



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
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OFFICE OF
ECOSYSTEMS,
TRIBAL AND PUBLIC
AFFAIRS

April 13, 2015

Naval Facilities Engineering Command Northwest
Attention: Mr. Thomas Dildine, LWI/SPE EIS Project Manager
1101 Tautog Circle, Suite 203
Silverdale, WA 98315-1101

Dear Mr. Dildine:

We have reviewed the Navy's February 2015 Draft Environmental Impact Statement for the Land-Water Interface and Service Pier Extension at Naval Base Kitsap Bangor (EPA Region 10 Project Number: 13-008-DOD).

Our review was conducted in accordance with the EPA's responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act. Section 309 specifically directs the EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Our review of the DEIS prepared for the proposed action considers expected environmental impacts and the adequacy of the EIS in meeting procedural and public disclosure requirements of the NEPA.

We are rating the DEIS Environmental Concerns – Adequate (EC-1). A copy of our rating system is enclosed.

Project summary

The Navy is proposing and analyzing two separate projects: 1) the construction and operation of Land-Water Interface structures, and 2) the construction and operation of a Service Pier Extension on Naval Base Kitsap Bangor.

The two action alternatives for the Land-Water Interface are the Pile-Supported Pier (Alternative 2) and Port Security Barrier Modifications (Alternative 3). Alternative 3, unlike Alternative 2, does not include in-water pile driving or mesh extending to the seafloor. Alternative 3 is the Navy's Preferred Alternative.

The two action alternatives for the Service Pier Extension are the Short Pier (Alternative 2) and the Long Pier (Alternative 3). Alternative 2 would require 335 piles and extend the existing pier by 44,000 square feet. Alternative 3 would require 660 piles and extend the existing pier by 70,000 square feet. Additional project elements including parking, utilities and road improvements are the same for both action alternatives and would occupy a total of approximately 7 acres. Alternative 2 is the Navy's Preferred Alternative.

Response:

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- 1. Thank you for the comment.

F2 – United States Environmental Protection Agency, Region 10 (page 3 of 4)

Environmentally Preferable Alternatives as the agency preferred alternatives; therefore, we support this decision.

3 cont.

Environmental Concerns

Our Environmental Concerns rating relates to the projects' unavoidable adverse impacts to fish, wildlife and humans from pile driving noise; loss of marine habitat including eelgrass; and loss of upland vegetation for roads and buildings. To address our concerns, we support the Navy's ongoing efforts to complete and implement the Mitigation Action Plan.

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Temporal Loss

In the FEIS's version of the Mitigation Action Plan (DEIS, Appendix C), we recommend additional information on how compensatory mitigation ratios required by the Hood Canal Coordinating Council's In-lieu Fee program account for risk and uncertainty associated with temporal loss. We believe that additional information on accounting for temporal loss will assist all agencies and entities who are involved in the early implementation of mitigation credit sales for impacts in Hood Canal.

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We understand that it has been difficult to locate available compensatory mitigation sites to offset the aquatic resource impacts associated with the ongoing Explosives Handling Warf-2 project. Based on this experience, we have concerns that similar over-water structures and aquatic resource impacts will also be difficult to mitigate.

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Consultation terms and conditions

The FEIS should also include, to the extent possible, permitting and consultation terms and conditions (DEIS, Appendix C, Section 7.0). We believe that including terms and conditions in the FEIS will help enable the public and other agencies reviewing the EIS understand how mitigation is adequate to make the project's contribution to cumulative impacts less than significant.

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Thank you for this opportunity to comment and if you have any questions please contact me at (206) 553-1601 or by electronic mail at reichgott.christine@epa.gov, or you may contact Erik Peterson of my staff at (206) 553-6382 or by electronic mail at peterston.erik@epa.gov.

Sincerely,


Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

Enclosure:

- 1. EPA Rating System for Draft Environmental Impact Statements

Response:

4. Thank you for the comment.

5. The FEIS documents progress on the ILF use plan. Section 6.4.3 of the Mitigation Action Plan (Appendix C) has been updated to add this information.

6. Comment noted.

7. The Mitigation Action Plan (Appendix C, Section 7) of the FEIS has been updated to include permitting and consultation terms.

Response:

**U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action***

Environmental Impact of the Action

LO – Lack of Objections

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

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MARINE MAMMAL COMMISSION

23 February 2015

Naval Facilities Engineering Command Northwest
Attention: Mr. Thomas Dildine, LWI/SPE EIS Project Manager
1101 Tautog Circle, Suite 203
Silverdale, WA 98315-1101

Dear Mr. Dildine:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the U.S. Navy's (the Navy) Draft Environmental Impact Statement (DEIS) for construction and operation of land-water interface structures (LWI) and a service pier extension (SPE) at Naval Base Kitsap in Bangor, Washington (80 Fed. Reg. 8076). The Commission has commented on activities involving pile driving and removal at Naval Base Kitsap since 2011 (see its most recent 23 June 2014 letter).

Background

The Navy plans to install steel and concrete piles and concrete abutments and remove timber piles and temporary (or false work) piles during construction of the LWI structures and SPE. The LWI structures would connect the existing on-water port security barrier system to the existing on-land waterfront security enclave to complete the perimeter of the waterfront restricted area. SPE activities would include extension of the pier and construction of support facilities to accommodate the transfer of two SEAWOLF Class submarines from the Naval Base Kitsap installation in Bremerton to Bangor. Construction activities could occur for up to two years. It is unclear from the DEIS if the Navy included removal of the temporary piles by vibratory hammer in its take estimations. Inclusion of those activities likely would increase the number of in-water construction days and the total number of takes. Therefore, the Commission recommends that the Navy clarify if removal of the temporary piles using a vibratory hammer was included in its take estimates and if not, re-estimate the total number of takes based on inclusion of temporary pile removal in addition to the takes estimated from pile-driving activities.

Harbor seal density estimates

The Commission has been making recommendations since 2011 regarding the manner in which the Navy has estimated its harbor seal densities, which the Commission believes have been underestimated. Specifically, the Commission does not support the Navy reducing the overall density based on the percentage of animals expected to be hauled out at any given instant. That reduction is only valid when models or methods to estimate takes incorporate a time element and animat simulation, similar to the Navy's methods for its environmental impact statements (EISs) for training and testing activities in support of military readiness. However, for construction activities at

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Response:

1. The Navy is not requesting take for the removal of piles as part of the proposed action. Within the EIS, the Navy discussed the vibratory removal of 120 temporary (or false work) piles as part of Alternative 2 of the LWI project. The Navy's preferred Alternative is Alternative 3 which does not include the construction of any temporary piles, so they have not been included within our take analysis.

The Service Pier Extension (Alternative 2) does include the removal of 36 creosote piles. These piles will be removed by using a clam shell or similar methods and cutting at the mudline if splitting or breakage occurs.

No changes to the take estimates within the EIS are necessary.

2. The new density value that should be applied is 7.93 animals per sq km.

The size of the harbor seal population has increased and is much higher than previously determined (3,555 animals vs 1,088). In addition, the correction factor for the amount of time these animals spend in the water vs hauled out has been improved based on Hood Canal specific data, since the behavior of these animals in the Canal is significantly different than haul out behavior in other parts of the inland waters (London *et al.* 2012).

The Navy utilized Jeffries *et al.* 1999 and London *et al.* 2012 in determining our correction factor. Jeffries *et al.* 1999 study was used to establish the abundance for the stock in NMFS SARs. In this survey 711 animals were counted (on 21 Sept between the hours of 1500-1600). As a result, an approximate correction factor for this count using the haul out probability from London would calculate the density as follows:

The approximate probability of animals hauled out during that time frame in those months is 0.20. The inverse of this (1.0/0.20) provides a correction factor of 5.0. When this is applied to the survey count data of 711 harbor seals it yields an updated population estimate of 3,555 animals. Assuming that only 20% of animals are hauled out at one time, then 2,844 (or 80% of the total population) of Hood Canal harbor seals could be available in the water to be taken.

The researchers indicated that this is the appropriate estimate of the Hood Canal harbor seal population size based upon only published survey data and haul out behavior. It should be noted that the Navy in coordination with (continued on next page)

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Mr. Thomas Dildine
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Page 2

Naval Base Kitsap, the Navy uses a simple area x density method to estimate the number of seals taken on any given day—a method that does not include an instantaneous time element.

For the DEIS, the Navy did update the haul-out correction factor that it had used in previous EISs and incidental harassment authorization applications from 1.53¹ to 5.0² based on London et al. (2012). The updated correction factor was used with the Jefferies et al. (2003) survey data³ from 1999 to yield an abundance of 3,555 harbor seals in Hood Canal. The Commission believes those data are currently the best available and supports the Navy incorporating updated information. But rather than dividing the calculated abundance by the area of Hood Canal⁴ to yield 9.92 seals/km², the Navy again assumed that only a portion of the seals would be present in the water at any one time—in this instance 80 percent were assumed to be in the water at a given time, which ultimately reduced the density to 7.93 seals/km². Based on past monitoring reports, pile driving has occurred for an average of 7 hours per day⁵ at any time during the day, including during tidal stages when harbor seals are more likely to be in the water. Given that information, virtually all of the harbor seals in the project area could be in the water at some time when sound-producing activities are being conducted and could be taken on a daily basis. Therefore, the Navy's estimate of the total number of seals that could be taken during the course of a day is a portion of the number of seals that actually could be affected.

For example, by using the lesser density of 7.93 seals/km², the Navy estimated that up to 10 percent of the estimated population of harbor seals could be exposed on any given day to pile driving during LMI activities. The Navy believes that percentage is likely a significant overestimate of potential exposures. The Commission does not agree. If the total ensouffled area for LMI activities equates to 50.1 km² and the total area of Hood Canal based on the Navy's estimate is 358 km², then 14 percent of the Canal would be ensouffled. The Navy acknowledged that a uniform density spread over Hood Canal is not ideal. Nevertheless, that is the method the Navy chose to use and based on this example⁶, the number of seals that have the potential to be taken was clearly underestimated. In addition, the Navy stated that the density would be greater around haul-out sites (e.g., Dabob Bay and farther south in Hood Canal, which are 16 km away from Bangor⁷). The Commission notes that only stratified density estimates and animat modeling would yield more fine-scale estimates and until those data are available and those methods used, the Navy should not be reducing its harbor seal density estimates by the proportion on land at any given instant.

The Navy did note that harbor seals are always present at Bangor. Irrespective of the proximity of dedicated haul-out sites, seals have been observed in large numbers over the years in the project area (Tannenbaum et al. 2009, Tannenbaum et al. 2011, HDR 2012a, HDR 2012b, Department of the Navy 2014), and any seals observed swimming in the area, foraging or not—would be exposed to pile-driving activities. Seals not only haul out on the floating security fence,

¹ Based on Huber et al. (2001).
² Haul-out correction factors are based on the reciprocal of the proportion of seals hauled out. 65 and 20 percent of the seals would be hauled out at a given time to yield correction factors of 1.53 and 5.0, respectively.
³ 711 harbor seals.
⁴ The Navy used an area of 358 km².
⁵ Although activities could have the potential to occur for up to 15 hours per day.
⁶ A similar result is evident for the SPE activities as well.
⁷ Based on the size of the ensouffled areas, those haul-out sites are not far from Bangor and harbor seals are known to forage and swim 10s of kilometers from their haul-out sites.

2 cont.

Response:

NMFS and WDFW have been funding aerial surveys of the inland waters of Washington including the Hood Canal to update the abundance information for this species from the Jefferies study. In coordination with those aerial surveys are tagging efforts to get accurate haul out information for the exact same time periods as the surveys. They only have preliminary data at this time and are not able to provide it for use in permitting but they indicated that population estimates were highly variable across year as were the haul-out correction factors.

Using a uniform density for calculating takes was avoided because the Navy felt it would significantly over estimate impacts in areas that are not located by known haul outs. The closest haulouts to Bangor are just south of Dabob Bay and further south in Hood Canal. Nevertheless, because we do not have any more recent tag data that can be used to assist in generating a stratified density layer to improve take estimates, the Navy is defaulting to a uniform density for the LWI/SPE calculation.

In the future, our approach for density calculations with respect to harbor seals may be different if we are able to obtain more reasonable density estimates based on tag data. Using the percentage of the total population that can be in the water at one time, and the area of Hood Canal, the uniform density value for this stock would be 7.93 animals/sq. km. This is a significant increase from our prior analysis and the Navy feels that this is likely a gross overestimation of our impacts, especially considering that we have no known large scale haul outs and based on the presence of in-water encounters with harbor seals during our other construction actions at the base.

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floating booms/floats, wave screen, ladders, overwater structures under the piers, and in workboats within the immediate project area, but they also pup from the northern to southern end of the waterfront—information corroborated by the Navy. For all of these reasons and until such time that the Navy incorporates stratified densities and uses animat modeling, the Commission recommends that the Navy use the relevant ensonified areas associated with LWI and SPE activities and the unadjusted harbor seal density estimate of 9.92 rather than 7.93 seals/km² to estimate the number of seals that could be taken during those activities—that unadjusted harbor seal density estimate should be used to estimate takes for all Navy activities occurring in Bangor.

Overall take estimates

The Commission has commented numerous times about the appropriate treatment of “fractions” of animals when estimating takes for EISs and incidental harassment authorization applications (including non-military activities). The Navy did not round the estimated takes⁸ until totaling for each activity. Since NMFS still uses a 24-hour reset time, species-specific takes should be based on the whole number of animals taken in a given day and the number of days those activities would occur—in this instance, the Navy should have rounded before multiplying by the number of days rather than after that multiplication.

By using its approach of rounding after multiplication, the Navy underestimated the number of takes for California sea lions and transient killer whales⁹ and overestimated the takes for harbor seals¹⁰ and harbor porpoises for LWI activities. However for SPE activities, the Navy underestimated the number of takes for harbor seals¹¹, California sea lions, and harbor porpoises and overestimated the takes for transient killer whales¹² only. Based on these issues, the Commission recommends that the Navy re-estimate the numbers of takes for harbor seals, California sea lions, harbor porpoises, and transient killer whales by determining the whole number of animals that could be taken on a given day for both LWI and SPE activities prior to multiplying by the number of activity days.

⁸ Generally, round down if less than 0.50 and round up if greater than or equal to 0.50.

⁹ The Navy should have rounded 33.5 up to 34 California sea lions taken per day (as was done in the most recent incidental harassment authorization for Naval Base Kitsap (and prior authorizations); 79 Fed. Reg. 43440) and then multiplied by 80. In addition to rounding after multiplication, the Commission believes the Navy likely miscalculated the daily takes for transient killer whales, since 0.02 whales/km² x 28.5 km² equates to 0.57 not 0.7 whales taken per day.

¹⁰ The Commission believes the Navy likely miscalculated the daily takes for harbor seals during LWI activities as well, since 7.93 seals/km² x 28.5 km² equates to 226.005 rather than 226.05 seals taken per day.

¹¹ The Commission believes the Navy also likely miscalculated the daily takes for harbor seals for SPE activities, since 7.93 seals/km² x 50.1 km² equates to 397.29 rather than 396.6 seals taken per day during vibratory pile driving of steel piles. For impact pile driving of concrete piles, the Navy overestimated takes based on 7.93 seals/km² x 0.007 km² equating to 0.05 seals taken per day, which is less than 0.50.

¹² In addition, the Commission believes the Navy likely miscalculated the daily takes for transient killer whales for SPE activities, since 0.02 whales/km² x 50.1 km² equates to 1.002 not 1.2 whales taken per day.

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Response:


- 3. The Navy agrees with the Commission’s recommendations. Changes have been made within the LWI-SPE EIS and IHA to correct the rounding error for our species estimates.

F3 – Marine Mammal Commission (page 4 of 4)

Response:

Mr. Thomas Dildine
23 February 2015
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The Commission hopes you find its letter useful. Please feel free to contact me should you have questions regarding the Commission’s recommendations and comments.

Sincerely,

Rebecca J. Lent, Ph.D.
Executive Director

Cc: Jolie Harrison, National Marine Fisheries Service

References

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TRIBE COMMENTS

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TRIBE 1 – POINT NO POINT TREATY COUNCIL

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POINT NO POINT TREATY COUNCIL

Port Gamble S'Klallam * Jamestown S'Klallam

April 13, 2015

Naval Facilities Engineering Command Northwest
Attention: Mr. Thomas Dildine – LWI/SPE EIS Project Manager
1101 Tautog Circle, Suite 203
Silverdale, WA 98315-1101

RE: Land-Water Interface/ Service Pier Extension Draft Environmental Impact Statement

Dear Mr. Dildine and the LWI/SPE Draft E.I.S. review committee,

Thank you for requesting comments for the Navy's Draft Environmental Impact Statement for the proposed Land-Water Interface and Service Pier Extension. The Point No Point Treaty Council (PNPTC) is concerned about the significant adverse effects on our Tribes' Treaty Rights and the effects on critical natural resources by these two projects. Our tribes (Jamestown S'Klallam and Port Gamble S'Klallam) would like to request government-to-government consultations to resolve some of these major concerns.

The PNPTC is a tribal organization that provides fisheries support services to the Jamestown S'Klallam Tribe and Port Gamble S'Klallam Tribe, whom have Usual and Accustomed Fishing Areas (U&A) in Hood Canal, Strait of Juan de Fuca, Admiralty Inlet, the Puget Sound and as far north as the San Juan Islands. The U&A fishing grounds for both tribes are directly included in the proposed areas for the Land-Water Interface (LWI) and the Service Pier Extension (SPE). Our Tribes rely on the healthy habitat conditions that sustain critical finfish and shellfish populations which support fishing activities that are fundamental to the economies and cultures of our tribal communities.

As discussed in previous PNPTC comments submitted two years ago to the Navy regarding the LWI-SPE scoping of these two projects, our Tribes have some fundamental concerns that need to be resolved. Without a Government to Government consultation process, and unless there is appropriate significant mitigation achieved, the Tribes will be very challenged to support these projects. We do, however, support the comment letters put forth by the Port Gamble S'Klallam Tribe's Natural Resources Department regarding Treaty Rights and Tribal natural resource concerns.

The Treaty of Point No Point

The Treaty of Point No Point reserves perpetual Fishing Rights to the S'Klallam Tribes. The connection to Treaty fishing rights should begin with the history and purpose of the Treaty. In Article I of the Treaty of Point No Point, the S'Klallam people ceded to the United States most of their rights in their land. However, the Treaty reserves the right of the Tribes to take fish "at usual and accustomed grounds and stations." (Treaty of Point No Point, 12 Stat. 933, Article IV)

Response:

1. Thank you for the comment letter. The Commanding Officer of Naval Base Kitsap invited the Port Gamble S'Klallam Tribe, Jamestown S'Klallam Tribe and Lower Elwha Klallam Tribe to consider initiation of government-to-government on the LWI and SPE Proposed Actions in 2008 and 2012, respectively. Since April 2015, the Navy and these Tribes have held many government-to-government and staff consultation meetings to discuss details of the LWI and SPE projects and Tribal concerns.
2. Comment noted.
3. The Navy and the Tribes have held government-to-government consultation and staff level consultation meetings to discuss details of the LWI and SPE projects and tribal concerns. As a result, the Navy has offered treaty mitigations for the potential impacts to treaty rights and resources by the construction and operation of the LWI and SPE projects. These offered treaty mitigations are described in Chapter 9 (Treaty Mitigation) of the Mitigation Action Plan (Appendix C of this FEIS).
4. The Navy appreciates the time taken by the PNPTC to provide the background on the S'Klallam Tribes history, culture and treaty fisheries.

T1 – Point No Point Treaty Council (page 2 of 7)

The right is not created by the Treaty; rather, the Treaty “secures” pre-existing Indian fishing rights.¹ In other words, the Treaty of Point No Point did not grant fishing, hunting, and gathering rights to the Tribes; rather, it reserved to the Tribes its pre-existing rights to engage in those activities. This reservation of rights was intended to permanently secure the full breadth of pre-treaty resource procurement practices.² Nothing in the treaty language or negotiations suggested, and neither side anticipated, that non-Indian development would ever hinder Indian fishing or deplete the seemingly inexhaustible abundance of resources.³

The Treaty of Point No Point protects three essential components of our Tribes’ fisheries: 1) Access to Fishing Places; 2) Access to Sufficient Harvests; 3) Access to necessary, healthy fish habitat. Over one hundred years of federal court decisions have supported and defended each of these components of the Treaty Right. The Jamestown S’Klallam Tribe and Port Gamble S’Klallam Tribe both have Usual and Accustomed Fishing Areas that encompass the marine and nearshore areas where the LWI and SPE are being proposed. The right of the Tribes’ to access and fish at these places exists regardless of who owns the land beside or beneath the waterway.⁴ The Navy’s proposal for the LWI will severely affect natural resources and limit access and possibly severely degrade an important beach (Devil’s Hole) that the Tribes have seeded and harvested for many, many years.

Below, we have briefly described some of the issues with the Draft Environmental Impact Statement (D.E.I.S.) for the LWI-SPE. First of all, we are concerned that the proposed facilities would impact our Tribes ability to access their Usual and Accustomed fishing grounds for shellfish, finfish and other species, which is our Tribes’ Treaty Right under the Treaty of Point No Point. Second of all, we have concerns regarding the cumulative environmental impacts in these areas and its disturbances that need more investigation. Finally, the following comments should be considered and addressed as the Navy continues to develop its plans for these projects. Because of the limited time frame to review the impacts for two very large projects, we look forward to the continued consultation with the Navy throughout this process.

1. Impacts to Court-Affirmed Treaty Fishing Rights and Better Analysis Needed

The Tribes are concerned that the impacts to Tribal fishing activities and Treaty Rights have not been adequately addressed by this DEIS.

While PNPIC appreciates the addition section 3.14, American Indian Traditional Resources, this section (3.14) fails to summarize the impacts to tribal fishers in an accurate manner. For example, calculating a \$2,208 annual loss for two years on oyster harvest losses may not be accurate (3.14-6). Beyond, the “tribal treaty right” loss that cannot be measured monetarily, it does not include the clams that are also seeded at that same beach. It is unclear how the author derived a 2 year recovery and within “3 years of in-water construction” ceasing (3.14-7) estimate. How these calculations were determined was not made clear in the document and resources and data were not included. This area needs to be better analyzed and brought forth through the government to government consultation process and with the appropriate technical tribal staffs. The area of disturbance (by the pontoon feet and the stairs of the structure), also needs to be adjusted to reflect a higher area of disturbance, since construction and maintenance will occur in a broader circumference around the impacted areas. Again, these areas fall short in assessing if entire beds will be devastated by impacts and

¹ See, e.g., *United States v. Winans*, 198 U.S. 371, 381 (1905).

² See *Boldt I*, 384 F.Supp. at 381 (“At the treaty council the United States negotiators promised, and the Indians understood, that the Yakimas would forever be able to continue the same off-reservation food gathering and fishing practices as to time, place, method, species and extent as they had”).

³ *Culverts* Summary Judgment at 10-11. See also *Fishing Vessel*, 443 U.S. at 668.

⁴ *Winans*, 198 U.S. 371 (right to cross fenced, private upland to reach fishing water); *United States v. Washington* 157 F.3d 630, 644-47 (9th Cir.1998).

4cont

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Response:

5. As discussed in government-to-government consultations, there will be no impact to access of the Devil’s Hole Beach for shellfishing at NAVBASE Kitsap Bangor in accordance with the 1997 cooperative agreement between the Navy and the Tribes. Further, the Navy has offered the Tribes treaty mitigations projects for the potential impacts to treaty rights and resources by the construction and operation of the LWI and SPE projects which are assessed in this document in Chapter 9 (Treaty Mitigation) of the Mitigation Action Plan (Appendix C).
6. While the Navy does not agree with the Tribes’ assertion that the Devil’s Hole beach and the shellfish resources will be severely affected by the LWI and SPE projects (see Navy response #13 below), the Navy has offered to discuss possible actions with the Tribes if significant changes occur at the beach. In addition, the 100-foot construction corridor accounts for the broader disturbance area that could be impacted during construction. However, a coffer dam will be installed during construction of the LWI abutments that will be above the shellfish habitat, reducing the likelihood that shellfish habitat would be impacted by abutment construction. Further, the latest design drawings of the LWI observation posts show these posts will be entirely located above the shellfish habitats. A reference to the appropriate benthic habitat impact discussion in Sections 3.2.2.2.2 and 3.2.2.2.3 (see FEIS pages 3.2-38 through 3.2-40) was added to Section 3.14 in the FEIS. The 2-year period referred to in the FEIS text is the 2-year construction period; that 2-year period would be followed by up to 3 years recovery time. This discussion and analysis has been revised in the FEIS after additional review in response to comments. The recovery time for disturbed shellfish was increased in the FEIS from 3 years to 5 years after construction ceases.

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not just the exact footprint of the physical structure. Shading effects and other deleterious effects could compound the issues environmentally. In addition, tribal access to the beach will be severely affected. The description of the potential impacts to tribal fishers and fisheries is not fully described in this document. The analysis breaks down at reporting the full extent and the ramifications that these project impacts would likely incur, particularly if gaining access through guards is difficult and if transfer between beaches inside and outside the “interface” becomes challenging. This will directly affect how quickly fishers can perform their tasks and will most likely affect their income. S’Klallam fishers actively fish at the locations of the projects. Some activities include fishing for salmon, intertidal clam and oyster gathering (and seeding) and other active fisheries activities. The DEIS does not assess nor does it include the full range of detrimental effects on shellfish habitat and salmonid/finfish habitat. The Navy’s Land Water Interface and Service Pier Extension can seriously impede Tribal fishing activities for the reasons described above, and the DEIS does not fully disclose any solutions to these issues.

2. Cumulative Effects of the Navy’s plans for major construction projects and operational changes including construction and operations of the LWI and SPE

The detrimental effect of the Navy’s proposed major projects on Treaty Rights cannot be overstated. Since locating in Puget Sound, the Navy has armored significant shoreline, built massive overwater structures, permanently destroyed acres of seafloor, spilled oil, and greatly increased vessel traffic and vessel exclusion zones. These activities have resulted in degraded habitat, diminished fish production, collisions with and loss of crab pots and other gear, increased fishing effort, temporary or long-term avoidance of traditional fishing areas, and diminished harvest, at a time when the Tribe’s fisheries are already greatly diminished and are not providing the Tribe with a moderate living. These injuries to the Treaty Rights will grow if the Navy proceeds with its plans to develop the Land-Water Interface and expand the Service Pier. When combined with the numerous other construction project and submarine reassignment proposals of which the Tribes are aware, these impacts are too great for the Navy to simultaneously meet its Trust responsibilities to the Tribes under the Treaty of Point No Point.

In the aggregate, the Navy should include an analysis of the cumulative effects of these actions and developments on Treaty Rights and its effect on tribal fisheries. It also should take into account the effects on timing, location, quality and quantity of harvest for tribal members. The final EIS should include an examination of the cumulative effects of all of these projects as it relates to Treaty Rights that the Navy has proposed in last few years.

Below is a sampling of Navy projects that should be included in the Cumulative Impacts Section of the DEIS is included in the Table 1 below:

7

Response:

7. This comment raises several distinct issues. Both the LWI and SPE projects are located within an established waterfront Naval Restricted Area (NRA). Currently, the Navy has not authorized tribal, recreational or commercial finfishing within the waterfront NRA. Therefore, there is no impact to other types of tribal fishing in the project sites located within the NRA. Outside the NRA, access to the Tribes’ fishing U&A in co-use navigable waterways will not be significantly affected. Tribal access to shellfish at NAVBASE Kitsap Bangor is already provided for at Devil’s Hole Beach under the 1997 cooperative agreement. Finally, refer to responses to Point No Point Treaty Council (PNPTC) Comments #6 and #19 (original PGST Comment 4) as well as Port Gamble S’Klallam Tribe (PGST) Comments #13, #21, and #23.

8

8. The American Indian Traditional Resources cumulative impacts section (4.3.14) has been revised to provide more detail on cumulative impacts of the proposed actions on American Indian traditional resources as well as all aspects of treaty rights. The cumulative impacts of multiple projects at NAVBASE Kitsap Bangor are quantified to the extent possible in Section 4 of the FEIS. Section 4.3.14 assesses impacts to American Indian traditional resources.

Further, the Navy has offered treaty mitigations projects as a result of government-to-government consultations with the PNPTC member Tribes for the potential impacts to treaty rights and resources by the construction and operation of the LWI and SPE projects which are assessed in this document in Chapter 9 (Treaty Mitigation) of the Mitigation Action Plan (Appendix C).

Also, refer to PGST Comment #12.

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Table 1: List of Navy Projects and Impacts

Navy Projects	Cumulative Impacts	Tribal Impacts
EHW1	Repair and replacement of 138 piles	Treaty Rights, Habitat Impacts, Fisheries
EHW2	Construction of and operations at a new Explosives Handling Wharf, including 6.3 acres of overwater structure, 1,250 piles, and additional vessel traffic in Hood Canal	Treaty Rights, Habitat Impacts, Fisheries
Barge Mooring Facility	Permanent moorage of a new research barge, which is half an acre in size and five times the size of the existing research barge, and construction of new mooring facilities	Treaty Rights, Habitat Impacts, Fisheries
SPE	Construction of and operations of a Service Pier Extension, adding up to 1.82 acres of overwater structure and up to 700 more pilings to the already massive Service Pier	Treaty Rights, Habitat Impacts, Fisheries
Relocate SEAWOLF to Bangor	Relocation of the SEAWOLF Class submarine SSN-21 (SEAWOLF) submarine from NBK-Bremerton to NBK-Bangor, which will result in even more vessel traffic from the submarines and their security convoys in Hood Canal and destruction of more tribal fishing gear	Treaty Rights, Habitat Impacts, Fisheries
Relocate Connecticut to Bangor	Relocation of the SEAWOLF Class submarine SSN-22 (CONNECTICUT) submarine from NBK-Bremerton to NBK-Bangor, which will result in even more vessel traffic from the submarines and their security convoys in Hood Canal and destruction of more tribal fishing gear.	Treaty Rights, Habitat Impacts, Fisheries
LWI	Construction of the Land-Water Interface, including in-water fill, up to 136 pilings, two large overwater structures, and a terrestrial structure in the middle of the Bangor Beach, where a cooperative agreement with the Navy is in place and tribal shell-fishing activities are ongoing	Treaty Rights, Habitat Impacts, Fisheries
EMMR	Construction and operation of the Electromagnetic Management Range (EMMR), which will interrupt tribal fishing with little to no prior notice to tribal fishermen and permanently destroy a portion of an actively harvested geoduck bed	Treaty Rights, Habitat Impacts, Fisheries
Port Angeles Coast Guard Dock	Construction of a Coast Guard Station dock in Port Angeles Harbor, which will increase vessel activity in the Harbor and permanently destroy important rock fish habitat reef,	Treaty Rights, Habitat Impacts, Fisheries
Indian Island	Indian Island piling replacement, which will impact forage fish spawning habitat	Treaty Rights, Habitat Impacts, Fisheries
NWTT	Testing and training exercises occurring throughout S'Klallam Tribal U&A, which results in closures of U&A, interrupting fisheries, increased vessel traffic, and gear loss, among other impacts	Treaty Rights, Habitat Impacts, Fisheries (finfish & shellfish)

Response:

9. Section 4.3.16 discusses the effects of climate change, including ocean acidification and effects on calcification. Further, climate change information has been added to Section 4.3.14 as a cumulative stressor for shellfish populations.

Emerging climate change data should also be included in concert with the cumulative impacts section. New climate data suggests that species (i.e., shellfish, oysters, clams) could be particularly vulnerable to ocean acidity, especially

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if these populations are already undergoing stress. The increased development in aggregate with all the other on-going and proposed projects further stresses these shellfish populations, along with changing ocean and temperature conditions, which can also cumulatively diminish the survival of these species.

9 cont.

The Tribes appreciate the insertion of Chapter 4, The Cumulative Impacts section, which includes a cumulative impacts Table (4-1). However, it needs to be taken a step further into the analysis section such that the impacts can be quantified (on the environmental resource level); and its direct impacts to Treaty fishers. The author also has included an "American Indian Traditional Resources" section. For the final EIS, however, it would enhance the analysis to have these two sections related to each other in a systematic way. The direct connection between cultural, subsistence and economic impacts by the Navy's large-scale development of these two projects can have a devastating effect on our Tribes. Our Tribes are looking at seven generations out in order to protect their way of life and cultural identity, and also to survive into the future.

10

3. Other Environmental Concerns that need to be addressed

The current Navy proposal is briefly summarized below:

Land-Water Interface (LWI):

The Navy proposes to carry forward to the EIS essentially two action alternatives (with Alternative 1 as a No Action Alternative) for the Land-Water Interface as described from the Notice of Intent for the LWI.

LWI Alternative 2: The construction of two pile supported piers (a northern pier which is 280 ft. long, with up to 54 piles (24-inch diameter steel) and a southern pier which is 730 ft. long, with up to 82 piles (24-inch diameter steel)) built from shoreline concrete abutments and connected at the north and south ends to the existing Port Security Barrier (PSB) system. It also includes the installation of a mesh/grate, including sensors, which would extend from the bottom of the pier walkway to the seafloor. This LWI also includes the installation of five 30 ft. tall towers on the piers to support lighting and security devices and the modification and lengthening of the existing PSB system to connect to the seaward ends of the LWI. PSB segments and anchors will be installed.

LWI Alternative 3: In this alternative, the Navy would build the LWI using PSBs instead of a pile supported pier. The modification and lengthening of the existing PSB system would extend across the intertidal zone and attach to shoreline concrete abutments. The PSB section in the North would be 280ft long and the PSB section in the south would be 730 ft. long. Installation of three 30ft. tall in-water towers (for lighting and security) would be installed and each in-water tower would be supported by a platform resting on four 24-inch piles. Also, two additional towers would be installed on land. Both Alternatives 2 and 3 involve constructing concrete shoreline abutments.

Service Pier Extension (SPE)

Two action alternatives (Alternative 1 is a no action alternative) are also being proposed by the Navy for the SPE which include two configurations - a short pier or a long pier.

SPE Alternative 2: This Short Pier Configuration involves a side-by-side mooring configuration for submarines, 600 lineal ft. pier extension to the existing Service Pier and approximately 320 steel piles.

SPE Alternative 3: This Long Pier Configuration involves an in-line berth mooring configuration for submarines, 1,200 lineal ft. pier extension, and approximately 700 steel piles. Both SPE action alternatives 2 and 3 include a 3,100 sq. ft. Pier Services and Compressor building, one pier crane, a shore side emergency

Response:

10. Please see the response to PNPTC Comment #8 and PGST Comment #4.

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diesel generator facility, a 50,000 sq. ft. shoreline Maintenance Support Facility (MSF) built within an existing parking lot, and a six acre new parking lot and area near the proposed MSF.

