ENVIRONMENTAL ASSESSMENT

FENDER PILE REMOVAL AND REPLACEMENT AT PIER 4
NAVAL BASE KITSAP, BREMERTON, WASHINGTON

DEPARTMENT OF THE NAVY

SEPTEMBER 2015

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FENDER PILE REMOVAL AND REPLACEMENT AT PIER 4 NAVAL BASE KITSAP, BREMERTON, WASHINGTON

SEPTEMBER 2015

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Department of the Navy

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ABSTRACT:

This environmental assessment (EA) evaluates the potential environmental impacts associated with the United States Department of the Navy's proposed action to remove and replace fender piles at Pier 4 at Naval Base Kitsap, Bremerton. The piles to be replaced occur along the perimeter of Pier 4. The Proposed Action is planned to begin in 2016 and will take approximately 6-12 weeks to complete, including approximately 4 weeks of in-water work. The proposed action includes removal of approximately 80 creosote-treated timber fender piles and replacement with approximately eighty 12- to 14-inch hollow steel fender piles. As part of the Navy's mission, maintaining facilities and readiness is a priority. Since the action is to replace existing piles, the only alternative would be to not replace the piles; therefore, no practical or feasible action alternatives were identified. This EA analyzes the Proposed Action and the No Action Alternative. The analysis addresses potential direct and indirect impacts on water resources, noise, biological resources, cultural resources, American Indian traditional resources, and cumulative impacts. There is no cooperating agency for this document.

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EXECUTIVE SUMMARY

Proposed Action

The United States (U.S.) Navy (Navy) is proposing to remove and replace approximately 80 deteriorated fender piles on Pier 4 in Sinclair Inlet at Naval Base (NAVBASE) Kitsap, Bremerton, beginning in 2016. The Proposed Action would include removing approximately 80 deteriorated creosote-treated timber fender piles by vibratory extraction and installing approximately eighty 12- to 14-inch hollow steel fender piles with a vibratory pile driver. In addition to replacing piles, the project would include replacement of damaged wood chocks and other topside hardware associated with the fender system.

Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to maintain the existing Pier 4 in working condition and to ensure structural integrity. The need for the Proposed Action is to ensure that Pier 4 continues to fulfill shore infrastructure needs and meets assigned operational mission requirements. The existing creosote-treated timber fender piles are deteriorated, and Pier 4 is currently at risk of damage from incoming vessels.

Existing Conditions

NAVBASE Kitsap, Bremerton, is located on Sinclair Inlet approximately 20 miles west of Seattle, Washington. Existing resources in the vicinity include federally-listed threatened and endangered fish species. Federally-listed marine mammals and birds are not frequent visitors to Sinclair Inlet and even less likely to occur within the industrial confines of the project area. The area is in attainment for all National Ambient Air Quality criteria pollutants. The area is also within the usual and accustomed fishing grounds and stations of the Suquamish Tribe. The Proposed Action is located within a Waterfront Restricted Area.

Alternatives Considered

Since the action is to maintain the existing Pier 4 in working condition and to ensure structural integrity, the only alternative would be to not repair Pier 4; therefore, no practical or feasible action alternatives were identified. This Environmental Assessment (EA) analyzes the Proposed Action and the No Action Alternative. Under the No Action Alternative, existing piles at Pier 4 at NAVBASE Kitsap, Bremerton, would not be replaced to maintain pier integrity and mission readiness. The No Action Alternative does not meet the purpose of and need for the Proposed Action, but represents the baseline condition against which potential consequences of the Proposed Action can be compared.

Summary of Environmental Resources Evaluated in the EA

Council on Environmental Quality regulations, National Environmental Policy Act (NEPA), and Navy instructions for implementing NEPA specify that an environmental assessment (EA) should address those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact.

The following resource areas have been addressed in this EA: water resources, noise, biological resources, cultural resources, and American Indian traditional resources. Because potential impacts were considered to be negligible or nonexistent, the following resources were not evaluated in this EA: land use, air quality, visual resources, recreational and commercial fishing, socioeconomics and environmental justice, transportation, and health and safety.

Summary of Potential Environmental Consequences of the Action Alternative

The following resources have been analyzed in this EA for potential environmental consequences of the Preferred Alternative (Proposed Action):

Water Resources. Direct discharges of waste would not occur. To ensure compliance with state or federal water quality standards, the Navy would implement Best Management Practices and minimization measures to prevent accidental losses or spills of construction debris. Some degree of localized changes in sediment composition would occur during construction. Impacts from sediment resuspension would be minor and localized in the area of pile removal and pile installation due to weak, stable tide currents in the project area, which would allow sediments disturbed during construction to resettle in the general area of pile removal/installation. Pier 4 is located within Operable Unit B (OU-B) Marine, a site listed on the EPA's National Priorities List for remediation (clean-up) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Navy has completed cleanup actions within OU-B Marine and continues to monitor the site. The Navy will coordinate with the U.S. Environmental Protection Agency before construction to confirm conformance with CERCLA requirements for these locations. Therefore, there would be no significant impact to water resources.

Noise. Bremerton, Port Orchard, and Washington State exempt temporary construction noise from 7:00 a.m. to 10:00 p.m. (7:00 a.m. to 9:00 p.m. for Port Orchard) from exceeding maximum permissible noise levels. Based on construction not occurring between 9:00 p.m. and 7:00 a.m., noise levels would be exempt from state and local codes. Therefore, no significant impacts from noise would result from the Proposed Action.

Biological Resources. The Proposed Action would not involve clearing or excavation that would impact any terrestrial habitats or terrestrial wildlife. Individual Endangered Species Act (ESA)-listed fish may be exposed to impacts from pile replacement including temporarily increased underwater sound pressure levels, which may result in temporary disturbance but would not result in injury. Impacts to ESA-listed fish from changes in water quality as a result of vibratory pile driving operations are expected to be minor and temporary. Dissolved oxygen levels are not expected to drop to levels that would result in harm to fish species. Underwater and airborne sound levels from vibratory pile driving have the potential to harass two ESA-listed marine mammals (humpback whales, and killer whales) and one ESA-listed avian species, marbled murrelet. Exposure to underwater sounds from pile replacement could cause behavioral disturbance, but would not be anticipated to result in injury or mortality. The following measures would be implemented to avoid and minimize impacts to ESA-listed species: conduct in-water work between July 16 and February 15, develop and implement a Marine Mammal Monitoring Plan, and implement a soft-start procedure before pile driving. The Navy has determined that the Proposed Action 'may affect, not likely to adversely affect' Chinook salmon, steelhead, yelloweye rockfish, canary rockfish, bull trout, and bocaccio; 'may affect, not likely to adversely affect' marbled murrelets 'may affect, but is not likely to adversely affect' killer whale; and would have 'no effect' on humpback whale. The Navy completed informal consultations under the ESA with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) and both agencies concurred with the Navy's findings under ESA. Exposure to underwater sounds from pile replacement could cause behavioral disturbance to migratory birds, but would not be anticipated to result in injury or mortality. Pier 4 is located over 2,500 feet from the nearest bald eagle nest site and would not impact bald eagle nesting activity. The Navy determined that the Proposed Action would not affect essential fish habitat for Pacific salmon, groundfish, and coast pelagic species. NMFS determined that consultation under the Magnuson-Stevens Fisheries Conservation and Management Act was not required.

Individual marine mammals may be exposed to sound pressure levels during pile driving operations, which may result in Level B behavioral harassment (defined by the Marine Mammal Protection Act (MMPA) as potential behavioral disruption). Any exposures will likely have only a minor effect on individuals and no effect on the population. In compliance with the MMPA, the Navy has applied for and will obtain an Incidental Harassment Authorization from NMFS and will comply with all conditions.

With implementation of the measures discussed above, there would be no significant impact to biological resources.

Cultural Resources. Pier 4 is a contributing element to the Puget Sound Naval Shipyard National Historic Landmark (NHL) district. The replacement of existing piles will have no impact to the characteristics that make Pier 4, the NHL, or nearby National Register of Historic Properties (NRHP) historic districts eligible for inclusion in the NRHP or affect any known NRHP-eligible archaeological sites. Construction activities would take place in previously disturbed areas along the industrial waterfront. The State Historic Preservation Officer concurred with the Navy's determination of no adverse effect to historic properties. The Proposed Action would have no adverse effect to cultural resources and therefore will result in no significant impact.

American Indian Traditional Resources. The Proposed Action would not alter access to or use of tribal traditional resources. Pier 4 is within Sinclair Inlet Naval Restricted Area Number 2 which precludes entry into the area without permission. Access for fishing in the waters surrounding Pier 4 is currently not permitted. The Proposed Action would not appreciably impact the quantities of fish available for harvest by the Suquamish Tribe in Sinclair Inlet, nor would it restrict access to existing traditional harvest areas in Sinclair Inlet. No significant impacts to American Indian traditional resources would occur with implementation of the Proposed Action.

Under the No Action Alternative, no piles would be removed or driven, thus there would be no change to the natural and physical environment and no significant impacts.

Public Involvement

The Navy made the Draft EA available for public review and comment and no comments were received. The Final EA and decision document will be made available to the public. The Notice of Availability (NOA) will be posted in the local newspaper and the Final EA and decision document will be posted at http://go.usa.gov/tAr4 for 30 days.

Conclusion

Implementation of the Proposed Action would not result in significant impacts to any resource area when considered individually or cumulatively in the context of NEPA, including both direct and indirect impacts. Fender pile removal and replacement at Pier 4 as proposed would not constitute a "major Federal action significantly affecting the quality of the human environment." Therefore, this EA supports a Finding of No Significant Impact for the Proposed Action, and the preparation of an Environmental Impact Statement is not warranted or required.

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ACRONYMS AND ABBREVIATIONS

ACQR	Puget Sound Interstate Air Quality Control Region
BE	Biological Evaluation
BMP	Best Management Practices
CAA	Clean Air Act
CCD	Coastal Consistency Determination
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIA	Controlled Industrial Area
CISS	Cast in Steel Shell
CZMA	Coastal Zone Management Act
DAHP	Department of Archaeological and Historic Preservation
dB	Decibel
dBA	Decibels Adjusted
DNR	Department of Natural Resources
DO	Dissolved Oxygen
DoD	Department of Defense
DON	Department of the Navy
DPS	Distinct Population Segment
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPP	Environmental Protection Plan
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FONSI	Finding of No Significant Impact
Hz	Hertz
MMPA	Marine Mammal Protection Act
MSA	Magnuson-Stevens Fisheries Conservation and Management Act
NAAQS	National Ambient Air Quality Standards
NAVBASE	Naval Base
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
OPNAVINST	Office of the Chief of Naval Operations Instruction
PCB	Polychlorinated Biphenyls
PSNS & IMF	Puget Sound Naval Shipyard and Intermediate Maintenance Facility
RCRA	Resource Conservation and Recovery Act
RMS	Root Mean Square
ROD	Record of Decision
ROI	Region of Influence
SECNAVINST	Secretary of the Navy Instruction
SHPO	State Historic Preservation Officer
STA	Sediment Trend Analysis
U&A	Usual and Accustomed
USACE	United States Army Corps of Engineers

U.S.	United States
USEPA	U.S. Environmental Protection Agency
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
WAC	Washington Administrative Code
WDOE	Washington State Department of Ecology
WQC	Water Quality Certification

1 PURPOSE OF AND NEED FOR PROPOSED ACTION

1.1 INTRODUCTION

The United States (U.S.) Department of the Navy (Navy) has prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code [USC] §4321-4370h), as implemented by the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508); Navy regulations for implementing NEPA (32 CFR Part 775); and Chief of Naval Operations Instruction (OPNAVINST) 5090.1D, Environmental Readiness Program.

The Navy proposes to remove 80 deteriorated creosote-treated fender piles and replace them with approximately eighty 12- to 14-inch hollow steel fender piles on Pier 4 in Sinclair Inlet at Naval Base (NAVBASE) Kitsap, Bremerton (Figure 1-1). Pier 4 was originally constructed in 1914 and lengthened in 1922. The pier is approximately 1,300 feet in length and 100 feet wide and is a concrete deck supported by concrete pilings. The pier is surrounded by timber fender piles. In addition to replacing timber fender piles, the project would replace damaged wood chocks and other topside hardware associated with the fender system.

The Proposed Action is planned to begin in 2016 and will take approximately 6-12 weeks to complete, including approximately 4 weeks of in-water work. NAVBASE Kitsap, the Action Proponent, is the command that manages several properties in Kitsap County Washington, including NAVBASE Kitsap, Bremerton.

1.2 LOCATION

NAVBASE Kitsap, Bremerton, is located on the north side of Sinclair Inlet within the City of Bremerton in Kitsap County (Figure 1-2). The NAVBASE Kitsap, Bremerton, waterfront, including Pier 4, is restricted from public access. Pier 4 is within the Sinclair Inlet Naval Restricted Area Number 2 (CFR Title 33, 2008), and is delineated by a floating Port Security Barrier shown on Figure 1-2. Per 33 CFR 334.1240 “this area is for the exclusive use of the United States Navy. No person, vessel, craft, article or thing, except those under supervision of military or naval authority shall enter this area without permission from the enforcing agency.”

Puget Sound Naval Shipyard and Intermediate Maintenance Facility (PSNS & IMF) is the major tenant command of NAVBASE Kitsap, Bremerton, and possesses the capabilities to overhaul and repair all types and sizes of ships while also serving as homeport for an aircraft carrier and other Navy vessels. Other significant capabilities include alteration, construction, deactivation, and dry-docking of all types of naval vessels.

1.3 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to maintain the existing Pier 4 in working condition and to ensure structural integrity. The need for the Proposed Action is to ensure that Pier 4 continues to fulfill shore infrastructure needs and meets assigned operational mission requirements. The existing creosote-treated timber fender piles are deteriorated, and Pier 4 is currently at risk of damage from incoming vessels.

1.4 SCOPE OF ENVIRONMENTAL ANALYSIS

This EA includes an analysis of potential environmental impacts associated with the Proposed Action. The environmental resource areas analyzed in this EA include: water resources, noise, biological resources, cultural resources, and American Indian traditional resources.

Because potential impacts were considered to be negligible or nonexistent, the following resources were not evaluated in this EA:

Land Use. Implementation of the Proposed Action would not alter existing land use on- or off-base. The Proposed Action would have no impact on local or regional development patterns. Therefore, there would be no impact on land use from the Proposed Action.

Air Quality. As described in 40 CFR Part 51, Determining Conformity of General Federal Actions to State or Federal Implementation Plans (the "General Conformity Rule") all federal actions occurring in air basins designated in nonattainment or in a maintenance area must conform to an applicable implementation plan. Since Kitsap County is designated an attainment area for all criteria pollutants, the General Conformity Rule does not apply. The activities associated with the Proposed Action are limited to mobile sources and sources excluded from Notice of Construction requirements per Puget Sound Clean Air Agency Regulation I Article 6.03; therefore, New Source Review and Prevention of Significant Deterioration requirements do not apply. The Proposed Action, particularly with respect to pile driving, will not impact PSNS & IMF's Title V air permit since the contractors shall operate equipment in a manner that is in compliance with Puget Sound Clean Air Agency Regulations I, II, and III. Therefore, effects on air quality from the implementation of the Proposed Action would be negligible.

Visual Resources. The Proposed Action would not change the appearance of Pier 4 or the waterfront area as it is limited to repair and replacement of piles at existing structures, which are part of the installation's waterfront. During construction, the temporary presence of additional barges and cranes would not change the appearance of the industrial waterfront area from any public viewpoints. Therefore, no impacts to visual resources would occur.

Recreational and Commercial Fishing. Recreational and commercial fishing does not occur near the project sites as this area is within the Sinclair Inlet Naval Restricted Area Number 2, which restricts access by the general public. Fish could flee the immediate construction areas as a result of the Proposed Action but would be expected to return to the area after the pile driving activities were concluded. The project site occurs in a dredged area where no geoduck or other intact shellfish beds occur. The closest shellfish bed is over 1 mile from the project site. Additionally Sinclair Inlet is closed to shellfish harvesting due to pollution (WA Department of Health 2015). Therefore, the Proposed Action would not impact recreational and commercial fishing.

Socioeconomics. The Proposed Action would be located entirely within NAVBASE Kitsap, Bremerton. Implementation of the Proposed Action would be limited to repairs at Pier 4, would not result in displacement of people or businesses, and would not change the economic character or stability of the installation or surrounding area. Pile driving activities would be conducted by contractors. The socioeconomic impacts related to temporary construction employment would occur intermittently over a short period of time. The Proposed Action may create a small number of temporary jobs and contribute minimally to local earnings spending. Any additional population associated with this temporary employment would not create undue demand on housing, schools, or other social services. As such, negligible socioeconomic impacts are anticipated as a result of the Proposed Action.

Environmental Justice. Environmental justice concerns related to construction activity typically include: exposure to noise, safety hazards, pollutants, and hazardous materials. Since the Proposed Action would occur within a controlled area that is off limits to the public, potential adverse environmental and human health effects are limited to airborne noise and construction-generated pollution within the marine waters of Sinclair Inlet. Low income and minority populations reside in the surrounding area. Populations living adjacent to the north boundary of NAVBASE Kitsap, Bremerton, may hear pile driving equipment while pile replacement occurs during an approximate 4-week period. However, temporary construction noise during daylight hours is exempt from state and local codes. Best Management Practices would be implemented

to prevent spills and contamination of Sinclair Inlet. By limiting pile driving to daylight hours and implementing Best Management Practices to avoid contamination of Sinclair Inlet, no adverse environmental and human health effects are anticipated to any populations, including low income and minority populations.

Traffic and Transportation. The volume of vehicle and marine traffic would temporarily increase during pile replacement activities with marine vessels and contractor vehicles. Materials and equipment would be staged on barges and at a paved area within the waterfront at NAVBASE Kitsap, Bremerton. Since privately-owned vehicles are not permitted within the waterfront area, there would be no impacts to employee parking. Marine vessel traffic would include a barge-mounted crane for pile installation and removal, a barge to deliver new piles and remove extracted piles (anticipated frequency of one barge delivery every one to three weeks), and tugs to assist barge movement. Marine vessels would operate and stage in the Waterfront Restricted Area. The addition of marine vessels and vehicles to implement the Proposed Action would be negligible when compared to existing marine and vehicle traffic at NAVBASE Kitsap, Bremerton. Therefore, there would be negligible impact to traffic and transportation.

Health and Safety. The waterfront area of NAVBASE Kitsap, Bremerton, is restricted from public access by a Port Security Barrier and upland fencing, which prevent recreational and commercial boater access to the waterfront areas. The Proposed Action would not differ significantly from normal day-to-day activities that occur at NAVBASE Kitsap, Bremerton. Construction contractors and Navy employees would adhere to all applicable environmental and safety regulations, and no impacts to health and safety are anticipated.

NAVBASE Kitsap, Bremerton, includes family housing approximately 1,400 feet northwest of Pier 4 and a Childcare Development Center approximately 3,000 feet to the west. However, there are no residences, schools, or other facilities used by children within the Controlled Industrial Area (CIA) at the NAVBASE Kitsap, Bremerton, waterfront, and access is restricted. Therefore, the removal and replacement of piles at Pier 4 would not cause environmental health risks and safety risks to children.

1.5 RELEVANT LAWS AND REGULATIONS

In addition to NEPA, CEQ, and Navy regulations, the Navy has prepared this EA integrating other federal and state laws, statutes, regulations, and policies that are relevant to the implementation of the Proposed Action including, but not limited to:

- Clean Air Act (CAA) (42 USC 7401 et seq.);
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC 9601 *et seq*.);
- Clean Water Act (CWA) (33 USC 1251 et seq.);
- Coastal Zone Management Act (CZMA) (16 USC 1451 et seq.);
- National Historic Preservation Act (NHPA) (54 USC 306108 et seq.);
- Endangered Species Act (ESA) (16 USC 1531 et seq.);
- Magnuson–Stevens Fishery Conservation and Management Act (16 U.S.C. 1800)
- Marine Mammal Protection Act (MMPA) (16 USC 1361 et seq.)
- Migratory Bird Treaty Act (MBTA) (16 USC 703-712);
- Bald and Golden Eagle Protection Act (16 USC 668-668d);

- Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority and Low-income Populations;
- EO 13175, Consultation and Coordination with Indian Tribal Governments; and
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risks.

A description of the Proposed Action's consistency with these policies and regulations is presented in Section 5 (Table 5-1).

1.6 PUBLIC INVOLVEMENT

The Navy made the Draft EA available for public review and comment and no comments were received. The Final EA and decision document will be made available to the public. The Notice of Availability (NOA) will be posted in the local newspaper and the Final EA and decision document will be posted at http://go.usa.gov/tAr4 for 30 days.

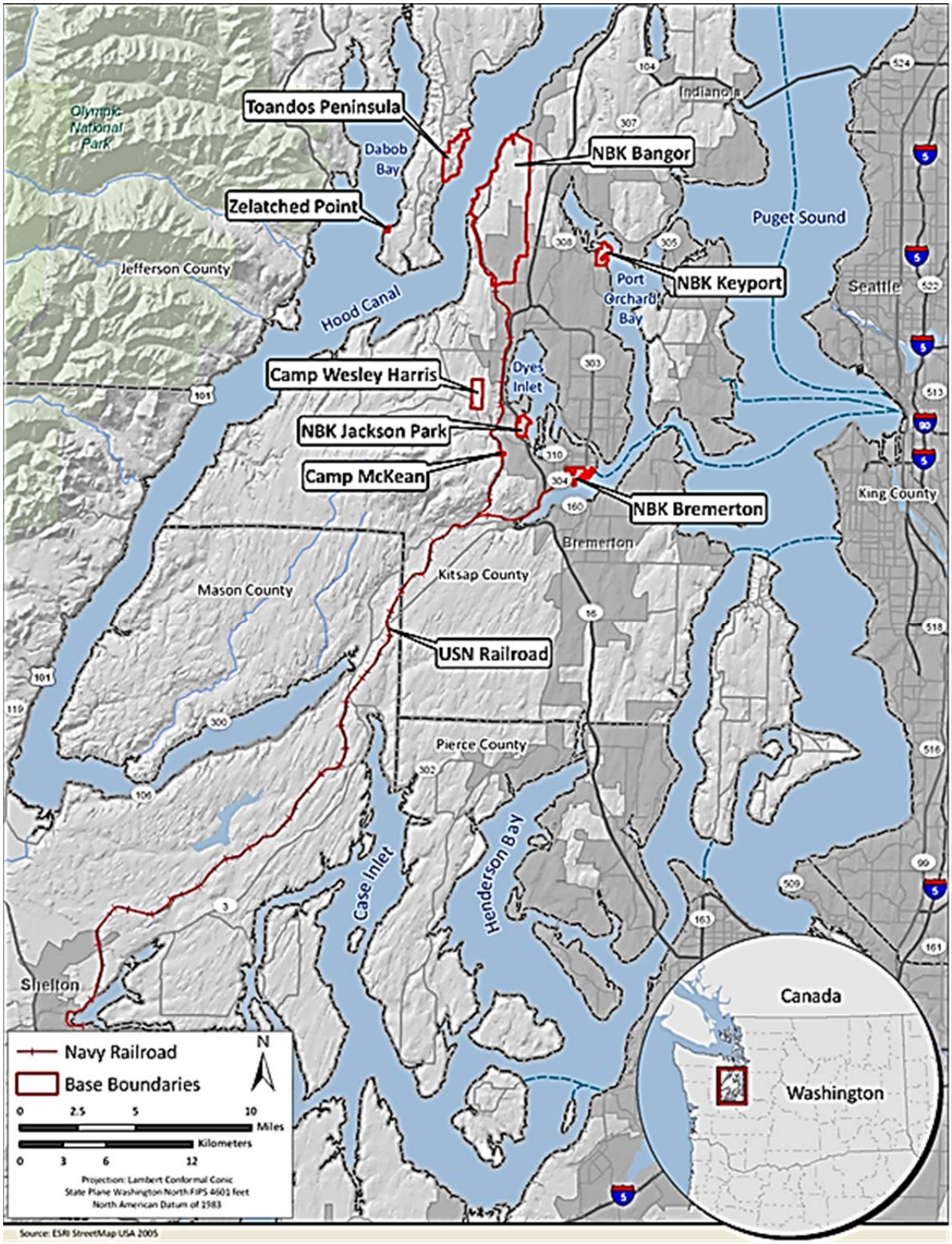

Figure 1-1. Regional Map Showing NAVBASE Kitsap, Bremerton

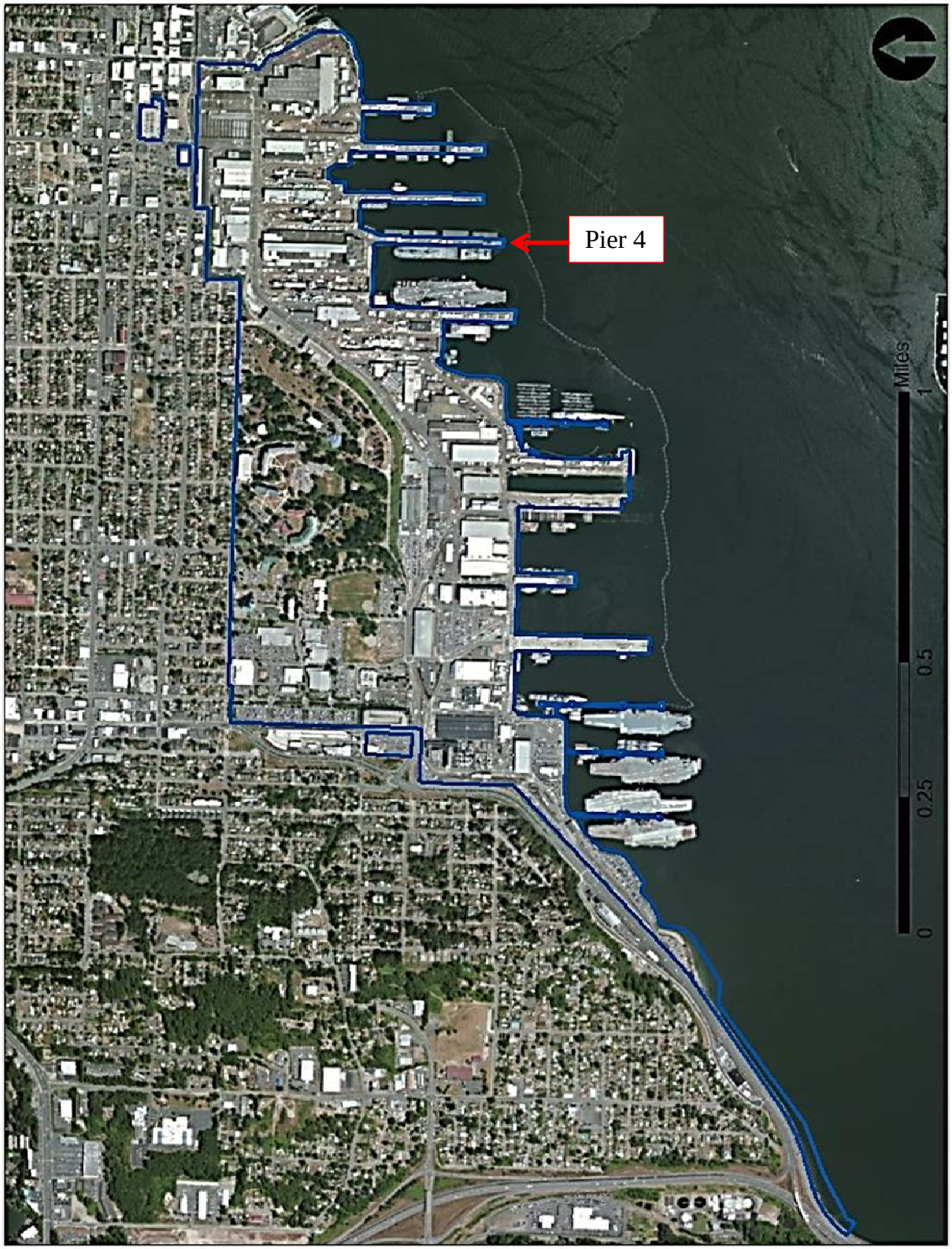

Figure 1-2. NAVBASE Kitsap, Bremerton

2 PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The Navy proposes to remove and replace approximately 80 deteriorated timber fender piles at Pier 4, located at NAVBASE Kitsap, Bremerton, over a several week period in 2016. Pier 4 is approximately 1,300 feet in length, 100 feet wide, and consists of a concrete deck supported on concrete pilings and pile caps. The pier is surrounded by a timber fender pile system. This pier was originally constructed in 1914 and lengthened in 1922. The Proposed Action would remove up to 80 deteriorated creosote-treated timber fender piles and replace them with up to 80 12- to 14-inch hollow steel fender piles (Figures 2-1 and 2-2). New piles would be placed in the same general location as the removed piles. In addition to replacing piles, the Proposed Action would include replacement of damaged wood chocks and other topside hardware associated with the fender system.

