

**THE NORTHWEST SEAPORT ALLIANCE**  
**MEMORANDUM**

**MANAGING MEMBERS**  
**STAFF BRIEFING**

Item No.	10A
Date of Meeting	March 7, 2023

**DATE:** February 24, 2023

**TO:** Managing Members

**FROM:** John Wolfe, CEO  
**Sponsor:** Tong Zhu, Chief Commercial & Strategy Officer  
**Project Manager:** Tony Warfield, Senior Manager Permitting

**SUBJECT:** Blair Waterway Deepening Program

**A. SYNOPSIS**

In August 2018, the Northwest Seaport Alliance (NWSA) signed an agreement with the US Army Corps of Engineers to conduct a feasibility study of deepening the Blair Waterway navigation channel in Tacoma. That study was completed May 2022 with a signed Chief's Report and recommendation that the project move forward. Congress authorized the project and approved funding in December of 2022. The Port of Tacoma (Port) and NWSA are now studying the parameters of a comprehensive Blair Waterway deepening program in an effort to modernize the waterway and prepare for larger ships requiring more depth.

**B. BACKGROUND**

Container ships are getting much larger. Previously ships generally carried a few thousand twenty-foot equivalent units (TEUs). Now ships are calling the Puget Sound gateway that are often twelve to fifteen thousand TEUs. Soon ships carrying eighteen plus thousand TEUs will be typical. As ships have gotten larger their draft requirements have significantly increased. In the 1990's depths<sup>1</sup> of forty-two feet would suffice. In the earlier part of this century fifty-one feet of depth was necessary. Going forward, depths of approximately fifty-seven feet will be necessary.

To remain competitive in the international container shipping business, ports must be able to handle the largest ships calling at their locations. For Seattle and Tacoma Harbors that means handling super post Panamax ships carrying eighteen thousand plus TEUs. To do so navigation channels and berth areas at international terminals must be deepened to approximately minus 57 feet plus two feet of over dredge.

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<sup>1</sup> Depths are measured from a tide of zero feet which is defined as Mean Lower Low Water (MLLW).

### **C. CURRENT STATUS**

After a multi-year effort between the NWSA and Army Corps of Engineers (Corps) we are pleased to report Congress has authorized and funded the design and construction effort for deepening the federal navigation channel in the Blair Waterway. Port Staff are beginning the negotiations to complete a design agreement with the Seattle Corps District. The Port/Corps mutual goal is to complete this process in Q3 of 2023.

NWSA Commercial leadership is meeting with customers to discuss the projects' scope, timing, and potential impacts to operations. These communication efforts with customers are on-going.

### **D. ALTERNATIVES CONSIDERED**

The feasibility study looked at multiple options including:

- a. Blair and Sitcum Waterways: At the beginning of the scoping effort both the Blair and Sitcum waterways were considered for the study. The Sitcum was dropped early at the request of the NWSA as it does not currently have a federal navigation channel and a much less certain future need to accommodate ultra-large ships.
- b. Range of deepening depths: The Corps studied a range of depths from deepening to -55' down to -58'.
- c. How much of the Blair Waterway to deepen: The study considered dredging only the northern portion of the Blair through the Husky terminal, dredging the northern and middle section through Washington United Terminals and the whole waterway through the turning basin.
- d. 100% open water disposal of suitable sediments vs. beneficial use of some material for habitat construction: The study considered a significant habitat restoration project along Marine View Drive in an area the Port has referred to as Saltchuk. It also considered taking all dredge material to the Commencement Bay Open Water Disposal facility. The large habitat project as conceptually designed was opposed by the Puget Sound Pilots and US Coast Guard for fear it would impinge on the Hylebos navigation channel. The Puyallup Tribe of Indians (Tribe) also opposed the large habitat project for environmental reasons. However, the Tribe has consistently said they will consider a habitat project of more limited scope focused on the beach area during the design process.
- e. No Action: Do not deepen the Blair Waterway, maintain the current -51' depth as necessary.
- f. Preferred Action: The study found that the preferred federal action is to deepen the entire Blair Waterway to a depth of -57', including the Turning Basin. That alternative maximizes the benefit/cost ratio at slightly over 10. The working assumption for non-federal actions is to strengthen the slopes and deepen the berths at least at Husky and WUT with improvements to Pierce County Terminal under consideration but not in

the current scope.