Additional Comments and Concerns:

- 1) We applaud the Navy for including a cumulative impacts section in the DEIS. The Navy should also include an analysis of the cumulative effects of these two projects on Treaty Rights and its effect on tribal fisheries (both finfish and shellfish) in a separate table. All these proposed actions, should include the combined past, present and reasonably foreseeable future actions that could impact Tribal resources due to changes in access to traditional fishing and foraging areas and loss of geoduck (and a more restricted beach access), and other shell-fishing and fishing activities.
- 2) The proposed land water interface and service pier extension is concerning because the project site is located in the Treaty Tribes' U&A, including tribal fishing and harvesting areas throughout Hood Canal where project vessels will travel. The cumulative impacts of these Project Actions and other projects in the Hood Canal will likely have a significant effect on tribal fishing and harvesting from vessel activity, construction, maintenance and operational activities. The cumulative effects section would be enhanced by including maps and tables containing vessel/boat traffic increases on the water- which covers a larger swath of area than depicted in the point map of project locations. This should also include the area that limits the tribal fishers because of coast guard vessels that will interfere with tribal fishers from their traditional grounds.
- 3) The Port Gamble S'Klallam Tribe provided a sediment transport study entitled, "Bangor Beach Littoral Drift Assessment, Kitsap County" on 10/8/14 that was professionally and scientifically prepared to analyze nearshore drift and sediment transport in the vicinity of these two projects. (See Attachment 1) In addition, Coast Geologic Services provided a memorandum (10/10/2014) that summarizes the findings. (See Attachment 2) This study identifies a long drift cell that runs from south to north. This study seems to contradict the study that was used in the Draft EIS, but is a more current study that demonstrates impacts that were not identified. The new littoral drift cell study should be reviewed and incorporated into the Final EIS for the LWI-SPE.
- 4) The Final EIS should better address impacts to shellfish and important shellfish beaches to the Tribes. In Chapter 3 (Marine Vegetation and Invertebrates), this chapter lightly touches the issues associated with benthic communities. The Navy should more specifically address project impacts to the known shellfish tracts (both tribal commercial and subsistence) that exist in the aquatic zone adjacent to the naval base. Tribal members harvest clams and oysters at Devil's Hole Beach, and harvest geoduck and other shellfish in the Hood Canal adjacent to the waterfront restriction area. A more comprehensive analysis of shellfish and benthic communities is needed to more fully assess the proposed project impacts to Treaty Rights. On page 3.2-36, the Draft EIS references piles as "creating habitat to support new algae." Piles are not an acceptable type of natural habitat and should not be used for mitigation. Should this be factored into the environmental component of mitigation, it should be made clear that piles cannot be promoted as habitat forming structures, when the overall area and species composition will be forever changed. For example, large vessels carrying exotic species that can also attach to pile supported piers. This should also be addressed in the FEIS.
- 6) The FEIS should address the direct adverse effects of construction, maintenance and repair activities throughout lifespan of the project, especially as it pertains to natural resources and treaty rights. The DEIS suggests that it only takes 2-3 years for certain shellfish habitats to go back to its original state. The Tribes request more data and information on this subject area. It should include a table that addresses indirect impacts of the proposed project on aquatic habitat, including habitat fragmentation, sediment disturbance, artificial lighting, and other impacts. It should also include a table on impacts to marine and nearshore species habitats, which could include salmon, forage fish, rockfish, shellfish (such as geoduck, crab and shrimp). While the Draft EIS discusses ESA listed species, it remains

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Response:

- 11. Tables of cumulative impacts are included for resources for which impacts can be quantified; text discussions of multiple numbers can be confusing. The proposed table would not add information not included in Table 4-1 and revised Section 4.3.14 (American Indian Traditional Resources cumulative impacts), which address the impacts included in this comment.
- 12. The potential impacts of project construction vessels and SEAWOLF, LOS ANGELES, and VIRGINIA Class submarine transits on tribal fishing vessels have been added to Section 3.14.2 (American Indian Traditional Resources) of the FEIS.
- 13. The DEIS analysis was based on modeling by cbec (2013). The Tribes' CGS study based its conclusions on literature review and field visits but did not do any modeling. The FEIS incorporates field observations noted in the CGS report. EPA reviewed and found the DEIS took a hard look at the sediment transport issue and found the DEIS adequate. Additionally, while the Navy does not agree with the Tribes' assertion that the Devil's Hole Beach will be severely affected by the LWI and SPE projects, the Navy has offered to discuss possible actions with the Tribes if significant changes occur at the beach. Also, refer to PGST Tribe Comment #13.
- 14. The LWI and SPE projects would not have impacts to shellfish resources outside of the immediate construction areas; impacts would not extend to the properties beyond the base. As described in the FEIS, the only benthic areas anticipated to be impacted during construction are those in the immediate areas of the pile driving where sediment disruption would occur, and where anchors are placed.
- 15. Section 3.2 of the FEIS has been revised to clarify that the habitat provided by the new piles is not viewed as mitigation for habitat loss.
- 16. Section 3.17 of the FEIS includes tables summarizing all the impacts of the Proposed Actions as requested by this comment. Chapter 4 describes the cumulative impacts of the proposed actions, and the Executive Summary includes a summary of cumulative impacts. Regarding shellfish recovery time, please see the response to PGST Comment #25.

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critical that functioning/ healthy species remain intact. These potential effects may extend beyond the project boundaries and impact species and habitats throughout the Hood Canal watershed. The final EIS should also include summary tables to indicate potential long-term, direct, indirect, and cumulative impacts of project components associated with each of the action alternatives.

16 cont.

7) The FEIS should also provide an analysis of alternatives to the shoreline abutments (LWI) that would avoid and minimize impacts to riparian vegetation and sediment delivery, transport, and deposition. Studies show that armoring the shoreline has dramatic negative effects on the shoreline. The Navy should look at known feeder bluffs that are undergoing protection in the current Kitsap County SMP and that play an important role in protecting sediment delivery and habitat function in Hood Canal.

17

8) The Final EIS should address alternatives to the currently designed six acre parking lot for the SPE that could avoid and minimize impacts to upland habitat including forest, wetland, riparian, and stream habitats. The Final EIS should also address the storm water system that will be developed and designed to handle run-off into the Hood Canal from the proposed parking lots, new structures and other cleared vegetated areas.

18

9) The Final EIS should provide an analysis of the increase in vessel activity from the current conditions (including an analysis of activity during construction times).

19

10) The FEIS should provide alternatives to the two observation towers that lie directly on the beaches on the North and South sides of the Land Water Interface. The abutment and stairwells to these towers can have significant effects to the beaches, which lie directly on shellfish beds. It would be appropriate to suggest alternatives in the FEIS.

20

We request that the Navy notify us directly and with ample time to comment on documents related to this project and other upcoming projects. This process is on-going and our Tribes need ample time to consider the cultural, historical, environmental, and economic effects of these projects to both of the Point No Point Treaty Council Tribes.

21

Thank you for the opportunity to comment on the Draft Environmental Impact Statement for the Land Water Interface and Service Pier Extension. The Navy has a Treaty Trust responsibility that should include selecting good final alternatives and appropriate mitigation that does not already add to the collective impact to the Jamestown S’Klallam Tribe and Port Gamble S’Klallam Tribe’s Usual and Accustomed fishing area. Our Tribes request government to government consultation regarding these projects. Please do not hesitate to contact me at crossi@pnptc.org or at 360-297-6534 with any questions or to provide additional information regarding the LWI and SPE projects.

Sincerely,

Cynthia A. Rossi

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Response:

- 17. The abutments have been designed and located to minimize environmental impacts while meeting the required security function (Section 2.3.1).
- 18. Comment Noted. Please refer to PGST Comment #New 17.
- 19. The potential impacts of project construction vessels and SEAWOLF, LOS ANGELES, and VIRGINIA Class submarine transits on co-use waterways of the Hood Canal and Admiralty Inlet on tribal fishing vessels have been added to Section 3.14.2 of the FEIS.
- 20. The observation posts will be located in the high intertidal zone, above the shellfish habitats, as will the stairs from the bluffs down to the beach. Further, installation of a coffer dam above the shellfish beds during abutment construction will reduce the potential of construction impacts to this resource.
- 21. The Navy remains committed to fulfilling its government-to-government consultation responsibilities in accordance with Navy policies. The Navy routinely provides notifications to the Tribes of project developments as early as practical in order to provide adequate time for the Tribes to review documents.

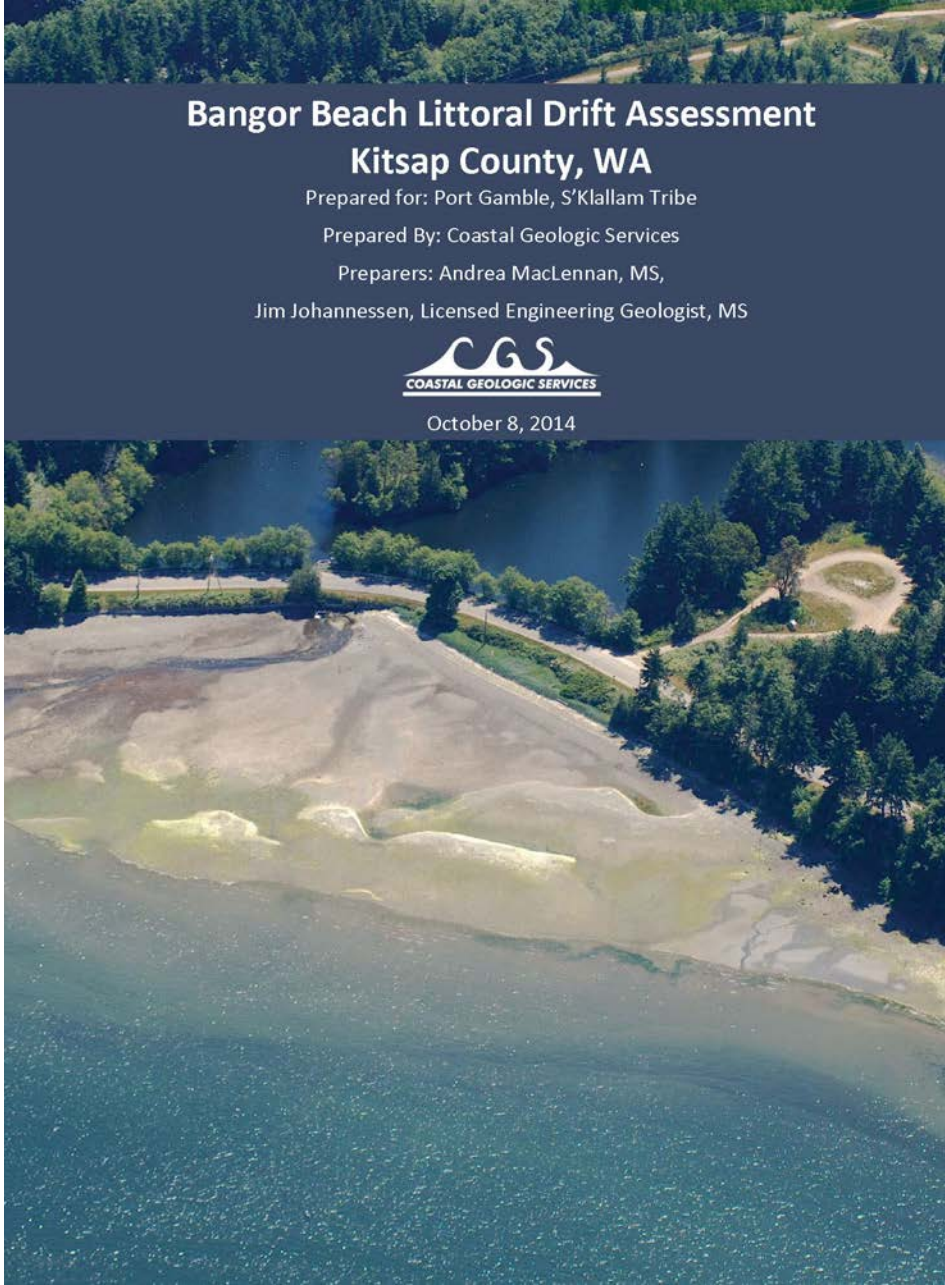
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T1 – Point No Point Treaty Council — ATTACHMENT 1 (*attachment page*)

Attachment 1: Bangor Beach Littoral Drift Assessment

RE: Land-Water Interface/ Service Pier Extension Draft Environmental Impact Statement
Point No Point Treaty Council Comments 4/13/2015

Responses have been provided to the main comment document, which references the attachments. There are no responses to the attachments here and below.



Bangor Beach Littoral Drift Assessment Kitsap County, WA

Prepared for: Port Gamble, S'Klallam Tribe

Prepared By: Coastal Geologic Services

Preparers: Andrea MacLennan, MS,
Jim Johannessen, Licensed Engineering Geologist, MS



October 8, 2014

COASTAL GEOLOGIC SERVICES, INC.

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Bangor Beach Geomorphology Assessment, Port Gamble, Kitsap County, WA
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COASTAL GEOLOGIC SERVICES, INC.

Introduction and Purpose

The objective of this memo is to summarize the potential effects on coastal geomorphic processes resulting from a proposed project at the Naval Base Kitsap – Bangor (NBK Bangor) beaches on behalf of the Port Gamble S’Klallam Tribe. The proposed project would entail several new structures in the intertidal area, including in-water fencing, two watch towers with associated footings and retaining walls, and a major expansion to the Service Pier located just north of Carlson Spit. Our understanding of the proposed new structures is based on preliminary design information provided by the Navy contained in the file “Navy_LWI_012314.pdf”, apparently created January 23, 2014. This file included a site plan map and 6 conceptual design schematics, which are attached in Appendix A for reference. Originally, conceptual design information provided by the Navy in a PowerPoint show titled *Notice of Intent to Prepare an Environmental Impact Statement For Land-Water Interface and Service Pier Extension, Naval Base Kitsap Bangor, WA Brief for Mr. Donald Schregardus, DASN(E),* dated January 16, 2013 was reviewed, however much of this information was updated by the information in Appendix A.

Observations from a field visit on February 21, 2014, examination of long-term shore change within the NBK Bangor shore areas, and results and recommendations are summarized below. The field visit was carried out by Jim Johannessen, MS, Licensed Engineering Geologist, and Andrea MacLennan, MS, of Coastal Geologic Services Inc. Roma Call of the Port Gamble S’Klallam Tribe and Rowan Thompson and Greg Leicht from the US Navy were also present during the field visit. CGS and other field visit participants were not allowed to take any photographs during the site visit, so no photos were available for later examination or inclusion in this report. This report was delayed for some months in waiting for updated designs from the Navy, which we were later informed would not be coming at this time. Therefore consideration of the proposed structures in this report is based on the analysis described below using the above mentioned design information only.

This report contains an overview of site conditions including net shore-drift and geology/geomorphology, historical shore change, a brief summary of model results (described in detail in associated memo by ESA, and Conclusions. The report generally discusses the site from south to north, in the direction of net shore-drift. Changes which appear to be due to overwater and in-water structures already in place are discussed to both document existing conditions and also to provide insight into the potential impacts of the installation of additional structures.

Site Conditions

The NBK Bangor is located along the northwest shore of the Kitsap Peninsula in northern Hood Canal (Figure 1). The base encompasses approximately 5 miles of shore directly east of the Toandos Peninsula, starting 7 miles south of the Hood Canal Bridge. For the purpose of this assessment, the Bangor study area was delineated into 5 distinct shore reaches, each of which was assessed during the field visit (Figure 2). The 5 reaches were numbered from south to north in the direction of net shore-drift and were generally visited in that same order. Field observations were assessed along with observed and mapped geologic and geomorphic information to both assure data quality and provide a baseline for pre-project conditions. In many cases the existing NBK Bangor’s waterfront infrastructure has already altered natural conditions. The areas in which historical conditions have been altered by extensive shoreline developments were identified and will be discussed below.

Bangor Beach Geomorphology Assessment, Port Gamble, Kitsap County, WA
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COASTAL GEOLOGIC SERVICES, INC.

Net Shore-drift

Net shore-drift is the long-term, net effect of littoral (beach and nearshore sediment) transport along a coast. Daily or seasonal littoral drift may occur in either direction along our coasts, typically driven by wind-generated waves in the sheltered Puget Sound region (Johannessen and MacLennan 2007). However net shore-drift is the net effect over many years of these short term processes (Schwartz and Jacobsen 1981).

Original net shore-drift mapping shows that the Bangor study area is located in the middle of one long drift cell (named KS-5-1 in Washington Department of Ecology (WDOE) digital coastal atlas). KS-5-1 extends from just north of Anderson Creek to the entrance to Port Gamble Bay (Figure 3), with continuous northward net shore-drift throughout this 16.5 mile shore reach. This drift cell was originally mapped by Taggart as KS-2-1 (1984), and mapping was later compiled and published in Schwartz et al. (1991), published by the Washington Department of Ecology. This mapping replaced earlier coastal drift mapping in the *Coastal Zone Atlas of Washington* (WDOE 1979), which is now understood to be incorrect. Net short-drift mapping was most recently verified and updated by MacLennan et al. (2013). No changes to previous mapping were made to this area. However, field observations suggest that the cell may now be functioning as several smaller cells due to the abundance of shoreline modifications.

The maximum fetch which the southern portion of the study area is exposed to is 5.8 miles, from the south-southwest. These shores have similar exposure to the north (5.5 miles). Predominant (strongest) winds are from the south (southerlies), resulting in a net northward transport of sediment. Portions of the central study area are exposed to lesser fetch from the southwest, particularly as subtle changes in shore alignment orient some of the shore more to the north, making these areas less exposed to the predominant southerly winds. Areas that are not located in the lee of sheltering shore features are exposed to up to 9.5 miles of fetch from northerly winds. This generally classifies these shores as moderately high wave energy in the Puget Sound-Hood Canal context.

Geology and Geomorphology

Surficial geology was mapped at a 1:24,000 scale by the Washington Department of Environment and Geologic Resources (Polenz et al. 2013, Contreras et al. 2013). Field observations concurred with the mapped geology. The geology of the bluffs differed considerably from south to north (Figure 4). At the south end of the Bangor study area, the bluffs were primarily comprised of Pre-Vashon alluvium (Qc) and Vashon ice-contact deposits (Table 1 includes additional description of these strata). Vashon ice-contact deposits (Qgic) and Vashon recessional outwash (Qgo) were more commonly found in the central and northern bluffs. The northernmost bluffs were comprised of Vashon esker deposits (Qge; Table 1). Intermittent artificial fill associated with naval infrastructure and beach deposits were observed along low elevation shores.

Shoretypes, observations of littoral drift patterns, beach substrate composition, and impacts to geomorphic processes were observed during the field assessment of the Bangor study area. Reach conditions are described below, from south to north, with additional detail in Table 2. The geomorphology of the coastal area was dominated by erosional bluffs, all containing intertidal beaches. The bluffs are locally known as bluff-backed beaches (Shipman 2008, Simenstad et al. 2010) and range in height from 30 to 55 ft. Typical bluff slopes were on the order of 35 to 50 degrees from horizontal.

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*Bangor Beach Geomorphology Assessment, Port Gamble, Kitsap County, WA
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COASTAL GEOLOGIC SERVICES, INC.

Table 1. Surficial geology units found within the study area.

Unit	Description
Qc	Pre-Vashon alluvium: sand, silt, pebble, gravel, clay, and organic sediment; gray to tan, locally brown, with silt and clay facies ranging to bluish-gray; compact; moderately sorted, bedded.
Qgic	Vashon ice-contact deposits: Cobbles and pebble gravel, sand, ablation till, flow till, lodgement till, lacustrine mud, and rare boulders; tan to gray, loose to compact, variously sorted; massive to well stratified; includes sub-ice flow and collapse features.
Qgo	Vashon recessional outwash: Sand, pebble, and cobble-gravel, some silt and clay, moderately fresh; clasts subrounded; moderately sorted and stratified.
Qge	Vashon esker: Pebble to cobble-gravel and sand, tan to brown; loose; clasts moderately to well rounded; mostly well sorted; mostly basaltic; forms sinuous hills.

Table 2. Reach characteristics (see Figure 2), including location, shore types, and sediment composition. N/A is not applicable to that reach; ND is no data.

Reach number	Location	Shore types	Backshore sediment	Upper beach sediment	Mid beach sediment
1	South of Carlson Spit	Feeder bluffs, accretion shoreform	N/A	Coarse sand with pebble and minor granules	Coarse sand with pebble and minor cobble
2	Carlson Spit to Keyport Bangor Docks spit	Feeder bluffs	Sand with granules	Pebble with sand	Sand with pebble and minor cobble
3	Keyport Bangor Docks spit to Delta Pier, including Port Gamble shellfish beach	Feeder bluffs and transport zones	Sand with shell hash	Coarse sand with granule and minor pebble	ND
4	Delta Pier to EHW #1	Feeder bluffs	ND	ND	ND
5	North of EHW #1	Transport zones	Sand with shell hash	Coarse sand with granules and pebble	Sand with pebble and minor cobble

Feeder bluffs are coastal bluffs with active erosion and/or mass wasting that periodically supplies moderate volumes of sediment to the nearshore, thereby “feeding” the beach with sediment. Feeder bluffs are the primary source of beach and littoral sediment in the Puget Sound-Hood Canal area (Keuler 1988, Johannessen and MacLennan 2007). The bluff face typically has vegetation indicative of disturbance, with evidence of landslides and toe erosion (MacLennan et al. 2013). Feeder bluffs account for approximately 40% of the KS-5-1 drift cell. Modified shores, which represent approximately one-third of the entire drift cell, include all forms of shore armor from riprap, rockeries, seawalls and sheet pile, and similar structures. Figure 2 displays the spatial extent of modified shores in the study area.

Feeder bluffs represent approximately 22% of the study area (Figure 2). Forty-six percent of the area of interest on the NBK Bangor waterfront is armored. Sediment for the beaches within the study area is supplied from bluffs both in the Bangor areas of interest as well as further up-drift, to the south. South of Carlson Spit, 1.8 miles of feeder bluff have been mapped, with an additional 0.6 miles of historical feeder bluffs. Historical feeder bluffs have been armored such that they no longer supply sediment to the down-drift shore. Therefore sediment supply and transport are currently altered within the Bangor study area.

Three large sand and gravel spits are located within the study area. These shoreforms develop as the result of long-term deposition of littoral sediment and are mapped as accretion shoreforms in Figure 2.

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Although sediment deposition is the process responsible for the evolution of these coastal landforms, many are no longer accreting and in some cases are eroding.

The southernmost accretion shoreform is Carlson Spit, which has the form of a cusped foreland. The Carderock Pier is located on the south shore of Carlson Spit and the Service Pier is located immediately north of the Carlson Spit (Figure 2). Indicators of northward drift were observed south of Carlson Spit, such as sediment accumulation on the south side of fallen trees. Sediment transport appeared unobstructed beneath the Carderock Pier. There were also areas in which dense glacial deposits were exposed, indicating that there was limited sediment in this system. Sediment transport appeared unobstructed beneath the pier.

Signs of erosion were observed along the north shore of Carlson Spit in Reach 3, although the eroded material was likely fill. Considerable sediment is continually transported over the boat launch located along the north shore of Carlson Spit. This confirms northward sediment transport at the site. A deeply incised channel with a 24-inch culvert and concrete rubble and may partially impede continuous sediment transport beneath the Service Pier trestle further north. Intermittent armor was observed along the toe of bluffs east of the Service Pier. Several small boats and moderately sized tug boats were moored in this area, and no signs of net erosion were observed.

Sediment transport dramatically declines north of the boat ramp, as the shore becomes increasingly sheltered from southwest wind waves by the Service Pier and vessels moored at the pier to also from the north by the Keyport Bangor Docks (also referred to as the K/B Docks). The existing Service Pier facility entails several docks, a trestle, a boat launch and extensive boat moorage. Dense pile spacing likely dampens wave energy and sediment transport in the lee of the pier and docks. The lack of sediment transport was evident by upper beach sediment with fine-grained sediment, dense barnacle growth on sediment in the middle of the high-tide beach, and old landslide colluvium on the backshore and upper beach (age indicated maturity of vegetation). The large majority of gravel contained barnacles in growth position, which refers to them growing upwards on the top of gravel clasts with no growth on the bottom. These combined characteristics suggest that the sediment has not moved or been buried recently. In addition, indicators of southward drift were observed on the leeward side of K/B Docks, suggesting this area is at least partially removed from the larger net shore-drift cell that has northward transport.

Devil’s Hole barrier estuary is located near the center of the study area, in Reach 3. This estuary has a filled causeway with the coastal road atop it, which serves to enclose the estuary at an artificially high water level. There is no free tidal exchange in or out of Devil’s Hole estuary. There is a tide gate with questionable fish passage located on the landward side of the road at Devil’s Hole estuary. The channel contains a relatively high velocity and steep exit channel, which was apparently intended to provide some amount of fish passage. Velocities observed indicate that flow may be too rapid for salmon to gain access to the estuary. Beaver are known to utilize the habitat. Historically, this area encompassed the mouth of a barrier estuary with two narrow and low-elevation converging spits (Figure 5).

The beach at Devil’s Hole is the Port Gamble S’Klallam Tribe’s shellfish beach. The constrained tidal flushing affects sediment transport patterns from the old open barrier estuary to the beach and alters

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nearshore processes. Sediment supply and transport have been impacted within this reach; however, indicators of northward net shore-drift were still evident. Sediment supply has been degraded due to armored bluffs that would otherwise supply sediment to the nearshore. Dense glacial deposits were exposed on the beach in several locations, which may be a result of diminished sediment supply. The beach is now considerably sheltered from the north by Delta Pier. Wave dampening would impact sediment transport, which would further alter nearshore conditions.

A third spit is located in Reach 4, south of the Explosive Handling Wharf 1 (EHW #1) and north of the Delta Pier. This spit was extensively developed and armored and now encompassed by the Marginal Wharf. This area was not directly observed in the field as access was not available. North of the EHW #1, in Reach 5 (where the new EHW #2 will be constructed), the shore was comprised of a transport zone and bluff-backed beaches (Figure 2). Some landslides and toe erosion were observed in this area. The existing EHW #1 has dense pile spacing that likely dampens northward sediment transport in this reach. Although sediment transport may be dampened, indicators of northward transport were observed.

Historical Shore Change

Methods

A set of shore change maps were produced using maps covering the longest data period available. These maps were produced in ArcGIS using 2 data sets. Topographic or T-sheet mapping was available from the year 1878, produced by the US Coast and Geodetic Survey (USCGS 1878). This mapping was produced at a scale of 1:20,000. Previously georeferenced T-sheets data were downloaded from the University of Washington's Puget Sound River History Project website (<http://riverhistory.ess.washington.edu/>). The mean high water (MHW) line was used from all data sets. The 1962 position of the MHW line was mapped by NOAA compiled from charts 6445 and 6446. More recent mapping, from the year 2000, was available from the Puget Sound LIDAR consortium. The local elevation of MHW was delineated by CGS using this elevation data. The published elevation of MHW at the Bangor tidal benchmark (NOAA Station ID: 9445133) is +10.2 ft above mean lower low water (MLLW).

History of Overwater Structures at NBK Bangor

The history of construction of major overwater structures at the base was investigated using all available aerial photos and maps. This was conducted in order to understand when and where these structures may have begun affecting coastal processes.

The first pier in the study area was constructed prior to 1951 and most of the Naval structures were built several decades ago. Several structures have been reconfigured or expanded in recent years. The overall order of construction of the six major overwater structures was as follows: Marginal Wharf, K/B Docks, EHW-1, Delta Pier, Service Pier, and finally Carderock Pier (Figure 2). The history of construction of these large overwater structures is important for qualitative consideration of processes as well as potential iterative examination of modeled quantitative change to processes over time (which has not been completed to date to our knowledge. The details of installation of these structures are outlined below:

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- Carderock Pier (Reach 1, Figure 2), located south of Carlson Spit, was constructed in the summer of 2007. The pier was visible in Landsat imagery at that time.
- The Service Pier (Reach 2) with its multiple docks was constructed in 1981 or 1982. This structure does not appear in the topographic map photorevised in 1981 but does appear on a 1982 T-sheet.
- The Keyport Bangor Docks (K/B Docks; Reach 2), west of Devil's Hole Lagoon, was constructed between 1951 and 1953. The pier and docks do not appear in 1951 air photo but appear on a topographic map from 1953.
- Marginal Wharf (Reach 4), which wraps around a smaller point, was constructed prior to 1951. This facility appears in the August 1951 air photo.
- Delta Pier (Reach 3-4 break), the largest of the overwater structures, was constructed in 1977. Delta pier appears under construction in a 1977 air photo.
- Explosive Handling Wharf (EHW1, Reach 4-5 break), was constructed between 1973 and 1977. The wharf does not appear on topographic map "photorevised" 1973 but does appear in the oblique air photo from 1977.

Shore Change Results

Examination of Figures 6-S and 6-N show several clear trends. Each of the 3 spits described above appear to have eroded and shifted northeastward. This is most pronounced at Carlson Spit where the historical location of the tip of the spit appears to have migrated northeastward by approximately 185 ft between 1878 and 2000. The northern migration of spits in the Salish Sea is caused by long-term prevailing and predominant southerly winds and waves, which typically result in northward sediment transport, the long-term effects of which is the gradual northward migration of depositional features. This phenomenon has been documented previously in several other studies (Johannessen 1992, Finlayson 2006, Johannessen and MacLennan 2007, MacLennan and Johannessen 2010). Some of the measured change may be due to inaccuracies in the historical mapping. Additional northward migration, approximately 10 to 13 ft, appears to have occurred between 2000 and 2013 (Figure 6-N and 6-S).

Another trend that is apparent from the shore change work is that the shorelines in most feeder bluff have receded landward significantly. Most of the bluff recession appears to have occurred prior to 1962 and was generally in 3 locations: between the Service Pier and the K/B Docks (Reach 2), at the bluffs west of Devil's Hole barrier estuary (Reach 3), and just north of the Marginal Wharf (Reach 4). Shoreline recession was not exclusive to bluff shoretypes and was also observed along much of the shore, excluding the tide flats on the shore south of Devil's Hole barrier estuary, which have changed very little since 1962.

The position of the mean lower low water (MLLW) line was compared using the 1878 T-Sheet with NOAA charts from 1970 to 1989. A greater amount of error is associated with the 1878 position of MLLW as compared to MHW, as MHW was a priority of the mapping in the earlier era. Additionally, T-sheet mapping from the late 1800s generally tended to map the position of MLLW as further waterward than it actually occurred (based on experience on other projects). Considerable apparent recession of the MLLW (ranging from 90 to 150 ft) was mapped throughout much of the southern portion of the study area. The point north of the Keyport Bangor Docks exhibited the least recession. The shore waterward of the mouth of Devil's Hole barrier estuary was one of the few areas that prograded. Northeast of Devil's

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Hole barrier estuary near the Delta Pier, recession of MLLW again persisted. This is not surprising, as the shore is not sheltered from waves by large structures. However, north of the EHW-1, southerly waves are again dampened by overwater structures and high pile density and the MLLW shoreline did not recede adjacent to and north of the EHW-1.

Review of Model Results

ESA reviewed the cbec modeling reports focused on the proposed new structures on the NBK Bangor waterfront (cbec 2012a, cbec 2012b, and cbec 2013). The review was limited in scope and only considered the effects of the proposed project on hydrodynamics and sediment transport. ESA prepared a memo (ESA 2014) for this study, which should be read in full as it contains much additional information. The following key pieces of information were excerpted from the ESA memo, which are particularly relevant and should be integrated with the other observations in this study.

- The model does not accurately represent wave-driven alongshore sediment transport in the Puget Sound region, as indicated by the model's prediction of deposition on the north side of structures, counter to the littoral transport observed at the site. ESA hypothesized that this prediction of sediment transport in opposition to observations may be due to tidal currents dominating model results, as opposed to wave-driven transport, which is the predominant driver of sediment transport in the Puget Sound region.
- Model results reported bed elevations changes ranged up to 2 meters over the course of a single year, which is a large range of change for the region.
- cbec's assumed recurrence-interval for a change-event was 2-years and they also considered a 50 year event; 2 years is considerably more frequent than typical change events in the region, which are typically on the order of 10-15 years.
- Local pile scour and pile density were one of the greatest potential impacts to sediment transport.

Conclusions

Current Conditions Relative to Overwater Structures

Based on the changes documented in the shore change analysis, it is concluded that accretion shoreforms are not currently prograding or accreting, but are instead shifting northeastward due to the predominant southerly winds and waves. Extensive shore modifications have likely impacted sediment transport and deposition, particularly along the lower beach, which appears to have resulted in considerable lower beach erosion throughout the study area; however, as stated above, error in MLLW mapping is greater than MHW mapping. The lower beach consists of several valuable habitat types; including eelgrass and shellfish beds. Bluffs have receded throughout the study area.

The combined recession of the lower (MLLW) and upper beach (as indicated by the MHW line) could represent the landward shift of the entire beach profile, which is a natural response at very gradual rates in this type of semi-sheltered Puget Sound shore and also attributable to a very small degree to the long-term effects of rising sea level. A small amount of erosion and recession of the beach is likely to continue into the coming decades due to natural erosion and also as sea levels rise is projected to accelerate. Intertidal to backshore (where present) beach area loss can be expected to occur along all

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modified (armored) shores, as armor precludes translation of the upper beach profile. There remains only one depositional shore within the reach and that is the Devil's Hole beach, where the Tribe maintains shellfish beds.

Based on the field visit and supported by shore change work and examination of aerial photos, several alterations of littoral sediment transport were observed. Overwater structures at NBK Bangor appear to have caused several fundamental and ongoing changes to beaches within the base. These conclusions relate to existing conditions in early 2014, which are important to understand and document prior to assessing potential changes in the geomorphology of beaches and other coastal features in the study area which may be caused by new structures. Observations revealed an active beach system south of Carlson Spit, including clear evidence of northward sand and gravel transport, dynamic beach adjustment, intermittent bluff toe erosion and landslides from mapped feeder bluffs, and a variety of beach habitats. Habitat types span the intertidal from sand flats at the lower beach, potential forage fish spawning areas on the mid-beach, backshore habitats in supratidal areas, and dune-upland transitional habitats moving further upland. Erosion occurring on the south limb of Carlson Spit is counterbalanced with significant deposition on the north limb, in agreement with historical shore change work (discussed above). Armor along these depositional shores will impact these processes, as this naturally-driven morphological process requires ample room for beaches to translate landward and for sediment erosion and deposition.

Northward net shore-drift appeared to continue around the tip of Carlson Spit from the south. The character of the beach sediment and degree of morphological change of the beach changed east and northeast of the Service Pier. The associated piers, docks, and moored vessels cause dampening of wave energy, thus reducing sediment mobility, sorting, and transport, as documented above. Here the majority of intertidal beach sediment did not appear to be subject to active littoral transport. This was evidenced by a decrease in sediment size and mobility with additional fine gravel and coarse sand, as compared to southern and more northern beaches (Table 2).

Similar to landward of the Service Pier, the Keyport Bangor Dock area also had a substantially finer-grained beach than away from the pier. This included substantial quantities of sand in an accreted area which bulges waterward towards the pier. The Keyport Bangor Dock also had significant structures including large floats with numerous barges and vessels tied up in deep water. Together, these structures appear to diminish littoral drift volume and potentially locally reverse the direction of littoral transport for considerable time periods. This process also occurred landward of the other overwater structures, which has resulted in long-term changes to the intertidal beach in the areas landward of the overwater structures.