The overwater coverage (or footprint) of Pier 4 and associated fenders, dolphins, and structures would not change.

2.2 ALTERNATIVES

NEPA's implementing regulations provide guidance on the consideration of alternatives to a federally proposed action and require rigorous exploration and objective evaluation of reasonable alternatives. However, only those alternatives determined to be reasonable relative to their ability to fulfill the purpose and need for the Proposed Action require detailed analysis. The action is to maintain Pier 4 through the replacement of deteriorated fender piles, which protect the pier structure itself against damage from incoming vessels. Replacing the entire pier in the same or a different location would not be reasonable alternatives to replacing the protective fendering system of the existing Pier. Therefore, no practical or feasible action alternatives were identified, and this EA analyzes the Proposed Action and the No Action Alternative.

Under the No Action Alternative, existing piles at Pier 4 at NAVBASE Kitsap, Bremerton, would not be replaced to maintain pier integrity and mission readiness. The No Action Alternative does not meet the purpose of and need for the Proposed Action, but represents the baseline condition against which potential impacts of the Proposed Action can be compared. As required by CEQ guidelines, the No Action Alternative is carried forward for analysis in this EA.

2.3 COMPONENTS OF PROPOSED ACTION

This section describes methods of pile removal and installation that are planned to be used to accomplish the work included as part of the Proposed Action. Removing and installing in-water piles are construction activities that have occurred regularly at NAVBASE Kitsap, Bremerton, as in-water structures have been built and maintained for more than 100 years.

Most in-water structures are pile-supported; therefore, repair of these structures typically involves removal of existing piles and installation of new piles. Fender piles (or guide piles) protect docks, wharves, and other structures from direct contact with vessels and consist of upright freestanding piles driven into the sea floor several feet from the pier.

The Proposed Action would include replacement of damaged wood chocks and other topside hardware associated with the fender system. No in-water dredging or placement of fill would occur under the Proposed Action. Material staging, if required, would occur in existing developed areas of NAVBASE Kitsap, Bremerton.

2.3.1 Pile Removal

Extraction with a vibratory driver would be the primary method for removing existing timber piles. A vibratory driver is a large mechanical device (5-16 tons) suspended from a crane by a cable and clamped onto a pile. The vibrations induced into the pile liquefy the surrounding sediments and allow removal with the aid of the crane. A barge-mounted crane would operate from the water adjacent to the pile during removal activities. The vibratory driver is shut off once the end of the pile reaches the mudline and the pile is pulled from the water and placed on a barge. Vibratory extraction would be expected to take approximately 5 to 10 minutes per pile. Sediments attached to the outside of the pile would fall back to the seafloor.

In some cases, complete removal with a vibratory driver is not possible. If piles break apart from the force of the clamp and the vibration or are damaged, a chain or clamshell bucket would be used, if practical, to remove the broken pile. If the entire pile cannot be removed, the pile would be cut at the mudline using a pneumatic underwater chainsaw to prevent disturbing contaminated sediment.

2.3.2 Pile Installation

Hollow steel piles would be driven with a vibratory driver. To drive the pile, a pile is first moved into position and set into the proper location by placing a choker cable around a pile and lifting it into vertical position with the crane. Once the pile is properly positioned, the vibratory driver is clamped onto the pile and activated. Similar to pile removal, the vibratory driver liquefies the sediment around the pile and drives the pile into the substrate aided by the weight of the driver. Substrate in the project area consists of up to 40 feet of fine grained mud (silt and clay) which should facilitate quick installation (e.g., a few minutes/pile) of fender piles. New piles would be installed in the same general location as extracted piles. No impact hammer pile driving will occur with the Proposed Action.

2.3.3 Pile Disposal

All materials and waste would be disposed of in accordance with federal and state requirements. Creosote-treated piles are not considered a hazardous waste (40 CFR 261.4(b)(9)) or a dangerous waste (Washington Administrative Code (WAC) 173-303-071). The Navy will follow the Washington State Department of Natural Resources (DNR) Best Management Practices (BMPs) for creosote-treated pile removal and disposal (DNR 2013), which recommends disposing creosote-treated wood in an approved Subtitle D Landfill. Prior to disposal, the creosote-treated piles would be cut into smaller segments in a manner that precludes further use.

2.4 BEST MANAGEMENT PRACTICES AND MINIMIZATION MEASURES

The Proposed Action includes BMPs for construction and general minimization measures that will be implemented to minimize or avoid potential environmental impacts. Mitigation measures, such as endangered species monitoring, are discussed in Section 3 of this EA.

2.4.1 General

An Environmental Protection Plan (EPP) will be prepared and implemented for the Proposed Action. The EPP would be completed prior to the commencement of any construction activities. The EPP would identify construction planning elements and recognize spill sources at the site. The EPP would outline BMPs, responsive actions in the event of a spill or release, and notification and reporting procedures. The EPP would also outline personnel responsibilities, contractor safety, project site security, site inspections, and training.

Minimization measures and other general BMPs incorporated in the EPP and implemented during project construction would include:

- Materials and equipment would be staged on barges and at a paved area within the waterfront at NAVBASE Kitsap, Bremerton.
- Hollow steel piles would be driven with a vibratory driver.
- Washwater resulting from washing equipment or work areas will be contained for proper disposal, and shall not be discharged unless authorized.
- Equipment that enters surface water will be cleaned and maintained to prevent any visible sheen from petroleum products.
- There will be no discharge of oil, fuels, or chemicals to surface waters, or onto land where there is a potential for re-entry into surface waters. Fuel hoses, oil drums, oil or fuel transfer valves, and fittings will be checked regularly for leaks. Materials shall be maintained and stored properly to prevent spills.
- No cleaning solvents or chemicals used for tools or equipment cleaning will be discharged to ground or surface waters.
- Oil-absorbent materials will be used in the event of a spill if any oil product is observed in the water.
- Waste materials will be disposed of in a state approved landfill or recycled. All creosote-treated material would be cut to prevent reuse and disposed of as discussed in Section 2.3.3.
- Removed piles and associated sediments (if any) will be contained on a barge or stored in a containment area on the pier until properly disposed.
- Construction materials will not be stored where high tides, wave action, or upland runoff could cause materials to enter surface waters.
- Any floating debris generated during construction will be retrieved. Any debris in the containment boom will be removed by the end of each work day or when the boom is removed, whichever occurs first.
- Whenever activities that generate sawdust, drill tailings, or wood chips from treated timbers are conducted, tarps or other containment material will be used to prevent debris from entering the water.

2.4.2 Timing Restrictions

To minimize the number of fish exposed to underwater sound and other construction disturbance, in-water work would be performed between July 16 and February 15 when juvenile salmon and bull trout are less likely to be migrating through the construction area.

To minimize noise impacts to surrounding residents, noise generating construction activities would not occur between the hours of 9:00 p.m. and 7:00 a.m.

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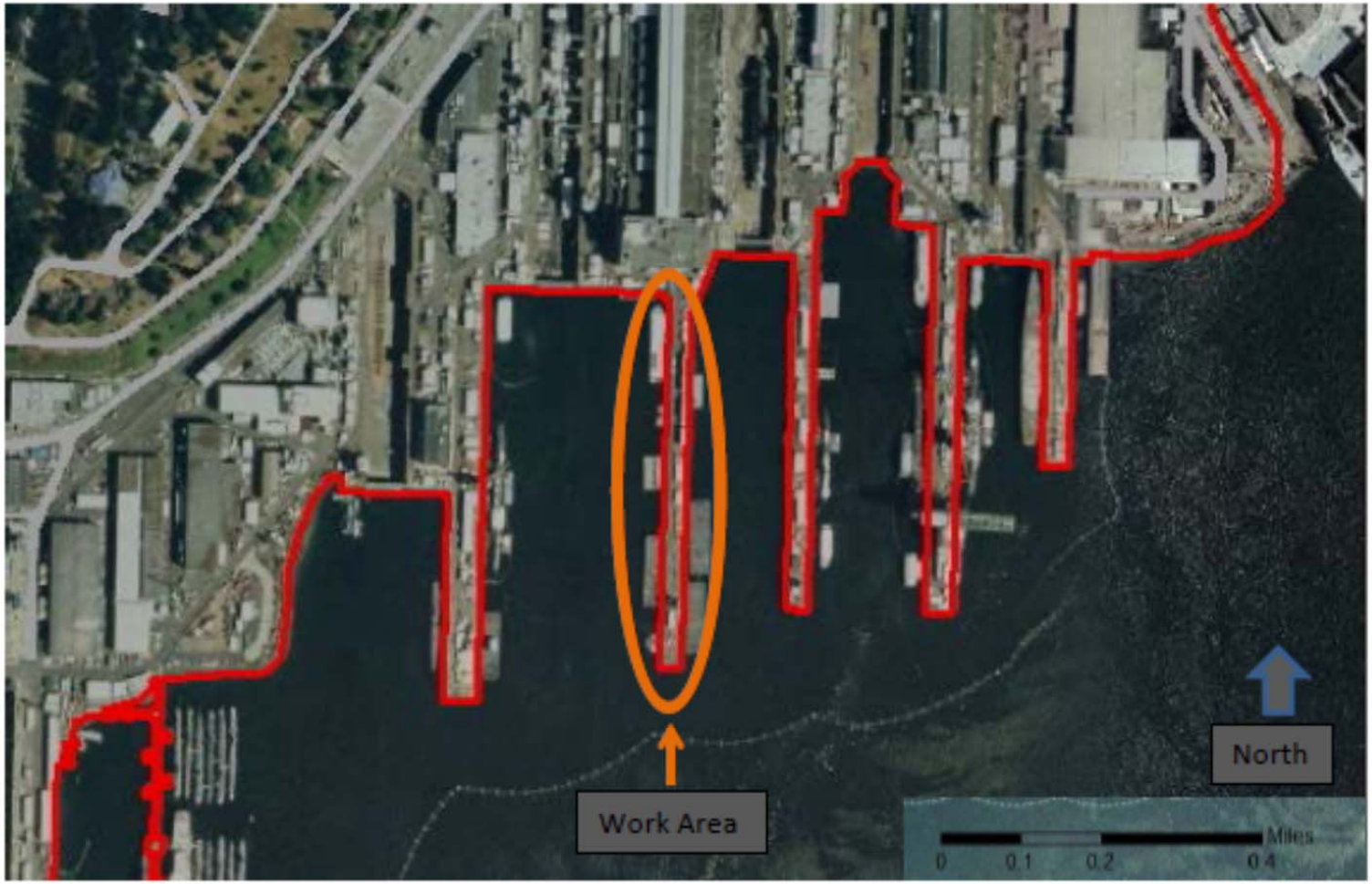

Figure 2-1. Pier 4 Work Area

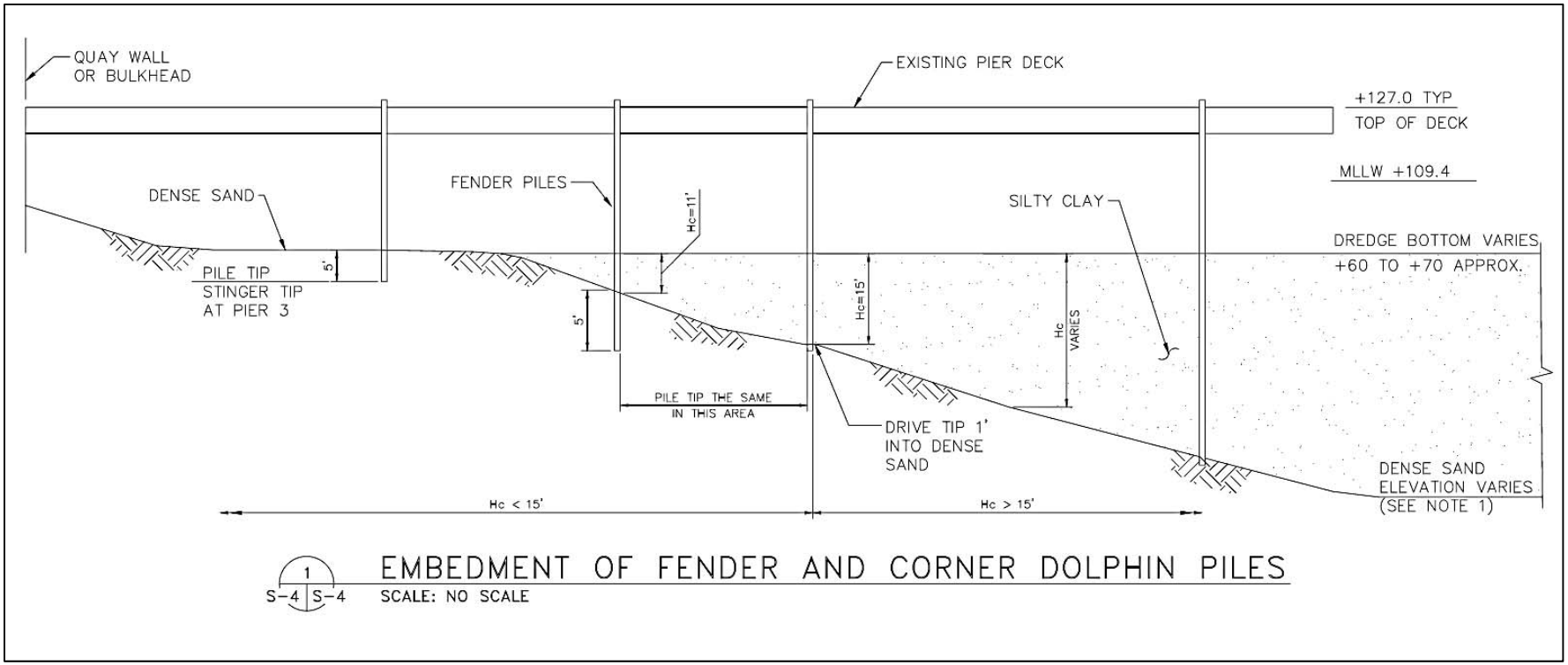

Figure 2-2. Site Plan

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter presents baseline data for the affected environment and an assessment of the potential impacts or environmental consequences that could result from implementation of the Proposed Action within the Region of Influence (ROI). The following resources are evaluated in this chapter: water resources, noise, biological resources, cultural resources, and American Indian traditional resources.

3.1 WATER RESOURCES

This section discusses water quality and marine sediments. The Proposed Action would have negligible impacts to bathymetry because of the limited scope of the work and the highly altered and disturbed industrial shipyard environment. Therefore, bathymetry is not discussed further.

3.1.1 Regulatory Setting

Washington surface water quality standards contained in WAC-173-210A provide the basis for protecting and regulating the quality of surface waters in Washington State. The standards implement portions of the federal Clean Water Act (CWA) by specifying the designated and potential uses of waterbodies in the state. They set water quality criteria to protect those uses and acknowledge limitations. The standards also contain policies to protect high-quality waters (antidegradation) and specify how criteria are to be implemented.

The CWA requires that all states restore their waters to be “fishable and swimmable.” Section 303(d) established a process to identify and clean up polluted waters. Every two years, all states are required to perform a water quality assessment of the quality of surface waters in the state, including all the rivers, lakes, and marine waters where data available. WDOE compiles its own water quality data and invites other groups to submit water quality data they have collected.

Waters where beneficial uses (such as for drinking, recreation, aquatic habitat, and industrial use) are impaired by pollutants are placed in the “polluted water” category (Category 5) on the water quality assessment. Categories range from Category 1, waters that meet tested standards for clean waters, to Category 5, waters that fall short of state surface water quality standards and are not expected to improve within the next two years. The 303(d) list is comprised of those waters that have been designated as Category 5, impaired.

Periodically, WDOE conducts an assessment of the water quality of the surface waters in the state (WDOE, 2012). The outcome of the assessment represents the Integrated Report for Sections 303(d) and 305(b) of the CWA. The Integrated Report identifies water bodies where water quality does not achieve standards. It also gives an overall indication of water quality of each water body. The most recent report is Washington State’s 2010 Integrated Water Quality Assessment, approved by U.S. Environmental Protection Agency (USEPA) in 2012 (WDOE, 2012).

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. The law authorizes two kinds of response actions: short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response, and long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening

The Washington State Sediment Management Standards (SMS) (WAC 173-204) provide the framework for the long-term management of marine sediment quality. The SMS establishes

standards for the quality of sediments as the basis for management and reduction of pollutant discharges by providing a management and decision-making process for contaminated sediments.

3.1.2 Affected Environment

NAVBASE Kitsap, Bremerton, and Pier 4 are located within Sinclair Inlet, a 3.5-mile-long shallow, poorly flushing bay with freshwater inputs from Gorst, Blackjack, Ross, Anderson, Sacco, and Karcher Creeks. While water quality in Sinclair Inlet is considered high enough to support many different uses from sailing to fishing, it has been adversely affected by runoff and sediment contamination from the surrounding watersheds, including such land uses as forest land, highways, urban development, commercial development, and industrial development.

WDOE has established the following uses for Sinclair Inlet: aquatic life, recreation, wildlife habitat, harvesting, commerce, navigation, boating, and aesthetics (WAC 173-201A-612). Sinclair Inlet is popular amongst private boaters, with several marinas in Port Orchard and Bremerton. While shellfish harvesting is prohibited due to pollution (WA Department of Health 2015), Sinclair Inlet remains an active water body for fishing.

Waters in the western portions of the waterfront area are classified as Category 2 for fecal coliform, temperature, and DO. Category 2 waters are waters of concern where there is some evidence of a water quality problem, but usually not in violation of state water quality standards. Piers 4 and 5 are located within an area classified as Category 4B (waters that have pollution problems, but where a plan is in place that is expected to resolve the problem) for Polychlorinated Biphenyls (PCBs). Several areas within Sinclair Inlet outside of the immediate NAVBASE Kitsap, Bremerton, waterfront area are classified as Category 5 (the water quality standards have been violated and there is no plan to resolve the problem) for fecal coliform and DO and Category 2 for temperature. Turbidity within Sinclair Inlet generally meets the state of Washington Class A (excellent) standards for marine waters (Gartner et al., 1998).

Sinclair Inlet experiences isolated events of low DO associated with elevated nutrient concentrations and phytoplankton blooms (URS and SAIC 1999). Low DO exceedances were recorded by Kitsap County during 1998, 2001, and 2003. Anthropogenic sources were identified as the major contributor to the low DO readings (WDOE, 2012). DO levels within Sinclair Inlet are seasonably variable; however, increasing development continues to contribute to low DO problems (WDOE, 2012).

While problems exist in Sinclair Inlet due to the surrounding land uses (highways, urban development, commercial development, and industrial development), Sinclair Inlet retains a water quality standard that continues to support its designated uses from fishing and sailing to wildlife viewing (WAC 173-201A-612).

Sinclair Inlet exhibits a weak estuarine flushing (i.e., water and sediments stay within Sinclair Inlet instead of being flushed out quickly to other parts of the Puget Sound), clockwise current pattern, and sediment deposition along the northern shoreline (URS and SAIC, 1999). Weak tide currents move water in and out of the inlet with a maximum velocity of 0.2 to 0.3 knots (URS and SAIC, 1999). This effect and the generally weak nature of these currents make the inlet more depositional than erosional for both mud (silt and clay) and sand-sized particles. Currents are generally not capable of re-suspending bottom sediments. Existing sedimentation rates at the project site are 0.2 to 0.8 in (0.5 to 2 cm) per year (URS and SAIC, 1999).

In 1998, a Sediment Trend Analysis (STA) was performed on samples taken from Sinclair Inlet and the adjacent Port Orchard waterway (McLaren, 1998). This study has been the basis for determination of areas of erosion, stability of sediments (dynamic equilibrium), and deposition of sediments in Sinclair Inlet. In general, muddy sediments show a dominant clockwise pattern

with flood-directed transport on the south side of the Inlet and ebb-directed transport on the north side of the Inlet (McLaren, 1998). The STA study demonstrates the sediments throughout Sinclair Inlet do not move with great speed, but do accumulate in certain areas. This is especially true on the north side of the inlet, near the project site, where the movement of sediments terminates inside the docks and piers of the shipyard (McLaren, 1998).

Industrial activities at NAVBASE Kitsap, Bremerton, have been a source of wastes and environmental contaminants since the early 1900s. In 1994, the Puget Sound Naval Shipyard Complex (now NAVBASE Kitsap, Bremerton) was listed on the CERCLA NPL. The site has been divided into Operable Units (OU), one of which is OU-B, further divided into OU-B Marine and OU-B Terrestrial. Pier 4 is located within OU-B Marine, which contains approximately 230 acres of subtidal land. In June 2000, a CERCLA Record of Decision (ROD) was signed by the Navy, the USEPA, and Washington State Department of Ecology (WDOE) for OU-B Marine. The Navy agreed to perform specific actions (remedies) to reduce polychlorinated biphenyls (PCBs) in marine sediment and fish tissue including dredging and confined aquatic disposal, a combination of sediment capping and natural recovery, shoreline stabilization, and monitoring marine tissue and sediments. Construction, dredging, and capping actions were completed in 2004 and post-remedy monitoring was conducted in 2003, 2005, 2007, 2010, and 2012. In 2007, the Navy identified new information about mercury concentrations in rockfish and tribal seafood ingestion rates, which continues to be evaluated. The Navy is continuing to evaluate health risks due to mercury contamination in Sinclair Inlet.

3.1.3 Environmental Consequences

The ROI for analyzing potential impacts to water resources is the northern shoreline of Sinclair Inlet within the Naval Restricted Area. Impacts to water resources would be considered significant if the Proposed Action:

- reduced the ability of Sinclair Inlet to support its designated uses (aquatic life, recreation, wildlife habitat, and harvesting) (WAC 173-201A-612);
- increased pollution levels (e.g., temperature, dissolved oxygen, and turbidity) to a point where Sinclair Inlet is placed in a reduced category in Washington's Water Quality Assessment Categories as described in Sections 303(d) and 305(b) of the Clean Water Act;
- compromised the integrity of the remedies implemented pursuant to the CERCLA ROD for OU-B Marine; or
- violated state Sediment Quality Standards (WAC 172-204-320).

Proposed Action

Direct discharges of waste or contaminants to the marine environment would not occur with implementation of the Proposed Action. Impacts to water quality would be limited to short-term and localized changes associated with re-suspension of bottom sediments from pile removal, installation, and barge and tug operations, such as anchoring and propeller wash. Because the project area is characterized as having weak and stable tide currents (URS and SAIC, 1999), these changes would be short-term and spatially limited to the construction site and areas immediately adjacent that may be impacted by re-suspended bottom sediments. Minor long-term water quality benefits are possible from the removal of creosote-treated piles, which are known to leach toxins (DNR, 2013).

The Proposed Action would result in a slight disturbance of bottom sediments through pile removal (vibratory extraction or choke and pull) and installation (vibratory pile driving). Impacts from sediment resuspension would be minor and localized in the area of pile removal and pile

installation due to weak, stable tide currents in the project area (URS and SAIC, 1999). These stable subsurface conditions would allow any disturbed sediments to resettle in the general area of pile removal/installation. Setting spuds and anchors for the barges used for pile removal and installation could also cause disturbance of bottom sediments. Impacts from sediment resuspension from these activities would be minor and localized in the area of the spud or anchor placements. Propeller wash could also disturb bottom sediments, but would not differ from day-to-day activities occurring in this industrial waterfront area. Impacts from sediment re-suspension would be further reduced through the implementation of BMPs during construction. These measures would limit re-suspension of sediments by shutting down the vibratory pile hammer when piles to be removed have broken free from the marine sediments. In the event that a pile breaks and cannot be removed, cutting existing piles at the mudline will minimize disturbance of bottom sediments.

Replacement of damaged wood chocks and other topside hardware would have no impact on sediments because these elements of the Proposed Action would not disturb bottom sediments.

The Navy will coordinate with USEPA's CERCLA Program Manager before construction to confirm conformance with CERCLA requirements for these locations. Pre- and post-construction sediment sampling is planned to ensure the Proposed Action does not adversely impact past cleanup actions. BMPs and minimization measures would be implemented to prevent accidental losses or spills of construction debris into Sinclair Inlet. Construction-related impacts would not increase pollution levels or violate applicable state or federal water quality standards, nor would they reduce the ability of Sinclair Inlet to support its designated uses. Implementation of the Proposed Action would result in minor and localized resuspension of sediments but is not expected to result in the violation of Washington Sediment Quality Standards (WAC 173-204) or degrade the CERCLA OU-B Marine remedy. Therefore, no significant impacts to water resources would occur with implementation of the Proposed Action.

No Action Alternative

Under the No Action Alternative, the existing creosote-treated timber piles would remain in place. No piles would be removed or driven and no disturbance to sediments would occur. As such, no changes to water resources would occur with implementation of the No Action Alternative.

3.2 NOISE

3.2.1 Regulatory Setting

The State of Washington adopted rules to establish maximum airborne noise levels based on the environmental designations of both the noise source and the noise receiving property. Washington Administrative Code (WAC) 173-60-040 states that noise levels created by a Class C industrial noise source cannot exceed 60 dBA at a Class A residential property during daytime hours and 50 dBA at night. Night is defined as 10:00 PM to 7:00 AM. Noise from temporary construction activities is exempt from noise restrictions during all hours when received by industrial or commercial zones and during daytime hours when received in residential zones.

The City of Bremerton and the City of Port Orchard have also developed maximum permissible environmental noise levels for noise receiving properties. The City of Bremerton has exempted noise generated by construction activities, as long as these activities do not occur between the hours of 10:00 p.m. and 7:00 a.m. (WAC Chapter 173-60 and City of Bremerton Code Chapter 6.32 Noise). The City of Port Orchard has exempted noise generated by construction activities, as long as these activities do not occur between the hours of 9:00 p.m. and 7:00 a.m. (Port Orchard Municipal Code 9.24).

3.2.2 Affected Environment

NAVBASE Kitsap, Bremerton, is located in an urban setting with marine industrial uses characterized by airborne noise and underwater sound from truck and automobile traffic; marine vessel traffic; cranes; diesel-powered equipment; railroad traffic; continuously operating transmission lines for steam, water, and fuel; and compressors. The primary concentration of these types of noise sources is along the shore and piers of NAVBASE Kitsap, Bremerton. Noise is also generated by commercial vessels (e.g., tugs, barges, and fishing vessels), ferry traffic, and recreational vessels operating on Sinclair Inlet. Noise from the shipyard can be heard throughout areas in the City of Bremerton and across Sinclair Inlet in the City of Port Orchard.

Cavanaugh and Tocci (1998) identify typical urban residential background sound at around 65 dBA, high-density urban areas at 78 dBA, and urban areas adjacent to freeway traffic at 88 dBA. The nearest on-base family residential area is located approximately 1,400 feet to the northwest, and an on-base Childcare Development Center is located approximately 3,000 feet to the west. The closest off-base sensitive receptors are residences located north of the base along Gregory Way, approximately 0.5 miles from Pier 4. Forest Ridge Park is located in a residential area west of Callow Avenue, approximately 1.3 miles from Pier 4. Residences are also located across Sinclair Inlet in Port Orchard, approximately 1.5 miles away.

3.2.3 Environmental Consequences

For this analysis, the ROI for noise is NAVBASE Kitsap, Bremerton; properties immediately adjacent to NAVBASE Kitsap, Bremerton; and properties across Sinclair Inlet from NAVBASE Kitsap, Bremerton. The threshold of significance for noise impacts would be exceedances of state and local noise thresholds at a sensitive receptor (e.g., residential land uses, nursing homes, and hospitals). Airborne noise and underwater sound impacts to ESA-listed species, EFH, and marine mammals are discussed in Sections 3.4, 3.5 and 3.6, respectively.

Proposed Action

Construction of the Proposed Action would generate airborne noise and underwater sound. The primary noise source would be equipment used for vibratory pile removal and vibratory pile installation. Other noise-producing activities would include operation of cranes, barges, and replacement of damaged wood chocks and other topside hardware.

