*Microstomus pacificus*)	–	✓	✓	–	–
Yellowfin Sole (*Limanda aspera*)	✓	–	–	✓	–
Alaska Plaice (*Pleuronectes quadrituberculatus*)	–	–	–	✓	–
Octopus (*unidentified*)	–	–	–	✓	–

*Dash (--) means no data is available on these stages.

A detailed description of each species in the Project area is available in the Project's EFH Assessment included in Appendix B (Solstice Alaska Consulting Inc. [SolsticeAK] 2020).

ADF&G identified Pacific Herring (*Clupea pallasii*) and Pacific Halibut (*Hippoglossus stenolepis*) as important species in the Project area (ADF&G 2019). While not an EFH species; Pacific Herring serve an important ecological role within Sitka Channel and are known to spawn on intertidal and subtidal substrates within the Project area in the spring (ADF&G 2019). They provide an abundant, high energy food source for a wide variety of fishes, mammals, including ESA-listed humpback whales and Steller sea lions, and birds. Herring are also commercially important and support a roe fishery in Sitka that remains one of the largest and most valuable roe fisheries in Alaska. Pacific herring are known to spawn on intertidal and subtidal substrates within the Project area in the spring (ADF&G 2019).

Inhabiting waters between 20 and 1,000 ft, Pacific Halibut are typically found near the bottom over a variety of bottom types, and sometimes swim up in the water column to feed (ADF&G 2020a). Pacific Halibut are not an EFH species, but are an important in subsistence, commercial, and recreational fisheries in Alaska. According to local fishing charters, the Sitka area supports one of the state's largest recreational halibut fisheries with a plentiful supply of halibut all year round (Big Blue Charters 2020).

5.2.1.3. Protected Marine Mammal Species

Marine mammals within the Project area include the following: fin whale (*Balaenoptera physalus*), North Pacific right whale (*Eubalaena japonica*), sperm whale (*Physeter macrocephalus*), humpback whale (*Megaptera novaeangliae*), Steller sea lion (*Eumatopia jubatus*), gray whale (*Eschrichtius robustus*), minke whale (*B. acutorostrata*), killer whale (*Orcinus orca*), Cuvier's beaked whale (*Ziphius cavirostris*), Dall's porpoise (*Phocoenoides dalli*), harbor porpoise (*Phocoena phocoena*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), harbor seal (*Phoca vituline*), northern fur seal (*Callorhinus ursinus*), and northern sea otter (*Enhydra lutris*). Marine mammals are protected by NMFS and USFWS under the MMPA. Some species have additional protections under the ESA.

The NMFS endangered species and critical habitat mapper indicates five species of marine mammals that are listed under the ESA within the Project area (NMFS 2020a). Listed species that have the potential to be in the vicinity of the action area are fin whale, North Pacific right whale, sperm whale, humpback whale, and Steller sea lion. The action area does not fall within any designated critical habitat of an ESA-listed species, but is within proposed critical habitat for the Mexico distinct population segment (DPS) humpback whale. A search of the USFWS' Information for Planning and Conservation (IPaC) did not find any ESA-listed marine mammals within the Project area under their jurisdiction (USFWS 2019).

MMPA-protected species under NMFS' jurisdiction that have habitat in the Project area include the ESA species listed above and gray whale, minke whale, killer whale, Cuvier's beaked whale, Dall's porpoise, harbor porpoise, Pacific white-sided dolphin, harbor seal, and northern fur seal (NMFS 2020a). The only MMPA protected species under USFWS jurisdiction found in the Project area is the northern sea otter (USFWS 2020). Based on existing data, the only non-ESA MMPA-protected species expected to be observed in the Project area include killer whale, harbor porpoise, harbor seal, and northern sea otter.

Because the north end of Sitka Channel is shallow and narrow, the listed species of fin whale, North Pacific right whale, and sperm whale are not expected in the Project area. These species are rare in the inside waters of Southeast Alaska (Neilson et al. 2012). Based on previous marine mammal surveys conducted in the area, no fin whales, North Pacific right whales, or sperm whales were sighted, and these species are not known or expected to occur near or within Sitka Channel (Windward 2017; Turnagain 2017; Turnagain 2018; Straley et al. 2018).

Within Southeast Alaska, humpback whales are documented throughout all major waterways and in a variety of habitats, including open-ocean entrances, open-strait environments, near-shore waters, areas with strong tidal currents, and secluded bays and inlets. They tend to concentrate in several areas, including northern Southeast Alaska. Patterns of occurrence likely follow spatial and temporal changes in prey abundance and distribution with humpback whales adjusting their foraging locations to follow areas of high prey density (Allen and Angliss 2012). Given their widespread

range and their opportunistic foraging strategies, humpback whales might be found in the Project vicinity year-round during the proposed Project activities (NMFS 2019). The vast majority of humpback whales (94 percent) in Southeast Alaska are likely to be from the recovered (from ESA listing) Hawaii DPS, and about six percent are likely to be from the ESA-listed threatened Mexico DPS (Wade et al. 2016).

Steller sea lions are known to occur year-round in the action area. Most are expected to be from the unlisted Eastern DPS; however, it is likely that some Steller sea lions in the Project area are from the Western DPS (WDPS) which is listed as endangered by NMFS under the ESA (Hastings et al. 2019; Jemison et al. 2013; NMFS 2013). Jemison et al. (2013) estimated an average annual breeding season movement of WDPS Steller sea lions to Southeast Alaska of 917 animals. Recent information from NMFS indicates that up to half the Steller sea lions in the Project area could be from the WDPS (SolsticeAK 2018).

NMFS's endangered species and critical habitat mapper indicates there is no critical habitat for ESA-listed species in the Project area (NMFS 2020b, 2019). The Biorka Island sea lion haulout (over 20 km southwest of the proposed Project location) is the closest designated critical habitat for Steller sea lions in Southeast Alaska and is well outside the action area. Proposed critical habitat for Mexico DPS humpback whales (approximately six percent of whales in the Project area) does occur in the action area; the proposal for the designation of critical habitat is under review. The action area is expected to be included in the decision on critical habitat.

During recent marine mammal monitoring in the Project vicinity, killer whales have been observed intermittently and usually in groups of four to eight (Windward 2017, Turnagain 2017, Turnagain 2018, Straley et al. 2018, SolsticeAK 2018). Transient killer whales, primarily from the West Coast transient stock, occur most frequently in the action area. Less often, whales from the Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea transient stocks occur in the action area (Straley 2017).

Harbor porpoises commonly frequent nearshore waters, but are not common in the Project vicinity. Observations from multiple locations around Sitka Channel from 2000 to 2018 show harbor porpoises occurring infrequently in or near the action area (Windward 2017; Turnagain 2017; Turnagain 2018; Straley et al. 2018).

Harbor seals are common in the inside waters of southeastern Alaska, including in the vicinity of the proposed Project. During recent marine mammal monitoring efforts in the Project vicinity, harbor seals were observed consistently throughout the year (Windward 2017; Turnagain 2017; Turnagain 2018; Straley et al. 2018). Harbor seals haul out of the water periodically to rest, give birth, and nurse their pups. According to the Alaska Fisheries Science Center's list of harbor seal haul-out locations, the closest listed haulout (ID 2,933 name CE49A) is located in Sitka Sound beyond Japonski Island and approximately three kilometers outside of the Project site (Alaska Fisheries Science Center 2018).

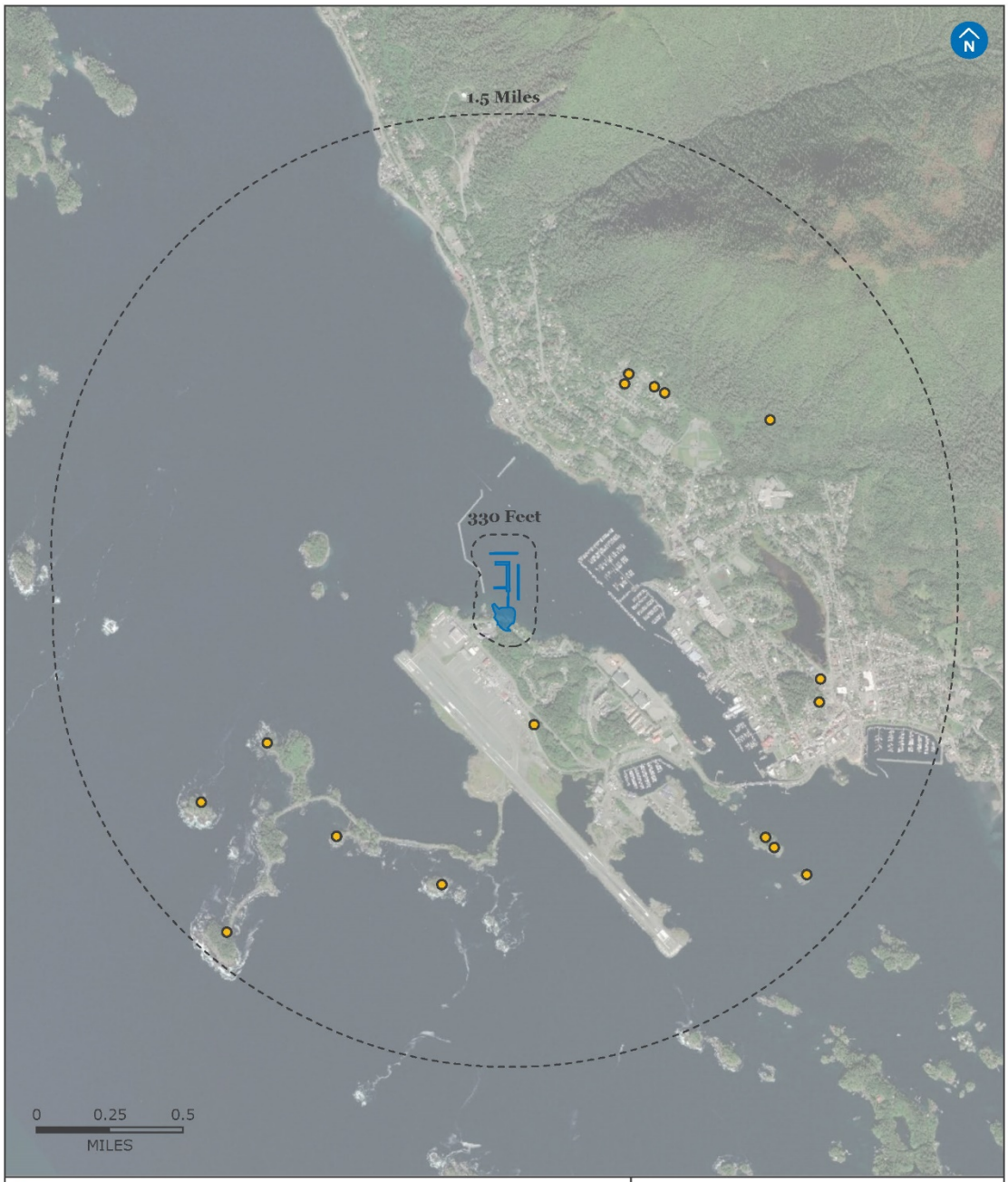
Although uncommon, minke whales and gray whales have been observed on rare occasions during marine mammal monitoring efforts in the Project vicinity, most often outside Sitka Channel (Windward 2017; Turnagain 2017; Turnagain 2018; Straley et al. 2018).

Northern sea otters are commonly observed in the Project vicinity throughout the year (Straley 2018). In 2018, northern sea otters were observed five out of eight days during monitoring at the O'Connell Float in Sitka Channel (over one kilometer from the Project location) (SolsticeAK 2018). Sea otters are not migratory and generally do not disperse over long distances.

5.2.1.4. Migratory Birds and Eagles

Bald and golden eagles and their nests are protected from take, including disturbance under the federal Bald and Golden Eagle Protection Act. Suitable eagle perching and nesting habitat exists on or adjacent to the proposed Project. There are no known active or inactive eagle nests on or within 330 feet of the proposed Project (USFWS 2020). The nearest documented nest is approximately 1,800 feet to the south (Figure 6).

Figure 6: Documented Bald Eagle Nests



5.2.1.5. Invasive Species

Executive Order 13112 Safeguarding the Nation from the Impacts of Invasive Species, as amended on December 5, 2016, requires federal agencies to prevent and control the introduction of invasive species to minimize the economic, ecological, and human health effects that invasive species may cause. The Alaska Exotic Plant Information Clearinghouse (AKEPIC) database, administered by the Alaska Center for Conservation Science at the University of Alaska Anchorage (UAA) was used to identify any invasive terrestrial, marine, and aquatic plant species that could do harm to native habitats on or adjacent to the Project. Although no invasive species have not been reported or identified on or adjacent to the Project site (AKEPIC 2020), wireweed, an invasive algal species, was found in the intertidal/subtidal zone within the Project area (SolsticeAK 2020).