Consideration of Proposed New Overwater and In-water Structures

The wave dampening due to existing overwater structures appears to reduce the total volume of littoral sediment transported in the drift cell as it runs northward through the site, as discussed immediately above. Proposed overwater structures and in-water structures are illustrated in materials in Appendix A, attached. Overall, structures proposed for up-drift and south of the Tribal shellfish beach are more likely to impact sediment transport to the beach, potentially reducing the volume and quantity of fine sediment along the down-drift Tribal beaches. The proposed Service Pier extension is the one proposed

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change up-drift of the Tribal shellfish beach. The proposed Service Pier extension information was provided in 2 alternatives; one had a shorter pier (44,025 square ft) with 2 submarines berthed adjacent to each other, and the other had a longer pier (90,000 square ft) with 2 submarines berthed end to end (Appendix A). Based upon an e-mail received from the tribe on January 30, 2014, we understand that the shorter and smaller overwater footprint pier extension is the preferred alternative.

The impacts associated with these structures are cumulative. Both alternatives for the Service Pier extension would likely have minor additional wave dampening compared to existing conditions, and would therefore constitute a small impact to littoral transport and beach habitats and conditions. The pier extension would affect both waves from the southwest and also for the northwest. The number and size of piles, sizes of submarines, alterations to the existing Service Pier, and if other vessels would also be docked here are not known at this time. After these sort of design details are provided, the degree of wave dampening and subsequent alteration of wave propagation and sediment transport in the nearshore would be best evaluated using a sediment transport model which has been shown to reproduce observed northward sediment transport trend.

The existing and proposed new structures are summarized, along with anticipated impacts to coastal processes in Table 3. The beach at Devil's Hole Barrier estuary, which we understand is a very productive beach and is the primary shellfish beach of concern to the Tribe within the base, appears to have a moderately large volume of sediment at present. It is likely that some littoral sediment, although a reduced volume since historical conditions, reaches this beach from the southwest and also possibly from the northeast. However the extensive scale of the naval infrastructure has at a minimum partially fragmented this net shore-drift cell, reducing the volume of sediment in transport and available sediment to maintain the Tribal shellfish beach. The proposed extension of the Service Pier would likely lead to some amount of additional reduction in sediment transport volume from the south. The magnitude of change would be very difficult to quantify, however a refined modeling approach may provide insight into this and other proposed changes.

The southern Land Water Interface (LWI; Appendix A) as we understand it would be constructed approximately 350 ft northeast of the Devil's Hole outlet and approximately 1,000 ft southwest of the southern portion of Delta Pier. We understand that this southern extent of the LWI would cross the nearshore northeast of the existing Tribal shellfish beds, and would therefore not have a direct burial impact on these intertidal resources. The current preferred alternative (formerly Alternative 3) for the LWI shows a floating barrier with vertical piles and fencing atop what appears to be cylindrical floats of unknown size. This approach appears to be an installation of an additional piece of the floating barrier, in place since prior to 2004, with the significantly large connection to the beach and bluff face. We understand that no mesh or fencing would extend to the subtidal bottom with this alternative. The existing floating barrier was observed in aerial photos to have a dampening effect on waves, and the new installation would likely slightly increase this effect.

This preferred alternative for in water portion of the LWI however is clearly preferable to the earlier alternatives which included mesh-like grates extending from the bottom to a narrow, floating pier above the water surface, as there would be less dampening of waves and tidal currents in the absence of under-water elements.

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Table 3. Summary of existing and proposed structures (based on preliminary designs) and corresponding altered coastal processes. Reach 4 was not included since no structures are proposed in this reach and the proposed projects are not likely to have an impact on this reach.

Reach number	Existing structures	Currently altered processes	Proposed structure description	Proposed structures potential effect on processes
1	Pier, dolphins, large overwater structures	Minor wave dampening from the south	None	Additional wave dampening from the north
2	Trestle, 2 piers, dense pile spacing, boat storage. Shore armor.	Moderate wave dampening from the north and south. Reduced sediment transport	560 ft extension of Service Pier with associated piles and submarine berthing (2 alternatives)	Further wave dampening and reduced northward sediment transport. Local scour at base of piles.
3	Shore armor, tide gate between Devil's Hole estuary and marine environment	Tidal flushing, sediment input, water quality and fish passage from Devil's Hole barrier estuary, road and creosoted wood bulkhead. Wave dampening from the north due to Delta Pier	Land-water interface observation platform and footings	Further wave dampening from the north. Local scour at base of piles.
5	EHW-1 large overwater structure, with dense pile spacing	EHW-1 dampens wave energy to from the south	Land-water interface observation platform and footings	Potential wave dampening from the north. This could isolate sediment transport processes within the reach. Local scour at base of piles.

The LWI design in the current preferred alternative also includes an approximately 70 ft long retaining wall on the upper beach (in this setting also known as a bulkhead or shore armor) at both the south and north ends. Although design details were not provided, we understand from the conceptual graphics provided (Appendix A) that the retaining wall would be vertical (likely concrete) walls along with concrete short return walls extending up the face of the bank. Both ends of the LWI would also have new observation towers constructed on piles over the upper beach and bank face. These retaining wall structures and vertical piles would constitute moderate sized areas of sediment impoundment with associated impacts to existing minor sediment input. The sediment impoundment would not be large as these areas are in mapped transport zones and not in mapped feeder bluffs (MacLennan et al. 2013), however transport zones do provide limited sediment input to local beaches. The retaining walls and associated structures would necessitate disturbance of existing marine riparian vegetation. The observation platforms, the southern of which would extend approximately 35 ft waterward of MHW, would also constitute small, new overwater structures with associated small shading footprints.

Overall the proposed shore modifications at NBK Bangor would likely have the impacts to littoral sediment transport and intertidal habitats outlined in this report and would likely result in a decrease in intertidal habitat quality and area at the Tribal shellfish beach in the long-term. Within the context of sea level rise, a further reduction in sediment supply and transport and in the presence of an armored (bulkheaded) upper beach at the shellfish area, the intertidal shellfish habitats have little natural

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adaptive capacity to sustain habitats in the face of the accelerated sea level rise projected for the coming decades.

Limitations of This Report

This report was prepared for the specific conditions present at the subject property to meet the needs of specific individuals. No one other than the client and the client's direct project partners should apply this report for any purposes other than that originally contemplated without first conferring with the geologist who prepared this report. The findings and recommendations presented in this report were reached based on brief field visits. The report does not reflect detailed examination of sub-surface conditions present at the site. It is based on examination of surface features, bank exposures, soils characteristics, beach features, and geologic processes. In addition, conditions may change at the site due to human influences, floods, earthquakes, groundwater regime changes, or other factors. This report may not be all that is required by a construction contractor to carry out recommended actions. Great care must be exercised when working on unstable slopes or close to foundations. Thank you for engaging the professional services of Coastal Geologic Services, Inc. If we can be of any additional assistance please contact our office at (360) 647-1845.

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Attachments

- Figure 1.** The location of Naval Base Kitsap Bangor.
- Figure 2.** Reach locations and geomorphic shoretypes within the NBK Bangor study area.
- Figure 3.** Net shore-drift cell and geomorphic shoretypes in the NBK Bangor study area.
- Figure 4.** 1:24,000 surface geology mapping of the NBK Bangor study area.
- Figure 5.** Historical condition of the Devil's Hole barrier estuary.
- Figure 6-N and 6-S.** Long-term shore change of mean high water (MHW) at NBK Bangor area, northern and southern sections.
- Figure 7-N and 7-S.** Long-term shore change of mean lower low water (MLLW) at NBK Bangor area, northern and southern sections.
- Appendix A.** Site plan map and 6 conceptual design schematics contained in the file "Navy_LWJ_012314.pdf", apparently created January 23, 2013.

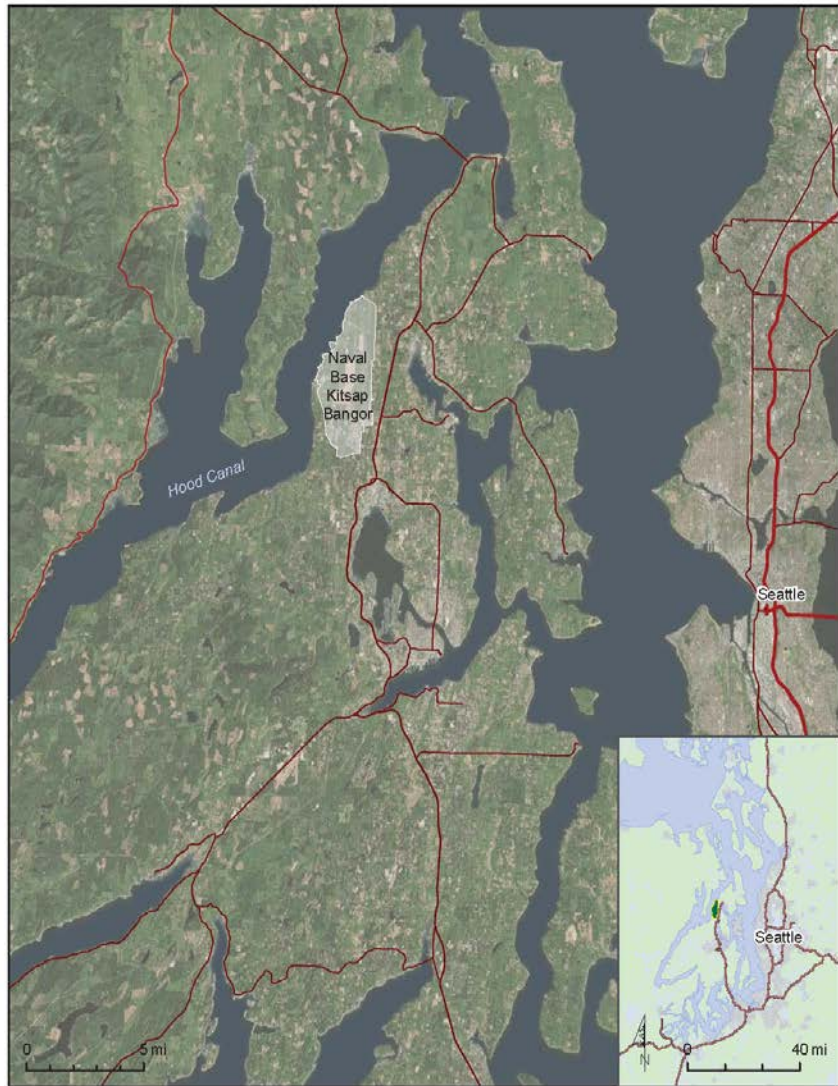


Figure 1. The location of Naval Base Kitsap Bangor. Bangor Beach Littoral Drift Assessment

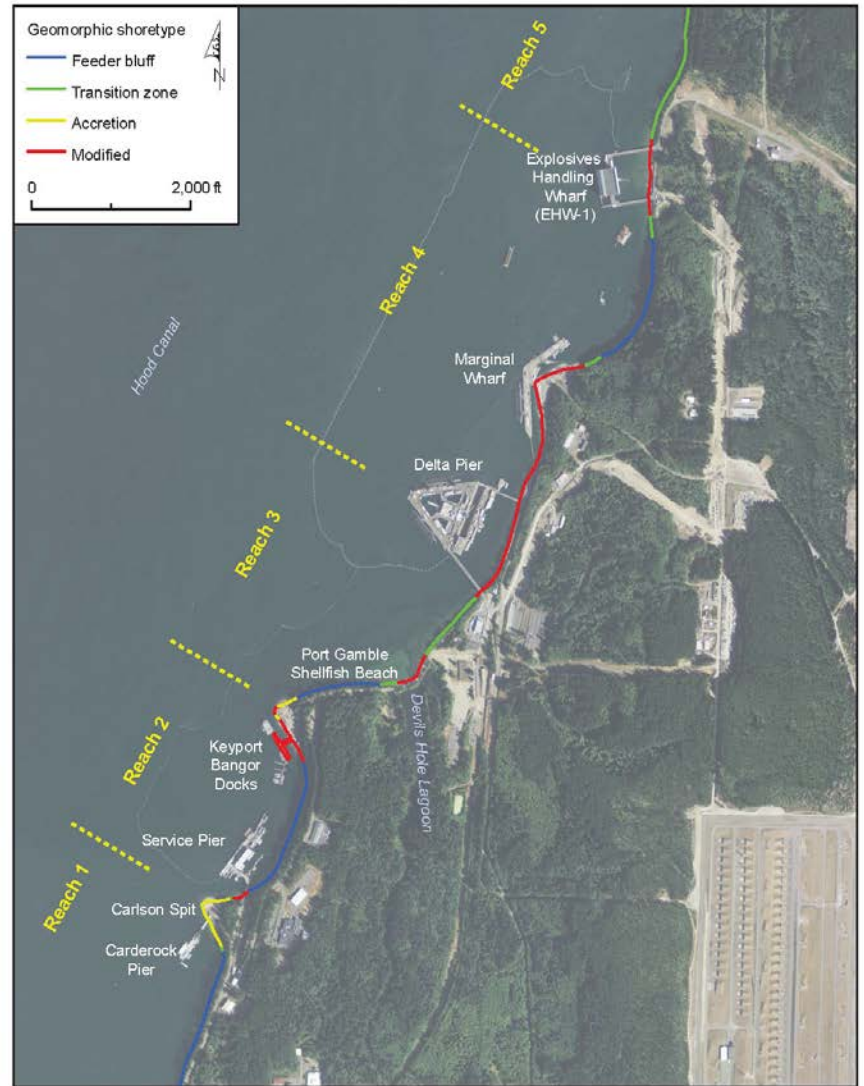


Figure 2. Reach locations and geomorphic shoretypes within the NBK Bangor study area (MacLennan et al. 2013). Bangor Beach Littoral Drift Assessment



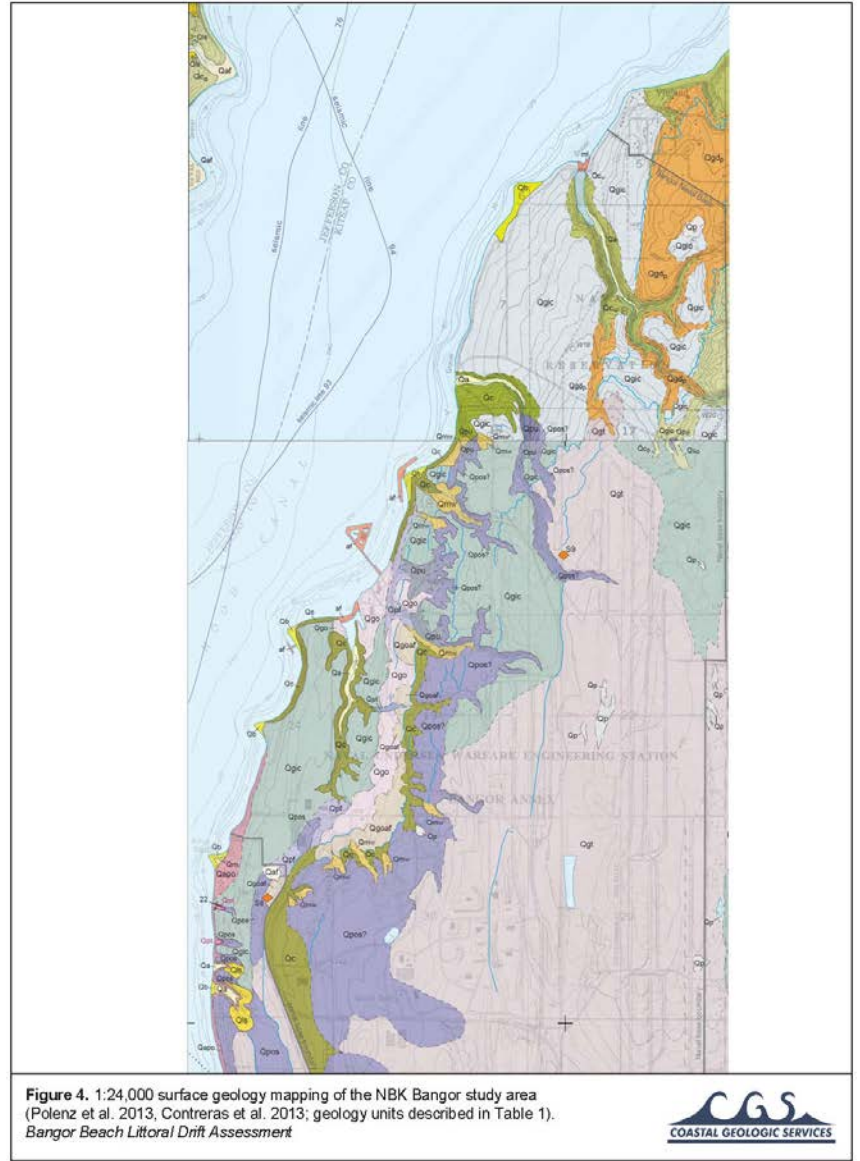
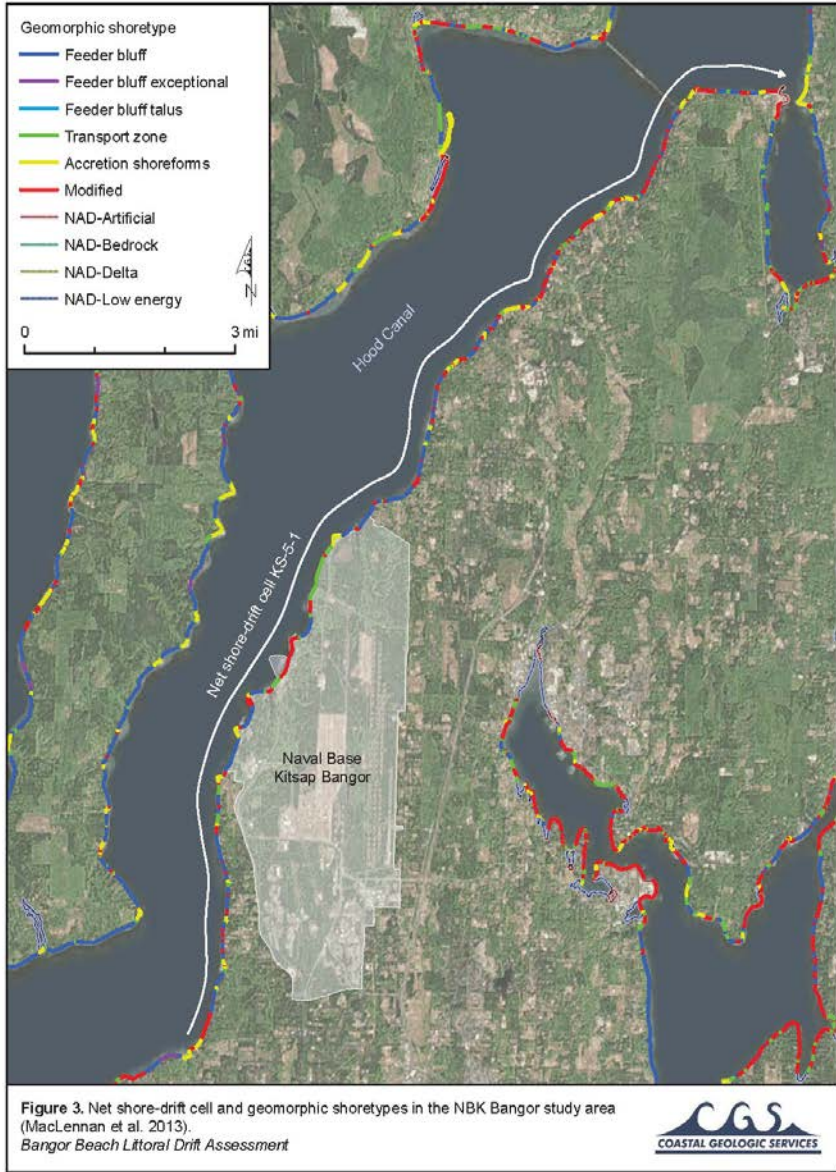




Figure 5. Historical condition of Devil's Hole barrier estuary (T-Sheet 1556, from 1878). Bangor Beach Littoral Drift Assessment

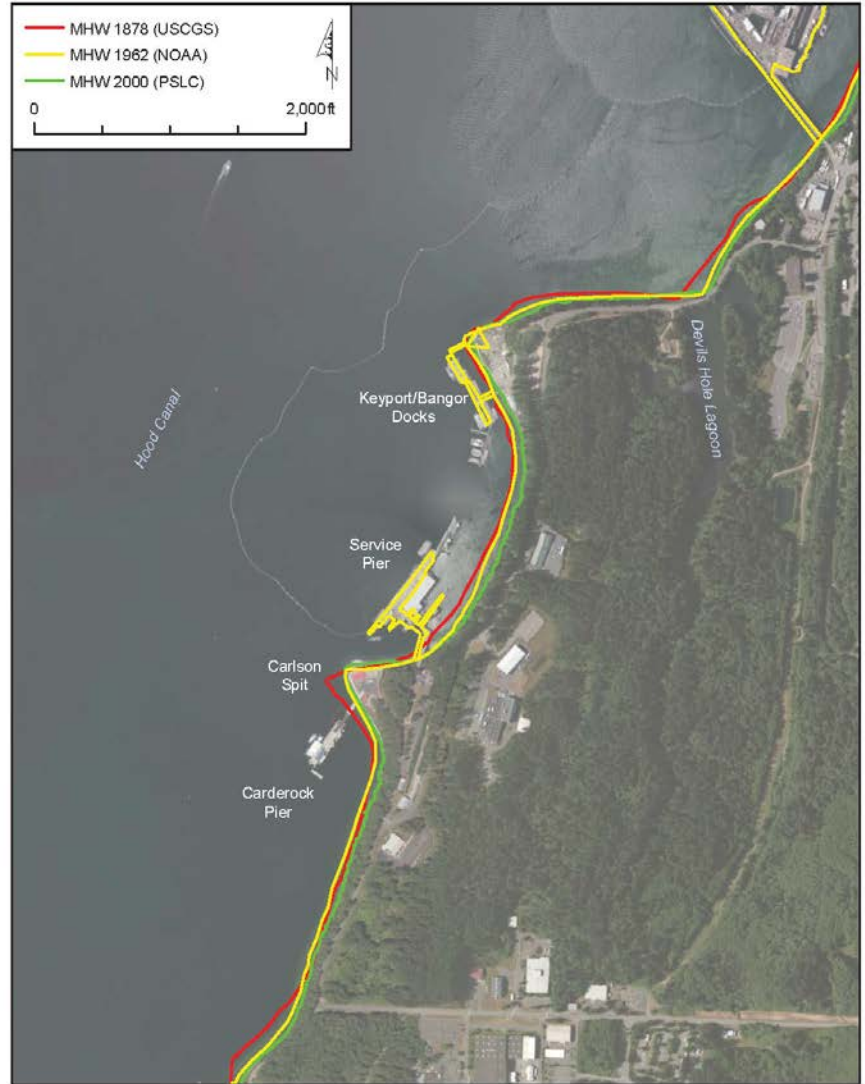
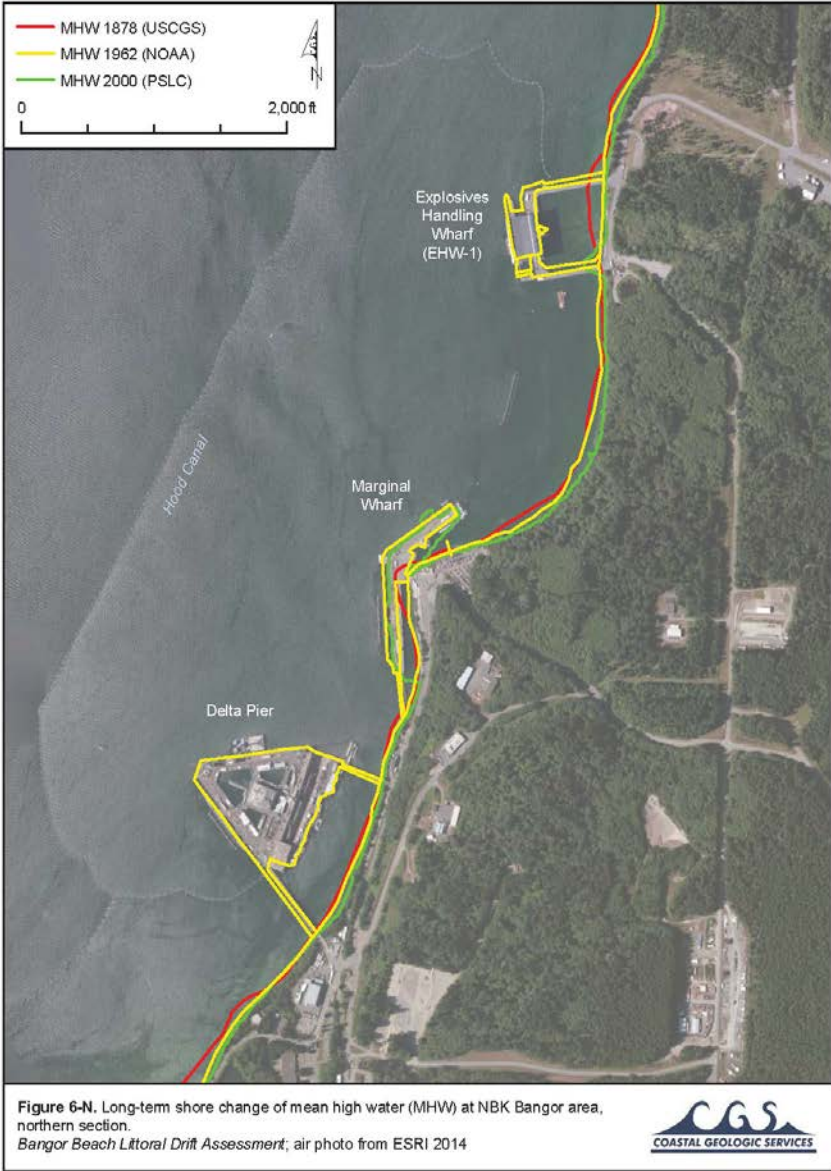
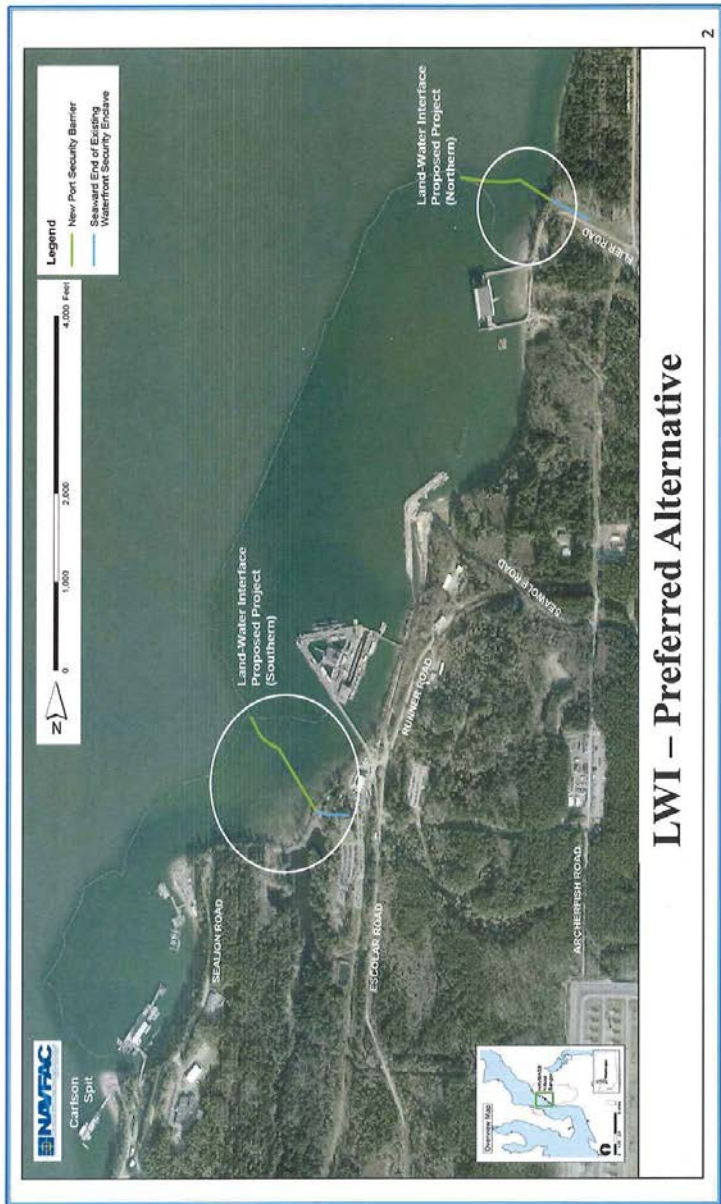
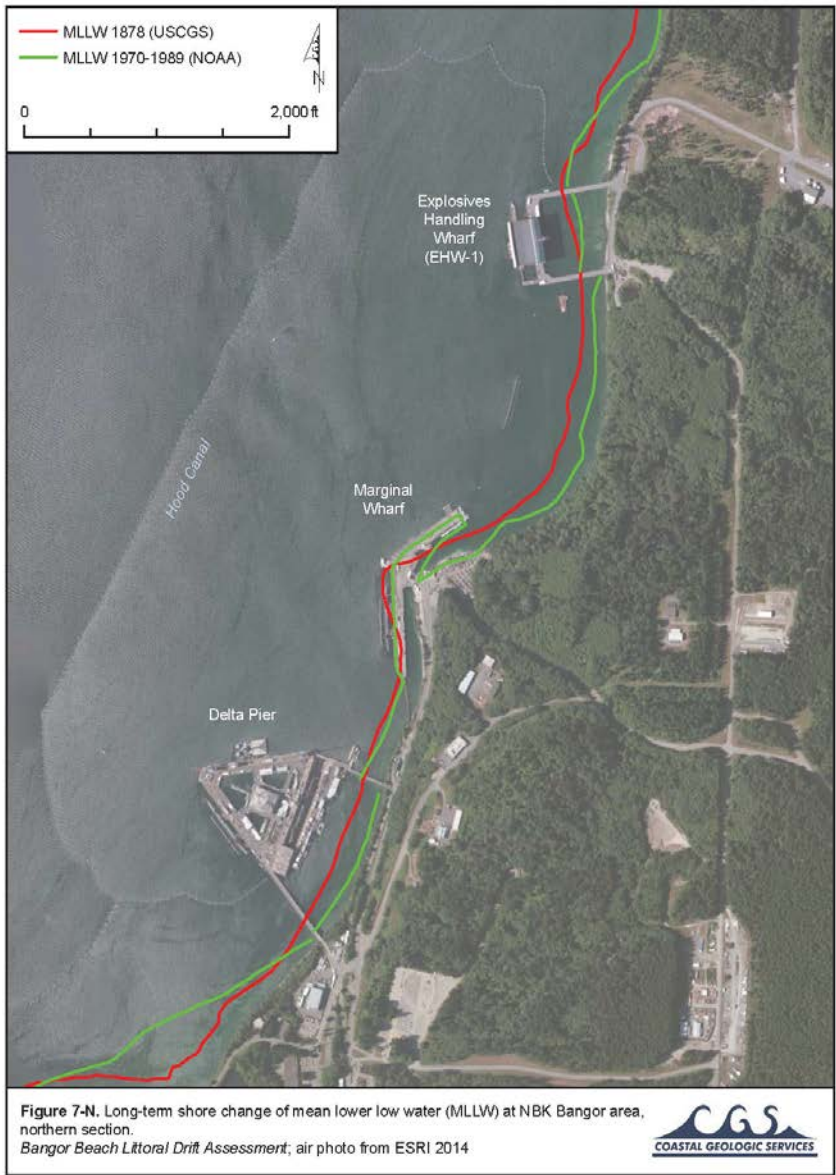


Figure 6-S. Long-term shore change of mean high water (MHW) at NBK Bangor area, southern section. Bangor Beach Littoral Drift Assessment; air photo from ESRI 2014

