Draft Integrated Feasibility Report
and Environmental Assessment and Draft Finding of No Significant Impact

APPENDIX E: CULTURAL RESOURCES

Whittier, Alaska

June 2018

US Army Corps of Engineers
Alaska District

APPENDIX E
CULTURAL RESOURCES

TABLE OF CONTENTS

TABLES

FIGURES

1.0. INTRODUCTION

Cultural resources include precontact and historic sites, structures, districts, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or any other reason. They are limited, nonrenewable resources whose potential for scientific research (or value as a traditional resource) may be easily diminished by actions affecting their integrity. Numerous Federal and State laws and regulations require that possible adverse effects to cultural resources be considered during the planning and execution of federal undertakings. These laws and regulations stipulate a process of compliance, define the responsibilities of the federal agency proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Officer, the Advisory Council on Historic Preservation). In addition to NEPA, the primary laws that pertain to the treatment of cultural resources during environmental analysis are the National Historic Preservation Act of 1966, the Archaeological Resources Protection Act of 1979, the Antiquities Act of 1906, the American Indian Religious Freedom Act of 1978, and the Native American Graves Protection and Repatriation Act of 1990.

2.0. CONTEXT

During the Pleistocene Prince William Sound was predominately covered by the Cordilleran Ice sheet that engulfed the entire sound until around 9,000 BP (de Laguna 1956; Yarborough and Yarborough 1998). As the ice sheet receded, people began to migrate into the Prince William Sound area, which is dated to be around 4,400 BP (Yarborough and Yarborough 1998; Steffian et al. 2016). Archaeological research by de Laguna in 1930 and 1933 at the Palugvik site, and by Yarborough and Yarborough at the Uqciuvit site in 1988, have been key in reconstructing the cultural chronology of the area. The chronology for this region is broken into four phases: Uqciuvit (4400-3300 BP), Neoglacial interval (3200-2500 BP), Palugvik (2500 BP-AD 1100), and Chugach (AD 1200-early historic period). Additional ethnographic research by Frederica de Laguna (1956) has also served to help reconstruct regional information lost through time.

The Uqciuvit phase is characterized by the artifacts consistent with hunting sea mammals and the collection of shellfish in the archaeological record. The use of red ocher as a dye, as well as the development of ground slate and chipped stone technology, was also evident during this time period (Yarborough and Yarborough 1998; Steffian et al. 2016). The predominant vegetation during this phase was extremely different from the modern environment, with vegetation consisting of shrub alder and sedge tundra with no forests (Steffian et al. 2016).

After the Uqciuvit phase, the Neoglacial period occurred with increasing glaciers and ice sheets causing areas to become uninhabitable (Yarborough and Yarborough 993). The Neoglacial period lasted for 700 years, between 3200 and 2500 BP. During this time, ice came within 7 kilometers (km) of the Uqciuvit site, an event that may have driven its inhabitants out of the inner areas of Prince William Sound (Steffian et al. 2016). Following the subsidence of glaciation, Sitka spruce or hemlock forests began to grow in the region, and by 2000 BP, Prince William Sound probably appeared similar to as it is today (Steffian et al. 2016).

The Palugvik phase marks the reoccupation of the Uqciuvit site around 2400 BP, and followed by the Palugvik site around 2250 BP. Technology of the Palugvik phase is primarily characterized by a majority of bone artifacts from sea mammals. Tools include awls, needles, drill rests, blades, scrapers, handles, labrets, tubes, buckles or toggles, fish vertebrae rings, pins, fish spears and hooks, detachable barbed harpoon heads, harpoon fore shafts, arrowheads, barbed points, and bone shafts (Steffian et al. 2016). Ground slate technology also was present during this time period, recovered artifacts include ulus, double-edges blades, and projectile points (Steffian et al. 2016). Woodworking tools have also been recovered, most likely relating to the forestation around 2000 BP (Steffian et al. 2016). While the technology generally reflects a mixed subsistence pattern of marine and terrestrial resources, the predominant emphasis continues to be on marine resources.

