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DEPARTMENT OF THE ARMY
RECORD OF DECISION
Seattle District

Application No. NWS-2009-572; U.S. Navy (Bangor) (Explosives Handling Wharf 2)

Applicant. U.S. Navy, Naval Base Kitsap

I. Introduction.

A. Contents. This permit decision document constitutes the Record of Decision (ROD), the statement of adoption of the Environmental Impact Statement (EIS), and the determination of compliance with the Section 404(b)(1) Guidelines for the work described in the attached Public Notice published by the Seattle District, U.S. Army Corps of Engineers (Corps) on 27 January 2012.

The EHW-2 project was the subject of a Federal EIS. The U.S. Navy (Navy) was the Federal lead agency for the EIS, and the Seattle District was a Cooperating Agency. The original Notice of Intent (NOI) to prepare an EIS was published in the Federal Register on 15 May 2009. A Notice of Availability of the Draft EIS was published on 18 March 2011 and public hearings were held on 19, 20, and 21 April 2011. A Notice of Availability of the Supplemental Draft EIS (SDEIS) was published on 7 October 2011 and a Notice of Availability of the Final EIS (FEIS) was published on 30 March 2012. The Navy produced a Record of Decision (ROD) on 4 May 2012. Following independent review of the Navy EIS, I have concluded that the Navy has satisfactorily responded to the Corps' comments and suggestions and the Corps is therefore hereby adopting the EIS.

B. Decision. Based upon a thorough analysis of relevant evaluation factors, my decision is to issue a Department of the Army (DA) permit with special conditions for this work. The special conditions are discussed at the end of this document.

II. Project Information.

A. Location. In Hood Canal and wetlands at Naval Base Kitsap-Bangor (NBK-Bangor) in Kitsap County, Washington. There are six work areas associated with the proposed project as shown in Figure 1 below. The project area includes the proposed Explosives Handling Wharf (EHW-2) site, the proposed adjacent infrastructure site, the proposed laydown area, the proposed pure water facility site, the proposed three new buildings site, and the proposed replacement parking spaces.

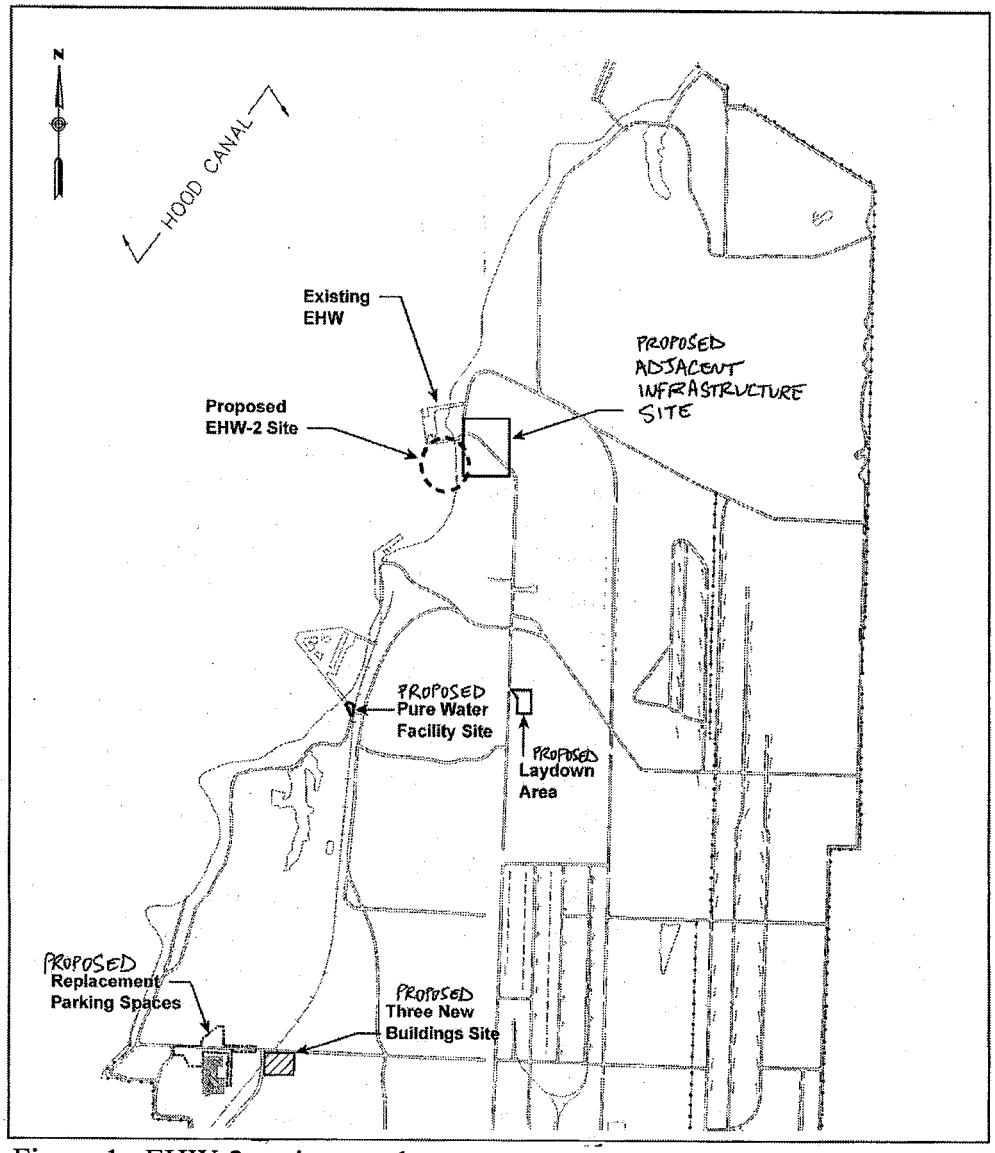

Figure 1. EHW-2 project work areas.

B. Description of the Proposed Work and Impacts to Waters of the U.S.
Construct and operate a second Explosives Handling Wharf (EHW-2) and attendant features necessary for the use and maintenance of the EHW-2. The project would be constructed over a five year period.

The project consists of in-water and land-based construction and operations resulting in 6.3 acres of new overwater structure, 0.03 acres of nearshore fill, and 0.20 acres of wetland fill. The project involves construction of a pile-supported wharf and access trestles, installation of a ramp and float, and construction of an access road.

The EHW-2 wharf would extend approximately 600 feet from the shore at water depths of 60 to 100 feet and would consist of a main wharf, a warping wharf, and lightning protection towers. It would include a slip (docking area) for submarines surrounded on three sides by the operational wharf area with an overhead cover. The warping wharf

would extend out from the main wharf. The warping wharf would be used to line up submarines to move into the slip and would provide a safety barrier between submarines and the existing EHW during berthing. The main wharf would have dimensions of 632 feet by 250 feet, resulting in 158,000 square feet (3.6 acres) of new structure. Of this amount, 152,200 square feet would be under the wharf cover. The height of the structure including the wharf cover would be 135 feet. The main wharf would include an operations support building (25,700 square feet providing office and storage space and mechanical/electrical system component housing). The six lightning protection towers (total height 207 feet) would be steel frame structures resulting in 5,400 square feet of new structure.

The wharf and access trestle component involves the following elements: drive up to 1,250 steel pipe piles ranging in diameter from 24 to 48-inches, drive approximately 150 temporary steel falsework piles, 36-inches in diameter (piling to be removed upon construction completion), construct a 632- by 250-foot overwater main wharf consisting of precast concrete sections supported on cast-in-place concrete pile caps, a 688- by 40-foot warping wharf, six 30- by 30-foot lightning protection towers, install lighting on and under the wharf and approach trestles and over the surrounding water ranging from 100-Watt metal halide lights to 1,500-Watt quartz lights, construct 81,208 square feet of overwater approach trestles comprised of precast concrete deck sections supported on cast in place concrete pile caps, excavate up to 1,350 cubic yards of material and place up to 1,350 cubic yards of rock and gravel bedding material waterward of the high tide line to construct a 103-foot long abutment and 69-foot wing wall to connect the access trestles to the access road, and install an 80- by 3.5-foot grated ramp and a 35- by 18-foot concrete float. Construction of the access road involves the excavation and discharge of fill in 0.20 acres of wetland.

Proposed work in uplands involves the following elements: construct a security fence, clear and grade a 5-acre construction laydown area, enlarge existing parking areas, install utilities, construct three support buildings and a pure water facility, install new culverts and an outfall, and modify or demolish up to 20 existing facilities or structures in proximity to the proposed EHW-2 to comply with Department of Defense Explosives Safety Board (DDESB) and Naval Ordnance Safety and Security Activity (NOSSA) requirements.

The Navy conducted an environmental review of the proposed project and prepared a Draft and Final EIS. During the preparation of the DEIS and FEIS, the impacts associated with the proposed project were calculated and evaluated based off of preliminary project drawings. As project design and construction methods were refined, calculations of impacted areas were revised as described below. The Corps has determined these revisions more accurately itemize the impacts from the project, but the revisions were not substantive changes to warrant a supplemental FEIS notice or the issuance of a revised Corps public notice.

Permanent Impacts to Waters of the U.S. (WOUS)
These impacts are defined as those directly within the construction and operational footprint of the project (as viewed from directly above the project).

1) Freshwater Impacts: The project will permanently fill up to 0.20 acre of Category IV palustrine forested slope wetland for installation of the access road.

2) Marine Impacts: The project will permanently fill 0.03 acre in Hood Canal for the wharf trestle abutment. The wharf, including the wharf cover, warping wharf, lightning towers, approach trestles, ramp, and float will permanently shade 6.3 acres of WOUS and the nearshore environment. Up to 1,250 steel pipe piles, 24 to 48-inches in diameter, would displace up to 0.21 acres of seafloor. Table 1 below summarizes the permanent direct impacts to WOUS from the proposed project.

Table 1. Permanent Impacts to WOUS

Permanent Impacts	Amount (acres)
Wetland fill for access road	0.20
Nearshore fill for trestle abutment	0.03
Full shading of eelgrass	0.06
Full shading of other marine vegetation	0.13
Partial shading of eelgrass[1]	0.027
Partial shading of other marine vegetation[1]	0.05
Full shading of benthic habitat in shallow water[2]	0.32
Partial shading of benthic habitat in shallow water	0.14
Deep water[3] coverage functional loss	0.2975
Habitat displaced by structure in shallow water	0.005
Habitat displaced by structure in deep water	0.15

[1] Acreage for eelgrass and other marine vegetation overlap in partially shaded area.

[2] Shallow water as defined by the Navy for this permit application are waters shallower than -30 feet below Mean Lower Low Water (MLLW). This determination was made using site specific dive survey data which indicated that below this depth submerged aquatic vegetation becomes sparse (less than 10% coverage) or absent.

[3] Deep water is defined as waters deeper than -30 feet MLLW.

Temporary Impacts to WOUS
All in-water work is projected to be completed within two to three work window seasons. The in-water work window is between July 16 and February 15 for each construction year. During the work windows, aquatic resources in WOUS would be directly impacted by seafloor disturbance from anchor and spud placement, pile driving, and vessel shading. These effects would be short term and temporary. The Navy would implement Best Management Practices (BMPs) and Current Practices (CPs) to minimize impacts including no grounding of barges, a debris spill management plan, construction monitoring, moving of barges to prevent shading of eelgrass and macroalgae for more than one day in a given area, and other contractor requirements. Current practices (CPs) are physical, structural, or managerial practices that decrease the potential for impacts, particularly related to water quality. BMPs are required to ensure compliance with the

U.S. Environmental Protection Agency (EPA) general permit for stormwater discharges from construction sites. The area of potential disturbance includes the structure footprint and the area within 150 feet of the structure. Table 2 below summarizes the temporary impacts to WOUS from the proposed project.

Table 2. Temporary Impacts to WOUS

Temporary Impacts	Amount (acres)[3]
Shallow water	Up to 3.7
Deep water	Up to 22

[3] Includes impacts from vessel shading and disturbance of sediments from pile driving and anchor/spud placement. Up to 25.7 acres of the aquatic environment could potentially be disturbed during construction.

C. Description of the Proposed Mitigation. The Navy has avoided and minimized impacts by:

- Minimizing and aligning trestles to reduce impacts and overwater coverage over shallow nearshore areas.
- Minimizing the number of piling to reduce impacts to aquatic resources.
- Minimizing the size of the support building to reduce overwater coverage.
- Implementation of Current Practices (CPs) and Best Management Practices (BMPs).

The Navy considered the use of grating in construction of the trestles to allow additional light penetration to the water. During the design process the Navy determined that grating would be ineffective at transmitting light due to the weight and thickness of grating required to support the vehicles using the trestle. Additionally, they would not be able to collect stormwater runoff and prevent it entering into Hood Canal if grating was used. Therefore, grating was not proposed for the EHW-2.

To compensate for the permanent, indirect, and temporary impacts to WOUS, the Navy proposes to use the Hood Canal Coordinating Council In-Lieu Fee program (HCCC ILF). The Navy submitted an ILF Use Plan titled *Hood Canal Coordinating Council In Lieu Fee Program Use Plan: ILF Use Plan for Mitigation for Navy Explosives Handling Wharf #2, Naval Base Kitsap Bangor*, dated 14 August 2012, which describes project impacts, provides justification for using the ILF program, and itemizes the number of ILF credits to be obtained.

D. Jurisdiction. Hood Canal is a navigable water of the United States. Wetland 32 at NBK-Bangor is a water of the United States and located adjacent to Hood Canal. The Corps has regulatory jurisdiction over the proposed work pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. A completed jurisdictional determination form dated 26 June 2012 is located in the file.

E. Purpose. The purpose of the work is to support Navy mission requirements for the eight TRIDENT submarines homeported at NBK-Bangor and the TRIDENT II (D5)

Strategic Weapons System. Submarine operations occur in both the Atlantic and Pacific oceans. Atlantic operations are supported from Georgia, and Pacific operations are supported from NBK-Bangor. The Nuclear Posture Review (NPR), which is available online to the public, discusses the need to have submarines in both the Atlantic and Pacific oceans. The NPR concluded "ensuring a survivable U.S. response force requires continuous at-sea deployments of SSBNs in both the Atlantic and Pacific oceans, as well as the ability to surge additional submarines in crisis." The Pacific fleet submarines are currently serviced and maintained at the existing EHW, which was constructed in the late 1970s to handle the TRIDENT I C4 missile (C4). In the 1990s this missile was replaced by the TRIDENT II D5 missile (D5), which is larger, more complex, and requires more time to handle and maintain than the C4. In 2001, the Navy began the TRIDENT II (D5) Life Extension Program, which will extend the life of the current TRIDENT weapons systems through 2042. This is accomplished through upgrades to the missiles to address outdated technology, particularly electronic components.

F. Project Need. The Corps has evaluated the general need for the construction and operation of a second explosives handling wharf. The Navy provided information regarding the need for this infrastructure in order to maintain the TRIDENT submarines and associated components. The proposed action is needed because the existing EHW alone is not sufficient to support the TRIDENT program requirements. The proposed action is not intended to support an increase in the number of submarines on NBK-Bangor. However, due to changes in the type of missile being serviced, the submarines will have to berth longer at both the existing EHW and the proposed EHW-2. As the missile systems age, upgrades to the missiles will require more frequent and longer handling and maintenance. While some of these activities can be done at locations other than the EHW, the submarine must still dock at EHW to remove components.

At times both the existing EHW and proposed EHW-2 would be used at the same time to service the submarines. However, due to facility maintenance of the existing and proposed EHWs, both of them would not always be available. The Navy determined that approximately 400 EHW operational days are needed each year to meet future TRIDENT program needs. An operational day is any day supporting fleet and missile requirements. The existing EHW is a 30 year-old structure that can only provide 200 operational days per year due to required maintenance activities to the structure. The proposed EHW-2 would provide approximately 300 operational days per year. Although there would be an excess of operational days with a second EHW, one EHW cannot provide the required 400 days needed to meet TRIDENT program requirements.

G. Water Dependency. Construction and operation of the EHW-2 structure for the maintenance of the TRIDENT submarine fleet is a water dependent activity. Although some upgrades and maintenance can be performed at locations other than the EHW, the submarines still have to dock at the EHW to remove components that are transported to other work locations.