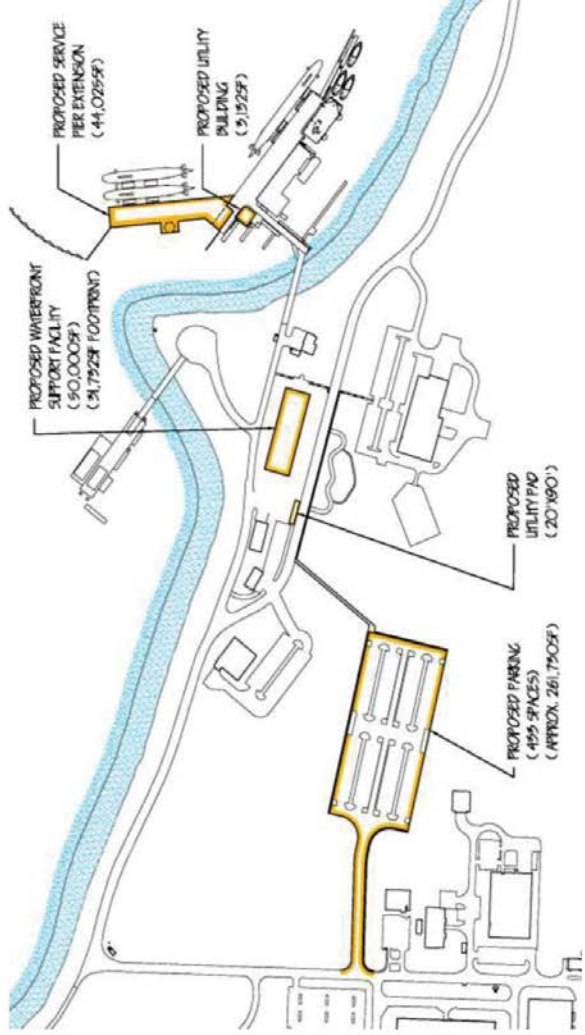






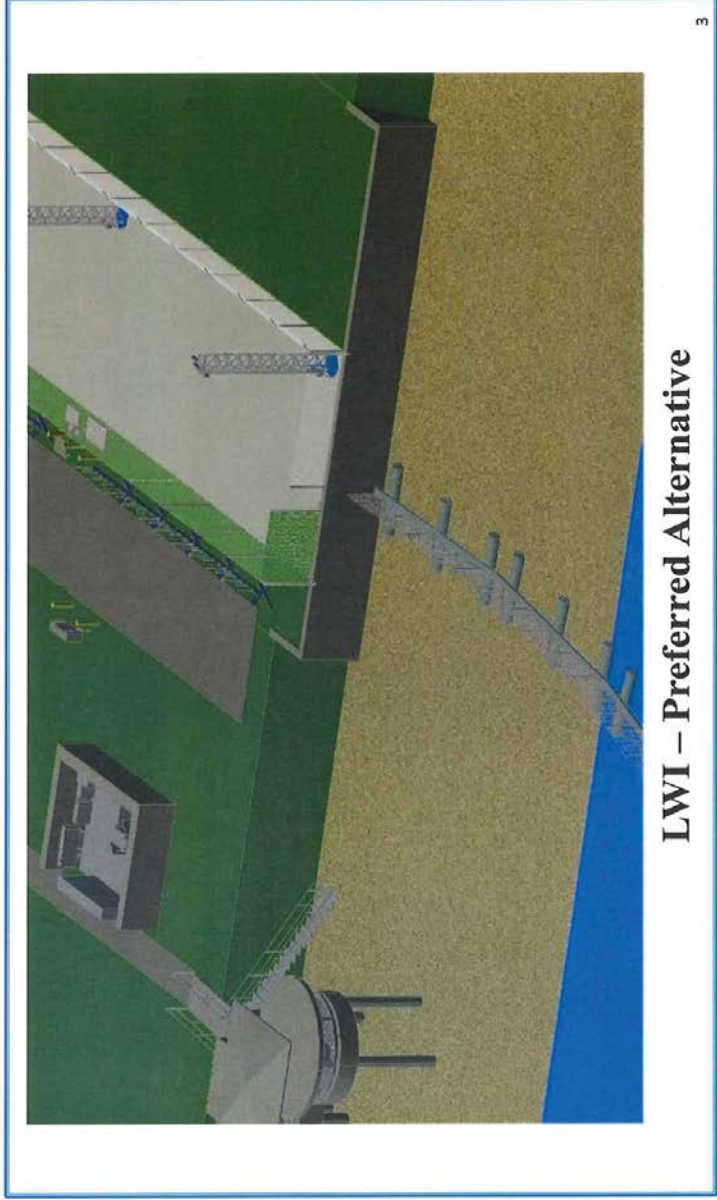


SPE Short Pier Configuration Alternative



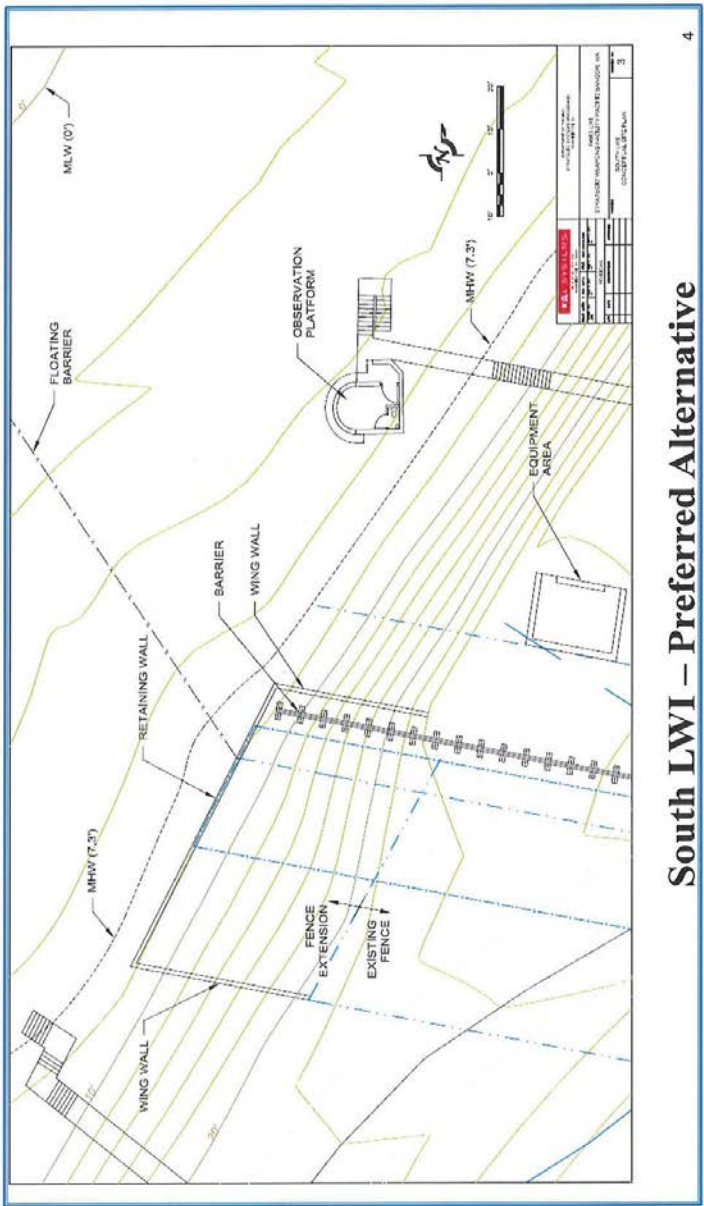
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UNCLASS

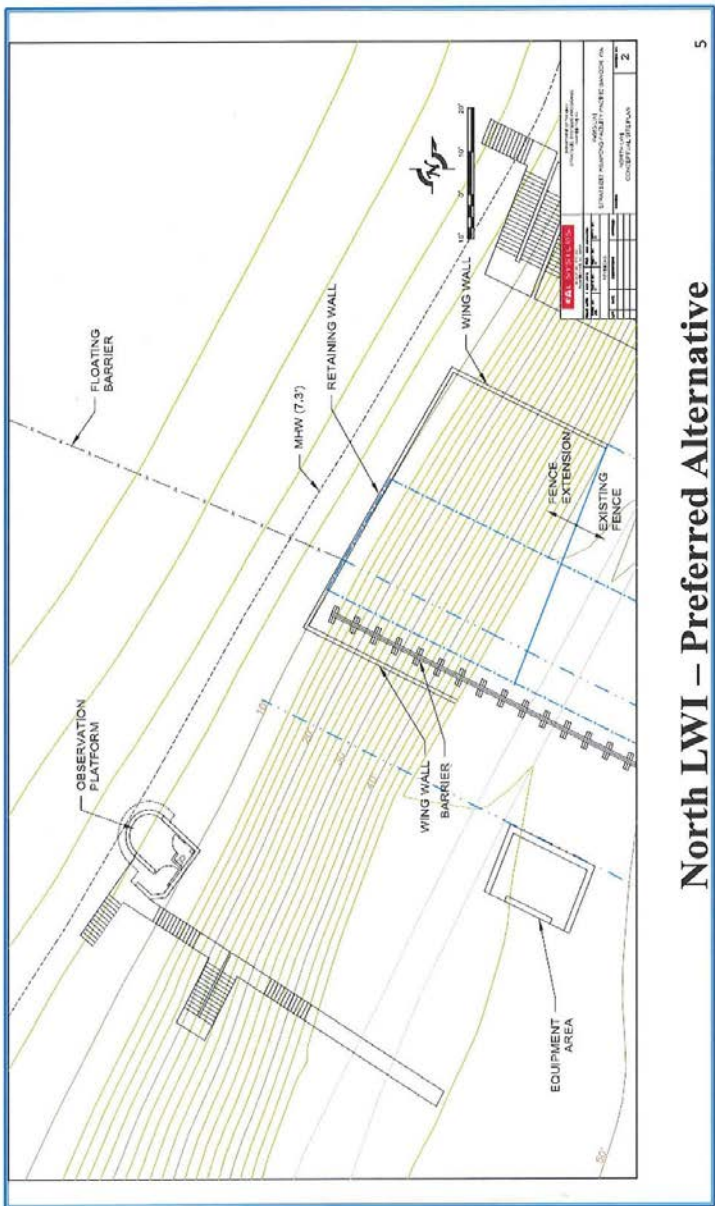


LWI – Preferred Alternative

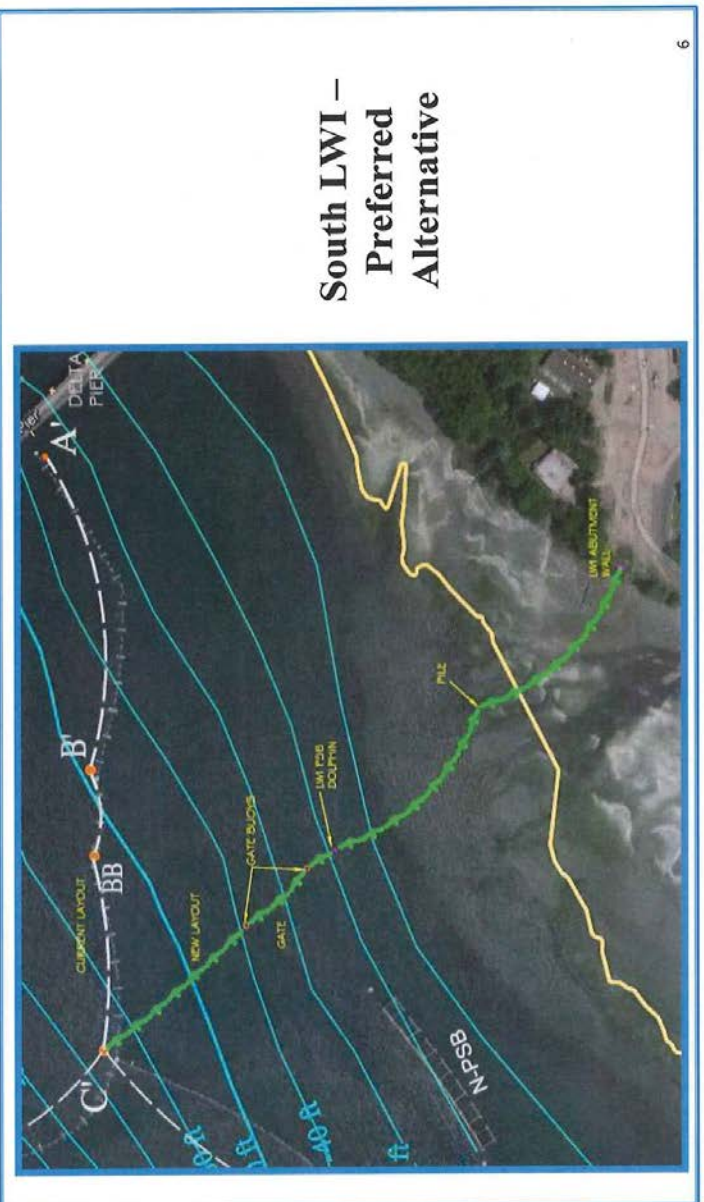
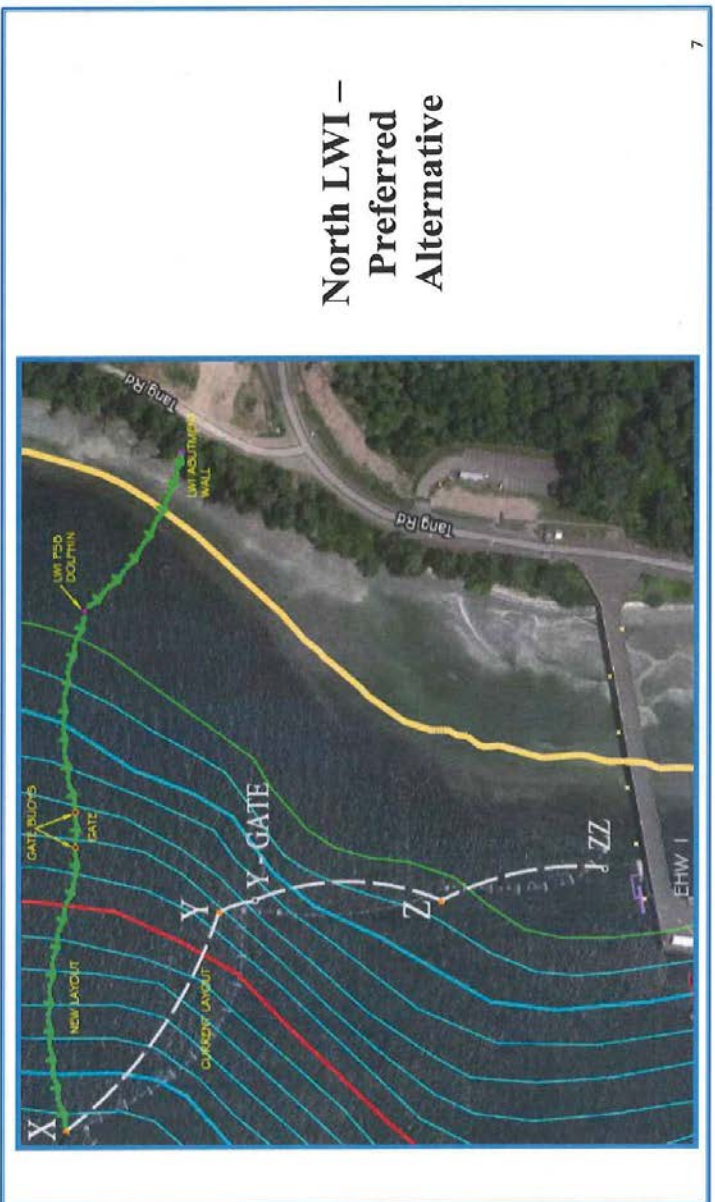
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South LWI – Preferred Alternative



North LWI – Preferred Alternative



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**Attachment 2: Bangor Beach Littoral Drift Assessment;
Summary of Findings**

RE: Land-Water Interface/ Service Pier Extension Draft Environmental Impact Statement
Point No Point Treaty Council Comments 4/13/2015

T1 – Point No Point Treaty Council — ATTACHMENT 2 (page 1 of 3)



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memorandum

date October 10, 2014

to Jim Johannessen, Andrea MacLennan (Coastal Geologic Services, Inc.)

from Matt Brennan, PhD, PE, and Bob Battalio, PE

subject Review of *Hydrodynamic and Sediment Transport Modeling of the NBK Bangor Waterfront – Draft Technical Report*

Introduction

The Naval Base Kitsap (NBK) has proposed the construction and operation of two new in-water projects at the Bangor waterfront. The first proposed project, the Land Water Interface (LWI), completes the base's security perimeter by extending a pile-supported security fence from the shore into the water. The second proposed project, the Service Pier Extension, consists of a pile-supported structure added to an existing pier.

The Port Gamble S'Klallam Tribe is concerned about possible short term and long term effects of the proposed projects on habitat and geomorphology, particularly with regard to shellfish beds used by the Tribe. To assess the proposed project's potential effects on beach geomorphology, the Tribe retained the services of a consultant team led by Coastal Geologic Services (CGS) and including ESA. ESA has been tasked with reviewing the report *Hydrodynamic and Sediment Transport Modeling of the NBK Bangor Waterfront – Draft Technical Report* (cbec, 2013). This report documents cbec's modeling comparison of existing conditions and project alternatives.

This memo documents ESA's review of the cbec report. We considered the model's representation of physical processes, the model's representation of the proposed projects, and what the predicted differences between modeled existing conditions and proposed project conditions suggest about potential impacts on the flow and sediment transport. After summarizing our findings, we present a more detailed model review, followed by a discussion of our model review as it relates to the CGS site assessment.

Summary of Findings

In developing and applying the Delft3D model to the Bangor waterfront, cbec has efficiently leveraged its previous modeling effort to predict the potential for impact from two proposed in-water projects. By using nested grids, cbec established a modeling approach that captures Puget Sound dynamics, achieves practical run times, and provides high grid resolution in the project area. Use of a two-dimensional depth-averaged model is consistent with the minor role freshwater inflows play in the Hood Canal and the shallow nearshore sediment transport region.

K:\projects\2013\ID130967.00 - NBK Bangor Modeling Review_Task1ModelReview\NBKBangorModelingReviewMemo v3.docx

Based on our review of the cbec modeling report, we found the following:

- The model predicts that regional effects of pile-supported structures will be limited.
- However, piles are likely to cause local scour holes in the immediate vicinity of their footings. If piles are grouped close together, these scour holes can interact to alter flow and bed morphology at a larger scale.
- If the security fence and pontoons (during low tide in intertidal areas) touch the bed, they may also cause some local impacts to the bed. The degree and types of impacts depend on the fence configuration and fence's interaction with currents and wind waves.
- The model does not appear to capture the dominant processes which affect shoreline sediment transport and geomorphology, most notably, the south-to-north alongshore sediment transport. The model predicts that structures along the NBK Bangor waterfront accumulate sediment on the downdrift (north side), which contradicts the regional sediment transport direction, typical groin blocking of alongshore transport, and site observations (CGS, 2014).
- In some areas, the model predictions of bed change switch sign abruptly and with considerable magnitude. These conditions are not likely to be representative of the natural system.

Overall, the modeling does not accurately represent waves and wave-induced sediment transport. Since this is a key physical process affecting shore resources and could be affected by the proposed project, we conclude that the modeling is not adequate to assess project effects. Also, the analysis did not include a geomorphic assessment, which further compounds, and perhaps caused the omission of this key process.

ESA's review of the modeling report and readily available supporting documentation was limited to the allocated budget for this review. We do not have sufficient information to fully understand what modeling was done, and our comments are therefore provisional pending additional information. To gain greater confidence in the model predictions, it may be useful to explore the model development and application further by initiating a discussion between ESA and cbec. Since ESA only reviewed the modeling report, and did not develop any portion of the model or review the modeling input and output files, ESA is not responsible for any findings or lack of findings based on the modeling. In addition, ESA's assessment is limited to the model predictions and do not include an assessment of whether the predicted impacts are significant.

Model Review

The focus of this review was the 2013 cbec report focused on the Bangor Waterfront has been provided for ESA's review. The model used in this 2013 report is based on modeling previously completed by cbec for NBK. Rather than repeat the details of model development and calibration, the 2013 report only contains a brief summary of these steps and refers the reader to prior 2012 reports (cbec, 2012a; cbec, 2012b). ESA conducted a cursory review of these 2012 reports. These reports provide some additional details about the model, but not specific information about the NBK Bangor waterfront model. In particular, the cbec (2013) report provides little or no details about the hydrodynamic calibration, about wind-induced processes (such as waves), and about the sediment transport setup and calibration for the NBK Bangor waterfront.

Our review only considered the effects of the proposed project on hydrodynamics and sediment transport. These structures can have other impacts on habitat. For example, the deck of a pier can shade the water column below, altering the habitat's light qualities. Also, the security net does not appear to be included in the model. It may have local impacts to flow velocity and ecosystem that were not evaluated as part of this review.

In the sections below, which correspond to similarly titled sections of the cbec report, we present our detailed comments on the modeling which informed our findings presented above.

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Modeling approach

Although cbec’s 2013 report discusses the wind boundary conditions, the report does not specify which wind-related processes are included in the modeling. The 2013 report makes reference to prior studies (cbec 2012a; cbec 2012b), but does not clarify which aspects of the earlier work was also included in the NBK Bangor waterfront model. For instance, the 2013 report does not mention the SWAN wave model, nor are there any predictions of the wave field provided in the report. Without this information, ESA cannot determine if waves were included in the NBK Bangor waterfront model and if waves were predicted, assess these predictions and their implications for sediment transport.

The prior reports (cbec 2012a; cbec 2012b) provide some additional detail on the methodology used at other sites, but, on cursory inspection, do not provide information about the following questions for the NBK Bangor waterfront: Was the wind boundary condition used to generate shear stress on the water surface that created flows within the water column? To predict wind-waves? Was the bed shear stress induced by either or both of these processes included in the sediment transport model? Were alongshore currents and transport generated by breaking waves modeled? Was any wave modeling conducted and were wave-induced, surf zone sediment transport computations made?

Were contributions of flow and cross-shore sediment from Devil’s Hole Creek included in the model? The deltaic formation at the mouth of this creek suggests that the pre-tidegate Creek flow in the intertidal zone led to cross-shore sediment transport across the shellfish beach. It now appears that there the Creek is connected to the Canal by a hydraulic structure with limited peak flows and therefore limited hydraulic and sediment conveyance. Does this structure alter sediment transport and grain sizes at the shellfish beach?

Wharf waterfront model development

Wind

Although the average wind direction at Duckabush was from the south, the hilly topography and alignment of Hood Canal at the project site suggests that dominant wind direction during specific events is likely to be from the southwest, along the main axis of the Canal. Using a south wind direction may underestimate wind forcing at the project site since the fetch is not aligned with the main axis of the Canal.

Since long-term wind records are available near the project site, it is not clear why an average wind speed was used, rather than actual wind data for a representative period. Using the average wind eliminates much of the dynamics of wind forcing. A representative time period of wind data could have been selected much in the same way that representative tides were selected. Because of local differences in direction (see point above), it may be appropriate to transform the wind record to project site conditions.

Sediment

How were the D50 grain sizes selected for the two sediment size classes? What is the relationship between the grain sizes used in the model and the grain sizes at the project site shoreline?

What parameterization of erosion and deposition were used for the sediment transport predictions?

In the areas with mixed size classes, does the model consider armoring whereby the large size class limits the erosion of the small size class?

Simulation Time Periods

During Weeks 2-6, it appears that a constant wind speed, representative of an average over a month or longer, were used. Because the averaging interval is so long, the magnitude of the wind speed is relatively small, e.g. less than 2 m/s (5 mph). Since sediment transport only occurs when bed shear stress exceeds a critical value, use of this constant average wind speed underestimates sediment transport for a large portion of the simulated period (Weeks 2-6) and an even larger portion of the morphologic year (Weeks 2-52).

Eddy Viscosity

Although the model grid cell size is relatively small, the lateral distribution of the velocity field behind the spits may be sensitive to the model’s horizontal eddy viscosity. The selected value for the horizontal eddy viscosity is not mentioned and we assume the model was not evaluated for sensitivity to this parameter.

Project Conditions

The documents cited in cbec (2013) as informing the representation of the proposed project conditions were not provided to ESA. Therefore, we cannot evaluate how well the model replicates these conditions, just the results based on the manner in which cbec chose to represent the proposed conditions. For example, we do not know the spacing of the piles in the proposed project, nor do we know the spacing of the dry cells used to represent the piles in the model.

An updated version of NBK’s preferred alternative for the LWI was provided to CGS and ESA on January 30th. While similar to the pile-supported LWI project alternative that was modeled, this alternative appears to differ from the proposed modeled alternatives in a few ways. The updated preferred alternative extends further out into the Canal than what is described in the modeling report. The updated alternative also includes observation towers, mounted on piles in the intertidal zone that do not appear to be represented in the model. In addition, the LWI abutments in the updated alternative are approximately 50 ft wide, not 30 ft wide, as in the pile-supported version that was modeled.

Model Results

Bed level changes off of Carson Spit, and, to a lesser degree off Three Spits and landward of the Explosive Handling Wharves, switch sign abruptly without clear connection to expected physical processes. These changes can be as much as at least one meter of erosion adjacent to at least one meter of deposition, a net change of more than two meters. Additionally, at the western edge of the change region off of Carson Spit, the changes appear to go from +/- 1m to zero almost immediately (e.g. Figure 4-3, Figure 4-4). A significant fraction of these bed level changes also occur in water that is more than 25 ft deep (Figure 2-3). It is not clear what forcing mechanism would create large enough bed shear stress at these depths to cause so much erosion.

The model predicts increased deposition on the downdrift (north) side of the rock-fill bridge and minimal deposition adjacent to the updrift (south) side (cbec 2013 p. 9 and Figure 4-22). This is counter to the expected impacts of groins, both in Puget Sound (Shipman, 2010) and elsewhere (USACE, 2002), as well as site observations (CGS, 2014). Groins typically interrupt the alongshore transport of sediment, which is south to north in this area (WDOE, 2002, as shown in Figure 2-2), such that sediment deposits on the updrift side and erodes from the downdrift side. This suggests that the model is not accurately representing the dominant, wave-driven alongshore transport and may be over-emphasizing changes that the proposed alternatives make on the currents. This might explain why the model predicts that the rock fill North LWI actually eliminates nearly all bed change in the vicinity of the groin (Figure 4-14). This is counter to our experience with groins, which typically cause local erosion and deposition, not halt sediment transport altogether. Therefore, it appears that wave-driven littoral sediment transport was not modeled, which indicates that the modeling is not adequate to address project effects.

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Text describing Figure 4-22 says that changes are ‘approximately 4mm’ (p. 9). It appears this is referring to the orange colored areas, which the legend says are 0.01 to 0.1 m of bed change. Should this be 4 cm instead?

The model shows little change for what is configured as a year of morphologic change and includes a nominal 2-year wind event. Model predictions of bed level change (Figures 4-17 through 4-20) show no or very little (less than 1 cm) change for most of the shoreline (except for the regions offshore from the spits). Is this amount of change representative of just the 2-year event (i.e. Week 1 of the simulations)? Observations at other locations in Puget Sound (Finlayson, 2006), suggest that events of this magnitude cause detectable changes in the shoreline, on the order of 10-20- cm. Are the changes predicted during the Week 1 storm event then offset by opposing bed changes predicted for the remainder of the simulation (Weeks 2-6)?

The model results presented are somewhat brief, with limited information about the analysis and interpretation. This limits a more extensive review of the model predictions. Examples of areas in which the analysis and interpretation could be extended include:

- The results metrics are limited to a single snapshot of the velocity field and integrated bed level changes, but there is little explanation of what processes link these two timescales.
- There is no discussion of the relative contributions to sediment flux and bed level change for the different periods of the model scenarios. For example, are there significant differences between storm conditions (first week of model run), typical winter conditions, and summer conditions?
- No information is provided to place the ebb velocity pattern figures in context relative to the hydrodynamics during the remainder of the simulation – when in time did this velocity field occur and how did the tides and wind compare to the rest of the simulation?
- The color scale for bed level change makes difficult to differentiate between 0.01-0.001 and 0.1-0.01 bins since they similar shades of green (for erosion) and yellow/orange (for deposition). Since these bed changes are most prevalent and differ by order of magnitude, a color scale that better differentiates between these bins would be helpful.
- The scales of the figures, which include the entire shoreline in a single figure, make it difficult to evaluate predicted changes in the vicinity of each of the proposed structures. Additionally, the scale varies from one figure to the next (e.g. 1 cm=215 m; 1 cm=219 m; 1cm= 275 m), making direct comparisons between figures more difficult.

Discussion of the CGS Site Assessment

After our initial model review, ESA recommended several factors for CGS consider when they conducted their site visit. These observations, reported to via phone calls, email and their memo (CGS, 2014) provide useful context for evaluate the cbec modeling and the geomorphic context of the project area. Below are several observations and discussion points related to CGS’s findings:

- CGS found that the south-to-north regional sediment transport was evident throughout the NBK Bangor study area, although some portions of the shore were more sheltered by overwater structures and/or protruding land.
- CGS noted that a substantial fraction of the waterfront’s feeder bluffs have been armored, reducing the overall sediment supply to the littoral (net shore-drift) cell and altering the ambient conditions.
- CGS found evidence that the existing overwater and other shore structures are likely to have altered and continue to alter the natural sediment transport regime.
- The cbec model did not show clear evidence of replicating the dominant south-to-north sediment transport regime. Nor did the model predict the expected response to the proposed structures, most notably the rock fill groin. Given the lack of these two key observed processes being replicated by the model, we recommend further model refinements before relying wholly on the modeling findings to assess potential project impacts.

- The model does capture some of the characteristics observed by CGS, such as the reduced sediment transport in the protected area just north of the Service Pier. It is not clear if the predicted reduction is due to the model’s representation of currents, waves, or both.
- The model’s assumption of mixed sand and gravel along the waterfront beaches is consistent with the visual observations by CGS. If model improvements are planned, some representative grain size samples would be informative.
- We concur with CGS’s judgment that the preferred LWI alternative’s alignment north of the shellfish beds and the limited vertical extent of the floating barrier will help reduce the project’s impact on the hydraulic and sediment transport environment relative to earlier LWI alternatives..
- CGS found that the hydraulic structure between Devil’s Hole Creek and the Hood Canal probably limits hydraulic and sediment conveyance between the Creek/lagoon and the Canal. They also found from a comparison of mapped MLLW between the late 19th century and the late 20th century that the Creek’s delta may be prograding. A more detailed study of this Reach may be warranted to better characterize the local sediment transport on this stretch of the shoreline containing the shellfish beach.

References

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cbec. 2012b. Preliminary Hydrodynamic Modeling of the Shine Tidelands Restoration Plan – Draft Technical Report, Mitigation Planning Support for P-990 Explosives Handling Wharf #2, Naval Base Kitsap Bangor, Jefferson County, Washington.

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Coastal Geologic Services (CGS). 2014. Bangor Beach Littoral Drift Assessment, Kitsap County, WA. Prepared for Port Gamble, S’Klallam Tribe.

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TRIBE 2 – PORT GAMBLE S’KLALLAM TRIBE

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T2 – Port Gamble S’Klallam Tribe (page 1 of 26)



PORT GAMBLE S’KLALLAM TRIBE
NATURAL RESOURCES DEPARTMENT
31912 Little Boston Rd. NE – Kingston, WA 98346

April 13, 2015

Naval Facilities Engineering Command Northwest
Attention: Mr. Thomas Dildine
LWI/SPE EIS Project Manager
1101 Tautog Circle, Suite 203
Silverdale, WA 98315-1101

Dear Mr. Dildine,

Thank you for the opportunity to comment on the U.S. Navy’s Land-Water Interface (LWI) and Service Pier Extension (SPE) Draft Environmental Impact Statement (DEIS). The Port Gamble S’Klallam Tribe has concerns regarding the potentially significant adverse effects of these proposed projects on treaty rights and the environment.

I. Port Gamble S’Klallam Tribe Has Significant Concerns that Proposed Actions Will Severely Interfere with Treaty Rights.

As stated in our Land Water Interface (LWI) and Service Pier Extension (SPE) Scoping comments (March 17, 2013) the Port Gamble S’Klallam Tribe opposes both of the proposed projects because they would severely infringe the Tribe’s treaty rights. These massive new structures, along with the construction, operation, and maintenance of these facilities, would physically eliminate the Tribe’s access to a portion of its usual and accustomed (U&A) fishing areas, preclude the Tribe’s access to additional portions of its fishing area due to submarine and construction vessel traffic, and further degrade marine and nearshore habitat. Given the multitude of existing and proposed in-water structures, construction activities, and additional naval operational uses in the Tribe’s U&A, the Tribe opposes these projects unless appropriate and meaningful mitigation to restore both treaty right and environmental impacts can be achieved.

The Tribe appreciates and supports the need for greater security for the Navy’s nuclear submarine fleet. However, the Navy’s proposed LWI project would have disastrous impacts on treaty rights. The DEIS does not go far enough to evaluate the full extent of these impacts. Four Tribes (Port Gamble S’Klallam, Jamestown S’Klallam, Lower Elwha Klallam and Skokomish) and the Navy entered a cooperative agreement in 1997 in which the Tribes agreed not to harvest the entire beach along NBK-Bangor (which is their right) in exchange for the right to harvest the Devil’s Hole Beach (“tribal shellfish beach”) to the exclusion of non-Indian harvesters. Now, the Navy wants to build a large security structure in the middle of that beach, as well as a concrete structure on the beach bluff and at the base of the bluff. As described in the DEIS,

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Response:

1 Thank you for the comment letter. The Commanding Officer of Naval Base Kitsap invited the Port Gamble S’Klallam Tribe S’Klallam Tribe, as well as the Jamestown S’Klallam Tribe and Lower Elwha Klallam Tribe, to consider initiation of government-to-government for the LWI and SPE projects in letters of August 22, 2008 and 2012, respectfully. Since April 2015, the Navy and the Tribes have held many government-to-government and staff consultation meetings to discuss details of the LWI and SPE projects and Tribal concerns. Although formal agreement was not reached, as a result of consultations, the Navy has offered treaty mitigations for the potential significant impacts to treaty rights and resources by the construction and operation of the LWI and SPE projects. These offered treaty mitigations are described in Chapter 9 (Treaty Mitigation) in Appendix C (Mitigation Action Plan) of this FEIS.

As discussed in government-to-government consultation meetings, the Tribes will continue to have access of the Devil’s Hole Beach for shellfishing at NAVBASE Kitsap Bangor in accordance with the 1997 cooperative agreement between the Navy and the Tribes. The Navy is committed to continued communication and coordination with the Tribes for continued access to the shellfish resources at this beach in accordance with Navy security requirements during both construction and operation of the LWI project. Currently the Tribes, including the Skokomish Indian Tribe, access this beach approximately 4 times a year for shellfish harvest.

In addition, as noted throughout the EIS, the Navy plans to provide compensatory mitigation for impacts to aquatic resources through the established Hood Canal In-Lieu Fee (ILF) Program, for which the Hood Canal Coordinating Council (HCCC) is the sponsor. The aquatic compensatory mitigation actions will be identified and developed by the ILF program and its inter-agency review team which includes Tribal representatives.

2. The Navy appreciates the Tribe’s support of the Navy’s mission and the need for protection of vital national security assets at NAVBASE Kitsap Bangor. As this comment raises several distinct issues, please refer to responses to Port Gamble S’Klallam Tribe (PGST) Comments #1, #13, #15, #25, and #27, as well as Point No Point Treaty Council (PNPTC) Comments #6 and #14.

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PORT GAMBLE S’KLALLAM TRIBE
 NATURAL RESOURCES DEPARTMENT
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these structures would severely disrupt tribal access and destroy tribal resources. A PGST-sponsored assessment of coastal processes by Coastal Geologic Services, Inc. described in these comments, reported that the Navy’s proposed shore modifications would likely result in a decrease in intertidal habitat quality and area at Devil’s Hole Beach in the long-term. The DEIS does not go far enough to assess the potential impacts of this project on geomorphological processes, shellfish habitat, and forage fish habitat. The Tribe vigorously opposes any alternative that would either physically or practically (e.g., through security protocols) limit tribal access to any portion of the Devil’s Hole Beach, any alternative where the footprint of terrestrial and aquatic infrastructure would physically destroy intertidal habitat quality and disturb shellfish beds, and any alternative that does not include the most environmentally protective design without appropriate mitigation.

As described in the DEIS, the Preferred Alternative for the proposed SPE project would involve the construction of a 44,000 square foot over-water structure and a 7-acre permanent upland footprint. As described in these comments, this project would detrimentally impact benthic species, the migration of salmonids, and water quality in Hood Canal. The SPE would also allow for reassignment of two additional submarines (SEAWOLF and CONNECTICUT) to the Service Pier. In addition to increased overwater shading from the moorage of two new submarines at the pier and from the pier extension itself, reassignment to Hood Canal would result in more submarine and security details in the canal and vehicle traffic, and, in turn, even greater risk of equipment damage and fishing disruption to tribal fishers. The DEIS falls short of evaluating the full extent of these significant effects on the Tribe’s treaty rights, including impacts to access, habitat and harvest.

A. Background on the Tribe’s Treaty Fisheries

The Port Gamble S’Klallam Tribe is the successor in interest to Indian bands and tribes signatory to the 1855 Treaty of Point No Point, 12 Stat. 933.¹ According to S’Klallam oral traditions, the ancestral Port Gamble people lived in the area of the level, sandy spit on the west shore of the mouth of Port Gamble Bay. Like other Washington treaty tribes, the S’Klallam people relied on their fisheries for much of their food supply, pre-dating the signing of the treaty by thousands of years.² The tribes used all available species of fish, including all six species of salmon, herring and other smaller fish, and shellfish.³ Tribal customs and traditions reflected the importance of

¹ *United States v. Washington*, 459 F. Supp. 1020, 1039 (W.D. Wash. 1978) (hereinafter *Boldt II*).
² See *United States v. Washington*, 384 F. Supp. 312, 350-53 (W.D. Wash. 1974), *aff’d* 520 F.2d 676 (9th Cir. 1975), *subst’y aff’d sub nom. Washington v. Wash. Commercial Passenger Fishing Vessel Ass’n*, 443 U.S. 658 (1979) (hereinafter *Boldt I*).
³ *Id.*

Response:

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3. This comment addresses several distinct issues. Please see responses to PGST Comments #17, #18, and #21, as well as PNPTC Comments #1, #14, and #16.
4. The American Indian Traditional Resources section (3.14.2) has been revised to provide more detail on the potential impacts of the Proposed Actions on American Indian traditional resources including off reservation treaty rights for access to harvest shellfish under the 1997 cooperative agreement between the Navy and the Tribes. Please also see the responses to PNPTC Comments #8 and #12, and PGST Comment # 26.
5. The Navy appreciates the time taken by the Port Gamble S’Klallam Tribe to provide the background on the Tribe’s history, culture and Treaty fisheries.