5.2.2. Environmental Consequences of Alternatives

5.2.2.1. Essential Fish Habitat

Approximately 1.64 acres of EFH below the high tide line would be permanently filled for upland staging associated with the Project. While eelgrass beds, Peterson Creek, and important fish rearing habitat have been mostly avoided by this Project (Figure 7), the seaplane base's overwater structures would shade approximately 1.34 acres of EFH which could permanently reduce or cause fragmentation of algae beds and inhibit eelgrass development in the area.

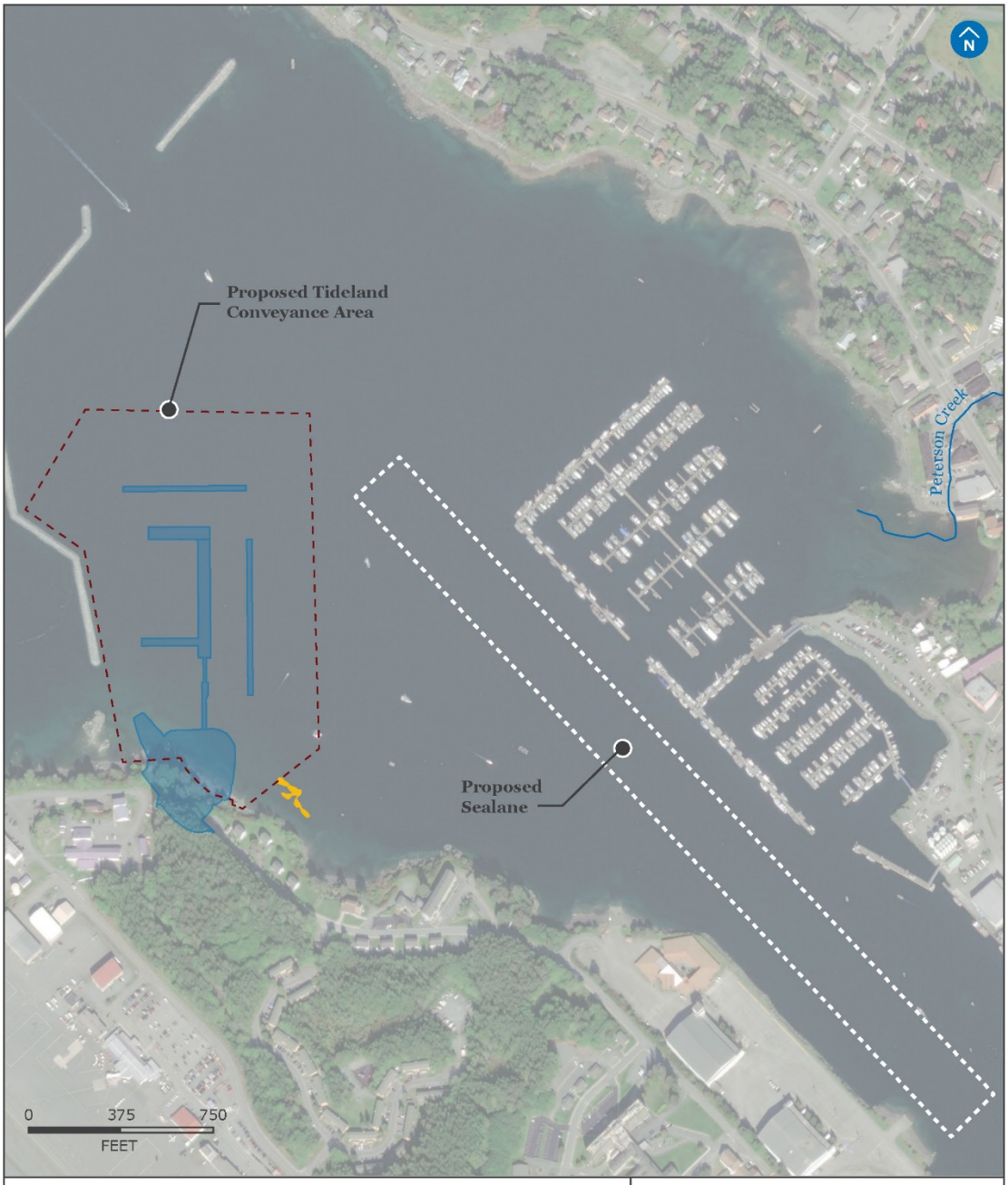
Construction activities within coastal marine areas have the potential to impact EFH. Construction of the new seaplane base may temporarily adversely impact EFH due to elevated noise from impact pile socketing, increased turbidity, increased vessel traffic, increased risk of introducing invasive species, and increased risk of accidental spills. The mouth of Peterson Creek (AWC: 113-41-10185) may potentially be directly impacted by propagated noise during construction.

Impacts are described in detail in the Project's EFH assessment (Appendix B, SolsticeAK 2020). Table 6 details potential adverse impacts to EFH from Project activities (NOAA 2017).

Table 6. Potential Adverse Impacts to EFH and EFH-listed Species for Activities Associated with the Proposed Project

	Project Activity			
Potential Impacts	Discharge of Fill Material	Overwater Structures	Pile Driving and Temporary Pile Removal	Vessel Traffic
Fish Avoidance/Displacement	✓	✓	✓	
Fish Injury or Mortality	✓		✓	
Loss or Alteration of Fish Habitat	✓	✓		✓
Increase in Turbidity	✓		✓	✓
Release of Contaminants		✓	✓	✓
Increased Mechanism for Invasive Species Introduction or Dissemination				✓
Decrease in Ambient Light		✓		
Reduction in Wave and Current Regimes	✓	✓		✓

Figure 7: Eelgrass Extent



Development of the seaplane base's upland surfaces into more impervious surfaces (such as paved areas, shelter structures, haul out ramp, etc.) could exacerbate local stormwater runoff leading to sedimentation, siltation, and an increase contaminants and debris in EFH. A decrease in aquatic vegetation and phytoplankton as a result of a decrease in ambient light from the seaplane base's overwater structures could indirectly impact fish by reducing prey abundance and habitat complexity (NOAA 2017). Further, construction activities, such as discharge of fill and noise from pile driving could injure fish. Injured fish, particularly prey species, may be more susceptible to predation resulting in indirect impacts on other EFH species and disruptions to the local marine system as a whole.

The proposed wave attenuator(s) and floats could change the wave and current regime in the area by disrupting and redirecting or slowing circulation, which may alter localized substrate and detrital materials and impact the nearshore detrital food web. Disruptions to sediment transport from the new seaplane base's marine structures could act as barriers to natural processes required for algal propagation and fish settlement, foraging, rearing, and spawning (NOAA 2017).

Impacts to EFH are further discussed in the Revised EFH Assessment in Appendix B. EFH impact minimization and mitigation measures are found in Section 5.2.3.1.

5.2.2.2. Protected Marine Mammal Species

Since neither listed fin whale, North Pacific right whale, sperm whale, or unlisted Cuvier's beaked whale, Dall's porpoise, Pacific white-sided dolphin, and northern fur seal are expected in the Project action area, the Project would not likely adversely affect these species. However, it is likely that the listed Mexico DPS humpback whales and WDPS Steller sea lion, along with gray whale, minke whale, killer whale, harbor porpoise, harbor seal, and northern sea otter could be adversely affected by habitat loss and construction activities due to the proposed action. Impacts to ESA-listed marine mammals expected in the action area, humpback whales and Steller sea lions, are discussed below and addressed in detail in the draft Biological Assessment (Appendix C) submitted to NMFS as part of Section 7 formal consultation under the ESA.

Approximately 2.98 acres of habitat would be lost due to the placement of fill (1.64 acres) in marine waters and intertidal areas and the placement of overwater structures (1.34 acres) in marine waters. Sitka Channel and the proposed Project area are not pristine marine waters and are not presently designated critical habitat. Permanent impacts from the proposed Project are not expected to jeopardize either humpback whales or Steller sea lions as the area affected by the Project is a relatively small portion of their available habitat.

Direct effects to humpback whales and Steller sea lions from noise associated with construction, primarily from impact, vibratory, and socket pile driving and vessel noise, would have the potential to result in Level B (behavioral) harassment (via disturbance reactions and/or masking). Level A harassment (resulting in injury) to humpback whales (low-frequency ceatceans) is not expected to occur because humpback whales are very uncommon in the Project area and because construction could be shut down prior to humpback whales entering their respective Level A zones. Note that underwater blasting is not proposed, and landside blasting associated with this project was analyzed and found to not have an impact on marine mammals.

Implementation of shutdown zones and a Marine Mammal Monitoring and Mitigation Plan (as typically required by NMFS) would reduce the potential of exposure to underwater noise levels above the Level A harassment threshold established by NMFS. Any Level A or Level B incidental takes of Steller sea lions or humpback whales will be addressed and approved through an Incidental Harassment Authorization (IHA) issued from NMFS. The draft IHA application requests an estimated 105 Level B takes of humpback whale (an estimated 6% from Mexico DPS, or 6 takes) and an estimated 1,432 Level B takes of Steller sea lion (approximately 2.2% from WDPS, or 32 takes).

Humpback whales and Steller sea lions could be temporarily displaced from the action area due to elevated noise levels produced by in-water construction. Displacement of either species by noise would be temporary and impacts would be limited to short-term effects on the local population.

Vessel traffic generated during construction could result in vessel strikes of marine mammals. Based on documented incidents, vessel strikes are a concern for humpback whales. Fewer Steller sea lion vessel strikes have been recorded. No known whale-vessel collisions have occurred in the Project area, as the probability of strike events depends largely on vessel speed (Laist et al. 2001). The risk of vessel strike to Steller sea lions and humpback whales associated with the proposed Project is low given: 1) vessels transporting Project materials to Sitka will follow well-established, frequently used routes; 2) a limited number of vessels would be needed for construction (likely no more than 20 barge trips); 3) within Sitka Channel, vessels must travel under 5 miles per hour, within a no wake zone (CBS Code 13.10.195); and 4) the limited duration of construction.

The likelihood of humpback whales and Steller sea lions exhibiting behavior responses due to vessel traffic is low. Both species are likely habituated to vessels because the Project location is in Sitka Channel and there is a high amount of existing vessel traffic in the area. There are no known Steller sea lion rookeries or haulouts near the Project area; therefore, the chances of stress due to increased vessel traffic near critical habitat is unlikely.

The probability of Project impacts to humpback whales or Steller sea lions from accidental spills or other pollution due to construction is very small. The risk of spills and pollutants related to the Project would be mitigated by implementing best management practices and policies to prevent accidental spills during base construction and operation. Introducing a fueling facility to the SBP may increase the risk of a spill during fueling and requires proper spill protection procedures. If a spill were to occur, plans would be in place and materials would be available for cleanup activities.

The new seaplane base would have the potential to increase water and air seaplane traffic in the Sitka Channel vicinity. Noise due to seaplanes flying over and landing in the channel has the potential to impact humpback whales and Steller sea lion behavior. Although no interactions between seaplanes and humpback whales and Steller sea lions have been documented, landings and takeoffs could result in unsafe conditions for animals in the vicinity; however, it is expected that the animals would avoid the area during busy periods. Seaplane strikes could occur, but are unlikely to injury humpback whales because whales are much larger than the seaplanes and because there is no underwater propulsion equipment on the sea planes. Seaplane strikes of Steller sea lions are also unlikely due to avoidance and no underwater propulsion associated with seaplanes. Seaplane and marine mammal interactions during seaplane taxiing, takeoff, and landing could also pose a risk to human safety.

Steller sea lions have been observed hauled out on floats in Sitka harbors and in other locations throughout Alaska, and there is the potential for the animals to haul out on floats and floating wave attenuators (depending on whether the design accommodates the weight of a sea lion). Suitable haul out locations in the area could lead to more sea lions congregating in the area, which could lead to the increased potential for negative human interactions and the potential for unavoidable seaplane and/or vessel strikes. Hazing of Steller sea lions from the area would require NMFS's approval, if required.

Impacts to marine mammal prey species, such as Walleye Pollock, Pacific Herring, and salmon, are expected to be minor and temporary. The most likely impact to fish and krill from the Project would be temporary behavioral avoidance and displacement from the immediate area from elevated noise levels from construction and seaplane operations. The area in which any disruptions to prey species would occur is relatively small compared to the available foraging habitat around Sitka. Further, mitigation measures would be implemented to reduce impacts of noise on habitat (see Section 5.2.3). Therefore, indirect effects on Mexico DPS humpback whale or WDPS Steller sea lion prey during the proposed Project are not expected to be substantial.