The Chugach phase ranges from approximately AD 1200 into the early historic period. This phase coincides with another neoglacial event, known as the Little Ice Age (Steffian et al. 2016). During this period the Palugvik site was abandoned, though the Uqciuvit site continued to be occupied. Artifacts from the Chugach phase are most commonly fire cracked rock, slate endblades, quartz crystal gravers, and copper bipoints (Yarborough and Yarborough 1996). Increases in use of salmon and fish such as pacific cod, halibut, rockfish, sculpin, and herring was also identified during this phase. Marine and terrestrial mammals were hunted to a lesser extent than previous phases (Steffian et al. 2016). Structures characteristic of this period were semi-subterranean houses with bark roofs supported by poles. Adornment items include heavy beaded aprons, shell beads and pendants, slate and ivory, labrets, and hair ornaments.

Ethnographic work compiled by de Laguna (1956) describes the Chugach of Prince William Sound during the historic period as consisting of eight politically distinct tribes related by a common language. At the time of European contact, intertribal warfare as well as fighting outside groups was not uncommon. Archaeological evidence of this is supported with the defensive aspects of site selection, such as the use of small islands with steep bluffs for settlements or having difficult shorelines for landing watercraft (Steffian et al. 216). Regional warfare often occurred in the form of raiding parties, but could become warfare with the groups to the north and south of Prince William Sound. During periods of regional conflict Chugach tribes would band together to defend their territory in Prince William Sound from attack (de Laguna 1956). In 1783, regional conflict was forgotten as the Chugach, Koniag, and Tlingit banded together to attack the Russian exploration party of Potap Zaikof, who had been committing atrocities across Prince William Sound (de Laguna 1956). The Chugach phase ended in the late 18th Century as the European fur trade brought ever increasing numbers of euromerican settlers into the region to take advantage of the booming industry.

From the first European contact with population, from 1741 into the 1780s, the Russians increased their demands for fur from the Aleutian Islands. This demand decimated the fur-bearing animal population; the decline of fur-bearing animals then led to the exploration of mainland Alaska. In 1741, Vitis Bering sailed near Kayak and Wingham Islands just south of Prince William Sound, but failed to make contact with the people there. The first recorded contact made with the Chugach was by Captain James Cook and his crew aboard the ships

Resolution and *Discovery* in 1778. In 1783, Russian traders made the first attempt to extend trade operations to mainland North America (Bancroft 1959). Potap Zaikof aboard the *Alexandr Nevski*, and two other ships the *Sv Mikhail* and *Mikhail* were assigned to the expedition (Bancroft 1959). Just prior to departure for their expedition, Zaikof met with Captain James Cook on Unalaska Island who gave Zaikof rough tracings of the charts used during a 1778 expedition to Prince William Sound (de Laguna 1956). On July 27, 1783, Zaikof's expedition sailed into the vicinity of Kayak Island near the southern entrance of Prince William Sound (Bancroft 1959). The results of Russian discovery of mainland Alaska would prove to be disastrous for the people living there. Between 1792 and 1799, the Russian American Company was granted monopoly of the fur trade in Prince William Sound, and by the early 1800s, the Russians had dominated the region, forcing the Chugach to move away from traditional grounds to areas closer to Russian controlled posts to allow for more direct control.

The sale of Alaska by Russia to the United States in 1867 increased the influx of European and U.S. Citizens into the region. By late 1800s commercial fishing and mining had become the main economic interest of euromericans inhabiting Alaska (Yarborough 2000). An 1880 census recorded by Ivan Petroff described hunting grounds near Hinchinbrook Island in eastern Prince William Sound as extensive, but reported a decline in the number of sea otter pelts sold in the area (Yarborough 2000). In 1889, commercial salmon canning began in eastern Prince William Sound, replacing what was left of the sea otter pelt trade with salmon canning operations. Up to six canneries operated in region, which caused disastrous results for subsistence within Prince William Sound. By the time Frederica de Laguna and Kaj Birket-Smith began ethnographic work in 1933, disease, consolidation of villages, and relocation of many settlements closer to trading posts had significantly altered Chugach society (Yarborough 2000).