H. Affected Environment. The proposed project is located along the waterfront of Hood Canal and in uplands at NBK-Bangor. The NBK-Bangor shoreline is in a

relatively natural condition with only 6% of shoreline classified as "modified" by the Kitsap County Nearshore Assessment Habitat. There are seven major structures along the NBK-Bangor waterfront, including an existing EHW. The proposed EHW-2 would be located immediately south of the existing EHW.

The substrate of the NBK-Bangor shoreline ranges from sand and gravel to cobble and rock in intertidal and shallow subtidal areas and silty or muddy substrate in deeper zones. Macroalgae and eelgrass beds exist along much of the shoreline to depths of approximately -30 feet MLLW, although some species of macroalgae occur sparsely as deep as -60 feet MLLW. The marine and terrestrial environments are separated by a shoreline cliff ranging from a few feet to over 20 feet in height. The upland area of NBK-Bangor is 68% forested and the rest is developed and occupied by base infrastructure and operations. There are numerous wetlands and surface water drainages discharging into Hood Canal. NBK-Bangor is bordered by Hood Canal on the west side and by private communities on the north, south, and east.

The EHW-2 project is located in the Water Resource Inventory Area (WRIA) 15, Hood Canal drainage. NBK-Bangor includes two main watersheds defined as major surface water drainages separated by topographic divides. The drainages at the base include five perennial streams flowing into Hood Canal (part of the northern Hood Canal watershed), and two tributaries of Clear Creek flowing to the southeast and enter into Dyes Inlet (part of the Clear Creek watershed). Including smaller streams on the base that are usually perennial, there are a total of 15 streams, with drainage basins for these streams varying from 0.03 to 3.7 square miles. Recorded stream flows range from 0.01 to 4.0 cubic feet per second. Three of the perennial streams pass through small lakes or marshes before discharging into Hood Canal at Cattail Lake, Wetland 6, and Devil's Hole.

The proposed work in uplands would be entirely within the Hood Canal watershed. Three perennial streams are located within the upland project area: Stream F, Stream G, and Stream I. Stream F originates near a wetland and then flows north and west through a gully in the bluff down to the waterfront. Stream G is the largest stream in the EHW-2 upland project area and flows north and then west through Wetland 6. Water in Wetland 6 then flows through a weir and a culvert and discharges to Hood Canal. Stream I is intermittent in its upper half and flows north and then northwest through Wetland 14. The surface flow then infiltrates into the soil and moves as shallow groundwater flow with no visible surface water connection. The water likely discharges either into Wetland 6 or the stormwater retention pond. There are no lakes or natural ponds within the EHW-2 upland project area.

A stormwater retention pond is located 250 feet south of Wetland 6. The pond collects runoff from nearby roadways and stormwater from the existing EHW facility. Stormwater at the upland project areas is transported via storm drain, drainage ditches, and overland flow. At the area for the three proposed buildings and associated replacement parking spaces, existing stormwater is collected via catch basins that drain through a storm sewer and then discharged north of Sturgeon Road. Some stormwater is

also collected in a drainage ditch on the south and west sides of the existing lot. At the existing pure water facility site and water line routes, stormwater infiltrates or flows overland into Hood Canal. Adjacent to the pure water facility, Stream A (intermittent) and Stream B2 (perennial) flow through culverts into a roadside ditch that discharges through another culvert into Hood Canal.

Five wetlands were identified within the vicinity of the EHW-2 project area, covering over 7.5 acres and ranging in size from 0.015 acre to more than 6 acres. The majority of the wetlands are palustrine forested with some scrub-shrub and emergent wetlands. Wetlands are described more fully in Section VI.A.5.

I. Authority. The Corps has regulatory jurisdiction over the proposed work pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403) and Section 404 of the Clean Water Act (33 U.S.C. §1344). Work within the EHW-2 project area covered under Section 10 of the Rivers and Harbors Act of 1899 is the overwater structure, piling, access trestles, and abutment fill. Work within the EHW-2 project area covered under Section 404 of the Clean Water Act is wetland fill from installation of the access road and nearshore fill for construction of the trestle abutment.

J. Scope of Analysis, Project Area, Action Area.

(1) NEPA. For NEPA the Corps establishes the "scope of analysis", 33 CFR 325 Appendix B. The "scope of the analysis" for this permit action is the EHW-2 project area, which includes the EHW-2 site and associated upland work as shown in Figure 1. The regulated activity does not comprise merely a "link" in a corridor type project as the EHW-2 project involves site-specific construction that is not part of a corridor-type project.

There are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity. Existing infrastructure and explosives safety restrictions at NBK-Bangor limit the location and configuration of the regulated activity.

Work in the Corps' jurisdiction within the EHW-2 project area includes excavation and construction in the nearshore, construction of the EHW-2, and placement of fill for the access road in Wetland 32.

The U.S. Navy is the Federal Lead and has control over the property and responsibility for the project within the EHW-2 project area.

(2) National Historic Preservation Act (NHPA) "Permit Area". For effects to historic properties under the NHPA, the Corps looks at the "Permit Area", 33 CFR 325 Appendix C. The "Permit Area" includes activities outside waters of the United States where (i) the activity outside of waters of the United States would not occur but for the authorization of the work or structures within waters of the United States, (ii) the activity outside waters of the United States is integrally related to the proposed work or structures

within waters of the United States (or, conversely, the proposed work or structures within waters of the United States must be essential to the completeness of the overall project or program), and (iii) the activity outside waters of the United States is directly associated (first order impact) with the proposed work or structures within waters of the United States. The Navy is the Federal lead agency for NHPA compliance. Activities outside waters of the U.S. considered part of the "permit area" include constructing a security fence, clearing and grading a 5-acre construction laydown area, enlarging existing parking areas, installing utilities, constructing three support buildings and a pure water facility, installing new culverts and an outfall, and modifying or demolishing up to 20 existing facilities or structures in proximity to the proposed EHW-2. The permit area also includes the proposed EHW-2 wharf site and areas involving excavation in uplands.

(3) Endangered Species Act (ESA) Action Area. For the ESA, the Corps considers the effects of the Federal action to listed species and critical habitat in the "action area", 50 CFR Part 402. "Action area" means the areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The Navy is the Federal lead agency for ESA and has responsibility for determining the scope. They determined the ESA action area includes the immediate vicinity of the waterfront and surrounding aquatic environment and areas of upland construction that would be affected by construction and operation of the EHW-2.

III. Public Involvement.

A. Public Notice Date. A public notice for this proposal was circulated on 27 January 2012. The expiration date for comments was 26 February 2012. The property owners adjacent to NBK-Bangor were notified of the public notice for this permit application by a post card informing them the public notice was available on the Corps' website. None of the post cards were returned undelivered. All comments received were forwarded to the Navy on 9 March 2012 for their response. Additionally, the Suquamish and Port Gamble S'Klallam Tribes requested and received a two-week time extension to provide comments on the public notice. The Tribes had recently obtained additional information on this permit application under the Freedom of Information Act and requested additional time to review the information before submitting comments on the public notice. These comments were transmitted to the Navy on 23 March 2012. By email dated 12 April 2012, the Navy provided its responses to the comments received from the public notice.

B. Comments Received. The Corps received 30 comments in response to the public notice. See Appendix A for the evaluation of comments received on the public notice.

C. Requests for Public Hearing. Six requests for a public hearing were received. The Corps has evaluated the request for a public hearing in regards to (1) the extent to which the issues presented are within Corps jurisdiction; (2) the extent to which the issues identified represent information not otherwise available to the Corps; and (3) whether the issues identified are already addressed by comments submitted in response to

the public notice. Public hearings are held when a hearing would provide the Corps with additional information that is necessary for a thorough evaluation of pertinent issues, but when that information is not otherwise available. The issues presented by the commenters in requesting a public hearing were to inform the public about the ecological effects of the proposed project and to encourage public scrutiny of the necessity of the project and address military defense spending and safety concerns. A separate public hearing was not held by the Corps because the Navy held public hearings in conjunction with the DEIS on 19, 20, and 21 April 2011 and the Corps attended these hearings as a cooperating agency. Based on testimony presented at these hearings and the information provided during the comment period, the Corps has the necessary information to evaluate the proposed project including the issues raised in the public hearing requests (environmental concerns, need for the project, and safety). Issues related to military spending are outside of the Corps' purview and were not evaluated. In accordance with 33 CFR 327.4(b), the commentators requesting a public hearing will be notified of this permit decision and the determination not to hold a public hearing.

IV. Alternatives. The Corps, as a Federal agency, is issuing a permit under the DA regulatory program. Appendix B to 33 CFR Part 325 contains the guidance implementing the application of the National Environmental Policy Act (NEPA) to the DA regulatory program. According to that Appendix, the decision options available to the Corps, which embrace all of the applicant's alternatives, are 1) issue the permit, 2) issue the permit with modifications, or 3) deny the permit. Only reasonable alternatives need be considered in detail. Reasonable alternatives must be those that are feasible and such feasibility must focus on the accomplishment of the underlying purpose and need that would be satisfied by the proposed federal action (permit issuance).

Section 404(b)(1) of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the U.S. unless the proposed discharge is the least environmentally damaging practicable alternative capable of achieving the proposal's purpose. In this case, the "discharge" being evaluated under the Section 404(b)(1) Guidelines is filling 0.2 acre in wetlands adjacent to Hood Canal and 0.03 acres in the nearshore of Hood Canal at NBK-Bangor. Under the Section 404(b)(1) Guidelines, all practicable alternatives were considered in light of costs, logistics and existing technology. For the purposes of this document, the Corps has combined the Section 404(b)(1) and NEPA alternatives analysis as discussed below.

The Navy's DEIS describes the project purpose and need, explains the proposed action and alternatives considered, presents the existing conditions in the region that could be potentially affected by the project, and provides an analysis of the environmental consequences (including short-term, long-term, and cumulative impacts) of the proposed action and each alternative, including a No-Action Alternative. The Navy prepared a Supplement to the DEIS (SDEIS) to present new project and environmental information that became available after the publication of the DEIS. The Navy's FEIS was prepared to reflect public and agency comments, the Navy's responses, and additional information received from reviewers. The FEIS provides a description of the potential environmental consequences of selecting their preferred alternative and other alternatives.

This section presents a summary of the alternatives described in the FEIS. I have conducted an independent analysis of the project alternatives including minimization and alternative methods.

A. Alternatives Criteria. The purpose of the work is to support Navy mission requirements for the eight TRIDENT submarines homeported at NBK-Bangor and the TRIDENT II (D5) Strategic Weapons System. Constraints to location and design include mission requirements, explosives safety requirements, minimum water depth for operability and maximum water depth for constructability, base and restricted area boundaries, and availability of specialized infrastructure to support the TRIDENT program.

NAVSEA OP5 Volume 1, *Ammunition and Explosives Safety Ashore*, provides criteria for establishing the distance from given types and quantities of explosives within which activities and facilities are restricted to assure protection to life and property in the event of an accident. This distance, plotted as a circle with the location of the explosives handling operation at the center, provides an arc that designates the area in which restrictions apply. Arcs for the existing EHW and the proposed EHW-2 are Department of Defense (DoD) Unclassified Controlled Nuclear Information (UCNI). For reasons of national security this information cannot be included in a public document.

The Navy identified six alternatives including five action alternatives and a "no action" alternative for construction of EHW-2. The Navy identified six project criteria for the evaluation of alternatives. For the purpose of this evaluation, the Corps concurs with the project criteria as follows:

1. Capability to meet TRIDENT mission requirements
2. Ability to avoid or reduce environmental impacts
3. Siting requirements including proximity to existing infrastructure
4. Availability of waterfront property
5. Constructability of essential project features
6. Explosives safety restrictions

B. Other Project Designs. The Navy conducted scoping for the EIS from15 May through 17 July, 2009. In the 15 May 2009 Notice of Intent in the Federal Register, the proposed design alternatives were described as an anchored floating structure or a pile supported structure. The following alternatives were identified through the scoping comments: locating EHW-2 at a different site, locating EHW-2 west and parallel to the existing EHW, combining trestles with the existing EHW, and demolishing the existing EHW after completion of EHW-2. These alternatives were dropped from further consideration for the reasons described below:

- LOCATING EHW-2 AT A DIFFERENT SITE: NBK-Bangor is the only naval base on the west coast with the specialized infrastructure for the TRIDENT submarine program. EHWs must be located in very close proximity to existing

dedicated land-based infrastructure for security and logistics reasons. While there is an existing facility on the east coast, operating from it would not meet critical mission requirements and thus this option was not carried forward for further analysis.

- LOCATING EHW-2 WEST AND PARALLEL TO EXISTING EHW: This option would not comply with DoD Explosives Safety Board (DDESB) and Naval Ordnance Safety and Security Activity (NOSSA) requirements, thus this option was not carried forward for further analysis.

- COMBINING TRESTLES WITH EXISTING EHW: The Navy determined this option would not be feasible because the existing EHW and EHW-2 could not operate concurrently if the same trestle served both EHWs. This option would not meet TRIDENT mission requirements and thus was not carried forward for further analysis.

- DEMOLISHING EXISTING EHW AFTER COMPLETION OF EHW-2: One EHW would not provide enough operational days to support TRIDENT program requirements, thus this option was not carried forward for further analysis.

C. Alternatives for Implementing the Proposed Action. The DEIS released on 18 March 2011 contained six alternatives (no action, 3 variations of the combined trestle alternative (one with large piles, one with conventional piles, and floating wharf) and two variations with separate trestles (one with large piles and one with conventional piles). The Navy received 271 comments on the DEIS, of which the majority were on the purpose and need. The SDEIS released on 7 October 2011 did not include any additional alternatives or eliminate any alternatives described in the DEIS. The same alternatives presented in the DEIS were carried over to the FEIS.

The following are alternatives considered for this project:

- Alternative 1: Combined Trestle, Large Pile Wharf (Applicant's Preferred Alternative)
- Alternative 2: Combined Trestle, Conventional Pile Wharf
- Alternative 3: Separate Trestles, Large Pile Wharf
- Alternative 4: Separate Trestles, Conventional Pile Wharf
- Alternative 5: Combined Trestle, Floating Wharf
- Alternative 6: No-Action Alternative

Design Elements Common To All Alternatives: An EHW-2 for this site would consist of two components: (1) the wharf proper (or Operations Area, including the warping wharf); and (2) two access trestles. The Operations Area would include a support building and wharf cover. The warping wharf would be a long, narrow wharf extension used to position submarines prior to moving into the Operations Area. Access trestles would allow vehicles to travel between the Operations Area and the shore. The wharf proper would be either pile-supported or floating. Two types of pile-supported

wharf were considered: a large pile wharf and a conventional pile-supported wharf. The access trestles would either be combined for part of their spans or completely separate. Combining the trestles over shallow water would reduce the amount of overwater coverage and piling in the nearshore, where the majority of submerged aquatic vegetation, including eelgrass, is present. All alternatives would include driving approximately 150 temporary falsework piles. These piles would be used as a template to guide installation of permanent piling and would be removed upon construction completion.

All alternatives would include construction of an abutment and wingwall to connect the trestle to the shore, construction of six 30- by 30-foot lightning protection towers, installation of lighting on the wharf and access trestles and over the surrounding water, and installation of an 80- by 3.5-foot grated ramp and a 35- by 18-foot concrete float to support Navy divers.

All alternatives would include the following upland components: construction of new roads, security fencing, and a laydown area, enlarging existing parking areas, installation of utilities, construction of three support buildings and a pure water facility, installation of new culverts and an outfall, construction of new retaining walls, and modification or demolition of up to 20 existing facilities or structures. The new pure water facility would be constructed about a mile south of the existing EHW to replace the existing facility, which would be demolished. The function of the pure water facility is to provide treated water to the submarines.

All alternatives include construction of a new access road at the EHW-2 site, which would result in the permanent loss of a 0.20 acre wetland. Bridging the wetland would not be feasible because of existing grade and topography. The access road must accommodate large vehicles with wide turning radii. Due to topography and the shoreline, there is no other feasible location to construct the access road that would not impact the wetland. A shore access route would have much greater environmental impacts.

Operations would be the same for all action alternatives. None of the alternatives would require dredging.

1) Alternative 1 (Proposed Project and Applicant's Preferred Alternative). The Navy's preferred project design is to construct a wharf supported on piling ranging from 24 to 48-inches in diameter with combined entrance and exit access trestles over shallow water (less than 30 feet). This alternative would result in 6.3 acres of new overwater structure. Alternative 1 would require up to 1,250 piles, including 317 24-inch piles, 670 36-inch piles, and 263 48-inch piles. Total area of seafloor displaced by piling would be 9,015 square feet or 0.207 acre. Estimated duration of in-water construction would be 2 to 3 in-water work seasons, including 200 to 400 pile driving days.