5.2.2.2.1 Non-ESA Listed Species

The proposed seaplane base is expected to have the same impacts on non-ESA listed marine mammals as those listed above for humpback whales and Steller sea lions. Specifically, noise associated with construction, primarily from impact, vibratory, and socket pile driving, and vessel noise, would have the potential to result in Level B (behavioral) harassment (via disturbance reactions and/or masking) or Level A harassment. An IHA application for the proposed Project would be submitted to NMFS and USFWS for take of marine mammals under the MMPA. The NMFS IHA application would seek approval for takes of killer whale (716 Level B takes), harbor porpoise (895 Level B takes),

harbor seal (1,074 Level B takes and 179 Level A takes), minke whale (53 Level B takes), and gray whale (32 Level B takes). In addition, an IHA application would be submitted to the USFWS for the take of northern sea otter (716 Level B takes). There is no intention to apply for take of any other non-ESA marine mammals due to the proposed Project, since they are not expected in the area.

5.2.2.3. Migratory Birds and Eagles

The Project area would be surveyed for the presence of eagles and their nests prior to construction in order to avoid impacts to nests or nesting birds. If active bald or golden eagle nests are found within the Project area, a primary zone of a minimum 330 feet would be maintained as an undisturbed habitat buffer around nesting eagles. If bald eagle nests are documented within 0.5 mile during the pre-construction survey, CBS would consult with USFWS prior to the start of construction for any nests within 660 feet of the cut and fill limits or 0.5 mile of pile driving. The Proposed Project is not anticipated to have an effect on bald or golden eagles.

5.2.2.4. Invasive Species

Construction, operation, and maintenance activities could increase vectors for invasive species introduction and dissemination through vessel, vehicle, and seaplane traffic. Measures to minimize and avoid this are described in Chapter 5.2.3.3 (Invasive Species).

5.2.3. Minimization and Mitigation

5.2.3.1. Essential Fish Habitat

Incorporating the following conservation measures would help minimize adverse impacts to EFH and EFH-managed species/species complexes and other fish and marine resources in the Project area.

- The Project design minimizes the areal extent of fill in EFH to the extent practicable, especially in areas that support managed species (eelgrass).
- Fill would be sloped to maintain shallow water, photic zone productivity; allow for unrestricted fish migration; and provide refuge for juvenile fish.
- The Project would employ the fewest number of pilings necessary to support the dock structure and to allow light into under-pier areas, minimizing impacts to the substrate.
- Operation protocols would require vessels to operate at sufficiently low speeds to reduce wake energy, and follow no-wake zones designated near sensitive habitats.
- CBS would develop operations protocols to minimize contamination from bilge waters, seaplane accidents, general maintenance, fueling, and nonpoint source contaminants from upland facilities related to vessel operations and navigation.
- CBS would implement practical measures to reduce, contain, and clean up petroleum spills.
- A storm drain system including manholes with catchment sumps to trap solids and an oil water separator will be installed in the upland area to collect surface runoff and to remove contaminants prior to delivery to any receiving waters.
- Pile installation and removal timeframes would be negotiated with ADF&G and NMFS to minimize impacts during sensitive time periods when larval and juvenile stages of EFH fish species are present. Pile installation will not occur during Herring spawning periods.
- Impact hammer use would be minimized, and piles would first be driven as deep as possible with a vibratory hammer and socketing.
- A silt curtain would surround the pile driving and temporary pile removal operation.
- Temporary piles would be removed slowly to allow sediment to slough off at or near the mudline to reduce suspended sediment and turbidity.
- CBS will require BMPs to prevent or minimize contamination from seaplane fueling, general maintenance, and non-point source contaminants from upland facilities.

- Preservative treatment will be in accordance with the Western Wood Preservers Institute BMPs.

5.2.3.2. *Endangered Species, Critical Habitat, and Marine* Mammals

To minimize impacts of Project activities on marine mammals, including ESA-listed species, a detailed Marine Mammal Monitoring and Mitigation Plan would be developed and would be implemented during any in-water pile driving and removal activities. Applications for IHAs would be prepared and submitted to NMFS to authorize the potential for Level A and Level B takes of marine mammals in the Project vicinity. Incorporating the following mitigation measures would help to avoid and minimize adverse impacts to ESA and MMPA-protected species and critical habitat in the Project area.

- The Project design minimizes fill to the extent practicable and and does not require marine dredging or blasting.
- The Project design uses the smallest-diameter and number of piles practicable.
- Pile driving and temporary pile removal operations would be surrounded by a silt curtain.
- Floats or barges would not be grounded at any tidal stage.
- The contractor would provide and maintain a spill cleanup kit on-site at all times as part of a safety plan and any fueling equipment would be checked regularly for drips or leaks.
- Oil spill prevention and response equipment would be readily available for oil or other fuel spill containment and response should any release occur.
- Measures would be implemented to prevent petroleum products, cement, chemicals, or other deleterious materials from entering surface waters.
- A NMFS-approved marine mammal monitoring plan would be followed during construction activities. The plan would include the following:
    - When marine mammals are present, there would be a 10-meter shutdown zone for construction-related activity where acoustic injury is not an issue. For these activities, monitoring would take place beginning 15 minutes prior to initiation of noise-inducing activities until the activity is complete.
    - Protected Species Observers (PSOs) would be present during pile driving and removal and pile driving/removal would not begin until a PSO has given a notice to proceed following.
    - Pile caps (pile softening material) would be used to minimize the noise generated during pile installation
    - To minimize impacts to marine mammals, a "soft start" technique would be used when impact pile driving with an initial set of three strikes from the impact hammer at 40 percent energy, followed by a one-minute waiting period, then two subsequent three-strike sets.
    - Pile driving softening material will be used to minimize noise during vibratory and impact pile driving. Much of the noise generated during pile installation comes from contact between the pile being driven and the steel template used to hold the pile in place. The contractor will use high-density polyethylene (HDPE) or ultra-high-molecular-weight polyethylene (UHMW) softening material on all templates to eliminate steel on steel noise generation.
    - Prior to pile driving, the action area would be surveyed for marine mammal presence for 30 minutes. Any marine mammal sightings would delay pile driving/removal until the animal(s) is confirmed to have moved outside of and on a path away from the area or if 15 minutes (for pinnipeds or small cetaceans) or 30 minutes (for large cetaceans) have elapsed since the last sighting of the marine mammal within the shutdown zone.
    - Shutdowns would be implemented if a marine mammal appears likely to enter a shutdown zone.
    - All work would be performed during daylight hours and under appropriate weather conditions to allow for visual monitoring.

5.2.3.3. Invasive Species

Measures to minimize or eliminate the potential for introduction, establishment, and spread of invasive species would be implemented during construction.

Construction equipment would be pressure washed to remove soil, seed, and plant material prior to moving onto or off the Project site. Clean fill material, native plants, and certified native seed mix would be used, removing the risk of seeding exposed areas with invasive species. Stabilization of disturbed areas would occur as soon as practicable, reducing the risk of invasive species establishing themselves in the exposed soils. Stabilization can include paving, laying down a gravel layer, and/or seeding and vegetating. Certified native seed or locally produced seed mix would be used when seeding is the selected stabilization method.

5.2.4. Consultations, Permits, and Other Approvals

The following consultations, permits, and other approvals would be required for the implementation of the proposed action:

- ESA Formal Consultation for species under NMFS's jurisdiction (Mexico DPS humpback whales, WDPS Steller sea lion)
- MMPA IHA for takes of marine mammal under NMFS's jurisdiction (humpback whales, Steller sea lions, killer whales, harbor porpoise, harbor seal, minke whale, and gray whale)
- MMPA IHA for takes of marine mammals under USFWS's jurisdiction (Northern sea otters)
- USACE Section 404 and Section 10 Permit for fill activity and placement of offshore infrastructure

Consultation with NMFS on ESA-listed species and marine mammals is underway. Consultation with the USACE and USCG on Section 404 and Section 10 permit requirements are also underway.

5.3. Hazardous Materials, Solid Waste, and Pollution Prevention

5.3.1. Affected Environment

Contaminated sites often threaten public health or the environment and can cause economic hardship to people and communities. ADEC maintains an inventory of contaminated sites. There are 13 contaminated sites within one-half mile of the proposed Project (Table 7, Figure 8).

None of these sites are active, however six have institutional controls (IC) (ADEC 2020). ICs are instituted when contamination remains above the established cleanup levels without an unacceptable risk to human health or the environment. Sites with ICs usually require coordination with ADEC if construction is on or immediately adjacent to the site boundary.

Most of the sites are associated with the Sitka Airport or the Sitka NOB, operated by the USCG, are more than 1,000 feet from the Project footprint, and would not be affected by the Project.

Solid waste facilities in Sitka consists of a Class III landfill, industrial scrap yard, waste area, transfer station, and recycling center. The Sitka landfill was permitted in 2006 and has an estimated 250 years of capacity for inert waste materials (CBS 2014).

5.3.2. Environmental Consequences of the Alternatives

The proposed Project would not occur within an area documented as contaminated with hazardous materials. However, as Japonski Island was used during WWII, there is a potential of discovering hazardous material during construction.

Generation of construction waste is not anticipated to affect the capacity of the landfill.

5.3.3. Minimization and Mitigation

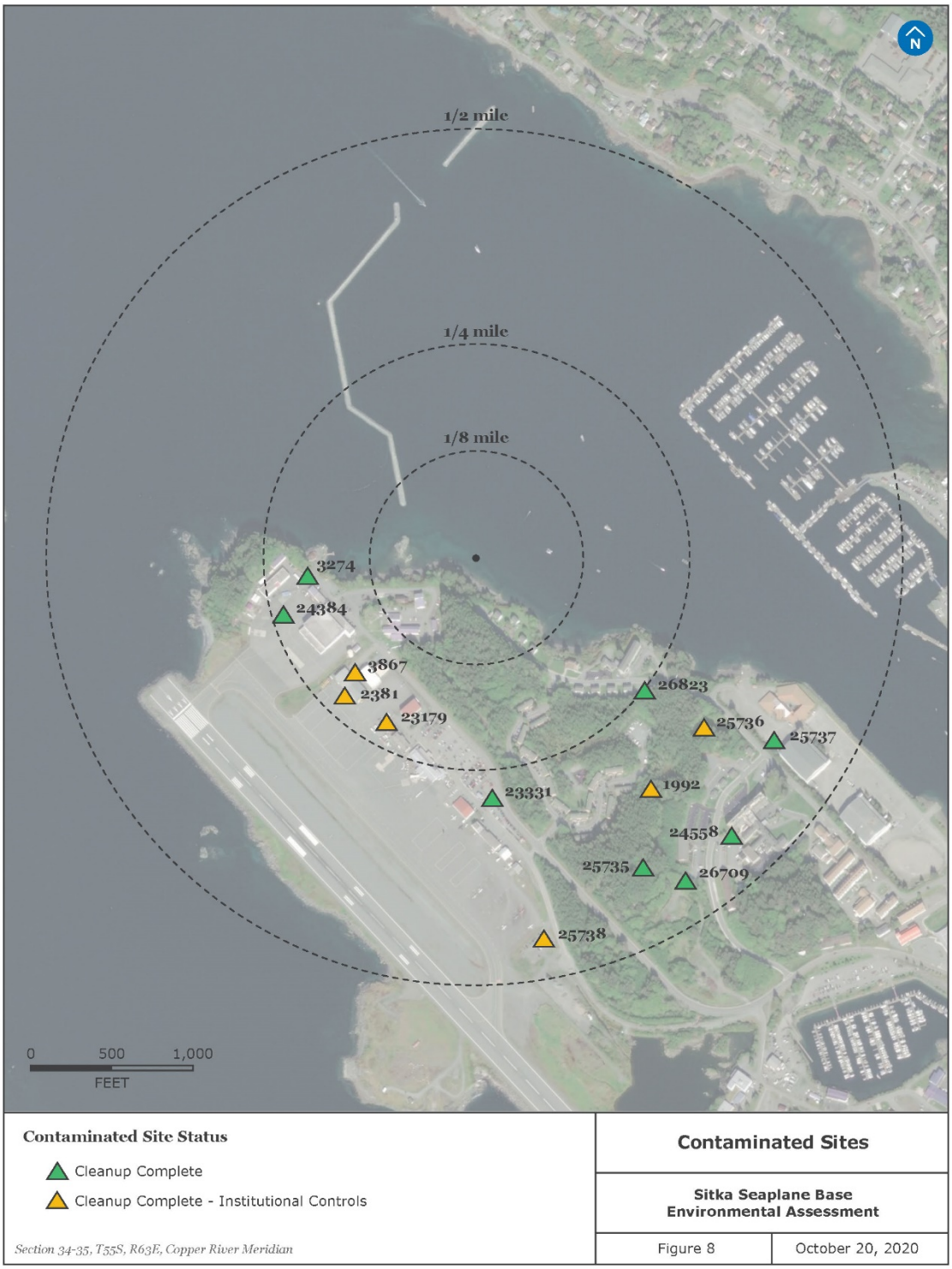
A Hazardous Materials Response Plan (HMRP) and Spill Prevention, Control, and Countermeasures (SPCC) plan would be required from the construction contractor to address appropriate storage, use, and disposal of any hazardous materials during construction. All construction waste would be managed and disposed of in accordance