In 1924, the War Department developed the "Orange Plan" to prepare for the mutual defense of Panama, Hawaii, and Alaska to protect the contiguous United States (Mighetto and Homstad 1997). The Limitations of Armament Treaty of 1922 prevented construction of military facilities along the coast of Alaska. The U.S. Navy's Hepburn Report released in 1938, advocated for increased in defense of Alaska in response to Japanese aggression in the Pacific, and their withdrawal from the Limitations of Armament Treaty (Mighetto and Homstad 1997). Military buildup in Alaska officially began in 1939 with the construction of bases on Kodiak Island and Dutch Harbor, Unalaska. A key lifeline to military and construction activities in Alaska during World War II was the port system. At the beginning of the war, Seward was selected as the main transshipment point for cargo moving to and from the greater Anchorage area. As a key lifeline, the War Department determined that having a single facility to accommodate the enormous amount of materials and workers was risky as given the challenging climatic conditions of Alaska. Anchorage was the first choice for a second port, but the frequent presence of winter ice made it difficult to operate full time as a suitable location. A secondary site relatively close to Anchorage for a port was Whittier, which was selected by the U.S. Army for the construction project. In 1941, construction of harbor facilities and a tunnel at Whittier began. As a port, Whittier provided the necessary deep draft and ice-free year round characteristics to support year round use of cargo and transportation ships, as well as being close enough to support Fort

Richardson once the Anton Anderson Memorial Tunnel was completed. War construction also included a temporary dock, construction camp, landing strip, ordnance storage area, sawmill, and gravel pit at the site (Figure E-1) (Yarborough 1993:2; Mighetto and Homstad 1997:64-65). In 1946, the Army declared the Whittier facilities surplus, the railroad connection was turned over to the Alaska Railroad and facilities to the General Services Administration for disposal.

The Whittier Terminal also known as the Defense Fuel Supply Point (Figure E-2) operated as a bulk fuel-handling and storage terminal for the Army from 1949 to 1996. The terminal was originally built to receive petroleum products from oil tankers, which were then transported by railroad to Elmendorf Air Force Base. The facility consisted of eight above ground storage tanks, a manifold building, offices, shops, and train infrastructure for loading and transportation. A second tank farm was located closer to the east of the Defense Fuel Supply Point next to an Army dock; both of which were completely destroyed during the 1964 earthquake.

On the morning of March 27, 1964, at 5:36 am, a 9.2 magnitude earthquake struck Alaska devastating towns and villages along the coast. Fuel storage and port facilities in Whittier collapsed; tanks were breached and caught on fire. M.J. Dixon, a resident of Whittier, reported "water in Passage Canal began to rise about one minute after the onset of the quake…about two or three minutes after the quake began, a wave hit the shore and ran up to an estimated 26 feet above lower low water" (pre-quake elevation) (Chance 1966: 27). Damage to Whittier was extensive, the majority of the fuel infrastructure at the Port had collapsed or burned (Figure E-1). As a result of damage to Whittier's fuel infrastructure and the limited space for fuel in the Anchorage Port, military operations at Elmendorf Air Force Base and Fort Richardson suffered. In 1966, to make up for the loss of facilities, congress authorized the construction of the Whittier-Anchorage pipeline, which created a line connecting the Whittier Terminal to the Anchorage Terminal. The pipeline was in operation between 1967 and 1996.

Figure E-1: March 27, 1964, Photo Showing Damage to Fuel Tanks After Earthquake [photo appears to be facing northwest into the head of passage canal (ADA 2018).]

3.0. PROJECT DESCRIPTION

The existing Whittier harbor has exceeded its capacity, making it unsafe for navigation and mooring for commercial, charter, and recreational vessels. The Whittier Small Boat Harbor Expansion will increase the existing moorage capacity of vessels at Whittier. The proposed project site is located east of the Whittier Fuel Terminal at the head of Passage Canal between Learnard and Shakespeare Creeks (Figure E-2). The Tentatively Selected Plan for this project is Alternative 7 –construct a 6 Lane Boat Launch with North Entrance Channel, with a dredged entrance, maneuvering channel, and a rubble-mound breakwater with a north entrance (Figure E-3). Dredging will be required for the construction of the harbor, as well as environmental sampling to delineate any hazardous material in the dredge area.

Figure E-2: Aerial Photo Taken in 1980 of the Head of Passage Canal
Note the sawmill, beach disturbance, defense fuel supply point, and approximate alignment of proposed boat launch and breakwater.

There are three potential methods for disposal of the dredged material. The first tentative method is water disposal; sediment from the harbor would be dredged and disposed of in the nearby waters of the passage canal (Figure E-4). The second tentative method of disposal would occur if sediment is determined to be contaminated, in which the dredged material would be placed into trucks and disposed of at a handling facility in Anchorage. The third option is to conduct upland disposal of uncontaminated dredge material and dispose of any contaminated material offsite in a processing facility. Selection of a disposal method will be based on the results of an environmental characterization sampling of the dredge area.

