

Port of Everett Pacific Terminal Dredging Project, Everett, Washington: An Integrated Navigational and Environmental Cleanup Dredging Project

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Background/Objectives. This case study highlights the Port of Everett's (Port) approach to integrate environmental cleanup with its business needs and presents technical challenges that were overcome by its team during the project. The Port's Pacific Terminal is utilized by its ship customers to offload and supply aerospace cargo to a nearby airplane manufacturing plant. Similar to other shipping trends, the Port's aerospace customer is upgrading to larger sized vessels. Additionally, the Port had received a separate request from the Puget Sound Pilots to improve navigation ingress and egress at the Pacific Terminal. One challenge is the terminal area is part of the Former Weyerhaeuser Mill A Cleanup Site that is being managed by Washington State Department of Ecology (Ecology).

The Port, Weyerhaeuser, and Ecology agreed to implement the project as an interim cleanup to:

- Expedite part of the environmental cleanup at the Weyerhaeuser Mill A Cleanup Site;
- Meet navigation needs of the Port;
- Meet the immediate functional needs of customers for the larger vessels; and
- Allow schedule flexibility for additional and more long-term terminal improvements.

Approach/Activities. The key project activities included obtaining partner funding agreements; project design agreements with the ship customers and the Puget Sound Pilots; obtaining regulatory agreements from Ecology and the Dredge Material Management Program; developing design documents; and construction. The construction activities were completed from August 2016 to February 2017 and included:

- Dredging a layer of contaminated sediment and an underlying layer of clean sediment.
- Dewatering, transloading, transporting and disposing contaminated sediment at an Ecology-approved landfill.
- Transporting and disposing clean sediment at an open-water disposal site.
- Importing and placing bedding and armor rock to cap exposed contaminated sediment and stabilize dredge side-slopes.
- Importing and placing habitat mix to enhance critical shoreline habitat.

Results/Lessons Learned. This project is a great example of regulatory agencies and the Port team working collaboratively to meet business needs for the local economy, while simultaneously cleaning up the environment. This project provided several lessons learned as follows:

- An innovative approach used for dredged material characterization to minimize upland disposal and streamline construction.
- Construction approach provided efficiency and reduced project cost by eliminating need for upland stockpiling, dewatering and waste water management.
- The Port, GeoEngineers and Tetra Tech worked together with the contractor to troubleshoot and modify the construction approach to ensure accurate placement of bedding and armor rock on the transition slope. Working together, with accurate and timely survey data, the project was completed on time and to the specifications.
- The collaborative design and construction process resulted in meeting project objectives.