2) Alternative 2: Combined Trestle, Conventional Pile Wharf. The Alternative 2 design is to construct a wharf supported on piling ranging from 24 to 36-inches in

diameter with combined entrance and exit access trestles. This alternative would result in 6.3 acres of new overwater structure. The 'conventional' piling would be smaller diameter, require more piling to support the structure, and require more time for installation. Alternative 2 would require up to 1,460 piles, including 317 24-inch piles and 1,143 36-inch piles. Total area of seafloor displaced by piling would be 9,050 square feet or 0.208 acre. Estimated duration of in-water construction would be 3 to 4 in-water work seasons, including 275 to 550 pile driving days.

3) Alternative 3: Separate Trestles, Large Pile Wharf. The Alternative 3 design is to construct a wharf supported on piling ranging from 24 to 48-inches in diameter with separate entrance and exit access trestles. This alternative would result in 6.6 acres of new overwater structure. Alternative 3 would require up to 1,290 piles, including 342 24-inch piles, 685 36-inch piles, and 263 48-inch piles. Total area of seafloor displaced by piling would be 9,175 square feet or 0.211 acre. Estimated duration of in-water construction would be 2 to 3 in-water work seasons, including 210 to 420 pile driving days.

4) Alternative 4: Separate Trestles, Conventional Pile Wharf. The Alternative 4 design is to construct a wharf supported on piling ranging from 24 to 36-inches in diameter with separate entrance and exit access trestles. This alternative would result in 6.6 acres of new overwater structure. Alternative 4 would require up to 1,500 piles, including 342 24-inch piles and 1,158 36-inch piles. Total area of seafloor displaced by piling would be 9,210 square feet or 0.211 acre. Estimated duration of in-water construction would be 3 to 4 in-water work seasons, including 290 to 570 pile driving days.

5) Alternative 5: Combined Trestle, Floating Wharf. The Alternative 5 design is to construct a floating pontoon-supported wharf with combined entrance and exit access trestles. This alternative would result in 8.5 acres of new overwater structure. Alternative 5 would require up to 440 piles, including 52 24-inch piles, 143 36-inch piles, and 115 48-inch mooring dolphin piles. Total area of seafloor displaced by piling would be 3,360 square feet or 0.077 acre. Estimated duration of in-water construction would be 2 in-water work seasons, including 135 to 175 pile driving days.

6) Alternative 6: No-Action Alternative. Under this alternative, no work would be performed and impacts would not occur. Operations would continue at the existing EHW. The option of not improving the removal and reinstallation of TRIDENT missiles in support of Navy mission requirements for the TRIDENT submarine fleet homeported at NBK-Bangor was considered and rejected because it did not meet the project purpose. The five alternatives carried forward in the evaluation and presented in the FEIS meet the project purpose and all six project criteria (capability to meet TRIDENT mission requirements, ability to avoid or reduce environmental impacts, siting requirements including proximity to existing infrastructure, availability of waterfront property, constructability of essential project features, and explosives safety restrictions). Table 3 below compares the impacts of the 5 alternatives.

Table 3. Comparison of impacts to waters/wetlands of the five alternatives.

Impact	Alternative 1: Combined Trestle, Large Pile	Alternative 2: Combined Trestle, Conventional Pile	Alternative 3: Separate Trestles, Large Pile	Alternative 4: Separate Trestles, Conventional Pile	Alternative 5: Combined Trestle, Floating Wharf
Total Overwater Area	6.3 acres	6.3 acres	6.6 acres	6.6 acres	8.5 acres
Total Number Permanent In-water Piles	Up to 1,250	Up to 1,460	Up to 1,290	Up to 1,500	Up to 440
Total Area Seafloor Displaced by Piles	9,015 sq ft (0.21 acre)	9,050 sq ft (0.21 acre)	9,175 sq ft (0.21 acre)	9,210 sq ft (0.21 acre)	3,360 sq ft (0.08 acre)
Area Displaced by Piles in Waters above -30 MLLW	361 sq ft (0.008 acre)	361 sq ft (0.008 acre)	642 sq ft (0.015 acre)	642 sq ft (0.015 acre)	1,068 sq ft (0.025 acre)
Duration of In-water Construction	2 to 3 in-water work seasons, including 200 to 400 pile driving days	3 to 4 in-water work seasons including, 275 to 550 pile driving days	2 to 3 in-water work seasons, including 210 to 420 pile driving days	3 to 4 in-water work seasons including, 290 to 570 pile driving days	2 in-water work seasons, including 135 to 175 pile driving days
Area of Excavation and backfill Below High Tide Line	0.03 acres	0.03 acres	0.06 acres	0.06 acres	0.03 acres
Area of wetland loss	0.20 acres	0.20 acres	0.20 acres	0.20 acres	0.20 acres

Alternative 1: Combined Trestle, Large Pile Wharf is the least environmentally damaging practicable alternative. Alternatives 1 and 2 would result in the least overwater coverage and area displaced by piling in shallow waters. However, Alternative 1 would require the fewest piling and would have a shorter in-water construction duration than Alternatives 2, 3, and 4. Although Alternative 5 would require much fewer piling than the other alternatives, it would result in more than 2 acres of additional overwater coverage.

Alternatives Conclusion: During scoping and the DEIS comment period, agencies, treaty Indian Tribes, and the general public submitted comments and suggestions about alternatives, all of which the Navy and the Corps have considered.

I have conducted an independent analysis of the project alternatives. My conclusion is all reasonable alternatives have been reviewed and the Navy's preferred alternative represents the least environmentally damaging practicable alternative available to the applicant capable of achieving the proposal's purpose. All presumptions involving practicable alternatives in special aquatic sites have been adequately rebutted.

V. **Evaluation of the 404(b)(1) Guidelines.** The work was evaluated pursuant to Section 404(b)(1) of the Clean Water Act in accordance with the guidelines promulgated by the Environmental Protection Agency (40 CFR Part 230) for evaluation of the discharge of dredged or fill material into waters of the United States. Section 404(b)(1) of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the U.S. unless the proposed discharge is the least environmentally damaging practicable alternative capable of achieving the proposal's purpose. In this case, the proposed discharge being evaluated is placement of fill in 0.20 acre of freshwater wetlands (Wetland 32) for the construction of an access road and placement of fill in 0.03 acres of

marine nearshore aquatic habitat for construction of a trestle abutment at the EHW-2 project site. In addition, consideration has been given to the need for the work and to such water quality standards as are appropriate and applicable by law. The work will not result in the unacceptable degradation of the aquatic environment. The discharges and methods specified in the proposed work comply with the Section 404(b)(1) Guidelines [40 CFR 230.12]. The results of the evaluation are discussed in the following sections.

A. Factual Determinations.

1. Physical Substrate.

a. Marine habitat (Trestle Abutment). Marine sediments at the proposed EHW-2 site are composed of gravelly sands with some cobbles in the intertidal zone underlain with glacial till. Nearshore marine sediments would be temporarily and permanently impacted through excavation, placement of armor rock below the substrate, and backfilling to original grade with the excavated sediments. A total of 0.03 acres of substrate would be impacted by excavating and backfilling to construct the abutment. This work would occur along the shore on the upper-most portion of the beach. The work would adversely affect bottom-dwelling organisms at the site; however, the beach would be returned to approximate pre-construction elevation and benthic forms are likely to re-colonize the area.

b. Wetland 32. The wetland substrate consists of Kitsap silt loam soil. A total of 0.20 acre of wetland substrate would be adversely affected at the EHW-2 project site. The substrate at Wetland 32 would be graded and filled to construct a paved access road. In addition, the entire wetland would be logged to remove trees to ensure slope stability. The alteration to wetland substrate would result in impervious area and will change the water flow through this area. Wetland 32 is a slope wetland and water currently flows to the north. With the substrate alteration and project construction water would be directed to a new storm drain and flow to the west into Hood Canal via a constructed outfall.

c. Physical Substrate Summary. Wetland 32 and Hood Canal substrates will be permanently and temporarily impacted by roadbed fill, new pavement, and abutment construction. The proposed discharge will alter substrate elevation and contours resulting in changes to the physical, chemical, and biological characteristics of the substrates. Impacts to the wetland and nearshore aquatic resources will be offset through implementation of compensatory mitigation through the HCCC ILF program. See Section IX below for details. I have determined the impacts to substrate comply with the Section 404(b)(1) Guidelines.

2. Water Circulation, Fluctuation, and Salinity.

a. Marine habitat (Trestle Abutment). The discharge of dredged or fill material can modify current patterns and water circulation by obstructing flow, changing the direction or velocity of water flow and circulation, or by otherwise changing the dimensions of a water body. The construction of the abutment would result in temporary impacts; however, the site would be returned to approximate pre-construction conditions. The project would not change water fluctuation or salinity in the nearshore as the area is

subject to daily tides. The abutment would not create an obstruction to tidal fluctuations or circulations, introduce changes to salinity, or otherwise change the dimensions of the water body.

b. Wetland 32. A total of 0.20 acre of wetland would be adversely affected at the EHW-2 project site. Water fluctuation would no longer exist once the wetland was filled and the flow and circulation of water would be routed and controlled by storm drains. During filling of Wetland 32 for the paved access road, project BMPs would be implemented for surface drainage including culverts, ditches, retaining walls, weep pipes, and sediment control devices. Drainage from the wetland as well as the access road would flow through three new culverts installed under the access road. These culverts would drain runoff from the vegetated hillside and wetland and from a ditch along the southeastern side of the roadway. These flows would be treated using low impact development (LID) Water Quality Catch Basins and discharge on the beach across a riprap apron to prevent erosion. The outfall of the storm drain from the Wetland 32 area into Hood Canal would have a minor affect on salinity at the mixing zone of the outfall site.

c. Water Circulation, Fluctuation, and Salinity Summary. The discharges associated with the work to construct the abutment and to construct a road in Wetland 32 would have minor impacts to water circulation, fluctuation, and salinity. I have determined the impacts to water circulation, fluctuation, and salinity comply with the Section 404(b)(1) Guidelines.

3. Suspended Particulate/Turbidity.

a. Marine habitat (Trestle Abutment). Suspended particulates and turbidity in the aquatic environment would result from construction of the abutment, but these effects would be short-term. Aquatic organisms may be temporarily displaced due to temporary turbidity or alteration of aquatic habitat. The initial ebb and flow of the tide into the site would result in a pulse of suspended particulates and turbidity until the site stabilizes. The work to construct the abutment would return the site to approximate pre-construction elevations and would not be a source of turbidity after construction.

b. Wetland 32. Work to log, grade and pave Wetland 32 for an access road may result in turbid water leaving the construction area. Project construction would use industry BMP controls to prevent turbid water from entering Hood Canal. Implementation of a Stormwater Pollution Prevention Plan (SWPPP) would minimize the potential for discharges at the EHW-2 project site, and discharges would be subject to a stormwater discharge permit. Impacts to water quality would be temporary. Storm water runoff after construction would be controlled through a storm drain and treatments system.

c. Suspended Particulate/Turbidity Summary. I have determined the impacts to suspended particulates and turbidity are temporary in nature during project construction and the project includes design measures to control suspended particulates and turbidity. Impacts to suspended particulate/turbidity comply with the Section 404(b)(1) Guidelines.

4. Contaminant Availability (Marine habitat (Trestle Abutment) and Wetland 32). Construction materials incorporated into the project site are not expected to introduce contaminants. Only clean fill soils imported from a suitable location on base or an approved offsite location would be used on the project. In the marine environment at the project site, the currents levels of chemical contaminant concentrations meet Sediment Quality Standards (SQS). Potential indirect impacts to marine water quality from upland construction and operations would be minimized through implementation of storm water measures. Accidental spills during construction and operations would be addressed though the Navy's spill response procedures immediately to minimize impacts to the aquatic environment. The EHW-2 contractor will be required to prepare and implement a Debris Management Plan to address debris spilled into Hood Canal.

Sites at NBK-Bangor have been listed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) on the National Priorities List (NPL) because of contamination. The required actions for Site 26, Hood Canal Sediments, which was part of Operable Unit (OU) 7, have been completed. Ecology, as the lead regulatory agency for contaminated sites at NBK-Bangor, concurred in 2005 that there was no increasing trend of contaminants of concerns and additional sampling was not needed.

On 18 June 2012, notification was sent to the Corps' Dredged Material Management Office (DMMO). DMMO responded on 20 June 2012 stating their involvement was not needed on the project as there are no active cleanups within the EHW-2 project vicinity. On 18 June 2012, CERCLA coordination was sent to EPA. EPA responded on 29 June 2012 stating that based on their review of the project, there appears to be no overlap between the proposed EHW-2 and any of the CERCLA operable units at the site and thus there is no need for coordination.

I have determined the impacts to contaminant availability comply with the Section 404(b)(1) Guidelines.

5. Aquatic Ecosystem and Organism.

a. Marine habitat (Trestle Abutment). Discharges in the aquatic environment may affect aquatic ecosystems and aquatic organisms by altering such characteristics as water chemistry, water flow and circulation, and habitat that supports aquatic organisms. Discharges to construct the abutment would be minimal and the site would be returned to approximate pre-construction elevations after construction.

b. Wetland 32. Construction activities to log, grade, and pave Wetland 32 for an access road would result in the loss of 0.20 acres of the aquatic ecosystem and the loss of habitat for aquatic organisms.

c. Aquatic Ecosystem and Organism Summary. The proposed work will result in unavoidable discharges in the aquatic environment that will adversely affect the aquatic ecosystem and aquatic organisms through the loss of Wetland 32 and the construction of

the trestle abutment. No practicable alternatives exist that can avoid these discharges. Actions have been taken to minimize impacts. The proposed activity complies with applicable State water quality standards. The fill material will not cause or contribute to significant degradation of waters of the United States; this determination has taken into consideration effects on human health, life stages of aquatic organisms, ecosystem diversity, productivity, and stability and special aquatic sites. Impacts to Wetland 32 and to the aquatic environment from the trestle abutment will be offset through implementation of compensatory mitigation through the HCCC ILF program. See Section IX below for details. I have determined impacts to the aquatic ecosystem and organisms have been minimized and will be offset through implementation of compensatory mitigation. Impacts to the aquatic ecosystem and organisms comply with the Section 404(b)(1) Guidelines.

6. Proposed Disposal Site. The proposed project does not include dredging or the disposal of dredged material and a disposal site is not applicable to this action. As discussed above the work would result in discharges in Wetland 32 and Hood Canal to construct an access road and trestle abutment, respectively.

7. Cumulative and Secondary Effects on the Aquatic Ecosystem. See Section VII below.

B. General Evaluation of Dredged and Fill Material. The Navy does not propose to use dredged sediments as part of the EHW-2 project. Up to 1,350 cubic yards of material would be excavated from below the high tide line and this area would be back filled with riprap to protect the toe of the trestle abutment. Up to 600 cubic yards of fill material would be placed in Wetland 32 to construct the access road. The fill would be imported from a suitable location on base or an approved offsite location. The fill material is not expected to be a carrier of contaminants; no testing of fill material, unless required to determine compliance with engineering standards, is required.

C. Restrictions on Discharges. Discharges into waters of the U.S. have been minimized to the maximum extent practicable. Measures to confine the discharges have likewise been incorporated into the proposed work. It has been demonstrated in Section IV there are no less environmentally damaging practicable alternatives that could satisfy the project's basic purpose. The activity is located in a special aquatic site (wetlands). The activity does not need to be located in a special aquatic site to fulfill its basic purpose, but the special aquatic site cannot be avoided. The proposed activity does not violate applicable State water quality standards or Section 307 prohibitions or effluent standards. The proposed activity does not jeopardize the continued existence of federally listed threatened or endangered species but may adversely affect their critical habitat. The proposed activity does not violate the requirements of a federally designate marine sanctuary. The activity will not cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms' ecosystem diversity, productivity and stability; and recreation, esthetic, and economic values. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (see Section IX for

description of mitigation actions).

VI. Public Interest Review.

A. Public Interest Factors. The public interest review factors were considered in the FEIS. This information has been evaluated and summarized below. Both cumulative and secondary impacts on the public interest were considered. The Corps has made an independent determination with respect to these factors. Relevant public interest factors are discussed below.