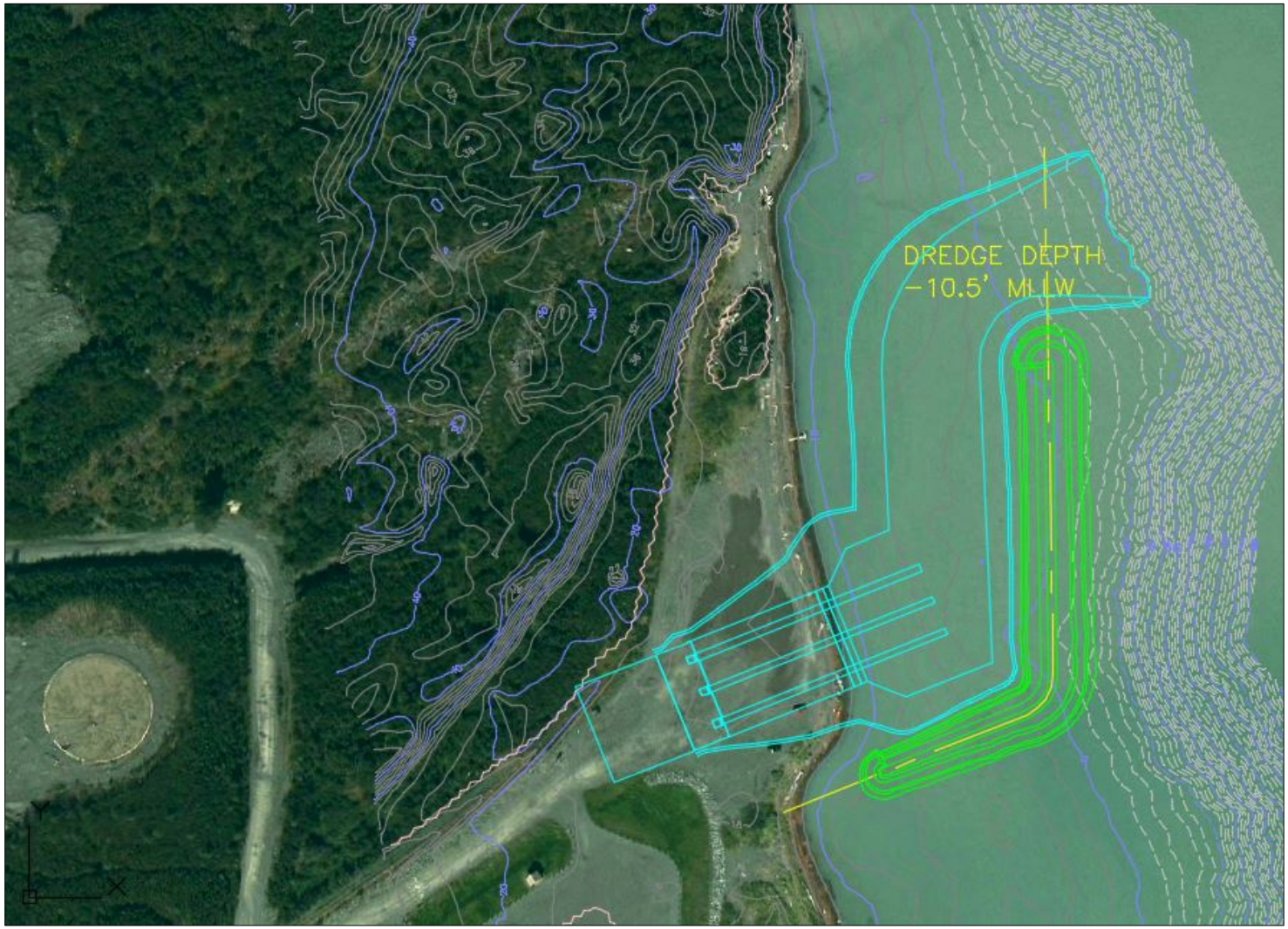

Figure E-3. Proposed Boat Launch

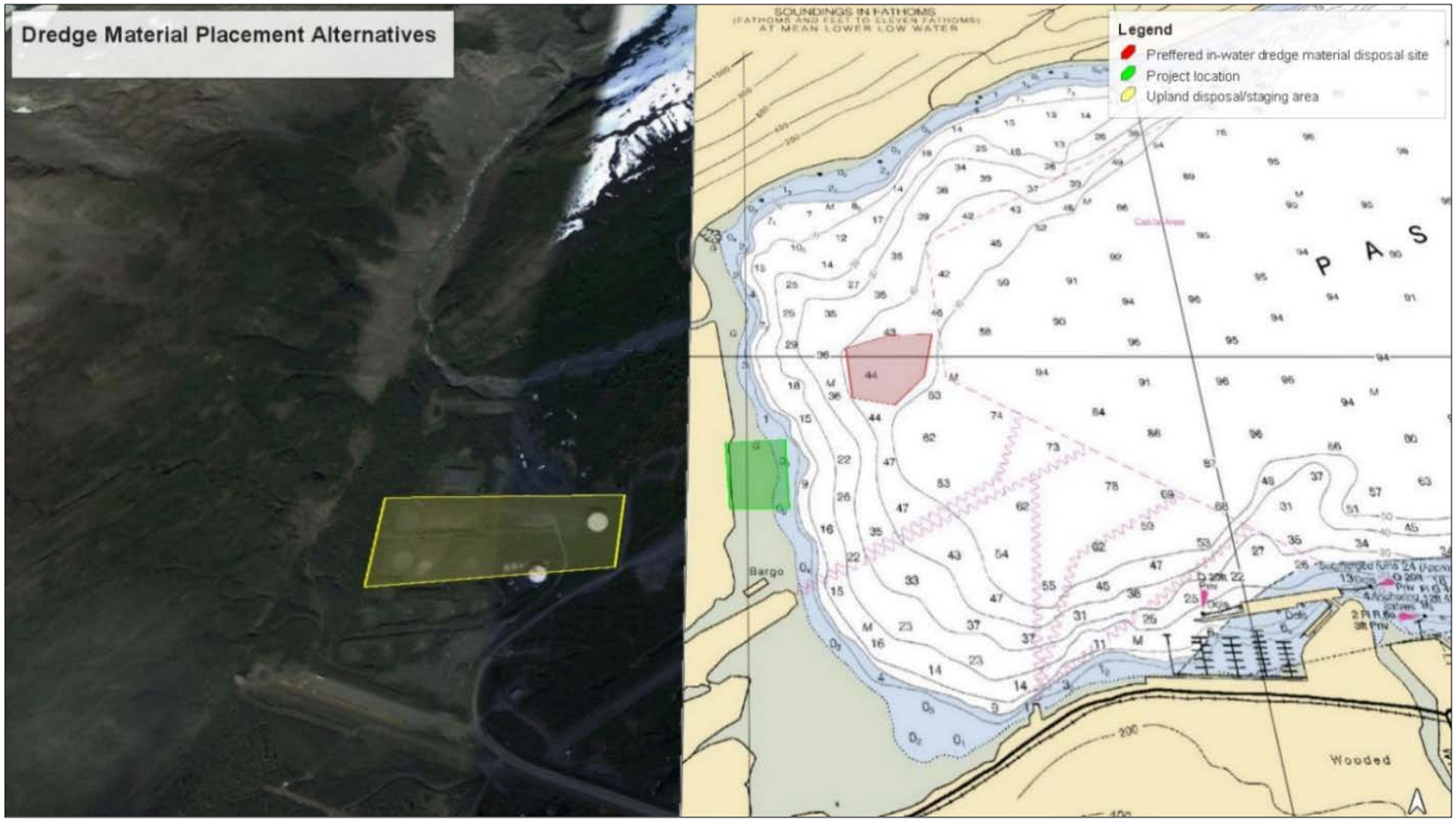

Figure E-4: Upland Disposal Area (Left in Yellow) on the Former Army Tank Farm and in Water Disposal Area Option (Left in Red) Located Northeast of the Proposed Harbor Location

4.0. ASSESSMENT OF EFFECT

The area of potential effect (APE) for this project encompasses the shoreline, waters, and parking lot just north of the current airstrip (Figure E-5). Four known cultural resources fall within the APE (Table E-1). Site SEW-00104 is the former location of Griset's Roadhouse (Figure E-2). SEW-00104 was located in what is now a parking area, it is not clear when the roadhouse was demolished. A sawmill and salt-water pump house also stood at the former location of the roadhouse, presumably after the destruction or modification of Griset's Roadhouse. Michael Yarborough (1993:4) described the results of a survey "no evidence of either a Native camp or a historic roadhouse was found during the survey. All of the cultural material that was located appears to date no earlier than World War II." Griset's Roadhouse is considered ineligible for the National Register of Historic Places (NRHP).