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PORT GAMBLE S’KLALLAM TRIBE
NATURAL RESOURCES DEPARTMENT
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the fisheries by proscribing waste, regulating distribution of the catch, and discouraging water pollution.⁴ An annual First Salmon ceremony expressed the people’s appreciation for their harvest.⁵ Trade in fish was a major element of the tribal economy, and the tribes developed a vibrant cultural life based on the wealth of their fisheries.⁶

In addition to rich fisheries, the waters surrounding the area offered the Tribe an easy means of travel. Each summer the S’Klallam dispersed by canoe to camps where they fished and met family and friends.⁷ The Treaty reserved to the S’Klallam the right to take fish at all these “usual and accustomed grounds and stations” (U&A)—an area roughly centered on Port Gamble Bay that includes all of the bay, most of the Hood Canal watersheds, and extends west along the Strait of Juan de Fuca to the Sekiu River, north to the San Juan Islands, east to Whidbey Island, and south through Hood Canal.⁸ Within these areas the Port Gamble S’Klallam and other tribes that share the U&A are entitled to take half the harvestable fish and shellfish, and retain the right to access private property to fish and to shellfish.⁹

Today, over 150 years after signing the Treaty of Point No Point, the Tribe retains deep cultural and economic ties to the surrounding waters and to their fisheries. More than ninety tribal members earn all or a portion of their livelihood working as commercial salmon fishermen (PGST 2005-2009 survey). In addition, the Tribe conducts fisheries in its U&A to obtain fish for ceremonial use. Subsistence harvests from the Tribe’s U&A are a key element of the diet of many tribal members. For example, Region 10 of the United States Environmental Protection Agency (EPA) found that the consumption rate for tribal members was approximately 147 pounds of salmon per year, 68 pounds of other fish per year, and 400 pounds of shellfish per year. See Framework for Selecting and Using Tribal Fish and Shellfish Consumption Rates for Risk-Based Decision Making at CERCLA and RCRA Cleanup Sites in Puget Sound and the Strait of Georgia, EPA Region 10, Appendix B, Table B-2 (consumption rates based upon data from the Suquamish Tribe, a neighboring Tribe); see also Fish Consumption Survey of the Suquamish Indian Tribe of the Port Madison Indian Reservation, Puget Sound Region.

⁴ *Id.* at 351, 357.

⁵ *Id.* at 351.

⁶ *United States v. Washington*, 626 F. Supp. 1405, 1433 (W.D. Wash. 1985); *Boldt I*, 384 F. Supp. at 350.

⁷ *United States v. Washington*, 626 F. Supp. at 1442; *Boldt I*, 384 F. Supp. at 350-51.

⁸ See *United States v. Washington*, 626 F. Supp. at 1442; *Boldt II*, 459 F. Supp. at 1041.

⁹ See, e.g., *United States v. Washington*, 873 F. Supp. 1422, 1444-45 (W.D. Wash. 1994) (hereinafter *Shellfish I*).

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B. The Treaty of Point No Point Reserves Perpetual Fishing Rights to the Tribe, Which the Navy Cannot Infringe.

A proper conception of treaty fishing rights must begin with the history and purpose of the Treaty. In Article I of the Treaty of Point No Point, the S’Klallam people ceded to the United States most of their rights in their land. However, the Treaty reserves the right of the Tribe to take fish “at usual and accustomed grounds and stations.” Treaty of Point No Point, 12 Stat. 933, Article IV. “[W]hatever land concessions they made, the Indians viewed a guarantee of permanent fishing rights as an absolute predicate to entering into a treaty.”¹⁰ Federal negotiators, led by Territorial Governor Isaac Stevens, obliged. “I want,” Stevens said, “that you shall not have simply food and drink now but that you may have them forever.”¹¹ Gov. Stevens’ promise regarding the Tribes’ continued access to traditionally-utilized resources is memorialized in Article IV of the Treaty:

The right of taking fish at usual and accustomed grounds and stations is further secured to said Indians, in common with all citizens of the United States; and of erecting temporary houses for the purpose of curing; together with the privilege of hunting and gathering roots and berries on open and unclaimed lands.¹²

The right is not created by the Treaty; rather, the Treaty “secures” pre-existing Indian fishing rights.¹³ In other words, the Treaty of Point No Point did not grant fishing, hunting, and gathering rights to the Tribe; rather, it reserved to the Tribe its pre-existing rights to engage in those activities.¹⁴ This reservation of rights was intended to permanently secure the full breadth of pre-treaty resource procurement practices.¹⁵ Nothing in the treaty language or negotiations suggested, and neither side anticipated, that non-Indian development would ever hinder Indian fishing or deplete the seemingly inexhaustible abundance of resources.¹⁶

¹⁰ *Shellfish I*, 873 F.Supp. at 1437.

¹¹ *United States v. Washington, Subproceeding 01-1*, No. C70-9213, 2007 WL 2437166, at *11 (W.D. Wash., 2007) (hereinafter *Culverts* Summary Judgment); see also *Washington v. Wash. Commercial Passenger Fishing Vessel Ass’n (Fishing Vessel)*, 443 U.S. 658, 667 n.11 (quoting Stevens: “This paper secures your fish”).

¹² Treaty of Point No Point, Art. IV.

¹³ See, e.g., *United States v. Winans*, 198 U.S. 371, 381 (1905).

¹⁴ *Id.*

¹⁵ See *Boldt I*, 384 F.Supp.at 381 (“At the treaty council the United States negotiators promised, and the Indians understood, that the Yakimas would forever be able to continue the same off-reservation food gathering and fishing practices as to time, place, method, species and extent as they had”).

¹⁶ *Culverts* Summary Judgment at 10-11. See also *Fishing Vessel*, 443 U.S. at 668.

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The rights that the Tribe reserved in the Treaty are property rights, and like any private property cannot be taken for government use except upon payment of just compensation.¹⁷ Because the treaties are approved by Congress, only Congress can take or diminish tribal treaty rights – no regulation or decision of an executive department or agency may do so.¹⁸

Implicit in the treaty bargain and the tribes’ surrender of lands to the United States was a promise of federal protection, referred to now as “the trust relationship.”¹⁹ The trust relationship imposes upon the United States and all its agencies the obligation to follow “the most exacting fiduciary standards” in dealing with the tribes, as well as to protect tribal rights and property.²⁰ Consistent with this relationship of trust, federal courts require that ambiguities in federal laws regarding tribes must be construed in the tribes’ favor.²¹ No statute will diminish treaty rights unless that is the clear intent of the Congress.²² The Navy’s policies acknowledge the trust responsibility and obligate the Navy to consult with tribes when its actions affect tribal treaty rights or resources.²³

C. The Treaty of Point No Point Protects Three Essential Components of the Tribe’s Fishery: Access to Fishing Places, Sufficient Harvests, and Necessary Fish Habitat. Both the Service Pier Extension and the Land-Water Interface Threaten to Infringe on Each of These Aspects of the Treaty Right.

More than a century of federal court decisions have fleshed out the components of the treaty right, including the right of access to places, the right to a share of harvest to meet tribal moderate living needs, and the right to protection of fish habitat. The Navy’s projects would adversely affect each of these components.

The treaty fishing right applies to every “usual and accustomed” area (U&A).²⁴ Tribal U&A

¹⁷ *Menominee Tribe v. United States*, 391 U.S. 404, 413 (1968).
¹⁸ *See, e.g., Confederated Tribes of Umatilla Indian Reservation v. Alexander*, 440 F.Supp. 553 (D. Or. 1977) (U.S. Army cannot build dam and flood tribal fishing places, where Congressional authorization does not expressly provide for taking of treaty fishing rights). Federal agencies may, however, regulate treaty fishing where necessary for conservation. *See N. Arapahoe Tribe v. Hodel*, 808 F.2d 741, 749-50 (10th Cir. 1987); *United States v. Eberhardt*, 789 F.2d 1354, 1359-60 (9th Cir. 1986).
¹⁹ *United States v. Kagama*, 118 U.S. 375, 384 (1886).
²⁰ *Seminole Nation v. United States*, 316 U.S. 286, 296-97 (1942); *Parravano v. Babbitt*, 70 F.3d 539, 546 (9th Cir. 1995) (federal agencies have trust obligation to protect tribal treaty fishing rights).
²¹ *Parravano*, 70 F.3d at 544.
²² *Menominee*, 391 U.S. at 412-13.
²³ Department of the Navy Policy for Consultation With Federally-Recognized Indian Tribes, SECNAV Instruction 11010.14A, ¶ 6.a. (Oct. 11, 2005).
²⁴ *Muckleshoot Tribe v. Hall*, 698 F. Supp. 1504, 1511 (W.D. Wash. 1988) [hereinafter *Muckleshoot*] (citing *Washington v. Wash. St. Commercial Passenger Fishing Vessel Ass’n*, 443 U.S. 658, 674 (1979))

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- 6. The Navy generally agrees with the statements regarding the existence and extent of off reservation fishing tribal treaty rights. With respect to the issue of habitat protection, the Navy acknowledges the decision of the federal district court in the sub-proceedings in the *United States v. Washington* regarding culverts. However, the Navy notes that the court’s decision is on appeal and the existence and parameters of a right of habitat protection (also referred to as habitat degradation) are subject to interpretation and evolving court decisions. Additionally, the Navy notes that a *de minimus* interference with treaty right is not necessarily a treaty violation (See *Lummi v. Cunningham*, No. C92-1023, Western District of WA unpublished decision 1992).

Further, both the LWI and SPE projects are located within an established waterfront Naval Restricted Area (NRA) (see 33 CFR Part 334). Currently no tribal, recreational or commercial finfishing is allowed within the waterfront NRA which encompasses the LWI and SPE project sites. Outside the NRA, access to the Tribe’s fishing U&A in co-use navigable waterways will not be significantly affected. Continued Tribal access to shellfish at NAVBASE Kitsap Bangor Devil’s Hole Beach is provided for under the 1997 cooperative agreement between the Navy and the Tribes.

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have been defined broadly by reference to entire water bodies.²⁵ This practice is consistent with the treaty language, which speaks not only of specific fishing “stations,” but of general fishing “grounds.”²⁶ The broad treatment of U&A is also consistent with the nature of the treaty fishing right—a reservation of preexisting rights. The Port Gamble S’Klallam Tribe’s U&A encompass the marine and nearshore areas of Naval Base Kitsap – Bangor and surrounding marine and nearshore areas. The right of the Tribe to access and fish at these places exists regardless of who owns the land beside or beneath the waterway.²⁷ The ability to access all potential fishing places has been and remains crucial for the tribe to maintain harvest stability in the face of unpredictable local variations in the supply of fish.²⁸ Maintaining access to the entire terrestrial and marine landscape that was used by tribal ancestors is also of critical cultural importance, and helps to define the Tribe’s identity.

Exclusion of treaty fishers from any of their U&A fishing places is a violation of tribal treaty fishing rights and subject to injunction.²⁹ The vehicle for the exclusion is immaterial. It may be fences that block the path to an onshore fishing site, or non-Indian fishing gear that monopolizes a stretch of water.³⁰ It may be a dam that drowns fishing places under fathoms of water.³¹ It may be a marina that physically occupies the water.³² It may be State regulations restricting the area to be fished, even if the regulations would increase a tribe’s harvest.³³ It may be a nearly two-acre overwater pier extension, significantly increasing existing overwater coverage and facilitating increased vessel traffic in Hood Canal. It may be a security structure that physically destroys shellfish habitat and inhibits a harvester’s access to a shellfish bed. The Navy may not choose to go forward with a plan that would prevent tribal access to usual and accustomed fishing places.³⁴

[hereinafter *Fishing Vessel*] and *Boldt I*, 384 F. Supp. at 332).

²⁵ *Boldt I*, 384 F. Supp. at 402; see, e.g., *United States v. Washington*, 626 F. Supp. at 1442.

²⁶ See *Boldt I*, 384 F. Supp. at 332 (distinguishing “grounds” from “stations”).

²⁷ *Winans*, 198 U.S. 371 (right to cross fenced, private upland to reach fishing water); *United States v. Washington* 157 F.3d 630, 644-47 (9th Cir. 1998) (tribes have right to take shellfish on private and State-owned lands).

²⁸ See *Boldt I*, 384 F.Supp. at 351-52 (local fish supplies varied, so tribes traditionally shifted fishery locations in response to relative abundance).

²⁹ See, e.g., *United States v. Oregon*, 718 F.2d 299, 303-04 & n.6 (9th Cir. 1983) (citing *Fishing Vessel*, 443 U.S. at 667, 675).

³⁰ *Winans*, 198 U.S. at 381-82.

³¹ *Umatilla Tribes v. Alexander*, 440 F. Supp. 553, 555 (D. Or. 1977).

³² *Muckleshoot*, 698 F. Supp. at 1511.

³³ *United States v. Oregon*, 718 F.2d at 304-05.

³⁴ *Nw. Sea Farms v. U.S. Army Corps of Eng’rs*, 931 F. Supp. 1515 (W.D. Wash. 1996).

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7. Comment noted. Please also refer to Section 3.14 for discussion on establishment of the 1997 cooperative agreement for shellfish at Devil’s Hole Beach and the 1993 Special legislation for DoD purchase of tidelands.

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It does not matter that the area taken may be a relatively small portion of the U&A.³⁵ “No case has been presented to this Court holding that it is permissible to take a small portion of a tribal usual and accustomed fishing ground, as opposed to a large portion, without an act of Congress, or to permit limitation of access to a tribal fishing place for a purpose other than conservation.”³⁶ Nor does it matter if there has been no recent fishing at a particular location. In *Muckleshoot*, for example, fishing had been curtailed in the area proposed for the marina for several years but the marina was enjoined nonetheless as interfering with the Tribes’ ability to access that area in the future.³⁷

The right of access to fishing places furthers the underlying right to take fish. The treaty right is more than the right merely to go fishing; it is the right to actually harvest fish.³⁸ The purpose of the fishing rights provision is to ensure the tribes sufficient harvest to sustain their livelihood, that is to say, a moderate living.³⁹ Because the tribes must share the fishery “in common” with non-Indians, however, tribal harvest is capped at 50% of the harvestable fish in each run or watershed.⁴⁰ Non-Indians may not deprive the tribes of their share of the harvest by monopolizing the catch themselves.⁴¹ Neither may they drive tribal harvest down by placing obstructions in tribal fishing places that increase the effort required to take the tribal share.⁴² The Tribe’s access right and harvest rights are independent.⁴³ Thus, an in-water structure that precludes tribal fishing at a site may violate the treaties, even if the tribes remain able to harvest their full share of the runs.⁴⁴

The final component of the Tribe’s treaty fishing rights that is relevant here is the right to protection of the habitat without which there will be no fish to take. As discussed above, the

³⁵ *Muckleshoot*, 698 F. Supp. at 1515.

³⁶ *Id.*

³⁷ *Id.* at 1522.

³⁸ *Fishing Vessel*, 443 U.S. at 678.

³⁹ *Id.* at 686 (treaty “secures so much as, but no more than, is necessary to provide the Indians with a livelihood—that is to say, a moderate living”).

⁴⁰ *Hoh Tribe v. Baldrige*, 522 F.Supp. 683, 690 (W.D.Wash. 1981).

⁴¹ *Winans*, 198 U.S. 371 (non-Indians may not take all harvestable fish with fish wheels); *Wash. Dept. of Game v. Puyallup Tribe*, 414 U.S. 44 (1973) (non-Indian sport fishery may not monopolize harvest).

⁴² *Muckleshoot v. Hall*, 698 F. Supp. 1504, 1509 n.5, 1515 (W.D. Wash. 1988) (proposed marina would occupy U&A and increase the effort necessary to harvest tribal share)

⁴³ *United States v. Oregon*, 718 F.2d 299, 304 n.6 (9th Cir. 1983) (multistate fish management plan may not dictate which parts of U&A tribes can fish, even if plan would increase tribal harvest).

⁴⁴ *Nw. Sea Farms, Inc. v. U.S. Army Corps of Engineers*, 931 F.Supp. 1515, 1522 (W.D. Wash. 1996) (Army Corps properly denied permit for overwater structure that would occupy part of tribe’s U&A, although project would not substantially affect number of fish available for harvest); *Muckleshoot Tribe v. Hall*, 698 F. Supp. 1504.

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Treaty of Point No Point promised the Tribe the ability to support itself through fishing as it has since time immemorial. Implicit in that promise is a commitment that non-Indians will not degrade the habitat and thereby diminish fish production, leaving the Tribe unable to catch fish sufficient to its moderate living needs.⁴⁵ For more than three decades, the United States has joined tribes in litigation successfully asserting the treaty right to habitat protection.⁴⁶ Having asserted for so long that the treaties impose habitat protection duties on others, there is little doubt that the United States – and the Navy – are subject to such duties themselves.

The Tribe is concerned that the Navy does not fully understand or accept the full scope and importance of the Tribe’s treaty rights. Thus, the Navy should engage the Tribe as a cooperating agency to help analyze impacts to treaty rights and tribal resources for this DEIS, as well as NEPA documents associated with other projects described later in these comments. Further, as the Tribe has told the Navy on many occasions, only the Tribe is in the position to access the value of its treaty right, to the extent any such valuation may actually be desirable. In any negotiations to settle upon mitigation projects that would offset impacts from these projects, the Navy must respect and accept this fact.

II. The Navy’s plans for numerous construction projects and operational changes at NBK-Bangor, including the Service Pier Extension and Land Water Interface, infringe on the treaty fishing right.

The detrimental effect of the Navy’s projects on treaty rights and tribal resources when examined in the aggregate cannot be overstated. The Bangor waterfront currently includes seven major structures and supports significant naval vessel operations. In the past three years, the Navy has proposed—and, in some cases, has begun to implement—at least nine additional major construction projects or operational shifts within the Port Gamble S’Klallam Tribe’s U&A. These projects include:

- Repair and replacement of 138 piles at the first Explosives Handling Wharf;
- Construction of and operations at a second Explosives Handling Wharf (EHW-2),

⁴⁵ *Culverts* Summary Judgment at 11; see *United States v. Adair*, 723 F.2d 1394, 1410 (9th Cir. 1983) (reserved treaty right to fish impliedly reserves sufficient water in river to support fishery).

⁴⁶ *Culverts* case, United States response to Washington’s Summary Judgment Motion, at 4 (Dkt. No. 313, Sept. 27, 2006); *United States v. Washington*, 506 F. Supp. 187, 190 (W.D. Wash. 1980) (“Phase II”); see also *Adair*, *supra*. When *Phase II* was appealed, the Ninth Circuit disagreed with the District Court over the scope of the implied right to habitat protection, but not over its existence. *United States v. Washington*, 694 F.2d 1374, 1389 (9th Cir. 1982) (treaties impose duty upon signatories to take reasonable measures to preserve fishery when their projects threaten existing harvests). This initial Ninth Circuit decision was later vacated on procedural grounds. *United States v. Washington*, 759 F.2d 1353 (9th Cir. 1985).

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8. Comment noted. The Navy acknowledges and respects the reserved treaty rights of the Port Gamble S’Klallam Tribe and other treaty tribes and remains committed to fulfilling its government-to-government consultation responsibilities in accordance with Navy policies. While the Navy and the Port Gamble S’Klallam Tribe could not reach formal agreement for treaty mitigations as a result of government-to-government consultations, the Navy has offered treaty mitigations to for potential significant impacts to treaty rights and resources by the construction and operation of the LWI and SPE projects. These offered treaty mitigations are described in Chapter 9 (Treaty Mitigation) of the Mitigation Action Plan (Appendix C of this FEIS).

9. The Navy acknowledges the Tribe’s concerns with the potential effects of various Navy projects on treaty fishing and the environment. NAVBASE Kitsap Bangor has a vital security mission that supports the Nation’s strategic deterrence program, as such, the operations at Bangor waterfront are complex and require on-going planning and coordination. NAVBASE Kitsap Bangor also supports various classes of non-ballistic submarines.

The Navy has invited and conducts government-to-government consultation with the PGST and other potentially affected tribes on these projects that have the potential to significantly affect the tribes in accordance with EO 13175 and Navy policy. Where impacts are significant, the Navy has reached formal agreement for appropriate treaty mitigations relative to potential impacts of the Proposed Actions with PGST (e.g., EHW-2 project in 2012).

The Navy also complies with other laws and permit requirements for these projects including providing compensatory mitigation under the U.S. Army Corps of Engineers/USEPA *Compensatory Mitigation Rule for Loss of Aquatic Resources* that also mitigates for impacts to some of the same treaty protected intertidal and marine aquatic resources.

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including 6.3 acres of overwater structure, 1,250 piles, and additional vessel traffic in Hood Canal;

- Permanent moorage of a new research barge, which is half an acre in size and five times the size of the existing research barge, and construction of new mooring facilities;
- Construction of and operations at the proposed Service Pier Extension, adding up to 1.82 acres of overwater structure and up to 700 more pilings to the already massive Service Pier;
- Relocation of the SEAWOLF Class submarine SSN-21 (SEAWOLF) submarine from NBK-Bremerton to NBK-Bangor, which will result in even more vessel traffic from the submarines and their security entourages in Hood Canal and destruction of more tribal fishing gear;
- Relocation of the SEAWOLF Class submarine SSN-22 (CONNECTICUT) submarine from NBK-Bremerton to NBK-Bangor, which will result in even more vessel traffic from the submarines and their security entourages in Hood Canal and destruction of more tribal fishing gear;
- Construction of the Land-Water Interface, including in-water fill, up to 136 pilings, two large overwater structures, and a terrestrial structure in the middle of the Devil’s Hole Beach, where a cooperative agreement with the Navy is in place and tribal shell-fishing activities are ongoing;
- Construction and operation of the Electromagnetic Management Range (EMMR), which will interrupt tribal fishing with little to no prior notice to tribal fishermen;
- Implementation of increasing numbers and magnitude of training and testing activities at Bangor, throughout the Hood Canal and beyond;
- Modification of the Magnetic Silencing Facility to provide berthing for U.S. Coast Guard Blocking Vessels, including the installation of a steel support structure and two mooring camels;
- Construction and operation of a pier and facilities for U.S. Coast Guard at Port Angeles Harbor, including piling installation and overwater structures.

All of these projects occur within the Port Gamble S’Klallam Tribe’s usual and accustomed fishing areas, and all of the projects affect the Tribe’s treaty rights in one way or another. Most of the projects have obvious detrimental effects on tribal resources and treaty rights, and these effects are likely to last for decades into the future. For example, the proposed EMMR threatens to displace tribal fishermen from frequently used fishing grounds with little to no prior notice before a submarine and its safety detail enter the course. The proposed Service Pier Extension threatens to destroy even more nearshore habitat, harming juvenile and adult salmonid migration and benthic species. The proposed Land Water Interface threatens to destroy or make inaccessible shellfish beds currently harvested by tribal members. This is just a sampling of

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long-term impacts to tribal resources and treaty rights, which must be fully disclosed and examined in the Navy’s cumulative effects analysis.

In addition to these long-term impacts, impacts from infrastructure construction—such as in-water noise, sediment transfer, and increased construction vessel traffic—are likely to be acute over the next few years. The Navy must fully analyze and disclose the possible impacts that will result from concentrating so much construction and vessel activity within just four work windows (July-February) between now and 2017. The Navy must reevaluate its proposed in-water construction window in light of new analyses by NOAA Fisheries and the Washington Department of Fish and Wildlife. The Navy must also fully analyze the possible effects on the environment and on treaty rights from further industrializing Hood Canal and concentrating so much in-water infrastructure in nearshore habitat along NBK-Bangor. The Tribe looks forward to a detailed analysis of these issues in the draft EIS.

Standing alone, each of these construction projects and operational shifts has a significant effect on treaty rights and natural resources. The impacts are amplified when examined collectively. Over the past few decades, Hood Canal has become increasingly industrialized, its shoreline increasingly hardened and shaded, and its waters increasingly congested. The Navy’s infrastructure and operations contribute greatly to these trends. Tribal fishers feel these impacts when there are not enough salmon to harvest, when fishing is disrupted or gear lost as a result of naval vessel traffic, and when shellfish beds are closed due to security measures or contamination. For purposes of NEPA, the Navy must accurately analyze and disclose these and other cumulative effects.

The Tribe is extremely concerned that the Navy’s past, present, and proposed activities in Hood Canal incrementally threaten the Tribe’s treaty right with death by a thousand cuts. As the Tribe’s trustee, the Navy cannot allow that to happen. This is particularly true when projects are not strictly necessary or could be reconfigured to minimize or avoid impacts to treaty rights and tribal resources. For example, the EMMR project is not strictly necessary because the Navy has successfully used the EMMR facility at Pearl Harbor for many years and a new EMMR facility will soon be available at half that distance at San Diego. Similarly, the Service Pier Extension project has been proposed, in large part, because of inconvenience to submarine movements resulting from tidal conditions at Rich Passage. Yet the Navy has successfully operated the SEAWOLF Division from Bremerton for many years. To put it simply, inconvenience alone does not make a project necessary, and it certainly does not justify avoidable infringement of the treaty right. On the other hand, where a project is necessary, it should be configured to avoid infringement of the treaty right, if at all possible.

To summarize, the treaty fishing rights of the Port Gamble S’Klallam are a “sacred entitlement”

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10. The need for the SPE Proposed Action is based on the Navy’s operational readiness mission, not merely due to inconvenience as suggested by the Tribe. The purpose of the Proposed Action is to provide additional berthing capacity and improve associated support facilities for existing homeported and visiting submarines at NAVBASE Kitsap Bangor (see FEIS Section 1.2.2). The SPE project is needed to:

- Provide alternative opportunities for berthing to mitigate restrictions at NAVBASE Kitsap Bremerton on navigating SEAWOLF Class submarines through Rich Passage under certain tidal conditions;
- Improve long-term operational effectiveness for the three SEAWOLF Class submarines on NAVBASE Kitsap;
- Provide berthing and logistical support for SEAWOLF, LOS ANGELES, and VIRGINIA submarine classes at the Navy’s SSN research, development, test and evaluation hub, which is currently located on NAVBASE Kitsap Bangor; and
- Improve submarine crew training and readiness through co-location of command functions at NAVBASE Kitsap Bangor submarine training center.

The SPE and supporting facilities would address a number of infrastructure deficiencies on NAVBASE Kitsap (both NAVBASE Kitsap Bangor and NAVBASE Kitsap Bremerton) to ensure its capability to support the SEAWOLF fleet. These deficiencies include inadequate support services facilities, parking, and berthing space at the existing NAVBASE Kitsap Bangor Service Pier.

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promised to them in exchange for their part of the vast territory that is now Washington State.⁴⁷ Having promised to secure the Tribes their fisheries, the United States, including the Navy, has a fiduciary duty to fulfill that promise and protect the Tribe’s treaty rights.¹ Exercising that trust responsibility requires the Navy to analyze and select action alternatives that do not add to the already great collective impact of the Navy’s actions on the Port Gamble S’Klallam Tribe’s treaty rights. The Tribe believes that requires analyzing different configurations for the LWI and alternative operations or locations to achieve the goals of the SPE project. To remediate those impacts to treaty rights and tribal resources that are unavoidable, it also requires the Navy to develop *with* the Tribe a serious mitigation package. We look forward to engaging in government-to-government consultation with the Navy in order to further discuss these matters.

III. The Navy’s DEIS for the Proposed Land Water Interface and Service Pier Extension does not adequately evaluate the significant adverse effects on tribal fisheries.

The Navy’s DEIS (February 2015) compares the environmental impacts of two alternatives and a no action alternative for each of the proposed projects. The Tribe finds that the DEIS does not go nearly far enough to evaluate the full range of potentially significant adverse effects on treaty rights and traditional resources. The proposed projects will likely impact all aspects of the Tribe’s treaty rights, including access, habitat and harvest.

The proposed LWI project includes the construction of two facilities, one north of the EHW-2 and one directly in the subtidal, intertidal and riparian areas of Devil’s Hole Beach, to enclose the Navy Waterfront Restricted Area. The proposed action includes at each location constructing security barriers in the intertidal zone, installing fill and abutments on the shoreline, constructing observation and stairwell structures on the beach and modifying the existing floating Port Security Barrier system (PSBs). Construction is anticipated to take two years with a three-year post-construction recovery period and would involve multiple components, including the relocation of PSB units and anchors using a barge-mounted crane, as well as the construction of concrete abutments, observation posts and stairs on the shore.

For the north LWI, four existing buoys and associated anchors would be relocated. For the south LWI, 200 feet of new PSB would be added, three existing buoys and associated anchors would be relocated, and one new buoy would be installed with two mooring legs. Each unit would be supported on three pontoons, two that are 6 feet and one that is 18 feet long. The north abutment

⁴⁷ *Shellfish I*, 873 F. Supp. at 1435.

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Response:

- 11. Executive Order (EO) 13175 *Consultation and Coordination with Indian Tribal Governments* affirms the trust responsibility of the United States and directs agencies to consult with American Indian tribes and respect tribal sovereignty when taking actions affecting such rights. The Navy complies with this federal trust responsibility by complying with laws and regulations such as the National Environmental Policy Act (NEPA).

Regarding the analysis of different LWI configurations or alternative operations or locations to achieve the goals of the Service Pier Extension, the Navy identified its Environmentally Preferred Alternatives in the DEIS which are also the Navy’s preferred alternatives.

For LWI the Port Security Barrier Modifications alternative is environmentally preferable because it requires no in-water pile driving thereby avoiding thousands of behavioral incidental take on marine mammals. This alternative also has a lower potential to affect migration of juvenile salmon and about half of the total impact on aquatic habitat and waters of the U.S. relative to the Pile Supported Pier alternative. Further, this alternative would have fewer impacts to marine vegetation and shellfish.

For SPE the short pier alternative is environmentally preferable because it is substantially shorter and the same width as the long pier. The shorter pier meaningfully reduces the behavioral incidental takes on marine mammals due to pile driving noise.

- 12. Comment noted. Refer to the responses to PGST Comments #1, #4 and #26, and PNPTC Comments #8 and #12.

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would be ~ 38 feet high and 75 feet long, and the south abutment would be ~ 12 feet high by 85 feet long. Both abutments would be located directly on the shoreline bluff. For each abutment, ten 24-inch piles would be driven on land. The abutments include a stairway from the top of the abutment to the LWI deck and base of the bluff. Riprap would be placed about MHHW to stabilize the bluff slopes disturbed by construction, with ~ 200 cubic yards covering 1,125 square feet on the north and 235 cubic yards covering 1,275 feet on the south. On the other end of the abutment observation posts and stairs would be installed adjacent to the abutments at the base of the bluff, directly on the beach. Each observation post would be ~ 35 by 45 feet, supported on seven 24-inch diameter steel piles, and include a second stairway to the base of the bluff. A potable water line and a wastewater line connecting to the base sanitary sewer system would be provided to the observation posts (DEIS Chapter 2).

The proposed SPE project includes the construction of a large over-water extension to the existing Service Pier. PSB fencing would be relocated to attach to the end of the new extension. A Waterfront Ship Support Building and Emergency Generator Facility would be constructed on the shoreline and a Pier Services and Compressor Building would be constructed on the Pier. Additionally, a parking lot for 421 additional spaces would be constructed on the shoreline. The purpose of the project is to relocate the SEAWOLF Class submarines SSN-21 and SSN-22 from NAVBASE Kitsap Bremerton to join SSN-23 at NAVBASE Kitsap Bangor. Operational changes would include berthing and maintenance of the two additional SEAWOLF Class submarines at Service Pier, including transfer of 322 employees from Bremerton to Bangor (DEIS Chapter 2).

For the proposed SPE Preferred Alternative the pier extension would be approximately 540 feet long and 68 feet wide and would have a surface area of approximately 44,000 square feet. The total number of 36-inch diameter steel support piles would be approximately 230. The total number of 24-inch diameter piles would be approximately 50 and there would be approximately 105 18-inch square concrete fender piles. Driving of the steel piles would require up to 125 days and driving of the concrete piles would require up to 36 additional days. Proposed new facilities would include a pier crane on a 28-by 60-foot foundation, a 2,100 square foot Pier Services and Compressor Building located on the Service Pier, and upland 500,000-square foot Waterfront Ship Support Building, an 1,800-square foot shore side emergency generator facility and roadway and utility improvements. The area permanently occupied by new project elements would be approximately 7 acres.

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a) **Significant Impacts of Navy’s Proposed Projects on Access to Fishing Places in Usual and Accustomed Areas**

The ability to access all potential fishing places has been and remains crucial for the tribe to maintain harvest stability in the face of unpredictable local variations in the supply of fish.⁴⁸ Maintaining access to the entire terrestrial and marine landscape that was used by tribal ancestors is also of critical cultural importance, and helps to define the Tribe’s identity.⁴⁹

Impacts of Proposed Facilities on Access

In recognition of rights of the tribes under the Treaty of Point No Point, January 26, 1855, and in recognition of the mission and responsibilities of the Department of the Navy, the four applicable tribes and the Navy signed a Cooperative Agreement⁵⁰ in 1997 to establish a plan for the conservation, harvest and enhancement of shellfish resources contained within the boundaries of SUBASE Bangor. In 2000, the Navy agreed to nighttime harvesting by the tribes of the Point No Point Treaty Council. The Port Gamble S’Klallam Tribe continues to harvest at the Devil’s Hole Beach under these cooperative agreements today.

Because the proposed LWI project is located directly on Devil’s Hole Beach, centrally located across the Tribe’s oyster and clam beds, as well as on the bluff and upper beach areas around the beds, impacts to the Tribe’s access will be significant. The Navy’s DEIS describes the impacts to Tribal access as follows:

For the south LWI project site, access at the north end of a tribal shellfishing beach at the mouth of Devil’s Hole would be restricted from the immediate construction zone. During construction of the south LWI, there would be temporary loss of access to an estimated 0.64 acres (0.26 hectare) of shellfish beds due to the presence of equipment and construction activities for up to 2 years. As with Alternative 2, access to shellfish beds in the immediate construction zone would be restricted during construction, for safety purposes (DEIS 3.14-7).

⁴⁸ See Boldt Decision, 384 F.Supp. at 351-52 (local fish supplies varied; tribes traditionally shifted fishery locations in response to relative abundance).

⁴⁹ See, e.g., DEIS at 4-3 (acknowledging the link between cultural injury and loss of access to traditional use areas).

⁵⁰ Cooperative Agreement for the Conservation, Management and Harvest of Shellfish at the Naval Submarine Base, Bangor, WA, 1997.

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Following construction, after up to 2 years, tribes would again have access to the shellfish beds, but with the permanent loss of an estimated 0.043 acre (0.017 hectare) due to displacement of existing shellfish beds by LWI structures (the area disturbed by the PSB pontoon feet and the area lost to access under the observation post stairs). Recovery of harvestable shellfish in the temporarily disturbed areas is expected within 3 years after in-water construction activities have ceased. Tribal access to these beds would continue during recovery, although subject to increased security checks (DEIS 3.14-7).

