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Permit Modification Request
Boat Haven Breakwater Repair
NWS-2019-390; WCRO-2020-00202
Port of Port Townsend, Jefferson County, Washington

Dear Josh Taylor,

The Port of Port Townsend (Port) is requesting a permit modification from the U.S. Army Corps of Engineers (USACE) to modify the footprint of permitted repair for the Boat Haven Breakwater Repair (Project) located in Port Townsend, Jefferson County, Washington (Appendix A). The permit modification will allow the Port to consume the available conservation credits generated by the linked Point Hudson Breakwater Replacement project. According to the Biological Opinion issued by NMFS on February 23, 2022 (WCRO-2021-00301; NWS-2021-139), the positive conservation credits generated by the Point Hudson project are to be applied to offset the debits associated with the Boat Haven Breakwater Repair (WCRO-2020-00202; NWS-2019-390) or another Port of Port Townsend nearshore project within the same Puget Sound marine basin.

This memorandum summarizes the formal consultation history and the availability of advance mitigation credits for the Project. It also describes the proposed permit modification (Appendix B), summarizes the evaluation of the additional work in the latest Puget Sound Nearshore Habitat Conservation Calculator (PSNHCC) v1.6 (Appendix C), and outlines how the additional work fits into the previously evaluated effects of the Project.

Consultation History

The Boat Haven Breakwater Repair project originally initiated Section 7 consultation through the U.S. Army Corps of Engineers, Seattle District, as the federal nexus for the project was a requirement of a federal permit and authorization from the USACE. The Project underwent consultation concurrently with the Point Hudson Breakwater Replacement (NWS-2021-139; WCRO-2020-00301), another Port project within the Hood Canal Marine Basin service area of Puget Sound. The impacts of both Port projects were evaluated with the Puget Sound Nearshore Habitat Conservation Calculator (PSNHCC) v1.3 with the intention that surplus credits generated at Point Hudson would provide advance mitigation for the Boat Haven Breakwater Repair or another Port nearshore project within the same Puget Sound marine basin. It was estimated that the Point Hudson Breakwater Replacement would generate +265 surplus credits (Appendix D, pg. 2, 3, & 12), providing advance mitigation for the Boat Haven Breakwater Repair.

Consultation with the Services was requested on August 5, 2019. USFWS issued their concurrence on February 3, 2020 (0lEWFW00-2019-1-1479) (Appendix E). NMFS issued a batched Biological Opinion on September 30, 2021 (WCRO-2021-01620), *Issuance of Permits for 11 Projects under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for Actions related to Structures in the Nearshore Environment of Puget Sound*, including the Boat Haven Breakwater project (WCRO-2020-00202; NWS-2019-390) (Appendix F). USFWS concurred that the proposed project "may affect, but is not likely to adversely affect" federally-listed species. NMFS determined in their biological opinion that the proposed action is likely to jeopardize the continued existence of Puget Sound Chinook salmon and the Southern Resident Killer Whale (SRKW) and adversely modify the designated critical habitats of these species. NMFS further concluded that the proposed action to repair 5,320 square feet of the breakwater would result in habitat loss equivalent to -201 debits (Appendix F, pg. 188), requiring compensatory conservation action to offset project debits with conservation credits. As +265 credits were anticipated to be generated by the Point Hudson Breakwater Replacement, USACE issued the permit for the repair of a portion (approximately 360 linear feet) of the Port-owned breakwater (NWS-2019-390) on April 29, 2022 (Appendix G).

Surplus Conservation Credits

The recently completed Point Hudson Breakwater Replacement project is located 1.15 miles northeast of the proposed Boat Haven Breakwater Repair. Both projects are within Port Townsend Bay in the Hood Canal Marine Basin service area of Puget Sound. When evaluated post-construction with the PSNHCC, the Point Hudson project resulted in net positive conservation credits from removing 684.43 tons of creosote piles from the nearshore environment. NMFS verified the Point Hudson final post-construction calculator on May 2, 2024, which determined that the project would generate +587 conservation credits, ensuring no net loss of habitat function (Appendix H).