Table E-1: Local Cultural Resources to Project Area

AHRS No.	Name	NRHP Status	APE
SEW-00059	Oyotu (Tuxtiaq; Passage Canal)	Not Eligible	
SEW-00104	Griset's Roadhouse	Not Eligible	**X**
SEW-00568	Portage Pass Connecting Trail	Eligible	
SEW-00845	World War II Era Remains (historic dump)	Unevaluated	
SEW-01009	Whittier Access corridor (Whittier Cutoff)	Not Eligible	**X**
SEW-01042	Whittier Terminal (Defense Fuel Supply Point)	Not Eligible	**X**
SEW-01044	Whittier-Anchorage Pipeline System	Not Eligible	**X**
SEW-01275	Anchorage-Whittier Pipeline	Not Eligible	
SEW-01373	Historic Remains/ Dump	Unevaluated	

While surveying the area around the former location of Griset's Roadhouse Yarborough (1993) identified a modern campsite on a forest-covered knob near the head of passage canal on the southwestern beach of the canal littered with modern trash, scraps of metal and glass. The southeastern margin of Shakespeare Creek was also reported as being covered with modern garbage, shovel tests revealed brown silt with plastic bags, faunal material and Styrofoam. On the northwestern bank of Shakespeare Creek were several wall sections made of timbers and tongue and groove boards. In the area of the "notch" northwest of the airstrip, Yarbrough reported a barge and rectangular concrete structure that may have been part of a pier. The Whittier Access Corridor (SEW-01009) is located on the south side of the Portage Glacier Highway/West Camp Road. SEW-01009 is considered ineligible for the NRHP.

The Whittier Terminal Defense Fuel Supply Point (SEW-01042) is a former U.S. Army tank farm used during World War II while Whittier was in service as a military port. The tank farm is set back approximately 700-feet (ft) from the beach to the west of the proposed boat harbor (Figure E-5). An additional tank farm and army dock was located on the selected construction site to the east of the Whittier Terminal Defense Fuel Supply Point. The additional tank farm and army dock was destroyed during the 1964 earthquake. SEW-01042 is considered ineligible for the NRHP.

The Whittier-Anchorage Pipeline System (SEW-01044) is located on the same portions of land as SEW-01042. SEW-01044 is considered ineligible for the NRHP. All cultural resources within the project APE are ineligible for the NRHP; therefore, this project will not adversely affect any of the identified resources.