Table 7. Contaminated Sites on Japonski Island

Site Name	Hazard ID	Cleanup Status	Contamination Source/Restrictions	Distance to Project (feet)
Avis Rent A Car -Sitka	23331	Complete	Underground storage tanks/Advance approval required to transport soil or groundwater off-site	1,491
USCG Air Station – Sitka	24384	Complete	Underground storage tanks/ Advance approval required to transport soil or groundwater off-site	1,221
SEARHC - Mount Edgecumbe Hospital, Tank ME-3	24558	Complete	Underground storage tanks/ Advance approval required to transport soil or groundwater off-site	2,344
Sitka NOB - Area E - Millerville Housing	25735	Complete	Underground and aboveground storage tanks/ Advance approval required to transport soil or groundwater off-site	2,184
Sitka NOB - Area H - Seaplane Dock	25737	Complete	Underground fuel lines and tank truck loading/ Advance approval required to transport soil or groundwater off-site	2,169
Mount Edgecumbe Hospital USTs 2 & 3	26709	Complete	Underground storage tanks/Advance approval required to transport soil or groundwater off-site	2,385
SEARHC Mount Edgecumbe Bldg 211A	26823	Complete	Vehicle and hazardous material storage/none	1,353
USCG Japonski Island Base	3274	Complete	Aboveground storage tank spill/Advance approval required to transport soil or groundwater off-site.	1,032
Sitka NOB - Area F - Tank Farm No. 2	1992	Complete -IC	Aboveground and underground storage tanks/ some contaminated soil remains at concentrations above the cleanup level below the paved parking lot.	1,800
Mountain Aviation	2381	Complete -IC	Hangar fuel storage/Property restrictions are in effect until such time that contaminant concentrations in soil in the utility corridor just beyond the leasehold boundary are shown to meet the most stringent cleanup criteria.	1,163
ADOT&PF Sitka Airport S&C Building	3867	Complete -IC	Petroleum contamination from undetermined source/deed restrictions	1,045
ADOTPF - Sitka Airport Maintenance Station	23179	Complete -IC	Underground storage tanks/deed restrictions in place	1,168
Sitka NOB - Area G - Igarotte Housing Area	25736	Complete -IC	Unidentified/Advance approval required to transport soil or groundwater off-site	1,771
Sitka NOB - Area K Tank Farm No. 3	25738	Complete -IC	Underground storage tanks; Advance approval required to transport soil or groundwater off-site	2,400

Source: ADEC 2020. Note: ID (identification number).

Figure 8: Contaminated Sites



with all state and federal solid-waste-management laws and regulations. If contaminated soil or groundwater is encountered during construction, the contractor shall immediately notify CBS and stop work until coordination on the appropriate response occurs with ADEC.

5.3.4. Consultation, Permits, and Other Approvals

No consultation, permits, or other approvals related to hazardous materials would be required.

5.4. Historical, Architectural, Archaeological and Cultural Resources

5.4.1. Affected Environment

The study area for cultural resources is defined as a 250' buffer around construction limits of the Project, which includes all areas requiring fill, construction or demolition, and ground disturbance (Figure 9). Figure 10 shows Project elements that are located within this study area.

The Alaska Heritage Resources Survey, maintained by the Office of History and Archaeology, was reviewed for this Project. The study area extends into the northwestern boundary of Sitka Naval Operating Base (NOB) and US Army Coastal Defenses National Historic Landmark (NHL) managed by the National Park Service (NPS). Additionally, the Project proposes to access the new seaplane base via Seward Avenue through the NHL.

Tlingit History

Evidence for human habitation of the Northwest Coast dates to at least 12,500 years before present. Sitka is part of an expansive territory occupied by the Tlingit, and takes its name from Sheey At'iká (or Sheet'tká) Kwaan. The temperate climate and abundant plant, game, and marine resources contributed to development of the complex Tlingit sociocultural system, intricate artistic traditions, and far-reaching relationships outside of Tlingit territory. Of the Tlingit in Southeast Alaska, the Sheet'tká Kwaan had the most (and likely the earliest) contact with Europeans, with contact possibly occurring as early as 1584, and documented by Russian sailors in 1741 (Grinëv et al, 2005). The perils of European contact, ensuing armed conflict, and eventual purchase of Alaska by the United States Government led to displacement, competition for resources, and disease. These effects of contact took a heavy toll on the Tlingit population.

Despite generations of social and cultural changes, the Tlingit continue to have a prominent presence in the community as they practice the same subsistence, cultural, and artistic traditions that have been ongoing for thousands of years. Today, the Sitka Tribe of Alaska is the federally recognized government for the immediate local indigenous population (inclusive of Tlingit, Haida, and Tsimshian members), along with the Central Council of Tlingit and Haida Indian Tribes of Alaska, which is headquartered in Juneau.

The Project area and broader vicinity have been used by the Tlingit for gathering shellfish (including abalone) and other marine resources for generations. Sites associated with Tlingit in the vicinity of the project include the Mt. Edgecumbe School (SIT-00648) which was determined eligible by the BIA, and possibly (SIT-00478), a grave site which is recorded in the AHRS as being of uncertain patrimony. Discussions with Sitka Tribe of Alaska have indicated that there are Tlingit graves in the vicinity of the Project (between the USCG base and the airport), and it is possible that SIT-00478 may represent one such grave. Sitka Tribe of Alaska members have also shared reports of human remains on the beach in historic times, although none were observed during site visits.

Although there are no prehistoric or historic-era Tlingit sites documented within the Study area, the Tlingit generations-long use of the broader vicinity for subsistence, and the presence of historic-era sites indicate a possibility that previously undocumented sites may exist in the vicinity of the Project.

Figure 9: Proposed Area of Potential Effect

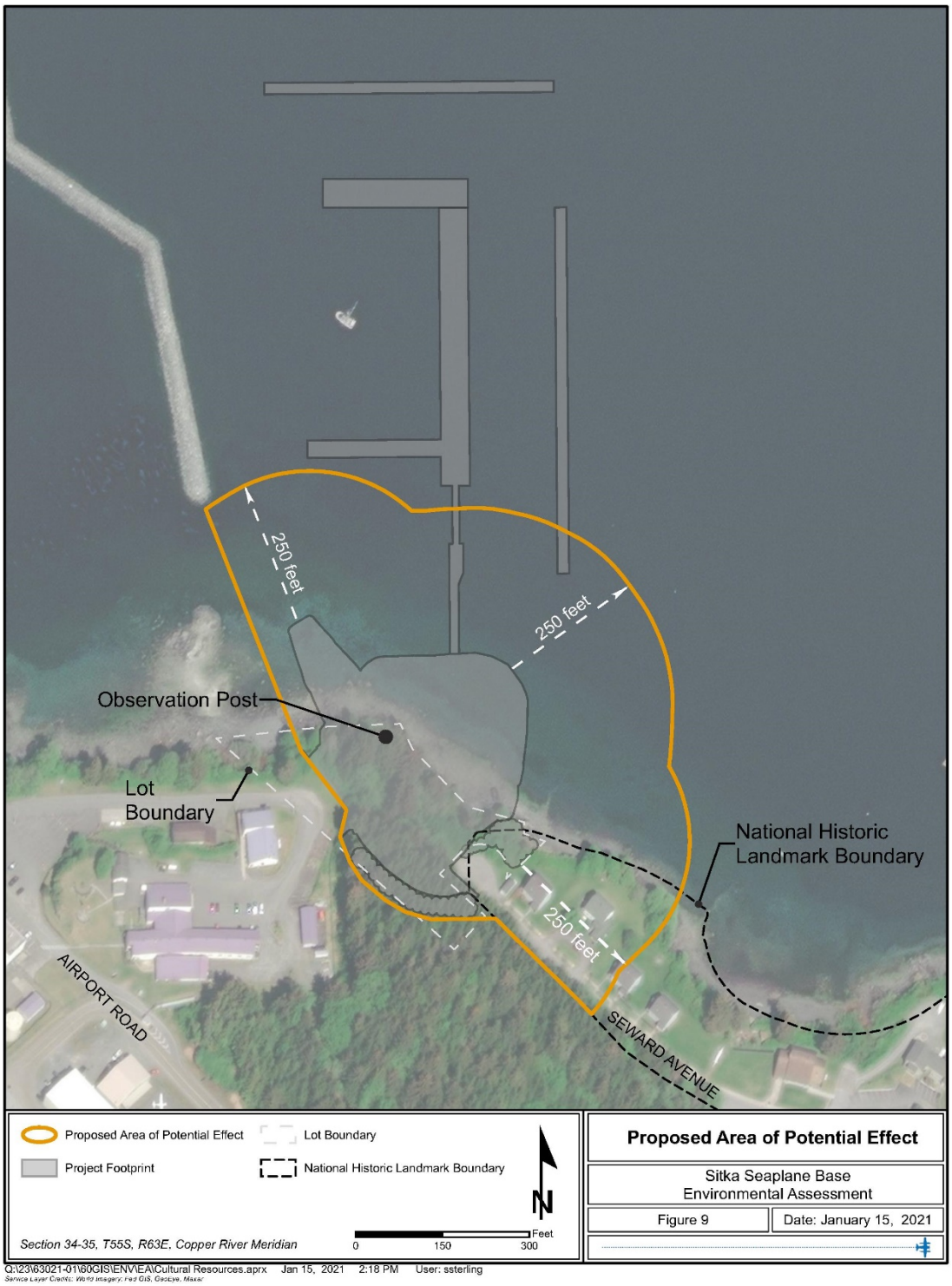
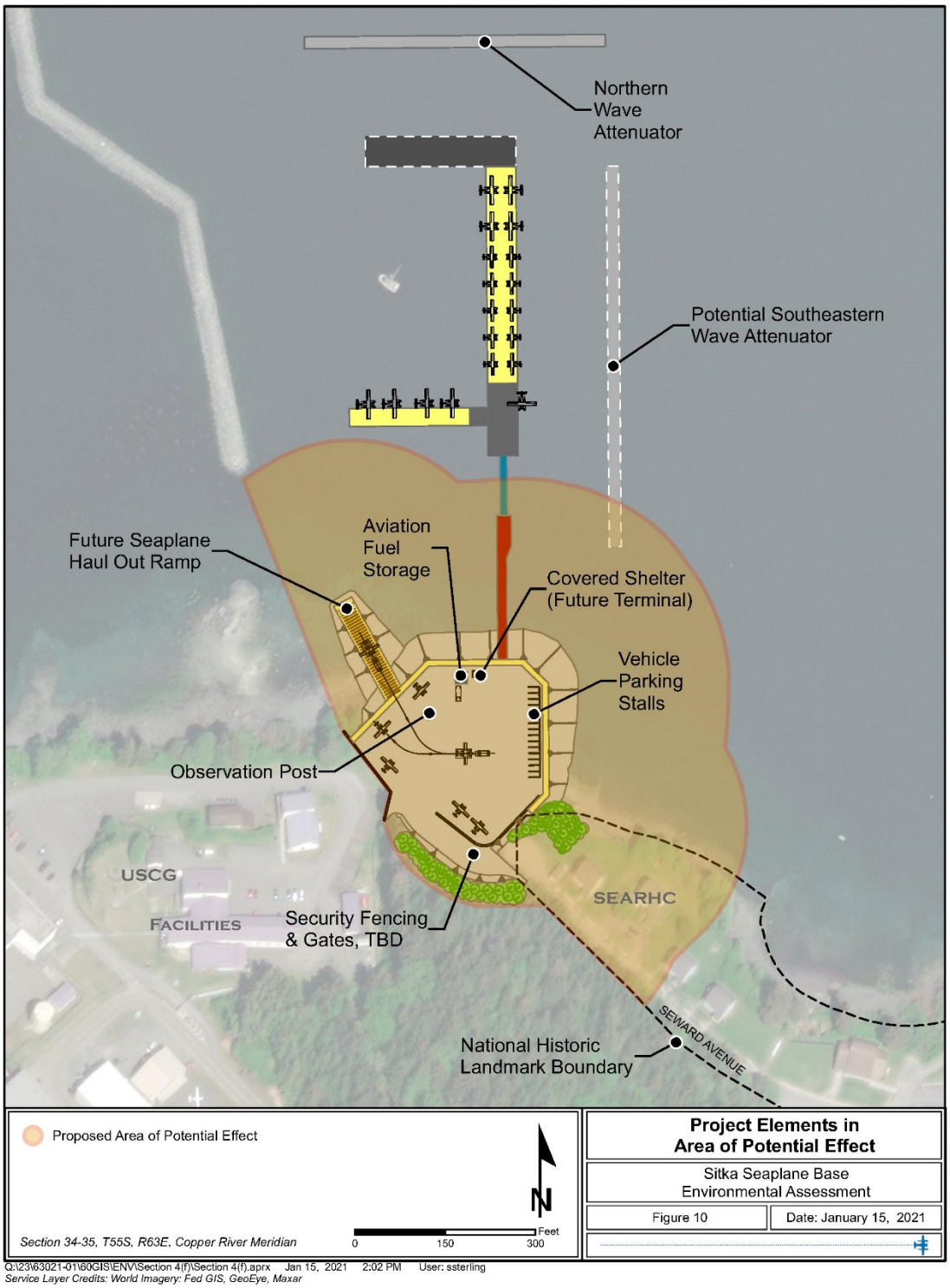