Project Description

The Project is currently permitted to repair 5,320 square feet (WCRO-2021-01620) or 360 linear feet (NWS-2019-390) of the Port-owned section of Breakwater. Upon further assessments by the Port, additional areas requiring repairs were identified. Due to damage by wave action, areas of riprap have been lost to sloughing, resulting in the exposure of the native sand core of the Breakwater. As a result, the Port proposes to modify the permitted work to repair approximately 18,000 SF or 782 LF of the Port-owned section of Breakwater. The requested permit modification is necessary to repair the Port-owned section of the breakwater in a manner that addresses all areas requiring repair, prevents the continued erosion of the native sand core, provides maximum scour protection, reduces future maintenance, and is structurally and aesthetically consistent with the USACE-owned portion of the breakwater. During the permitting process, the entire Port-owned section of the breakwater received concurrence from the State Historic Preservation Officer (SHPO) that no historic structures would be affected (Appendix I). Therefore, the additional work has already been evaluated under Section 106 of the National Historic Preservation Act of 1966.

General Project Description

The modified Project will repair approximately 18,000 SF or 782 LF of the Port-owned section of the Boat Haven Breakwater through a combination of stabilizing, rebuilding, and filling slopes to prevent the continued erosion of the exposed native sand core and achieve a consistent grade that is structurally and aesthetically consistent with the USACE-owned portion of the Breakwater. The proposed repair

design would excavate 259 CY of existing rock riprap and sand over 4,022 SF of the Breakwater slopes. The removed material will be stockpiled on top of the Breakwater or a barge until it is hauled off-site for disposal at an approved upland location. Fill material will consist of 259 CY of replacement and 417 CY of new quarry spalls and Class A and Class C riprap from an approved commercial source, totaling 676 CY of fill over 18,000 SF of the Breakwater (Table 1). As further assessments by the Port did not identify any areas of exposure below +5 MLLW, the modified design will raise the lower work limits to +2 MLLW, allowing 100% of the work to be constructed in the dry during low tides. All work below the HTL (+9.99 MLLW) will be conducted during the previously approved in-water work window from July 16 through February 15 and restricted within the existing footprint of the Breakwater structure.

Table 1. Waterbody Impact Summary

Activity	Material	CY	Total CY	SF
Excavate	Existing Rock Riprap and Sand	259	259	4,022
Fill	Replacement Quarry Spalls and Riprap	259	676	18,000
	New Quarry Spalls and Riprap	417		

Detailed Project Description

The Port proposes the following activities and resulting waterbody impacts (Table 2) to repair the Port-owned section of the Boat Haven Breakwater in Port Townsend Bay, Puget Sound.

Table 2. Proposed Waterbody Impacts in Port Townsend Bay, Puget Sound

Section	Activity	Waterbody Name	Impact Location	Duration of Impact	Amount of Material (CY) to be placed in or removed from water body	Area (SF / LF) of waterbody directly affected	
						SF	LF
A	Excavate	Port Townsend Bay	In	Permanent	258	3,489	408
	Fill	Port Townsend Bay	In	Permanent	329	3,489	408
B	Excavate	Port Townsend Bay	In	Permanent	1	533	223
	Fill	Port Townsend Bay	In	Permanent	6	533	223
C	Fill	Port Townsend Bay	In	Permanent	41	750	76
D	Fill	Port Townsend Bay	In	Permanent	27	500	50
E	Fill	Port Townsend Bay	In	Permanent	14	250	25

Section A will be prepared by removing the existing riprap and native sand using an excavator from elevation +5 MLLW to +18 MLLW. Next, the existing rock below the work area from elevation +2 MLLW to +5 MLLW will be compacted with an excavator bucket and plate compactor. This process will ensure a stable foundation for the rebuilt section and prevent any additional rock from sloughing off the Breakwater surface into the water. No PSNHCC impacts are assessed for stabilization, only the addition

of new material. The prepared area will be lined with geotextile fabric before backfilling with a 1-foot thickness of quarry spalls topped with a 2-foot thickness of Class A Riprap.