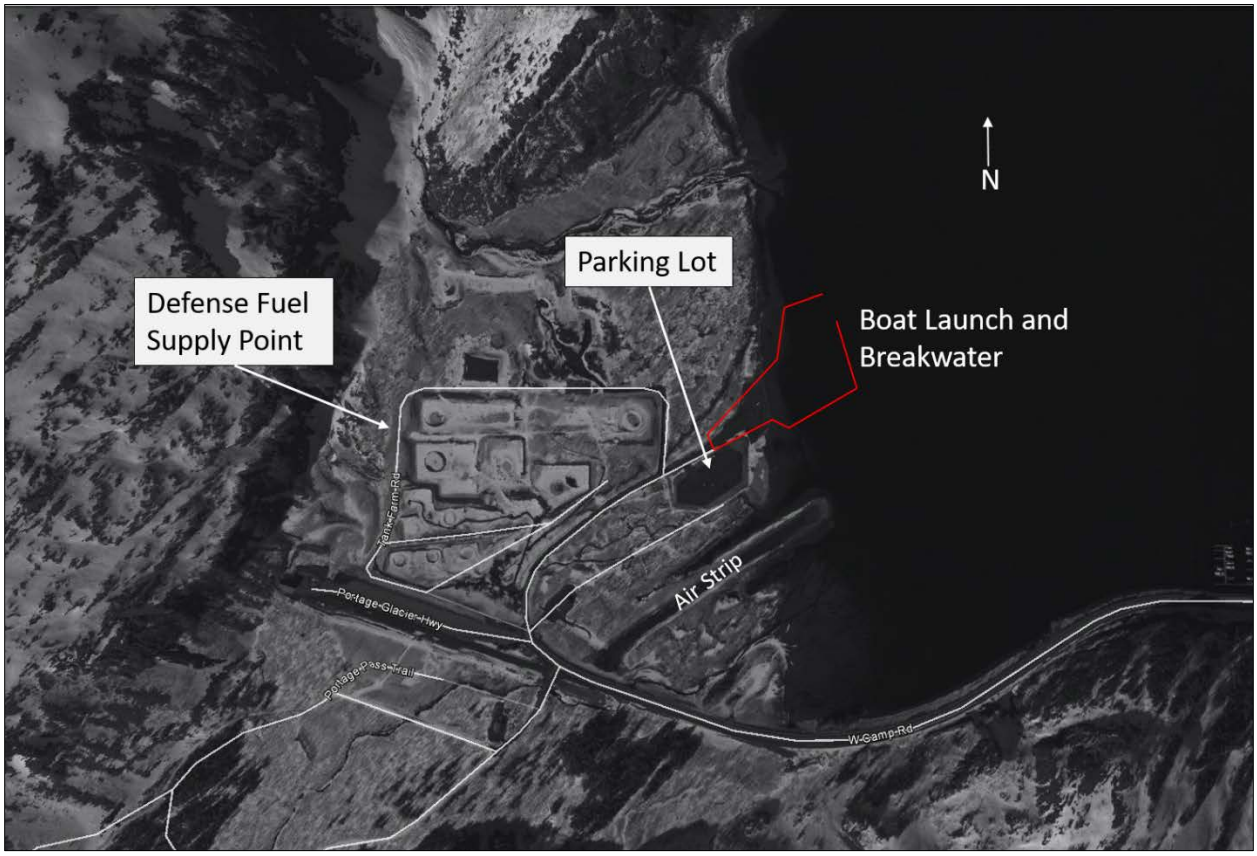

Figure E-5: 2018 Satellite Imagery of Proposed Project Area and Approximate Alignment of Boat Launch and Breakwater

A search of the National Oceanic and Atmospheric Administration's wrecks and obstructions database shows no known wrecks or obstructions within the footprint of sediment sampling, dredging, in-water dredge spoils disposal area, or harbor construction area (Figure E-6). A search of the Bureau of Ocean Energy Management (BOEM) shipwreck database shows six known wrecks and two incidents in the area (Table E-2, Figure E-6). However, no wrecks were reported to be at the head of the passage canal within the APE. A letter dated received by OHA on July 18, 2006 detailing plans by the City of Whittier to develop facilities at the Head of Passage Canal similar to the proposed project resulted in a finding of no historic properties affected under 36 CFR § 800.5(b) (Whittier 2006).

Figure E-6: National Oceanic and Atmospheric Administration Wrecks and Obstructions Map Obstructions in dashed-red circles at harbor entrance, and submerged wreck in solid red circle with cross in Shotgun Cove, project area in red box (NOAA 2018).

Table E-2: Bureau of Ocean Energy Management Database Results for Nearby Shipwrecks

Name	Type	Date	Location	Narrative
King and Winge	Power Schooner	12/2/1915	Whittier Island	Stranded, RTS[1]
Myra	Diesel Screw	8/1/1948	Whittier Harbor	Burned
Unnamed	Fishing/Pleasure	3/27/1964	Whittier	Destroyed by tidal wave
Alaska	Train Ship	9/27/1965	Near Whittier	Ran aground, RTS
Mark F.	Logging Barge	9/13/1974	Near Whittier	Foundered
Leschi	Fish Processor	12/30/1979	Shotgun Cove	Wrecked
The Faith	Barge	9/30/1981	Shotgun Cove	Sank
Michellinda	Fishing Vessel	8/28/1983	Outside Whittier	Burned, sank

[1] RTS – Returned to Service

Much of the coastline around the project area was disturbed during construction of a temporary boat harbor, runway, ordnance storage area, sawmill, and gravel pit during World War II, and was disturbed again during the 1964 earthquake. An aerial photograph from 1980 (Figure E-2) also shows disturbance along the coastline near the former sawmill in the form of discarded lumber and two artificial channels dug along the beach east of the former sawmill. The USACE's Formally Used Defense Site (FUDS) Program has previously removed the former Army Tank Farm and other associated former military structures in the area during the 1980s, 1990s, and 2000s. Given the magnitude of disturbance along the current coastline within the project area during World War II, and subsequent destruction caused by the 1964 earthquake it is unlikely than cultural resources exist along the shoreline selected for the harbor installation. Additionally, de Laguna (1956) discusses the placement of historic permeant villages in Prince William Sound as, "no permanent villages were located at the heads of bays, in spite of the tempting presence of some of the best salmon streams, because these were dead ends form which no escape by water would be possible in the event of an attack." Temporary camps, however, were made at fish streams during salmon runs (de Laguna 1956). Shakespeare and Learnard Creeks are located to the north and south of the project area, outside the APE.