1. Conservation. Activities authorized by this DA permit would modify the natural resource characteristics of the EHW-2 project area. The Navy is the steward of the lands within NBK-Bangor and is responsible for conservation while maintaining the environmental conditions consistent with its military mission. The project would alter the natural resource characteristics of the EHW-2 project area that occurs on a military base. Views across Hood Canal would change. The nearshore environment and a palustrine wetland would be impacted. Authorized impacts require compensatory wetland and aquatic resource mitigation. The mitigation will result in the restoration, creation, enhancement, and preservation of aquatic resource habitats that will offset losses of conservation values. I have determined the impacts to conservation are not contrary to the public interest.

2. Economics. The proposed project is expected to have a positive impact on the local economy. Construction of the project would create jobs and generate revenue for the companies supplying the construction materials. The EHW-2 construction cost is estimated to be more than $500 million, and total economic output to the region would be more than $722 million. Project construction could result in 4,370 direct jobs and 1,970 indirect and induced jobs over the approximately four years of engineering and construction. Based on economic analysis, the proposed action would provide a substantial economic benefit to the local and regional economy.

During construction, increased employment and spending will likely occur in the region. Some construction products will likely be purchased locally and some local firms and workers will likely be employed by the project. The proposed work would stimulate the local economy.

No property would need to be acquired for the EHW-2 project as it would be located on federal land within the existing boundary of NBK-Bangor.

The anticipated economic effects of construction are expected to be beneficial. It is unlikely that property values will be considerably affected or that many businesses will experience substantial negative economic effects during construction.

I have determined the impacts to economics are not contrary to the public interest.

3. Aesthetics. Activities authorized by this DA permit would alter the visual character of the EHW-2 project area. The presence of EHW-2 would be in character with existing structures and the general nature of a military base. Views of the EHW-2 from off-base land areas would be limited because of distance and geographic features. The closest viewing locations are about 2 miles away on the opposite shore in Jefferson County and from adjacent waters in Hood Canal. Upland project features would be compatible with existing land uses and would not adversely impact public views.

As public access to NBK-Bangor is restricted, impacts to aesthetics on the base during construction would be limited to viewing by military and civilian personnel and government contractors. Vegetation will be cleared, including forested vegetation, which will take years to return to pre-project conditions. On base during construction, increased traffic congestion, construction signage, construction traffic, and construction work will temporarily affect aesthetics. Construction will affect boaters as there will be an increase in barge traffic which will affect their views.

The project will not conflict with existing aesthetic values in the project vicinity, and I have determined the impacts to aesthetics are not contrary to the public interest.

4. General Environmental Concerns. The project will have minor adverse effects on general environmental concerns, such as water, air, noise, and land pollution. Potential impacts to water quality, water supply, air quality, noise, and hazardous materials are discussed in detail elsewhere in this document. During construction the project may temporarily affect water quality and air quality, generate more noise, and expose hazardous materials. The project will use BMPs and other conservation measures to minimize general environmental concerns. The project will not degrade water quality. If hazardous materials are encountered then they would be removed.

I have determined the adverse effects of the project on general environmental concerns are not contrary to the public interest.

5. Wetlands. Wetland 32 occurs in the EHW-2 project area and is a Category IV palustrine forested wetland. The project would result in the permanent loss of the entire 0.20 acre of wetland for installation of an access road. The functions provided by the impacted wetland include sediment removal, nutrient and toxicant removal, erosion control, organic matter production and export, and general habitat suitability.

The Navy first looked at avoiding and minimizing wetland impacts from the EHW-2 project. It was not possible to avoid wetland impacts. Other alignments of the proposed EHW-2 access road would not meet security requirements. During operations at an EHW, a minimum standoff zone is required. Currently there is one access road to the existing EHW. A second route is needed to allow construction access to the EHW-2 site during EHW operations. The access road would be left in place post-construction to provide isolated access to either or both facilities during existing EHW and EHW-2 operations. During construction of EHW-2, a new waterline would be installed as a life

safety requirement. The access road would also provide future maintenance access to this waterline.

The project has been designed to avoid any additional wetland impacts. The project will implement construction BMPs to minimize the potential for any indirect wetland impacts. To compensate for the 0.20 acre permanent loss, the Navy will offset impacts with compensatory mitigation through the HCCC ILF program.

With the addition of special conditions "g" through "i" listed in Section XI of this document, I have determined the impacts to wetlands have been adequately mitigated and are not contrary to the public interest.

6. Historic Properties. As the Federal lead for compliance with Section 106 of the National Historic Preservation Act (NHPA), the Navy has consulted with the State Historic Preservation Officer (SHPO) regarding the potential effect of the EHW-2 project on the visual context and aesthetic environment of those properties that are eligible for listing in the National Register of Historic Places (NRHP) within the Area of Potential Effect (APE). Of over 90 potential resources on NBK-Bangor, only five would be considered eligible for the NRHP: the existing EHW, Delta Pier, a portion of a World War II railroad (Shelton-Bangor Railroad), and an archaeological site and a Cold War building that are located away from the EHW-2 project work areas. There would be no adverse effect on any of these NRHP-eligible properties.

On 1 December 2011, the State Historic Preservation Officer concurred with the Navy's evaluation of the Delta Pier and existing EHW as eligible for the NRHP and with the finding of no adverse effect on NRHP-eligible historic properties and with the Navy's APE.

The Navy consulted with the Skokomish, Port Gamble S'Klallam, Lower Elwha Klallam, Jamestown S'Klallam, and Suquamish Tribes under Section 106 of the NHPA. The Lower Elwha Klallam Tribe responded in a letter to the Navy dated 21 May 2009 indicating the proposed action lies outside of their ancestral lands. The Skokomish Tribe responded to the Navy via email on 15 March 2011 stating they had received and reviewed the cultural resources report for the project and had no comments and concurred with the determination of No Historic Properties Affected. The Port Gamble S'Klallam Tribe provided comments regarding cultural resources via letter to the Navy dated 21 November 2012. By letter dated 6 June 2012, the Port Gamble S'Klallam Tribe stated they withdraw their pending objections to the Corps permit. The Navy did not receive responses from the Jamestown S'Klallam or Suquamish Tribes regarding 106.

There would be a small potential for disturbance of archaeological resources during construction; if any such resources were encountered, the Navy as the Federal lead would coordinate with the State Historic Preservation Officer and Tribes.

The Navy has completed Section 106 consultation for historic resources. No mitigation measures are proposed or required. I have determined the impacts to historic properties

are not contrary to the public interest.

7. Fish and Wildlife Values. Aquatic resources in the EHW-2 project area, including freshwater wetlands and marine waters, provide habitat for fish and other aquatic organisms. Aquatic organisms support the food web and may use aquatic resources for all or a portion of their life cycle. The proposed activity does not jeopardize the continued existence of federally listed threatened or endangered species. The project is likely to adversely affect critical habitat for Puget Sound Chinook salmon and Hood Canal summer run chum salmon and would adversely affect Essential Fish Habitat (EFH). Fish and other mobile aquatic organisms may be temporarily or permanently displaced due to temporary turbidity or loss of aquatic habitat.

The EHW-2 project area also provides habitat for a variety of wildlife. Activities authorized by this DA permit will result in the loss of wildlife habitat associated with the aquatic ecosystem, such as habitat used by resident and transient mammals, birds, reptiles and amphibians. The DA permit includes special conditions minimizing impacts to habitat for fish and other aquatic organisms.

(1) Habitat for Fish and Other Aquatic Organisms: Fish and other aquatic organism habitat at the site includes eelgrass, kelp, red and green algae, forage fish habitat in the nearshore, and substrate suitable for the colonization and growth of benthic organisms. Eelgrass beds in the vicinity of the EHW-2 project area appear healthy and dense and are located between 0 to -20 feet MLLW. Eelgrass beds are particularly important because of the large amount of food web support and habitat they provide to many marine species including shellfish and juvenile salmonids. Green macroalgae is present in the EHW-2 project area but is not as dominant as eelgrass and is found mostly in depths less than -30 feet MLLW and sparsely (less than 10 percent coverage) at greater depths. Red and brown algae are found mostly in water depths between -10 and -25 feet MLLW but red algae also occurs sparsely (less than 10 percent coverage) out to depths of -60 feet MLLW. Kelp beds occur to depths of approximately -25 feet MLLW.

The total area of marine habitat potentially disturbed during construction of the proposed project would be 25.7 acres. This acreage accounts for the footprint of EHW-2 and a 150 foot construction work area around the wharf. Impacts would occur in 3.7 acres of nearshore (shallower than -30 feet MLLW) and 22 acres in deep water (deeper than -30 feet MLLW). The Navy conducted site-specific surveys and used the results to define the nearshore as waters landward of -30 feet MLLW. Of those 25.7 acres, approximately 1 acre supports vegetation communities. Construction activities for the proposed action, including impacts from anchor and spud placement, pile driving, and vessel shading, would result in temporary impacts to approximately 0.43 acre of eelgrass bed (approximately 10 percent of the bed), 0.13 acre of kelp beds (approximately 6 percent of the bed), 0.92 acre of green macroalgae beds, and 0.17 acre of red macroalgae beds. Impact percentages were not calculated for green and red algae because these communities do not occur in discrete beds at NBK-Bangor in the way that eelgrass and kelp occur. These algae types occur almost continuously along the base nearshore.

Macroalgae is expected to recolonize the area post-construction, but there would be some reduction of algal habitat in fully shaded areas. Construction of the EHW-2 would not result in the introduction or increase the existing prevalence of exotic species, such as Japanese wireweed, along the Bangor shoreline. Long-term presence and operation of EHW-2 would reduce some productivity in the immediate area due to shading. Shading would result in the loss or reduction of eelgrass directly under the trestles.

The presence of EHW-2 would further fragment existing nearshore habitat. Although the majority of the structure occurs offshore out of the nearshore migratory path used by juvenile salmonids, the trestles could restrict juvenile salmon movement between habitats used for foraging, refuge, and migration. Adult salmonids are not as dependent on nearshore habitat for refuge as juvenile salmonids and would be expected to experience little or no loss of refugia. This increase in habitat fragmentation may reduce some functionality of these habitats and their suitability in supporting marine species, including salmonids.

Compensatory mitigation is required for these impacts and would be implemented through the HCCC ILF program. See Section IX below for details.

(i) Marine Fish: Hood Canal is known to support at least 250 species of marine fish, including anadromous species living part of their life cycle in fresh water. Species more prevalent in deeper offshore habitats include a variety of rockfish, Pacific hake, walleye pollock, wolfeel, skates, sharks, lanternfish, snailfish, and flatfish species.

Recent fish surveys in nearshore habitats along the Bangor shoreline have documented the occurrence of juvenile salmonids and forage fish, including Pacific herring, surf smelt, and Pacific sand lance. In addition, over 45 other non-salmonid finfish species occur in the vicinity of the EHW-2 project area including perches, gunnels, pricklebacks, sculpins, pipefish, threespine sticklebacks, tubesnouts, and juvenile flatfish species.

Seven threatened or endangered marine fish species may occur in the waters of northern Hood Canal (Puget Sound Chinook salmon, Hood Canal summer-run chum salmon, Puget Sound steelhead, bull trout, bocaccio, canary rockfish, and yelloweye rockfish).

Fish habitat along the Bangor waterfront has been characterized as diverse and healthy based on analyses of fish species richness, composition, abundance, and size distribution. The freshwater outlets from Hunter's Marsh, Devil's Hole, and Cattail Lake provide warmer, nutrient-rich fresh water in these areas. This warmer water supports dense marine vegetation and benthic communities, which provide refuge and food sources for marine fish, including juvenile salmon.

Construction, particularly pile driving, would impact marine fish and marine fish habitat. Pile driving would exceed the underwater noise thresholds for fish resulting in adverse impacts to marine fish. Pile installation would involve the use of vibratory pile drivers to the greatest extent possible. It is anticipated that most piles would be vibratory driven to within several feet of the required depth. If difficult subsurface driving conditions (i.e.,

cobble/boulder zones) are encountered, it may be necessary to use an impact hammer to drive some piles for the remaining portion of their required depth. During impact hammer pile driving, air bubble curtains or other noise attenuating devices would be used to minimize noise impacts.

Siting and anchoring the construction barges and pile driving equipment would locally increase turbidity, disturb benthic habitats and forage fish, and shade marine vegetation in the immediate project vicinity. Impacts to salmonids, including ESA-listed species, would be minimized by constructing during the in-water work period for northern Hood Canal waters, when less than five percent of all juvenile salmonids occurring in NBK-Bangor nearshore waters are expected to be present. The proposed project would adversely affect EFH for coastal pelagic species, Pacific salmon, and groundfish. Implementation of in-water work windows would reduce construction impacts.

Operational impacts to marine fish would be permanent. The parts of the trestles located in the nearshore would decrease habitat value and present a barrier to shoreline-dependent juvenile salmon. The piling and overwater structure would reduce the biological productivity of the benthic community and marine vegetation, both of which are habitats used by marine fish, including salmonids and juvenile rockfish.

Compensatory mitigation is required for impacts to habitat from loss of seafloor from piling and shading of submerged aquatic vegetation and benthic habitat and would be implemented through the HCCC ILF program. See Section IX below for details.

(ii) Benthic Communities (including shellfish): Benthic organisms are abundant and diverse at the EHW-2 project site, more so in the subtidal than in the intertidal zone. Oyster beds occur along approximately 72 percent of the Bangor waterfront and may coexist with mussel beds. Four beaches on NBK-Bangor were open to shellfish harvest by residents until recently when increased security measures closed the beaches to further shellfish gathering. American Indian Tribes continue to harvest oysters and clams at NBK-Bangor on a fifth beach, but not in the vicinity of the EHW-2 project site.

During a 2007 survey conducted in a wide range of depths at the EHW-2 project site, bivalve siphons (likely geoducks) were observed, with concentrations in the silty sand substrate below -25 feet MLLW.

Construction would result in several impacts to the benthic community, including loss of soft-bottom habitat from pile placement, disturbance to the soft-bottom habitat from anchor and spud placement and propeller wash, increased turbidity and suspended solids, and increased noise and vibration during pile placement.

Previous studies of dredged and other disturbed sites show that benthic species recolonize disturbed areas within 2 years of disturbance. The benthic organisms lost due to turbidity and bottom disturbances by barges, tugboats, anchors, and spuds would be expected to

recolonize within the EHW-2 project site over a 3-year period after sediment disturbance at the site has ceased.

Operational impacts would include overwater shading and permanent replacement of soft-bottom habitat with hard-bottom habitat due to the installation of piles. These changes would adversely impact some species and benefit others, resulting in localized changes in the number and composition of benthic species.

Up to 25.7 acres of benthic habitat would be disturbed during construction. Installation of piling would permanently displace 0.20 acre of seafloor.

Compensatory mitigation is required for these impacts to habitat from loss of seafloor from piling and shading of benthic habitat and would be implemented through the HCCC ILF program. See Section IX below for details.

(iii) Marine Mammals: Marine mammals occurring within the project vicinity include California sea lions and harbor seals, both of which are protected under the Marine Mammal Protection Act (MMPA), and ESA-listed Steller sea lions and humpback whale. Southern resident killer whales have not been sighted in Hood Canal since 1995 but were considered in the project analysis as their primary prey is salmonids, which may be adversely affected by the proposed action.

The Navy entered into consultation with NMFS and submitted an application for Incidental Harassment Authorization (IHA) under Section to I (a)(5)(D) of the MMPA to NMFS in November 2011. NMFS will issue an IHA at a later date; construction would not begin until the IHA is issued. As indicated in their Record of Decision, the Navy will adhere to all provisions of the final IHA and associated monitoring plans and reporting requirements. The IHA would allow incidental take of marine mammals due to construction of EHW-2 during the first in-water construction work window of 16 July 2012 through 15 February 2013 for pile-driving and other in-water work, and through 1 July 2013 for non-in-water work. The Navy intends to apply for an Incidental Harassment Authorization (IHA) for both the 2013 and 2014 in-water construction work windows for the project.

Within Hood Canal, Harbor porpoise are occasionally present and transient stock killer whale and Dall's porpoise are rarely present. Gray whale, minke whale, and northern elephant seal could potentially occur in Hood Canal, but have not had confirmed sightings in at least 15 years and were therefore excluded from further analysis.