Section B will be prepared by removing the existing riprap and native sand from elevation +10 MLLW to +18 MLLW using an excavator. Next, the existing rock below the work area from elevation +5 MLLW to +10 MLLW will be repositioned with an excavator bucket. This process will ensure a stable foundation for the rebuilt section and prevent any additional rock from sloughing off the breakwater surface into the water. No PSNHCC impacts are assessed for stabilization, only the addition of new material. The prepared area will be lined with geotextile fabric before backfilling with a 1-foot thickness of quarry spalls topped with a 5-foot thickness of Class C Riprap.

Section C will be stabilized using an excavator to reposition existing rock from elevation +5 MLLW to +9 MLLW. No PSNHCC impacts are assessed for stabilization, only the addition of new material. Above the stabilized area will be backfilled with Class C riprap from elevation +9 MLLW to +18 MLLW to repair the slope to a consistent grade.

Section D will be stabilized using an excavator to reposition existing rock from elevation +2 MLLW to +6 MLLW, then backfilled with Class C riprap from elevation +2 MLLW to +14.5 MLLW to repair the slope to a consistent grade.

Section E will be stabilized using an excavator to reposition existing rock from elevation +2 MLLW to +6 MLLW, then backfilled with Class C riprap from elevation +4 MLLW to +18 MLLW to repair the slope to a consistent grade.

Required Mitigation

The Port has been undergoing informal consultation during numerous attendances of Nearshore Calculator Expert Office Hours with Nissa Rudh at NOAA to develop the PSNHCC for the permit modification. The use of a percent existing rock coverage impact adjustment factor was approved, as the Port is not seeking removal credit for the repair areas. This will result in no PSNHCC impacts for stabilization work (compacting and repositioning existing rock), only the addition of new material.

The project will make repairs over an 18,000 SF work area of the Boat Haven Breakwater. However, the existing rock riprap coverage in Section A, the navigation channel side, is approximately 25%, and the coverage in Section B, the bay side, is approximately 75%. Therefore, only 75% and 25% of the repair areas represent new impacts. Impact reduction factors have been applied to account for the disparity between the size of the repair area versus the impact areas, resulting in the new nearshore habitat impacts being quantified at 9,125 SF. The strategically targeted locations have 100% existing rock coverage; thus, no impact reduction factor is applied to 1,500 SF of fill activities. The new nearshore habitat impacts resulting from the project will total 10,625 SF. 5,320 SF of these impacts were evaluated in PSNHCC v1.3, leaving 5,305 SF of additional impacts to be evaluated in v1.6 (Table 3).

Table 3. New Impacts as Quantified with Impact Adjustment Factors for Existing Rock Coverage

New Impact Summary	Work Area (SF)	Existing Rock Coverage	Impact Adjustment Factor (SF*(1-Exist Coverage))	New Impacts (SF)
Slope Rebuilding, Sections A & B	10,000	0.25	0.75	7,500
	6,500	0.75	0.25	1,625

Targeted Fill, Sections C, D, & E	1,500	1	1	1,500
Total New Impacts	18,000	0.25-1	0-0.75	10,625
Previously Permitted Impacts	-	-	-	-5,320
Additional Impacts Evaluated in PSNHCC v1.6	-	-	-	5,305

The original permit authorized 5,320 SF of repairs for -201 debits, leaving +386 credits remaining of the +587 credits generated at Point Hudson (Appendix H). Evaluating the additional new impacts of 5,305 SF with PSNHCC v1.6 results in -246 debits (Appendix C), demonstrating that the proposed modification does not exceed the available conservation credits (Table 4), thus will not result in a loss of nearshore habitat functions or values.