Vibratory pile removal and installation will create underwater sound. Scuba divers diving in Sinclair Inlet could experience underwater sound levels that could cause a behavioral response including increased breathing and elevated heart rate (154 dB re 1μPa) (Naval Submarine Medical Research Laboratory 2002) within 7,070 feet of the construction site during pile driving but would not receive levels sufficient to cause injury (SPL of 200 dB re 1μPa). Other recreational users (e.g., boating, kayaking, and fishing) in the vicinity could be exposed to increased airborne noise levels during pile driving. The sound levels would not cause injury, but users may avoid the area during pile driving.

Noise generating activities associated with the Proposed Action would be temporary (occurring during an approximate 6-12 week period) and would not occur between the hours of 9:00 p.m. and 7:00 a.m. Accordingly, these activities are exempt from state and local noise codes. No significant impacts from noise would occur with implementation of the Proposed Action.

No Action Alternative

Under this alternative, no pile work would take place, thus no change to noise levels would occur. As such, no significant impacts from noise would occur with implementation of the No Action Alternative.

3.3 BIOLOGICAL RESOURCES

This section discusses species listed as endangered or threatened under the Endangered Species Act, migratory birds including bald eagles, essential fish habitat, and marine mammals. The Proposed Action would have no or negligible impacts to terrestrial habitats and species, marine vegetation, and benthic invertebrates because:

- The Proposed Action would occur on an existing over-water structure and would not involve any clearing or excavation. Material staging, if required, would occur in existing developed areas of NAVBASE Kitsap, Bremerton.
- The impacts related to construction would be limited to the footprint of the new piles. Underwater surveys conducted in 2012 show that marine vegetation is sparse throughout the NAVBASE Kitsap, Bremerton, waterfront (Navy 2012).
- The Proposed Action would include temporary disruption of the benthic community (marine worms, snails and bivalves, crustaceans, and sea stars) in a limited area where pile replacement occurs. However, benthic organisms are very resilient to habitat disturbance and would quickly recover to pre-disturbance levels. Therefore, the localized and temporary nature of the Proposed Action would have a negligible impact to benthic invertebrates.

Therefore, terrestrial habitats and species, marine vegetation, and benthic invertebrates are not discussed further.

3.3.1 Regulatory Setting

The Endangered Species Act (ESA) of 1973, as amended, requires that an action authorized by a federal agency not jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. Section 7 of the Act requires that the responsible federal agency consult with United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) concerning endangered and threatened species under their jurisdiction.

The Migratory Bird Treaty Act (MBTA) of 1918 protects native migratory birds that live, reproduce, or migrate within or across international borders. The MBTA prohibits the taking, killing, or possessing of migratory birds unless permitted. Bird species protected by the MBTA are listed in 50 CFR 10.13. NAVBASE Kitsap is located in western Washington State, which generally falls within the potential pathway of the Pacific Migratory flyway. Birds use this flyway primarily in fall and spring during their southward and northward migrations, respectively.

Bald eagles are protected under both the MBTA and the Bald and Golden Eagle Protection Act, which prohibits the taking of bald eagles through pursuit, shooting, poison, killing, trapping, collecting, disturbance, or transportation.

The Magnuson-Stevens Fishery Conservation and Management Act provides for the conservation and management of the fisheries and other purposes, including a requirement to designate essential fish habitat (EFH).

The Marine Mammal Protection Act (MMPA) of 1972, as amended, established a federal responsibility to conserve marine mammals. Subject to limited exceptions, MMPA protects marine mammals by prohibiting unauthorized "taking" of marine mammals in the United States or on the high seas unless exempted or authorized by NMFS. "Taking" is defined by MMPA 2004 as "to harass, hunt, capture, or kill or attempt to harass, hunt, capture, or kill any marine mammal." Permission may be granted to "take" marine mammal(s) incidental to Navy activities if NMFS determines the Navy action will: (1) have a negligible impact on the species or stock(s)

so the taking is not likely to reduce annual rates of adult survival or annual recruitment; and (2) the activity affects "small numbers" of species or stock so the taking will be small relative to the estimated population size and relevant to the behavioral, physiological, and life history characteristics of the species.

3.3.2 Affected Environment

Endangered and Threatened Species. There are nine species that have been listed as threatened or endangered under the Endangered Species Act (ESA) that could occur near NAVBASE Kitsap, Bremerton (Table 3-1). Critical habitat has been designated for several of the ESA-listed species that occur in the Puget Sound, but no critical habitat occurs at NAVBASE Kitsap, Bremerton, where the Proposed Action would take place. For more detail on the life history, critical habitat, and distribution of ESA-listed species, please refer to the Biological Evaluation (BE) in Appendix B.

The majority (77 percent) of ESA-listed Chinook salmon found in Sinclair Inlet are estimated to be of hatchery origin from facilities in Gorst Creek (Fresh, et al. 2006). Ten percent are estimated to have naturally spawned in Sinclair Inlet area streams, with the remainder coming from other hatchery populations (Fresh, et al. 2006). There are no historic populations of Chinook salmon in streams draining into Sinclair Inlet.

ESA-listed Puget Sound steelhead can also be found in Sinclair Inlet, including the project area (Fresh, et al. 2006). ESA-listed bull trout do not utilize any of the East Kitsap drainages due to a lack of suitable spawning habitat. Bull trout use of the project area would be on an incidental basis. However, anadromous forms of bull trout could overwinter or forage in Sinclair Inlet and thus be found rarely in the project area (University of Washington, 2002).

Depth occurrences for adult bocaccio and canary rockfish are 160 to 820 feet deep and for yelloweye rockfish are 300 to 590 feet deep. Water depths at Pier 4 at NAVBASE Kitsap, Bremerton, range from 32 feet to 45 feet mean lower low water, and the site lacks rocky habitat preferred by these species. No adult rockfish are anticipated to be in the immediate project area. Larval rockfish are pelagic and can be found in Sinclair Inlet, but the action area is a few miles from waters that are suitable depth for rockfish, which would limit the number of larval rockfish in the Pier 4 vicinity. Juvenile rockfish have the potential to occur near pier side locations, if their preferred high relief or kelp bed habitat is nearby, but kelp does not occur at NAVBASE Kitsap, Bremerton. Based on recent rockfish surveys, depth at the project site, a lack of vegetation, and limited likelihood of larval stages, ESA-listed rockfish are not likely to be present in the project area.

Table 3-1. Endangered Species Act Listed Species

Species	ESA-Listed Status	Critical Habitat Designated	Occurrence in Sinclair Inlet
Chinook salmon *Oncorhynchus tshawytscha* Puget Sound ESU	Threatened	Yes	Juveniles - May to Jul; Adults - Jul to Oct
Marbled murrelet *Brachyramphus marmoratus* California-Oregon-Washington	Threatened	Yes	Rare

Species	ESA-Listed Status	Critical Habitat Designated	Occurrence in Sinclair Inlet
Steelhead trout *Oncorhynchus mykiss* Puget Sound DPS	Threatened	No	Year-round
Bull Trout *Salvelinus confluentus* All U.S. stocks	Threatened	Yes	Rare adults and subadults – March to July
Bocaccio *Sebastes paucispinis* Puget Sound/Georgia Basin DPS	Endangered	No	Year-round
Canary rockfish *Sebastes pinniger* Puget Sound/Georgia Basin DPS	Threatened	No	Year-round
Yelloweye rockfish *Sebastes ruberrimus* Puget Sound/Georgia Basin DPS	Threatened	No	Year-round
Killer Whale *Orcinus orca* Eastern North Pacific Southern Resident/DPS	Endangered	Yes	Rare
Humpback Whale *Megaptera novaeangliae* California-Oregon-Washington stock	Endangered	No	Rare

ESA-listed marine mammals with the potential to occur in the waters surrounding NAVBASE Kitsap, Bremerton, include southern resident killer whale and humpback whale. Southern resident killer whales occasionally move into rarely visited areas and inlets, probably in response to locally abundant food sources. In 1997, southern residents moved into Dyes Inlet near Bremerton and spent nearly a month feeding on a salmon run (Wiles 2004). Humpback whales were common in inland Washington State waters in the early 1900s; however, there have only been a few sightings in this area since the whales were heavily hunted in the eastern North Pacific (Scheffer and Slipp 1948; Calambokidis and Steiger 1990; Pinnell and Sandilands 2004). While the two ESA-listed marine mammals have the potential to occur in Sinclair Inlet, confirmed sightings have been very rare over the past 20 years.

Marbled murrelets occur in Puget Sound marine habitats in relatively low numbers (Speich and Wahl 1995). Although old-growth forest is the preferred habitat for nesting, marbled murrelets are known to nest in mature second growth forest with trees as young as 80 years old (Hamer and Nelson, 1995). The majority of Kitsap County, including NAVBASE Kitsap, Bremerton, and the area surrounding Sinclair Inlet, has been logged several times over the past 150 years and no longer contains old growth forest or the large trees necessary for marbled murrelet nesting.

The closest documented habitat is on the west side of the Hood Canal in the Olympic National Forest (61 Federal Register 26256). The project area is in an industrial shipyard, miles from known nesting habitat and where high activity and noise levels limit any potential for foraging. While marbled murrelets can be seen in the South Puget Sound foraging, they have not been identified in the industrial waters surrounding NAVBASE Kitsap, Bremerton (Pearson 2013).

Migratory Birds and Bald Eagles. Birds protected under the Migratory Bird Treaty Act occur in Sinclair Inlet including the project area. Known species in Sinclair Inlet include various gulls, grebes, cormorants, scaups, scoters, loons, wigeons, geese, osprey, and mallards (URS and SAIC 1999). NAVBASE Kitsap, Bremerton, has one known bald eagle nest located over 2,500 feet west of Pier 4.

Essential Fish Habitat. The Pacific Fishery Management Council (PFMC) (2014) designated EFH in Puget Sound for the Pacific salmon fishery as “riverine, estuarine, and marine areas used by life stages of managed salmon species and riverine areas found within watersheds of documented occurrence.” The Pacific salmon management unit includes Chinook, coho, and pink salmon. All three species use the marine nearshore environment for rearing as juveniles and migration for both adults and juveniles. The EFH designation for the Pacific salmon fishery in estuarine and marine environments in the state of Washington extends from nearshore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (200 nautical miles) offshore (PFMC 2014).

PFMC also manages a fishery in Puget Sound for all types of Pacific groundfish. Broad swaths of EFH have been designated for this fishery and include, but are not limited to, sea mounts, eelgrass, kelp, estuaries, and rocky reefs. In addition to salmonids and groundfish, the PFMC manages coastal pelagic species that occur in Puget Sound including krill, northern anchovy, mackerels, Pacific sardine, and market squid.

While EFH for the above species does exist in Sinclair Inlet, the industrial nature of NAVBASE Kitsap, Bremerton, minimizes the quality of this habitat in the area surrounding Pier 4.

Marine Mammals. Marine mammal species that may occur in Sinclair Inlet are listed in Table 3-2. Two of these species are federally listed under the ESA as discussed above. For more detail on the life history, critical habitat, and distribution of ESA-listed species, please refer to the BE in Appendix B.

Any of the species listed in Table 3-2 have the potential to occur within Puget Sound. However, the species most likely to be encountered are non ESA-listed harbor seals and California sea lions. Harbor seals are common year-round in the waters of Sinclair Inlet and haulout on log breakwaters at various marinas in Port Orchard. Harbor seal pupping occurs from late June through September in this area of the Puget Sound (NOAA and WDFW, 2009). The submarines at NAVBASE Kitsap, Bremerton, are not used as a haulout by marine mammals. The preferred haulout locations for these species in the vicinity of the project are the pontoons associated with the floating security barrier (Figure 1-2). While California sea lions have been observed by Navy biologists with great regularity hauled out along the floating security barrier (Navy 2014), only one Steller sea lion has been observed on the barrier (Lance, 2012). California sea lions hauled out on the barrier have become accustomed to frequent noise from the industrial waterfront of NAVBASE Kitsap, Bremerton. Humpback whales, Minke whales, gray whales, Pacific white sided dolphins, harbor porpoises, Dall’s porpoises, and northern elephant seals are extremely unlikely to be in the project area and are included in Table 3-2 for informational purposes only.

Table 3-2. Sinclair Inlet Marine Mammals Protected Under the MMPA

Species	Stock(s)	ESA Status
Humpback Whale *(Megaptera novaeangliae)*	California-Oregon-Washington stock	Endangered
Minke Whale *(Balaenoptera acutorostrata)*	California-Oregon-Washington stock	None
Gray Whale (*Eschrichtius robustus*)	Eastern North Pacific stock	None
Killer Whale (*Orcinus orca*)	(1) West Coast transient stock (2) Eastern North Pacific Southern Resident/DPS	(1) Not listed (2) Endangered
Pacific white-sided dolphin (*Lagenorhynchus obliquidens*)	California-Oregon-Washington, Northern and Southern stock	None
Harbor Porpoise *(Phocoena phocoena)*	Washington inland waters stock	None
Dall's Porpoise (*Phocoenoides dalli*)	California-Oregon-Washington stock	None
Steller Sea Lion (*Eumetopias jubatus*)	Eastern U.S. stock/DPS	None
California Sea Lion (*Zalophus californianus*)	U.S. stock	None
Northern Elephant Seal *(Mirounga angustirostris)*	California breeding stock	None
Harbor Seal (*Phoca vitulina*)	Washington inland waters stock	None

3.3.3 Environmental Consequences

The ROI for analyzing potential impacts to fish and wildlife species is the marine waters of Sinclair Inlet. Impacts to biological resources would be considered significant if the Proposed Action:

- destroyed or adversely modified critical habitat;
- had an adverse effect to a population, stock, species, or evolutionary significant unit of ESA-listed species;

- adversely affected a local population of a non-listed species;
- reduced the quantity or quality of EFH;
- result in a finding of adverse effect to EFH that could not be avoided, minimized, or otherwise offset by conservation measures; or
- caused physical injury to marine mammals.

Proposed Action

Endangered and Threatened Species. Individual ESA-listed fish may be exposed to impacts from pile replacement including sound pressure levels, which may result in behavioral disturbance depending on the distance of the fish to sound source. However, work will be conducted when fish are least likely to be present in the area. Fish that occur near the project site would be exposed to underwater sound, and behavioral disturbance may occur. However, because pile diameters are small and a vibratory pile driver will be used, increased sound levels would be unlikely and are unlikely to result in significant impacts to fish. Sound pressure levels from vibratory pile removal of timber piles and small-diameter steel pile installation would not exceed the injury thresholds for fish. The Proposed Action would have no effect on designated critical habitat because no critical habitat has been designated within the project area.

Any exposures would likely have a minor and temporary impact on individuals and would not be expected to result in population level impacts. Adherence to minimization measures and best management practices would avoid adverse impacts to ESA-listed fish from vibratory pile driving. To minimize the number of fish exposed to underwater sound and other construction disturbance, in-water work would be performed between July 16 and February 15, when juvenile salmon are less likely to be migrating through the construction area. This in-water work window is consistent with work restrictions imposed by the USACE under their nationwide permitting requirements and National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) under the ESA consultation (refer to Appendix B). Any modifications to this window would require additional consultation with the USACE, NMFS, and USFWS.

Impacts to ESA-listed fish from changes in water quality as a result of pile driving operations are expected to be minor and temporary. DO levels are not expected to drop to levels that would result in harm to fish species. Some degree of localized, short-term increase in turbidity is expected to occur during installation and removal of the piles, but would not affect overall conditions in the area. Fish species are expected to avoid areas with elevated suspended sediments or experience minor behavioral effects due to changes in turbidity. Though some sediment at the project location is listed as contaminated, re-suspension of contaminants from sediments are not expected to rise to levels that would cause toxicity in fish present. The numbers of fish exposed to project impacts is expected to be negligible because:

- The activity would occur when few juvenile Chinook salmon and steelhead are present;
- Migrating adult salmon do not orient to nearshore areas like juveniles of some species so are unlikely to be in the project area;
- Steelhead do not use nearshore habitat in the project area;
- There is no adult or juvenile rockfish habitat in the project area; and
- Bull trout are unlikely to be in the project area.

Given these considerations, the Navy expects very small numbers of ESA-listed fish species to be present during the in-water work window and fewer of those to be exposed to project effects.

The Navy has determined that the Proposed Action 'may affect, not likely to adversely affect' Chinook salmon, steelhead, yelloweye rockfish, canary rockfish, bull trout, and bocaccio.

ESA-listed marine mammals (humpback whales and killer whales) are not frequent visitors to Sinclair Inlet and even less likely to occur within the industrial confines of the shipyard surrounding the project area. The high level of existing background noise (underwater sound and airborne noise) combined with the high level of marine activity limits the attractiveness of NAVBASE Kitsap, Bremerton, for marine mammals.

To minimize impacts to marine mammals, including ESA-listed marine mammals, the Navy would develop and implement a Marine Mammal Monitoring Plan. In accordance with the plan, monitoring would occur within a 10-meter shutdown zone for purposes of avoiding physical contact with equipment. Marine mammal monitoring would take place from 15 minutes prior to initiation through 15 minutes post-completion of vibratory pile work. Should a marine mammal enter the shutdown zone, vibratory pile work would be immediately halted until the marine mammal leaves the area. The 10-meter shutdown zone would be monitored by a trained observer from pier side or stationed on the pile driving barge. A larger disturbance zone (> 2,000 meters from pile driving activity) would be patrolled by a trained observer in a boat during all pile work. If a cetacean (e.g., humpback or killer whale) approaches or enters the disturbance zone during pile driving, work would be halted until either the animal has voluntarily left and been visually confirmed beyond the disturbance zone or 15 minutes have passed without re-detection of the animal. Marine mammal behavior would be monitored and documented during all pile work associated with the Proposed Action.

Additionally, a soft-start procedure would be implemented at the beginning of each vibratory pile driving session. The soft-start procedure provides a warning and/or gives animals in close proximity to pile driving a chance to leave the area prior to operating at full capacity, thereby exposing fewer animals to loud underwater and airborne sounds.

With implementation of the Marine Mammal Monitoring Plan, the Navy has determined that the Proposed Action 'may affect, but is not likely to adversely affect' killer whales and has no effect on humpback whales.

Underwater sound and airborne noise levels from vibratory pile work have the potential to harass marbled murrelets foraging and resting in the project area. Nearshore waters in the vicinity are highly industrial, but may provide foraging habitat and prey species. The presence of construction workers, cranes, vessels (e.g., tugs, barges, small monitoring boats), pile equipment, and associated activities would be unlikely to create visual disturbance beyond the current disturbance levels in the project area. Exposure to underwater sounds from pile replacement could cause behavioral disturbance, but would not be anticipated to result in injury or mortality based on the low levels of sound from the vibratory driver and small pile sizes.

The low chance of encountering marbled murrelets in the project area would limit the exposure of marbled murrelets to any sound pressure levels above the behavioral guidance criterion. No critical habitat for the marbled murrelet is located within the project area; therefore, pile replacement activities will not affect critical habitat for the species. As such, the Navy has determined the Proposed Action 'may affect, not likely to adversely affect' marbled murrelets.

The Navy has completed informal consultations under the ESA with the USFWS and NMFS. In concurrence letters dated March 31, 2015, USFWS and NMFS concurred with the Navy's findings of 'may effect, not likely to adversely affect' for the species discussed above. Agency concurrence letters and detailed analysis are in Appendix B.

Migratory Birds and Bald Eagles. Exposure to underwater sounds from pile replacement could cause behavioral disturbance to migratory birds, but would not be anticipated to result in

injury or mortality. Pier 4 is located over 2,500 feet from the nearest bald eagle nest site; therefore the Proposed Action would not impact bald eagle nesting activity. The Proposed Action is unlikely to cause significant impacts to individual migratory birds and bald eagles. Therefore, impacts to populations, stocks, species, or evolutionary significant unit levels would be negligible.

Essential Fish Habitat. The ROI includes habitats for various life stages of three species of Pacific salmon, groundfish, and five coastal pelagic species. The Proposed Action would result in a short-term increase in underwater sound-pressure levels. The Proposed Action would not result in excessive levels of organic materials, inorganic nutrients or heat, would not alter physical conditions that could adversely affect water temperature or beach contours, would not remove large woody debris, or other natural beach complexity features, nor would it affect any vegetated shallows. The Navy determined that the Proposed Action would adversely affect EFH for Pacific salmon, groundfish, and coast pelagic species if no protection measures were implemented. However, by limiting work to the in-water work window, the Proposed Action would have no affect to EFH, and NMFS determined that consultation under the Magnuson-Stevens Fisheries Conservation and Management Act was not required. Detailed analysis can be found Appendix B.

Marine Mammals. Non ESA-listed marine mammals would experience similar impacts as described above for killer whales and humpback whales. Individual marine mammals may be exposed to sound pressure levels during vibratory pile driving operations, which may result in Level B behavioral harassment (defined by the MMPA as potential behavioral disruption). Any marine mammals that are exposed (harassed) may change their normal behavior patterns (e.g., swimming speed and foraging habits) or be temporarily displaced from the area of construction. Any exposures will likely have only a minor effect on individuals and no effect on the population. The sound generated from vibratory pile driving is non-pulsed (i.e., continuous), which is not known to cause injury to marine mammals. NMFS has established a guideline for assessing injury to pinnipeds at 190 dBA. The Navy does not anticipate Level A harassment (defined by the MMPA as potential to injure) because vibratory pile driving used for pile extraction and installation has a relatively low in-water sound source level (less than 190 dB), and pile driving would be halted if a marine mammal is within the injury zone.

Airborne noise from construction is not anticipated to have significant impacts to pinnipeds hauled out on the floating security barrier. NMFS has established a guideline for assessing behavioral disturbance to harbor seals at 90 dBA; the behavior of other pinnipeds (sea lions and other seals) is affected when noise levels are at 100 dBA. Vibratory pile driving is the loudest construction noise source anticipated within the ROI. Airborne noise associated with vibratory pile driving equipment is anticipated to be 87.5 dB rms re 20 μPa (unweighted) at 50 feet, based on in-air measurements of vibratory driving of 18-inch steel piles during the Wahkiakum County Ferry Terminal project (Laughlin 2010). The anticipated noise level is below the NMFS guidelines for behavioral disturbance to seals and sea lions.

The Navy has applied for an Incidental Harassment Authorization (IHA) from NMFS. The Navy's exposure assessment methodology calculated estimates for the numbers of individuals that may be exposed to the effects that exceed NMFS-established thresholds. The calculated acoustic impact numbers should be regarded as conservative overestimates due to limited marine mammal population data. To reduce the number of animals affected, the Navy will implement the following BMPs and mitigation measures: marine mammal monitoring, soft-starts, shutdown zones, and daily review of the Orca Network website for whale sightings in the area.

To minimize impacts to marine mammals, including ESA-listed marine mammals, the Navy would develop and implement a Marine Mammal Monitoring Plan as described above. Implementation of this Plan would prevent exposure to potentially injurious sound levels.

Additionally, a soft-start procedure would be implemented at the beginning each of vibratory pile driving session. The soft-start procedure provides a warning and/or gives animals in close proximity to pile driving a chance to leave the area prior to operating at full capacity, thereby exposing fewer animals to loud underwater and airborne sounds.

The analysis presented above indicates that activities associated with the Proposed Action at NAVBASE Kitsap, Bremerton, may impact the behavior of individual marine mammals, but any impacts observed at the population, stock, or species level would be negligible.

Conclusion. By conducting in-water work between July 16 and February 15, developing and implementing a Marine Mammal Monitoring Plan, shutting down pile driving if marine mammals are within 10 meters, and implementing a soft-start procedure at the beginning each vibratory pile driving session, no significant impacts to biological resources would occur with implementation of the Proposed Action.

No Action Alternative

Under this alternative, no piles would be removed or driven, thus there would be no change to biological resources. As such, no significant impacts to biological resources would occur from implementation of the No Action Alternative.

3.4 CULTURAL RESOURCES

This section discusses cultural resources, including both archaeological sites and architectural resources.

3.4.1 Regulatory Setting

The National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of their undertakings on historic properties and to designate a qualified federal preservation officer to coordinate agency activities. Section 106 of the NHPA requires federal agencies to identify historic properties within a proposed project's area of potential effects (APE), determine potential effects the proposed project may have on identified historic properties, and consult with the State Historic Preservation Officer (SHPO) on determinations of eligibility and findings of effects. If the proposed project adversely affects an identified historic property, further consultation with the SHPO is required to avoid or minimize the adverse effect. Federal agencies must afford the Advisory Council on Historic Preservation an opportunity to comment whenever agency undertakings may affect historic properties or resources eligible for listing on the National Register (refer to 36 CFR 800), and, to the maximum extent possible, undertake planning and actions necessary to minimize harm to national historic landmarks.

Cultural resources generally must be more than 50 years old to be considered under the NHPA. However, more recent properties, such as Cold War era buildings less than 50 years of age, may warrant protection if they are "exceptionally important." A historic property is a cultural resource property that meets one or more criteria as defined in 36 CFR 60.4, National Register of Historic Places, Criteria for Evaluation, for inclusion on the National Register of Historic Places (NRHP). These criteria include association with an important event, association with a famous person, properties that embody the distinctive characteristics of a type, period, or method of construction, or that have yielded or may be likely to yield information important in prehistory or history on the local, state, or national level. Resources must also possess integrity (i.e., their important historic features must still be present and recognizable). Additionally, the primary NRHP criteria consideration for properties less than 50 years of age is Criteria

Consideration G: properties that have achieved exceptional significance within the past 50 years.

The APE for cultural resources is the geographic area or areas within which an undertaking (project, activity, program, or practice) may cause changes in the character or use of any historic properties present. The APE is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking. For the Proposed Action, the Navy determined that the APE is the footprint of Pier 4.

3.4.2 Affected Environment

No known archaeological sites occur within the project area, although areas along the original shoreline and upland areas have potential for pre-historic and historic period archaeological deposits (Lewarch et. al., 2002). The proposed construction site is in a highly disturbed area where dredging, armoring, and general construction has been occurring for over 100 years.

Four National Register of Historic Properties (NRHP) Historic Districts and one National Historic Landmark (NHL) have been designated at NAVBASE Kitsap, Bremerton: Officers Row, Puget Sound Radio Station District, Marine Reservation District, Naval Hospital, and the Puget Sound Naval Shipyard NHL district. The NHL is historically significant on the national level for its association with World War II (Thompson and Levy 1990). The shipyard was the principal repair establishment for battle-damaged battleships and aircraft carriers as well as smaller warships of the Pacific Fleet during World War II. Five of the eight battleships bombed at Pearl Harbor on December 7, 1941, were repaired at the shipyard and returned to sea. During the war, the Navy yard repaired 26 battleships (some more than once), 18 aircraft carriers, 13 cruisers, and 79 destroyers. In addition, 50 ships were built or fitted out at the yard during the war. More than 30,000 shipyard workers built, fitted out, repaired, over-hauled, or modernized 394 fighting ships between 1941 and 1945. The shipyard's contribution to the success of the Pacific Fleet from the first to the last day of the war was inestimable.

Puget Sound Naval Shipyard shares with Mare Island Naval Shipyard the distinction of epitomizing the rise of the United States to world power in the Pacific and thus on two oceans. While Mare Island was the Navy's first permanent installation on the Pacific coast, Puget Sound became the focus of attention because it was the only west coast yard capable of repairing modern battleships, which emerged as the symbol and reality of U.S. naval power. Pier 4 is a contributing element to the NHL. There are no Cold War era properties within the APE.

3.4.3 Environmental Consequences

For this EA, impacts to cultural resources would be considered significant if the Proposed Action resulted in adverse effects to NRHP-eligible resources that could not be mitigated or reduced through a Memorandum of Agreement with the SHPO. The ROI for analyzing potential impacts to cultural resources is NAVBASE Kitsap, Bremerton.

Proposed Action

Implementation of the Proposed Action would not affect any known NRHP-eligible archaeological sites. Construction activities would take place in previously disturbed underwater areas. Although there are no known or expected underwater cultural resources, if there was an "inadvertent discovery" of archaeological resources, work would stop immediately and the Navy would comply with 36 CFR Part 800 for the discovery. The Navy would evaluate the eligibility and effects to the discovered resources through consultation with the SHPO, the Suquamish Tribe, and other interested parties in accordance with federal regulations and Navy policy. Similarly, if American Indian human remains, funerary items, sacred objects, or items of cultural

patrimony are encountered, work would stop immediately and the Navy would comply with the Native American Graves and Repatriation Act.