Underwater pile driving noise during construction would disrupt marine mammal foraging, resting, and transit in the vicinity of the EHW-2 project site. During both impact and vibratory driving, a soft-start approach to pile driving would be used to induce marine mammals to leave the immediate area. This soft-start approach requires contractors to initiate noise from hammers at reduced energy, followed by a waiting period. Other impacts including changes in prey availability are anticipated to be localized within the construction area.

Impacts from operations at EHW-2 include human presence over a larger area that is currently undeveloped and changes in prey availability; these impacts are anticipated to be localized to the EHW-2 site. Marine mammals are wide-ranging and have suitable habitat available along the Bangor waterfront and at other locations within Hood Canal. Also, from observations along the Bangor shoreline, marine mammals appear to be capable of habituating to human activity. No significant impacts to marine mammal populations in Hood Canal are expected. Through the Navy's ESA consultation, marine mammal monitoring would be required during pile driving.

(iv) Marine Birds: Marine birds occurring at NBK-Bangor include shorebirds, wading birds, marine waterfowl, raptors, and seabirds. Marbled murrelets, which are listed under the ESA, are present in the marine environment at NBK-Bangor.

The Navy submitted a biological assessment (BA) and consulted formally with USFWS on potential effects of the proposed action on marbled murrelets. USFWS issued a Biological Opinion (BiOp) placing terms and conditions on project construction to minimize effects to marbled murrelets. These include hydroacoustic monitoring and marbled murrelet monitoring during pile driving, and the shutdown of pile driving when marbled murrelets are present within areas where injury could occur due to pile driving noise.

Pile driving noise during construction would disrupt marine bird nesting, foraging, and resting in the vicinity of the EHW-2 project site. The zone of impact due to construction noise extends beyond the construction zone and was considered in this analysis. Other impacts to marine birds, such as changes in prey availability, are anticipated to be localized to the construction area. During both impact and vibratory driving, a soft-start approach to pile driving would be used to induce marine birds to leave the immediate area. This soft-start approach requires contractors to initiate noise from hammers at reduced energy, followed by a waiting period.

Impacts from operations at EHW-2 include human presence over a larger area that is currently undeveloped and changes in prey availability; these impacts are anticipated to be localized to the EHW-2 site. Marine birds are wide-ranging and have suitable habitat available along the Bangor waterfront and at other locations within Hood Canal. Also, from observations along the Bangor shoreline, marine birds appear to be capable of habituating to human activity. No significant impacts to marine bird populations in Hood Canal are expected. Marbled murrelet monitoring would be required during pile driving.

In addition, work will be done per the conditions of the WQC issued on 10 August 2012. This permit includes conditions that protect fish life and water quality during construction.

I have determined the impacts to habitat for fish and other aquatic organisms, with the implementation of compensatory mitigation and addition of special conditions "g" through "i" listed in Section XI, are not contrary to the public interest.

(2) Wildlife Habitat. NBK-Bangor manages its natural resources in compliance with federal law and regulations, Executive Orders, and DoD and Navy guidance. This includes mandated cooperation with other federal agencies such as USFWS and NMFS. The Navy must comply with all applicable laws including the ESA, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act (MBTA), and EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, and Sikes Act Improvement Act.

The terrestrial wildlife in the EHW-2 project area is typical of the wildlife occurring on NBK-Bangor overall and includes many mammals, birds (including migratory species), amphibians, and reptiles. The main land cover types on NBK-Bangor includes developed areas but also forest, brush and shrubland, wetlands, streams, open water, and marine shorelines, all of which provide suitable habitat for a number of different wildlife species.

The EHW-2 project area would be cleared of approximately 11.3 acres of upland wildlife habitat, 4.4 acres of which will be permanently impacted and 6.9 acres of which will be revegetated. This includes approximately 1.0 acre of trees which would be removed with stumps left intact to reduce slope instability in the area of the access road, of which 0.9 acre is wetland buffer. Many of the animals living next to the developed areas are accustomed to living in urban areas and may not be disturbed by construction-related activity and habitat alteration. Individuals that are more sensitive to disturbance would be displaced to other areas of suitable habitat. The project will provide a beneficial effect by removing invasive species. Specific effects on wildlife would vary by species and throughout the project corridor. Temporarily cleared areas will be revegetated with an erosion-control seed mix and native plant species. None of the freshwater bodies potentially affected by the proposed action contain fish. Therefore, freshwater fish would not be impacted by the project.

Through implementation of the HCCC ILF program, wildlife habitat in the marine and freshwater environment would be restored, created, enhanced, or preserved. I have determined the impacts to wildlife habitat, with the addition of special conditions "g" through "i" listed in Section XI, are not contrary to the public interest.

8. Flood Hazards and Floodplain Values. In accordance with Executive Order 11988, Federal agencies should avoid to the extent practicable long and short term adverse impacts associated with the occupancy and modification of floodplains as well as the direct and indirect support of floodplain development. Based upon the flood zone rating for the local area, the EHW-2 project site would not be in a floodplain and changes in runoff conditions would not be transmitted to a flood plain.

I have determined impacts to flood hazards and floodplain values are not contrary to the public interest.

9. Land Use. Activities authorized by this DA permit would change the land use at the EHW-2 project area from natural to developed. The change in land use would

alter the character of the area, including temporary and permanent loss of forested areas and undeveloped shoreline, but would support the Navy's mission at NBK-Bangor. The EHW-2 is compatible with NBK-Bangor's base master plan, existing land uses, and land use goals and policies including the Coastal Zone Management Act (CZMA).

I have determined the impacts to land use are not contrary to the public interest.

10. Navigation: Navigable waters occur within the EHW-2 project area. Hood Canal is a navigable water of the U.S. The EHW-2 project site would be located inside an existing Naval Restricted Area and thus, the area is not available to public navigation. An existing floating security fence surrounds this Restricted Area. The boundary of the Restricted Area would not be affected by the proposed project. Any boats or barges used during in-water construction activities would generally be located in the NBK-Bangor Restricted Area away from normal public navigation activities.

The project would result in increased vessel traffic in Hood Canal during construction. Standard U.S. Coast Guard safety precautions would be used by all contractors. During the projected three in-water work window construction seasons, there would be an increase of three barge trips per week. This increase would have a minimal impact on marine vessel traffic in Hood Canal.

In order to maintain adequate levels of safety for vessel navigation during in-water construction activities, the Navy will request the U.S. Coast Guard issue a Notice to Mariners to minimize navigational hazards in Hood Canal.

Operation of EHW-2 would not result in an increase in boat traffic at the Bangor waterfront. Some of the ongoing operations and boat traffic at the existing EHW and other facilities within the Waterfront Restricted Area would be diverted to EHW-2. The EHW-2 may be used as a backup explosives handling facility for OHIO-class guided missile submarines currently homeported at the Bangor waterfront when there are no TRIDENT operations at the existing EHW. The EHW-2 may also provide temporary berthing when no ordnance handling operations are occurring at either wharf. As all of the submarines proposed to use the facility currently transit Hood Canal to reach NBK-Bangor and all these operations would occur inside the existing Restricted Area there would be no effect on navigation in Hood Canal.

I have determined the proposed project impacts on navigation would be temporary and are not contrary to the public interest.

11. Shore Erosion and Accretion. Shore erosion and accretion can be caused by a variety of sources: wind stress, convective mixing, upwelling activity, and wave activity from boat wakes. Shoreline topography and aspect also affect shore erosion and accretion.

As described in the FEIS, during construction pile driving, barge grounding, vessel propeller wash, and anchor and spud placement may result in bottom scour and seafloor

disturbance such as mounding and displacement of sediments. Changes to bathymetry would be limited to highly localized areas and would range between 0.5 and 3 feet due mainly to displacement during pile driving and anchor placement. Due to natural processes governing sediment erosion, deposition, and transport, it is anticipated the bathymetric profile of the seafloor near the EHW-2 project site would return to pre-construction conditions within 6 to 12 months after completion of construction and demobilization.

I have determined the impacts to shore erosion and accretion are not contrary to the public interest.

12. Recreation. As public access to NBK-Bangor is restricted and the EHW-2 project area occurs where there is no public access to recreational facilities, there would be no impacts to recreation for the general public within the project area. However, recreational areas near NBK-Bangor could be affected by construction noise. Boaters and kayakers on Hood Canal within audible range of the construction site would be subjected to noise from pile driving, but the presence of the floating security barrier would prevent recreational users from getting close enough to the pile driver to receive injurious noise levels. Recreational scuba divers diving between Hazel Point and Termination Point on the Toandos Peninsula could experience underwater noise, but not at levels that would cause an adverse affect on recreational activities.

Any boats or barges used during in-water construction activities would generally be located in the NBK-Bangor Restricted Areas away from normal recreational activities. Standard U.S. Coast Guard safety precautions would be used by contractors. The maximum three one-way barge trips per week would have a minimal impact on recreational marine traffic in Hood Canal.

The Navy will request the U.S. Coast Guard issue a Notice to Mariners, which is a public notice on the Coast Guard website that recreational boaters could review when planning their activities.

I have determined the impacts to recreation are not contrary to the public interest.

13. Water Supply and Conservation. Activities authorized by this DA permit may affect water supplies due to increased demand or potential impacts to surface and groundwater quality. As NBK-Bangor is a federal military facility, the Navy owns and maintains the water supply system located on the project site. Potable water on NBK-Bangor is provided by four deep groundwater supply wells. Water is provided to the project site by an existing water main located within Archerfish Road.

Construction workers (maximum 100 workers per day) would create increased demands on water supply, but these amounts would be a very small percentage of the total demand on the water system.

The proposed action would require only minimal increases to the existing water supply to support the main wharf and warping wharf. The existing water distribution infrastructure was designed to provide sufficient capacity to support future development in the EHW area. There is sufficient capacity in it to accommodate the minimal increase in water for potable uses and fire suppression. As the number of new employees (20) and increased water demands would not be substantial relative to existing and projected regional utility supplies, significant impacts to the potable water system would not occur. The potable water systems for the three new buildings and the proposed pure water facility would connect to the existing systems at those sites and capacity is sufficient to meet demand for the new facilities.

The 3.6 acres of new impervious surface in upland areas (including the three new buildings, replacement parking, and pure water facility) would have a negligible impact to groundwater supply and quality as stormwater would be captured and discharged to the existing stormwater system, and because the proposed sites are in a groundwater discharge zone which is not used as a water source.

I have determined the impacts to water supplies and conservation are not contrary to the public interest.

14. Water Quality. The EHW-2 project activities may affect water quality by increasing pollutants and turbidity in the water. Impacts to water quality may occur during project construction and from the long-term use of the facility. Long-term impacts include runoff from impervious surfaces and the loss of wetlands which may trap pollutants, sediments and transform chemical compounds.

The project corridor is located in the Hood Canal watershed. At the project site water quality in Hood Canal is characterized as excellent for most of the year, except during late summer when dissolved oxygen (DO) levels are typically lower. Other water quality parameters typically are within the state water quality standards. Sediment quality is generally good and chemical contaminant concentrations meet Sediment Quality Standards (SQS).

In general, construction and operation of project components in the upland portion of the project site would not directly alter or impact marine water quality. Potential indirect impacts to marine water quality would be minimized through implementation of stormwater management measures.

Adverse effects on water quality during construction would be minor and short term. The construction work would be managed with a variety of BMPs. For example, floating debris barriers and oil booms would be used to minimize water quality impacts during construction. The Navy would implement current practices (CPs), which are physical, structural, or managerial practices that decrease the potential for impacts, particularly related to water quality. In the event of an accidental spill, response measures would be implemented immediately to minimize potential impacts to the surrounding environment.

Operations at EHW-2 would not discharge wastes to Hood Canal. Stormwater runoff from the EHW-2 rooftop would not require treatment and could discharge directly into Hood Canal because the rooftop would consist largely of inert materials and would not be a source of substantial pollutant loadings to Hood Canal. Some of the materials used for the wharf structure would be galvanized metal, which can leach zinc into the environment. Because most of the surfaces would consist of inert materials, the amount of zinc leached into the environment would be minimal, and the project would implement stormwater BMPs and be operated in accordance with the NPDES permit. The presence of the sacrificial aluminum anodes for cathodic protection on piling would be a source for input of aluminum to Hood Canal waters. However, based on EPA modeling and analysis, the resulting concentrations would be well below federal and state water quality standards and therefore are not expected to impact water quality in the project area.

As the level of operations and number of vessels involved would not increase from existing conditions, the number and size of potential spills and releases of contaminants in general would not be expected to increase. During maintenance of the EHW-2, measures would be employed to avoid discharge of contaminants to the marine environment.

Drainage water from the warping wharf, trestles, and upland areas would be collected, passed through oil/water separators, released to a wetpond or other stormwater management facility, and then discharged to Hood Canal in accordance with the NPDES permit. Overall, the project will improve water quality by treating stormwater that will provide water quality improvement functions (see Section IX below).

The WQC contains a wide variety of conditions that address the BMPs to be used, including the equipment that is allowed and construction methods that may be employed. It also addresses all in-water work.

On 10 August 2012, the Department of Ecology issued a WQC for the project. To ensure that there are no adverse affects to water quality, General Condition 5 of the DA permit will require compliance with the conditions specified in the WQC. I have determined the water quality impacts are not contrary to the public interest.

15. Energy Needs. The activities authorized by this DA permit may increase energy consumption in the area, particularly electricity and petroleum products. However, additional power plants or oil refineries to meet energy demands are beyond the Corps' scope of review for this action.

The Navy has implemented guidance and policies promoting sustainable planning, design, development and operations to decrease energy use, minimize reliance on traditional fossil fuels, protect and conserve water, and reduce the environmental impact of materials use and disposal. The proposed action would be implemented in accordance with Navy and other federal requirements regarding energy conservation and alternative energy sources.

Building the project would consume large amounts of energy that would no longer be available for other purposes. Operations would increase the demand for energy. However, capacity exists in the existing energy systems to meet EHW-2 requirements; therefore there would be little impact to these systems. Maintenance of EHW-2 would not require energy beyond existing capacity. The proposed action would not generate any energy.

I have determined the energy consumption or generation impacts are not contrary to the public interest.

16. Safety. The activities authorized by this DA permit would be subject to Federal safety laws and regulations.

(1) Earthquakes and Tsunamis: The Pacific Northwest is a seismically active region where there is the potential for earthquakes and earthquake-generated tsunamis. The EHW-2 was designed to meet the most current seismic design criteria. The Navy designed the structures in accordance with ASCE 7-05 (American Society of Civil Engineers design guide) and MOTEMS (Marine Oil Terminal Engineering and Maintenance Standards), which are approved standards for such a design. Both design guides are based on United States Geological Survey (USGS) data and are intended to account for the worst-case scenario.

The area along the NBK-Bangor waterfront has a very small potential for tsunami activity. A large earthquake generated in the offshore tectonic zone would not produce a significant tsunami event in Hood Canal due to the attenuation of wave energy as the wave travels from the Strait of Juan de Fuca and travels into the protected waters of Hood Canal.

(2) Hazardous Materials: Should any hazardous materials be found during demolition or modification of existing facilities or other construction activities, procedures for proper handling and disposal of the specific materials would be implemented.

(3) Explosives: As described in Section 1.2.1 of the FEIS, the TRIDENT mission requires more frequent and longer handling and maintenance of missiles than was previously required due to D5 Life Extension Program requirements, fleet reconfigurations, and engineered refueling overhauls. The Navy's strategic weapons programs use a layered safety system that includes highly trained personnel, detailed administration, and specifically designed equipment to ensure its missiles and weapons are safe and reliable. The Navy maintains contingency plans and conducts regular emergency response training to ensure rapid and effective actions in the unlikely event of an accident. Should an accident occur, the Navy would coordinate with regional media outlets including radio, television, and internet and county- or state-based emergency responders to immediately notify the public. A Mutual Aid Agreement between the Navy emergency response components, local communities, county, tribes, state and federal

agencies ensures an adequate response force is available to respond to an emergency or accident.

The existing EHW at NBK-Bangor has operated safely for over 30 years. There have been no accidents at the existing EHW jeopardizing the safety of the base, the local population, or the environment. Accidents have been prevented by implementing test results and experience into an overall system of safety which includes facilities, equipment, training, and personnel. Weapons systems are tested under extreme conditions well beyond those which they might be subjected during the Navy's weapons handling operations. Navy criteria establish the distance from given types and quantities of explosives within which activities and facilities are restricted to assure protection to life and property in the event of an accident. This safety arc would be applied to the EHW-2.

Operation of the EHW-2 would not result in increased danger to the public from earthquakes and tsunamis, hazardous materials, or explosives. I have determined the impacts to safety are not contrary to the public interest.