Figure 10: Project Elements in Area of Potential Effect



World War II History

The Sitka NOB was one of three Alaskan Naval Air Stations used during WWII (NPS 2020). Sitka NOB was originally established as an advance seaplane base in 1937 and designated a NOB in 1942. During WWII planes operating out of the Sitka NOB patrolled Southeast Alaska and the Gulf of Alaska. Sitka NOB also provided critical defense for shipping in the Gulf of Alaska. Beginning in 1941, the U.S. Army established Forts Ray, Rousseau (which replacedFort Ray as the headquarters for coastal defense in 1943), Pierce, and Babcock to provide defensive support to the Sitka NOB. As part of this effort the Army also constructed the Coastal Defense Network, a system of armaments and fortifications to protect Sitka Sound and associated Naval facilities. Sitka NOB was closed by the Navy in 1944 (Bush 1944; NPS 2020).

Several historic sites are located in the vicinity of Seward Avenue and one are located in the vicinity of the Project. The Sitka NOB and U.S. Army Coastal Defenses NHL was designated in 1986 for its role in WWII defenses in Alaska and the Aleutian Islands. The NHL is comprised of the Sitka NOB and Fort Rousseau, including associated U.S. Army Coastal Defenses on eight islands. The 1986 nomination had 78 contributing features, and although there have been safety and efficiency improvements and changes in use, these retain the character of their period of significance. The NPS is currently in the process of updating the 1986 nomination to account for changes to the NHL, including demolition or rehabilitation of buildings, and improved documentation of contributing features (NPS 2020). The revised NHL nomination includes the Sitka NOB road system.

In May 2020, a site visit of the Project footprint identified one building, consisting of an intact WWII-era observation post (Appendix C). Development of the new seaplane base would require demolition of this building. Observation posts similar to this building were used to identify and triangulate the position and distance of enemy craft to guide artillery fire. The position of this building in relation to a battery of 90mm Anti Motor Torpedo Boat guns constructed at Watson Point during WWII supports this hypothesis (Berhow 2020). Unfortunately, the available records associated with the artillery at Watson Point do not include this building. It is also possible that this building was constructed by Marine or Army infantry as part of series of small coastal fortifications that used to ring Japonski, Alice, and Charcoal Islands. These small defensive positions would have ranged from foxholes and trenches to more elaborate concrete buildings such as this (M. Hunter and M. Berkhow personal communication to C. Kennedy [DOWL], August 7, 2020).

A Determination of Eligibility was completed and the SHPO has agreed that this structure (SIT-01115) is eligible for the National Register as a contributing feature to the Sitka NOB and U.S. Army Coastal Defenses NHL.

5.4.2. Environmental Consequences of the Alternatives

It is expected that the proposed seaplane facilities, including the access road and parking lot, can be designed to avoid direct impacts on the contributing features of the NHL as it currently exists.

Tlingit Cultural Uses and Resources

Discussions with Sitka Tribe of Alaska have indicated that there may have been human remains on beaches in the vicinity in the past and there are burials in the vicinity of the project (between the USCG base and the airport). Sitka Tribe of Alaska did not identify any burials within the Study Area; however, the proximity of the Study Area to known burial sites and identified subsistence use areas creates potential for inadvertent discoveries of, or inadvertent adverse effects to, Alaska Native cultural resources.

Development of the site and nearshore waters will reduce the shoreline areas available for subsistence harvests of marine resources. However, the areas used for subsistence harvests around Sitka is extensive (Still and Koster, 2017). Therefore, restricted access to this particular portion of the shoreline would not substantially impact subsistence harvest potential. A tidal survey done during the planning phase found no abalone present in the surveyed area.

World War II Historic Resources

Impacts to cultural resources range from changes to the character of the NHL due to additional noise and visual alterations of the setting to physical damages to individual elements (as part of vibration from construction activities, heavy traffic, or other construction-related impacts.) Addition of buildings and structures could alter the original setting of the NHL (or the impacted portion of the NHL, specifically). Similarly, changes to the types, duration, and volume of noise associated with construction and operation of the seaplane base could alter the setting and feeling of the impacted portion of the NHL. Vibration from construction activities, blasting of the hill at the entry area, and staging of heavy equipment have the potential to cause damage to WWII-era buildings and roads, which may not have been updated or reinforced.

The Project proposes to avoid visual and audible impacts to the NHL and the facilities within it. Noise impacts resulting from construction of the Project would be temporary and would only occur during construction which would be expected to occur over one to two years. Barge delivery of fill materials would eliminate the need for gravel hauling trucks to use Seward Avenue. Blasting of the hill at the south end of the Project site would occur only over a one-month period. A blasting plan would be developed and coordinated with the NPS, SEARHC, and Mount Edgecumbe High School. Vibrations at the site boundary would be less than the level at which damage to drywall occurs. The blast plan would include noise and vibration monitors during blast events located at critical adjacent structures.

Changes in noise levels within the NHL along Seward Avenue would occur during seaplane base operations as vehicle traffic on Seward Highway would increase and ground-based activities at the seaplane base would generate noise. However, noise from both land-based aircraft (including helicopters and commercial airplanes) and seaplanes can already routinely be heard from the institutional and residential areas of the NHL. The main commercial airport and the USCG Air Station Sitka are nearby and seaplanes currently takeoff and land on Sitka Channel.

The Proposed Action would demolish the observation post (SIT -01115) resulting in an adverse effect on a historic property. Consultation in accordance with Section 106 of the NHPA is underway with appropriate parties to identify appropriate minimization and mitigation measures to address this adverse effect.

5.4.3. Minimization and Mitigation

Project design elements to avoid visual impacts to the adjacent NHL have been included in Project design. Examples of these include lowering the site elevation, changing the orientation of the seaplane base floats, and including vegetative barriers designed to obscure the seaplane base from the direct view of the NHL. A blast plan for construction would be developed and coordinated with NPS, SEARHC, and Mount Edgecumbe High School to incorporate measures to monitor and minimize the potential for blasting effects on the structures on Seward Avenue.

Impacts to previously undocumented WWII relics or other artifacts will be addressed by implementing a standard inadvertent discovery plan. Under such a plan, if other war relics or artifacts are found during construction, work would be halted and the SHPO notified. Work on the site would not restart until appropriate agency consultation occurred.

Consultation with Sitka Tribe of Alaska is underway to address archaeological and tribal monitoring during ground disturbance on the site and inadvertent discovery plan protocols. CBS has agreed to engage archaeological and tribal monitors during ground disturbing construction activities that have the potential to uncover cultural resources As noted above, Section 106 consultation is also underway to determine appropriate mitigation measures to be implemented to address the adverse effect to the observation post (SIT-01115).

5.4.4. Consultation, Permits, and Other Approvals

Consultation to resolve adverse effects under Section 106 of the NHPA has been initiated with the NPS, Alaska SHPO, Sitka Tribe of Alaska, and Sitka's Historic Preservation Committee (see Section 6.2, Section 106 Consultation, for a list of recipients). Since the SHPO has determined that the observation post is eligible for the NRHP as a contributing element of the NHL, consultation is underway to determine appropriate mitigation measures to be implemented to address the adverse effect. Potential mitigation measures may include documentation of the structure through the

Historic Amercian Buildings Survey (HABS) and Historic American Engineering Record (HAER), use of interpretive signage documenting the observation post and its use in WWII, documentation of another similar structure on the island, or other measures.

The Sitka Tribe of Alaska has provided input regarding the potential for artifacts and/or human remains to be present on the site. Consultation is underway regarding an inadvertent discovery plan and notification process and tribal monitoring during ground disturbance.

Consultation currently underway with appropriate parities will identify specific mitigation measures and responsibilities in a Memorandum of Agreement (MOA) prior to any site disturbance.

5.5. Land Use

5.5.1. Affected Environment

Japonski Island is zoned public land. The island has a variety of public facilities including the Sitka Rocky Gutierrez Airport, the USCG Air Station Sitka, the municipal wastewater treatment plant, SEARHC/Mount Edgecumbe Medical Center and the Mount Edgecumbe High School. A SEARHC clinic, day care center, and office building, and a government-owned residence are located within the immediate Project vicinity. SEARHC outpatient behavioral health clinics are located on Seward Avenue south of the Project site and a new SEARHC hospital is proposed for construction to the southwest of the site.

The CBS Comprehensive Plan 2030 identified the need to replace Sitka's existing deteriorating seaplane base to maintain the economic and transportation benefits it provides not only to Sitka residents, but other nearby small communities (CBS 2018a). The plan also noted the deterioration of the existing seaplane base; the existing conflicts between seaplane operations, boats, and birds; and the need for eliminatory conflicts between floatplane operators and boats in Sitka Channel.

5.5.2. Environmental Consequences of the Alternatives

The proposed action is consistent with land use plans for publicly zoned areas and would address the issues identified for the existing seaplane base. It would achieve the goal identified in the CBS Comprehensive Plan 2030 and would be consistent with other transportation related uses of Japonski Island including the Sitka Rocky Gutierrez Airport and USCG Air Station Sitka.

The intensity of land use would change on the site, resulting in additional vehicle traffic and noise on Seward Avenue. One structure on Seward Avenue is used as a residence, other structures are used for behavioral health services, and Mount Edgecumbe High School is located on the Sitka Channel shoreline farther south on Seward Avenue. These are noise sensitive uses. Noise effects are discussed further in Section 5.8 (Noise and Noise-Compatible Land Use).

5.5.3. Minimization and Mitigation

No minimization or mitigation actions are proposed or would be required.

5.5.4. Consultation, Permits, and Other Approvals

No consultation, permits, or other approvals related to land use would be required.

5.6. Department of Transportation Act, Section 4(f)

5.6.1. Affected Environment

Publicly owned wildlife refuges, parks and recreation areas, and historic sites eligible for the NRHP are protected from transportation impacts by Section 4(f) of the Department of Transportation Act. There are no wildlife refuges, parks, or recreation areas located in the Project area. However, the Sitka NOB and US Army Coastal Defenses NHL is adjacent to the proposed seaplane base site and is protected by Section 4(f). In addition, there is an observation post located on the Project site that is recommended as eligible for the NRHP as a contributing element to the NHL in a draft Determination of Eligibility evaluation. This structure would be removed as part of the Proposed Action.

5.6.2. Environmental Consequences of the Alternatives

Although the proposed site is adjacent to the Sitka NOB and US Army Coastal Defenses NHL, site development would not encroach on the adjacent NHL. Construction activities may have temporary effects on the NHL due to increased traffic and construction noise. In addition, vehicle traffic and associated traffic noise, and seaplane operations and noise in Sitka Channel may have longer term effects on the NHL. These effects are not expected to be so severe that the activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired or diminished.

However, the Project would have an adverse effect on the observation post located on the proposed site. A Section 4(f) evaluation was conducted to determine if there were any feasible and prudent alternatives to the Proposed Action (Appendix D). The evaluation found that there were no prudent or feasible alternatives to the Proposed Action. Consultation is underway to ensure that all proper planning has been completed to mitigate the effects on this site. The Project team would coordinate with the Alaska SHPO, the NPS, and the FAA on concurrence with this determination prior to an site disturbance.

5.6.3. Minimization and Mitigation

Minimization and mitigation measures associated with the NHL are discussed in Section 5.5 (Historical, Architectural, Archaeological and Cultural Resources). Consultation currently underway with appropriate parities will identify specific mitigation measures and responsibilities in a Memorandum of Agreement (MOA) prior to any site disturbance.