The replacement of existing piles will have no impact to the characteristics that make Pier 4, the NHL, or nearby historic districts eligible for inclusion in the NRHP. The Navy has determined that the Proposed Action would have no adverse effect on historic resources. In a letter dated April 8, 2015, SHPO concurred with the APE and the determination that the Proposed Action would not have an adverse effect on Pier 4 or the NHL (Appendix D). In a letter dated June 12, 2015, the Navy invited the National Park Service to participate in consultation regarding the Proposed Action. No significant impacts to cultural resources would occur with implementation of the Proposed Action.

No Action Alternative

Under this alternative, no piles would be removed or driven, thus there would be no change to Pier 4. As such, no significant impacts to cultural resources would occur with implementation of the No Action Alternative.

3.5 AMERICAN INDIAN TRADITIONAL RESOURCES

3.5.1 Regulatory Setting

As required by EO 13175, Consultation and Coordination with Indian Tribal Governments, the Navy has implemented a policy for consultation with federally recognized Indian Tribes on actions with the potential to significantly impact protected tribal resources, tribal rights, or Indian lands. This policy, included in Secretary of the Navy Instruction 11010.14A and Commander, Navy Region Northwest Instruction 11010.14, describes the Navy's process and responsibilities during consultation. The Suquamish Tribe has adjudicated tribal treaty rights in Sinclair Inlet that include the project area.

3.5.2 Affected Environment

The Suquamish Tribe is a signatory to the Treaty of Point Elliot, and the tribe has Usual and Accustomed fishing grounds and stations in the project area. The Suquamish Tribe harvests a variety of fish throughout Sinclair Inlet, which continues to be a culturally and economically important area for the Tribe. However, the Suquamish Tribe does not fish within the Sinclair Inlet Naval Restricted Area No.2. Shellfish harvesting is prohibited throughout Sinclair Inlet due to pollution (WA Department of Health 2015).

3.5.3 Environmental Consequences

Impacts to American Indian traditional resources would be considered significant if there was a loss of access to exercise tribal treaty rights secured under treaties or a substantial reduction or degradation of harvestable marine resources. The ROI for analyzing potential impacts to American Indian traditional resources is the marine waters of Sinclair Inlet.

Proposed Action

In February 2015, the Navy invited the Suquamish Tribe to review the Proposed Action and evaluate whether any impacts on tribal treaty rights would result from its implementation. The Tribe did not express concerns or initiate consultation on this action. The Proposed Action would not alter access to, or use of, tribal traditional resources. Access for fishing in the waters surrounding Pier 4 is currently not permitted. The Proposed Action would not appreciably impact the quantities of fish available for harvest by the Suquamish Tribe in Sinclair Inlet, nor would it restrict access to existing traditional harvest areas in Sinclair Inlet. As such, no significant impacts to American Indian traditional resources would occur with implementation of the Proposed Action.

No Action Alternative

Under this alternative, no piles would be removed or driven, thus there would be no change to American Indian traditional resources. As such, no significant impacts to American Indian traditional resources would occur with implementation of the No Action Alternative.

Table 3-3. Summary of Potential Direct and Indirect Environmental Consequences by Resource

Resource Area	Proposed Action	No Action Alternative
Water Resources	Direct discharges of waste would not occur. Temporary impacts would not violate applicable state or federal water quality standards. To ensure compliance with state or federal water quality standards, the Navy would implement Best Management Practices and minimization measures to prevent accidental losses or spills of construction debris. Some degree of localized changes in sediment composition would occur during construction. Impacts from sediment resuspension would be minor and localized in the area of pile removal and pile installation. Weak, stable tide currents in the project area would allow any disturbed sediments to resettle in the general area of pile removal/installation. Project-related construction activities would not create sediment contamination concentrations or physical changes that violate state standards. Therefore, there would be no significant impact to water resources.	Under this alternative, no piles would be removed or driven, thus there would be no impacts to water resources due to the No Action Alternative.
Noise	Bremerton, Port Orchard, and Washington state exempt temporary construction noise from 7:00 a.m. to 10:00 p.m. (7:00 a.m. to 9:00 p.m. for Port Orchard) from exceeding maximum permissible environmental noise levels. Based on construction not occurring between 9:00 p.m. and 7:00 a.m., noise levels would be exempt from state and local codes. Therefore, no significant impacts from noise would result from the Proposed Action.	Under this alternative, no piles would be removed or driven, thus there would be no significant impact from noise.

Table 3-3. Summary of Potential Direct and Indirect Environmental Consequences by Resource

Resource Area	Proposed Action	No Action Alternative
Biological Resources	ESA-Listed Species: With implementation of the protection measures, including limiting work to the in-water work windows and implementing monitoring protocols for marine mammals, the Proposed Action would not result in significant impacts to ESA-listed species. Migratory Birds and Bald Eagles: Exposure to underwater sounds from pile replacement could cause behavioral disturbance to migratory birds, but would not be anticipated to result in injury or mortality. Pier 4 is located over 2,500 feet from the nearest bald eagle nest site and would not impact bald eagle nesting activity. Essential Fish Habitat: The action would result in a short-term increase in underwater sound-pressure levels. The action would not result in physical alterations that could adversely affect water temperature or beach contours, would not remove large woody debris or other natural beach complexity features, nor would it affect any vegetated shallows. Therefore, there would be no significant impacts to EFH. Marine Mammals: Construction activities may impact the behavior of individual marine mammals, but any impacts observed at the population, stock, or species level would be negligible. Shutdown zones and marine mammal monitoring would reduce potential impacts. Therefore, there would be no significant impact to marine mammals.	Under this alternative, no piles would be removed or driven, thus there would be no significant impacts to biological resources due to the No Action Alternative.
Cultural Resources	The replacement of existing piles would have no impact to the historic districts or national landmark or affect any known NRHP-eligible archaeological sites. Construction activities would take place in previously disturbed areas at Pier 4. In the unlikely event historic properties or cultural materials such as archaeological deposits or human remains are encountered during construction, the Navy will initiate consultation with the SHPO and affected tribes, as appropriate. The Navy has determined that the Proposed Action would have no adverse effect to cultural resources, and therefore will result in no significant impact.	Under this alternative, no piles would be removed or driven, thus there would be no significant impacts to cultural resources due to the No Action Alternative.

Table 3-3. Summary of Potential Direct and Indirect Environmental Consequences by Resource

Resource Area	Proposed Action	No Action Alternative
American Indian Traditional Resources	The Proposed Action would not appreciably impact the quantities of fish available for harvest by the Suquamish Tribe in the Sinclair Inlet, nor would it restrict access to existing traditional harvest areas in the Sinclair Inlet. As such, no significant impacts to American Indian traditional resources would occur with implementation of the Proposed Action.	Under this alternative, no piles would be removed or driven, thus there would be no significant impacts to American Indian traditional resources due to the No Action Alternative.

4 CUMULATIVE IMPACTS

CEQ regulations implementing the procedural provisions of NEPA define cumulative impacts as:

"…the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." *(40 CFR 1508.7).*

Each resource, ecosystem, and human community must be analyzed in terms of its ability to accommodate additional effects based on its own time and space parameters. Therefore, cumulative effects analysis normally will encompass a ROI or geographic boundaries beyond the immediate area of the Proposed Action and will cover a time frame including past actions and foreseeable future actions for capturing these additional effects.

For the Proposed Action to have a cumulatively significant impact to an environmental resource, two conditions must be met. First, the combined effects of all identified past, present, and reasonably foreseeable projects, activities, and processes on a resource, including the effects of the Proposed Action, must be significant. Second, the Proposed Action must make an appreciable contribution to that significant cumulative impact. In order to analyze cumulative effects, a cumulative effects region must be identified for which effects of the Proposed Action and other past, present, and reasonably foreseeable actions would occur.

4.1 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

This analysis depends on the availability of data and the relevance of effects of past, present, and future actions. Although certain data (e.g., extent of forest cover) may be available for extensive periods in the past (i.e., decades), other data (e.g., water quality) may be available for much shorter periods. Because specific information and data on past projects and action are usually scarce, the analysis of past effects is often qualitative (CEQ 1997).

For this cumulative analysis, the ROI is defined as Sinclair Inlet and the adjacent upland areas including the industrial waterfront and waterfront lands within the cities of Bremerton and Port Orchard. Table 4-1 provides the past, present, and reasonably foreseeable future actions within the ROI that have had, continue to have, or would be expected to have some impact to the natural and human environment. The projects in this list are limited to those implemented in the last 5 years or those with ongoing contributions to environmental effects. Projects with measureable contributions to impacts within the ROI for a resource area were included in the cumulative analysis.

Table 4-1. Past, Present, and Reasonably Foreseeable Future Projects at NAVBASE Kitsap, Bremerton and within the ROI

Project	*Project Description*	*Project Timeframe*		
		Past	*Present*	*Future*
Dredging	Dredging for navigational and CERCLA purposes included over 368,000 cubic yards of material from 13 berthing areas and from the inner channel south of the installation in Sinclair Inlet.	X		
Security Barriers	This project installed a floating security barrier from Pier 8 to Mooring E. A proposed extension would connect it to the shore at the eastern edge of the installation	X		X
Piers Pile Replacement	In 2011, 70 creosote-treated timber piles at Piers 5 and 6 were replaced with concrete piles.	X		
Pier 6 Pile Replacement	In 2014/2015, 400 creosote-treated timber piles and steel piles are being replaced with concrete piles. Work is expected to be competed in the fall/early winter of 2015/2016.	X	X	X
Manette Bridge Replacement	In 2011, Washington Departments of Transportation completed the replacement of the Manette Bridge, crossing the nearby Washington Narrows. This included the demolition of existing in-water structures and the construction of a new in-water foundation for the bridge.	X		
Pier B Construction	In 2012, the Navy completed construction of the aircraft carrier Maintenance Wharf, replacing the existing Pier B. The new concrete pile supported pier (165,000 foot^2) was constructed to support vessel overhaul and maintenance.	X		
Pier B Mitigation	As mitigation for construction of Pier B, Pier 8 on the east side of the installations was demolished. Additional mitigation funding was set aside for restoration efforts on Chico Creek, including fish passage improvement and the purchase/preservation of two properties.	X	X	
Port Orchard Boat Launch	In 2013, the City of Port Orchard installed a new floating pier with steel piles at the public boat launch in Port Orchard.	X		
Bremerton Ferry Terminal Maintenance	In 2014, Washington Department of Transportation started removal of 112 creosote-treated piles and installation of 20 steel piles in support of the Bremerton Ferry Terminal.		X	

Table 4-1. Past, Present, and Reasonably Foreseeable Future Projects at NAVBASE Kitsap, Bremerton and within the ROI

Project	*Project Description*	*Project Timeframe*		
		Past	*Present*	*Future*
Northwest Training and Range Complex (NWTRC) and Northwest Training and Testing (NWTT)	The Navy's Proposed Action is to conduct training and testing activities primarily within existing range complexes, operating areas, testing ranges, and select Navy pier side locations in the Pacific Northwest. The Proposed Action includes pier side sonar testing conducted as part of overhaul, modernization, maintenance, and repair activities at PSNS & IMF in Bremerton; NAVBASE Kitsap, Bangor; and Naval Station Everett. The NWTT EIS/OEIS will reassess the environmental analyses of Navy at-sea training and testing activities contained in the EISs/OEISs for NWTRC and Keyport Range and various environmental planning documents and will consolidate these analyses into a single environmental planning document.	X	X	X

4.2 ASSESSMENT OF CUMULATIVE IMPACTS BY RESOURCE

This cumulative impacts assessment includes the following resource areas: water resources, noise, biological resources, and American Indian traditional resources. Since the Proposed Action would have no impact to cultural resources, there would be no contribution to cumulative impacts to this resource. Therefore, cultural resources are not discussed in this section.

4.2.1 Water Resources

Puget Sound has been and is being impacted by past and present in-water actions and would potentially be impacted by future actions. Specific actions include: 1) industrial development and uses; 2) incidental spills; 3) marine sediment disturbance and turbidity; 4) toxin leakage attributable to use over time of materials such as treated wood pilings; 5) stormwater runoff; and 6) nutrient and pollutant loading from septic systems or development.

Previous marine sediment contamination has occurred from historic Navy operations resulting in high levels of polychlorinated biphenyl and metals (USEPA, 2000). A Record of Decision (ROD) is in place for managing these sediments (USEPA, 2000). Past Navy projects including Pier 5 and 6 have helped make incremental improvements to water quality in Sinclair Inlet by removing 70 creosote-treated piles and replacing them with concrete piles. Past and ongoing Navy projects implemented to mitigate for impacts from and Pier B impacts have also improved water quality in Sinclair Inlet and nearby waterways through beach creation, pier removal, and remediation of fish passage barriers.

Most of the future actions would have no impact or variable (sometimes minimal) short-term impact, and some future actions would be designed to minimize such impacts. For example, pile repair and maintenance at the Bremerton Ferry Terminal and NAVBASE Kitsap, Bremerton, piers would use concrete or steel piles, which, unlike creosote-treated piles used in the past, would not have the potential for leaching toxic compounds into the water. Additionally, more recent in-water structures (e.g., Pier B at NAVBASE Kitsap, Bremerton) include stormwater

control and treatments systems thereby reducing impacts from stormwater runoff into Sinclair Inlet.

Implementation of the Proposed Action would not be expected to contribute to cumulative water resource impacts because spills would be avoided through adherences to BMPs and minimization measures; sediment disturbance would be minimal and localized; creosote-treated piles would be removed; no stormwater runoff would be generated; and no nutrients or pollutants would be discharged. Therefore, in combination with the past, present, and foreseeable future projects, implementing the Proposed Action would not have a significant cumulative impact to water resources.

4.2.2 Noise

NAVBASE Kitsap, Bremerton, has been an industrial ship repair facility for 100 years. While surrounded by suburban to urban residential land uses, noise from the shipyard has likely been fairly constant since the installation's creation. Completed past actions listed in Table 4-1 would not contribute cumulatively to the noise environment within the ROI. The current and reasonably foreseeable future projects would contribute to the noise environment primarily during construction and secondarily during operations.

Construction noise would come primarily from pile driving activities, as well as supporting equipment (e.g., cranes, truck traffic). This noise is expected to be similar to background noise from the shipyard which includes operational noise from cranes, trains, large vessels, and ship maintenance and repair activities. Airborne noise tends to extend over limited distances, while underwater noise travels for longer distances. Future projects such as the repair of pilings at NAVBASE Kitsap, Bremerton, Pier 5 and the current replacement of piles at the Bremerton Ferry Terminal will have similar noise impacts. Construction would likely be limited to the hours between 07:00 a.m. and 09:00 p.m. and would be exempt from state and city noise regulations. After construction, operations at these facilities would be similar to existing operations, and no significant change to current airborne and underwater sound is anticipated. Due to the limited duration of construction activities and anticipated consistency with current operations, the Proposed Action in combination with known past, present, and future actions would not have a significant adverse noise impact.

4.2.3 Biological Resources

Past and present Navy and non-Navy actions, including marinas, residential docks, boat ramps, and piers have resulted in increased human presence, underwater sound and airborne noise, boat movement, and other activities, and have impacted biological resources in the ROI. Past actions have adversely impacted populations of fish, marine mammals, and avian species in Sinclair Inlet and tributaries through loss of foraging and refuge habitat in shallow areas, reduced function of migratory corridors, loss and degradation of spawning habitat in streams, interfering with migration, adverse impacts to forage fish habitat and spawning, contamination of water and sediments, and removal of old growth forest habitat.

The State of the Sound Report (PSAT 2007) describes several trends that may be indicative of cumulative impacts to the growth and development of salmonids and marine mammals. There is an increasing trend for toxics to be concentrated in the tissues of salmon and marine mammals. Both salmon and killer whales have been found to have PCB levels much higher than species outside of the Puget Sound. Wild salmon stocks have declined from 93 to 81 healthy stocks from 1992 to 2002, and during that same period seven stocks have become extinct.

Fish

Ongoing fish harvest has resulted in adverse impacts to salmonid abundance and the impact has been greatest on native stocks. Practically all chum salmon, most Chinook, and all sockeye salmon spawning in Sinclair Inlet and in the Puget Sound stream systems are derived from naturalized hatchery stock. Populations of pink salmon, coho salmon, bull trout, and steelhead are also in decline. The net result is that several Puget Sound salmonid species have been listed under the ESA.

Existing Navy structures have affected salmonid and forage fish habitat, and the structures have potentially impeded and continue to impede juvenile salmon migration to some degree. The placement of in-water structures by the Navy and from non-Navy actions has changed and would continue to change fish habitat in and around these structures. In-water structures can impact fish in several ways, including increasing the presence of predators that prey on juvenile fish; posing a barrier to fish movement, particularly juvenile fish; causing direct loss of marine vegetation such as eelgrass, which is important habitat for forage fish and other species; and creating shade that reduces the productivity of aquatic vegetation and benthic organisms, which are preyed on by fish.

Currently, efforts are being made to reverse the decline of fish populations by regulating development and restoring fish habitat. Numerous salmon preservation and restoration groups have proposed and constructed habitat restoration projects in Puget Sound. Efforts to reduce construction impacts to salmonids and other fish have resulted in a schedule of in-water work periods that all projects must adhere to if authorized by state (WDFW) or federal regulatory (USACE) authorities. The in-water work windows help minimize adverse impacts to fish.

The Navy's construction of Piers B and D included several projects to mitigate for impacts to salmonids. This included demolition of Pier 8 at Bremerton, creation of Charleston Beach, installation of a fish ladder on Heinz Creek, and restoration of Chico Creek.

Future waterfront projects at NAVBASE Kitsap, Bremerton, would be designed and implemented to minimize impacts to salmonids and other fish habitat and migration. The protective measures taken to minimize impacts during construction activities and the design elements that reduce long-term impacts to nearby habitats is expected to reduce impacts to fish populations. In addition, many regional habitat restoration projects would benefit all fish species.

Marine Birds and Marine Mammals

Similar to fish, impacts have occurred to ESA-listed marine mammals including killer whales and humpback whales whose populations have dropped significantly due to hunting. Marbled murrelet nesting habitat has been lost throughout the Puget Sound area as the removal of old growth forests has pushed the breeding population in Washington to small areas on the Olympic Peninsula.

Future Navy and non-Navy waterfront projects may have similar impacts to past and present actions including increased anthropogenic sound (both airborne and underwater), increased human presence, increased boat movements, and other associated activities. These actions could result in behavioral impacts to local populations of marine birds and marine mammals, such as temporary avoidance of habitat, decreased time spent foraging, increased or decreased time spent hauled out (depending on the activity), and other minor behavioral impacts. All impacts would likely be short-term, temporary in nature, and unlikely to affect the overall fitness of the marine birds and marine mammals.

The primary impact of in-water construction projects to marine birds and marine mammals, including the Proposed Action, is behavioral disturbance from underwater sound due to

vibratory pile driving. Marine Birds and marine mammals that are behaviorally disturbed may change their normal behavior patterns (e.g., swimming speed or foraging habits) or be temporarily displaced from the area of construction. Cumulative impacts to marine birds and marine mammals have the greatest potential to occur during simultaneous pile driving activities. However, it is very unlikely that pile driving activities associated with planned pile replacement work at Piers 5 would occur simultaneously with pile driving activities associated with the Proposed Action. Other projects listed in Table 4-1 would not overlap temporally with the Proposed Action.

The Northwest Training and Range Complex program implements several procedures and mitigation measures and will evaluate other mitigation measures to reduce impacts to marine mammals. The current procedures of monitoring, safety zones and level of sonar transmissions, and working with NMFS and local resources groups will reduce the cumulative effects of the various exercise and training activities covered under this program. Implementation of the future Northwest Training and Testing program would include similar procedures and measures to reduce effects to marine mammals.

Conclusion

Due to the temporary and localized extent of the Proposed Action, including measures to avoid and minimize impacts; the Proposed Action would not contribute to significant cumulative adverse impacts to biological resources.

4.2.4 American Indian Traditional Resources

Regionally, tribes have expressed concern over loss of access to traditional harvesting areas along the coastline of Puget Sound, especially as a result of the incremental habitat loss from construction of new piers, bulkheads, and docks. The Proposed Action would not have an appreciable contribution to impacts to quantities of fish available for harvest by the Suquamish Tribe, nor would it restrict access to existing traditional harvest areas, since the Suquamish Tribe does not currently have permission to harvest inside the Waterfront Restricted Area that surrounds Pier 4. Pile repairs at Pier 5 would have similar effects to the Proposed Action and would not be expected to have a significant impact to tribal resources. The Navy will continue to consult with the Suquamish Tribe regarding future Navy activities and projects that may have the potential to significantly affect the tribal treaty rights and resources. Therefore, in combination with the past, present, and foreseeable future projects, implementing the Proposed Action would not have a significant cumulative impact to American Indian traditional resources.

5 OTHER CONSIDERATIONS REQUIRED BY NEPA

In accordance with 40 CFR Section 1502.16(c), analysis of environmental consequences shall include discussion of possible conflicts between the Proposed Action and the objectives of federal, regional, state, and local land use plans, policies, and controls. Table 5-1 identifies the principal federal and state laws and regulations that are applicable to the Proposed Action and describes briefly how compliance with these laws and regulations would be accomplished.

Table 5-1. Principal Federal and State Laws, Regulations and Policies Applicable to the Proposed Action

Federal and State Laws, Regulations, and Policies	Status of Compliance
National Environmental Policy Act (NEPA) (42 USC §4321 et seq.); CEQ NEPA implementing regulations (40 CFR 1500-1508); Navy procedures for Implementing NEPA (32 CFR Part 775 and OPNAVINST M- 5090.1 Chapter 10)	Preparation of this EA has been conducted in compliance with NEPA and in accordance with CEQ regulations and the Navy's NEPA procedures.
Comprehensive Environmental Response, Compensation, and Liability Act (42 USC 9601 *et seq*.)	The Navy will coordinate with USEPA's CERCLA Program Manager before construction to confirm conformance with CERCLA requirements for OU-B Marine.
Clean Air Act (42 USC §7401 *et seq*.)	The USEPA has established NAAQS for seven pollutants. NAVBASE Kitsap, Bremerton, is located in Kitsap County, which is an attainment area. A formal conformity determination is not required. Emissions for the Proposed Action would come from mobile sources: one pile driver and associated support vehicles and would be well below applicable thresholds. As a result, the project would comply with the requirements of the Clean Air Act, as amended.
Clean Water Act (Sections 401 and 404, 33 USC 1251 *et seq*.)	The Proposed Action would not require a Section 404 Permit or Section 401 Water Quality Certification because the Action does not involve discharge of fill materials into water of the U.S. All chemicals, liquid products, petroleum products, and other wastes present at the construction site would be covered, contained, and protected.
Rivers and Harbors Act (33 U.S.C. 401 et seq.)	A permit under Section 10 of the Rivers and Harbors Act is required for the removal and replacement of pilings in navigable waters. The Proposed Action qualifies for a USACE Nationwide Permit (NWP #3 Maintenance). The Navy would obtain a Nationwide Permit from the USACE prior to construction and would comply with all permit conditions.
Coastal Zone Management Act (16 USC 1451 *et seq*.)	Washington is a coastal state and has an approved CZMA program. The Proposed Action is expected to qualify for a USACE Nationwide Permit (#3 Maintenance), which has been certified by Washington State as consistent with Coastal Zone Management Act.

Table 5-1. Principal Federal and State Laws, Regulations and Policies Applicable to the Proposed Action

Federal and State Laws, Regulations, and Policies	Status of Compliance
National Historic Preservation Act (Section 106, 54 USC 306108 *et seq*.)	In accordance with Section 106 of the NHPA, the Navy determined that the Proposed Action would have no adverse effect on historic properties. The SHPO concurred with the Navy's finding. In the unlikely event historic properties or cultural materials such as archaeological deposits or human remains are encountered during construction, the Navy will initiate consultation with the SHPO and the Suquamish Tribe, as appropriate.
Endangered Species Act (16 USC 1531 *et seq*.)	In accordance with ESA Section 7 requirements, the Navy prepared a Biological Evaluation and consulted informally with USFWS and NMFS regarding potential effects to ESA-listed species and critical habitat. The Navy received Letters of Concurrence from NMFS and USFWS, concluding informal consultation (Appendix B).
Marine Mammal Protection Act (16 USC 1361 *et seq*.)	Based on potential impacts to marine mammals, the Navy submitted an IHA application to NMFS, requesting take for level "B" harassment. The Navy will obtain an IHA prior to beginning pile driving operations, and will comply with all IHA requirements.
Magnuson-Stevens Fishery Conservation and Management Act MSA (16 USC 1801-1882)	The Navy prepared an EFH Assessment and submitted it to NMFS with the BA. The Navy determined that the Proposed Action would not affect EFH and NMFS determined that consultation under the Magnuson-Stevens Fisheries Conservation and Management Act was not required.
Migratory Bird Treaty Act (16 USC 703-712)	Exposure to underwater sounds from pile replacement could cause behavioral disturbance to migratory birds, but would not be anticipated to result in injury or mortality. Therefore, the Proposed Action is not likely to take migratory birds.
Bald and Golden Eagle Protection Act (16 USC 668-668d)	The Proposed Action would occur over 2,500 feet from the nearest bald nest and would not impact bald eagle nesting activity.
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-income Populations	By limiting pile driving to daylight hours and implementing Best Management Practices to avoid contamination of Sinclair Inlet, no adverse environmental and human health effects are anticipated to any populations, including low income and minority populations. Therefore, no disproportionately high or adverse impacts to minority and/or low income populations would be expected from the Proposed Action.
EO 13045, Protection of Children from Environmental Health Risks and Safety Risks.	NAVBASE Kitsap, Bremerton, includes family housing approximately 1,400 feet northwest of Pier 4 and a Childcare Development Center approximately 3,000 feet to the west. However, there are no residences, schools, or other facilities used by children within the CIA at the NAVBASE Kitsap, Bremerton, waterfront, and access is restricted. Therefore, the removal and replacement of piles at Pier 4 would not cause environmental health risks and safety risks to children.

Table 5-1. Principal Federal and State Laws, Regulations and Policies Applicable to the Proposed Action

Federal and State Laws, Regulations, and Policies	Status of Compliance
Consultation and Coordination with Indian Tribal Governments (EO 13175)	In February 2015, the Navy invited the Suquamish Tribe to review the action and evaluate impacts on tribal treaty rights. The tribe did not express concerns or initiate Government-to-Government consultation on this action.

5.1 Irreversible or Irretrievable Commitment of Natural or Depletable Resources (40 CFR Section 1502.16)

Resources that are irreversibly or irretrievably committed to a project are those that are used on a long-term or permanent basis. This includes the use of non-renewable resources such as metal, fuel, and natural or cultural resources. These resources are irretrievable in that they would be used for this project when they could have been used for other purposes. Human labor is also considered an irretrievable resource.

Implementation of the Proposed Action would involve human labor, the consumption of fuel, oil, and lubricants for construction vehicles and loss of natural resources (to make the construction materials). Implementation of the Proposed Action would not result in significant irreversible or irretrievable commitment of resources.

5.2 Relationship between Local Short-Term Use of the Human Environment and Maintenance and Enhancement of Long-Term Natural Resource Productivity (40 CFR Section 1502.16)

NEPA requires an analysis of the relationship between a project's short-term impacts on the environment and the effects that these impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. Impacts that narrow the range of beneficial uses of the environment are of particular concern. This refers to the possibility that choosing one development site reduces future flexibility in pursuing other options, or that using a parcel of land or other resources often eliminates the possibility of other uses at that site.

In the short-term, effects to the human environment with implementation of the Proposed Action would primarily relate to the construction activity itself. Noise would be a short-term impact. In the long-term, there would be beneficial impacts to water quality by removing the structurally unsound creosote-treated piles.

5.3 Means to Mitigate and/or Monitor Adverse Environmental Impacts (40 CFR Section 1502.16(h))

The Proposed Action would not result in any significant adverse environmental impacts with implementation of BMPs and mitigation measures to avoid, minimize, and/or mitigate impacts. BMPs are described in Section 2.4 and mitigation measures are described in Appendix A.

5.4 Any Probable Adverse Environmental Effects That Cannot Be Avoided and Are Not Amenable To Mitigation

This EA has determined that the Proposed Action would not result in any significant impacts; therefore, there are no probable adverse environmental effects that cannot be avoided or are not amenable to mitigation.

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Appendix A
Mitigation and Monitoring

This Appendix provides a comprehensive list of all mitigation requirements associated with the Proposed Action, as required by OPNAV M-5090.1, section 10-3.6.