17. Food and Fiber Production. Agricultural areas and farmland do not occur within the project area and thus there would be no impact on food and fiber production from the project.

I have determined the impacts to food and fiber production are not contrary to the public interest.

18. Mineral Needs. Activities authorized by this DA permit may increase demand for aggregates used to construct roads and buildings and raw materials used in industrial manufacturing such as for piling and utilities. The project will increase demand for aggregates used to construct the road and parking areas. The wharf and utilities construction will increase the demand for steel and copper, which is made from mineral ores. This permit would not authorize impacts to waters of the U.S. associated with mining activities. The potential need for new mines to meet mineral needs is beyond the Corps scope of review for this action.

I have determined the impacts to mineral needs are not contrary to the public interest.

19. Consideration of Property Ownership. The applicant in this case is the Navy and the property which is the subject of the permit action is owned by the U.S. government. The EHW-2 project area would experience noise, dust, traffic, odor due to equipment operations, and glare from nighttime lighting that could affect neighboring privately owned properties. However, construction would occur on a military base where public access is restricted. The Navy will use BMPs to mitigate construction-related impacts during the construction period.

I have determined the impacts to private property are not contrary to the public interest.

20. Needs and Welfare of the People. The EHW-2 project supports U.S. national defense, which meets the needs and welfare of the people. The action authorized by this DA permit, including construction and operation of EHW-2 and the associated compensatory mitigation, have been evaluated based on the project impacts, including cumulative impacts, of the proposed action on the public interest. The benefits, which may be reasonably expected to accrue from the action authorized by this DA permit, have been considered against the reasonably foreseeable detriments. The action authorized by this DA permit and the impacts that may occur are not contrary to the needs and welfare of the people. I have determined there will be a benefit from the project on general needs and welfare of the people, which is not contrary to the public interest.

B. Other Factors Identified by Corps.

1. Traffic and Transportation Patterns. As described in the FEIS, construction and operational impacts to upland transportation would be minor except for delays for traffic crossing the Hood Canal Bridge during construction. Based on a review of data on Hood Canal Bridge openings, the bridge typically opens 400 to 450 times per year. During the approximately two to three in-water work seasons, there could be increase of three openings per week to allow construction barges to transit into Hood Canal below the bridge. On average, a bridge opening delays traffic for 30 minutes. During the in-water construction work window, there would be an estimated 90 additional minutes of traffic delay due to the increased openings. Impacts to motorists on SR 104 would be minimized by avoiding barge trips through the Hood Canal Bridge opening during peak commute hours of 6:00 AM to 8:30 AM and 3:30 PM to 6:00 PM, Monday through Friday.

As public access to NBK-Bangor is restricted, there would be no impact to the general public related to traffic and transportation patterns. On base, there would be an increase in traffic and transportation patterns, primarily along Archerfish Road which would be the primary haul road during construction.

I have determined the proposed project would not have adverse effects on traffic and transportation patterns and is not contrary to the public interest.

2. Air Quality. Kitsap County is in attainment of all National Ambient Air Quality Standards (NAAQS) due to its rural nature and lack of large emission sources. Air quality in the vicinity of the EHW-2 project site, the upland project area, and the greater NBK-Bangor area is generally rated as good, the highest air quality rating, for the majority of the year. The Navy used construction schedules from similar projects to estimate emissions for the EHW-2 construction activities.

During construction the project could temporarily affect air quality by increasing particulate, carbon monoxide (CO), and nitrogen oxides (NO_x) emissions due to construction equipment and increased traffic congestion during construction. Dust emissions would be associated with demolition, land clearing, ground excavation, and fill operations. Particulate emissions would vary from day to day, depending on the level of

activity, specific operations, and weather conditions. The project is required to control fugitive dust and BMPs will be used to control dust generation and distribution. Some phases of construction will result in short-term odors and the emission of VOCs, particularly paving operations. These odors will be diluted as distance from the site increases. The construction vehicles, operated by gasoline and diesel engines, will create a slight increase in CO and NO_x emissions. This increase in emissions will be temporary and only a slight increase above background conditions. Future operations would produce a nominal increase in emissions that would not exceed Puget Sound Clean Air Agency (PSCAA) annual emission thresholds.

I have determined the impacts to air quality resulting from the proposed project are not contrary to the public interest.

3. Noise. During construction, recreational and residential areas would be subjected to construction noise from boats, vessels, pile driving, and construction equipment. Pile driving noise would not be registered above ambient noise levels in the residential areas of NBK-Bangor or at local schools and residential neighborhoods. Construction would typically occur 6 days per week during daylight hours. Impact pile driving during the first part of the in-water work window (July 16 to September 15) would occur between 2 hours after sunrise and 2 hours before sunset to protect marbled murrelets during the breeding season. Vibratory pile driving and other in-water construction activities could occur during daylight hours (sunrise to sunset) between July 16 and September 15. Between September 16 and February 15, other in-water construction activities would occur during daylight hours (sunrise to sunset). Upland construction would occur between 7:00 AM and 10:00 PM. There would be between 211 and 411 pile driving days, including the abutment piles. Temporary construction noise is exempt from state limitations.

A vibratory pile driver would be the preferred method to drive pilings. An impact hammer would be used if a vibratory pile driver was unable to install pilings to the required depth. No more than one impact pile driver would operate at a time, but it could operate with up to three vibratory pile-driving rigs operating at the same time. The noise emitted from these concurrent operations could potentially injure workers at the site. Personal protective equipment would be required for workers and must be capable of reducing the noise exposure below injury thresholds.

Operations would result in increased localized noise at the EHW-2 project site and at the three new building and pure water facility. Overall noise at the Bangor waterfront is expected to remain similar to existing conditions, as part of the operations and boat traffic at the existing EHW and other waterfront facilities would be diverted to EHW-2. Noise from operation of the three new buildings and pure water facility would be the same as noise produced by the existing facilities. This noise would be audible at times in the residential community nearest to the three new buildings, but would not be louder than noise from existing Navy facilities at the same site. Therefore, no adverse impacts from operational noise are anticipated.

I have determined the noise impacts are not contrary to the public interest.

4. Lighting. Lighting on the wharf and access trestles would range from 100-Watt (W) metal halide lights to 1,500 W quartz lights. Lights over the surrounding water would consist of pulse-start metal halide lights, plus 1,500 W quartz backup lights. This lighting has the potential to alter fish behavior in the immediate vicinity of the light and could increase nighttime predation.

The EHW-2 trestle height overwater was designed to minimize the effects of lighting on nearshore habitats and fish, specifically migrating juvenile salmonids. The trestles in the nearshore were designed to minimize overwater coverage in this sensitive habitat to minimize direct and indirect impacts to nearshore species and their habitats and reduce the amount of lighting required. Scientific research has produced mixed determinations regarding whether artificial lighting results in increased predation on juvenile salmon.

I have determined the impacts from lighting are not contrary to the public interest.

5. Recreational or Commercial Fisheries. The Navy as the Federal Lead has consulted with NMFS regarding requirements for protection of waters and substrate supporting federally managed and commercially harvested fish protected under the Essential Fish Habitat (EFH) provision of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). NMFS issued a Biological Opinion (BiOp) and EFH conservation recommendations on 29 September 2011. The Navy submitted a statutory response requirement on 23 November 2011 agreeing to implement all recommendations in the NMFS BiOp MSA Consultation section.

The 1997 Memorandum of Agreement between the Navy and the Point No Point Treaty Council (PNPTC) addresses shellfish harvesting on the Bangor shoreline (FEIS section 3.19.1.3). Regarding Restricted Area 1, FEIS section 1.1 states: "Naval Restricted Area 1 covers the area to the north and south along Hood Canal encompassing the Bangor waterfront. The regulations associated with Naval Restricted Area 1 state that no person or vessel shall enter this area without permission from the Commander, Naval Submarine Base Bangor, or his/her authorized representative." To date, no tribes have requested permission to finfish within the waters of this area. Regarding Restricted Area 2, "...navigation will be permitted within that portion of this circular area not lying within Restricted Area 1 at all times except when magnetic silencing operations are in progress." Within Restricted Area 2, there is no restriction to Tribal fishing except during the noted operations.

Implementation of the proposed action would adversely affect fish, which include tribal treaty resources. A net loss of tribal resources is not anticipated, but pile driving noise during construction may cause salmon and steelhead to move to a different location within Hood Canal. This could increase the time for Tribal members to harvest resources. Tribal divers engaged in resource harvest within the project area could experience increased underwater noise levels. Mitigation is included as part of the

proposed action to address impacts to tribal fisheries.

Recreational fishing is very common in Hood Canal and generates revenue in the area. As the public is not allowed to fish within the project area at NBK-Bangor, there would be no change to recreational or commercial fishing there. Noise and vibrations from pile driving would drive fish further from the project site. Given the size of Hood Canal (95,296 acres), the project is not expected to have an adverse affect on recreational fisheries.

Through implementation of the HCCC ILF program, fish habitat in the marine and freshwater environment would be restored, created, enhanced, or preserved. I have determined the impacts to recreational or commercial fisheries are not contrary to the public interest.

C. General Evaluation Criteria Considered Under the Public Interest Review.

1. The following general evaluation criteria were considered under this public interest review:

a. The relative extent of the public and private need for the project: The Corps has evaluated the general need for the EHW-2. The project would improve missile handling capability at NBK-Bangor, which benefits the public by supporting national defense.

b. Unresolved conflicts as to resource use: None.

c. The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public, and private uses to which the area is suited: Substantial permanent and/or temporary detrimental impacts will occur to wetlands and habitat for fish and other aquatic organisms. However, mitigation and BMPs are provided to compensate for these impacts. The beneficial effects associated with the EHW-2 project would be permanent.

VII. <u>Cumulative and Secondary Effects</u>. To evaluate cumulative impacts, the Corps considered the scope (resources, geographic area, timeframe); past, present, and reasonably foreseeable actions; cumulative and secondary effects of the action; and the effect of the proposed mitigation. The cumulative impact assessments submitted by the Navy are included in the FEIS and provide supporting documentation to this evaluation. This section contains the Corps' evaluation of the Navy's analysis in the FEIS. The resources included in this analysis are: aesthetics, air quality, energy, fish and other aquatic resource habitat, lighting, marine vegetation, navigation, noise, terrestrial vegetation and wildlife habitat, water quality, and wetlands.

The timeframe for the project is Euro-American settlement (early 1800s) to 2030. The geographic boundaries of the Corps' assessment vary for each resource, but at a maximum include the whole of Hood Canal. In the FEIS, the Navy used the term Region

of Influence (ROI) to describe the geographic boundary of their cumulative impact assessment. For some resources, the Corps determined a smaller geographic area was appropriate for analysis. For example, the Corps evaluated impacts to eelgrass from construction along the NBK-Bangor shoreline rather than looking at the entirety of Hood Canal. Eelgrass is a relatively fixed resource which provides aquatic resource functions that are difficult to replace, therefore it is appropriate to look at impacts along a specific shoreline i.e., as used by migrating salmonids.

A. Historic Conditions of the Watershed. The first Euro-American settlers arrived at the Washington coast in the early 1800s. The early economy of the Hood Canal area was based on fur trade and logging. Small towns were developed along waterways to take advantage of these areas for transporting timber and fishing harvests. As these people continued to arrive and development of the area continued and intensified, trees were cut and landforms were altered. Since that time, development in the study area has been shaped in large part by the geography of Hood Canal, the development of transportation routes to and across the Canal, and the ways in which those routes have changed over time.

In the 1850's the territorial governor began the process of gaining treaty cessions from local American Indian Tribes. Shortly after the treaties were signed, small towns became established in the surrounding area. The town of Bangor, Washington was founded in 1890.

B. Major Changes of the Watershed and the Existing Condition. The Hood Canal watershed has undergone changes from historic conditions due to relatively intense development. The rate of development is influenced by zoning and land use designations. Along the Hood Canal shoreline, development has been largely residential although there are some commercial facilities.

In the marine environment, there continues to be an increase in pier construction and bank stabilization projects. Approximately 27 percent of the Hood Canal shoreline is modified with bulkheads, riprap, or other structures compared to approximately 6 percent of the Bangor shoreline.

Along the NBK-Bangor shoreline, past actions such as construction of new structures including piers and wharfs, waterfront operations and vessel traffic, maintenance activities such as pressure-washing marine structures and substantial piling replacement, installation and relocation of floating barriers and mooring buoys, road and facility construction, and installation of security fencing upland (Waterfront Security Enclave project).

Trends in the marine environment include the following: a decrease in marine birds (particularly scoters, loons, and grebes) and increase in California sea lions and harbor seals; a decline in native eelgrass in Hood Canal, an increase in the size and duration of phytoplankton blooms and a corresponding decrease in overall DO levels, a decrease in some fish stocks (salmon, rockfish, spiny dogfish, Pacific cod, and hake), increased

shoreline sediment erosion due to shoreline armoring and in-water structures, and an overall decline in fecal coliform levels. The southern end of Hood Canal in particular experiences low dissolved oxygen levels due to human actions such as leaking septic systems and fertilizer runoff.

Upland development within the Hood Canal watershed has also changed the area. The Kitsap County Shoreline Management Master Program (SMP) was implemented to enhance and protect water resources in the Hood Canal Watershed, including all lands and activities affecting drainage of water into the canal or its tributaries. This includes minimizing erosion and sedimentation, and protecting soil resources. The areas around NBK-Bangor are designated as Rural Residential, which has slowed the rate of development.

C. Anticipated Cumulative and Secondary Impacts of the Proposed Project and Reasonably Foreseeable Future Actions (RFFAs). Based on current projected schedules, construction of the following projects at NBK-Bangor may overlap with construction of EHW-2: EHW-1 Pile Replacement, Land-Water Interface construction, Service Pier barge mooring replacement, potential Service Pier Extension, installation of Electromagnetic Measurement Range Sensor System equipment, and reuse or replacement of the Magnetic Silencing Facility Pier and upland monitoring buildings. The EHW-1 Pile Replacement, Land-Water Interface, Service Pier barge mooring replacement, Service Pier Extension, and Electromagnetic Measurement Range projects would involve substantial pile driving resulting in cumulative impacts with the proposed action. RFFAs outside of NBK-Bangor include construction of a commercial pier in Port Gamble, potential cleanup actions within Port Gamble Bay, removal of a 1000-foot long bulkhead at Kitsap Memorial State Park, construction of a new marina in Seabeck Bay, and construction of a new pier for sand and gravel loading at Thorndyke Bay.

Impacts from these RFFAs will be additive to the effects of the proposed project. The RFFAs would result in additional noise impacts as well as impacts to air and water quality, eelgrass, fish and wildlife habitat, and other aquatic and terrestrial resources. Any mitigation required to compensate for these impacts will be determined during their permit review process.

Cumulative and secondary impacts will result from constructing the EHW-2 project. Specific areas of cumulative and secondary effects analyzed for the project include:

1) **Aesthetics of the aquatic ecosystem**—The geographic boundary for this impact is the NBK-Bangor shoreline. The project would add another large, industrial structure to the shoreline at the base which would be visible from parts of Hood Canal having a direct line of sight to the structure. The majority of the NBK-Bangor is undeveloped, and construction of this additional structure would not appreciable degrade the aesthetics of the shoreline at the base.

2) **Air quality**—The geographic boundary for air quality is the Puget Sound Clean Air Agency (PSCAA) region, which encompasses localities in Kitsap County and the

Hood Canal area. Project construction activities will make a small, short-term contribution to an incremental effect on air quality by emitting exhaust gases and particulates into the atmosphere. Emissions from project construction activities will combine with other emissions from sources within the region. This incremental effect will be temporary and is not expected to cause a change from the baseline condition or a violation of the National Ambient Air Quality Standards. During project operation, there would be emissions from operations but they are not expected to violate air quality standards.