The proposed undertaking involves sampling, dredging, disposal of dredged material, and construction of a six-lane boat harbor with a North Channel entrance. Cultural resources that occur within the proposed APE are ineligible for the NRHP. World War II military construction activities of a small boat harbor and runway heavily disturbed the shoreline located along the proposed dock alignment. The 1964 earthquake also destroyed a tank farm and dock which was located in the current boat launch alignment. Archaeological surveys have been conducted in the area in 1985, 1993, and 1994 and have reported no known cultural resources along the shoreline in the proposed project area. All access routes will be on already established road systems and will be used in a manner consistent with their historic use. It is not likely that the proposed undertaking will adversely affect any cultural resources. Consultation between the USACE and SHPO resulting in a finding of no historic properties affected per 36 CFR 800.4(d)(1) in a letter dated received by the SHPO on June 08, 2018 (USACE 2018).

5.0. REFERENCES CITED

Alaska Digital Archives (ADA). 2018. Photo, 1964 earthquake damage, Whittier. Identifier: ASL-P100-230, collection: USACE photograph collection: Alaska earthquake, March 27, 1964.

Alaska Heritage Resources Survey (AHRS). 2018. AHRS Database. Alaska Office of History and Archaeology.

Bancroft, Hubert Howe. 1959 [1886]. History of Alaska 1730-1885. Antiquarian Press LTD. New York.

Bureau of Ocean Energy Management (BOEM). 2011. Alaskan Shipwrecks Table. Online document, https://www.boem.gov/Alaska-Coast-Shipwrecks/, accessed March 03, 2018.

Chance, Genie. 1966. Chronology of Physical Events of the Alaskan Earthquake. National Science Foundation grant, University of Alaska.

City of Whittier (Whittier). 2006. Whittier Head of Passage Canal Waterfront Development initiative, Whittier, Alaska. AHRS Document Repository Report ID # 00002224.

De Laguna, Frederica. 1956. *Chugach Prehistory: The Archaeology of Prince William Sound, Alaska.* University of Washington Press, Seattle, WA.

National Oceanic and Atmospheric Administration (NOAA). 2017. Wrecks and Obstructions Database. Online document, https://wrecks.nauticalcharts.noaa.gov/viewer/, accessed March 03, 2018.

Steffian, Amy, Patrick Saltonstall, and Linda Finn Yarborough. 2016. Maritime Economies of the Central Gulf of Alaska After 4,000 BC. In *The Oxford Handbook of the Prehistoric Arctic*. T. Max Friesen and Owen K. Mason (eds), pp 303-322. Oxford University Press, New York, NY.

United States Army Corps of Engineers (USACE). 2018. Letter to SHPO Re: COE-ENV Boat Launch Facility Passage Canal. 3130-IR COEENV 6-14-2018.

Yarborough, Linda Finn. 2000. Prehistoric and Early Historic Subsistence Patterns Along the North Gulf of Alaska Coast. Dissertation, University of Wisconsin-Madison.

Yarborough, Michael R. 1993. Archaeological Survey of Portions of the Whittier Access Corridor. Prepared for HDR Engineering, Inc., Anchorage AK. Prepared by Cultural Resource Consultants, Anchorage, AK.

Yarborough, Michael R. and Linda Finn Yarborough. 1993. Regional Overview of Prince William Sound and the Pacific Coast of the Kenai Peninsula. Draft. Prepared for the International Seminar on the Origins, Development, and Spread of Prehistoric North Pacific-Bering Sea Maritime Cultures, Honolulu, June 1993.

Yarborough, Michael R. and Linda Finn Yarborough. 1998. Prehistoric Maritime Adaptations of Prince William sound and the Pacific Coast of the Kenai Peninsula. *Arctic Anthropology* 35(1): 132-145.