Mitigation Measure *Title and Description*	Origin of measure*	Anticipated Benefit	Criteria for Evaluating Effectiveness	Responsible Party	Estimated Completion Date
In-water work would be performed between July 16 and February 15 to avoid juvenile salmon and bull trout	BE CWA permit	Avoid impacts to juvenile salmon and bull trout.	Observance of approved work windows for protection of juvenile salmon and bull trout	Navy	Fall 2016
Marine mammal monitoring during vibratory pile driving	BE IHA	Avoid injury to marine mammals.	Marine mammal monitoring	Navy	Fall 2016
During pile driving, daily review of Orca Network website for whale sitings	BE IHA	Avoid injury to whales	Marine mammal monitoring	Navy	Fall 2016

* BE – Biological Evaluation; CWA – Clean Water Act; IHA – Incidental Harassment Authorization

Appendix B
Endangered Species Act Consultations

DEPARTMENT OF THE NAVY
NAVAL BASE KITSAP
120 SOUTH DEWEY ST
BREMERTON, WA 98314-5020

5090
Ser PRB4/00343
27 Feb 15

Ken S. Berg
Manager, Washington Fish and Wildlife Office
U.S. Fish and Wildlife Service
510 Desmond Drive SE, Suite 102
Lacey, WA 98503

Dear Mr. Berg:

SUBJECT: SECTION 7 INFORMAL CONSULTATION FOR PIER 4 FENDER SYSTEM REPAIRS, NAVAL BASE KITSAP BREMERTON, WASHINGTON

The Department of the Navy (Navy) proposes to remove and replace the existing Pier 4 fender system at Naval Base (NAVBASE) Kitsap Bremerton. The existing fender system consists primarily of creosote treated timber piles, many of which are damaged and inadequate for protecting the pier from vessel impacts. The proposed project would remove approximately 80 creosote treated timber fender piles from Sinclair Inlet and replace them with steel piles.

This letter is to request initiation of informal consultation under the Endangered Species Act. The enclosed biological evaluation (BE) contains the Navy's determination of effect for listed species that may be present in the action area. The BE also contains analysis of effects to Essential Fish Habitat as required by the Magnuson-Stevens Fishery Conservation Management Act. If you have any questions, please contact Ms. Julia Stockton. She can be reached at (360) 476-6067 or julia.stockton@navy.mil.

Sincerely,

T. A. ZWOLFER
Captain, U.S. Navy
Commanding Officer

Enclosure: 1. Biological Evaluation

BIOLOGICAL EVALUATION
PIER 4 FENDER SYSTEM REPAIRS
NAVAL BASE KITSAP BREMERTON
KITSAP COUNTY, WASHINGTON

1. INTRODUCTION

The Department of the Navy (Navy) proposes a minor repair project on the Pier 4 fender system at Naval Base (NAVBASE) Kitsap Bremerton. Proposed work is essential to ensure a critical ship maintenance asset is not jeopardized as continued deterioration leaves the pier vulnerable to vessel impacts. Updated species lists were accessed from the websites of the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). Federally listed species that may occur in the action area are summarized in Table 1. This biological evaluation was prepared to address potential impacts on listed species resulting from the proposed project as required under Section 7(c) of the Endangered Species Act (ESA).

1.1 PROJECT DESCRIPTION

The proposed project replaces deteriorated creosote treated timber fender piles, creosote treated timber chocks, and minor repairs to replace U-clamps on usable wood fender piles at Pier 4. The project installs new steel fender piles. This proposed repair project is planned for a single in-water work window. The proposed project includes:

- Removal of approximately 80 existing creosote treated timber fender piles.
- Removal of deteriorated creosote timber chocks.
- Installation of approximately 80 12-14 inch steel fender piles via vibratory hammer.
- Removal and replacement of wood camel logs.

1.2 PROJECT LOCATION AND ACTION AREA

The project location and action area is centered at Pier 4 on NAVBASE Kitsap Bremerton [Figure 1]. NAVBASE Kitsap Bremerton is primarily an industrial facility located within the City of Bremerton along approximately two miles of the northern Sinclair Inlet shoreline. The shoreline at the project location is characterized by piers, dry docks, and quay walls that have developed since the facility was established in 1891. Pier 4 is a concrete pier located at the east end of the facility, and is

1220 ft in length by 100 ft in width. Pier 4 is located in water depths ranging from 32 ft mean lower low water (MLLW) at its head near the quay wall to 45 ft MLLW at its end.

2. SPECIES AND CRITICAL HABITAT

Nine ESA listed species have the potential to occur within the action area. No critical habitat for any species has been designated within the action area. Table 1 lists the species that may be present in the vicinity of Pier 4 at NAVBASE Kitsap Bremerton.

Table 1 Occurrence of Federally Listed Species in the Action Area.

Species	***Regulatory Agency/Status***	***Critical Habitat***
Puget Sound Chinook ESU Salmon (*Oncorhynchus tshawytscha*)	NMFS/Threatened	*Designated; Not designated on NW Navy installations*
Puget Sound Steelhead DPS (*O. mykiss*)	NMFS/Threatened	*Proposed in January 2013 (78 FR 2725)*
Southern Resident Killer Whale (*Orcinus orca*)	NMFS/Endangered	*Designated; Not designated in Sinclair Inlet or on NW Navy installations*
Humpback Whale (*Megaptera novaeangliae*)	NMFS/Endangered	*Non Designated*
Georgia Basin/Puget Sound Bocaccio DPS (*Sebastes paucispinis*)	NMFS/Endangered	*Designated; Not designated on NW Navy Installations*
Georgia Basin/Puget Sound Yelloweye Rockfish DPS (*S. ruberrimus*)	NMFS/Threatened	*Designated; Not designated on NW Navy Installations*
Georgia Basin/Puget Sound Canary Rockfish DPS (*S. pinniger*)	NMFS/Threatened	*Designated; Not designated on NW Navy Installations*
Coastal/Puget Sound Bull Trout (*Salvelinus confluentus*)	USFWS/Threatened	Designated; Not designated on NW Navy installations
Marbled Murrelet (*Brachyramphus marmoratus*)	USFWS/Threatened	Designated, not designated in project area

2.2 EFFECT DETERMINATION

The effect of this proposed project within the action area would be temporary noise increases in the vicinity of Pier 4 due to the vibratory removal of wood piles and the vibratory installation of new steel piles. Additionally, pile removal and

installation activities may result in minor localized turbidity of the surface waters around the piles but it is not expected that Washington State Water Quality Standards for turbidity will be exceeded. No eelgrass beds will be impacted by the proposed project as there are no eelgrass beds within Sinclair Inlet and all pile replacement will occur in water depths of 32 – 45 feet MLLW. Resulting long-term positive effects will be the removal of approximately 80 creosote treated timber pilings from the marine waters of Sinclair Inlet. The proposed project will have no effect on designated critical habitat as no critical habitat has been designated within the action area.

Puget Sound Chinook ESU Salmon

Although Sinclair Inlet streams do not support native runs of Chinook salmon, and there are no historical records of such runs in the project area, Chinook from other runs may occur in the area during migration. The Washington Department of Fish and Wildlife (WDFW) performed a two-year capture and release study in 2001 and 2002 to increase understanding of the use of nearshore habitat and food resources by juvenile salmonids in Sinclair Inlet. Hatchery origin juvenile Chinook comprised a majority of salmonids captured in the study. Because not all hatchery juvenile Chinook salmon were distinctly marked in 2001 and 2002, the number of hatchery-produced fish obtained in the samples was thought to be underestimated (Fresh et al. 2006).

Best management practices will be followed for all pile driving. The proposed in-water work would occur during the recommended work window for the project area (July 3 to March 1). This will minimize the effects of noise and other disturbances to juvenile salmon. The project may affect, but is not likely to adversely affect, Puget Sound Chinook salmon.

Puget Sound Steelhead DPS

Steelhead are found in very small numbers in Sinclair Inlet. Of the 73,615 fish caught during the 2001-2002 Sinclair Inlet juvenile salmonid outmigration study performed by WDFW, only four were Steelhead (Fresh et al. 2006).

Effects will be the same as those for Chinook. The project may affect, but is not likely to adversely affect, Puget Sound Steelhead.

Southern Resident Killer Whale

Southern Resident killer whales occasionally move into rarely visited areas and inlets, probably in response to locally abundant food sources. In 1997, southern residents moved into Dyes Inlet near Bremerton and spent nearly a month feeding on a salmon run (Wiles 2004).

Killer whales may experience disturbance from construction noise and activity, however, it is unlikely that they will be present in the action area. The Navy will be applying for an Incidental Harassment Authorization (IHA) due to noise disturbance of marine mammals. Along with monitoring local websites for whale presence, a shutdown procedure will be in place, and monitored, if killer whales enter a designated Zone of Influence (ZOI). The project may affect, but is not likely to adversely affect, Southern Resident killer whales.

Humpback Whale

Humpback whales were common in inland Washington State waters in the early 1900s; however, there have only been a few sightings in this area since the whales were heavily hunted in the eastern North Pacific (Scheffer and Slipp 1948; Calambokidis and Steiger 1990; Pinnell and Sandilands 2004). Today, humpback whales occasionally occur in the Puget Sound Study Area but do not remain there for long periods (Everitt et al. 1980; Osborne and Ransom 1988). Calambokidis and Steiger (1990) recorded the movements of at least two humpback whales in southern Puget Sound in June and July 1988.

It is unlikely that humpback whales will be in the action area. This project will have no effect on humpback whales.

Georgia Basin/Puget Sound Bocaccio DPS

DeLacy et al. (1972) and Miller and Borton (1980) compiled all available data on Puget Sound fish species distributions and relative number of occurrences through the mid-1970s from literature, fish collections, unpublished log records, and other sources. Though bocaccio was recorded 110 times in these documents, most records were associated with sport catch from the 1970s in Tacoma Narrows and Appletree Cove (near Kingston). The University of Washington Museum Collection has two bocaccio specimens pulled from Port Orchard between the Kitsap Peninsula and Bainbridge Island off of Fletcher Bay. No records occur in Sinclair Inlet. Although there have been no confirmed

observations of bocaccio in Puget Sound for approximately 7 years prior to the reports final ruling in 2009(74 FR 18516), Drake et al. (2008) concluded that it is likely that bocaccio occur in low abundances.

NMFS relied on scientific information outlined by the Biological Review Team (Drake et al. 2008) and Palsson et al. (2008) to outline the limiting factors for rockfish in Puget Sound waters. These stressors included commercial and sport fisheries, habitat disruption (including exotic species), derelict gear, climate changes, water quality (specifically dissolved oxygen), species interactions (including predation and competition), diseases, and genetic changes.

Minor, temporary, and localized effects on water quality (notably small increases in turbidity) may occur during pile driving; however, there would be no associated decrease in dissolved oxygen, or increase in water temperatures. The proposed project would not facilitate the introduction or increase the existing prevalence of non-indigenous species in the action area.

NAVBASE Kitsap Bremerton is currently partnered with the Washington Department of Fish and Wildlife (WDFW) to conduct Rockfish surveys along the Bremerton waterfront. From surveys conducted in 2013 and 2014, it has been determined that the likelihood of rockfish in the vicinity of NAVBASE Kitsap Bremerton is unlikely at this or any time in the near future. This is due to the lack of required vegetation and rocky habitat for the fish to be present. Future surveys will continue but with less frequency than past years. The results from these surveys will assist Navy biologists in any future ESA consultations.

The proposed project would not present an increase in the limiting factors for rockfish in Puget Sound. The project may affect, but is not likely to adversely affect, bocaccio.

Georgia Basin/Puget Sound Yelloweye Rockfish DPS

Yelloweye rockfish are extremely rare in Puget Sound, Washington. DeLacy et al. (1972) and Miller and Borton (1980) discovered 113 documented yelloweye rockfish records from Puget Sound associated with sport catch. No records occur in Sinclair Inlet (Miller and Borton 1980). Kincaid (1919) reported yelloweye rockfish used to be relatively common in the deep waters of Puget Sound. Due to the moratorium on both sport and

commercial fishing for yelloweye rockfish in Sinclair Inlet, the absence of associated recent catch records, and no recent scientific surveys of these waters, the prevalence of yelloweye rockfish in these waters remains unknown. Little is known about their habitat requirements or use in Puget Sound waters (Drake et al. 2008; Palsson et al. 2008).

The effects of the proposed project on yelloweye rockfish would be the same as those described for bocaccio above. The project may affect, but is not likely to adversely affect, yelloweye rockfish.

Georgia Basin/Puget Sound Canary Rockfish DPS

Canary rockfish were once considered fairly common in the greater Puget Sound area (Kincaid 1919); however, little is known about their habitat requirements in these waters (Drake et al. 2008; Palsson et al. 2008). DeLacy et al. (1972) and Miller and Borton (1980) documented 114 records of canary rockfish prior to the mid-1970s, with most records attributed to sport catch from the 1960s to 1970s in Tacoma Narrows, Hood Canal, San Juan Islands, Bellingham, and Appletree Cove. No records occur in Sinclair Inlet (Miller and Borton 1980). With the absence of associated catch records, and no recent scientific surveys of these waters, the prevalence of rockfish in these waters remains unknown. Drake et al. (2008) concluded that canary rockfish occur in low and decreasing abundances in Puget Sound.

The effects of the proposed project on canary rockfish would be the same as those described for bocaccio above. The project may affect, but is not likely to adversely affect, canary rockfish.

Coastal/Puget Sound Bull Trout

There are no core populations of bull trout that occur in any of the streams that empty into Sinclair Inlet or the entirety of East Kitsap. Bull trout typically prefer colder water temperatures, which are usually associated with snowmelt-fed streams. The lowland streams that drain into Sinclair Inlet are primarily fed by surface runoff and do not meet the optimal conditions necessary for spawning and rearing of bull trout. The two-year survey of salmonid use of Sinclair Inlet found no bull trout occurring in the area (Fresh et al. 2006).

Although streams within Sinclair Inlet are unlikely to support any core populations of bull trout, there is the potential for adult fish from other drainages within the Puget Sound (i.e.

Green and Puyallup watersheds) to utilize the littoral zones for foraging. Typically, most anadromous bull trout remain within several miles of the mouth of their natal stream. However, relatively little research has been done on their saltwater migrations (University of Washington, 2002).

Effects will be the same as those for Chinook although there are no reports of bull trout within the action area. The project may affect, but is not likely to adversely affect, Coastal/Puget Sound bull trout.

Marbled Murrelet

Marbled murrelets nest and roost in mature and old growth forest areas of western Washington. The majority of Kitsap County, including NAVBASE Kitsap Bremerton and the area surrounding Sinclair Inlet, has been logged several times over the past 150 years and no longer contains old growth forest or large trees necessary for marbled murrelet nesting. The closest documented habitat is on the other side of the Hood Canal in the Olympic National Forest.

The project area and the surrounding shipyard generate loud noises throughout the day, from pulsed and non-pulsed sources. Noise is generated by Navy and non-Navy vessels including tugs, barges, aircraft carriers, submarines, ferry traffic, security boats, and recreational vessels operating in Sinclair Inlet. Other sources include ships maintenance, dry dock activity, and ship disassembly. Depending on the noise-generating activity and distance from those activities, industrial shipyard airborne noise is expected to be between 60 and 90 dBA.

The project area is in an industrial shipyard, miles from known nesting habitat and where high activity and noise levels limit any potential for foraging. While marbled murrelets can be seen in the South Puget Sound foraging, they have not been identified in the industrial waters surrounding NAVBASE Kitsap at Bremerton.

The effects on marbled murrelets, due to the rare sightings in Sinclair Inlet, would be minimal if any. Therefore, the proposed action may affect, but is not likely to adversely affect marbled murrelets.

Table 2 Effects Determination

Listed Species	***Effects Determination***
Puget Sound Chinook ESU Salmon	May affect, not likely to adversely affect
Puget Sound Steelhead DPS	May affect, not likely to adversely affect
Southern Resident Killer Whale	May affect, not likely to adversely affect
Humpback Whale	No effect
Georgia Basin/Puget Sound Bocaccio DPS	May affect, not likely to adversely affect
Georgia Basin/Puget Sound Yelloweye Rockfish DPS	May affect, not likely to adversely affect
Georgia Basin/Puget Sound Canary Rockfish DPS	May affect, not likely to adversely affect
Coastal/Puget Sound Bull Trout	May affect, not likely to adversely affect
Marbled Murrelet	May affect, not likely to adversely affect

3. ESSENTIAL FISH HABITAT ASSESSMENT

The action area includes habitats designated as essential fish habitat (EFH) for various life stages of 17 species of groundfish, five coastal pelagic species, and three species of Pacific salmon. The proposed project will not result in excessive levels of organic materials, inorganic nutrient, or heat. The action will not result in physical alterations that could adversely affect water temperature or beach contours. The action will not remove large woody debris, or other natural beach complexity features, nor will it affect any vegetated shallows. The proposed project will not affect EFH for Pacific salmon, groundfish, and coast pelagic species.

4. MITIGATION

Due to the potential presence of ESA threatened and endangered species in the action area, the following mitigation measures will be observed:

- In-water work will be conducted between July 3 and March 1 to avoid the juvenile salmon migration period in Sinclair Inlet.
- The Navy is applying for an Incidental Harassment Authorization (IHA) under the Marine Mammal Protection Act (MMPA). The IHA will include additional mitigation measures, including a shutdown area that the Navy will implement during pile removal and installation;
- Daily monitoring of local websites for whale presence
- Piles that break during construction will be cut at mudline to avoid disturbing contaminated sediment;
- Removed piles will be cut into four foot lengths and placed in a dumpster for disposal to preclude reuse; and
- All work will be accomplished so that no debris or deleterious material enters the water. Including the placing of containment boom around the creosote piles being removed to contain possible sheen for cleanup.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office
510 Desmond Dr. SE, Suite 102
Lacey, Washington 98503

MAR 3 1 2015

In Reply Refer To:
01EWFW00-2015-I-0391

Captain T.A. Zwolfer
Department of the Navy
Naval Base Kitsap Bremerton
ATTN: Julia Stockton
120 South Dewey St.
Bremerton, Washington 98314-5020

Dear Captain Zwolfer:

Subject: Naval Base Kitsap Pier 4 Fender System Repairs

This letter is in response to your February 27, 2015, request for our concurrence with your determination that the proposed action at Naval Base Kitsap Bremerton, Kitsap County, Washington, "may affect, but is not likely to adversely affect" federally listed species. We received your letter and biological evaluation, providing information in support of "may affect, not likely to adversely affect" determinations, on March 3, 2015. A copy of your transmittal document(s) describing the proposed action is enclosed. We requested additional information on March 16, 2015, regarding the correct dates for the bull trout work window within Tidal Reference Area 5, which includes the project area. We received the final information necessary to complete the consultation on March 20, 2015.

Specifically, you requested informal consultation pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) for the federally listed species and critical habitat identified below.

- Bull trout (*Salvelinus confluentus*)
- Marbled murrelet (*Brachyramphus marmoratus*)

We believe that sufficient information has been provided to determine the effects of the proposed action and to conclude whether it would adversely affect federally listed species and/or designated critical habitat. Our concurrence is based on information provided by the action agency, best available science, and complete and successful implementation of agreed-upon conservation measures.

EFFECTS TO BULL TROUT

Effects and Disturbance

Temporary and/or long-term effects from the action are not expected to measurably disrupt normal bull trout behaviors (i.e., the ability to successfully feed, move, and/or shelter), and are therefore considered insignificant and/or discountable:

- The action is located in Kitsap Peninsula, including Vashon Island, Bainbridge Island, and the eastern shore of Hood Canal where, at present, bull trout occurrence is rare or unlikely.
- The action will occur during the recommended in-water work window (July 16 to February 15), when bull trout are least likely to be present in the project area.
- The action will result in temporary impacts to water quality, including potential temporary increases in elevated levels of turbidity, suspended sediments, contaminants, and underwater sound. These effects will be intermittent and limited in physical extent and duration.
- The action includes pile driving or activities that will result in elevated sound pressure levels. However, because a vibratory pile driver will be used, project-related effects are unlikely to result in injury to bull trout or to disrupt normal bull trout behaviors.
- The action includes vibratory removal of creosoate treated timber fender piles and vibratory pile installation or other activities that will result in elevated sound pressure levels, turbidity, suspended sediments, and creosote. However, because work will be done when bull trout are least likely to be present, project-related effects are unlikely to result in injury to bull trout or to disrupt normal bull trout behaviors.

Effects to Bull Trout Habitat and Prey Sources

With successful implementation of the agreed-upon conservation measures, we expect that temporary impacts from the action will not measurably degrade or diminish habitat functions or prey resources in the action area, and effects are therefore considered insignificant and/or discountable:

- The action will improve water quality by removing 80 creosote-treated timber fender piles and deteriorated creosote timber checks.

- Construction methods and proposed permanent features may impact habitat that supports bull trout and/or their prey sources. These impacts will be limited in physical extent and/or duration, and will not measurably degrade habitat functions, including prey resources, that are important to bull trout within the action area:
    - The action will result in limited temporary and/or permanent impacts to native substrates, aquatic vegetation, and the benthic invertebrate community. However, the action removes and replaces a simliar number of piles next to an existing pier. Pile removal and installation will disturb the substrate and will temporarily impact habitat for benthic invertebrates. The benthic invertebrates will rapidly recolonize the disturbed area from the surrounding area.
    - Construction of the project may result in periodic impacts to water quality through replacement of creosote treated fender piles and timber chocks; however, these effects will be intermittent and of short duration.
    - The action is not expected to result in additional shading, destruction or long-term impacts to submerged aquatic vegetation. The action includes replacing fender piles along an existing pier. There will be minimal loss of prey resource abundance during replacement of existing piles.
    - Actions in marine waters will occur only during the Corps approved work window, from July 16 to February 15, when prey fish presence, spawning, and/or holding is least likely to occur.

EFFECTS TO MARBLED MURRELET

Effects - Terrestrial Environment

Temporary exposures and effects from the action are not expected to measurably disrupt normal marbled murrelet behaviors while in the terrestrial environmetn (i.e., the ability to successfully feed, move, and/or shelter), and are therefore considered insignificant and/or discountable:

- The project will not result in sound that will extend into nesting habitat or impact nesting marbled murrelets or their young. Thus, nesting marbled murrelets are extremely unlikely to be exposed to project stressors, including sound and visual disturbance.

Effects - Marine Environment

Temporary exposures and effects from the action are not expected to measurably disrupt normal marbled murrelet behaviors (i.e., the ability to successfully feed, move, and/or shelter), and are therefore considered insignificant and/or discountable:

- The action will result in temporary impacts to water quality, including potential temporary increases in elevated levels of turbidity, suspended sediments, contaminants, and underwater sound. These effects would be intermittent and limited in physical extent and duration.
- The action will improve water quality by removing 80 creosote-treated timber fender piles and deteriorated creosote timber checks.
- The action includes pile driving or activities that will result in elevated sound pressure levels. However, because a vibratory pile driver will be used, project-related effects are unlikely to result in injury to bull trout or to disrupt normal bull trout behaviors.

Effects to Marbled Murrelet Foraging Habitat and Prey Sources

With successful implementation of the included conservation measures, we expect that temporary impacts from the action will not measurably degrade or diminish habitat functions or prey resources in the action area, and effects are therefore considered insignificant and/or discountable:

- Construction methods and proposed permanent features may impact habitat that supports marbled murrelets and/or their prey sources. These impacts will be limited in physical extent and/or duration, and will not measurably degrade habitat functions, including prey resources, that are important to marbled murrelets within the action area:
    - The action will result in limited temporary and/or permanent impacts to native substrates, aquatic vegetation, and the benthic invertebrate community. However, the action removes and replaces a simliar number of piles next to an existing pier. Pile removal and installation will disturb the substrate and will temporarily impact habitat for benthic invertebrates. The benthic invertebrates will rapidly recolonize the disturbed area from the surrounding area.
    - The action is not expected to result in additional shading, destruction or long-term impacts to submerged aquatic vegetation. The action includes replacing fender piles along an existing pier. There will be minimal loss of prey resource abundance during replacement of existing piles.
    - Actions in marine waters would occur during the Corps approved work window, from July 16 to February 15, when prey fish presence, spawning, and/or holding is least likely to occur.

Conclusion

This concludes consultation pursuant to the regulations implementing the Endangered Species Act (50 CFR 402.13). Our review and concurrence with your effect determination is based on the implementation of the project as described. It is the responsibility of the Federal action agency to ensure that projects that they authorize or carry out are in compliance with the regulatory permit and/or the Endangered Species Act, respectively. If a permittee or the Federal action agency deviates from the measures outlined in a permit or project description, the Federal action agency has the obligation to reinitiate consultation and comply with section 7(d).

This project should be re-analyzed and re-initiation may be necessary if 1) new information reveals effects of the action that may affect listed species or critical habitat in a manner, or to an extent, not considered in this consultation, 2) if the action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was *not* considered in this consultation, and/or 3) a new species is listed or critical habitat is designated that may be affected by this project.

This letter and its enclosures constitute a complete response by the U.S. Fish and Wildlife Service to your request for informal consultation. If you have any questions about this letter or our joint responsibilities under the Endangered Species Act, please contact the consulting biologist identified below.

U.S. Fish and Wildlife Service Consultation Biologist(s):
Jim Muck (206-526-4740)

Sincerely,

Martha L. Jensen

for Eric V. Rickerson, State Supervisor
Washington Fish and Wildlife Office

Enclosure(s)

BIOLOGICAL EVALUATION
PIER 4 FENDER SYSTEM REPAIRS
NAVAL BASE KITSAP BREMERTON
KITSAP COUNTY, WASHINGTON

1. INTRODUCTION

The Department of the Navy (Navy) proposes a minor repair project on the Pier 4 fender system at Naval Base (NAVBASE) Kitsap Bremerton. Proposed work is essential to ensure a critical ship maintenance asset is not jeopardized as continued deterioration leaves the pier vulnerable to vessel impacts. Updated species lists were accessed from the websites of the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). Federally listed species that may occur in the action area are summarized in Table 1. This biological evaluation was prepared to address potential impacts on listed species resulting from the proposed project as required under Section 7(c) of the Endangered Species Act (ESA).

1.1 PROJECT DESCRIPTION

The proposed project replaces deteriorated creosote treated timber fender piles, creosote treated timber chocks, and minor repairs to replace U-clamps on usable wood fender piles at Pier 4. The project installs new steel fender piles. This proposed repair project is planned for a single in-water work window. The proposed project includes:

- Removal of approximately 80 existing creosote treated timber fender piles.
- Removal of deteriorated creosote timber chocks.
- Installation of approximately 80 12-14 inch steel fender piles via vibratory hammer.
- Removal and replacement of wood camel logs.

1.2 PROJECT LOCATION AND ACTION AREA

The project location and action area is centered at Pier 4 on NAVBASE Kitsap Bremerton [Figure 1]. NAVBASE Kitsap Bremerton is primarily an industrial facility located within the City of Bremerton along approximately two miles of the northern Sinclair Inlet shoreline. The shoreline at the project location is characterized by piers, dry docks, and quay walls that have developed since the facility was established in 1891. Pier 4 is a concrete pier located at the east end of the facility, and is

DEPARTMENT OF THE NAVY
NAVAL BASE KITSAP
120 SOUTH DEWEY ST
BREMERTON, WA 98314-5020

5090
Ser PRB4/00341
27 Feb 15

Steven Landino
Director, Washington State Habitat Office
Northwest Regional Office
National Marine Fisheries Service
510 Desmond Drive SE, Suite 102
Lacey, WA 98503

Dear Mr. Landino:

SUBJECT: SECTION 7 INFORMAL CONSULTATION FOR PIER 4 FENDER SYSTEM REPAIRS, NAVAL BASE KITSAP BREMERTON, WASHINGTON

The Department of the Navy (Navy) proposes to remove and replace the existing Pier 4 fender system at Naval Base (NAVBASE) Kitsap Bremerton. The existing fender system consists primarily of creosote treated timber piles, many of which are damaged and inadequate for protecting the pier from vessel impacts. The proposed project would remove approximately 80 creosote treated timber fender piles from Sinclair Inlet and replace them with steel piles.

This letter is to request initiation of informal consultation under the Endangered Species Act. The enclosed biological evaluation (BE) contains the Navy's determination of effect for listed species that may be present in the action area. The BE is also being reviewed by U.S. Fish and Wildlife Service in accordance with Section 7 of the Endangered Species Act. If you have any questions, please contact Ms. Julia Stockton. She can be reached at (360) 476-6067 or julia.stockton@navy.mil.