3) **Habitat for fish and other aquatic organisms**—
   a) The geographic boundary for benthic communities, including shellfish, is the NBK-Bangor waterfront. The project would result in 0.20 acres of permanently lost benthic habitat due to the presence of piling, and an additional 25.7 acres of habitat could be disturbed during construction. The conversion of soft-bottom habitat to hard surfaces from past, present, and foreseeable future actions would include approximately 2.5 acres from Navy actions and the proposed action would add 0.20 acre of this impact, putting the total impacts from all actions at less than 3 acres. Accretion and erosion of sediments has occurred in the vicinity of the structures along the shoreline at NBK-Bangor. These changes result in alteration of the benthic community. Benthic organisms lost due to turbidity and bottom disturbances by barges, tugboats, anchors, and spuds would be expected to recolonize within the EHW-2 project site over a 3-year period after sediment disturbance at the site has ceased, however, there would be localized changes in the number and composition of benthic species.

   b) The geographic boundary for marine fish is Hood Canal based on migration patterns and resource and harvest management plans. The proposed action would impact marine fish as they would be affected by pile driving and other construction activities and obstruction from the presence of another structure along the shoreline. Navy and non-Navy actions in Hood Canal have resulted in and will result in loss and alteration of marine fish habitat. However, through legislation and the work of numerous restoration groups to improve marine fish habitat in Hood Canal, efforts are being made to reverse the decline of marine fish species, particularly ESA-listed salmonids.

   c) The geographic boundary for marine mammals and birds is Hood Canal based on migration patterns and availability of habitat. The proposed action would impact marine mammals and fish as they would be affected by pile driving and other construction activities, especially if concurrent with other pile driving projects. The animals would be driven away from the construction site; however, other suitable habitat exists in Hood Canal. Observations at NBK-Bangor indicate marine mammals and birds can adapt to the presence of human activity.

4) **Lighting**—The geographic boundary is the NBK-Bangor waterfront. The proposed project would result in additional lighting, which may increase predation of benthic

organisms and potentially juvenile salmonids. Affects from lighting would be highly localized.

5) **Marine Vegetation**—The geographic boundary is the NBK-Bangor waterfront. There are currently approximately 37.7 acres of eelgrass in the intertidal/nearshore zone of the NBK-Bangor waterfront. The Navy estimates 5.2 acres of eelgrass may have been lost over time due to placement of in-water structures such as pilings and anchors, or to displacement by Japanese wireweed. Approximately 24.7 acres of overwater shading have been created by past actions along the Bangor waterfront. Overwater shading reduces the productivity of marine vegetation such as eelgrass and macroalgae. The project would result in the permanent loss (through shading) of 0.09 acre of eelgrass and temporary impacts to 1.65 acres of eelgrass, kelp, and green and red macroalgae. Macroalgae is expected to recolonize the area post-construction, but there would be some reduction of algal habitat in fully shaded areas.

6) **Navigation**—The geographic boundary is Hood Canal. There would be temporary impacts to navigation during construction due to the presence and transit of additional barges and vessels. However, operations at EHW-2 would not result in a permanent increase of vessels to or within the Restricted Area.

7) **Noise**—The geographic boundary is areas of Hood Canal within audible range of the project. Construction of EHW-2 could overlap in time with construction of other waterfront structures at NBK-Bangor, including pile replacement at the existing EHW, the Service Pier barge mooring replacement, Service Pier Extension, Land Water Interface, and Electromagnetic Range projects. Pile driving for the multiple projects could result in cumulative noise impacts. If more than one construction project occurred at the same time, the predominant noise impact would be expansion of the geographic area affected by maximum sound levels. More individuals of marine species (fish, marine mammals, and marine birds) would be affected, but it is unlikely the population-level effects of the cumulative sound levels would be greater than those of the EHW-2 project alone. Noise impacts to nearby residential and recreational areas would also increase slightly. There are expected to be no major marine construction projects outside of NBK-Bangor with which the NBK-Bangor projects could have cumulative noise impacts. The Test Pile Program did not overlap in time with the EHW-2 project, but it did add an additional season (August to October 2011), during which marine biota on NBK-Bangor were exposed to pile driving noise. A total of 21 days of pile driving were needed to complete this program.

8) **Terrestrial vegetation and wildlife habitat**—The geographic boundary is NBK-Bangor. On NBK-Bangor, past and present development has resulted or is resulting in the loss of approximately 1,100 acres of the forested area to development and 300 acres to grassland/shrubland habitat. Past and present non-Navy actions have contributed or are contributing to vegetation loss or conversion due to residential and commercial development in the general area. Since the 1960s approximately 1,000 acres on NBK-Bangor have been replanted with native species. Based on available

information on past, present, and future Navy and non-Navy actions, it is estimated that future Navy and non-Navy actions would result in loss of approximately 300 and 128 acres of vegetation, respectively. The EHW-2 would temporarily remove approximately 10.3 acres of second-growth forest and shrub habitat. Most (6.9 acres) of the cleared area would be revegetated following construction and the remainder (3.4 acres) would be permanently lost due to construction of new roads, buildings, parking, utilities, and stormwater facilities. The proposed action would at most contribute less than 1 percent to the total area of vegetation cleared on NBK-Bangor by past, present, and future Navy actions.

9) **Water quality**—The geographic boundary consists of Hood Canal and its watershed. This geographic boundary was determined based on available information on management of water quality, planning, recovery efforts, and trend data. Implementation of the proposed action would not be expected to add appreciably to cumulative water quality impacts as the water quality impacts would be localized and short-tem during construction with little potential to overlap in space with other projects in the area.

10) **Wetlands**—The geographic boundary is NBK-Bangor. There are approximately 254 wetlands on base. Currently permitted development will result in the loss of 2.1 acres due to the Enclave Security Fence project. Mitigation for this impact is being implemented onsite at NBK-Bangor through the restoration of tidal influence to Cattail Lake. The proposed EHW-2 project would impact 0.20 acre of wetland. These two projects represent a loss of less than 1% of the total wetland acreage. Future Navy actions could result in loss of wetland, but would require any appropriate mitigation.

11) **Marine Sediments**—The reduction in wave energy from passing through the structure would result in a secondary impact of deposition of sediments and establishment of a shoal area in the nearshore. Longer-term, a beach would form along the shoreline. This accumulation of sediments inshore of the EHW-2 structure would be expected to be similar to the accumulation inshore of the existing EHW. The accumulation would occur slowly and would not contribute to changes in sediment transport in areas beyond the immediate project area. While the project would replace some natural shoreline with a concrete structure, the size of the structure is small in comparison to the overall length of undeveloped shoreline in the area, and the effect on the shoreline would be minimal.

D. Proposed Mitigation, Including Avoidance and Minimization. The project has incorporated numerous avoidance and minimization efforts to reduce impacts. The Navy has avoided and minimized impacts by:

- Minimizing and aligning trestles to reduce impacts and overwater coverage over shallow nearshore areas.
- Minimizing the number of piling to reduce impacts to aquatic resources.
- Minimizing the size of the support building to reduce overwater coverage.

- Implementing Current Practices (CPs) and Best Management Practices (BMPs) including:
    - Floating debris barriers and oil booms would be used to minimize water quality impacts during construction.
    - Tugboat operations would be managed to minimize suspension of bottom sediments from propeller wash.
    - Barges and other construction vessels would not be allowed to run aground to minimize impacts to the seafloor and benthic community.
    - In-water construction would be performed during the in-water work window (July 16 to February 15) to minimize project impacts to potentially occurring juvenile salmonids.
    - BMPs would be implemented to control runoff and siltation and minimize impacts to surface water per the *Stormwater Management Manual for Western Washington* (WDOE 2005a).
- Implementing mitigation measures including:
    - Acoustic monitoring would be performed during pile driving to confirm or revise noise predictions.
    - Monitoring would be conducted by trained observers during pile driving for the presence of marine mammals and marbled murrelets in the area adjacent to the pile driving site. Pile driving would be suspended while these species were close enough to be injured.
    - Using vibratory pile driving rather than impact methods to the maximum extent practicable to reduce noise levels.
    - Using air bubble curtains or other noise attenuating devices during impact hammer pile driving to minimize noise impacts.
    - Using a soft-start approach to pile driving during both impact and vibratory driving to induce marine mammals and birds to leave the immediate area. This soft-start approach requires contractors to initiate noise from hammers at reduced energy, followed by a waiting period.
    - Impact pile driving during the first part of the in-water work window (16 July to 15 September) would only occur between 2 hours after sunrise and 2 hours before sunset to protect foraging marbled murrelets during the breeding season.
    - Following construction, areas not permanently paved or otherwise used for the proposed action would be revegetated with native forest and shrub species.

Compensatory mitigation for the impacts has focused on the aquatic and wetland impacts. Section XI below provides details regarding the proposed mitigation. In summary, the Navy has avoided and minimized cumulative and secondary impacts to the maximum extent practicable through design revisions and implementation of CPs, BMPs, and mitigation measures. Unavoidable impacts to aquatic resources would be compensated through use of the HCCC ILF program.

E. Conclusions. The Corps has evaluated the magnitude of the environmental consequences of this action in the context of the other past, present, and reasonably foreseeable future actions. The cumulative and secondary effects of continued development and increasing impervious surfaces are expected to continue within the project area regardless of the proposed action. The Navy has implemented numerous avoidance and minimization measures. The proposed compensatory mitigation for wetland and aquatic resource impacts will adequately offset any cumulative and secondary impacts attributable to the project for aesthetics, air quality, energy, fish and other aquatic resource habitat, lighting, marine vegetation, navigation, noise, terrestrial vegetation and wildlife habitat, water quality, and wetlands. Therefore, while the proposed project and mitigation does not reverse the past adverse impacts having occurred in this area, it does not further contribute to the degradation of the aquatic environment.

With the addition of special conditions "g" through "i" listed at the end of this document, I have determined the secondary and cumulative impacts are not contrary to the public interest and are in compliance with the Section 404(b)(1) Guidelines.

VIII. Other Federal Laws. For this project, the Navy is the Federal lead agency responsible for compliance with:

A. Endangered Species Act, Section 7. Listed below are the species, listed under ESA that occur in the project area and the Federal lead agency's determination of effect.

- Puget Sound/Coastal bull trout (*Salvelinus confluentus*) Distinct Population Segment (DPS), threatened, may affect, not likely to adversely affect.
- Puget Sound/Coastal bull trout critical habitat, no effect.
- Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*) Evolutionary Significant Unit (ESU), threatened, may affect, likely to adversely affect.
- Puget Sound Chinook salmon critical habitat, likely to adversely affect.
- Hood Canal summer-run chum salmon (*O. keta*), threatened, may affect, likely to adversely affect.
- Hood Canal summer-run chum salmon critical habitat, likely to adversely affect.
- Puget Sound/Georgia Basin bocaccio (*Sebastes paucispinis*) DPS, threatened, may affect, likely to adversely affect.
- Puget Sound/Georgia Basin canary rockfish (*S. pinniger*) DPS, threatened, may affect, likely to adversely affect.
- Puget Sound/Georgia Basin yelloweye rockfish (*S. ruberrimus*) DPS, threatened, may affect, likely to adversely affect.
- Puget Sound steelhead (*O. mykiss*) DPS, threatened, may affect, likely to adversely affect.
- Southern resident killer whale (*Orcinus orca*), endangered, may affect, not likely to adversely affect.
- Southern resident killer whale critical habitat, no effect.

- Steller sea lion (*Eumetopias jubatus*), Eastern DPS, threatened, may affect, likely to adversely affect.
- Steller sea lion critical habitat, no effect.
- Marbled murrelet (*Brachyramphus marmoratus*), endangered, may affect, likely to adversely affect.
- Marbled murrelet critical habitat, no effect.
- Humpback whale (*Megaptera novaeangliae*), eastern North Pacific stock, endangered, may affect, not likely to adversely affect.

On 16 November 2011 and 29 September 2011, the U.S. Fish and Wildlife Service and National Marine Fisheries Service (NMFS), respectively, provided Biological Opinions (BiOps) for the project. The Navy will implement the impact-reducing measures in the USFWS BiOp. The Navy reinitiated consultation on18 April 2012 for humpback whale due to sightings within the project area. NMFS provided a letter of concurrence (LOC) on 26 April 2012 concurring with the Navy's determination of "not likely to adversely affect" for humpback whale.

To achieve minimal impacts on listed species, special conditions "a" through "e" listed at the end of this document will become conditions of the permit. I have determined the proposed project is in compliance with Section 7 of the ESA.

B. Magnuson-Stevens Fishery Conservation and Management Act. In accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Navy assessed the potential impacts of the project on Essential Fish Habitat (EFH). The project area includes EFH for groundfish, coastal pelagic species, and Chinook, coho, and pink salmon. Based on the rationale detailed in the Biological Assessment, the Navy has determined that the proposed action would adversely affect EFH for salmonids and groundfish, but would not adversely affect coastal pelagic EFH. On 29 September 2011, NMFS determined the project would have an adverse affect on salmonid, groundfish, and coastal pelagic EFH and provided three conservation recommendations. The Navy submitted a statutory response requirement on 23 November 2011 agreeing to implement all three recommendations in the NMFS BiOp MSA Consultation section. To minimize impacts on EFH, special condition "f" at the end of this document will become conditions of the permit. I have determined the proposed project is in compliance with the MSA.

C. National Historic Preservation Act, Section 106. As the Federal lead for compliance with Section 106 of the National Historic Preservation Act (NHPA), the Navy has consulted with the State Historic Preservation Officer (SHPO) regarding the potential effect of the EHW-2 project on the visual context and aesthetic environment of the NRHP-eligible properties within the Area of Potential Effect (APE). On 1 December 2011, the State Historic Preservation Officer concurred with the Navy's evaluation of the Delta Pier and EHW as eligible for the NRHP and with the finding of no adverse effect on NRHP-eligible historic properties and with the Navy's APE.

The Navy consulted with the Skokomish, Port Gamble S'Klallam, Lower Elwha Klallam,

Jamestown S'Klallam, and Suquamish Tribes under Section 106 of the NHPA. This consultation is described in Section VI.A.6 of the ROD. I have determined the proposed project is in compliance with the Section 106 of the NHPA.

D. Coastal Zone Management Act. On 10 August 2012, Department of Ecology issued a CZMA consistency determination for the project.

IX. Compensation and Other Mitigation Actions. Through the design process, the Navy minimized impacts to wetlands and aquatic resources by:

- Minimizing and aligning trestles to reduce impacts and overwater coverage over shallow nearshore areas.
- Minimizing the number of piling to reduce impacts to aquatic resources.
- Minimizing the size of the support building to reduce overwater coverage.

Other mitigation actions include implementation of Current Practices (CPs) and Best Management Practices (BMPs) as described in the Navy's *Mitigation Action Plan, Trident Support Facilities Explosives Handling Wharf* dated March 2012 (FEIS Appendix F). Current practices (CPs) are physical, structural, or managerial practices that decrease the potential for impacts, particularly related to water quality. BMPs are required to ensure compliance with the U.S. Environmental Protection Agency (EPA) general permit for storm water discharges from construction sites.

To compensate for unavoidable impacts to wetlands and aquatic resources, the applicant will purchase credits from the Hood Canal Coordinating Council (HCCC) In Lieu Fee (ILF) program.

A. Impact Assessment. The project would permanently fill 0.20 acre of wetland and impact 0.03 acre of nearshore habitat below the high tide line by the discharge of dredged or fill material. The proposed EHW-2 would result in direct and indirect impacts from the 6.3-acre overwater structure. The construction and operation of the EHW-2 structure would impact marine intertidal and subtidal habitats as described in Section II.B. above. The work would also result in temporary impacts that would occur during the construction period. The project would alter the aquatic environment of Hood Canal and result in the loss of benthic habitat, eelgrass, and macroalgae as described in the *Hood Canal Coordinating Council In Lieu Fee Program Use Plan: ILF Use Plan for Mitigation for Navy Explosive Handling Wharf #2 Naval Base Kitsap Bangor* dated 14 August 2012. Compensatory mitigation is required to reduce the individual and cumulative adverse environmental effects to a minimal level.

B. Proposed Mitigation. As part of the permit application, the Navy included a *Mitigation Action Plan* that includes measures to avoid and minimize impacts and the Navy voluntarily submitted an ILF use plan to compensate for unavoidable impacts to the aquatic environment from the proposed EHW-2 project. An in-lieu fee program refers to a program involving restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements. An ILF program

sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu fee program sponsor. The operation and use of an ILF program are governed by an ILF program instrument. In this case the Navy proposed to meet its mitigation requirements in accordance with the Hood Canal Coordinating Council In Lieu Fee Program instrument as described in the *Hood Canal Coordinating Council In Lieu Fee Program Use Plan: ILF Use Plan for Mitigation for Navy Explosive Handling Wharf #2 Naval Base Kitsap Bangor* dated 14 August 2012.