5.6.4. Consultation, Permits, and Other Approvals

As the SHPO and the NPS are the parties with jurisdiction over the SIT-01115 and the NHL, consultation with NPS on the potential for effects on the NHL have occurred. NPS has concurred that there are no feasible and prudent alternatives to the Proposed Action and that all propoer planning has occurred to mitigate the effects on the historic resources.

5.7. Natural Resources and Energy Supply

5.7.1. Affected Environment

The CBS electrical grid is primarily powered by hydropower. In 2015, the CBS completed a major expansion of the Blue Lake hydroelectric Project and its capacity ranges between 22 megawatts (MW) in the summer and 32 MW in the winter (CBS 2018b). Low voltage electrical lines run from substations west to Japonski Island. Increased electric loads on Japonski Island are anticipated through expansion of the SEARHC campus and per the Japonski Island Electrical Master Plan, a general increase of 0.2 MW was estimated for “a float plane facility” (CBS 2018b).

The Sitka Wastewater Treatment Facility is located on Japonski Island, which collects domestic wastewater from across Japonski Island, including the Japonski Airport and USCG housing area and (CBS 2012).

CBS provides potable water to residents through a system sourced from Blue Lake and demand has remained relatively constant for more than 10 years and is anticipated to remain stable for the foreseeable future (CBS 2018a).

Fill materials would be obtained from excavation of a hill on the site and from an existing quarry.

5.7.2. Environmental Consequences of the Alternatives

Construction of the new seaplane base on Japonski Island may result in an increase in seaplane operations in Sitka Channel. Many of these operations would likely occur anyway, but might be based out of the commercial airport or other areas in Southeast Alaska. The increase in energy usage from the Project would likely be negligible. Although power, water, and sewer would be provided to the site, CBS utilities have sufficient capacity and the demand generated by the seaplane base would have minimal effects on local utility systems.

There is an existing quarry located within CBS. This quarry and material generated on site from excavation would be sufficient for proposed material needs.

5.7.3. Minimization and Mitigation

The contractor would produce a traffic control plan to address operational traffic delays, and detours during construction that make efficient use of time and energy.

5.7.4. Consultation, Permits, and Other Approvals

No consultation, permits, or other approvals related to natural resources and energy supply would be required.

5.8. Noise and Noise-Compatible Land Use

5.8.1. Affected Environment

Japonski Island contains Sitka's commercial airport and the USCG's Air Station Sitka, which conducts search and rescue operations in Southeast Alaska. The existing seaplane base is located south and east of the proposed site. Seaplanes currently take off and land on Sitka Channel from the existing seaplane base south and east of the proposed site.

Noise-sensitive receptors, such as Mount Edgecumbe High School, SEARHC health care facilities, student dormitories, and a school staff residence are located on Japonski Island in the vicinity of the site. It has been reported that existing seaplane operations in the channel sometimes interfere with class activities at Mount Edgecumbe High School and activities in the SEARHC facilities.

Aircraft operations were estimated based on interviews and surveys of pilots that had signed papers indicating interest in basing aircraft at the new seaplane facility. Most pilots indicated that they would use their aircraft only seasonally for private use, but there were three pilots that would potentially provide commercial service. Based on the surveys and interviews, peak day operations were conservatively estimated at 92 operations (Table 8). This assumes that all aircraft opeators and transient operations were operating on the peak day, which is unlikely and therefore conservative.

Table 8. Future Estimated Annual and Peak Day Operations

Aircraft Tie Down	Service Type	Aircraft	Annual Ops	Peak Season Ops	Peak Season Peak Day Ops
Tie-Down 1	Commercial	1	180	90	4
Tie-Down 2	Commercial	2	1000	500	16
Tie-Down 3	Commercial	3	2400	1200	40
Tie-Down 4	Private	1	60	30	2
Tie-Down 5	Private	1	63	32	2
Tie-Down 6	Private	1	40	20	2
Tie-Down 7	Private	1	80	40	2
Tie-Down 8	Private	1	40	20	2
Tie-Down 9	Private	1	40	20	2
Tie-Down 10	Private	1	40	20	2
Tie-Down 11	Private	1	60	30	2
Tie-Down 12	Private	1	200	100	4
Tie-Down 13	Private	1	39	20	2
Tie-Down 14	Private	1	40	20	2
Transient Slips (4)	Either		600	300	8
Peak Day Operations					92

5.8.2. Environmental Consequences of the Alternatives

Noise impacts from the proposed Project were evaluated with consideration of Yearly Average Day-Night Noise Levels (DNL) and land use noise compatibility guidelines. This noise metric averages aircraft sound levels over a 24-hour period based on the number of events and the time period in which they occur. Most land uses (including residential, schools, and health care facilities) are compatible with DNL levels of 65 decibels (dB) and below.

FAA environmental review guidance does not require noise analysis for Projects involving Design Group I and II airplanes, such as Cessna and Beavers, when these operations do not exceed 90,000 annual (247 average daily) operations. However, due to the proximity of Mount Edgecumbe High School at the water's edge and other potentially noise sensitive uses in the project vicinity, a noise analysis was conducted.

A screening level analyisis was conducted using FAA's Area Equivalent Method Version 2C SP2. The model provides a comparison of existing to future average noise levels by calculating the increase in the footprint of the 65 dB DNL contour. Based on the expected increase in the number of flights and an increase in the number of louder aircraft, the screening analysis indicated that a more detailed method should be used for calculating impacts at noise sensitive receptors. Detailed analysis was performed using FAA's Aviation Environmental Design Tool AEDT version 3C. Appendix E contains a summary of the noise analysis performed. Table 9 below shows the noise level calculated at selected receptors for a peak activity day (assumed to be in the summer) and Figure 11 shows the noise contours based on peak day operations.

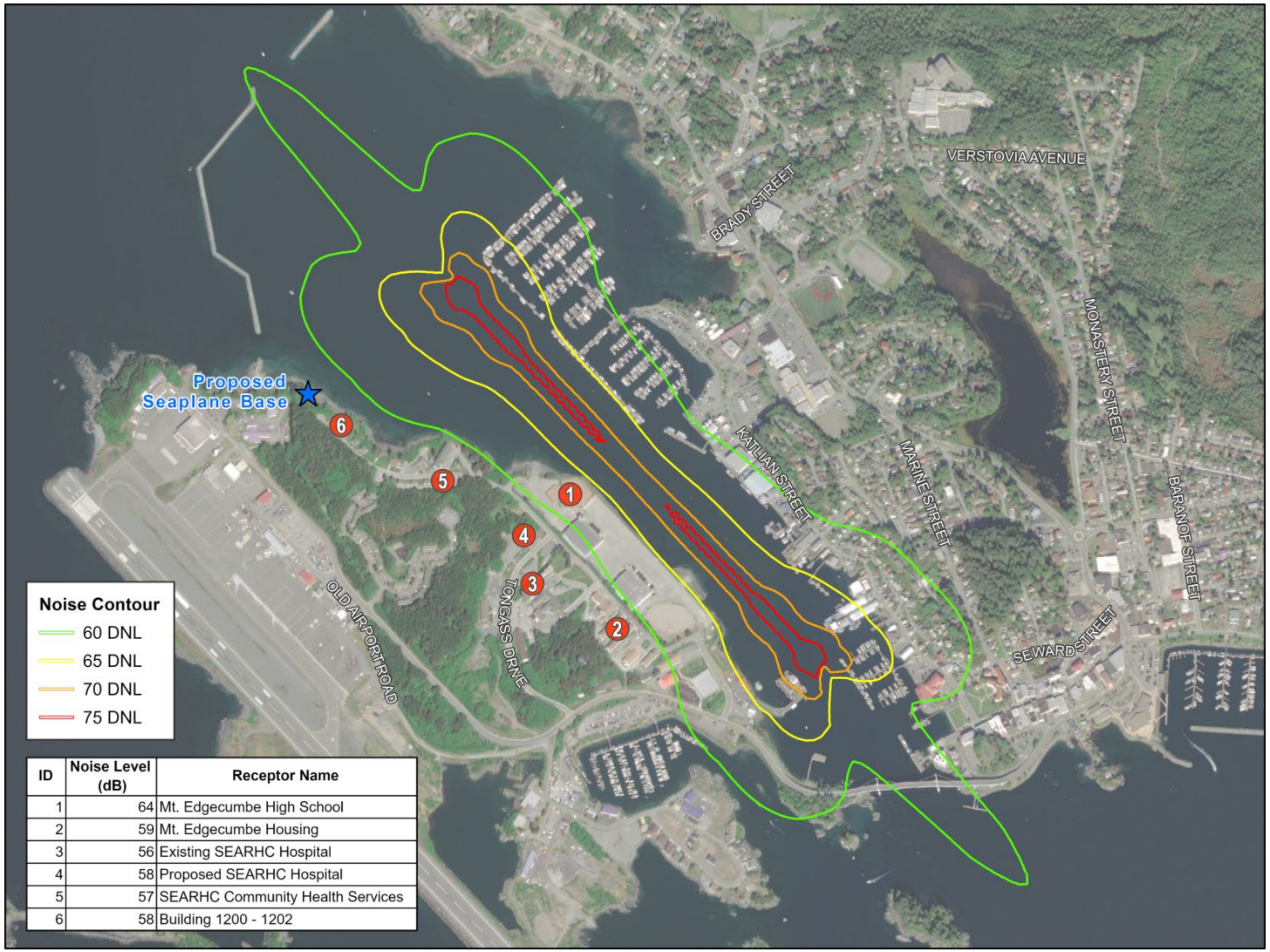
Table 9. Future Estimated Average Noise Levels at Noise Sensitive Locations

Receptor ID	Receptor Name	Noise Level (dB)	Noise Metric
1	Mount Edgecumbe HS	64	DNL
2	Mount Edgecumbe Student Housing	59	DNL
3	SEARHC Hospital – Existing Location	56	DNL
4	SEARHC Hospital – New Location	58	DNL
5	SEARHC Community Health Services	57	DNL
6	Buildings at 1200-1202 Seward Avenue	58	DNL

Seaplane takeoff and landing operations would still occur in the Sitka Channel, but may be shifted north of their current location. The new seaplane base would provide more float capacity and could increase the number of seaplane operations in the Sitka Channel from an estimated 1,043 per year to approximately 4,882 per year (an average of 13 per day). Use is seasonal and so daily operations would be higher in summer and lower in the winter. Peak-day operations are estimated at 92 operations.

The noise analysis shows that average noise levels for all sites are within the standard for land use compatibility (less than 65 dB DNL). Long-term noise levels are 64 dB DNL at the school based on peak operations, but peak operations are expected to occur in the summer when school is not in session. While long-term noise levels would be considered compatible based on land use compatibility criteria, there would continue to be some noise impacts on Mount Edgecumbe High School during individual takeoff events depending on the aircraft type, takeoff location, and weather conditions. Although the takeoff activities would be further from the school, there may be more operations on the channel. The maximum noise levels during a takeoff event would not be expected to change.

Figure 11. DNL Noise Contours based on Peak Day Operations



ID	Noise Level (dB)	Receptor Name
1	64	Mt. Edgecumbe High School
2	59	Mt. Edgecumbe Housing
3	56	Existing SEARHC Hospital
4	58	Proposed SEARHC Hospital
5	57	SEARHC Community Health Services
6	58	Building 1200 - 1202

Noise levels at the various other facilities along Seward Avenue would remain below 65 dB DNL. Therefore the surrounding uses and activities would be considered compatible based on FAA land use compatibility criteria. As with Mount Edgecumbe High School, the number of noise events is likely to increase, but the maximum noise level is not expected to increase. While below FAA criteria for land use compatibility, the increase in operations could result in more frequent annoyance for SEARHC employees and patients of the hospital and clinics.

The Proposed Action would also increase traffic on Seward Avenue, with a potential for a higher frequency of traffic noise events. Although traffic events would increase, overall noise levels are not expected to increase substantially as traffic would be spread out throughout the week and cars would be traveling at a slow speed on Seward Avenue. Therefore, there would not be a substantial increase in traffic noise volumes, particularly inside structures.

Temporary impacts to noise-sensitive receptors from construction activities, particularly blasting, are anticipated, but would be short term and end at construction completion.

5.8.3. Minimization and Mitigation

CBS has committed to developing a Fly Friendly program for the new seaplane facility. CBS would work with adjacent land owners and pilots to develop measures to minimize impacts to the facilities located along Seward Avenue. A construction blast plan would be developed and would incorporate measures to reduce the potential for adverse effects on structures along Seward Avenue. CBS intends to coordinate with NPS, SEAHC, and the ADEED on the blast plan.

5.8.4. Consultation, Permits, and Other Approvals

No consultation, permits, or other approvals related to noise would be required.