Sincerely,

T. A. ZWOLFER
Captain, U.S. Navy
Commanding Officer

Enclosure: 1. Biological Evaluation

BIOLOGICAL EVALUATION
PIER 4 FENDER SYSTEM REPAIRS
NAVAL BASE KITSAP BREMERTON
KITSAP COUNTY, WASHINGTON

1. INTRODUCTION

The Department of the Navy (Navy) proposes a minor repair project on the Pier 4 fender system at Naval Base (NAVBASE) Kitsap Bremerton. Proposed work is essential to ensure a critical ship maintenance asset is not jeopardized as continued deterioration leaves the pier vulnerable to vessel impacts. Updated species lists were accessed from the websites of the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). Federally listed species that may occur in the action area are summarized in Table 1. This biological evaluation was prepared to address potential impacts on listed species resulting from the proposed project as required under Section 7(c) of the Endangered Species Act (ESA).

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- Removal of approximately 80 existing creosote treated timber fender piles.
- Removal of deteriorated creosote timber chocks.
- Installation of approximately 80 12-14 inch steel fender piles via vibratory hammer.
- Removal and replacement of wood camel logs.

1.2 PROJECT LOCATION AND ACTION AREA

The project location and action area is centered at Pier 4 on NAVBASE Kitsap Bremerton [Figure 1]. NAVBASE Kitsap Bremerton is primarily an industrial facility located within the City of Bremerton along approximately two miles of the northern Sinclair Inlet shoreline. The shoreline at the project location is characterized by piers, dry docks, and quay walls that have developed since the facility was established in 1891. Pier 4 is a concrete pier located at the east end of the facility, and is

1220 ft in length by 100 ft in width. Pier 4 is located in water depths ranging from 32 ft mean lower low water (MLLW) at its head near the quay wall to 45 ft MLLW at its end.

2. SPECIES AND CRITICAL HABITAT

Nine ESA listed species have the potential to occur within the action area. No critical habitat for any species has been designated within the action area. Table 1 lists the species that may be present in the vicinity of Pier 4 at NAVBASE Kitsap Bremerton.

Table 1 Occurrence of Federally Listed Species in the Action Area.

Species	***Regulatory Agency/Status***	***Critical Habitat***
Puget Sound Chinook ESU Salmon (*Oncorhynchus tshawytscha*)	NMFS/Threatened	*Designated; Not designated on NW Navy installations*
Puget Sound Steelhead DPS (*O. mykiss*)	NMFS/Threatened	*Proposed in January 2013 (78 FR 2725)*
Southern Resident Killer Whale (*Orcinus orca*)	NMFS/Endangered	*Designated; Not designated in Sinclair Inlet or on NW Navy installations*
Humpback Whale (*Megaptera novaeangliae*)	NMFS/Endangered	*Non Designated*
Georgia Basin/Puget Sound Bocaccio DPS (*Sebastes paucispinis*)	NMFS/Endangered	*Designated; Not designated on NW Navy Installations*
Georgia Basin/Puget Sound Yelloweye Rockfish DPS (*S. ruberrimus*)	NMFS/Threatened	*Designated; Not designated on NW Navy Installations*
Georgia Basin/Puget Sound Canary Rockfish DPS (*S. pinniger*)	NMFS/Threatened	*Designated; Not designated on NW Navy Installations*
Coastal/Puget Sound Bull Trout (*Salvelinus confluentus*)	USFWS/Threatened	Designated; Not designated on NW Navy installations
Marbled Murrelet (*Brachyramphus marmoratus*)	USFWS/Threatened	Designated, not designated in project area

2.2 EFFECT DETERMINATION

The effect of this proposed project within the action area would be temporary noise increases in the vicinity of Pier 4 due to the vibratory removal of wood piles and the vibratory installation of new steel piles. Additionally, pile removal and

installation activities may result in minor localized turbidity of the surface waters around the piles but it is not expected that Washington State Water Quality Standards for turbidity will be exceeded. No eelgrass beds will be impacted by the proposed project as there are no eelgrass beds within Sinclair Inlet and all pile replacement will occur in water depths of 32 – 45 feet MLLW. Resulting long-term positive effects will be the removal of approximately 80 creosote treated timber pilings from the marine waters of Sinclair Inlet. The proposed project will have no effect on designated critical habitat as no critical habitat has been designated within the action area.

Puget Sound Chinook ESU Salmon

Although Sinclair Inlet streams do not support native runs of Chinook salmon, and there are no historical records of such runs in the project area, Chinook from other runs may occur in the area during migration. The Washington Department of Fish and Wildlife (WDFW) performed a two-year capture and release study in 2001 and 2002 to increase understanding of the use of nearshore habitat and food resources by juvenile salmonids in Sinclair Inlet. Hatchery origin juvenile Chinook comprised a majority of salmonids captured in the study. Because not all hatchery juvenile Chinook salmon were distinctly marked in 2001 and 2002, the number of hatchery-produced fish obtained in the samples was thought to be underestimated (Fresh et al. 2006).

Best management practices will be followed for all pile driving. The proposed in-water work would occur during the recommended work window for the project area (July 3 to March 1). This will minimize the effects of noise and other disturbances to juvenile salmon. The project may affect, but is not likely to adversely affect, Puget Sound Chinook salmon.

Puget Sound Steelhead DPS

Steelhead are found in very small numbers in Sinclair Inlet. Of the 73,615 fish caught during the 2001-2002 Sinclair Inlet juvenile salmonid outmigration study performed by WDFW, only four were Steelhead (Fresh et al. 2006).

Effects will be the same as those for Chinook. The project may affect, but is not likely to adversely affect, Puget Sound Steelhead.

Southern Resident Killer Whale

Southern Resident killer whales occasionally move into rarely visited areas and inlets, probably in response to locally abundant food sources. In 1997, southern residents moved into Dyes Inlet near Bremerton and spent nearly a month feeding on a salmon run (Wiles 2004).

Killer whales may experience disturbance from construction noise and activity, however, it is unlikely that they will be present in the action area. The Navy will be applying for an Incidental Harassment Authorization (IHA) due to noise disturbance of marine mammals. Along with monitoring local websites for whale presence, a shutdown procedure will be in place, and monitored, if killer whales enter a designated Zone of Influence (ZOI). The project may affect, but is not likely to adversely affect, Southern Resident killer whales.

Humpback Whale

Humpback whales were common in inland Washington State waters in the early 1900s; however, there have only been a few sightings in this area since the whales were heavily hunted in the eastern North Pacific (Scheffer and Slipp 1948; Calambokidis and Steiger 1990; Pinnell and Sandilands 2004). Today, humpback whales occasionally occur in the Puget Sound Study Area but do not remain there for long periods (Everitt et al. 1980; Osborne and Ransom 1988). Calambokidis and Steiger (1990) recorded the movements of at least two humpback whales in southern Puget Sound in June and July 1988.

It is unlikely that humpback whales will be in the action area. This project will have no effect on humpback whales.

Georgia Basin/Puget Sound Bocaccio DPS

DeLacy et al. (1972) and Miller and Borton (1980) compiled all available data on Puget Sound fish species distributions and relative number of occurrences through the mid-1970s from literature, fish collections, unpublished log records, and other sources. Though bocaccio was recorded 110 times in these documents, most records were associated with sport catch from the 1970s in Tacoma Narrows and Appletree Cove (near Kingston). The University of Washington Museum Collection has two bocaccio specimens pulled from Port Orchard between the Kitsap Peninsula and Bainbridge Island off of Fletcher Bay. No records occur in Sinclair Inlet. Although there have been no confirmed

observations of bocaccio in Puget Sound for approximately 7 years prior to the reports final ruling in 2009(74 FR 18516), Drake et al. (2008) concluded that it is likely that bocaccio occur in low abundances.

NMFS relied on scientific information outlined by the Biological Review Team (Drake et al. 2008) and Palsson et al. (2008) to outline the limiting factors for rockfish in Puget Sound waters. These stressors included commercial and sport fisheries, habitat disruption (including exotic species), derelict gear, climate changes, water quality (specifically dissolved oxygen), species interactions (including predation and competition), diseases, and genetic changes.

Minor, temporary, and localized effects on water quality (notably small increases in turbidity) may occur during pile driving; however, there would be no associated decrease in dissolved oxygen, or increase in water temperatures. The proposed project would not facilitate the introduction or increase the existing prevalence of non-indigenous species in the action area.

NAVBASE Kitsap Bremerton is currently partnered with the Washington Department of Fish and Wildlife (WDFW) to conduct Rockfish surveys along the Bremerton waterfront. From surveys conducted in 2013 and 2014, it has been determined that the likelihood of rockfish in the vicinity of NAVBASE Kitsap Bremerton is unlikely at this or any time in the near future. This is due to the lack of required vegetation and rocky habitat for the fish to be present. Future surveys will continue but with less frequency than past years. The results from these surveys will assist Navy biologists in any future ESA consultations.

The proposed project would not present an increase in the limiting factors for rockfish in Puget Sound. The project may affect, but is not likely to adversely affect, bocaccio.

Georgia Basin/Puget Sound Yelloweye Rockfish DPS

Yelloweye rockfish are extremely rare in Puget Sound, Washington. DeLacy et al. (1972) and Miller and Borton (1980) discovered 113 documented yelloweye rockfish records from Puget Sound associated with sport catch. No records occur in Sinclair Inlet (Miller and Borton 1980). Kincaid (1919) reported yelloweye rockfish used to be relatively common in the deep waters of Puget Sound. Due to the moratorium on both sport and

commercial fishing for yelloweye rockfish in Sinclair Inlet, the absence of associated recent catch records, and no recent scientific surveys of these waters, the prevalence of yelloweye rockfish in these waters remains unknown. Little is known about their habitat requirements or use in Puget Sound waters (Drake et al. 2008; Palsson et al. 2008).

The effects of the proposed project on yelloweye rockfish would be the same as those described for bocaccio above. The project may affect, but is not likely to adversely affect, yelloweye rockfish.

Georgia Basin/Puget Sound Canary Rockfish DPS

Canary rockfish were once considered fairly common in the greater Puget Sound area (Kincaid 1919); however, little is known about their habitat requirements in these waters (Drake et al. 2008; Palsson et al. 2008). DeLacy et al. (1972) and Miller and Borton (1980) documented 114 records of canary rockfish prior to the mid-1970s, with most records attributed to sport catch from the 1960s to 1970s in Tacoma Narrows, Hood Canal, San Juan Islands, Bellingham, and Appletree Cove. No records occur in Sinclair Inlet (Miller and Borton 1980). With the absence of associated catch records, and no recent scientific surveys of these waters, the prevalence of rockfish in these waters remains unknown. Drake et al. (2008) concluded that canary rockfish occur in low and decreasing abundances in Puget Sound.

The effects of the proposed project on canary rockfish would be the same as those described for bocaccio above. The project may affect, but is not likely to adversely affect, canary rockfish.

Coastal/Puget Sound Bull Trout

There are no core populations of bull trout that occur in any of the streams that empty into Sinclair Inlet or the entirety of East Kitsap. Bull trout typically prefer colder water temperatures, which are usually associated with snowmelt-fed streams. The lowland streams that drain into Sinclair Inlet are primarily fed by surface runoff and do not meet the optimal conditions necessary for spawning and rearing of bull trout. The two-year survey of salmonid use of Sinclair Inlet found no bull trout occurring in the area (Fresh et al. 2006).

Although streams within Sinclair Inlet are unlikely to support any core populations of bull trout, there is the potential for adult fish from other drainages within the Puget Sound (i.e.

Green and Puyallup watersheds) to utilize the littoral zones for foraging. Typically, most anadromous bull trout remain within several miles of the mouth of their natal stream. However, relatively little research has been done on their saltwater migrations (University of Washington, 2002).

Effects will be the same as those for Chinook although there are no reports of bull trout within the action area. The project may affect, but is not likely to adversely affect, Coastal/Puget Sound bull trout.

Marbled Murrelet

Marbled murrelets nest and roost in mature and old growth forest areas of western Washington. The majority of Kitsap County, including NAVBASE Kitsap Bremerton and the area surrounding Sinclair Inlet, has been logged several times over the past 150 years and no longer contains old growth forest or large trees necessary for marbled murrelet nesting. The closest documented habitat is on the other side of the Hood Canal in the Olympic National Forest.

The project area and the surrounding shipyard generate loud noises throughout the day, from pulsed and non-pulsed sources. Noise is generated by Navy and non-Navy vessels including tugs, barges, aircraft carriers, submarines, ferry traffic, security boats, and recreational vessels operating in Sinclair Inlet. Other sources include ships maintenance, dry dock activity, and ship disassembly. Depending on the noise-generating activity and distance from those activities, industrial shipyard airborne noise is expected to be between 60 and 90 dBA.

The project area is in an industrial shipyard, miles from known nesting habitat and where high activity and noise levels limit any potential for foraging. While marbled murrelets can be seen in the South Puget Sound foraging, they have not been identified in the industrial waters surrounding NAVBASE Kitsap at Bremerton.

The effects on marbled murrelets, due to the rare sightings in Sinclair Inlet, would be minimal if any. Therefore, the proposed action may affect, but is not likely to adversely affect marbled murrelets.

Table 2 Effects Determination

Listed Species	***Effects Determination***
Puget Sound Chinook ESU Salmon	May affect, not likely to adversely affect
Puget Sound Steelhead DPS	May affect, not likely to adversely affect
Southern Resident Killer Whale	May affect, not likely to adversely affect
Humpback Whale	No effect
Georgia Basin/Puget Sound Bocaccio DPS	May affect, not likely to adversely affect
Georgia Basin/Puget Sound Yelloweye Rockfish DPS	May affect, not likely to adversely affect
Georgia Basin/Puget Sound Canary Rockfish DPS	May affect, not likely to adversely affect
Coastal/Puget Sound Bull Trout	May affect, not likely to adversely affect
Marbled Murrelet	May affect, not likely to adversely affect

3. ESSENTIAL FISH HABITAT ASSESSMENT

The action area includes habitats designated as essential fish habitat (EFH) for various life stages of 17 species of groundfish, five coastal pelagic species, and three species of Pacific salmon. The proposed project will not result in excessive levels of organic materials, inorganic nutrient, or heat. The action will not result in physical alterations that could adversely affect water temperature or beach contours. The action will not remove large woody debris, or other natural beach complexity features, nor will it affect any vegetated shallows. The proposed project will not affect EFH for Pacific salmon, groundfish, and coast pelagic species.

4. MITIGATION

Due to the potential presence of ESA threatened and endangered species in the action area, the following mitigation measures will be observed:

- In-water work will be conducted between July 3 and March 1 to avoid the juvenile salmon migration period in Sinclair Inlet.
- The Navy is applying for an Incidental Harassment Authorization (IHA) under the Marine Mammal Protection Act (MMPA). The IHA will include additional mitigation measures, including a shutdown area that the Navy will implement during pile removal and installation;
- Daily monitoring of local websites for whale presence
- Piles that break during construction will be cut at mudline to avoid disturbing contaminated sediment;
- Removed piles will be cut into four foot lengths and placed in a dumpster for disposal to preclude reuse; and
- All work will be accomplished so that no debris or deleterious material enters the water. Including the placing of containment boom around the creosote piles being removed to contain possible sheen for cleanup.

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, Washington 98115

NMFS Tracking No:
WCR-2015-2221

March 31, 2015

Captain T. A. Zwolfer
Commanding Officer
Department of the Navy
Naval Base Kitsap
120 South Dewey Street
Bremerton, WA 98314-5020

Re: Endangered Species Act Section 7 Concurrence Letter for the Pier 4 Fender System Repairs in Sinclair Inlet, Kitsap County, Washington, (6th Field HUC 171100190705).

Dear Captain Zwolfer:

On March 4, 2015, the National Marine Fisheries Service (NMFS) received your request for a written concurrence that the US Navy (Navy) proposed action to remove and replace the existing Pier 4 fender system is not likely to adversely affect (NLAA) species listed as threatened or endangered, or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Act (MSA), including conservation measures and any determination that you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.[1] The Navy determined the action would not adversely affect EFH, and consultation under the MSA is not required for this action.

This letter is in compliance with section 515 of the Treasury and General Government Appropriations Act of 2001 (Data Quality Act) (44 U.S.C. 3504 (d) (1) and 3516), and underwent pre-dissemination review using standards for utility, integrity and objectivity.

[1] Memorandum from William T. Hogarth, Acting Administrator for Fisheries, to Regional Administrators (national finding for use of Endangered Species Act section 7 consultation process to complete essential fish habitat consultations) (February 28, 2001).

Proposed Action and Action Area

The Navy will remove approximately 80 existing deteriorated creosote treated timber fender piles and replace them with 12- to 14-inch steel fender piles using a vibratory hammer. Deteriorated creosote timber chocks will be removed and untreated wood pieces will be removed and replaced. The project is located on Pier 4, a concrete pier that is 1,220 feet long and 100 feet wide, and in water depths ranging from 32 feet to 45 feet. This proposed repair project is planned for a single in-water work window from July 2 to March 2 (not July 3 to March 1 as stated in the Navy's Biological Evaluation).

The action area is determined by the greatest extent of effects stemming from the project. The proposed project is in the sub-tidal waters of Sinclair Inlet on the Kitsap Peninsula. For this project, the action area is limited to the immediate construction area encompassing about 150 feet radius from the removed and replaced piles to account for construction effects on underwater sound and turbidity. The project location is on NAVBASE Kitsap Bremerton, which is an industrial facility located within the City of Bremerton along approximately 2 miles of northern Sinclair Inlet shoreline. At the project location, the shoreline is entirely modified with piers, dry docks and quay walls.

This action area in Sinclair Inlet may be used by Puget Sound (PS) Chinook and PS steelhead for seasonal migration. The nearest natal PS Chinook salmon is the Duwamish River, about 15 miles east. The nearest steelhead spawning stream is Blackjack Creek, about 1 mile south across Sinclair Inlet. Juvenile Chinook salmon and steelhead could potentially pass through the action area seasonally.

Sinclair Inlet is about 6,200 feet wide at this site. Between one and five Southern resident killer whales (SRKW) have been sighted in the general vicinity of Sinclair Inlet in February, May, and December. Between six and twenty-five SRKWs have been sighted, at times, in October and November. There is no likelihood of SRKW within the action area, so no-effect on that specie.

Action Agency's Effects Determination

The Navy requested concurrence with the following determinations: "may affect, not likely to adversely affect" Puget Sound (PS) Chinook salmon and PS steelhead (0. mykiss). The NMFS listed PS Chinook salmon as threatened under the ESA on March 24, 1999 (64 FR 14308). On June 11, 2007, NMFS listed the PS steelhead Distinct Population Segment (DPS) as threatened under the ESA (72 FR 26722). The Navy also requested concurrence for Puget Sound/Georgia Basin (PS/GB) bocaccio, PS/GB yelloweye rockfish and PS/GB canary rockfish as "may affect, not likely to adversely affect." PS/GB canary rockfish and yelloweye rockfish DPSs were listed as threatened and bocaccio DPS was listed as endangered under the ESA on April 28, 2010 (75 FR 22276, updated 79 FR 20802, and April 14, 2014). The Navy requested concurrence for southern resident killer whales (SRKW) as "may affect, not likely to adversely affect." The NMFS listed the SRKW as endangered under the ESA on November 18, 2005 (70 FR 69903, updated 79 FR 20802, April14, 2014).

Potential effects from the project include temporary noise increases in the vicinity of Pier 4 due to the vibratory removal of wood piles and the vibratory installation of new steel piles. Additionally, pile removal and installation activities may result in minor localized turbidity of the surface water around the piles, but it is not expected that Washington State Water Quality Standards for turbidity will be exceeded. No eelgrass beds exist within Sinclair Inlet and all pile replacement will occur in water depths of 32 to 45 feet. Resulting long-term positive effects will be the removal of approximately 80 creosote treated timber pilings from the marine waters of Sinclair Inlet. The proposed project will have no effect on designated critical habitat because no critical habitat has been designated within the project area. There are no activities that are interrelated or interdependent with that action.

Consultation History

The NMFS received a Biological Evaluation along with a request for informal consultation from the U.S. Navy on March 4, 2015. NMFS requested additional information from the Navy on March 24, 2015. This information was received on March 27, 2015. We initiated informal consultation on March 27, 2015.

A complete record of this consultation is on file at the Oregon and Washington Coastal Area Office in Lacey, Washington.

Endangered Species Act

Effects of the Action

For purposes of the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is NLAA listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial.[2] Beneficial effects are contemporaneous positive effects without any adverse effects to the species. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

During construction, elevated underwater noise levels and a temporary increase in suspended sediment concentrations (turbidity) generated by pile installation will occur within about 100 feet of the construction. Juvenile Chinook salmon, steelhead, and larval rockfish could be in the action area during construction, so could be exposed to these insignificant effects. We are not aware of indirect effects from the permit.

Puget Sound Chinook Salmon
Puget Sound Steelhead

[2] U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1998. Endangered Species Act consultation handbook: procedures for conducting section 7 consultations and conferences. March. Final. P. 3-12.

We do not expect increased underwater noise created by vibratory pile removal and driving to reach levels that would adversely affect fish. Turbidity caused by pile removal and installation activities will be short-term and localized. We expect suspended sediment concentrations (turbidity) will be below levels that present a risk of either physical harm or behavioral disruption to listed salmonids. Therefore, the construction effects of these actions will be insignificant for juvenile PS Chinook salmon.

Any adult steelhead that may migrate through Hale Passage during construction would likely be in deep water and at low numbers. Juvenile steelhead emigrate from natal streams by May and June, and typically do not use the nearshore or rear in Puget Sound. Project work will occur when juvenile steelhead are not expected to occur in Puget Sound. Therefore, steelhead are highly unlikely to occupy the action area during project activities, so potential effects on them are discountable.

We analyzed the potential impacts of the project on salmon and steelhead and determined that construction-related effects will be short term and localized, and the slight changes to water quality will return to the pre-construction condition following the cessation of activity. The conservation value of the nearshore habitats will be maintained at current moderate level.

PS/GS Bocaccio
PS/GS Canary Rockfish
PS/GS Yelloweye Rockfish

The depth occurrences for adult bocaccio and canary rockfish are 160 to 820 feet deep and for yelloweye rockfish are 300 to 590 feet deep. The project area has no preferred rocky habitat and therefore extremely limited distribution of these species in the action area. As such, the potential for exposure of juvenile or adult rockfish to project impacts from the construction will be discountable.

PS/GB bocaccio, PS/GB canary rockfish and PS/GB yelloweyed rockfish, born as free-swimming planktonic larvae, remain in open waters for several months before settling to the seafloor as juveniles. Larval bocaccio and canary rockfish may settle to nearshore habitats, particularly near kelp. Because the action area is a few miles from waters that are suitable depth for rockfish, larvae of these rockfish could inhabit the shallow action area and be exposed to minor effects of construction. A small number of rockfish larvae may be in the action area during the in-water work window. Construction-related effects on the water quality and nearshore area alterations will be short-term and localized, and return to pre-construction conditions following the cessation of activity. Any project effects are therefore insignificant on rockfish.

Conclusion

Based on this analysis, because effects on PS Chinook salmon are insignificant, and effects are discountable on PS steelhead and PS/GB rockfishes, we concur the proposed Navy action would be NLAA for listed fishes.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the Federal agency, or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect on the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

This concludes consultation under the ESA and MSA. Please direct questions regarding this letter to Valerie Elliott of the Oregon and Washington Coastal Office, Lacey, Washington, (360) 753-5834, valerie.elliott@noaa.gov.

Sincerely,

for

William W. Stelle, Jr.
Regional Administrator

cc: Julia Stockton

Appendix C
Incidental Harassment Authorization

(To be inserted)

Appendix D
Cultural Resources

DEPARTMENT OF THE NAVY
NAVAL BASE KITSAP
120 SOUTH DEWEY ST
BREMERTON, WA 98314-5020

5090
Ser PRB4/00626
30 Mar 15

Allyson Brooks, PhD
State Historic Preservation Officer
Department of Archaeology & Historic Preservation
P.O. Box 48343
Olympia, WA 98504-8343

Dear Dr. Brooks:

SUBJECT: REQUEST FOR CONCURRENCE ON AREA OF POTENTIAL EFFECT AND FINDING OF EFFECT FOR FENDER SYSTEM REPAIR AT PIER 4 AT NAVAL BASE KITSAP BREMERTON, WA

The Navy is initiating consultation in accordance with Section 106 of the National Historic Preservation Act as amended and 36 CFR Part 800 for a proposed undertaking at Naval Base (NAVBASE) Kitsap Bremerton that repairs the Pier 4 fender system (Enclosure 1). The Area of Potential Effect (APE) for this undertaking is the footprint of Pier 4 (Enclosure 2).

The principle purpose of the fender system is to prevent Navy vessels and the pier from being damaged during vessel mooring or berthing. The existing Pier 4 fender system is deteriorated and insufficient for berthing large Navy vessels such as aircraft carriers without risk of damaging the pier's structural integrity. The proposed undertaking replaces deteriorated creosote treated timber fender piles, creosote treated timber chocks, and minor repairs to replace U-clamps on usable wood fender piles at Pier 4 (Enclosures 3 & 4). The proposed undertaking is essential to ensure a critical ship maintenance asset is not jeopardized as continued deterioration leaves the pier vulnerable to vessel impacts. This work is similar to recently completed projects that repaired the fender systems for Piers 5, 6, and 7 at NAVBASE Kitsap Bremerton.

The proposed project includes:

- Removal of approximately 80 existing creosote treated timber fender piles.
- Removal of deteriorated creosote timber chocks.
- Installation of approximately 80 12 to 14 inch steel fender piles via vibratory hammer.

SUBJECT: REQUEST FOR CONCURRENCE ON AREA OF POTENTIAL EFFECT AND FINDING OF EFFECT FOR FENDER SYSTEM REPAIR AT PIER 4 AT NAVAL BASE KITSAP BREMERTON, WA

Pier 4 is a contributing property to the Puget Sound Naval Shipyard National Historic Landmark (NHL) district and played an important role in the repair effort during World War II (WWII). Constructed in 1914, Pier 4 was extended in 1922 and has a traveling gantry crane that spans the concrete pier. This undertaking will repair the structural integrity of Pier 4 so that it can continue to be utilized for ship berthing and repair work. As such, the Navy has determined that this undertaking will not adversely affect historic properties or those contributing to the NHL.

The Navy requests your concurrence with our defining of the APE and finding of effect within 30 days of receipt of this letter. A draft Historic Inventory Report for Pier 4 has been input in the Department of Archaeology and Historic Preservation Historic Property Inventory (HPI) database and a hardcopy is included in the enclosures (Enclosure 5).

If you have any further questions, please contact Ms. Julia Stockton. She can be reached by phone at (360) 476-6067 or by email at julia.stockton@navy.mil.