Table 4. PSNHCC Conservation Debit/Credit Ledger

PSNHCC Evaluations	Debit/Credit
Previously Permitted Impacts (5,320 SF)	-201
Tied Credits Generated by Point Hudson	+587
Remaining Available Credits	+386
Additional New Impacts (5,305 SF)	-246
Credit Balance	+140

Justification for Extension of Coverage to Additional Work

While the construction of the additional work will increase the area and duration of impacts, the exposure pathways to ESA-listed species and habitats remain the same as evaluated during the original consultation. The work will occur within the footprint of the existing structure, and the methods will be traditional, follow industry standards, and employ BMPs to protect aquatic habitats, as previously evaluated. In addition, work below the HTL will be restricted to the previously approved in-water work window from July 16 through February 15 and conducted in the dry during low tides to avoid and minimize waterbody impacts.

Offsetting the impacts for the additional work area and increased duration of effects simply requires additional mitigation. The Project will consume -246 of the additional +386 conservation credits generated through creosote removal by the tied Point Hudson Breakwater Replacement project. The work to generate these credits was completed in February 2024 and verified by NMFS on May 2, 2024, providing a temporal lag between the mitigation and nearshore impacts. This ensures no net loss of function and value will result from the proposed project.

The Port of Port Townsend requests your assistance in obtaining approval for the permit modification for the Boat Haven Breakwater Repair project. We believe this memorandum provides a sufficient description of the proposed work modifications, summarizes the evaluation of additional impacts in the PSNHCC, and outlines the justification for extending coverage to the additional effects of the action. Should you have any questions about this memorandum or require additional information, please contact Ross Widener at (425) 332-3961 or ross@widener-enviro.com.

Sincerely,

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Transportation & Environmental Planning
1902 120th PL. SE. STE 202 Everett, WA 98208
Tel (425)-332-3961

Ross Widener
Widener & Associates

Appendix A – Location

Figure 1: Vicinity Map

Boat Haven Breakwater Project

Port of Port Townsend, Jefferson County, Washington
Township 30N, Range 01W, Section 11

Project Area

0 0.45 0.9 1.35 1.8 Miles

N

Appendix B – JARPA Drawings for Permit Modification

Appendix C – Boat Haven Breakwater Repair Additional Work PSNHCC v1.6 [WCRO-2021-00301; NWS-2021-139]

Blue cells contain section headings.
Orange cells describe information needed.
Grey cells describe units requested for entry.
Yellow cells indicate user entry fields.
Green cells contain additional explanations, notes, and resource links.
Maroon cells contain summary values.

Action Agency Reference #	NWS-2019-390
FWS or NMFS #	WCRO-2020-00202
Project Name:	Boat Haven Breakwater Repair-Permit Modification
Prepared on and by: (Add each update)	C.Petraccaro 02/07/25

Puget Sound Nearshore Habitat Conservation Calculator

	Version 1.6	**3/22/2024**

This tool determines long-term habitat impacts and benefits for projects in the Salish Sea nearshore. Details about the use of this Conservation Calculator can be found in the User Guide, FAQs, and training materials, which are all available on the Puget Sound Nearshore Habitat Conservation Calculator Webpage

		Conservation Credits/Debits	**DSAYs (Discounted Service Acre Years)**
Overwater Structures	Debit	0	**0.00**
	Credit (includes creosote removal)	0	**0.00**
	Balance	**0**	**0.00**
Shoreline Armoring	Debit	0	**0.00**
	Credit from Armor Removal	0	**0.00**
	Credit from Creosote Removal	0	**0.00**
	Balance	**0**	**0.00**
Maintenance Dredging	**Balance**	**0**	**0.00**
Boatramps, Jetties, Rubble	Debit	-246	**-2.46**
	Credit	0	**0.00**
	Balance	**-246**	**-2.46**
Riparian Enhancement/Degradation	**Balance**	**0**	**0.00**
SAV Planting	**Conservation Credit**	**0**	**0.00**
Habitat Loss / Remaining Conservation Offsets Needed		**-246**	**-2.46**
Is this a standalone restoration project?*	**No**		

* Standalone restoration actions are actions that can be executed outside of a replacement or construction of new structures. They have no negative long term habitat impacts. A standalone restoration action solely restores or improves habitat functions. It does not introduce new or temporally extend adverse effects aside from construction-related effects. Standalone restoration projects include removal of a structure (that has adverse effects) without its replacement.