5.9. Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks

5.9.1. Affected Environment

CBS is located in Sitka Sound in the Gulf of Alaska. The proposed Project site is located on Japonski Island, a small island just off of Baranof Island within the Alexander Archipelago. Japonski Island connects to Baranof Island via the O'Connell Bridge. Aviation or marine transportation is required to travel from CBS. CBS has five harbors supporting commercial, sport, and recreational boats. The CBS Harbor Enterprise Fund maintains all of CBS's public harbors and ports.

The Sitka region is the historic lands of the Tlingit people who have inhabited the region for over 4,000 years. Russia began to colonize the region in 1741, primarily to support fur trading activities, and by 1808 it served as the capital of Russian Alaska with a major port exporting goods to several countries (Department of Community and Regional Affairs (DCRA) 2020). Sitka became part of the United States in 1867 when Alaska was purchased from Russia and it served as the capital of the Alaska territory until 1906 (DCRA 2020). The 2019 population was estimated at 8,493 people (U.S. Census Bureau (USCB) 2020); it is the sixth largest city in Alaska.

Local, state, and federal government; agriculture, forestry, fishing, and hunting; health care and social assistance; accommodation and food service; retail trade; manufacturing; and transportation and warehousing are major employers in CBS (CBS 2018a). The local scenery and city's location along major cruise ship routes have contributed to a growing tourism sector. Approximately 82 percent of tourists travel to Sitka by cruise ship, 17 percent by air, and 1 percent by ferry. In CBS, most cruise ships use the Halibut Point Marine Dock (CBS, 2018).

5.9.1.1. Environmental Justice

The CBS has a racial composition similar to Alaska's statewide racial composition, 66 percent of the population is white, 16 percent is American Indian or Alaska Native, eight percent is Asian, one percent is black or African American, and the remainder are some other race or a mixture of races (USCB 2020). Average per capita income is $38,423 and median household income is $71,534 (in 2018 dollars). This is comparable to Alaska's $35,874 per capita income and $76,715 median household income (USCB 2020). An estimated eight percent of the population in CBS is below the poverty level, compared to 10% in Alaska (USCB 2020).

Japonski Island has little residential development, other than USCG-based housing and a small subdivision on the southeast end of Japonski Island. In addition, approximately 400 students living in Mount Edgecumbe dormitories, and there is a state-owned structure used as the Mount Edgecumbe High School Principal's residence adjacent to the site.

5.9.1.2. Children's Environmental Health & Safety Risks

Approximately 25 percent of CBS's population is comprised of school age children or younger (under 18). CBS schools are operated by the Sitka School District. CBS is home to Baranof Elementary, Keet Gooshi Heen Elementary, Blatchley Middle School, Sitka High School, and Pacific High School. These schools are located across Sitka Channel on Baranoff Island. Mount Edgecumbe High School is operated by ADEED and is located at the south end of Seward Avenue. It serves approximately 400 students. The Mount Edgecumbe Medical Center/ SEARHC facility located south and west of the site is the only hospital in Sitka and provides emergency services. SEARHC has multiple medical service buildings throughout Sitka, including family care, sports/student health services, dental clinic, eye clinic, behavioral health, physical therapy, and long-term care. Mount Edgecumbe Medical Center also receives patients who require high level of care from other communities in the region. Many of these communities rely on seaplanes to transport residents to Sitka for medical care.

5.9.2. Environmental Consequences of the Alternatives

The proposed Project would not induce population growth, require any relocation, or provide substantial changes in the community's tax base. It would support overall community economic activity by providing transportation between smaller local communities in the area and Sitka. An economic impact analysis conducted in 2016 estimated a new seaplane base could generate up to $1.6 million in earnings for Sitka businesses with an estimated 39 percent of that income staying in Sitka (DOWL 2016).

Overall average noise levels would increase for facilities along Seward Avenue, including the Mount Edgecumbe Medical Center, SEARHC clinics, and the Mount Edgecumbe High School and dorms. As discussed in the noise section above, increased operations on Sitka Channel could increase the number of annoyance events related to aircraft takeoffs, for students in the Mount Edgecumbe High School and for patients in nearby health care facilities, but the long-term average noise level is not anticipated to exceed 65 dB DNL. Peak operations are expected to occur in the summer when school is not in session. In addition, FAA noise-compatibility criteria consider educational uses compatible with noise levels under 65 dB DNL. Therefore, the Proposed Action would not result in a disproportionately high and adverse effect on the school population and would not impact children's environmental health and safety.

5.9.3. Minimization and Mitigation

No minimization or mitigation actions would be required. CBS would work with pilots, Mount Edgecumbe High School staff, and SEARHC staff to develop a noise minimization program to reduce noise effects during the school year and other sensitive time periods.

5.9.4. Consultation, Permits, and Other Approvals

No consultation, permits, or other approvals related to socioeconomics, environmental justice, and children's environmental health and safety risks would be required.

5.10. Visual Impacts

5.10.1. Affected Environment

The upland area where the land-based improvements are planned is an undeveloped vegetated parcel with steep slopes at the end of Seward Avenue between the USCG Air Station Sitka and Sitka Channel. Land use along Sitka Channel includes harbors and marinas, lodging, commercial businesses, residential housing, and governmental or tribal buildings. Thomsen Harbor, with approximately 200 vessels moored, is across Sitka Channel about ¼ mile from the proposed marine components of the Project. The existing seaplane base is located to the south across Sitka Channel.

5.10.2. Environmental Consequences of the Alternatives

The new seaplane base would be on the north end of Japonski Island adjacent to the USCG Air Station Sitka. New lighting is proposed as part of this Project but most use is expected to occur during long summer daylight hours. Although the Proposed Action would result in changing the site from an undeveloped vegetated lot to a seaplane base, the facility would not be out of character with other development along Sitka Channel. The existing elevation at the site varies from about 30 feet mean sea level (MSL) at the central area north of the cul-de-sac to 60 feet MSL at the top of the hill on the southwest corner and down to an elevation of 10 feet MSL at the shoreline. The site would be cleared and graded to an elevation of about 22 feet MSL with a retaining wall located just south of Seward Avenue and along the USCG facility and landscape buffering along the Seward Avenue end of the site. Given the lower elevation of the site compared to the facilities to the south, the retaining wall, and the vegetation buffer, visual impacts would be minimal.

5.10.3. Minimization and Mitigation

To mitigate the change in the nature of the view from development to the south, the marine components have been oriented farther north and the upland area has been lowered in elevation and a landscape buffer is proposed along the south end of the facility.

5.10.4. Consultation, Permits, and Other Approvals

No consultation, permits, or other approvals related to visual impacts would be required.

5.11. Water Resources

5.11.1. Affected Environment

5.11.1.1. Wetlands

DOWL conducted a wetland delineation in May 2020 on the terrestrial portion of the project to identify and classify areas under USACE jurisdiction per Section 404 of the CWA. The approximate 2.0-acre study area consists of forested, scrub shrub, and tidal areas adjacent to Sitka Harbor. Approximately 97 percent of the study area is uplands, with 0.06 acres of potentially jurisdictional wetlands and 0.01 acres of Waters of the U.S.[3] (WOUS) (Appendix D, Wetland Delineation and Functions and Values Report). No streams were observed in the wetland study area. All wetlands in the study area are classified as PSS1B (using the Cowardin classification (Cowardin 1979). Table 10 summarizes the results of the wetland delineation.

Table 10. Wetlands, Waters of the U.S., and Uplands in the Wetland Study Area

Type	Acres	Cowardin Classification
Wetlands	0.06	PSS1B
Waters of the U.S.	0.01	M2USN
Uplands	1.9	N/A

Note: Cowardin classifications described in Cowardin 1979.

The most common plant species identified in the wetland study area included western hemlock (*Tsuga heterophylla*), Sitka mountain ash (*Sorbus sitchensis*), salmonberry, false lily of the valley, stink currant, and red alder (*Alnus rubra*). The wetland study area is predominantly uplands, consisting of western hemlock and Sitka spruce forests. The southern

[3] *Waters of the U.S. is a term established in the CWA and includes waters used for interstate commerce, waters subject to the ebb and flow of tide, interstate waters, tributaries of these waters, the territorial sea, and wetlands adjacent to these waters.*

side of the access road has an open understory, while the northern forested area has a scrub shrub understory consisting of salmonberry, Sitka mountain ash, and alder. Upland slopes are two to three percent.

Wetland habitats occur in the northern and northwestern portion of the wetland study area and typically begin as small seeps. One wetland starts as two seeps that flow together into a single swale. The other wetland is a small seep that starts at a toeslope. The wetlands occur on two-to-three percent slopes between several hills. Both wetlands are adjacent to the coastline and Sitka Harbor, separated by approximately 6 to 20 feet of uplands.

Scrub-shrub wetlands are characterized by greater than 30 percent aerial cover in the shrub layer and have a robust scrub shrub layer of stink currant (*Ribes bracteosum*) and salmonberry (*Rubus spectabilis*) with an herbaceous layer of false lily of the valley (*Maianthemum dilatatum*). Characteristically, these wetlands are depressional, concave (two to three percent slopes) features that form as seeps. These wetlands are located beneath the forest canopy but are small in size and have either scrub shrub vegetation or a sparsely vegetated concave surface. Both wetlands start as seeps flowing downhill. One wetland forms a swale while the other flows to a downhill point, forming a triangle. Dominant vegetation includes stink currant, false lily of the valley, and salmonberry.

A triangle-shaped seep wetland formed at a toeslope, and has a sparsely vegetated concave surface. The shrub stratum is growing over top of the wetland to maximize sunlight with few individuals rooted in the seep, and the herb stratum is growing at the downslope point of the triangle on a slight rise in elevation. The shrub stratum is dominantly salmonberry, which is most common on moist to wet, water-receiving sites in forested or wooded areas (Zouhar 2015). The Salmonberry grows laterally over top of the seep.

A functional assessment was completed for the two PSS1B wetlands. These wetlands were similar in Cowardin Classification, hydrogeomorphic classification, small in size, and similar in formation from spring seeps (Appendix D, Wetland Delineation and Functions and Values Report). The assessment area scored higher functioning for surface water storage, stream water cooling, sediment and toxicant retention and stabilization, phosphorus retention, and nitrate removal and retention.

Wetlands in the study area are adjacent to a traditional navigable water (Sitka Channel) and are separated by approximately 6 to 20 feet of uplands. Wetlands are assumed to be jurisdictional under Section 404 of the Clean Water Act (CWA) due to proximity to a traditional navigable water.

Marine waters subject to Section 10 of the Rivers and Harbors Act and Section 404 occur in tidal areas in Sitka Harbor below MHW elevation of 9.16 feet and are composed of gravel, cobble, boulder, and bedrock substrate with barnacles and marine vegetation growing along the rocks.

5.11.1.2. Floodplains

The Federal Emergency Management Agency (FEMA 2020) has identified portions of the project area as a Coastal High Hazard Area, which have special flood hazards associated with high velocity waters from tidal and storm surges. The project area has an identified base flood elevation of 21 feet above sea level.