## E. CURRENT CONCEPTUAL SCOPE OF WORK

Design: There are two major components to the Program's design process. The first component is the Preconstruction Engineering and Design (PED) process managed by the Corps for the federal navigation channel. Negotiations on a design agreement between the Port of Tacoma and the Corps are just beginning. Staff anticipate seeking authorization to enter into the agreement from the Port of Tacoma Commission this summer. The second component is the design process for berth deepening, which is a NWSA led effort. Staff intend to bring authorization requests for Husky and WUT berth deepening design to the Managing members Summer 2023.

*Navigation Channel Design Schedule: 2023-2025*

*Berth Area Design<sup>2</sup> Schedule: 2023-2025*

*Navigation Channel - Port Estimated Contribution to Design Cost: \$5.25M*

*Berth Area -NWSA Estimated Design Cost: \$4.7M*

Phase 1 Construction: (Note: Cost responsibility between the NWSA, the Port of Tacoma, and the Corps will be addressed in the Finance section below) Phase 1 construction includes preparing for and dredging the Blair Waterway from its northern entrance through the Husky terminal. This will include:

- Standing up a sediment dewatering facility to dewater sediments that are unsuitable for open water disposal prior to transport and upland disposal.
- Removing contaminated sediment in front of the Tru-Grit facility to avoid that material sloughing into the channel during the Corps dredge work. That work would likely be conducted as an action under the Model Toxics Control Act (MTCA). This will allow the Corps work to proceed much faster (mitigating potential schedule risk).
- Install toe-wall at Husky Pier 3. This strengthens the slope and is required prior to berth dredging. A toe wall is assumed not to be required at Pier 4 which was designed for berth deepening.
- Dredge Husky berth area.
- Dredge northern portion of the navigation channel to just south of Husky (Corps managed work).
- Construct habitat along Marine View Drive (Saltchuk) as deemed feasible in design.

*Phase 1 Construction Schedule: 2025-2027*

*Phase 1 Construction Estimated Costs: \$37.5M + Tru-Grit cleanup + Saltchuk*

*Phase 1 Construction Expected Results: The Blair Waterway including the navigational channel and Husky berth areas are modernized to accommodate super-post Panamax ships. Wood waste is remediated at the Port's*

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<sup>2</sup> Berth area design costs include civil and structural design, sediment characterization (chemical analysis), geotechnical investigations and permitting.

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Department of Natural Resources lease hold along Marine View Drive (Saltchuk) and habitat improvements are constructed as deemed feasible in design. Construction of the toe wall and berth dredging will make portions of Husky terminal's preferential berthing and leased acreage unavailable for a period of time. Staff is negotiating with Husky to minimize the impact to NWSA revenue during the construction.

Phase 2 Construction: Phase 2 construction deepens the Blair Waterway from the south end of Husky through the south end of WUT and will include:

- Installing a toe-wall at all but approximately 600' at the southern end of WUT. This strengthens the slope and is required prior to berth dredging. Assumed not to be required in the southern 600' as that extension was designed for berth deepening.
- Deepening the berth area at WUT.
- Bank cutback to widen channel<sup>3</sup>.
- Deepen navigation channel from the south end of Husky through the south end of WUT.

*Phase 2 Construction Schedule: 2026-2028*

*Phase 2 Construction Estimated Costs: \$62.5*

*Phase 2 Construction Expected Results:* The Blair Waterway including the navigational channel and Husky and WUT berth areas are modernized to accommodate super-post Panamax ships. The Tribe's adjacent property is readied for future maritime development. Construction of the toe wall and berth dredging will make portions of WUT preferential berthing and leased acreage unavailable for a period of time. Staff is negotiating with WUT to minimize the impact to NWSA revenue during the construction.