Sincerely,

T. A. ZWOLFER
Captain, U.S. Navy
Commanding Officer

Enclosures: 1. Location of Naval Base Kitsap Bremerton
2. Location of Pier 4 and APE
3. Project Plan - Section View
4. Project Plan - Plan View
5. Pier 4 Historic Property Inventory

Copy to:
Elaine Jackson-Retondo, Ph.D.
Acting History Program Manager
National Historic Landmarks Program Manager
National Park Service
Pacific West Region Office
333 Bush Street, Suite 500
San Francisco, CA 94104

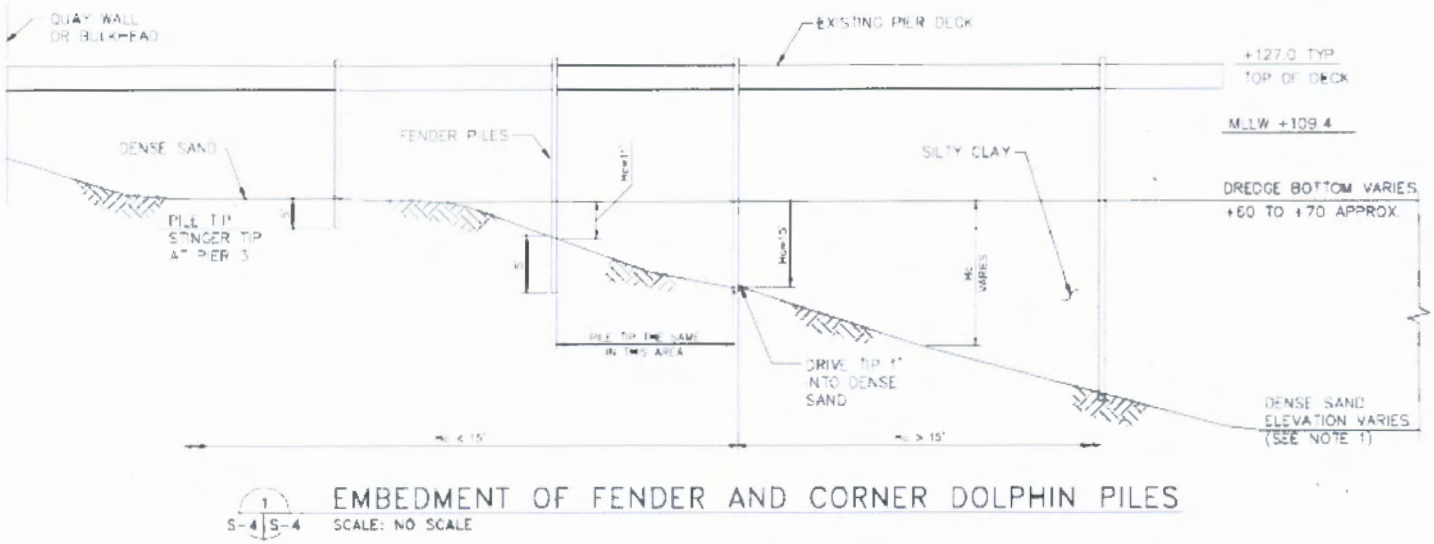
SUBJECT: REQUEST FOR CONCURRENCE ON AREA OF POTENTIAL EFFECT AND FINDING OF EFFECT FOR FENDER SYSTEM REPAIR AT PIER 4 AT NAVAL BASE KITSAP BREMERTON, WA

Enclosure 1. Location of Naval Base Kitsap Bremerton

SUBJECT: REQUEST FOR CONCURRENCE ON AREA OF POTENTIAL EFFECT AND FINDING OF EFFECT FOR PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WA

Enclosure 2. Location of Pier 4 and Area of Potential Effect

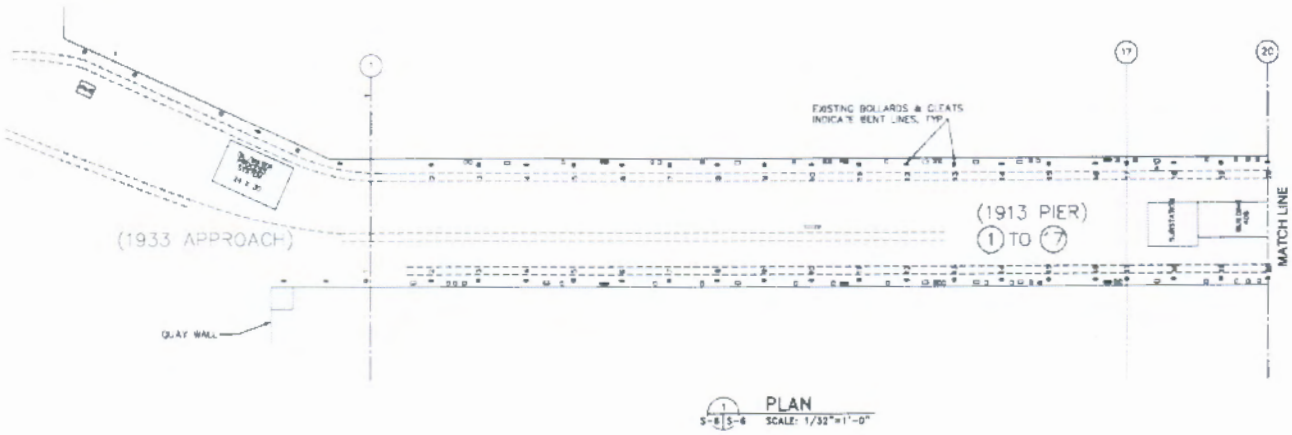
SUBJECT: REQUEST FOR CONCURRENCE ON AREA OF POTENTIAL EFFECT AND FINDING OF EFFECT FOR PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WA

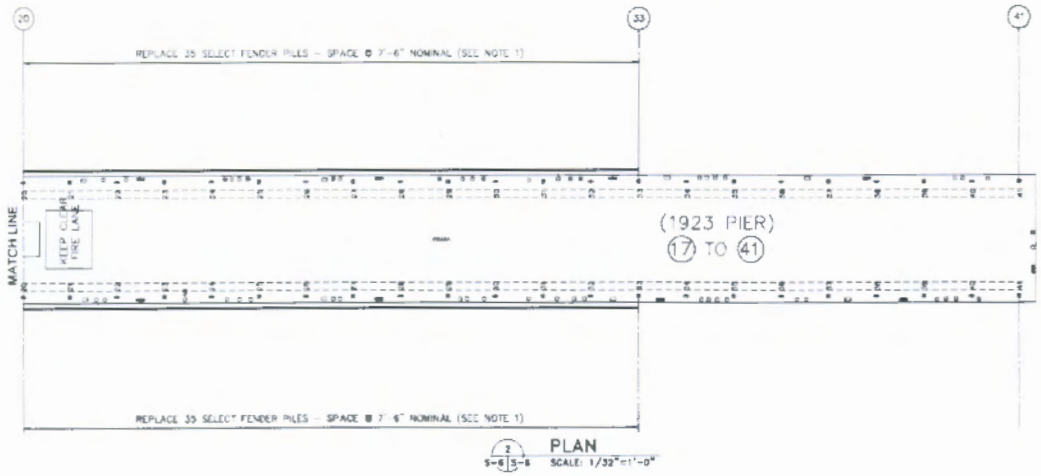


1
S-4 S-4 EMBEDMENT OF FENDER AND CORNER DOLPHIN PILES
SCALE: NO SCALE

Enclosure 3. Project Plan - Section View

SUBJECT: REQUEST FOR CONCURRENCE ON AREA OF POTENTIAL EFFECT AND FINDING OF EFFECT FOR PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WA





LEGEND

FENDER PILES

NOTES:

1. THE PLAN IS TO REPLACE A WOOD FENDER PILES WITH S
2. BASE PLAN OF PIER WAS P PUBLIC WORKS. CONTRACTO LAYOUT BEFORE SHOP DRA
3. THE FOLLOWING PW DRAWIN REFERENCE: 78/185, 6585, 6771-5 TO 6771-11, 9636
4. LOCATE ARCH FENDERS TO INTO ABANDONED CONDUITS

Enclosure 4. Project Plan - Plan View

SUBJECT: REQUEST FOR CONCURRENCE ON AREA OF POTENTIAL EFFECT AND FINDING OF EFFECT FOR PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WA

Enclosure 5.

Pier 4 Historic Property Inventory

Historic Inventory Report

Location

Field Site No.

DAHP No.

Historic Name: Pier 4

Common Name: Building 714

Property Address: 120 Dewey St, Bremerton, WA 98314

Comments:

Tax No./Parcel No.

Plat/Block/Lot

Acreage

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T24R01E	23			Kitsap	BREMERTON WEST

Coordinate Reference

Easting: 1110542

Northing: 820602

Projection: Washington State Plane South

Datum: HARN (feet)

Identification

Survey Name: Pier 4 Piling

Date Recorded: 02/19/2015

Field Recorder: Amanda J. Bennett

Owner's Name: US Navy

Owner Address:

City: Bremerton **State:** WA **Zip:** 98314

Classification: Structure

Resource Status: Survey/Inventory

Comments:

Within a District? Yes

Contributing? Yes

National Register: Navy Yard Puget Sound

Local District:

National Register District/Thematic Nomination Name: Navy Yard Puget Sound

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

Historic Inventory Report

Description

Historic Use: Defense - Naval Facility

Current Use: Defense - Naval Facility

Plan: Rectangle **Stories:** 1

Structural System: Concrete - Reinforced Concrete

Changes to Plan: Intact

Changes to Interior: Not Applicable

Changes to Original Cladding: Intact

Changes to Windows: Not Applicable

Changes to Other: Not Applicable

Other (specify):

Style:	Cladding:	Roof Type:	Roof Material:
Other - Utilitarian	Concrete Wood Other	None	None

Foundation:	Form/Type:
Post & Pier	Utilitarian

Narrative

Study Unit
Military

Other

Date of Construction: 1913 Built Date
1922 Addition

Builder: Erickson Construction Company

Engineer: Erickson Construction Company

Architect: Erickson Construction Company

Property appears to meet criteria for the National Register of Historic Places: Yes

Property is located in a potential historic district (National and/or local): Yes - National

Property potentially contributes to a historic district (National and/or local): Yes

Statement of Significance: From Historic Survey of Puget Sound Naval Shipyard, Grulich Architecture and Planning Services, 1986.

Pier 4 (Facility 714) was originally constructed in 1914 and was approximately doubled in length in 1922. Unlike the other piers in the industrial area (with the exception of pier 118), Pier 4 is not served by the heavy-gauge crane rail typical in the industrial yard. The pier has a traveling gantry crane that spans the width of the pier. This gives Pier 4 a unique configuration among the piers of the industrial yard. The pier was designed by the Puget Sound Navy Yard.

The photographic record of the use of this pier is limited. Prior to WWII it was used to moor the crane ship. The limited photographs of WWII indicate that the pier was primarily used for mooring of auxillary ships. Since Pier 4 is not equipped to handle the heavy traveling portal cranes that are employed in the yard to do much of the repair work, Pier 4 is assumed to have been used primarily for light refitting and repair work, and for ship moorage awaiting other activities.

Historic Inventory Report

Description of Physical Appearance:

From Historic Survey of Puget Sound Naval Shipyard, Grulich Architecture and Planning Services, 1986.

720 feet of Pier 4 was constructed in 1914 by Erickson Construction Company. A 1922 extension of 690 feet completed the structure which is 80 feet wide. The original pier was constructed after the completion of Drydock #2. Unlike other piers, Pier 4 does not have the heavy-gauge crane track that serves much of the rest of the yard. The pier has a traveling gantry crane that spans the pier. Bldg. 408 (1924) Electric Substation, is located at the midpoint of the pier. The Pier is concrete with concrete pilings, asphalt paving and wood fenders. The center of the Pier is used for storage and work area and has several miscellaneous temporary structures.

Major Bibliographic References:

Grulich Architecture and Planning Services. Historic Survey of Puget Sound Naval Shipyard, 1986.

Photos

Image courtesy of Google Maps
Pier 4, looking east
2015

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

April 8, 2015

Capt. T.A. Zwolfer
Commanding Officer
U.S. Navy, Naval Base Kitsap Bremerton
120 South Dewey St
Bremerton, WA 98134-5020

Attn: Julia Stockton

In future correspondence please refer to:
Log: 040815-09-USN
Property: Fender System Repair at Pier 4 Naval Base Kitsap Bremerton
Re: NO Adverse Effect

Dear Capt. Zwolfer:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP). The above referenced project has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. My review is based upon documentation contained in your communication.

First, I agree with the Area of Potential Effect (APE) as described in your consultation letter. I also concur that the proposed fender pile replacement project will have "NO ADVERSE EFFECT" on Pier 4, a contributing resource to the Navy Yard Puget Sound National Historic Landmark (NHL) district. If additional information on the project becomes available, or if any archaeological resources are uncovered during construction, please halt work in the area of discovery and contact the appropriate Native American Tribes and DAHP for further consultation.

Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,

Nicholas Vann, AIA
Historical Architect
(360) 586-3079
Nicholas.Vann@dahp.wa.gov

cc: Elaine Jackson-Retondo

DEPARTMENT OF THE NAVY
NAVAL BASE KITSAP
120 SOUTH DEWEY ST
BREMERTON, WA 98314-5020

5090
Ser PRB4/00627
30 Mar 15

The Suquamish Tribe
The Honorable Leonard Forsman
PO Box 498
Suquamish WA 98392

Dear Chairman Forsman:

SUBJECT: REQUEST FOR SECTION 106 CONSULTATION ON PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WASHINGTON

In accordance with Section 106 of the National Historic Preservation Act, the Navy would like to initiate consultation regarding a proposed project that repairs the Pier 4 fender system at Naval Base (NAVBASE) Kitsap, Bremerton. The Area of Potential Effect (APE) for this undertaking is the footprint of Pier 4 (Enclosure 1).

Pier 4 is located centrally on the shore of the Puget Sound Naval Shipyard. The principle purpose of the fender system is to prevent Navy vessels and the pier from being damaged during vessel mooring or berthing. The existing Pier 4 fender system is deteriorated and insufficient for berthing large Navy vessels such as aircraft carriers without risk of damaging the pier's structural integrity. The proposed undertaking replaces deteriorated creosote treated timber fender piles, creosote treated timber chocks, and minor repairs to replace U-clamps on usable wood fender piles at Pier 4. The proposed undertaking is essential to ensure a critical ship maintenance asset is not jeopardized as continued deterioration leaves the pier vulnerable to vessel impacts.

The proposed project includes:

- Removal of approximately 80 existing creosote treated timber fender piles.
- Removal of deteriorated creosote timber chocks.
- Installation of approximately 80 12 to 14 inch steel fender piles via vibratory hammer.

SUBJECT: REQUEST FOR SECTION 106 CONSULTATION ON PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WASHINGTON

Pier 4 is a contributing property to the Puget Sound Naval Shipyard National Historic Landmark (NHL) district and played an important role in the repair effort during World War II (WWII). Constructed in 1914, Pier 4 was extended in 1922 and has a travelling gantry crane that spans the concrete pier. This undertaking will repair the structural integrity of Pier 4 so that it can continue to be utilized for ship berthing and repair work. As such, the Navy has determined that this undertaking will not adversely affect historic properties or those contributing to the NHL.

A review of records reveals that no historic sites are presently known within the land portion of the APE. A 2002 archeological survey of Naval Base Kitsap Bremerton found the area to have a low probability for hunter-fisher-gatherer and historic period archeological resources. This is a likely result of the post-1890 filling in of the installations shoreline. According to maps of the historic shoreline, this area would have been completely underwater prior to infill during shipyard development. Currently, the beach gently slopes down from the quay wall and consists of miscellaneous rocks and debris.

The new piles will be installed in approximately the same location as the existing piles. If any archaeological resources are uncovered during construction, project work will be halted in the area of discovery and appropriate Native American Tribes and the Department of Archaeology and Historic Preservation will be contacted for further consultation.

Because the proposed undertaking will not negatively impact the historic Pier 4, alter the viewshed of the NHL, or disturb known archeological resources, the Navy finds that there will be No Adverse Effect on historic properties.

Naval Base Kitsap requests your concurrence on the definition of the APE and the determination of effect on the proposed undertaking.

SUBJECT: REQUEST FOR SECTION 106 CONSULTATION ON PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WASHINGTON

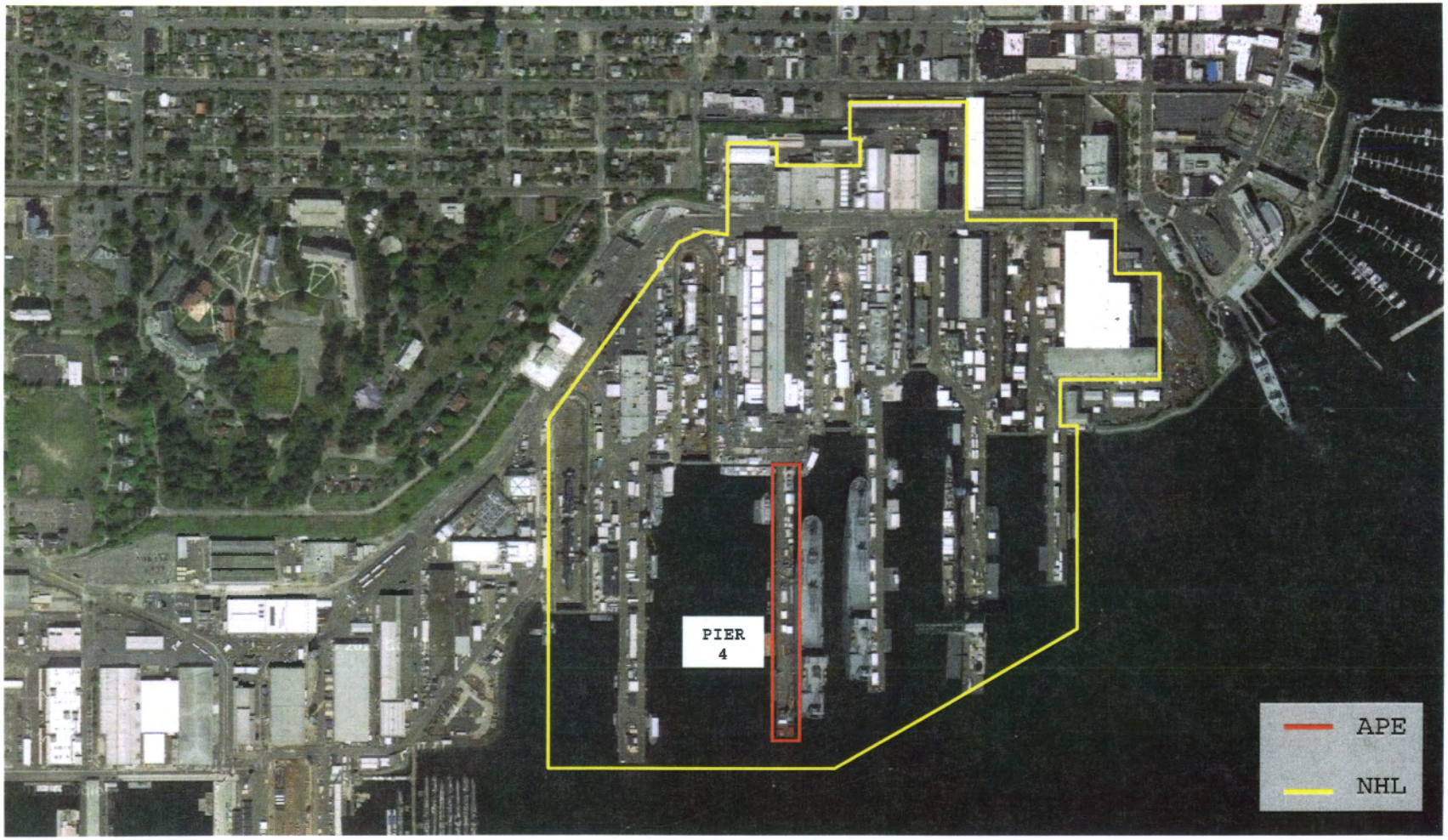
If you have any questions please contact Ms. Julia Stockton. She can be reached by telephone at (360)476-6067 or by e-mail at julia.stockton@navy.mil.

Sincerely,

T. A. ZWOLFER
Captain, U. S. Navy
Commanding Officer

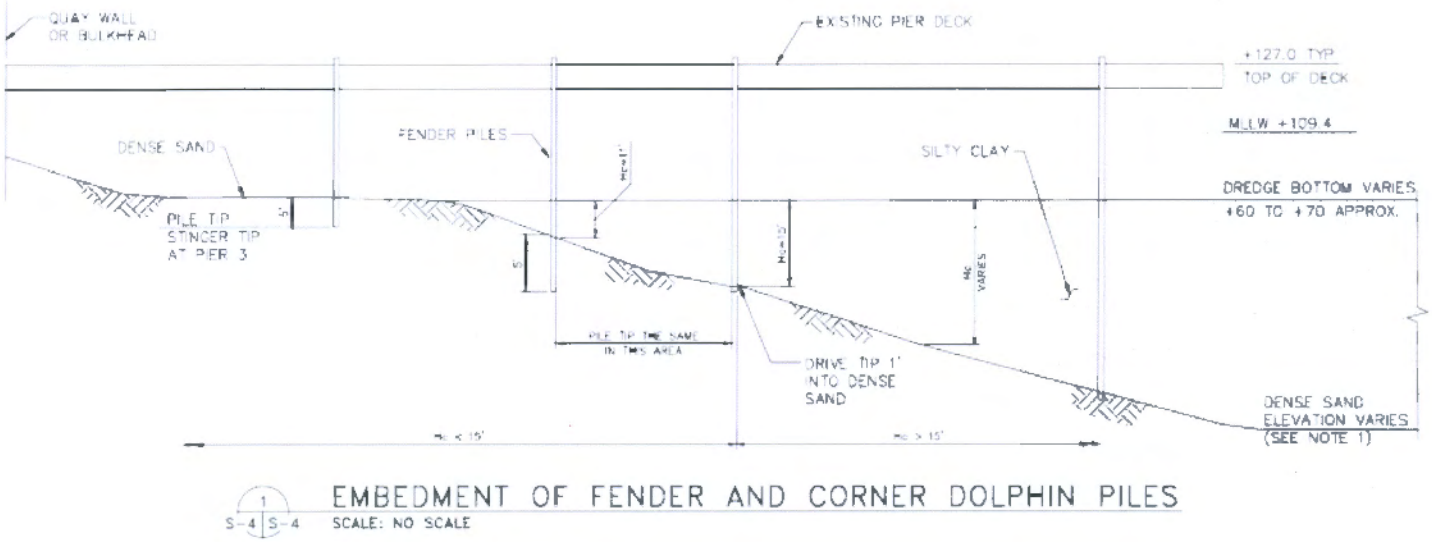
Enclosures:
1. Area of Potential Effect & NHL Boundary
2. Project Plan - Section View
3. Project Plan - Plan View

SUBJECT: REQUEST FOR SECTION 106 CONSULTATION ON PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WASHINGTON



Enclosure 1. Area of Potential Effect and NHL Boundary

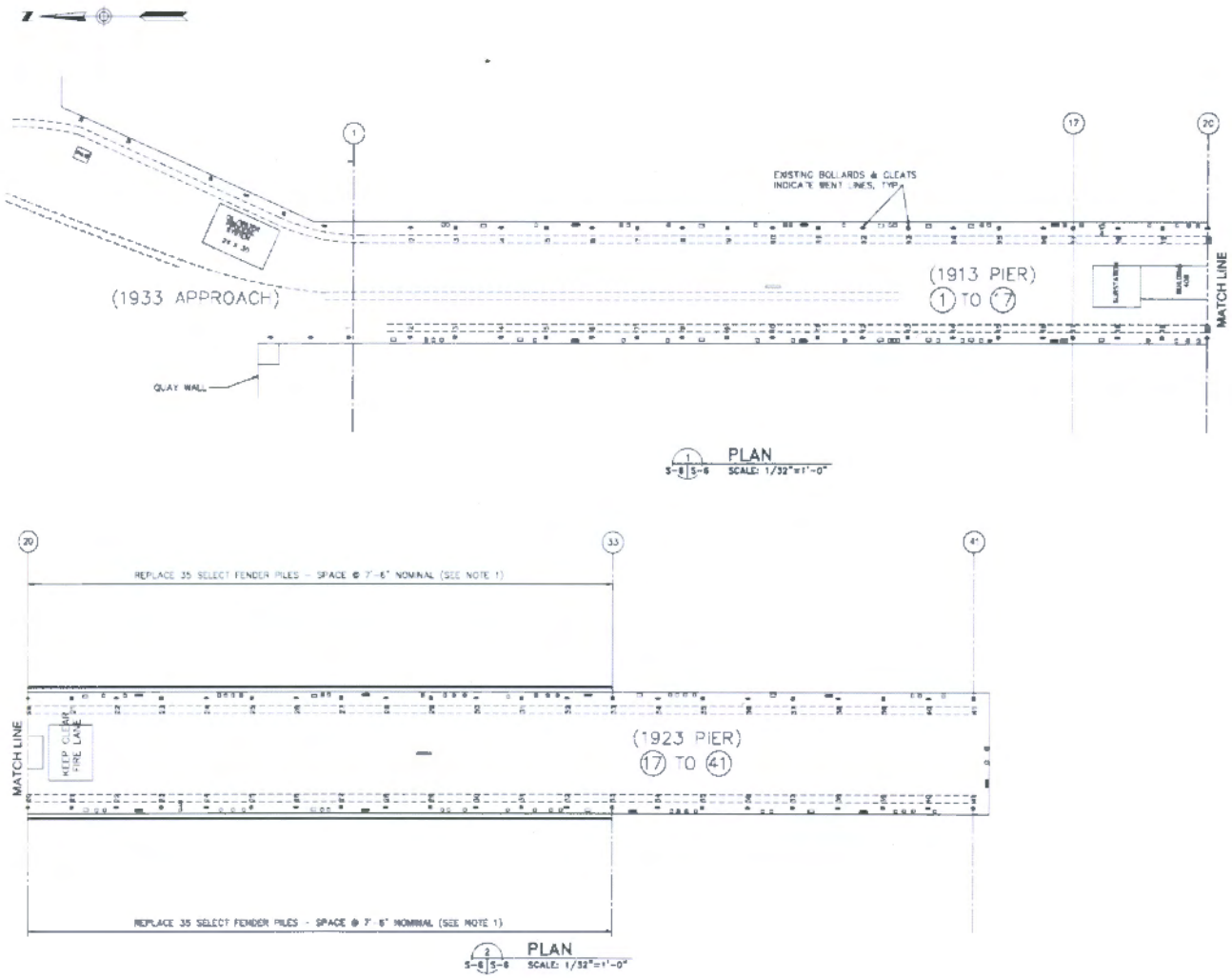
SUBJECT: REQUEST FOR SECTION 106 CONSULTATION ON PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WASHINGTON



1
S-4 | S-4 EMBEDMENT OF FENDER AND CORNER DOLPHIN PILES
SCALE: NO SCALE

Enclosure 2. Project Plan - Section View

SUBJECT: REQUEST FOR SECTION 106 CONSULTATION ON PROPOSED PILING REPLACEMENT AT NAVAL BASE KITSAP BREMERTON, WASHINGTON



Enclosure 3. Project Plan - Plan View

-----Original Message-----
From: Dennis Lewarch [mailto:dlewarch@Suquamish.nsn.us]
Sent: Thursday, May 28, 2015 10:26 AM
To: Bennett, Amanda J CIV NAVFAC NW, PRB41
Subject: RE: Request for concurrence on Pier 4 Piling Replacement

Hello Amanda,

Thank you for the reminder. I reviewed the proposed project plans and do not have any concerns regarding archaeological resources.

Best,

Dennis

Dennis E. Lewarch
Tribal Historic Preservation Officer, Fisheries Department, Suquamish Tribe

Office Telephone:360-394-8529 Cell:360-509-1321 FAX:360-598-4666

Mailing Address: Suquamish Tribe Administration Building Street Address:
P.O. Box 498 18490 Suquamish Way
Suquamish, WA 98392 Suquamish, WA 98392

-----Original Message-----
From: Bennett, Amanda J CIV NAVFAC NW, PRB41 [mailto:amanda.j.bennett@navy.mil]
Sent: Thursday, May 28, 2015 9:56 AM
To: Dennis Lewarch
Subject: Request for concurrence on Pier 4 Piling Replacement

Hi Dennis,
I have attached the Section 106 consultation letter regarding the Pier 4 Piling Replacement that was sent to Chairman Forsman on 3/30 for review and concurrence.
We are also preparing an EA and would appreciate your concurrence or to know if you have any questions or concerns.

Thank you,
Amanda J. Bennett

NBK Cultural Resources Manager
Architectural Historian
NAVFAC NW
467 W Street, 4th Floor, Rm 448
Bremerton, WA 98314

M, Tu, Th, F: 360-476-6613
W: 206-595-1604

DEPARTMENT OF THE NAVY
NAVAL BASE KITSAP
120 SOUTH DEWEY ST
BREMERTON, WA 98314-5020

5090
Ser PRB4/ 01108
12 Jun 15

Elaine Jackson-Retondo
National Historic Landmarks Program Manager
National Park Service
333 Bush Street, Suite 500
San Francisco, CA 94104

Dear Dr. Jackson-Retondo:

SUBJECT: REQUEST FOR PARTICIPATION IN CONSULTATION FOR FENDER SYSTEM REPAIR AT PIER 4 AT NAVAL BASE KITSAP BREMERTON, WA

The Navy is initiating consultation in accordance with Section 106 of the National Historic Preservation Act as amended and 36 CFR Part 800 for a proposed undertaking at Naval Base (NAVBASE) Kitsap Bremerton that repairs the Pier 4 fender system (Enclosure 1). The Area of Potential Effect (APE) for this undertaking is the footprint of Pier 4, a contributing resource of the Puget Sound Naval Shipyard National Historic Landmark (NHL) (Enclosure 2).