5.11.1.3. Surface Water

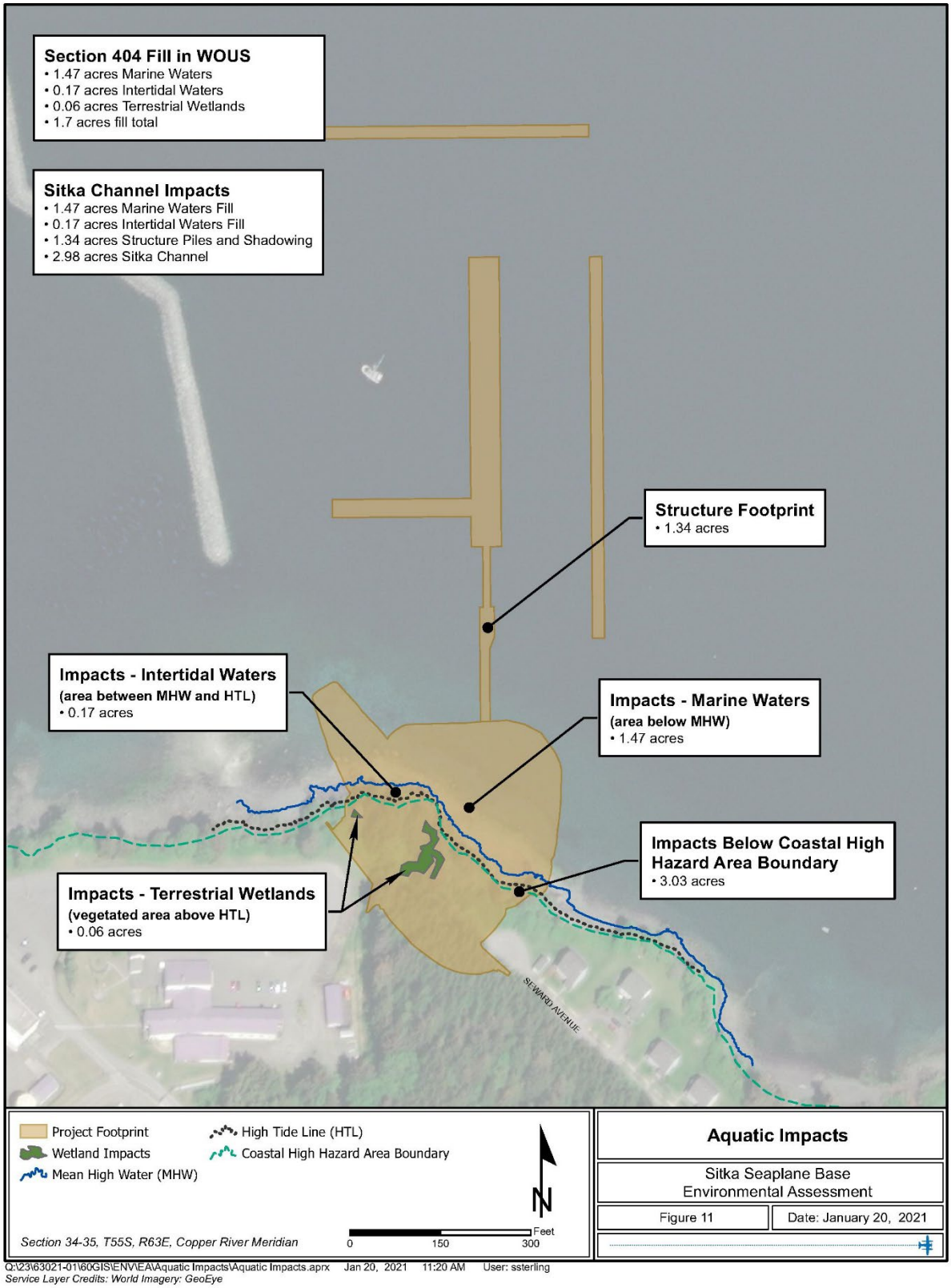
Sitka Channel is the only receiving waterbody. There are no creeks or other waterbodies within the upland area of the proposed Project. The Indian River, Sawmill Creek, Swan Lake, Cascade Creek, Blue Lake, and an unnamed lagoon on Japonski Island are the principal surface-water bodies in the Sitka area (USGS 1995).

5.11.2. Environmental Consequences of the Alternatives

5.11.2.1. Wetlands

As a seaplane base, the Proposed Action is water dependent. The Project would place fill in 0.06 acres of wetlands above HTL, 0.17 acres of intertidal waters between HTL and MWH, and 1.47 acres in marine waters below MHW, resulting in 1.7 acres of fill impacts in WOUS subject to Section 404 of the CWA (Figure 12).

Figure 12: Aquatic Impacts



5.11.2.2. Floodplains

The Project would result in 3.03 acres of fill within the Coastal High Hazard Area but not result in impeded flows. Consultation with CBS and a CBS Development Permit would be required to ensure compliance with the National Flood Insurance Program.

5.11.2.3. Surface Water

Approximately 2.98 acres of Sitka Channel, including intertidal areas, would be affected by the Project (Figure 11). In addition to the 1.47 acres of fill placed in Sitka Channel and 0.17 acres of fill placed in intertidal areas, approximately 1.34 acres would be affected through construction of floating/anchored elements (wave attenuator(s), floats) and pile-supported trestles.

5.11.3. Minimization and Mitigation

All construction activities would be conducted according to the APDES Alaska Construction General Permit. A contractor prepared SWPPP would identify all receiving waters and identify appropriate BMPs to use during construction to prevent erosion and to prevent untreated runoff from reaching nearby waterbodies.

If a fueling facility is incorporated into the seaplane base design, it is likely clearances would be required from ADEC, the Environmental Protection Agency, the local Fire Marshall, and the USCG. Any new fuel systems would have a spill prevention and response plan and oil spill cleanup supplies on site.

Appropriate compensatory mitigation for wetland and marine impacts, if required, would be determined during permitting. The permitting process would also include a USCG review for risks to navigation in the channel and may require lighting on the wave attenuators and floats to minimize potential navigation hazards in low light conditions.

5.11.4. Consultation, Permits, and Other Approvals

A USACE 404/Section 10 permit (Individual Permit) and a CBS Development Permit would be obtained prior to construction.

5.12. Cumulative Impacts and Irreversible and Irretrievable Commitment of Resources

Cumulative impacts are those that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (RFFA). Cumulative impacts are not discussed for the no-action alternative, since this alternative would not be expected to contribute to existing cumulative impacts in the Project area.

5.12.1. Past, Present and RFFAs

For purposes of the proposed Project, the review of past actions follows the FAA 1050.1F Desk Reference (FAA Office of Environmental and Energy 2015), "Present impacts of past actions that are relevant and useful are those that may have a significant cause-and-effect relationship with the direct and indirect impacts of the Proposed Action and alternative(s)." Present actions (i.e., actions that are in progress for which effects have begun) are those that are occurring in the same general time frame as this Project that could have cumulative impacts. Reasonably foreseeable future actions include those that are not remote or speculative (generally meaning they are included in planning documents reviewed for this Project).

5.12.2. Affected Environment

The timeframe for the cumulative impact analysis considers 10 years into the past (approximately 2009 to 2019) and 20 years into the future (through approximately 2039). The geographic scope considered for cumulative impacts includes Japonski Island and the Sitka Channel, as the potential effects of the Project are limited to those areas.

Past actions include the following:

- Historic military activities including construction of facilities along Seward Avenue and development of the USCG Air Station Sitka
- Development of a marina on the east side of Sitka Channel
- Construction and addition to a breakwater in Sitka Channel
- Reuse of buildings along Seward Avenue as educational and health facilities
- Fall 2016 repairs to pile section and restoring all existing seaplane slips

Present actions include the following:

- Wastewater treatment facility upgrades on south end of Japonski Island
- Sitka Airport terminal improvements and expansion

RFFAs include the following:

- Proposed construction of a new SEARHC hospital on Tongass and Seward Avenues
- Construction of more lease lots at Sitka's Rocky Gutierrez Airport

5.12.3. Resources and Actions Considered

Cumulative effects would only occur for resource categories where the Proposed Action would have an effect. These include endangered species, aquatic habitats, land use, and noise.

5.12.4. Environmental Consequences

Past activities have had moderate effects on marine habitats adjacent to the proposed seaplane site. There are no known foreseeable actions planned within the Project area that would contribute to cumulative effects on EFH or EFH-managed species/species complexes and other fish and marine resources. Most of the RFFAs would occur on the other side of the island and so would not affect the same aquatic habitats or the land uses on Seward Avenue. The cumulative effects of the Project are not anticipated to exceed significance criteria for any environmental resource evaluated.

6.0 Coordination

6.1. Agency Correspondence

Agency scoping for the seaplane improvements Project was conducted November 2019. Scoping letters describing the Project and soliciting information were sent to the appropriate state and federal agencies:

On November 19, 2019, CBS in coordination with FAA sent an agency scoping letter and to the following recipients:

- ADF&G
- NMFS
- USACE

Scoping comments were received from ADFG, NMFS, and USACE and provided information on marine habitats and aquatic resources to be addressed through consultation or in the environmental document.

An agency scoping meeting was held on December 12, 2019 at Harrigan Centennial Hall and via teleconference with 21 people in attendance. Comments included a need to address fisheries habitat and specifically herring use, noise impacts on existing development and recreation, and potential for wetlands or contaminated sites.

6.2. Section 106 Consultation

FAA sent Section 106 consultation initiation letters to the following entities:

- Alaska SHPO
- NPS
- Sitka Tribe of Alaska
- Hoonah Indian Association
- Hydaburg Indian Association
- Organized Village of Kake
- Central Council Tlingit & Haida Indian Tribes of Alaska
- Yakutat Tlingit Tribe
- Sitka Historic Preservation Commission
- Sealaska

The Sitka Historic Preservation Commission discussed the proposed project at its February 10, 2021 meeting. Commission members asked about the feasibility of leaving the observation post in place, moving it, or even burying it in place and constructing on top of it. The project team explained that site planning for the project initially looked at the potential to leave the observation post in place and construct around it. Unfortunately, given the location of the observation post, the small size of the site, and the need to level the site to accommodate the features of the Proposed Action, leaving the observation post in place was not a feasible option. Commission members also talked about potential mitigation measures that might be coordinated with the Sitka Heritage Museum or the proposed Sitka Maritime Heritage Museum. Finally, Commission members noted that proximity of the project location to areas of tribal significance and recommended that an approved plan be in place for discovery of archateological artifacts on the site during construction.

CBS also consulted with the Sitka Tribe of Alaska Tribal Council and Resource Protection Committee on the project and its potential to affect areas used by tribal members. Tribe members noted the historic use of the area and asked that CBS and FAA develop an inadvertent discovery plan that would prioritize notification of and consultation with tribal representatives if any artifacts or human remains were discovered. Tribal representatives also noted historic reports of human remains on the beaches in the area, the use of the shoreline for abalone harvests, and the use of the channel for boat anchorage outside developed marinas.

The NPS and Alaska SHPO provided information on the adjacent NHL. Consultation with appropriate parties is under way to determine appropriate mitigation for adverse effects on the observation post (SIT-01115) on site. No site disturbance would occur prior to completion of the Section 106 consultation.

6.3. Consultation on Endangered Species and Marine Mammal Protection Act

The NMFS has provided information on EFH, endangered species, and protected marine mammals that may be found in Sitka Channel and the Project vicinity. Consultation with NMFS on EFH was conducted (Appendix B) and consultation related to the ESA Section 7 and the MMPA are underway. CBS would request an IHA from NMFS for the potential harassment of marine mammals during construction and operation of the facility.

6.4. Public Scoping

A public scoping meeting was held on December 11, 2019 at Harrigan Centennial Hall with 25 people in attendance.

Most comments were related to the site selection process, the financing of the Project, and the urgent need for the Project. The scoping process was initiated on November 22, 2019 and continued through December 31, 2019. Notification of the scoping process was advertised through:

- Advertisements in the Sitka Sentinel on November 22 and November 29, 2019
- Direct email to pilots and other aviation contacts from previous studies
- Direct mail postcard to all Sitka residents
- Community calendar notices and Public Service Announcements on radio (Coast Alaska-KCAW and KIFW 1230/The Rock 103.7

6.5. Public Input on Draft EA

A Notice of Availability for the Draft EA was published in the Sitka Sentinel newspaper on four days between February 5 and February 16, 2021. Notice was emaled to everyone on the project mailing list; Public Service Announcements were broadcast on local radio stations four times per day for 15 days and the public meeting information was posted on radio station community calendars. The Draft EA was available for review or download on a project website and a hard copy was submitted to STA.

CBS held a virtual public meeting on the Draft EA on February 17, 2021. The meeting was attended by 22 interested parties. Comments on the Draft EA were received from 17 interested parties. Comments received and responses to them are included in Appendix F. These comment resulted in changes to the EA primarily in the sections on Historic, Cultural Resources and Noise and Noise-Compatible Land Use.

7.0 List of Preparers

Table 10 provides the list of preparers.

Table 10. List of Preparers

Name and Education	Affiliation and Expertise Applied to Document	Profession or Experience
City and Borough of Sitka		
Kelli Cropper, MPM	Project Manager	Architectural Project Management/ 30 years
DOWL		
Maryellen Tuttell, AICP	Environmental Lead	Environmental compliance/33 years
Kenneth Nichols, PE	Engineering Lead	Engineering 29 years/Aviation Engineering/27 years
Leyla Arsan	Senior Review	Environmental compliance/Fish Biologist/18 years
Emily Creely	Environmental Support	Professional Wetland Scientist/ environmental compliance/ 20 years
Caity Kennedy	Cultural Resources	Historian/11years
Jake Anders	Cultural Resources	Cultural Resources Manager/18 years
Lucy F. O'Quinn	Cultural Resource	Archaeologist/23 years
Josh Grabel, PWS	Wetlands	Professional Wetland Scientist/12 years
Lizzie Zemke	Environmental scoping	Professional Wetland Scientist/ environmental compliance/28 years
PND		
Dick Somerville, PE	Infrastructure Design Lead	Engineering 40 years/Marine Engineering/30 years
Solstice		
Robin Reich	Marine Environment and Mammals, ESA, EFH	Marine Biologist/ 20 years
Natalie Kiley-Bergen	Marine Environment and Mammals, ESA, EFH	Environmental Planner/ 3 years

Abbreviations:
AICP: *American Institute of Certified Planners*
MPM: *Master of Project Management*
PE: *Professional Engineer*
PWS: *Professional Wetland Scientist*

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