Phase 3 Construction: Phase 3 construction deepens the Blair Waterway's turning basin. This will include:

- Dredging the navigation channel from the south end of WUT through the turning basin.

Pierce County Terminal berth improvements are not currently in the program budget and are subject to Commercial conversations.

*Phase 3 Construction Schedule: 2028-2029*

*Phase 3 Construction Estimated Costs: \$27.4M*

- *Phase 3 Construction Expected Results:* The entire Blair Waterway including the navigational channel, and Husky and WUT berth areas are modernized to accommodate super-post Panamax ships.

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<sup>3</sup> This cutback area is on Tribal property near the old Emerald Queen Casino boat and the Tribe's Blair Backup Property. The Port of Tacoma and Puyallup Tribe of Indians have agreements in place regarding this cutback.

**F. FINANCIAL IMPLICATIONS**

	<b>Year</b>	<b>Action</b>	<b>Cost (\$ Millions)</b>
<b>Toe Walls and Berth Deepening (NWSA)*</b>	2023	2023 – Design/Permitting	3.2
	2024	2024 – Design/Permitting -	1.5
	2025	2025 – Construction Husky	12.1
	2026	2026 – Construction Husky	6.1
	2026	2027 – Construction WUT	18.9
	2027	2028 – Construction WUT	9.4
		<b>NWSA Subtotal</b>	

\* Toe Walls are eligible costs under the Harbor Maintenance Tax. Deepening is not eligible for HMT funding.

<b>Channel Deepening (POT Portion)**</b>	2023	Preconstruction Engineering and Design**	2.1
	2024	Preconstruction Engineering and Design	2.1
	2025	Preconstruction Engineering and Design	1.05
	2025	Channel Dredging to Husky <sup>2</sup>	9.7
	2026	Channel Dredging to Husky	9.7
	2027	Channel Dredging to WUT	17.1
	2028	Channel Dredging to WUT	17.1
	2029	Channel Dredging to PCT / Turning Basin	13.7
	2030	Channel Dredging to PCT / Turning Basin	13.7
		<b>Port of Tacoma Subtotal (without habitat and cleanup)</b>	

<b>Other (POT)</b>	2023	Habitat Design and Permitting	TBD
	2024	Habitat Design and Permitting	TBD
	2023	Tru-Grit Remedial Investigation	TBD
	2024	Tru-Grit Remedial Investigation	TBD
	2025	Tru-Grit Dredging	TBD
	2025	Habitat Construction	TBD
	2026	Habitat Construction	TBD
		<b>Sub-total other costs</b>	

Staff recommends the use of Harbor Maintenance Tax on the toe wall installation at Husky and WUT and any other eligible portions of this project as identified during the design phase. Funding of the NWSA’s portion will come from the two

home ports (less any HMT funds). Funding sources of the Port of Tacoma's portion will be determined based on the Plan of Finance.

**G. PREVIOUS ACTIONS OR BRIEFINGS**

<u>Date</u>	<u>Action</u>	<u>Amount</u>
August 14, 2018	Managing Members Authorization for Feasibility Study	\$1,500,000
December 3, 2019	Managing Members Briefing	\$0
April 7, 2020	Managing Members Increase in Authorization for Feasibility Study	\$129,000
	TOTAL	<b>\$1,629,000</b>

**H. NEXT STEPS (2023-2024)**

1. Complete initial Commercial conversations with customers on project scope and operational and financial impacts of construction.
2. Complete design agreement with Corps.
3. Issue Requests for Qualifications (RFQ) for sediment characterization.
4. Seek Authorization and complete sediment characterizations (both NWSA/POT Action).
5. Issue RFQ for berth area design and permitting team.
6. Seek Authorization for and complete design of berth deepening projects (NWSA Action)
7. Work with Tribal environmental and fisheries staff on design alternatives for habitat improvements along Marine View Drive.
8. Begin permitting for berth deepening areas.