The Navy’s evaluation of American Indian Traditional Resources (DEIS, Chapter 3.14) as in the statements above, acknowledges the restriction of tribal access for at least 5 years (2 years of construction and 3 years post-construction for habitat recovery). However, the DEIS inappropriately underestimates and minimizes impacts to the Tribe’s access to harvesting areas over the long term. By constructing and operating a permanent new facility and security operation directly on and around the Tribe’s harvesting areas at Devil’s Hole Beach, the Navy’s proposed project violates its 1997 Cooperative Agreement with the tribes to conserve, harvest and enhance shellfish resources.

Due to the new PSB fence, Tribal members will not be able to walk across the full length of the beach and will be forced to leave the beach and go through an additional security checkpoint and reenter the beach in order to access the northern section of the harvest. Limited access and increased security checks have a direct impact on the amount of shellfish that tribal members can harvest during a scheduled visit. This impact is likely to be significant on tribal fisheries. In addition, the tribes’ access to Devil’s Hole Beach for periodic oyster and clam seeding is important for ensuring sufficient tribal harvest into the future. Given the high security measures with the LWI project, it is unclear at this time whether or not the tribes would be able to continue accessing the intertidal area inside the security fence for such seeding activity, particularly for seeding by barge. This restriction of access would have a significant adverse effect on available harvest into the future. Also, it is not clear how the new security fence will impact access for the nighttime harvest by Port Gamble S’Klallam Tribal members.

Vessel Traffic Impacts on Access

The proposed in-water construction activities for the LWI would require use of marine-based construction equipment (pile-driving rigs, support barges, tugboats and work skiffs) that would be present within the project area for two in—water work seasons (July 16, 2016, to January 15, 2017 and July 16, 2017, to January 15, 2018). A total of approximately 16 barge round trips through Hood Canal per year would be required to support construction activities (DEIS 3.15-12). Any increase in marine vessels through the Hood Canal, within the Tribe’s U&A, will have a potentially significant adverse effect on access to tribal fisheries. Cumulative effects of

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13. The Navy respectfully disagrees that construction of the LWI project violates the 1997 cooperative agreement between the Navy and the Tribes. The Tribes will continue to have access to the shellfish resources at the Devil’s Hole Beach. Section 3.14.2.2 of the DEIS acknowledged that a portion of shellfish beds at Devil’s Hole Beach would be temporarily restricted during construction of the LWI. Access would be restored after construction, with the exception that the LWI structures (floating Port Security Barriers) would occupy a small relative portion of the shellfish beds. In addition, tribal shellfishers would have to pass through an additional security checkpoint to gain access to the northern 1/3 of the shellfish beds (access to the southern 2/3 would not change from current practices). The Navy has indicated that it is committed to coordinating with the Tribes to make this additional security measure as seamless as possible while still following Navy security procedures for the approximate four times a year that the Tribes harvest. Neither construction nor operation of the SPE would directly affect these shellfish beds or access to those beds as there are no shellfish harvest sites at this project location; however, the loss of geoduck and other clam standing stocks under the SPE piles for seeding future generations in adjacent areas of Hood Canal has been clarified in the FEIS.

14. The impacts of LWI and SPE construction vessels and SEAWOLF, LOS ANGELES, and VIRGINIA Class submarine transits on tribal fishing vessels have been added to Section 3.14.2 of the FEIS. Both the LWI and SPE projects are located within the established waterfront Naval Restricted Area (NRA) at Bangor. Currently no tribal, recreational or commercial finfishing is allowed within the waterfront NRA. Therefore, there is no impact tribal fishing in the project sites located within the NRA. Outside the NRA, construction vessel traffic and Navy submarine traffic is in the co-use navigable waterways of the Hood Canal and Admiralty Inlet.

The Navy currently coordinates with the Post Gamble S’Klallam Tribe and the three other Tribes whose adjudicated treaty fishing area includes the co-use navigable waters of the Hood Canal. The Navy provides text messaging to Tribal fisheries enforcement staff to inform them of submarine escort movements as soon as allowed to minimize or eliminate any potential to interfere with tribal fisheries.

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increased vessel traffic limit tribal fisheries and increase the risk of vessel conflicts and loss of fishing gear. In combination with all of the other increased construction and operation vessels proposed by the Navy for Hood Canal cumulative effects on tribal fisheries is likely be significant. While the Navy proposes to build the LWI fence and massive structures on and around the Tribe’s shellfish harvest beach, and to increase vessel traffic in Hood Canal for two seasons for construction, the DEIS minimizes the extent of these impacts on the Tribe’s access to its traditional places.

The DEIS states that the proposed SPE project would have a “substantial increase in openings of Hood Canal Bridge; barge trips schedule to avoid commuting hours to maximum extent possible” (DEIS 3-17-19). Homeporting the two additional SEAWOLF Class submarines at the Service Pier would result in “two additional one-way transits of these submarines per month, resulting in two additional openings of Hood Canal Bridge” (DEIS 3.15-20). During SPE construction marine-based equipment would be present within the project area for two in-water work seasons. A total of approximately six barge round trips per month would be required to support construction activities during this period (DEIS 3.15-17). As stated earlier, the cumulative effects of increased vessel activity from the SPE and LWI projects in combination with the increase in construction and operation vessel activity from all of the other proposed Navy projects over the next five years will be significant for tribal fisheries.

The DEIS does not identify any impact to American Indian Traditional Resources from increased marine vessel traffic during construction and operation of the proposed SPE project. The DEIS does not acknowledge that vessel traffic associated with project construction and operation would usurp or significantly limit tribal access to fishing places. The DEIS does not acknowledge that these effects would increase the fishing effort required in tribal fisheries, nor does it disclose that the Tribe’s ability to increase its fishing effort is constrained by a host of factors including limited fishing seasons (openings), other fisheries regulations, and the availability of fishers and gear. Navy actions that increase required fishing effort may interfere with the Tribe’s ability to obtain its harvest share and thus infringe on the access component of the Tribe’s treaty right.

b) Significant Impacts of Proposed Projects on Habitat for Critical Species in Tribe’s Usual and Accustomed Areas

The Navy’s DEIS identifies environmental impacts of the proposed projects, but falls short of describing the potentially significant effects on treaty rights, including impacts to habitat. The DEIS describes some environmental impacts to marine water resources and marine vegetation and invertebrates from the LWI Preferred Alternative. The DEIS states that 2,570 sq. ft. of intertidal habitat will be permanently lost by the LWI project and 2,000 sq. ft. of shading will

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occur from over-water area of the project (DEIS Table 3.17-1). A total of 12.7 acres of bottom sediment will be disturbed during construction. The DEIS also describes some of the environmental effects of the proposed SPE project. It identifies just under 2,000 sq. ft. of benthic habitat permanent loss and 3.9 acres of impact to marine vegetation and invertebrates from the SPE Preferred Alternative structures. The DEIS states that SPE project would construct 44,000 sq. ft. of overwater structure, approximately 385 piles, and 7 acres of new impervious surface on the shoreline. (DEIS Table 3.17-3).

Impacts on Coastal Processes

Although the environmental effects described in the DEIS are significant, the evaluation does not go far enough to identify all potential impacts of the proposed projects on habitats of concern to the Tribe and fails to use appropriate data. The DEIS does not adequately assess the long-term effects of the proposed projects on coastal processes along the Bangor shoreline, including those at Devil’s Hole Beach. Coastal Geologic Services, Inc. (CGS) reported on their assessment of littoral drift at Bangor and potential effects of the proposed LWI and SPE projects on coastal geomorphic processes.⁵¹ CGS reported the following:

Original net shore-drift mapping shows that the Bangor study area is located in the middle of one long drift cell (named KS-5-1 in Washington Department of Ecology (WDOE) digital coastal atlas. KS-5-1 extends from just north of Anderson Creek to the entrance to Port Gamble Bay, with continuous northward net shore-drift throughout the 16.5 mile shore reach. This drift cell was originally mapped by Taggart as KS-2-1 (1984), and mapping was later compiled and published in Schwartz et al. (1991), published by the Washington Department of Ecology. This mapping replaced earlier coastal drift mapping in the Coastal Zone Atlas of Washington (WDOE 1979), which is now understood to be incorrect. Net shore-drift mapping was more recently verified and updated by MacLennan et al. (2013).

Contrary to the information above, the Navy’s DEIS states that the north and south LWI and SPE project sites are within three drift cells, Drift Cells 18, 19 and 20, respectively (DEIS 3.1-13) based on a 2010 assessment. Although subarea drift cells may exist in the area, the description of the Bangor drift cells as described seems to contradict the most recent mapping and verification of sediment transport processes in the Bangor nearshore. A comprehensive assessment of shoreline processes using the most up-to-date science is important to the Tribe for evaluating impacts to habitat, particularly impacts to Devil’s Hole Beach.

⁵¹ Johannessen, J. and MacLennan, A, Coastal Geologic Services, Inc., Bangor Beach Littoral Drift Assessment, Kitsap County, WA, Prepared for Port Gamble S’Klallam Tribe, October 8, 2014.

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15. The DEIS analysis was based on modeling by cbec (2013). The Tribes’ CGS study based its conclusions on literature review and field visits but did not do any modeling. The FEIS incorporates field observations noted in the CGS report. EPA reviewed and found the DEIS took a hard look at the sediment transport issue and found the DEIS adequate. Additionally, while the Navy does not agree with the Tribes’ assertion that the Devil’s Hole Beach will be severely affected by the LWI and SPE projects, the Navy has offered to discuss possible actions with the Tribes if significant changes occur at the beach.

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A memorandum prepared by ESA Associates (October 10, 2014) summarizes findings from a review of the Navy’s “Hydrodynamic and Sediment Transport Modeling of the NBK Bangor Waterfront – Draft Technical Report,” upon which the Navy based its DEIS assessment of impacts to sediment and hydrology. ESA summarizes the following:

- *The model predicts that regional effects of pile-supported structures will be limited. However, piles are likely to cause local scour holes in the immediate vicinity of their footings. If piles are grouped close together, these scour holes can interact to alter flow and bed morphology at a larger scale.*
- *The model does not appear to capture the dominant processes, which affect shoreline sediment transport and geomorphology, most notably, the south-to-north alongshore sediment transport. The model predicts that structures along the NBK Bangor waterfront accumulate sediment on the downdrift (north side), which contradicts the regional sediment transport direction, typical groin blocking of alongshore transport, and site observations (CGS, 2014).*
- *In some areas, the model predictions of bed change switch sign abruptly and with considerable magnitude. These conditions are not likely to be representative of the natural system.*
- *Overall, the modeling does not accurately represent waves and wave-induced sediment transport. Since this is a key physical process affecting shore resources and could be affected by the proposed project, we conclude that the modeling is not adequate to assess project effects. Also, the analysis did not include a geomorphic assessment, which further compounds, and perhaps caused the omission of the key process.*

A more appropriate modeling analysis should be applied in the Navy’s environmental assessment. Potentially significant impacts of the proposed projects on erosion or depositional changes to Devil’s Hole Beach over the long term are particularly important to the Tribe. In addition, the DEIS should evaluate alternatives to the abutments and observation towers. The DEIS compares alternatives for the fencing and piling design, and should also include alternate designs for the on shore facilities.

The Navy’s DEIS states, “... relatively little shoreline change has occurred over the last two decades and only moderate change has occurred since 1876, indicating that the shoreline in the region is fairly stable as a result of the relatively sheltered environment and low net erosion and long shore transport rates” (DEIS 3.1-14). This statement contradicts the CGS assessment report, which states the following:

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Extensive shore modifications have likely impacted sediment transport and deposition, particularly along the lower beach, which appears to have resulted in considerable lower beach erosion throughout the study area.

Intertidal to backshore (where present) beach area loss can be expected to occur along all modified (armored) shores, as armor precludes translation of the upper beach profile. There remains only one depositional shore within the reach and that is the Devil’s Hole beach, where the Tribe maintains shellfish beds.

Overwater structures at NBK Bangor appear to have caused several fundamental and ongoing changes to beaches within the base. These conclusions relate to existing conditions in early 2014, which are important to understand and document prior to assessing potential changes in the geomorphology of beaches and other coastal features in the study area, which may be caused by new structures. Observations revealed an active beach system south of Carlson Spit, including clear evidence of northward sand and gravel transport, dynamic beach adjustment, intermittent bluff toe erosion and landslides from mapped feeder bluffs, and a variety of beach habitats. Habitat types span the intertidal from sand flats at the lower beach, potential forage fish spawning areas on the mid-beach, backshore habitats in supratidal areas, and dune-upland transitional habitats moving further upland. Erosion occurring on the south limb of Carlson Spit is counterbalanced with significant deposition on the north limb, in agreement with historical shore change work.

Although the DEIS admits to some permanent disturbance of shoreline geology and soils from the proposed LWI project at the abutments and temporary disturbance from the proposed SPE project construction, it does not go far enough to evaluate coastal processes that would effect the long term health and stability of the Tribe’s harvest beach at Devil’s Hole and the entire Bangor shoreline. According to the CGS assessment,

Armor along these depositional shores will impact these processes, as this naturally-driven morphological process requires ample room for beaches to translate landward and for sediment erosion and deposition. The Navy’s proposed shore modifications would likely result in a decrease in intertidal habitat quality and area at Devil’s Hole Beach in the long-term. Within the context of sea level rise, a further reduction in sediment supply and transport and in the presence of an armored upper beach at the shellfish area, the intertidal

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shellfish habitats have little natural adaptive capacity to sustain habitats in the face of accelerated sea level rise projected for the coming decades.⁵²

These impacts will have a significant adverse effect on the Bangor shoreline and the Tribe’s harvest beach over the long term and were not adequately addressed in the DEIS. In addition to the impacts to coastal processes, we are concerned about other effects on critical habitat, such as impacts to water quality, marine vegetation and visual impacts.

Impacts on Water Quality

The DEIS states that the LWI observation posts would be provided with a potable water line and with a wastewater line connecting to the base sanitary sewer system. These lines would be attached to the walkways/trestles leading to the observation posts (DEIS 2-9). The purpose of these lines for the observation posts is unclear and the DEIS does not provide any design information to indicate whether or not the wastewater line system would be protective of water quality at the Tribe’s harvest beach. We are concerned that leakages and breaks to the system could impact water quality and potentially cause a closure of the shellfish beach. We request that the final EIS include a complete description of these lines and their purpose with detailed design information that describes measures for protecting the Tribe’s harvest beach and other shoreline areas.

The DEIS indicates that a new parking lot would be constructed as part of the proposed SPE project. The new lot would contain 421 spaces to replace the existing 107 parking spaces and to accommodate 322 personnel from Bremerton (DEIS 2-20). This additional impervious surface and potentially up to 322 additional cars at the site daily, the effects of stormwater runoff are a major concern. The DEIS fails to identify the exact size and acreage of the new parking lot, but does state that the total of impervious surface would be approximately 7 acres including the new lot and upland buildings. The DEIS also describes road improvements to accommodate changes in traffic patterns but does not provide any detail on these changes.

We are concerned that this enormous amount of new impervious surface would likely increase stormwater runoff over the long term. In combination with the pollution from an additional 322 vehicles and large amount of in-water construction proposed at Bangor over the next 5+ years, the project would have a significant adverse effect on water quality in Hood Canal. The DEIS states that “WDOE stormwater standards would be maintained” (DEIS 3.1-86) during operation

⁵² Johannessen, J. and MacLennan, A, Coastal Geologic Services, Inc., Bangor Beach Littoral Drift Assessment, Kitsap County, WA, Prepared for Port Gamble S’Klallam Tribe, October 8, 2014, p. 10.

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16. The wastewater lines from the north and south LWI observation posts would be double-piped to ensure no contamination of beach areas. This has been added to Section 3.1.2.2.3 of the FEIS. No water lines are planned for the replacement observation post on Marginal Wharf.

17. FEIS Section 2.2.1.3.2 was updated to state that the size of the proposed parking lot is 6 acres and there would be an additional one acre of impervious surface for other structures. Section 2.2.1.3.2 of the FEIS explains why the parking lot is needed. This parking lot has been designed to minimize clearing of vegetation and creation of impervious surface, while providing the needed parking spaces. Section 3.7.2.3.2 (pages 3.7-27 to 3.7-28) of the FEIS explains in detail how stormwater would be managed during both construction and operation of the SPE. These measures are considered adequate to protect water quality, including the water quality of Hood Canal. These measures are components of project design.

The Navy has considered alternatives to the onshore facilities and has revised the preferred alternative appropriately. For example, an earlier concept included an industrial facility located on a larger pier extension. Also, parking needs have been carefully reviewed to ensure they are accurate. Finally, due to functionality requirements, the upland structure needs to be adjacent to the pier where the submarines will be berthed, and the parking needs to be adjacent to the upland structure where people will be working.

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of the SPE and that the projects “will meet the requirements of the USEPA general permit for stormwater discharges from construction sites” (DEIS C-16), and indicates that drainage water at the SPE would be collected in a trench drain and treated using an in-line canister system and then discharged to Hood Canal (DEIS C-25).

However, the DEIS Mitigation Action Plan does not go far enough to mitigate for the impacts of stormwater runoff. For example, designs for bioswales, vegetated buffers, permeable pavement or other measures to infiltrate stormwater rather than discharge it into Hood Canal, would improve water quality and potentially provide appropriate mitigation for the likely significant impacts of an additional 7 acres of new impervious surface. Implementing rideshare and other types of programs to decrease the number of automobiles at the waterfront would help to reduce stormwater pollution. In addition, the DEIS should consider alternatives to the onshore facilities and parking lot for consideration. Considering the cumulative effects of all proposed Navy projects and increasing activities in Hood Canal, improvement to water quality should be the goal rather than merely maintaining or degrading current levels.

Impacts on Marine Vegetation

Eelgrass and other types of aquatic vegetation are important habitats for herring, salmon and shellfish. The LWI Preferred Alternative, although having less impact on marine vegetation than the Alternative 2, does traverse the eelgrass beds and areas with other types aquatic vegetation on both the north and south locations. The DEIS states that an estimated 0.46 acre and 0.5 acres of eelgrass would be potentially impacted within the 100-foot wide construction corridors of the north and south LWI respectively from the Preferred Alternative (DEIS 3.2-44). The DEIS Mitigation Plan identifies steps for avoiding and minimizing impacts to eelgrass during LWI construction and the DEIS states that “seagrass recoveries in natural systems following clearing or declines due to turbidity plumes found full recoveries ranging from 2 to 6 years” (DEIS 3.2-33). Regardless, there will clearly be permanent impacts to eelgrass and other aquatic vegetation from the project footprint. The DEIS does not identify options for mitigating eelgrass loss, such as removing eelgrass from the area during construction and/or replanting eelgrass after construction. The Mitigation Plan for the LWI should go further to identify all options for replacing eelgrass and other types of aquatic vegetation.

The DEIS identifies 1.0 acre of shading impact from the proposed SPE project and states that the shading would occur in areas that do not support marine vegetation as of a 2007 survey (DEIS 3.2-37) and 3.9 acres of disturbed habitat from SPE construction. For a project of this size we recommend that the Navy conduct a new marine vegetation survey in order to assess potential impacts using more recent data. Variations in temperature and sediment and water quality may cause changes in the distribution and abundance of marine vegetation over time. In other words,

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18. Removing eelgrass from a healthy eelgrass bed ahead of construction could be damaging to the existing bed areas that would not be disturbed by anchors/buoys, and would not be beneficial if no suitable transplant area can be identified. Eelgrass occurs in a nearly continuous line along the Bangor shoreline and generally should currently occupy any areas with suitable habitat. As noted throughout the FEIS, the Navy plans to provide compensatory mitigation for impacts to marine vegetation, including eelgrass, through the established Hood Canal ILF Program. The mitigation actions will be identified and developed by the ILF program and its inter-agency review team which includes Tribal representatives

The 2007 survey was wide ranging and covered the entire Bangor shoreline. Macroalgae density and species diversity tended to increase with decreasing depth, as red and brown algae became more abundant at water depths between 10 to 25 feet below MLLW. Most forms of macroalgae were documented in the shallow subtidal zone between 0 and 10 feet below MLLW, often growing in the direct presence of eelgrass. Below -30 feet, macroalgae occurrence was generally sparse along the entire ~5 miles of survey area. The majority of the new pier extension would be located in depths greater than -35 feet (FEIS Figure 2-10). The new submarines would be moored at depths of -55 to -85 feet (FEIS Figure 2-10). Therefore, a new vegetation survey is not warranted. Unavoidable impacts to eelgrass and other aquatic vegetation will be mitigated through the Navy’s proposed compensatory mitigation action.

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a 2007 survey may not represent current conditions. In order to ensure that SPE structures would not impact these critical marine habitats, the Navy should provide a new survey and more accurate and current data upon which to base their assessment of marine vegetation impacts. In addition to the shading effects of the SPE structure, the assessment of impacts should include the shading effects of two new submarines stationed at the Service Pier. In addition, the Navy has not provided information on the removal of overwater structures and facilities at Bremerton, once the SEAWOLF Class submarines are located to Bangor. This would be an important consideration for the Mitigation Action Plan. We are concerned that by using outdated and incomplete information, the environmental assessment of these large structures and increased activity will omit potentially significant impacts to marine vegetation.

Visual Impacts

The DEIS also identifies “possible visual impacts” to American Traditional Indian Resources with the construction of the LWI. This does not adequately describe the significant effects of the proposed project on a traditional cultural harvest site at Devil’s Hole Beach, which is all that remains of tribal access along the Bangor shoreline. The LWI will construct a fence across the beach, a concrete observation tower and stairwell at the base of the bluff, and a concrete abutment wall on the bluff. The SPE will bring additional vessel traffic to Hood Canal and construct massive structures in water and on the shoreline. The visual impact of these facilities, in combination with the cumulative impacts of other Navy structures on the Bangor shoreline, will have an obvious adverse effect on the integrity of this cultural site, which would be permanently lost. These impacts cannot be identified by the size of the structures in square feet. Impacts to the integrity of a cultural site and the loss to future generations go beyond any quantitative measurement for the tribe. The description of possible visual impacts described in the DEIS does not do justice to the actual effects of these proposed actions on treaty rights and cultural resources.

c) Significant Impacts of Navy’s Proposed Projects on Sufficient Tribal Harvest in Usual and Accustomed Areas

With regard to harvest, the DEIS states that the LWI Preferred Alternative would involve temporary and intermittent construction impacts including increased turbidity and minor reduction in benthic habitats. Minimal barrier effects on nearshore-occurring juvenile and adult migratory fish were identified. Under LWI impacts to American Indian Traditional Resources, the DEIS sites a long-term loss of approximately 1,880 sq. ft. of shellfish beds and no population-level impacts on salmon stocks harvested by tribes. The DEIS identifies potential long-term impacts to American Indian Traditional Resources from the operation of the LWI as follows:

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19. The USS SEAWOLF and USS CONNECTICUT are moored at NAVBASE Kitsap Bremerton Pier D, which is also the homeport pier for the aircraft carrier USS Nimitz. There are no overwater structures in Bremerton that are unused and available for removal or demolition.

20

20. Comment noted. Refer to Section 3.13 for the Navy impact analyses for cultural resources.

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Following construction, after up to 2 years, tribes would again have access to shellfish beds, but with the permanent loss of an estimated 0.043 acre due to displacement of existing shellfish beds by LWI structures (the area disturbed by the PSB pontoon feet and the area lost to access under the observation post stairs). Recovery of harvestable shellfish in the temporarily disturbed areas is expected within 3 years after in-water construction activities have ceased.

The DEIS identifies SPE impacts to fish from pile driving noise that may exceed current thresholds and guidelines and from 24 months of in-water construction work. The DEIS also states that 44,000 sq. ft. offshore overwater structure with approximately 385 support piles and fender piles and artificial lighting would have an impact on fish (DEIS 3.3-76) and adjacent nearshore sand lance spawning habitat (DEIS 3.3-82).

Impacts to Fish

The DEIS summarizes SPE Preferred Alternative impacts on American Indian Resources as follows (DEIS Table 3.14-2).

Construction: Minimal impact on salmon with no impact on tribal salmon harvest. No impact on tribal shellfish harvest.

Operations: No impact on tribal salmon or shellfish harvest

The DEIS assertion that SPE construction and operations would have no or minimal impact on tribal harvest, while the assessment does identify impacts to fish and forage fish species and their habitats, is not consistent. The DEIS claims that impacts on tribal harvest would be minimal because the impacts on the overall population of available adult salmon and steelhead in Hood Canal would be minimal. However, any impacts to juvenile or adult fish and shellfish have a direct effect on the survival and abundance of species over time and tribal harvest over the long term. Additionally, the DEIS fails to consider the impacts of increased vessel traffic on treaty fisheries and it does not consider impacts of the SPE structure on reserve geoduck areas.

Impacts on Forage Fish

The DEIS states that “operation of LWI Alternative 3 is not anticipated to impact surf smelt or Pacific herring spawning habitats or their reproductive success, because surf smelt or Pacific herring spawning grounds have not been documented along the 4.3-mile (7 kilometer) long Bangor waterfront. However, Pacific sand lance spawning occurs adjacent to both the south and north LWI locations.” This analysis assumes that impacts would not occur due to lack of

Response:

21. As discussed in Section 3.3.2.3 of the DEIS, the potential impacts of SPE construction on salmonids will be temporary and minimized through observation of the salmonid in-water work window. In the long term, the SPE structure will lie in water depths greater than 30 feet, which will minimize interference with juvenile salmon migration, which occurs primarily in shallower water. The depth of the SPE will also minimize impacts to marine vegetation and other habitats used by juvenile salmon for foraging and refuge. Therefore, the SPE project is not likely to affect salmonid populations to the extent that tribal harvest is affected. Cumulative Impacts are addressed in Sections 4.3.3 and 4.3.14. The Navy’s proposed compensatory mitigation action (Appendix C, Mitigation Action Plan, Chapter 6) will offset the potential contribution of the Proposed Actions to cumulative impacts, through habitat enhancement elsewhere in Hood Canal, such that there is no net loss in marine habitat, or marine life survival and abundance as a result of the LWI and SPE projects.
22. Section 3.14.2 has been revised to acknowledge that the naval vessel protection zone (33 CFR Part 165.2030) around Navy vessels may have the potential to impact access by tribal fishing vessels while fishing in their respective treaty fish area in the co-use waterways of Hood Canal (outside the Naval Restricted Areas). The FEIS has clarified discussion of SPE impacts to address impacts to seed shellfish under the piles.
23. Since 2013, NAVBASE Kitsap Bangor has conducted forage fish spawning surveys using WDFW protocols. The Navy has revised the EIS with available updated findings.

The term “forage fish” was added to Appendix C, Mitigation Action Plan, Chapters 5 and 6, instead of implied as a sensitive species. These sections include descriptions of how BMPs will help avoid or minimize potential impacts to sensitive habitats.

Within the FEIS, the Navy provides additional description of potential impacts from the abutment and tower construction on forage fish habitats.

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documented surveys for surf smelt and Pacific herring spawning. While DEIS Appendix B identifies varying percentages of surf smelt and Pacific herring captured in samples over different years, it does seem to indicate the presence of surf smelt habitat at the project location. A more conservative approach to protecting this important habitat and more comprehensive survey work over a long-term period is needed. According to Navy staff at the February 13 Pre-public Scoping Meeting, the Navy intends to develop a forage fish spawning sampling plan for Hood Canal. The Tribe has an interest in participating in the development of that plan if possible and coordinating with the Navy on the Tribe’s own forage fish survey work now underway in Hood Canal.

Appendix B states that Pacific sand lance were documented along an estimated 1,000-foot shoreline at the north LWI project site extending from the proposed abutment location southward. At the south LWI project site, Pacific sand lance spawning habitat has been documented along the shoreline approximately 500 feet north of the proposed abutment location, extending approximately 1,600 feet north. However, the Mitigation Action Plan (DEIS Appendix C) does not include measures to avoid or minimize disturbance in these areas. In addition, the DEIS does not evaluate the potential environmental effects of the abutment and observation tower construction on these habitats. Pacific herring, surf smelt and Pacific sand lance are important species for tribal fisheries, as they are critical forage species for salmon and other fish.

Impacts to Geoduck

The DEIS states that the decrease in soft-bottom habitat and increase in hard substrate habitat would result in a localized change in species composition, but would not result in substantial loss of biological productivity in the area of the SPE project (DEIS 3.2-59). However, geoduck species were not considered in this assessment. The DEIS states that “there are no recent geoduck survey data for the SPE project site” (DEIS 3.2-17). According to the Washington State Department of Fish and Wildlife Geoduck Atlas⁵³, surveys have shown that geoduck tracts exist within the US Naval Trident submarine base, over 116 acres and containing an estimated 651,000 pounds of geoduck. Reserve Geoducks found in waters deeper and shallower than the commercial harvest depths are part of the standing stock, and contribute to the reproductive potential of the population. This is an open system and various parts contribute to the population health. Biological and ecological values have a direct impact on the entire geoduck stock and other nearshore species.⁵⁴ The Navy should complete a survey of subtidal geoduck in the project areas and complete a comprehensive assessment of all benthic species being impacted.

⁵³ Sizemore, Bob, and Ulrich, Michael, WDFW 2002 Geoduck Atlas, Atlas of Major Geoduck Tracts of Puget Sound, p. 51.

⁵⁴ Personal correspondence with Bob Sizemore, WDFW Research Scientist, March 12, 2013.

23 cont.

Response:

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24. Section 3.2.2.3 of the DEIS describes the impacts of the SPE on benthic communities and shellfish, including geoducks, based on available information. As discussed in the response to WDNR Comment #2, the Navy and WDNR will determine mitigation for impacts to geoducks, based on available information. Impacts to the benthic community in general will be mitigated through compensatory mitigation (ILF program) and any additional mitigation agreed upon by the Navy and affected Tribes through government-to government consultation (Section 3.14.1.2 and Appendix C, Mitigation Action Plan, Chapters 6 and 9).

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Recovery of Shellfish

The DEIS does not provide supporting information to validate the claim that recovery of shellfish in temporarily disturbed areas would only take up to three years. The location, size and type of construction activity has not been identified in the DEIS, making it difficult to understand the full level of impact to oyster and clam beds. In addition, it is not evident that recovery would actually occur once shellfish have been lost from construction activities unless construction is followed by seeding and restoration actions. As an example, a local oyster bed has not yet recovered five years later from construction impacts that occurred in 2010⁵⁵. The DEIS does not identify any plans for seeding the beach or restoring disturbed areas after construction and this should be part of the Mitigation Action Plan if recovery is expected within three years.

25

Vessel Traffic Impacts on Harvest

Procedures to accommodate the transit of the Navy’s two SEAWOLF Class submarines in addition to the existing Navy vessel traffic in Hood Canal will have a direct impact on tribal fishing and harvesting opportunities. Fishing vessels are required to stop or adjust the timing and location of their activities under the U.S. Coast Guard procedures.⁵⁶ Tribal harvesting and fishing openings are limited to specific days and times according to fisheries management regulations. Accommodation of additional Navy vessel traffic will further limit harvesting and fishing during these scheduled openings, by requiring that fishing boats leave or stay away from particular areas of the Hood Canal during specific periods to provide safety zones for military traffic.⁵⁷ As stated above, two additional one-way transits of the SEAWOLF Class submarines per month to and from the SPE over the 50-year life of the project will have a significant effect on tribal harvest and the DEIS fails to recognize these impacts.

26

Calculating Impacts to Tribal Harvest

The DEIS summarizes the impacts to tribal harvest from long-term permanent loss of shellfish beds as “up to \$2,208 per year.” This is based on the Navy’s calculation of oysters per square foot and price per dozen oysters. The DEIS states that:

⁵⁵ Conversation with Tamara Gage, Shellfish Program Manager, Port Gamble S’Klallam Tribe Natural Resources Department, April 8, 2015.

⁵⁶ U.S. Navy Boat Owners Information Notice.

⁵⁷ Port Gamble S’Klallam Tribe, Point No Point Treaty Council, U.S. Navy Email Correspondence, Sept. 2011.

Response:

25. The DEIS provides citations for the information referenced regarding shellfish recovery in the benthic impact sections. This discussion and analysis has been revised in the FEIS after additional review in response to comments. Because the SPE will be built in deep waters, no impacts to shellfish (clams & oysters) are expected from construction of the SPE project. Additionally, most of the work associated with construction of the LWI will be above the shellfish (clams & oyster) beds where the abutments and observation posts proposed to be built. The DEIS described, in Section 2.1.1.3.3 on page 2-10, how the LWI’s PSB anchors/buoys would be placed (with barge/crane) to avoid beach and shellfish impacts. In addition, installation of a coffer dam above the shellfish beds during abutment construction will reduce the potential of construction impacts to this resource (this has been incorporated into the project and the description added to Chapter 2 of the FEIS). For LWI, construction impacts to other benthic organisms would be due to crushing (e.g., when piles and anchors are placed) or smothering from turbidity caused by pile driving and other in-water activities. Approximately 420 square feet of the Devil’s Hole Beach oyster bed would be impacted in the long term due to coverage expected. Both of these impacts would be localized to immediate areas in the construction zone, as acknowledged in the DEIS and FEIS.
26. The potential impacts of the LWI and SPE project construction vessels and SEAWOLF, LOS ANGELES, and VIRGINIA Class submarine transits on tribal fishing in the co-use waterways of Hood Canal have been added to Section 3.14.2 of the FEIS.

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There would be an estimated 1,880 square feet of oyster beds to which the tribes would permanently no longer have access. Oyster density at the south LWI location is approximately 2.3 oysters per square foot. If all these oysters were harvested for commercial purposes, the socioeconomic impact could be up to \$2,208 per year, approximately 30,000 dozen oysters per year at NAVBASE Kitsap Bangor, with an estimated commercial value of \$180,000. Therefore the \$2,208 annual loss would represent approximately 1.2 percent of annual tribal income from this source.

We disagree with this calculation for several reasons. First, it is not clear where the values in the Navy’s calculation were derived. A 2009 survey of oyster beds at Devil’s Hole Beach found 7.27 oysters per square foot and 118,344 dozen oysters on the beach. Last year a survey found that the oyster band on Devil’s Hole Beach is 77,862 square feet. This indicates that the annual loss to tribes for oyster harvest would be closer to \$17,041.53. However, the calculation is based on a permanent loss of 1,880 square feet of oyster beds, which is likely to be an underestimate of the actual area of shellfish loss. The additional shellfish area that will be lost due to changes in sediment movement outside of the immediate area of the pontoon feet in the intertidal zone has not yet been determined. Likewise, the area that will be lost due to the decrease in quality of intertidal shellfish habitat over time from shoreline armoring has not yet been determined. Also, the DEIS does not consider any impacts to tribal harvest of clams that are also located on Devil’s Hole Beach. According to the DEIS, a 2013 shellfish survey indicated that bent nose clams were the most abundant clams in the intertidal region of the north LWI site, followed by Manila clams and native little necks. At the south LWI project site, a 2013 subtidal survey included samples of geoduck, false geoduck, horse clam and cockle.