The principle purpose of the fender system is to prevent Navy vessels and the pier from being damaged during vessel mooring or berthing. The existing Pier 4 fender system is deteriorated and insufficient for berthing large Navy vessels such as aircraft carriers without risk of damaging the pier's structural integrity. The proposed undertaking replaces deteriorated creosote treated timber fender piles, creosote treated timber chocks, and minor repairs to replace U-clamps on usable wood fender piles at Pier 4 (Enclosures 3 & 4). The proposed undertaking is essential to ensure a critical ship maintenance asset is not jeopardized as continued deterioration leaves the pier vulnerable to vessel impacts. This work is similar to recently completed projects that repaired the fender systems for Piers 5, 6, and 7 at NAVBASE Kitsap Bremerton.

SUBJECT: REQUEST FOR PARTICIPATION IN CONSULTATION FOR FENDER SYSTEM REPAIR AT PIER 4 AT NAVAL BASE KITSAP BREMERTON, WA

The proposed project includes:

- Removal of approximately 80 existing creosote treated timber fender piles.
- Removal of deteriorated creosote timber chocks.
- Installation of approximately 80 12 to 14 inch steel fender piles via vibratory hammer.

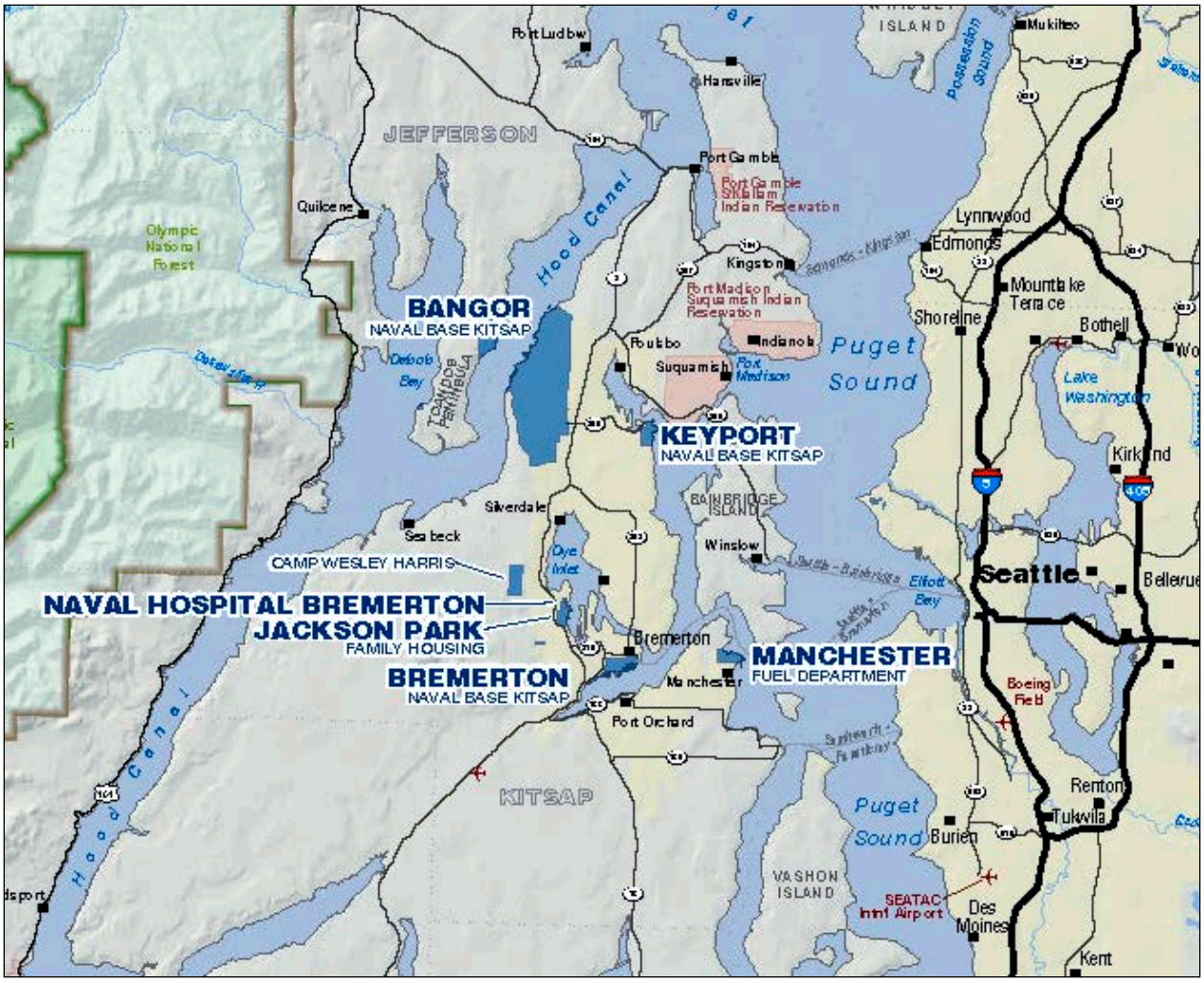
Pier 4 is a contributing property to the Puget Sound Naval Shipyard National Historic Landmark (NHL) district and played an important role in the repair effort during World War II (WWII). Constructed in 1914, Pier 4 was extended in 1922 and has a traveling gantry crane that spans the concrete pier (Enclosure 5). This undertaking will repair the structural integrity of Pier 4 so that it can continue to be utilized for ship berthing and repair work. As such, the Navy has determined that this undertaking will not adversely affect historic properties or those contributing to the NHL.

Please notify the Navy should you choose to participate in this consultation within 30 days of receipt of this letter. If you have any further questions, please contact Ms. Amanda J. Bennett. She can be reached by phone at (360) 476-6613 or by email at amanda.j.bennett@navy.mil.

Sincerely,

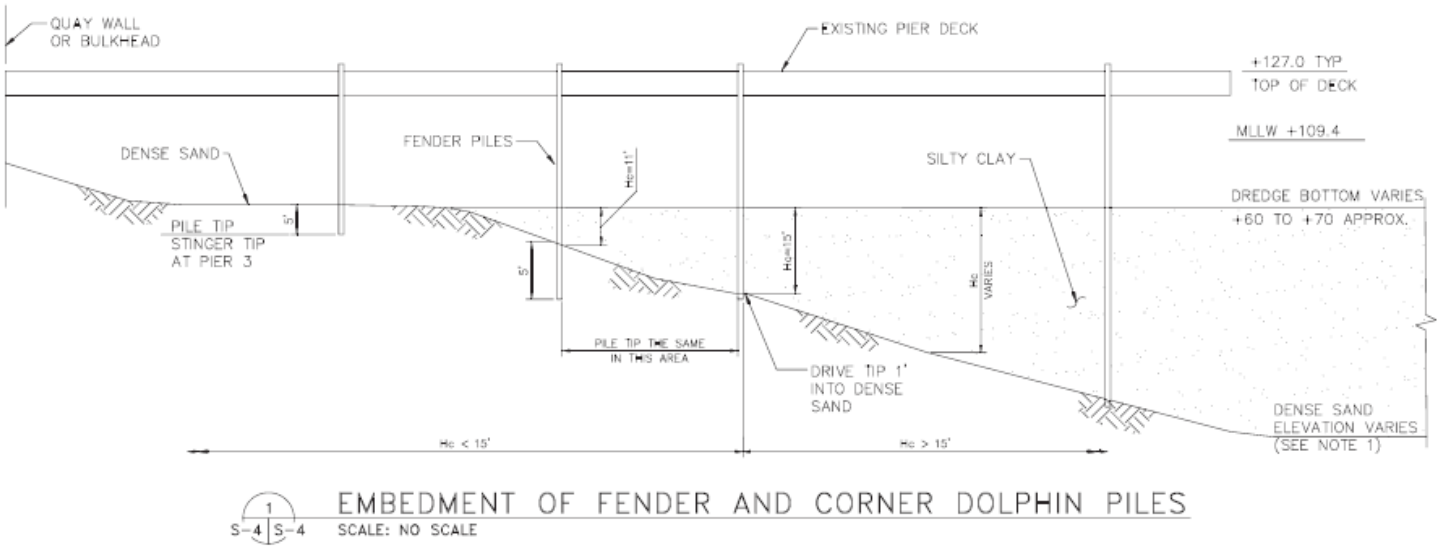
T. A. ZWOLFER
Captain, U.S. Navy
Commanding Officer

Enclosures:
1. Location of Naval Base Kitsap Bremerton
2. Location of Pier 4 and APE
3. Project Plan - Section View
4. Project Plan - Plan View
5. Pier 4 Historic Property Inventory



Enclosure 1. Location of Naval Base Kitsap Bremerton

Enclosure 2. Location of Pier 4 and Area of Potential Effect



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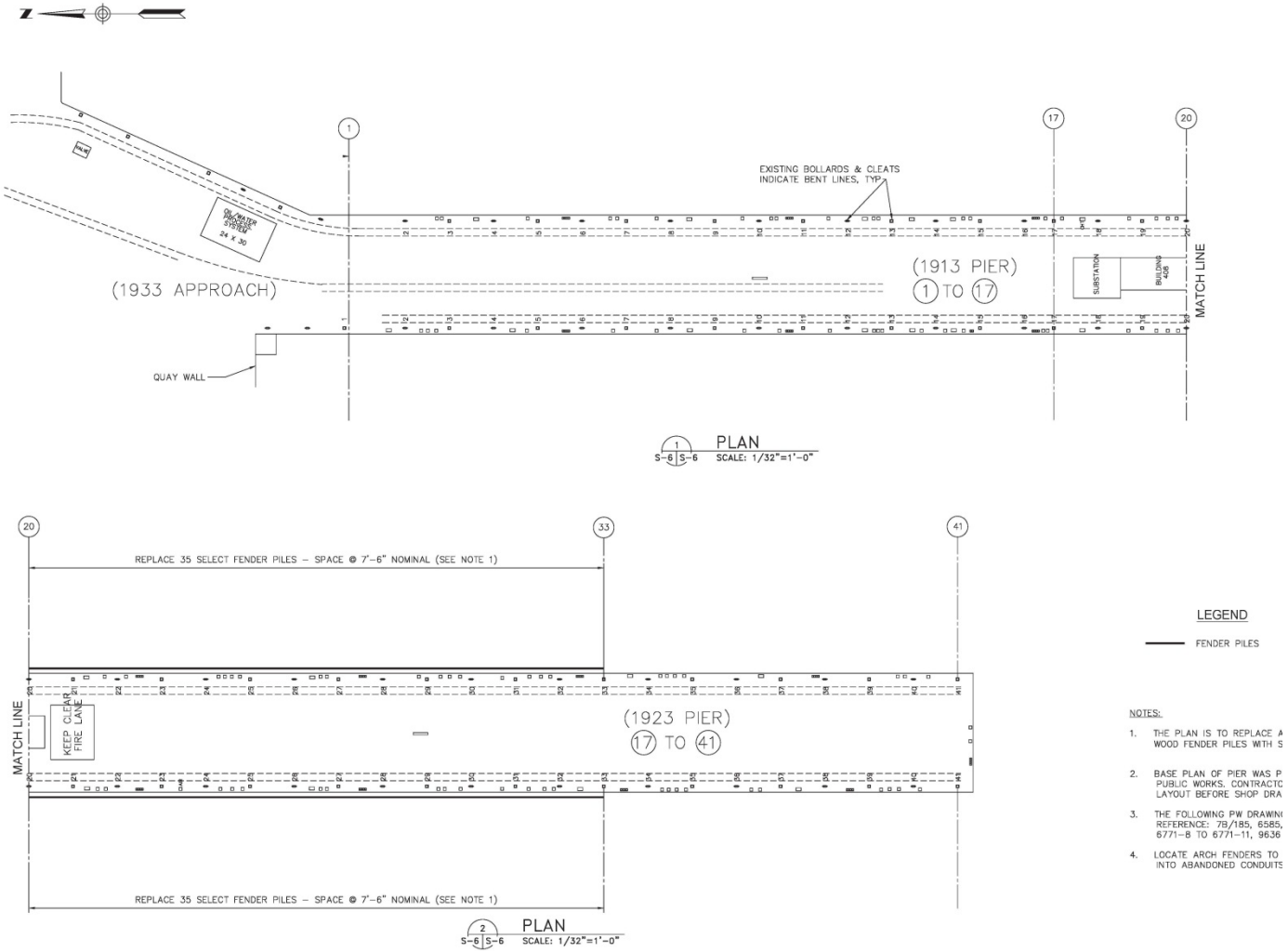
S-4 | S-4

EMBEDMENT OF FENDER AND CORNER DOLPHIN PILES

SCALE: NO SCALE

Enclosure 3. Project Plan – Section View



Enclosure 4. Project Plan – Plan View

Enclosure 5.

Pier 4 Historic Property Inventory

Historic Inventory Report

Location

Field Site No. DAHP No.

Historic Name: Pier 4

Common Name: Building 714

Property Address: 120 Dewey St, Bremerton, WA 98314

Comments:

Tax No./Parcel No.

Plat/Block/Lot

Acreage

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T24R01E	23			Kitsap	BREMERTON WEST

Coordinate Reference

Easting: 1110542

Northing: 820602

Projection: Washington State Plane South

Datum: HARN (feet)

Identification

Survey Name: Pier 4 Piling Date Recorded: 02/19/2015

Field Recorder: Amanda J. Bennett

Owner's Name: US Navy

Owner Address:

City: Bremerton State: WA Zip: 98314

Classification: Structure

Resource Status: Comments:
Survey/Inventory

Within a District? Yes

Contributing? Yes

National Register: Navy Yard Puget Sound

Local District:

National Register District/Thematic Nomination Name: Navy Yard Puget Sound

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

Description

Historic Use: Defense - Naval Facility

Current Use: Defense - Naval Facility

Plan: Rectangle

Stories: 1

Structural System: Concrete - Reinforced Concrete

Changes to Plan: Intact

Changes to Interior: Not Applicable

Changes to Original Cladding: Intact

Changes to Windows: Not Applicable

Changes to Other: Not Applicable

Other (specify):

Style:	Cladding:	Roof Type:	Roof Material:
Other - Utilitarian	Concrete Wood Other	None	None

Foundation:	Form/Type:
Post & Pier	Utilitarian

Narrative

Study Unit

Military

Other

Date of Construction:

1913 Built Date

1922 Addition

Builder: Erickson Construction Company

Engineer: Erickson Construction Company

Architect: Erickson Construction Company

Property appears to meet criteria for the National Register of Historic Places:Yes

Property is located in a potential historic district (National and/or local): Yes - National

Property potentially contributes to a historic district (National and/or local): Yes

Statement of Significance:

From Historic Survey of Puget Sound Naval Shipyard, Grulich Architecture and Planning Services, 1986.

Pier 4 (Facility 714) was originally constructed in 1914 and was approximately doubled in length in 1922. Unlike the other piers in the industrial area (with the exception of pier 118), Pier 4 is not served by the heavy-gauge crane rail typical in the industrial yard. The pier has a traveling gantry crane that spans the width of the pier. This gives Pier 4 a unique configuration among the piers of the industrial yard. The pier was designed by the Puget Sound Navy Yard.

The photographic record of the use of this pier is limited. Prior to WWII it was used to moor the crane ship. The limited photographs of WWII indicate that the pier was primarily used for mooring of auxillary ships. Since Pier 4 is not equipped to handle the heavy traveling portal cranes that are employed in the yard to do much of the repair work, Pier 4 is assumed to have been used primarily for light refitting and repair work, and for ship moorage awaiting other activities.

Description of Physical Appearance:	From Historic Survey of Puget Sound Naval Shipyard, Grulich Architecture and Planning Services, 1986. 720 feet of Pier 4 was constructed in 1914 by Erickson Construction Company. A 1922 extension of 690 feet completed the structure which is 80 feet wide. The original pier was constructed after the completion of Drydock #2. Unlike other piers, Pier 4 does not have the heavy-gauge crane track that serves much of the rest of the yard. The pier has a traveling gantry crane that spans the pier. Bldg. 408 (1924) Electric Substation, is located at the midpoint of the pier. The Pier is concrete with concrete pilings, asphalt paving and wood fenders. The center of the Pier is used for storage and work area and has several miscellaneous temporary structures.
Major Bibliographic References:	Grulich Architecture and Planning Services. Historic Survey of Puget Sound Naval Shipyard, 1986.

Photos

Image courtesy of Google Maps
Pier 4, looking east
2015

Appendix E
Government-to-Government Consultations

DEPARTMENT OF THE NAVY
NAVAL BASE KITSAP
120 SOUTH DEWEY ST
BREMERTON, WA 98314-5020

5090
Ser PRB4/00342
27 Feb 15

The Suquamish Tribe
The Honorable Leonard Forsman
P.O. Box 498
Suquamish, Washington 98392

Dear Chairman Forsman:

SUBJECT: INVITATION TO INITIATE GOVERNMENT-TO-GOVERNMENT CONSULTATION FOR PIER 4 FENDER SYSTEM REPAIRS AT NAVAL BASE KITSAP BREMERTON, WASHINGTON

I am writing to inform you of a proposed project to remove and replace portions of the existing Pier 4 fender system at Naval Base Kitsap Bremerton. The fender system consists primarily of creosote treated timber piles, many of which are inadequate for protecting the pier from vessel impacts. The proposed project would remove approximately 80 creosote timber piles from Sinclair Inlet and replace them with steel piles.

Pursuant to the Navy's American Indian and Alaska Native policy, I would like to extend the opportunity to review this action and evaluate whether you believe there would be a significant impact on tribal treaty rights resulting from the implementation of the project. If there is a concern that tribal rights may be adversely affected, please contact us.

I look forward to working with you to address any concerns or provide additional information you may need. Please contact me directly at (360) 627-4000 or thomas.zwolfer@navy.mil, or contact my Environmental Director, Mr. Greg Leicht at (360) 315-5411 or gregory.leicht@navy.mil, with any questions or comments.

Sincerely,

T. A. ZWOLFER
Captain, U.S. Navy
Commanding Officer

Enclosure: 1. Pier 4 Fender System Repairs, Naval Base Kitsap Bremerton

PIER 4 FENDER SYSTEM REPAIRS
NAVAL BASE KITSAP BREMERTON

Pier 4 is located at the east end of the Puget Sound Naval Shipyard (Figure 1). Initially constructed in 1914 with an extension of 690 feet completed in 1922, it is a 1410 foot long concrete pier supported by piles with a quay wall under the north end.

The Navy proposes to repair the existing deteriorated timber fender system. The proposed work would provide a structurally sound fendering system to ensure the pier is not vulnerable to vessel impacts.

The proposed project would replace approximately 80 deteriorated creosote treated timber fender piles, creosote treated timber chocks, and replace U-clamps. The project would install new steel fender piles via vibratory hammer in the same approximate location as the existing piles. Untreated wood camel logs would also be removed and replaced.

This project is planned for FY16 and would be accomplished in a single in-water work window (July 3 to March 1).

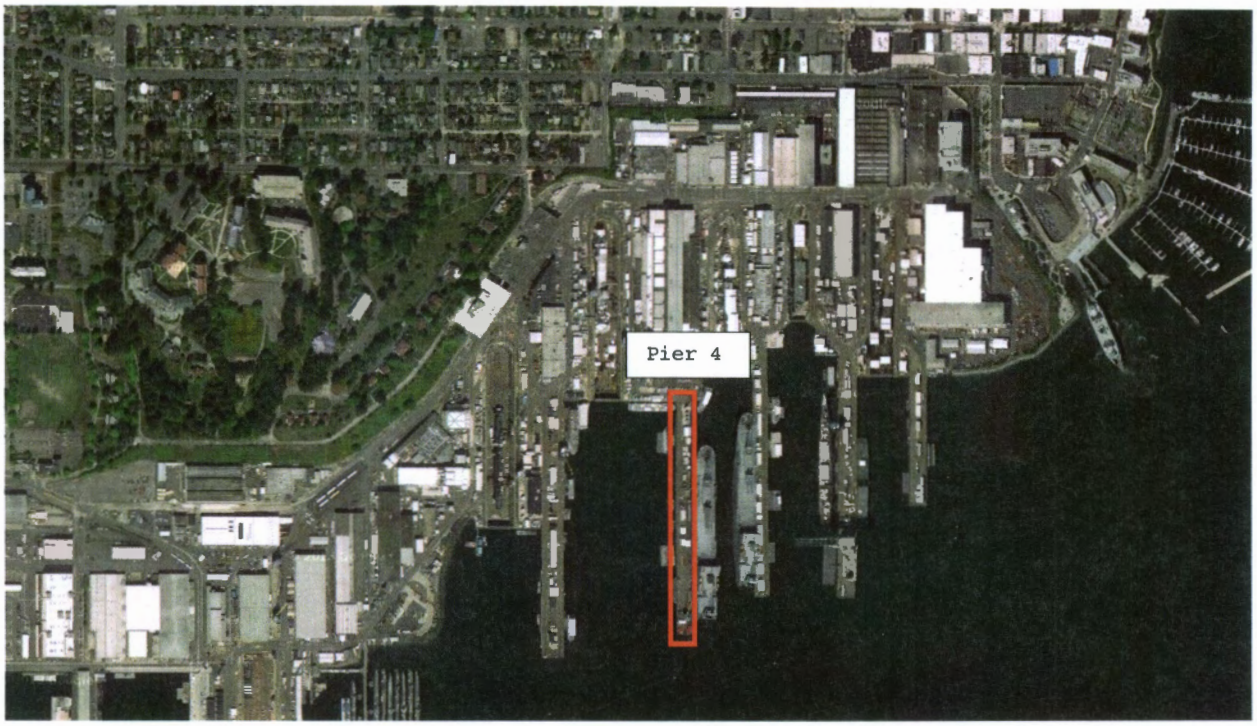
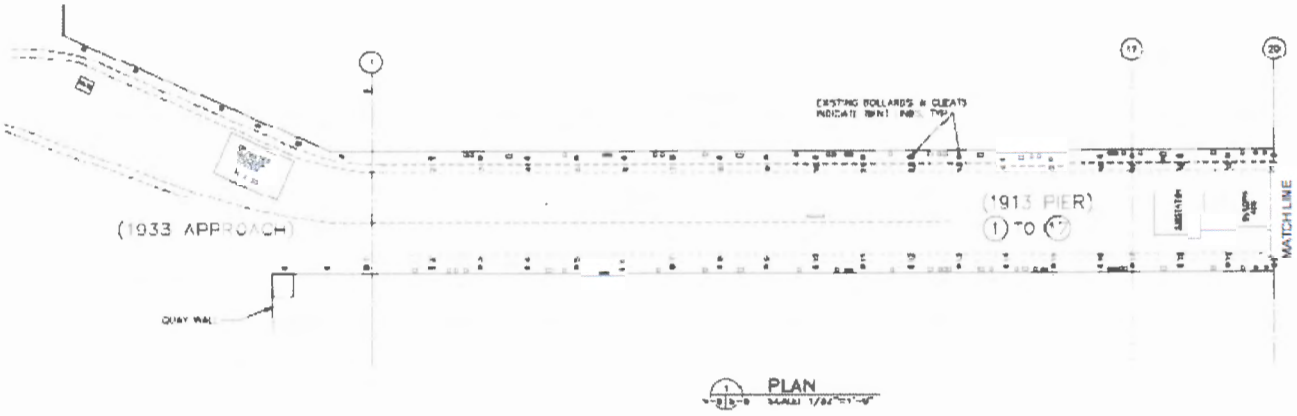
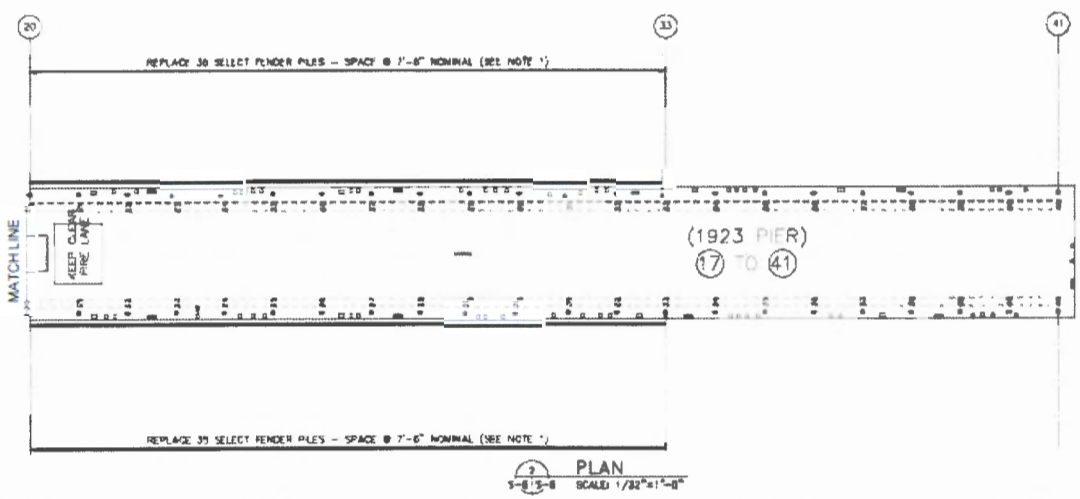


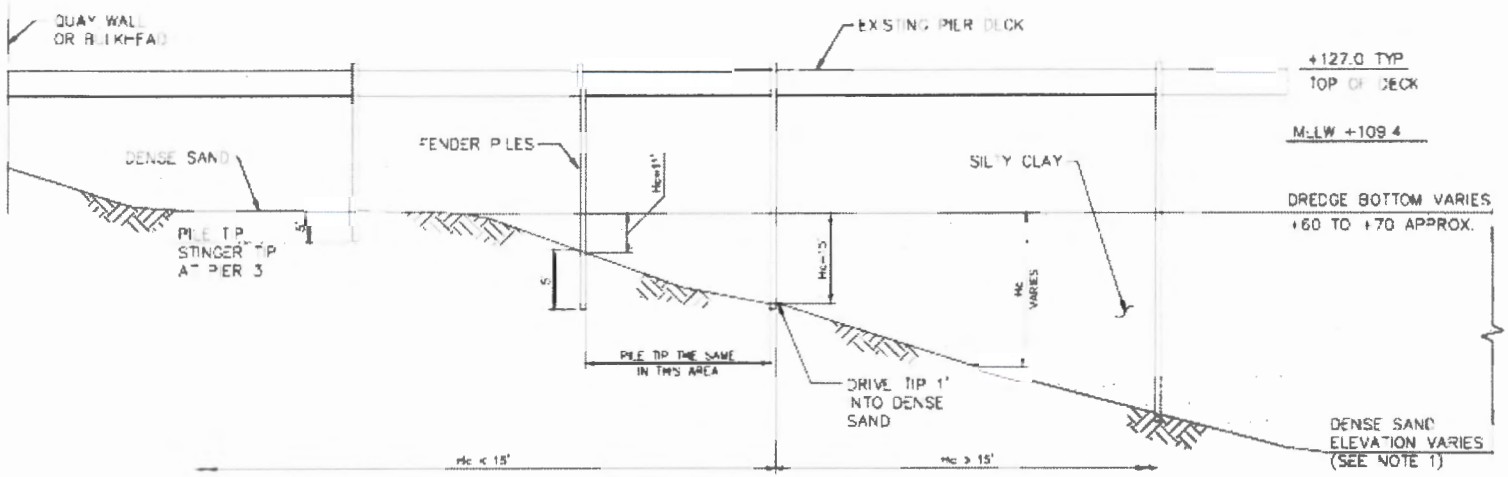
Figure 1: Pier 4, Project Area





PURPCSE: MAINTENANCE AND REPAIR	NAME: US NAVY	PROPOSED: PIER 4 FENDER SYSTEM REPAIR
DATUM: MLLW (109.4)	REFERENCE#:	IN: SINCLAIR INLET
ADJACENT PROPERTY OWNERS: 2) CITY OF BREMERTON	SITE LOCATION ADDRESS: NAVAL BASE KITSAP BREMERTON, WA 98314	COUNTY: KITSAP STATE: WA DATE: 2/4/15

Figure 2: Plan View



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S-4 | S-4 EMBEDMENT OF FENDER AND CORNER DOLPHIN PILES
SCALE: NO SCALE

PURPOSE: MAINTENANCE AND REPAIR DATUM: MLLW (109.4) ADJACENT PROPERTY OWNERS: 1) CITY OF BREMERTON	NAME: US NAVY REFERENCE#: SITE LOCATION ADDRESS: NAVAL BASE KITSAP BREMERTON, WA 98314	PROPOSED: PIER 4 FENDER SYSTEM REPAIR IN: SINCLAIR INLET COUNTY: KITSAP STATE: WA DATE: 2/4/15

Figure 3: Side View