

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

**MANAGING MEMBERS**  
**ACTION ITEM**

**Item No.** 4E  
**Date of Meeting** August 14, 2018

**DATE:** July 31, 2018  
**TO:** Managing Members  
**FROM:** John Wolfe, Chief Executive Officer  
**Sponsor:** Tong Zhu, Chief Commercial Officer  
**Project Manager:** Tony Warfield, Environmental Senior Project Manager  
**SUBJECT:** Tacoma Harbor Deepening Study

**A. ACTION REQUESTED**

Request Managing Members of the Northwest Seaport Alliance (NWSA) authorization for the Chief Executive Officer or his delegate to sign a Feasibility Cost Share Agreement with the US Army Corps of Engineers to study the feasibility of deepening the navigation channels in the Tacoma Harbor and obligate the NWSA to funding \$1,500,000 of the study as the non-federal sponsor.

**B. SYNOPSIS**

The US Army Corps of Engineers (Corps) maintains the federal navigation channels in the United States. Corps projects to improve federal waterways follow a set process that begins with a study to determine the federal interest to make the improvements. The process takes place under the Corps' 3x3x3 Smart Planning process, and is expected to take no longer than 3 years and cost no more than \$3 million. The Port, as the non-federal sponsor, is obligated to pay 50% of the cost of the study, or \$1.5M. The Port of Tacoma has asked the Corps to study the feasibility of deepening the Blair and Sitcum Waterways to accommodate big ships. Money was allocated to the study by the Federal Government in the 2018 Corps Work Plan. The Feasibility Cost Share Agreement must be signed in August 2018 for the work to take place.

**C. BACKGROUND**

The shipping industry is rapidly increasing the size of ships to realize savings through economies of scale. These ships can carry more containers, lowering the unit cost per container when factoring in the costs of assets and fuel. Smaller, less efficient ships are leaving the market and being scrapped. Within 10 years, The Northwest Seaport Alliance has seen an increase in the average ship size, and now sees regular calls of ships in the 10,000-14,000 TEU range. Almost all of the new ships being built are larger than 10,000 TEU. The

industry is also consolidating into fewer, larger shipping lines. The top 5 shipping lines control 79% of the fleet capacity of ships 9,000 TEU or larger.

Ports in North America are investing in infrastructure to handle these ships efficiently, and the evolution of ship size is likely to mean consolidation of the industry to fewer, larger terminals that can handle large ships efficiently. These ships have drafts up to 54'. With the additional 10% of draft under keel required by the Puget Sound Pilots for safe transit, channel depth needed for a fully laden ship is -57' at Mean Lower Low Water (MLLW). Currently the berths and navigation channels in the Tacoma Harbor, the Blair and Sitcum Waterways, are 50--51' MLLW.

The Port of Prince Rupert has 60' of water or deeper at berth, and the Ports of LA and Long Beach have either completed projects, or are in the planning process, to construct deeper channels and berths at the majority of their container terminals.

Because the Pacific Northwest is rich in export cargo like seafood, agricultural and forest products which are very heavy, ships need to be able to arrive and depart our port at their fully-laden draft. If ships are restricted in movement by depth, they must either depart without a full payload of cargo or wait on the tide for enough water. These measures create financial and operational impacts through less efficient ship and terminal operations. Less efficient ship economics could mean our gateway loses future business to those ports with water depth to handle them.

Navigation improvement projects take 10 years or longer. The Port of Seattle started the deepening process in 2012, with a study finally being funded and begun in 2014. Final completion of the entire project isn't expected until 2031. The Seattle Harbor Feasibility Study and associated cost transitioned to the NWSA upon formation of the Alliance. Similarly, the NWSA will fund the study for the Tacoma Harbor. It is still up to the Managing Members to decide whether funding of the next stages of the projects (Preconstruction Engineering & Design or PED, and Construction) will be paid by the home port or by the NWSA. The Seattle project completed the Feasibility Study in June 2018 and is moving through congress for authorization and then funding of the next phases of the project.

**Feasibility Process** The Corps process for a Feasibility Study consists of various milestones, culminating in the final Chief's Report that is sent to Congress. The non-federal sponsor participates in the study in multiple ways, including performing designated work in-kind in lieu of cash funding. In the Seattle study, this consisted of staff time for management of the study and meetings with the Corps, costs associated with public National Environmental Policy Act (NEPA) outreach meetings, contracts for outside vendors to conduct cargo and vessel forecasts, graphics for the presentation materials and study documents, sediment sampling, data for the economic study, and other information, as well as expenses for two pilots to attend a ship simulation at the Corps' Engineer Research and Development Center in Vicksburg, MS. It is expected that similar work will be performed by NWSA and Port of Tacoma for the Tacoma Harbor study.

Feasibility Study milestones include the following stages:

Alternatives Milestone – public scoping meetings, forecast future with/without project scenarios and arrive at alternatives to be studied.

Tentatively Selected Plan Milestone – the team more fully develops the best alternatives, identifies costs to implement each alternative, performs a cost/benefit analysis, sometimes performs a ship simulation, and arrives at a plan that is in the national interest according to its National Economic Development objectives and modeling.

Agency Decision Milestone – feasibility level analysis including environmental review, agency technical review, additional public review and initial policy review, assessment of public comments.

Civil Works Review Milestone – more thorough review of the analysis, some design work completed, certification of cost estimates and other work, complete policy review.

Final Report Milestone – Final report released to Chief of Engineers

Chief's Report Milestone – Chief of Engineers signs and send to Congress for authorization.

After the Feasibility Study is authorized and funding is appropriated, the next project stages are Pre-Construction Engineering and Design (PED) and Construction. The non-federal sponsor also has a cost share obligation for these next stages, with a more varied percentage rate. Estimates of cost will be developed in Feasibility and refined in PED. Because berth infrastructure must also be at a depth to support the deepening, it is expected that the waterway improvements will take place in the outer reaches rather than the entire Blair Waterway.

## **D. FINANCIAL IMPLICATIONS**

### ***Source of Funds***

The current Capital Investment Plan (CIP) allocates \$1,500,000 for this project. From that total, \$500,000 will be transmitted to the Corps in 2018, matching the \$500,000 they received in the 2018 federal work plan budget.

### ***Financial Impact***

Project costs will be expensed as incurred. This expense was included in the 2018 budget and 2019-2020 forecast at \$500,000 per year for three years.

## **E. ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS**

- **No Action Alternative:** Do not sign cost share agreement. Larger ships may experience draft limitations when fully laden. As the number of shipping lines and services are reduced

with the deployment of fewer larger ships, the NWSA may continue to see an erosion of ship calls to other deeper gateways.

- **Recommended Action:** Conduct feasibility study to position the NWSA to handle big ships into the future.

#### **F. ENVIRONMENTAL IMPACTS/REVIEW**

A full environmental assessment will be performed by the US Army Corps of Engineers as part of the feasibility study, and will be made available for public review and comment. Elements of the review included habitat, benthic organisms and other wildlife, water quality, air quality, hydrology, cultural resources, hazardous and toxic waste, and public health and safety. The NWSA and Port of Tacoma will be able to contribute to and make comments on the review.

#### **G. ATTACHMENTS TO THIS REQUEST**

- Computer slide presentation.
- Draft Feasibility Cost Share Agreement
- Letter to Corps requesting the study.

#### **H. PREVIOUS ACTIONS OR BRIEFINGS**

December 5, 2017 Briefing to MM on Seattle Harbor Deepening project and work to begin Tacoma Harbor Feasibility study with the Corps.