Even with these corrections, the DEIS calculation would not be suitable for describing the impacts of these proposed projects on treaty rights. Only the tribes can determine what their treaty rights are worth. Impacts to treaty rights cannot be quantified with the calculation of a project footprint or market price per pound. Treaty right impacts go beyond commercial harvest to subsistence and ceremonial harvest that cannot be defined in monetary terms. Likewise, the impacts to tribal access and loss of the integrity of traditional areas cannot be measured.

IV. Other Considerations for Discussion through Government-to-Government Consultation.

In general, the Port Gamble S’Klallam Tribe has serious concerns over the manner in which the Navy is attempting to force through numerous construction projects and operational changes in the Tribe’s U&A that, either individually or collectively, will disrupt Tribal members’ exercise of the treaty fishing right. Providing the Tribe very limited time to review and comment upon two major project proposals in one lengthy DEIS document, and ignoring the Tribe’s

Response:

- 27. Oyster harvest data was used to estimate shellfish impacts because no clam harvest data was available for the analysis. The \$17,041.53 amount noted in the comment appears to be for the entire oyster band at the Devil’s Hole delta. The Navy’s method for calculating physical disturbance by the LWI PSBs is described in detail in Sections 2.1.1.3.3 (page 2-16) and 3.2.2.3 (page 3.2-50) of the DEIS. The 1,880 square foot estimate is the entire disturbance footprint of the PSB feet on the intertidal zone, not just in the Devil’s Hole delta oyster beds (420 sq ft); so while the Navy’s dollar estimate (\$2,208) was based on oyster values (available data), the overall area impacted included both clam and oyster habitat. Sediment is frequently moving across the shellfish beach (on incoming and outgoing tides, during and after storms, etc.); therefore, sediment movement due to pontoon feet (equivalent downward pressure of a human footprint on the surface) should not be more than what oysters typically experience.
 - 28. The Navy acknowledges the Tribe’s position that monetary impacts do not fully describe the potential of the Proposed Actions to impact to the Tribes’ treaty rights. Based on court decisions, treaty rights are identified as access to fishing grounds and the fisheries resources themselves. The monetary impacts were determined as part of the socioeconomic impact analysis and included as part of the analysis of impacts to traditional resources.
 - 29. The Navy invited the Port Gamble S’Klallam Tribe, the Jamestown S’Klallam Tribe and the Lower Elwha Klallam Tribe to consider government-to-government consultation for LWI in August 2008 and for SPE in July of 2012 due to the potential for the LWI and SPE projects to potentially impact American Indian traditional resources. As a result, the Navy has consulted with the Port Gamble S’Klallam Tribe, the Jamestown S’Klallam Tribe and the Lower Elwha Klallam Tribe (Tribes) and other tribes with adjudicated treaty fishing in Hood Canal on the details of the LWI and SPE Proposed Actions. The Navy and the Tribes have met eleven times to discuss the LWI project, seven times since June of 2015. The Navy has carefully considered the Tribe’s concerns and the project designs were revised to address these issues where possible. As an example, the Navy’s original preferred alternative for the LWI project had been to construct two piers; however, as a result of our government-to-government consultations, the preferred alternative is now the floating LWI barrier.
- Under Navy policy, the Navy is required to consider tribal comments and concerns prior to making a final Navy decision on Proposed Actions. However, reaching formal agreement with a tribe or obtaining tribal approval prior to a Navy final decision is not required.

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explanations of treaty rights impacts and the aggregate effect of the Navy’s presence in Hood Canal on the exercise of treaty rights also gives us cause for concern.

As stated previously in these comments, the Tribe opposes the two proposed projects unless appropriate and meaningful mitigation for impacts to treaty rights and the environment can be achieved. This cannot be accomplished unless the Navy considers the full extent of impacts its proposed new projects and activities, as well as cumulative impacts of past and future projects and activities, are likely to impose on treaty rights and traditional resources in the Tribe’s U&A. The Tribe welcomes further discussion through the government-to-government consultation process.

Sincerely,

Jeromy Sullivan
Chair, Port Gamble S’Klallam Tribe

29 cont.

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Response:

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Although formal agreement was not reached as a result of government-to-government consultation with the Port Gamble S’Klallam Tribe, the Jamestown S’Klallam Tribe and the Lower Elwha Klallam Tribe, the Navy has offered treaty mitigations for the potential significant impacts to treaty rights and resources by the construction and operation of the LWI and SPE projects. These offered treaty mitigations are described in Chapter 9 (Treaty Mitigation) of Appendix C (Mitigation Action Plan) of this FEIS.

- 30. The Navy appreciates the time the Port Gamble S’Klallam Tribal Leadership and staffs have committed to government-to-government consultation meetings and discussions with the Navy on the LWI and SPE Proposed Actions at NAVBASE Kitsap Bangor.

TRIBE 3 – SUQUAMISH TRIBE

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THE SUQUAMISH TRIBE

PO Box 498 Suquamish, WA

April 13, 2015

Naval Facilities Engineering Command, Northwest
1101 Tautog Circle
Silverdale, WA 98315-1101
ATTN: Thomas Dildine, LWI/SPE EIS Project Manager

Subject: Draft EIS Comments for proposed Land-Water Interface and Service Pier Extension projects, Naval Base Kitsap-Bangor

Dear Mr. Dildine:

This letter transmits the Suquamish Tribe’s (“Suquamish”) comments on the Draft Environmental Impact Statement (DEIS) for the Land-Water Interface (LWI) and Service Pier Extension (SPE) projects proposed by the Navy at Naval Base Kitsap - Bangor. Suquamish is a signatory to the 1855 Treaty of Point Elliott and the proposed LWI and SPE projects are located within Suquamish’s usual and accustomed fishing grounds and stations (“U&A”). Based on information received during previous communication with the Navy, participation in a multi-agency meeting pre-public scoping meeting on February 13, 2013, and review of the DEIS, the proposed LWI and SPE projects will likely result in significant and cumulative impacts to natural resources, shoreline, marine, and upland habitats, as well as impacts to tribal fisheries.

Suquamish submitted Scoping comments on the LWI-SPE project on March 15, 2013 (see attached letter). Our review of the DEIS and comments in this letter focus primarily on the extent to which the Navy has addressed those scoping comments. On April 9, Suquamish requested a 10 day extension for review of the DEIS, but was denied this extension.

A. PURPOSE AND NEED

As stated in the DEIS, the Purpose and Need of the LWI is to “comply with Dept. of Defense directives to protect Navy OHIO Class Ballistic Missile submarines (TRIDENT submarines) from increased and evolving threats and to prevent the seizure, damage, or destruction of military assets” by enhancing security within the Navy’s Waterfront Restricted Area (WRA). The Purpose and Need of the SPE is to “eliminate deployment constraints and improve maintenance of SEAWOLF Class submarines” by “removing restrictions on navigating submarines through Rich Passage under certain tidal conditions; providing berthing and logistical support at the Navy’s submarine research, development, test and evaluation (RDT&E) hub, which is located at NAVBASE Kitsap Bangor; and by improving submarine crew training and readiness through co-

Response:

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1. Thank you for the comment letter. The Navy understands the Suquamish Tribe is signatory to the 1833 Treaty of Point Elliot and that its adjudicated usual and accustomed fishing grounds and stations include the waters of Hood Canal. However, the Skokomish Indian Tribe’s primary fishing rights in the waters of Hood Canal over those of other tribes granted rights under this treaty, particularly the Suquamish, was affirmed in a 1985 ruling by the Ninth Circuit Court of Appeals (*United States v. Skokomish Indian Tribe*, 764 F.2d 670 [9th Cir. 1985]). Since the 1985 court decision, the Suquamish Tribe must receive permission from the Skokomish Tribe to fish south of the Hood Canal Bridge; this permission has not been granted.

The Commanding Officer of Naval Base Kitsap (CO NBK) invited the Suquamish Tribe to consider initiation of government-to-government for the LWI and SPE projects in letters of August 22, 2008 and July 23, 2012, respectively. The CO NBK provided information for the Proposed Actions to the Tribe in consultation meetings.

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location of the submarines and crew with command functions at NAVBASE Kitsap Bangor submarine training center”.

B. ACTION ALTERNATIVES

The Navy proposes to combine two separate and independent marine-nearshore projects into a single EIS because the projects would be constructed in close proximity to each other along the Hood Canal Bangor shoreline, they would likely have similar impacts, and construction of the projects would overlap or occur sequentially.

Land-Water Interface (LWI)

The Navy proposes two action alternatives (Alternative 1 is No Action) for the Land-Water Interface as described in the DEIS. Alternative 2 (Pile Supported Pier) involves (1) the construction of two pile supported piers (northern pier - 280 ft. long, up to 54, 24-inch diam. steel piles; southern pier – 730 ft. long, up to 82, 24-inch diam. steel piles); (2) construction of shoreline concrete abutments that would connect to the north and south piers and to the existing Port Security Barrier (PSB) system on land; (3) installation of a mesh/grate (and sensors) that would extend from the bottom of the pier walkways to the seafloor; (4) installation of twenty 40 ft. tall towers on the piers to support lighting and security devices; (5) relocation of the existing PSB system to connect to seaward ends of the LWI; and (6) relocation of PSB anchors.

LWI Alternative 3 (Navy’s preference) involves (1) the modification and lengthening of the existing PSB system to extend across the intertidal zone and attach to shoreline concrete abutments (therefore, the PSBs would occur at the same north and south locations as the pile supported piers in Alternative 2; 280 ft. long PSB section at northern location and 730 ft. long PSB section at southern location; (2) installation of two 30 ft. observation towers (one at north end and another at south end) along the shoreline at the newly constructed abutments. Both action alternatives would involve the construction of concrete shoreline abutments.

Service Pier Extension (SPE)

Two action alternatives (Alternative 1 is no action) for the SPE are described in the DEIS– a short pier configuration and a long pier configuration. SPE Alternative 2 (Short Pier Configuration) is the Navy’s preferred alternative, and involves a side-by-side mooring configuration for submarines; 540 ft long by 68 ft wide pier extension to the existing Service Pier, supported by 385 steel or concrete piles. SPE Alternative 3 (Long Pier Configuration) involves an in-line berth mooring configuration for submarines; 975 ft long by 68 ft wide pier extension, supported by 710 steel or concrete piles.

Both SPE action alternatives involve: (1) a 2,100 sf Pier Services and Compressor building; (2) one pier crane; (3) 1,800 sf shore side emergency generator facility; (4) 50,000 sf Waterfront Support Building; (5) 421 space parking lot; and (6) 7 acres of permanently occupied upland area for new structures.

Response:

- 2 2. Comment noted. Please see Chapter 2 for modifications made to the Action Alternatives in this FEIS.

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C. SUQUAMISH COMMENTS

Land Water Interface

Port Security Barriers

The LWI project Alternative 3 (Navy’s preferred) would include extending the existing Port Security Barrier (PSB) to connect to the land-based security enclave. Extending the PSBs at Bangor increases the area that is excluded from treaty fishing without established fishing access agreements between the Navy and tribes and without mitigation.

3

In its 2013 Scoping comments, Suquamish requested that the EIS include an assessment of PSBs (specifically the pontoons that support the PSB) serving as an “attractive nuisance” for marine mammals that are known to haul out on the PSBs. The DEIS looks at impacts from the perspective of the marine mammal species and concludes that there may be benefits of adding PSBs for certain marine mammal species (e.g., harbor seals, California sea lions), (e.g., From Table 3.4-3: “Manmade structures at and near the LWI project sites represent unique haul-out habitat for California sea lions, which are not known to haul out in groups elsewhere in Hood Canal”). However, the Navy has done no analysis of potential concentrations of marine mammal species and resulting impacts to local salmonid species. There also does not appear to be any analysis of potential impacts to tribal fishing from having large concentrations of marine mammals hauled out on PSBs or other artificial structures. Suquamish also requested in Scoping comments that the EIS provide an analysis of alternative PSB designs that would avoid and minimize this attractive nuisance effect.

4

Shoreline Abutments

In Scoping comments (from 2013) Suquamish requested an analysis of alternatives to the shoreline abutments that support the north and south LWI overwater structures that would avoid and minimize ecological impacts. These abutments and associated onshore observation posts (or towers) will result in removal of riparian vegetation and associated functions, reduction of sediment delivery (an essential ecological function along these shorelines) from shoreline bluffs, and coverage of shallow upper intertidal habitat. There is no evidence in the DEIS that the alternatives analysis included different options in the design of the abutments or the potential to use alternative means of meeting the purpose of the abutments.

5

Service Pier Extension

The purpose and need of the SPE is to accommodate the transfer of two submarines from Bremerton to Bangor. The Navy needs to consider ways to eliminate and minimize impacts to the marine/nearshore environment by constructing temporary structures that can be removed when the purpose has been met and removing overwater structures that are no longer needed. Suquamish requests that the SPE project be dismantled once this purpose and need has been met.

6

Response:

- 3. The PSB extensions would occur within the established Bangor waterfront Naval Restricted Area (33 CFR Part 334). Also the project sites are located within the existing PSBs where neither the Suquamish Tribe or nor any other tribe is authorized to fish due to Navy operations and security requirements. In 1997, the Navy and the Tribes with adjudicated shellfish harvest rights at Bangor established a cooperative agreement for shellfish harvest and management at Bangor. Therefore, no new area is created that would be excluded from tribal fishing. The Navy has consulted with the Tribes that have adjudicated fishing rights at the project sites (see Section 3.14).
- 4. Comment noted. The Navy recognizes that the Suquamish Tribe is concerned with PSBs serving as an “attractive nuisance” for marine mammals at NAVBASE Kitsap Bangor, however, the Navy’s historic information indicate that the majority of sea lions haul out on exposed submarine hulls rather than PSB pontoons. Those sea lions that have been detected on PSB pontoons have been in close proximity to Delta Pier. Most pontoons have never been used for hauling out by sea lions. Sea lions have not been detected hauling out elsewhere on the Bangor shoreline. The numbers of California and Steller sea lions hauling out on submarines at Delta Pier and pontoons of the adjacent PSB have increased since marine mammal surveys commenced at Bangor Naval Base in 2008 without the addition of any new haulout sites. It is possible that sea lions could use the additional pontoons that would be installed under LWI Alternative 3, but these would be in intertidal waters; as noted, sea lions do not currently haul out on the shoreline and appear to prefer to be in close proximity to the submarines at Delta Pier. In addition, sea lions can readily access nearshore areas from Delta Pier if so desired. Therefore, the presence of the LWI pontoons is unlikely to increase the presence of sea lions at NAVBASE Kitsap Bangor or the prevalence of sea lions in very nearshore waters of the base. Predation by sea lions on salmon, including juvenile salmon, is unlikely to increase due to the presence of the LWI pontoons. Section 3.3 of this FEIS has been revised to evaluate this potential impact on fish.
- 5. The abutments have been designed and located to minimize environmental impacts while meeting the required security function (Section 2.3.1).
- 6. As stated in FEIS Section 1.2.2, the purpose of the SPE Proposed Action is to provide additional berthing capacity and improve associated support facilities for existing homeported and visiting submarines at NAVBASE Kitsap Bangor. The SPE project is needed to:

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Similarly, are there overwater structures that can be removed at NAVBASE Bremerton because demands will be transferred to Bangor?

Cumulative Impacts

The DEIS states at 4-15: “Potential cumulative impacts include (sic) that construction and operation of the LWI and SPE would contribute to regional cumulative impacts on marine resources such as shallow-water habitat, including loss of eelgrass, macroalgae, and habitat for juvenile salmon and other fish and invertebrate species. However, through the implementation of proposed compensatory aquatic mitigation actions in the Mitigation Action Plan (Appendix C), the project’s contribution to cumulative impacts would not be significant.”

Suquamish is concerned that the cumulative impacts resulting from the proposed LWI and SPE projects, in combination with the many other past, present, and reasonably foreseeable future federal and non-federal actions in the Hood Canal area are not only significant, but at risk of not being adequately mitigated. In particular, there are several current (e.g., EHW2) and proposed (e.g., Transit Protection System Pier) Navy construction actions occurring along the Bangor shoreline during the next several years that involve pile driving, construction of overwater structures, shoreline abutments or armoring, and other actions.

Consultation with Services

In 2013 Scoping comments, Suquamish requested that the DEIS include an analysis of impacts from proposed in-water work windows on ESA-listed and non-listed species, including but not limited to summer chum, Chinook, and forage fish species. The proposed in-water work window is July 16-Jan. 15. The Navy needs to describe the basis for determining that ending the window on January 15 would be protective enough for juvenile summer chum out-migrating in Hood Canal. Suquamish repeats its recommendation to apply an in-water work window that is least impacting to these species, and concentrating the most impacting in-water construction during periods when these species are least likely to be present in the area.

Suquamish requests information from the Navy on the current status of consultation with the Services (NOAA and USFWS).

Compensatory Mitigation

From Appendix C, 6.1, C-51: “The proposed actions will result in the loss and shading of eelgrass habitat, impacts on sensitive species, including movement of salmonids, and other long-term impacts on marine habitats and species.”

The Navy’s preference for offsetting unavoidable environmental impacts associated with the LWI and SPE projects is to purchase credits from the Hood Canal In Lieu Fee (ILF) Mitigation Program. The adequacy of this mitigation will depend in part on specific impacts identified and described in the Final Mitigation Action Plan (Appendix C of the DEIS), and the ability to

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Response:

6 cont:

- Provide alternative opportunities for berthing to mitigate restrictions at NAVBASE Kitsap Bremerton on navigating SEAWOLF Class submarines through Rich Passage under certain tidal conditions;
- Improve long-term operational effectiveness for the three SEAWOLF Class submarines on NAVBASE Kitsap;
- Provide berthing and logistical support for SEAWOLF, LOS ANGELES, and VIRGINIA submarine classes at the Navy’s SSN research, development, test and evaluation hub, which is currently located on NAVBASE Kitsap Bangor; and
- Improve submarine crew training and readiness through co-location of command functions at NAVBASE Kitsap Bangor submarine training center.

The SPE and supporting facilities would address a number of infrastructure deficiencies on NAVBASE Kitsap (both NAVBASE Kitsap Bangor and NAVBASE Kitsap Bremerton) to ensure its capability to support the SEAWOLF fleet. As stated in Section 2.2 of the FEIS, the design life of the SPE Proposed Action is 50 years, but the purpose and need will continue as long as the mission requires. There are no overwater structures at NAVBASE Kitsap Bremerton that are unused and available for demolition.

7. Sections 3.14.2.2 and 4.3.14 of the EIS state that appropriate mitigation for potential impacts of the Proposed Actions, including contributions to cumulative impacts, tribal traditional resources, and treaty rights will be developed through consultation between the Navy and affected tribes. Please also see the response to Suquamish Comment #10.
8. In-water work windows dates in the DEIS were determined by closely working with NMFS to identify when juvenile summer chum out-migration in Hood Canal is active. The Navy proposed the shorter window (closing January 15) based on best available science, including SAIC 2006; Bhuthimethee et al. 2009. WDFW (see WDFW Comment #3) describe their use of best available science documenting the presence of juvenile chum in upper Hood Canal and concurred that this shortened window will help protect juvenile chum salmon during periods of in-water work. WDFW Comment #3 on the DEIS supports the January 15 closing date. The updated Hydraulic Code (WAC 220-660) established the Authorized Work Times in Saltwater Areas for Hood Canal (at WAC 220-660-330) as July 15 to January 15, effective July 1, 2015. The new window has been incorporated throughout the FEIS.

T3 –Suquamish Tribe (page 5 of 5)

Thomas Dildine
April 13, 2015
Page 5

identify appropriate sites for mitigating these various environmental impacts through the ILF Program.

Suquamish requests continued consultation with the Navy as developments on the LWI and SPE projects progress, including throughout the NEPA, biological consultation with the services (NOAA Fisheries and USFWS), and Corps permit processes. Please provide the Suquamish Tribe with opportunities to attend and participate in any multi-agency meetings and site visits associated with the LWI/SPE projects. For issues concerning cultural resources, including Section 106 consultation, please contact Dennis Lewarch, the Suquamish Tribal Historic Preservation Officer at 360-394-8529. If you have other questions, please contact me at 360-394-8667.

Sincerely,

Steve Todd
Ecologist

e-cc:
Roma Call, Port Gamble S’Klallam Tribe
Randy Lumper, Skokomish Tribe
Scott Chitwood, Jamestown S’Klallam Tribe
Doug Morrill, Lower Elwha Klallam Tribe
Cynthia Rossi, Point No Point Treaty Council
Kathlene Barnhart, Kitsap County
Stacy Hoskins, Jefferson County
Karen Urelius, USACE
Sheila Hosner, Governor’s Office of Regulatory Assistance
Linda Storm, USEPA
Erik Peterson, USEPA
Tami Black, NOAA-Fisheries
Nancy Brennen-Dubbs, USFWS
Rebekah Padgett, Washington Dept. of Ecology
Chris Waldbillig, Washington Dept. of Fish and Wildlife
Cyrilla Cook, Washington Dept. of Natural Resources
Matt Goehring, Washington Dept. of Natural Resources
Timothy Westcott, US Coast Guard

10cont.

1

Response:

- 9. The Navy submitted the Biological Assessment (BA) for both projects to NMFS and USFWS, who requested more information and a revised BA was submitted. NMFS concurred with the Navy’s effect determinations for LWI; ESA consultation with NMFS is ongoing for SPE. The USFWS determined for both projects that effects were insignificant for bull trout and discountable for the marbled murrelet. The Navy submitted an IHA for SPE to NMFS in November 2014 and a revised IHA in June 2015. MMPA consultation with NMFS for SPE is ongoing. The Navy did not submit an IHA for LWI because the preferred alternative would not result in takes of marine mammals. The Navy will provide updates as consultation for both projects progresses. Suquamish Tribe representatives attended the second inter-agency meeting, held on May 4, 2015.
- 10. As noted throughout the FEIS, the Navy plans to provide compensatory mitigation through the established Hood Canal In-Lieu Fee (ILF) Program, of which the Hood Canal Coordinating Council (HCCC) is the sponsor. The mitigation actions will be identified and developed by the ILF program and its inter-agency review team which includes Tribal representatives.
- 11. Please see response to Suquamish Tribe Comment #9. The Navy appreciates the contact for the Suquamish Tribal Historic Preservation Officer. The Navy’s impact assessment to cultural resources is found in Section 3.13 of this FEIS.

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T3 –Suquamish Tribe – ATTACHMENT (*attachment page*)

Responses have been provided to the main comment document, which references the attachment. There are no responses to the attachment.

Attachment: EIS Scoping Comments

RE: Land-Water Interface and Service Pier Extension Projects,
Naval Base Kitsap-Bangor
Suquamish Tribe Comments 3/15/2013



PHONE (360) 598-3311
 Fax (360) 598-6295
<http://www.suquamish.nsn.us>

THE SUQUAMISH TRIBE
 PO Box 498 Suquamish, WA 98392-0498

March 15, 2013

Naval Facilities Engineering Command, Northwest
 1101 Tautog Circle
 Silverdale, WA 98315-1101
 ATTN: Thomas Dildine, LWI/SPE EIS Project Manager

Subject: EIS Scoping Comments for proposed Land-Water Interface and Service Pier Extension projects, Naval Base Kitsap-Bangor

Dear Mr. Dildine:

This letter transmits the Suquamish Tribe's ("Suquamish") comments on scoping for the Environmental Impact Statement (EIS) for the Land-Water Interface (LWI) and Service Pier Extension (SPE) projects proposed by the Navy at Naval Base Kitsap - Bangor. Suquamish is a signatory to the 1855 Treaty of Point Elliott and the proposed LWI and SPE projects are located within Suquamish's usual and accustomed fishing grounds and stations ("U&A"). Based on information received during previous communication with the Navy, a review of the Notice of Intent (NOI) to prepare an EIS for these projects, and participation in a multi-agency meeting pre-public scoping meeting on February 13, 2013, the proposed LWI and SPE projects will likely result in significant impacts to natural resources, shoreline, marine, and upland habitats, as well as tribal fisheries. Suquamish requests pre-decisional government-to-government consultation to minimize and avoid these impacts.

A. PURPOSE AND NEED

As stated in the NOI, the Purpose and Need of the LWI is to "comply with Dept. of Defense directives to protect Navy OHIO Class Ballistic Missile submarines (TRIDENT submarines) from increased and evolving threats and to prevent the seizure, damage, or destruction of military assets" by enhancing security within the Navy's Waterfront Restricted Area (WRA). The Purpose and Need of the SPE is to "eliminate deployment constraints and improve maintenance of SEAWOLF Class submarines" by "removing restrictions on navigating submarines through Rich Passage under certain tidal conditions; providing berthing and logistical support at the Navy's submarine research, development, test and evaluation (RDT&E) hub, which is located at NAVBASE Kitsap Bangor; and by improving submarine crew training and

Thomas Dildine
 March 15, 2013
 Page 2

readiness through co-location of the submarines and crew with command functions at NAVBASE Kitsap Bangor submarine training center".

B. ACTION ALTERNATIVES

The Navy proposes to combine two separate and independent largely marine-nearshore projects into a single EIS because both projects would be constructed along the Hood Canal Bangor shoreline, and they would likely have similar impacts.

Land-Water Interface (LWI)

The Navy proposes to carry forward to the EIS two action alternatives (Alternative 1 is No Action) for the Land-Water Interface as described from the Notice of Intent to prepare EIS LWI. Alternative 2 involves (1) the construction of two pile supported piers (northern pier - 280 ft. long, up to 54, 24-inch diam. steel piles; southern pier - 730 ft. long, up to 82, 24-inch diam. steel piles) built from shoreline concrete abutments and connected at north and south ends to the existing Port Security Barrier (PSB) system; (2) installation of a mesh/grate (and sensors) that would extend from the bottom of the pier walkway to the seafloor; (3) installation of five 30 ft. tall towers on the piers to support lighting and security devices; and modification and lengthening of the existing PSB system to connect to seaward ends of the LWI; (4) installation of new PSB segments; and (5) construction of PSB anchors.

LWI Alternative 3 involves (1) the modification and lengthening of the existing PSB system to extend across the intertidal zone and attach to shoreline concrete abutments (therefore, the PSBs would occur at the same north and south locations as the pile supported piers in Alternative 2); 280 ft. long PSB section at northern location; (2) 730 ft. long PSB section at southern location; (3) installation of three 30 ft. tall in-water towers to support lighting and security devices; (4) each in-water tower would be supported by a platform resting on four 24-inch piles; and (5) two additional towers would be installed on land. Both action alternatives would involve the construction of concrete shoreline abutments.

Service Pier Extension (SPE)

Two action alternatives (Alternative 1 is no action) are also being carried forward by the Navy for the SPE - a short pier configuration and a long pier configuration. SPE Alternative 2 (Short Pier Configuration) involves a side-by-side mooring configuration for submarines; 600 lineal ft. pier extension to the existing Service Pier; and approximately 320 steel piles. SPE Alternative 3 (Long Pier Configuration) involves an in-line berth mooring configuration for submarines; 1,200 lineal ft. pier extension; and approximately 700 steel piles. Both SPE action alternatives involve: (1) a 3,100 sf Pier Services and Compressor building; (2) one pier crane; (3) shore side emergency diesel generator facility; (4) 50,000 sf shoreline Maintenance Support Facility (MSF) built within an existing parking lot; and (5) 6 ac. new parking lot and lay down area near the proposed MSF.

T3 –Suquamish Tribe – ATTACHMENT (page 2 of 3)

Thomas Dildine
March 15, 2013
Page 3

C. SUQUAMISH COMMENTS

Suquamish reiterates comments made at the February 13, 2013 multi-agency meeting, and offers the following additional comments:

- Include summary tables to indicate the potential temporary, long-term, direct, indirect, and cumulative impacts (absolute and relative) of project components associated with the action alternatives.
- Include summary tables showing the footprint dimensions (area, length, width, etc.) covered by piles, abutments, anchors, overwater structures, fill, and other structures.
- The EIS should address construction, operation, and maintenance-related impacts to marine habitat, including but not be limited to effects on nearshore and deep water habitat for salmonids, forage fish, rock fish and other marine fish species, as well as shellfish species including bivalves such as geoduck and crustaceans such as crab and shrimp.
- In addition to assessing impacts to habitat, and species injury and death from proposed actions, the EIS should assess construction, operation, and maintenance-related impacts on the behavior of marine/nearshore species.
- Assess potential impacts of the proposed mesh grate (LWI Alternative 2) and use of concertina wire suspended in the water column (LWI Alternative 1).
- Assess potential temporary, long-term, direct, indirect, and cumulative impacts to nearshore ecological processes including but not limited to alterations in shoreline and beach sediment delivery, transport, and deposition associated with the proposed overwater structures, Port Security Barrier (PSB) system, and shoreline abutments.
- Provide details on the dimensions and position relative to the ordinary high water mark (OHWM) of the proposed shoreline abutments associated with the LWI project.
- Provide an analysis of alternatives to the shoreline abutments (LWI) that would avoid and minimize impacts to riparian vegetation and sediment delivery, transport, and deposition.
- Provide an assessment of impacts to cultural resources associated with upland and shoreline project construction, operation, and maintenance activities.
- In addition to the “Cultural Resources” section that would include issues related to Section 106 of the NHPA, the EIS should include another section entitled “American Indian Treaty Rights and Resources”. This recommended section should address potential impacts to treaty-reserved fishing rights from both construction and

Thomas Dildine
March 15, 2013
Page 4

operation/maintenance of the proposed LWI and SPE projects. These impacts would include but not be limited to impacts on geoduck beds and on the treaty-protected harvest of geoduck. Much of the proposed project infrastructure for both LWI and SPE projects would occur at depths where geoducks grow and harvesting occurs.

- Assess impacts to water quality from any proposed pile driving, dredging, and other construction, operation, and maintenance-related activities. These impacts need to be assessed in the context of other overlapping and sequential projects proposed by the Navy and other entities in the Hood Canal area (see Cumulative Impacts comment below).
- Assess the biological impacts from the generation of underwater and in-air noise associated with pile driving and other construction and operation/maintenance activities. These impacts need to be assessed in the context of other overlapping and sequential projects proposed by the Navy and other entities in the Hood Canal area (see Cumulative Impacts comment below).
- Assess alternatives to the proposed 6 acre parking lot (SPE) that could avoid and minimize impacts to upland habitat including forest, wetland, riparian, and stream habitats. Suquamish recommends the use of low impact development methods, including retaining and restoring as much native vegetation and soil as possible, and employing pervious surfaces when at all possible to reduce runoff and minimize water quality impacts.
- Describe the stormwater systems designed to handle runoff from proposed parking, buildings, and other cleared upland areas associated with the LWI and SPE projects.
- Include an assessment of Port Security Barriers (PSBs) that function as an “attractive nuisance” for marine mammals that are known to haul out on the PSBs. Include as part of the EIS an analysis of alternative PSB designs that would avoid and minimize this attractive nuisance effect.
- Assess Cumulative Impacts associated with the proposed LWI and SPE projects, in combination with the many other past, present, and reasonably foreseeable future federal and non-federal actions in the Hood Canal area. There are several current and proposed Navy actions along the Bangor shoreline during the next several years that involve pile driving, construction of overwater structures, shoreline abutments, and other actions that need to be considered in the cumulative impact analysis for this project. To aid in effectively illustrating the temporal and spatial extent of cumulative impacts, we recommend displaying the geographical location of current and foreseeable future projects (both Navy and other entities) on a map of the Hood Canal area, including project highlights for each project (e.g., overwater coverage area, number of piles, length of armoring, and year(s) of construction).

T3 –Suquamish Tribe – ATTACHMENT (page 3 of 3)

Thomas Dildine
March 15, 2013
Page 5

- The EIS include an analysis of impacts to ESA-listed and non-listed species, including but not limited to summer chum, Chinook, and forage fish species of in-water work windows. Suquamish strongly recommends applying an in-water work window that is least impacting to these species, and concentrating the most impacting in-water construction during periods when these species are least likely to be present in the area.

We look forward to continued consultation with the Navy as developments on the LWI and SPE projects progress, including throughout the NEPA and biological consultation processes with the services (NOAA Fisheries and USFWS). For issues concerning cultural resources, including Section 106 consultation, please contact Dennis Lewarch, the Suquamish Tribal Historic Preservation Officer at 360-394-8529. If you have other questions, please contact me at 360-394-8667.

Sincerely,



Steve Todd
Ecologist

e-cc:

Roma Call, Port Gamble S'Klallam Tribe
Randy Lumper, Skokomish Tribe
Scott Chitwood, Jamestown S'Klallam Tribe
Doug Morrill, Lower Elwha Klallam Tribe
Cynthia Rossi, Point No Point Treaty Council
Kathlene Barnhart, Kitsap County
Stacy Hoskins, Jefferson County
Catherine Blackwell, USACE
Sheila Hosner, Governor's Office of Regulatory Assistance
Linda Storm, USEPA
Erik Peterson, USEPA
Tami Black, NOAA-Fisheries
Nancy Brennen-Dubbs, USFWS
Rebekah Padgett, Washington Dept. of Ecology
Chris Waldbillig, Washington Dept. of Fish and Wildlife
Cyrilla Cook, Washington Dept. of Natural Resources
Matt Goehring, Washington Dept. of Natural Resources
Timothy Westcott, US Coast Guard

STATE AGENCY COMMENTS

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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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April 13, 2015

Naval Facilities Engineering Command Northwest
Attention: Thomas Dildine, LWI/SPE EIS Project Manager
1101 Tautog Circle, Suite 203
Silverdale, WA 98315-1101

**RE: Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor
Project, Draft Environmental Impact Statement (DEIS)**

Dear Mr. Dildine:

Thank you for the opportunity to comment on the DEIS for the Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor projects.

The DEIS identifies the preferred alternative for the Land-Water Interface as the Port Security Barrier Modifications Alternative, which would extend the existing Port Security Barrier system and attach it to new concrete abutments at either end of the interface. For the Service Pier Extension, the DEIS identifies the preferred alternative as the Short Pier Alternative, which would extend the existing pier by 540 feet in length, reconfigure the Port Security Barrier, and add new facilities and infrastructure on the pier and upland.

The Department of Ecology (Ecology) reviewed the DEIS and prepared the attached comments for inclusion in the record. Note that the comments are made by separate programs in our agency, so please contact the person appropriate for that subject area if you have questions.

We look forward to meeting with the Navy, along with other regulatory agencies and tribes, as a follow-up to our February 13, 2013 meeting.