C. Mitigation Acceptance. The Corps has evaluated the *Mitigation Action Plan.* The action plan includes specific measures to avoid and minimize impacts from the project. The Navy will be required to implement and abide by the impact avoidance and minimization measures contained in the *Mitigation Action Plan, Trident Support Facilities Explosives Handling Wharf* (Sections 1.0 through 5.3.9) dated March 2012. Other sections described in the March 2012 *Mitigation Action Plan* have either been superseded by the revised compensatory mitigation proposal or are actions beyond the purview of this DA permit evaluation.

The Corps has evaluated the proposed ILF use plan. The proposed project is located within the service area of the Hood Canal Coordinating Council In Lieu Fee Program and is consistent with the program instrument. The selected compensatory mitigation option of obtaining credits from an approved ILF program complies with the type and order of mitigation options at 33 CFR 332.3. The ILF use plan proposed by the Navy is reasonable, has been specifically designed for this project site to compensate for the loss of wetlands and their functions, including the cumulative loss of wetlands and their functions, and impacts to marine aquatic resources and their functions, which will occur as a result of the project. The Navy will be required to obtain mitigation credits in accordance with Table 6 and Table 8 of the *Hood Canal Coordinating Council In Lieu Fee Program Use Plan: ILF Use Plan for Mitigation for Navy Explosive Handling Wharf #2 Naval Base Kitsap Bangor* dated 14 August 2012. I have determined the impacts to wetlands and aquatic resources, with the addition of special conditions "g" through "i" listed in Section XI of this document, are not contrary to the public interest and are in compliance with the Section 404(b)(1) Guidelines.

X. Compliance with Federal Laws, Other Policies, and Treaty Rights.

A. Federal Laws. As discussed in preceding sections of this document, I have determined the work is in compliance with compliance with Section 7 of the Endangered Species Act, the Magnuson Stevens Fishery Conservation and Management Act, Section 106 of the National Historic Preservation Act, Coastal Zone Management Act, and Section 401 of the Clean Water Act.

B. Relevant Presidential Executive Orders.

1. EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians. This action has direct effects on one or more Indian tribes (see Section X.C Treaty Rights below).

2. EO 11988, Floodplain Management. Based upon the flood zone rating for the local area, the EHW-2 project site would not be in a floodplain and changes in runoff conditions would not be transmitted to a flood plain. I have determined this action is in compliance with EO 11988.

3. EO 12898, Environmental Justice. Minority populations range from 14.1 percent in Poulsbo to 27.7 percent in Bremerton, compared to 17.8 percent for Kitsap County overall and 9.7 percent in Jefferson County and 21.1 percent of the population in Washington State. American Indians populations range from 0.8 percent in Silverdale to 2.4 percent in Jefferson County.

With the exception of Bremerton, which has a poverty rate of 17.9 percent, poverty in the affected region is below state levels. Poverty rates range from 4.7 percent in Silverdale, 8.9 percent in Poulsbo, 8.4 percent in Kitsap County, and 12.4 percent in Jefferson County.

Construction of EHW-2 would generate additional jobs and the related income would provide short-term benefits to the Kitsap County area during construction. There would be no other construction-related socioeconomic impacts including any impacts to environmental justice populations. Operations would provide permanent employment for approximately 20 people and could increase county population by 45 persons.

In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the project would not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin, nor would it have a disproportionate effect on low-income or minority communities.

4. EO 13112, Invasive Species. The evaluation above included invasive species concerns in the analysis of activities authorized by this DA permit and associated compensatory mitigation projects. The permittee will be required to control the introduction and spread of exotic species.

5. EO 13212 and 13302, Energy Supply and Availability. Activities authorized by this DA permit are not activities that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.

C. Treaty Rights. In the mid-1850s, the United States entered into treaties with a number of Indian tribes in Washington. These treaties guaranteed the signatory tribes the right to "take fish at usual and accustomed grounds and stations . . . in common with all

citizens of the territory" [U.S. v. Washington, 384 F.Supp. 312 at 332 (WDWA 1974)]. In U.S. v. Washington, 384 F.Supp. 312 at 343 - 344, the court also found that the Treaty tribes had the right to take up to 50 percent of the harvestable anadromous fish runs passing through those grounds, as needed to provide them with a moderate standard of living (Fair Share). Over the years, the courts have held that this right comprehends certain subsidiary rights, such as access to their "usual and accustomed" fishing grounds. More than de minimis impacts to access to usual and accustomed fishing area may violate this treaty right [Northwest Sea Farms v. Wynn, F.Supp. 931 F.Supp. 1515 at 1522 (WDWA 1996)]. In U.S. v. Washington, 759 F.2d 1353 (9th Cir 1985) the court indicated that the obligation to prevent degradation of the fish habitat would be determined on a case-by-case basis. The Ninth Circuit has held that this right also encompasses the right to take shellfish [U.S. v. Washington 135 F.3d 618 (9th Cir 1998)].

Treaty Determinations. The work proposed in this application has been analyzed with respect to its effects on the treaty rights described above, and my conclusions are that the work will impact treaty fishing resources and will cause the degradation of fish runs and habitat. Impacts to treaty fishing rights and aquatic resources will be addressed through mitigation. Through implementation of treaty rights and aquatic resource mitigation, the proposed project will not impair affected Tribes' ability to meet moderate living needs. The Navy has had Government to Government consultations with the Skokomish, Port Gamble S'Klallam, Lower Elwha Klallam, Jamestown S'Klallam, and Suquamish Tribes. The Navy has reached an agreement to compensate for the interference with treaty fishing rights with the Skokomish, Port Gamble S'Klallam, Lower Elwha Klallam, Jamestown S'Klallam Tribes. Per the Navy's ROD signed on 4 May 2012, the Navy will implement mitigation to compensate for impacts to tribal treaty resources.

The Corps conducted Government to Government (G to G) meetings with the Suquamish Tribe on 17 February 2012 and 21 June 2012. During these meetings the Tribe discussed concerns regarding their usual and accustomed treaty rights, EHW-2 project impacts, and the proposed mitigation. The Tribe submitted information for the Corps' consideration regarding their usual and accustomed treaty rights via letters dated 15 June 2012, 19 June 2012, and 29 June 2012.

The Corps also had a G to G meeting with the Port Gamble S'Klallam Tribe on 14 February 2012. The Tribe gave a tour of their usual and accustomed fishing and harvesting areas in Port Gamble Bay and described their cultural practices and concerns about project impacts on the Tribe's subsistence living and way of life.

As the Suquamish Indian Tribe has pointed out, they have usual and accustomed fishing rights in Hood Canal. However, the Skokomish Indian Tribe (Twana Indians were preserved to the Skokomish Indian Tribe by the Treaty of Point No Point) has primary rights in Hood Canal with Suquamish rights being a secondary right or as invited guests. A primary right is the power to regulate or prohibit fishing by members of other treaty tribes. *U..S. v. Washington*, 764 F.2d 670 (9th cir 1985) at 674. As stated in *U.S. v. Washington,* 626 F. Supp. 1405 (WDWA 1984) at 1405, affr'd 764 F.2d 670 (9th cir 1985) :

" (1). The Skokomish Indian Tribe holds the primary right to take fish in Hood Canal and on all rivers and streams draining into Hood Canal south of the line displayed on Exhibit A [SEE EXHIBIT A IN ORIGINAL] (attached to Special Master's Report and Recommendation, etc. . .) commencing on the west shore of Hood Canal at Termination Point and following the course of the Hood Canal Floating Bridge to the east shore of the canal.

(2). No tribe or member of a tribe shall exercise treaty fishing rights within the area of Hood Canal or on rivers or streams draining into Hood Canal subject to the primary right of the Skokomish Indian Tribe without the prior express consent of the Skokomish Indian Tribe or as otherwise provided by the Hood Canal Agreement Between Skokomish Indian Tribe, Port Gamble Band of Klallam Indians, Lower Elwha Band of Klallam Indians and Jamestown Band of Klallam Indians and Order herein of March 8, 1983."

As explained in the Special Master's Report at finding of fact 356:

> 356. The Twana and their neighbors, like other treaty-time Indians in the case area, recognized a hierarchy of primary and secondary or permissive use rights, including fishing rights. (Tr. of hearing, pp. 14-18; finding 12 herein.) The people occupying a territory held the primary right to fish in the territory. Women who married into a community outside their natal territory retained secondary fishing rights in that territory. Marriage relatives could also acquire such secondary rights in the natal territories of their spouses. The secondary or permissive fishing rights were ineffective, however, unless holders of the primary fishing right first invited or otherwise permitted persons with secondary rights to fish in the territory. The holders of the primary fishing right exercised the prerogative to exclude some or all secondary users from their territorial fishing grounds for any reason they deemed adequate. (Tr. of Hearing, pp. 162-63.) The court finds that at and before treaty times, the Twana Indians held the primary fishing right within their territory, and this right was acknowledged by neighboring peoples. (Tr. of Hearing, pp. 68-69, 144-146, 159-162.) To the extent that Klallam and Suquamish people fished in Twana territory at treaty times, the court finds they did so by virtue of secondary rights or as invited guests. (Tr. of Hearing, pp. 66-67, Ex. SK-SM-2; Ex. SK-SM-1, pp. 22, 44-46, 57.) The court further finds that the Suquamish Tribe's evidence of fishing activity by Suquamish people in the Hood Canal area around the turn of the 20th Century, even if fully credited, would not support a finding that, at treaty times, the Suquamish Tribe's forebears fished in Twana territory as other than persons holding secondary rights subject to the Twanas' primary right.

The EHW is located within the area described above. The Skokomish Indian Tribe, being the Tribe with primary rights in the area, has reached an agreement with the Navy to address potential usual and accustomed treaty fishing rights impacts and they do not

object to the EHW-2. Our understanding is that the Navy also entered into discussion with other Tribes with secondary or invitation rights, the Jamestown S'Klallam, Lower Elwha Klallam, and Port Gamble S'Klallam, and have likewise signed an agreement to address those Tribes' concerns regarding the EHW-2. However, though the Suquamish and Navy have had discussions they have not reached an agreement.

The Suquamish are of the opinion that the Navy must reach an agreement with them to address potential usual and accustomed fishing impacts before the EHW-2 can be constructed. In doing so, they have pointed to the fact that the Navy, for other projects in the area, has previously entered into agreements with them as well as with other Tribes with secondary rights.

We are not in agreement with the Suquamish position that the Navy is required to enter into an agreement with them to address their secondary usual and accustomed rights in the area of the EHW-2. As the primary right holder, the Skokomish Indian Tribe has addressed with the Navy the potential usual and accustomed fishing right concerns. As a Tribe with invitational rights, the Suquamish are subject to the limitations the Skokomish may place on the use of the area, to include the agreement they have reached with the Navy with respect to the EHW-2. The simple fact that the Navy has tried to resolve issues in the past with secondary invitational usual and accustomed right holders, does not provide support to the position that somehow this secondary right has enlarged to one of primary importance.

XI. <u>Special Conditions</u>.

a. You shall provide a copy of the permit transmittal letter, permit form, and permit drawings to all contractors drawings to all contractors performing any of the authorized work.

b. If future operations by the United States require the removal, relocation, or other alteration of the work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, you will be required, upon due notice from the U. S Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

c. This U.S. Army Corps of Engineers (Corps) permit does not authorize you to take a threatened or endangered species, in particular the Coastal-Puget Sound bull trout, Coastal-Puget Sound bull trout critical habitat, Puget Sound Chinook salmon, Puget Sound Chinook salmon critical habitat, Puget Sound steelhead. In order to legally take a listed species, you must have a separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or ESA Section 7 consultation Biological Opinion (BiOp) with non-discretionary "incidental take" provisions with which you must comply). The BiOps prepared by the National Marine Fisheries Service (NMFS) dated September 29, 2011, and the U.S. Fish and Wildlife Service (USFWS) dated November 16, 2011, contain

mandatory terms and conditions to implement the reasonable and prudent measures that are associated with the specified "incidental take" in the BiOps (NMFS Reference Number 2011/00658, USFWS Reference Number 13410-2011-F-0164). Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the BiOps. These terms and conditions are incorporated by reference in this permit. Failure to comply with the commitments made in this document constitutes non-compliance with the ESA and your Corps permit. The USFWS/NMFS is the appropriate authority to determine compliance with ESA.

d. You must implement and abide by the ESA requirements and/or agreements set forth in the Biological Assessment titled "Biological Assessment for the TRIDENT Support Facilities Explosives Handling Wharf, NBK Bangor", dated February 2011, and all addendum in their entirety. The U.S. Fish and Wildlife Service (USFWS) concurred with a finding of "may affect, not likely to adversely affect" based on this document on November 16, 2011 (USFWS Reference Number 13410-2011-F-0164). The National Marine Fisheries Service (NMFS) concurred with a finding of "may affect, not likely to adversely affect" based on this document on September 29, 2011 and April 26, 2012 (NMFS Reference Numbers 2011/00658 and 2012/01318). Both agencies will be informed of this permit issuance. Failure to comply with the commitments made in this document constitutes non-compliance with the ESA and your Corps permit. The USFWS/NMFS is the appropriate authority to determine compliance with ESA.

e. In order to protect the listed threatened and endangered species in the project area, you may conduct the authorized activities in the work window as agreed to and documented in writing through consultation by the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (Services) in any year this permit is valid. If changes to the originally authorized work window are proposed, you must re-coordinate these changes with the Services and receive written concurrence on the changes. Copies of the concurrence(s) must be sent to the U.S. Army Corps of Engineers, Regulatory Branch, within 10 days of the date of the revised concurrence.

f. You shall implement and abide by the Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat conservation recommendations in the National Marine Fisheries Service Biological Opinion dated September 29, 2011 (NMFS Reference Number 2011/00658).

g. You shall implement and abide by the impact avoidance and minimization measures contained in the *Mitigation Action Plan, Trident Support Facilities Explosives Handling Wharf* (Sections 1.0 through 5.3.9) dated March 2012.

h. You shall implement and abide by the *Hood Canal Coordinating Council In Lieu Fee Program Use Plan: ILF Use Plan for Mitigation for Navy Explosive Handling Wharf #2 Naval Base Kitsap Bangor* dated August 14, 2012 and obtain ILF credits in accordance with Table 6 and Table 8 of the ILF Use Plan.

i. You shall submit to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch a copy of the Hood Canal Coordinating Council In Lieu Fee Program Statement of Sale within 30 days of permit issuance. All submittals must prominently display the reference number NWS-2009-572.

XII. Determinations/Findings.

A. Findings of Significant Impact. I have determined the issuance of a DA permit for the work is a major Federal action that would have significant impact on the human environment. The DA has adopted the Navy's NEPA EIS, which has been described herein. All practicable means to avoid or minimize environmental harm from the alternative selected have been adopted. The monitoring program for this action is specifically addressed in Sections IX Compensatory Mitigation and Section XI Special Conditions. No additional environmental documentation is warranted or required.

B. Evaluation/Determination of Compliance with Section 404(b)(1) Guidelines. The work was evaluated pursuant to Section 404(b)(1) of the Clean Water Act in accordance with the guidelines promulgated by the Environmental Protection Agency (40 CFR Part 230) for evaluation of the discharge of dredged or fill material into waters of the U.S. In addition, consideration has been given to the need for the work and to such water quality standards as are appropriate and applicable by law. Alternatives not requiring the discharge of dredged or fill material into water of the U.S. are not available or are more damaging to the aquatic ecosystem. The proposed DA permit action represents the least environmentally damaging practicable alternative and includes all appropriate and practicable measures to minimize adverse effects on the aquatic environment. The work will not result in the unacceptable degradation of the aquatic environment. The discharges and methods specified in the proposed work are in accordance with the Section 404(b)(1) Guidelines.

C. Section 176(c) of the Clean Air Act General Conformity Rule Review. The proposed DA permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. I have determined the activities proposed under this permit will not exceed *de minimis* levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

D. Public Interest Determination. The work is consistent with national policy, statutes, and administrative directives. I find that issuance of a specially conditioned DA permit for this work is based upon a thorough analysis of the various evaluation factors and determinations that have been identified herein. The proposed work is not contrary to the public interest.

I have determined the issuance of a DA permit with special conditions is the course of action available to the Corps that best achieves the general public interest.

I have determined the issuance of a DA permit with special conditions is the course of action available to the Corps that best achieves the general public interest.

XIII. Permit Decision. My decision is to issue a permit with special conditions.

Bruce A. Estok
Colonel, Corps of Engineers
District Engineer

20 AUG 2012
Date