Sincerely,

Rebekah R. Padgett
Federal Permit Manager
Shorelands and Environmental Assistance Program

e-cc: Danielle DeVoe, Ecology
Susannah Edwards, Ecology



Response:

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S1 – State of Washington Department of Ecology (page 2 of 6)

Laura Inouye, Ecology
 Hugh Shipman, Ecology
 Chad Fisher, Ecology
 Susan Dier, Ecology
 Joe Burcar, Ecology
 Patrick McGraner, Ecology
 Loree' Randall, Ecology

Karen Urelius, U.S. Army Corps of Engineers
 Chris Waldbillig, WA Department of Fish and Wildlife
 Cyrilla Cook, WA Department of Natural Resources
 Kelly Craig, Governor's Office for Regulatory Innovation and Assistance

Patty Charnas, Kitsap County
 Kathlene Barnhart, Kitsap County
 Stacy Hoskins, Jefferson County
 Nancy Brennan-Dubbs, U.S. Fish and Wildlife Service
 Tami Black, NOAA Fisheries
 Timothy Westcott, U.S. Coast Guard
 Linda Storm, U.S. Environmental Protection Agency
 Steve Todd, Suquamish Tribe
 Paul McCollum, Port Gamble S'Klallam Tribe
 Roma Call, Port Gamble, S'Klallam Tribe
 Cynthia Rossi, Point No Point Treaty Council
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Response:

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S1 – State of Washington Department of Ecology (page 3 of 6)

Attachment

**Detailed Ecology Comments on the Land-Water Interface and Service Pier Extension at Naval Base Kitsap Bangor
Draft Environmental Impact Statement**

SHORELANDS AND ENVIRONMENTAL ASSISTANCE PROGRAM

401/CZM: Rebekah Padgett, (425) 649-7129

As noted in the DEIS, it is anticipated that both the Land-Water Interface and Service Pier Extension projects will require the U.S. Navy, Naval Base Kitsap-Bangor, to obtain an individual Section 401 water quality certification (WQC) and/or Coastal Zone Management (CZM) Consistency Determination from Ecology.

We would also like to let you know that relative to the ordinary high water mark (OHWM), the DEIS only mentions mean higher high water (MHHW). When it comes time to submit permit applications to Ecology, including site plans, you should be aware that the OHWM will need to be based on field indicators. In the central Puget Sound, MHHW is typically about 1.5 feet lower in elevation than OHWM. Ecology staff would be happy to field-verify your OHWM determination prior to submitting the application package.

Here are some specific comments on the DEIS:

- Section 3.1.1.2.1 Regulatory Compliance, Water Quality: There is a statement that “The proponent submits the JARPA to USACE who coordinates the overall approval process” and continues with a discussion of other permits and authorizations. This implies that the U.S. Army Corps of Engineers (Corps) would send the JARPA on to Ecology and coordinate the WQC review. This should be clarified.
- Section 3.6.1.1.1 Vegetation and Habitats: It appears that the project will avoid impacting all of the wetlands, including the isolated Orchard Wetland. Please note that if this isolated wetland is impacted, while not regulated by the Corps, those impacts would need to be mitigated and would require an Isolated Wetland Administrative Order from Ecology.
- Section 3.6.1.2.3 Requirements and Practices Related to Wetlands: This section should include reference to Ecology’s regulation of waters of the state, including wetlands, under Section 401 of the Clean Water Act, as well as RCW 90.48.
- Section 3.6.2.3.2 Service Pier Extension Alternative 2: Short Pier (Preferred), Wetlands: This paragraph states that “[t]he Service Pier Extension project would impact the orchard

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Response:

1. The USACE’s policy for the marine waters of Washington State is that the OHWM is MHHW.

2. Comment has been incorporated.

3. Comment noted.

4. Comment has been incorporated.

5. The proposed project will not affect the wetland near the orchard; this typo has been fixed in the FEIS.

S1 – State of Washington Department of Ecology (page 4 of 6)

wetland because it is excluded from the proposed construction area...” Please clarify whether the wetland would be impacted.

5 cont.

- Appendix C—Mitigation Action Plan: Ecology anticipates addressing mitigation for aquatic resources in its review, which would include an evaluation as to whether impacts have been avoided and minimized to the maximum extent practicable prior to review of the proposed use of the Hood Canal Coordinating Council In-Lieu Fee (HCCC ILF) Program to address any mitigation needs. The mitigation plan should include other mitigation approaches considered both on site and in the vicinity of the project areas. If use of the HCCC ILF is approved by Ecology, the HCCC ILF Interagency Review Team would also need to be consulted regarding use of the Program.

6

Response:

6. Due to the Navy’s current and future use of the Bangor waterfront, onsite mitigation options are limited.

SHORELINES: Joe Burcar, (425) 649-7145

For CZM, as noted in the DEIS, the Navy will need to submit an analysis for each of these projects demonstrating how the enforceable policies of Washington State’s CZM Program are being met. One of the enforceable policies of this Program is the Shoreline Management Act. The proposed project is located in Kitsap County and each of the CZM Consistency Determinations should provide an analysis of how the proposed project is consistent with applicable provisions from the Kitsap County Shoreline Master Program, including the location and determination of the OHWM. Kitsap County recently completed an update to their Shoreline Master Program, which has been approved by Ecology and should serve as the basis for the Navy’s consistency analysis.

7

7. The Navy’s Coastal Consistency Determination, submitted to Ecology on May 25, 2016, considered the most recent Kitsap Shoreline Master Program.

HAZARDOUS WASTE AND TOXICS REDUCTION PROGRAM

Chad Fisher, (425) 649-7281

I have reviewed the Draft Environmental Impact Statement for the Land-Water Interface and Service Pier Extension, Naval Base Kitsap Bangor (<https://www.nbkeis.com/lwi/>), and have the following comments and suggestions regarding hazardous waste generation and management:

📁 Cover - Ch. 2 (17 MB)

- Executive Summary (page xxiii) – Regulatory Compliance: Add “Resource Conservation and Recovery Act (RCRA)” to the list.
- Chapter 1.4. – Regulatory Considerations: Add “Resource Conservation and Recovery Act (RCRA)” to the list.

8

8. Comment has been incorporated.

9

9. Comment has been incorporated.

📁 Ch. 3 - Section 3.2 (38 MB)

- Chapter 3.1.1.2.3. – Best Management Practices and Current Practices: Include that the applicant must designate all waste generated from operations at this site as per the Dangerous Waste Regulations, Chapter 173-303 WAC. As detailed in our original comments, the following items should be addressed:
 - Issues of hazardous waste designation, accumulation, management and proper disposal will be addressed.

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10. Comment has been incorporated.

S1 – State of Washington Department of Ecology (page 5 of 6)

- o Proper steps to prevent spills and leaks and mitigate soil contamination and/or cleanup of contaminated soils excavated during the proposed construction activities.
- o Appropriate management of hazardous waste generated through the use, maintenance, or repair of any construction equipment, vehicles, earth working equipment, paving equipment, etc., are also subject to the dangerous waste regulatory requirements.
- o Any contractor demolishing or constructing buildings or other structures, foundations, etc. must comply with the state regulatory requirements of designation and appropriate management of any hazardous waste generated as a result of such work. Assess building demolition materials for asbestos, lead, mercury, etc.

10 cont.

Ch. 4 - 6 (3 MB)

- Chapter 5.1.6. – Regulatory Compliance: Add “Resource Conservation and Recovery Act (RCRA)” and “Washington State Dangerous Waste Regulations, Chapter 173-303 WAC” to Table 5-1. Responsible agencies are USEPA and WA State Department of Ecology, respectively.
- Chapter 5.2.6. – Regulatory Compliance: Add “Resource Conservation and Recovery Act (RCRA)” and “Washington State Dangerous Waste Regulations, Chapter 173-303 WAC” to Table 5-2. Responsible agencies are USEPA and WA State Department of Ecology, respectively.

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Response:

11. Comment has been incorporated.

12. Comment has been incorporated.

TOXICS CLEANUP PROGRAM

SEDIMENTS: Susannah Edwards, (360) 407-6798

The area of the proposed service pier extension and land-water interface structures is within the boundaries of the Naval Base Kitsap-Bangor Superfund Cleanup Site. The area where construction is proposed includes sediments that are within Operable Unit 7, Area 26 (Hood Canal Sediments) of the cleanup Site. In the Second Five-Year Review of this Site the Navy and U.S. Environmental Protection Agency (EPA) concluded that “no unacceptable human health risks were identified for Site 26 (based upon recreational exposure to sediments and ingestion of clams).” Since the time of that determination, the Washington State Sediment Management Standards have been updated (September 2013) and include new criteria for evaluating risk to human health and upper trophic level species. These criteria constitute new Applicable or Relevant and Appropriate Requirements (ARARs) which need to be met at the Site.

Sediment samples collected in vicinity of the proposed project construction areas, and reported in the DEIS represent the top 0-10cm of sediment. Reported concentrations are protective of benthic invertebrates. However, during and post project construction, sediment deeper than 10cm may be disturbed and released into the surrounding aquatic environment, potentially significantly exacerbating the Site conditions identified during the most recent five-year review period. The chemical concentrations of these deeper sediments must be characterized and evaluated against the updated Sediment Management Standards in order to comply with State ARARs.

13

13. This comment’s statement that sediments at NAVBASE Kitsap Bangor must be evaluated against the new SMS is not accurate. The applicable ARARs are those in effect at the time of the site ROD, which include the 1995 SMS. These ARARs will continue to be valid for Five-Year Reviews for the site. The site is not contaminated. As stated in the comment, past Five-Year Reviews found that site sediments do not pose a risk to human health or the environment; contaminant levels in site sediments have not increased over time. In addition, driving piles is not expected to result in significant releases of materials from depth to the surface environment. Therefore, no additional action related to sediment contamination is required for implementation of the two proposed actions.

S1 – State of Washington Department of Ecology (page 6 of 6)

Because contamination is known to be present at the Site, testing of the potentially contaminated media must be conducted. If contamination of soil, groundwater, or sediment is revealed by testing, the Department of Ecology must be notified; contact the Environmental Report Tracking System Coordinator at the Northwest Regional Office at (425) 649-7229. For assistance and information about subsequent cleanup and to identify the type of testing that will be required, contact Susannah Edwards with the Toxics Cleanup Program at Ecology Headquarters at (360) 407-6798.

13 cont.

Please note that prior to conducting any sampling the Navy should coordinate with both Ecology's Toxics Cleanup Program and the Dredged Material Management Program (DMMP). Ecology's representative on the DMMP is Laura Inouye, 360-407-6165 or Laura.Inouye@ecy.wa.gov.

Response:

Response side of this page intentionally left blank.

S2 –Washington State Department of Fish and Wildlife (page 1 of 2)



State of Washington
DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: 600 Capitol Way N · Olympia, WA 98501-1091 · (360) 902-2200, TTY (800) 833-6388
Main Office Location: Natural Resources Building · 1111 Washington Street SE · Olympia, WA

April 13, 2015

Naval Facilities Engineering Command Northwest
Attention: Mr. Thomas Dildine, LWI/SPE EIS Project Manager
1101 Tautog Circle, Suite 2 03
Silverdale, WA 98315-1101

RE: Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor Project, Draft Environmental Impact Statement (DEIS)

Dear Mr. Dildine:

The Washington Department of Fish and Wildlife (WDFW) submit this comment letter in response to the above-referenced document. Thank you for the opportunity to comment on the DEIS for the Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor projects.

The DEIS identifies the preferred alternative for the Land-Water Interface as the Port Security Barrier Modifications Alternative, which would extend the existing Port Security Barrier system and attach it to new concrete abutments at either end of the interface. For the Service Pier Extension, the DEIS identifies the preferred alternative as the Short Pier Alternative, which would extend the existing pier by 540 feet in length, reconfigure the Port Security Barrier, and add new facilities and infrastructure on the pier and upland.

WDFW appreciates the opportunity to comment on this DEIS. We look forward to meeting with the Navy, along with other regulatory agencies and tribes on May 4 2015, as a follow-up to our February 13, 2013 meeting. We may have additional comments after review of these background materials for consideration in the final EIS.

Our comments on the DEIS follow:

The projects will have impacts to nearshore, intertidal, shallow subtidal and subtidal areas.

Mitigation- WDFW supports the In-Lieu-Fee (ILF) Program, in concept, to provide more successful mitigation options within the Hood Canal watershed. WDFW supports this program as the preferred option for mitigation and continues to work with Hood Canal Coordinating Council to continue develop and management of the program as quickly as possible.

1

Response:

1. Thank you for the comment. The Hood Canal ILF Program is also the Navy's preferred option for compensatory mitigation.

S2 –Washington State Department of Fish and Wildlife (page 2 of 2)

WDFW is concerned about impacts to the marine ecosystem, e.g. not just how the eelgrass bed will be disturbed, but also other kelp and macroalgae and the fish and wildlife that use these communities for shelter, food and reproduction. For example, the role of drift algae in recruitment of juvenile lingcod and juvenile rockfish is an important function not listed in the DEIS impact table.

2

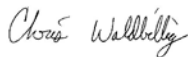
Inwater work window- WDFW uses in-water work window closures for the protection of fish life. For the last five years WDFW has used the best available science that documents the presence of juvenile chum in upper Hood Canal, presumed to be Hood Canal summer chum salmon (ESA listed), rearing in marine waters as early as late December and early January. Some of this work was conducted at Bangor in the marine waters adjacent to EHW-1 and both north and south of the pier. WDFW recommends that in-water work closures be expanded to include protection for juvenile chum salmon beginning January 15. WDFW understands the constraints a seven month in-water work closure (January 15-July 16) would place on the Navy and may be able to work with the applicants and contractors on construction sequencing to identify specific work offshore in waters greater than +20 MLLW, that will not cause direct harm to juvenile chum migration corridors along the shallow marine shoreline during January 15 – February 14. After this time, additional salmonids are present and migration is less confined to the shallow shoreline.

3

WDFW may comment at a later date on operational impacts, such as increase likelihood of spills, vessel traffic disturbance, as well as impacts to fisheries (e.g. damage assessments for geoduck and other resources).

We look forward to working with the Navy on this project and the mitigation options. Just as construction of these two projects is of critical importance to the Navy, the protection of fish life and appropriate mitigation selection is crucial to WDFW for our constituents. Once again, we request to be informed of any action taken relative to the mitigation planning for the LWI/SPE projects. If there are any questions or additional information is needed, please do not hesitate to contact Chris Waldbillig, Marine Area Habitat Biologist for Kitsap County at (360) 874-7258.

Sincerely,



Chris Waldbillig
Region 6 Assistant Habitat Program Manager

Response:

2. Drift algae impacts have been added to Section 3.2 of the Final EIS.

3. The Navy will adhere to the July 15 to January 15 in-water work window for the proposed actions.

S3 –Washington State Department of Natural Resources (page 1 of 2)



Caring for your natural resources ... now and forever

April 13, 2015

Thomas Dildine, Project Manager
Naval Facilities Engineering Command Northwest
1101 Tautog Circle
Silverdale, WA 98315-1101

Dear Mr. Dildine:

Thank you for the opportunity to submit comments on the Draft Environmental Impact Statement for the Land-Water Interface and Service Pier Extension at Naval Base Kitsap Bangor. The Washington Department of Natural Resources (DNR) is the proprietary manager of state-owned aquatic, which include the bedlands and tidelands located within or adjacent to the proposed project area. DNR also manages the resources embedded or attached to state-owned aquatic lands, including aquatic vegetation, geoducks, and valuable materials and minerals.

The Navy proposes two separate actions at NAVBASE Kitsap Bangor waterfront: the Land-water interface and the Service Pier Extension. The Land-Water Interface proposal includes alternatives that would result in construction and operation of barrier structures, including two pile-supported piers at both the north and south ends of the waterfront restricted area, a walkway, fence, and towers for lights and equipment. One of the alternatives proposes installation of metal mesh that would extend from the bottom of the piers to the seafloor, anchored to heavy steel plates, placed on the seafloor using a barge-mounted crane. Other improvements would include a floating dock for small boat access, a gangway deck and up to 136 permanent piles, and various anchoring structures.

The Service Pier Extension (SPE) proposed action is the extension and operation of the existing Service Pier, and construction and operation of support facilities to accommodate the transfer of two SEAWOLF Class submarines from NAVBASE Kitsap Bremerton to NAVBASE Kitsap Bangor. Depending on the alternative, the service pier could be extended by up to 975 feet. Two of the alternatives would include construction of a 2,100-square foot Pier Services and Compressor Building on the Service Pier and relocation of the existing system to attach to the end of the pier extension.

Shellfish, Eelgrass, and Benthic Community Impacts

DNR has an interest in ensuring that resources located on state-owned aquatic lands where DNR has a reversionary interest will be fully mitigated by projects that provide substantial habitat benefits to state-owned aquatic lands. DNR supports the proposed use of the Hood Canal Coordinating Council (HCCC) in-lieu fee mitigation program to mitigate unavoidable impacts to aquatic vegetation and other benthic community habitats. Under this program, the HCCC uses fees paid into the program to enhance, restore, create, and preserve habitat in Hood Canal.

1

Response:

- 1. Thank you for the comment.



Thomas Dildine, Project Manager
Naval Facilities Engineering Command Northwest
April 13, 2015
Page 2 of 2


However, the in-lieu fee program cannot be used to compensate for the taking of shellfish from public lands.

The placement of pilings, abutments, anchor systems, mesh barriers, and other construction that impacts the substrate have the potential to permanently harm the wild geoduck stock located on state-owned aquatic lands. The people of Washington own the wild geoducks located on public aquatic lands, and the clams are sold by the state as valuable materials. Under Chapter 79.135 Revised Code of Washington, the people of Washington must be compensated for the taking of geoducks, and damages must be deposited in state of Washington accounts.

DNR requests the Navy reimburse the state for the lost commercial value of geoducks located on state-owned aquatic lands that will be harmed by construction activity under our proprietary authority granted under Chapter 79, Revised Code of Washington. DNR also requests that the Final EIS identify potential, adverse impacts on shellfish, including geoducks, from sediment disturbance, crushing, or smothering due to pile driving, anchor and dolphin placement, and increases in turbidity. The Mitigation Plan in Appendix C should be revised, as it does not adequately address the specific impacts to geoduck and shellfish in intertidal and subtidal areas within the proposed project area.

Should you have any questions, please do not hesitate to contact Cyrilla Cook, Policy Unit Supervisor, at (360) 902-1080.

Sincerely,


Kristin Swenddal, Manager
Aquatic Resources Division

c: Cyrilla Cook, Policy Unit Supervisor

2

Response:

- 2. The ILF is for compensatory mitigation. The Navy and WDNR will determine the fee resulting from impacts to geoducks, which the Navy will pay to WDNR.

Section 3.2.2 of the DEIS addresses the impacts of the proposed actions on geoducks.

Sections 2.1 and 5.1 of the MAP (Appendix C) describe measures to minimize impacts to marine habitat, which includes shellfish. Mitigation for impacts to geoducks is addressed earlier in this response.

PRIVATE ENTITY/INDIVIDUAL COMMENTS

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P1 – Barnhart, Kathlene (page 1 of 1)



Public Meeting Comment Form

Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor Environmental Impact Statement

Location: Ubu/Spo Date: 3-4-15

Thank you for your comments on the Land-Water Interface and Service Pier Extension Draft Environmental Impact Statement

Please use this form to record your comments on the Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor Draft Environmental Impact Statement (EIS). Comments must be postmarked or received electronically by **April 13, 2015**, to ensure they become part of the official record. All comments will be responded to in the Final EIS.

Please provide your comments on the adequacy and accuracy of the environmental analysis.

Please Print

* Please include LENGTH of riprap around abutments, not just area & volume

* Desired to see issues addressed that were brought up during scoping process

Name: Kathlene Barnhart

Organization/Affiliation: Kitsap County, DCD

Address: * 914 Division Street ME-36

City, State, Zip Code: Port Orchard, WA 98366

Please give this completed form to one of the project team representatives, or mail, email or submit online by **April 13, 2015**, to:

Naval Facilities Engineering Command Northwest
Attention: Mr. Thomas Dildine, LWI/SPE EIS Project Manager
 1101 Tautog Circle, Suite 203
 Silverdale, WA 98315-1101
 Email: nwnepa@navy.mil
 Website: www.nbkeis.com/lwi

*Provide your mailing address to receive future notices about the Land-Water Interface and Service Pier Extension EIS. Visit www.nbkeis.com/lwi for project information.

Response:

1. The requested information has been added in the FEIS.
2. Thank you for the comment.



Public Meeting Comment Form

Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor Environmental Impact Statement

Location: Poulsbo Date: 4 Mar 15

Thank you for your comments on the Land-Water Interface and Service Pier Extension Draft Environmental Impact Statement. Please use this form to record your comments on the Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor Draft Environmental Impact Statement (EIS). Comments must be postmarked or received electronically by **April 13, 2015**, to ensure they become part of the official record. All comments will be responded to in the Final EIS. Please provide your comments on the adequacy and accuracy of the environmental analysis.

Please Print

I recommend that you consider Alternate III for the pier extension. This will allow pre-side berthing for both submarines, rather than breasting out. Invariably it is the inboard boat that needs to get out.

The extra pier space will also allow for future growth and berthing space for visiting submarines.

What plans are there to upgrade Marginal Wharf

Name: Alan Beam
 Organization/Affiliation: Bremerton Navy League
 Address: * [Redacted] Tracyton WA 98393
 City, State, Zip Code: [Redacted]

Please give this completed form to one of the project team representatives, or mail, email or submit online by **April 13, 2015**, to:

Naval Facilities Engineering Command Northwest
 Attention: Mr. Thomas Dildine, LWI/SPE EIS Project Manager
 1101 Tautog Circle, Suite 203
 Silverdale, WA 98315-1101
 Email: nwnepa@navy.mil
 Website: www.nbkeis.com/lwi

*Provide your mailing address to receive future notices about the Land-Water Interface and Service Pier Extension EIS. Visit www.nbkeis.com/lwi for project information.

Response:

1. Although the long pier may offer operational advantages, the Navy has identified the short pier as the Preferred Alternative because it would have fewer environmental impacts and lower cost.
2. Upgrades to Marginal Wharf are not within the scope of the LWI/SPE EIS.

P3 – Bruns, Michele (page 1 of 1)

Michele Bruns

Subject: FW: Naval Base Kitsap Bangor EIS comment

-----Original Message-----

From: michele bruns [REDACTED]
Sent: Sunday, April 12, 2015 4:48 PM
To: Michele Bruns; NAVFAC NW NEPA
Subject: Naval Base Kitsap Bangor EIS

Your draft EIS states that there would be, during the months-long construction project, a large number of construction barges passing through Hood Canal and apparently requiring the closure of Hood Canal Bridge. Moreover, it states that one-way transits through this spot with Seawolf Class submarines would increase, I assume not temporarily, from .5 times per month to 2 times per month, a fourfold increase in bridge closures for that purpose alone.

The EIS MUST address the fact that the Hood Canal Bridge is a lifeline for thousands and every closure affects people trying to get to medical appointments, jobs, airline and train connections, events for which expensive tickets have been purchased, and often emergency medical care.

The Navy is not the only entity which causes bridge closures, but it has been the cause of many (sometimes up to 2 hours according to Navy statements!), and now you wish to burden the public with even more closures. The EIS needs to address, with an INDEPENDENT study, just what these additional closures will mean for the safety and physical welfare of citizens, as well as the economic impact. There is no reasonable alternative route for people to take.

The Navy needs to explain why it needs to increase this burden on law-abiding, tax-paying citizens, who have the right to travel freely on public roads paid for and maintained by their taxes. In August of 2013, I was traveling home from Seattle on this route. We (my brother who had leukemia, a Japanese family whom we had gone down to pick up after their long flight, and myself) were stuck for 2 1/2 hours in stopped traffic. It was a Friday afternoon, a time with a great deal of traffic headed to the Peninsula, and VERY hot. All those people. No water. No bathrooms for miles. I can't imagine how awful this was for the elderly, people with babies, pregnant women, etc. The word went down the line of cars that the long ordeal was caused by a Navy sub with escort. The response was anger because of the suffering and inconvenience. The public does NOT feel that the Navy is there to protect us when this is what we have to endure. Quite the opposite.

Respectfully, Michele T. Bruns

[REDACTED]
Port Townsend, WA 98368

Response:

1. The Navy regrets that openings of the Hood Canal Bridge would be unavoidable to allow passage of construction vessels and transits of SEAWOLF, LOS ANGELES, and VIRGINIA Class submarines. As stated in the EIS, the number of required openings would be minimized and timed to avoid peak commuting hours, 6:00 a.m. to 8:30 a.m. and 3:30 p.m. to 6:00 p.m. For the LWI preferred alternative, an average of 0.5 openings per month would be required, resulting in average delays of 30 minutes per month during one in-water construction season (July 15, 2016 through January 15, 2017). This is considered a minimal impact. For the SPE preferred alternative, an average of 12 bridge openings per month would be required, resulting in average delays of 6 hours per month during two in-water work seasons (July 15 through January 15 [construction years not yet known]). This would represent an increase of approximately one-third from the current number of openings and traffic delays; currently there are approximately 400-450 openings per year, or about 35 per month on average. This would be an unavoidable adverse impact that the Navy would minimize as described above. During operation, SEAWOLF, LOS ANGELES, and VIRGINIA Class submarines would be transiently moored at the SPE at NAVBASE Kitsap Bangor for maintenance and logistic support. Transits of these submarines, which do not require the same large escort group as the OHIO Class submarines, would result in approximately two additional openings of the Hood Canal Bridge per month, producing two additional traffic delays of about 30 minutes each. This would be an increase of approximately 5 percent over current conditions.



COMMENTS REPORTS

LOGOUT

Reviewing Comment 30...

Close/Cancel and Return to Comments

Approved N/A No Yes

Approved Date N/A

Reviewer N/A

Update Cancel

Submit Date 3/15/2015

Comment The most important things I see that need to be adressed with this new pier based upon my experance is as follows. 1. Subdet5 needs to keep its hands off any additions to the pier. I worked at Service a number of time for PSNS on the Jimmy Carter since it first arrived in 2005. Because DET5 owned 2/3 of the buiding the offices for the Shipyard and OE mangement team was stuffed into a very small space. Downstairs you had to put all the shops into a space that in most cases is smaller then the size of a single shop back at PSNS in Bremerton. The engineers had to be located up across from bldg. 7000 area because of the small space PSNS had on service pier. The other problem is parking PSNS built a parking lot north of the main DET5 buliding at their cost but right from the start DET 5 tried to clam the lot as their own. By 2006 everytime PSNS had an upkeep on the JIMMY CARTER starting in 2006 shop personnel had to park up the hill across from bldg 7000 and ride busses paid for by PSNS at a rate of \$70-90 per hour for one bus and one driver per shift of 2 shifts. Finally the services were lacking auch as having to lease abackup generator for shore power, proper heavy crane service (had to use one of PSNS's floating cranes. just to name a few problems. hopefully all these problem will be adressed. By the way I am a retired Submarine A-Ganger who was first on service pier on active duty in 1992 on the USS BREMERTON SSN698 when the pier was only have as wide as it is now. I retired later that same year on 9/30/92

1

Response:

1. Thank you for the comment.

E-mail [Redacted]
 Name May, Stephen
 Address [Redacted]
 City Port Orchard
 State WA
 Zip Code 98366

Top of Page

P5 – McCluskey, Kathy (page 1 of 1)

McCluskey, Kathy

From: Dildine, Thomas E CIV NAVFAC NW, OPSP [REDACTED]
Sent: Monday, March 09, 2015 8:52 AM
To: Turk, Ted R; Wallin, Jennifer M.
Subject: FW: Pier EIS comment
Signed By: [REDACTED]

Hi,

Comment from NWNNEPA email address.

Thanks

Tom

-----Original Message-----

From: Kathy McCluskey [REDACTED]
Sent: Saturday, March 07, 2015 8:33 PM
To: NAVFAC NW NEPA
Subject: Pier EIS

I'm writing to express my concern regarding the impact of additional openings of the hood canal bridge during construction of the pier and after addition of two subs. Bridge closures are intolerable already. This will only be worse. How does the navy plan to mitigate this impact. There are serious economic impacts to bridge delays as well as general inconvenience, highway backups and lost production.

Sent from my iPad

Response:

1. Please see response to Bruns Comment #1.

P6 – McLemore, Janice (page 1 of 1)

McLemore, Janice

From: Janice McLemore [REDACTED]
Sent: Sunday, March 01, 2015 12:39 PM
To: NAVFAC NW NEPA
Subject: Extension of Service Pier on Naval Base Kitsap Bangor

Naval Facilities Engineering Command Northwest
Attention: Mr Thomas Dildine

Dear Mr Dildine and Naval Facilities Engineering Command NW:

Thank you for the opportunity to respond to the environmental impact on Hood Canal because of proposed construction and operation of the extension of the service pier at Bangor.

Hood Canal and in fact the entire Puget Sound is stressed environmentally. With the effect of increased climate temperatures the stresses are increasing. Sea stars, as an indicator of the health of the Canal are diseased and dying. Increasing the naval activity on the Canal is not good for the health of the environment. Please figure out how to use what you already have without increasing the negative impact you make.

1

Furthermore, our country is spending more on military expenses than the combined budgets of most countries on the earth. We need to be focusing on caring for our earth, the people and animals on it, not blowing it up.

2

Please stop further construction of the new pier at Bangor.
Sincerely,
Janice McLemore

Response:

1. The Navy is dedicated to environmental stewardship while fulfilling its mission. On NAVBASE Kitsap Bangor this includes protecting the Hood Canal environment. As described in the EIS, the proposed LWI and SPE projects have been designed to minimize impacts to Hood Canal, and incorporate many mitigation measures, including compensatory habitat mitigation within Hood Canal (see Appendix C, Mitigation Action Plan, Section 6.0) to balance unavoidable impacts of the project. Although the project would contribute to cumulative impacts to the Hood Canal environment, the Navy’s proposed mitigation measures and actions would ensure that the project’s net contribution would not be significant.
2. The Navy recognizes that individuals may have different views on the most appropriate approach to the defense of the United States, and on priorities for spending taxpayers' money in the current financial climate. However, current U.S. government policy is that the TRIDENT submarine program remains a vital part of the nation's sea-based strategic deterrence mission. Per the April 2010 Nuclear Posture Review Report, "as long as nuclear weapons exist, the United States will sustain safe, secure, and effective nuclear forces. These nuclear forces will continue to play an essential role in deterring potential adversaries and reassuring allies and partners around the world." The LWI project is important to the security of the TRIDENT program submarines, facilities and personnel at NAVBASE Kitsap Bangor. The SPE is a critical project required to improve posture and surge capability in the Pacific area of responsibility (AOR) per the USFF/PACFLT. Every effort has been and will be made to minimize costs during the planning, design, construction, and operation of the LWI and SPE projects.

P7 – Sanford, Carolyn (page 1 of 1)



COMMENTS REPORTS

LOGOUT

Reviewing Comment 29...

Close/Cancel and Return to Comments

Approved N/A No Yes

Approved Date N/A

Reviewer N/A

Update Cancel

Submit Date 2/27/2015

Comment Re: Bangor, WA I want the Navy to get approval for the plan they prefer. I believe in their ability and expertise. We crab, fish and use the waterways affected. | 1

E-mail [Redacted]

Name sanford, carolyn

Address [Redacted]

City Brinnon

State WA

Zip Code

Top of Page

Response:

1. Thank you for the comment.



Public Meeting Comment Form
Land-Water Interface and Service Pier Extension on
Naval Base Kitsap Bangor Environmental Impact Statement

Location: POULSBO Date: 3-4-15

Thank you for your comments on the Land-Water Interface and Service Pier Extension Draft Environmental Impact Statement
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Please provide your comments on the adequacy and accuracy of the environmental analysis.
 Please Print

My CONCERNS:
 BRIDGE OPENINGS, INCREASED
 Even if it is only 50, 1/2 mile FROM MY
 house is enough TO upset me.
 Salmon Salmon Transit
 Preferred method Floating security
 barrier, service Pier Short pier

Name: Jim STRYCHARSKI
 Organization/Affiliation: Retired USN
 Address: * [REDACTED]
 City, State, Zip Code: POULSBO, WA 98370

Please give this completed form to one of the project team representatives, or mail, email or submit online by April 13, 2015, to:
 Naval Facilities Engineering Command Northwest
 Attention: Mr. Thomas Dildine, LWI/SPE EIS Project Manager
 1101 Tautog Circle, Suite 203
 Silverdale, WA 98315-1101
 Email: nwnepa@navy.mil
 Website: www.nbkeis.com/lwi

*Provide your mailing address to receive future notices about the Land-Water Interface and Service Pier Extension EIS.
 Visit www.nbkeis.com/lwi for project information.

Response:

1. Please see response to Bruns Comment #1.
2. Both the LWI and SPE projects have been designed to minimize impacts to salmon migration.
3. Thank you for the comment.



Public Meeting Comment Form

Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor Environmental Impact Statement

Location: NKHS - Paulsbo

Date: March 4, 2015

Thank you for your comments on the Land-Water Interface and Service Pier Extension Draft Environmental Impact Statement

Please use this form to record your comments on the Land-Water Interface and Service Pier Extension on Naval Base Kitsap Bangor Draft Environmental Impact Statement (EIS). Comments must be postmarked or received electronically by **April 13, 2015**, to ensure they become part of the official record. All comments will be responded to in the Final EIS.

Please provide your comments on the adequacy and accuracy of the environmental analysis.

Please Print

AS a tribal member, with family members that depend on commercial harvesting and subsistence living of natural resources, I hope the Navy acknowledges that the obstruction to habitat increases the fishing/harvesting efforts. I recommend that the Navy employ a tribal liaison with their projects, someone who understands Indian Law and understands the impact to tribal members when treaty rights are violated, overlooking the projects.

Name: Julianna Sullivan

Organization/Affiliation: PGST

Address: *

City, State, Zip Code: Kingston WA 98346

Please give this completed form to one of the project team representatives, or mail, email or submit online by **April 13, 2015**, to:

Naval Facilities Engineering Command Northwest
Attention: Mr. Thomas Dildine, LWI/SPE EIS Project Manager
1101 Tautog Circle, Suite 203
Silverdale, WA 98315-1101
Email: nwnepa@navy.mil
Website: www.nbkeis.com/lwi

*Provide your mailing address to receive future notices about the Land-Water Interface and Service Pier Extension EIS. Visit www.nbkeis.com/lwi for project information.

Response:

1. The Navy maintains both a tribal liaison officer and a Cultural Resources staff who are knowledgeable of tribal treaty rights, review all proposed Navy projects, and engage in government-to-government consultation with the tribes. Please also see the responses to Port Gamble S'Klallam Tribe Comments #5, #8, #9, and #10.



COMMENTS REPORTS

LOGOUT

Reviewing Comment 31...

Close/Cancel and Return to Comments

Approved N/A No Yes

Approved Date N/A

Reviewer N/A

Update Cancel

Submit Date 3/20/2015

Comment With the additional personnel being assigned onboard NBK Bangor, is there going to be additional traffic lanes opened for access onto the base and operational area to relieve some of the traffic backlogs that occur? The last modification to base entry requirements has already caused significant increases in traffic back-ups when accessing the base in the mornings, additional personnel assigned to the base could result in those back-ups extending out onto the highways, posing serious safety issues for personnel. The amounts of automobile exhaust discharged while idling in line to access the base/operational areas should be factored in this as well.

1

2

E-mail [Redacted]

Name Waters, Steven

Address [Redacted]

City Seabeck

State WA

Zip Code 98380

Top of Page

Response:

1. The proposed actions are not expected to result in back-ups of traffic onto highways near the base. Construction of the two projects would not overlap. A maximum of 100 construction workers is expected for the LWI, and 225 workers for the SPE. Ongoing construction of the second Explosives Handling Wharf (EHW-2) has required a maximum of 260 workers and has not resulted in traffic back-ups onto nearby highways.
2. Emissions from vehicles waiting to enter the base will be localized and temporary and would not have a significant effect on air quality in the region.