



Partners Navigate Upstream to Cleaner Waters



Volunteers plant a variety of upland plants on the Squally Beach restoration site along the Hylebos Waterway.

Hylebos Waterway

Ranking as one of the largest Superfund sites in the country, the Commencement Bay Nearshore/Tideflats site covers 12 square miles in the Southern Basin of Puget Sound, on the shores of Tacoma, Washington. Massive cleanup efforts are being initiated in discrete portions of the Bay, marking the first actual in-water cleanup work in Commencement Bay since 425,000 cubic yards of contaminated sediment from Sitcum Waterway was dredged in 1995. Cleanup of the Hylebos Waterway in the Tideflats area is underway after the Environmental Protection Agency (EPA) declared it a Superfund site two decades ago. After years of legal wrangling among more than 60 PRPs (potentially responsible parties), a critical mass of parties are now working cooperatively with EPA to clean the waterway and create a healthy marine environment by 2005.

Hylebos Waterway Site

The Commencement Bay Nearshore/Tideflats (CB/NT) Superfund site is located in Tacoma, Washington at the southern end of Puget Sound. EPA placed the site on the Superfund National Priorities List in 1983 after discovering widespread contamination. The Hylebos waterway contains a toxic blanket of sediment contaminated with PCBs, PAHs, arsenic, hexachlorobenzene, hexachlorobutadiene, and other organics and metals. The contamination is from several industries established in the late 1800s, including chemical manufacturing plants, scrap metal recycling, log transfer facilities, and shipbuilding. The Port of Tacoma worked to extend the Hylebos Waterway in the 1960s to a three mile-long waterway, 200 feet wide. Today, 167 acres of the 285-acre area that makes up the Hylebos Waterway requires cleanup.

Over the last hundred plus years, the Hylebos Waterway—named for a 19th century Roman Catholic priest who served parishes in Steilacoom and Tacoma—has experienced a major transformation. At one time the Hylebos watershed contained over 25 miles of streams, 11 lakes, and many smaller unnamed lakes. Due to population growth and industrial development, the same area contains only about 25% of that surface water due to filling, channeling, and underground piping of the waters. In the mid 1800s when the railroad came to Tacoma, Commencement Bay was filled and shaped into its present configuration of four main and several smaller waterways. As a result, the Bay was transformed into a highly developed industrial upland. The straightening and channeling of the Hylebos creek to form the current Hylebos Waterway destroyed much of the juvenile salmon and wildlife habitat.

continued ▶▶

JUST THE FACTS:

- EPA issued three unilateral administrative orders requiring four responsible parties to clean up the Hylebos Waterway at a cost of approximately \$56 million.
- Prior to cleanup actions, an estimated \$96 million was spent by private parties for upland source control to limit waste discharges to the Bay.
- The Hylebos cleanup plan employs a flexible cleanup approach including dredging 940,000 cubic yards of contaminated sediments and disposing of the hazardous waste in a nearshore site and an upland disposal site; capping several intertidal shoreline properties; and monitored natural recovery of up to 20 acres.

The multi-year disposal site selection process for Hylebos stands out as a national example that large-scale dredging of contaminated sediment can be a success story. After thoughtful consideration of the homeowners' and others' concerns, the EPA devised a disposal alternative acceptable to the community.

Initial site investigations documented lesions in flatfish, and observed adverse effects to shellfish and other aquatic organisms. Increased risks to humans from eating fish from this area were also found, primarily from PCBs. Subsequent studies conducted by the natural resource trustees showed that the studied fish (juvenile salmon and flatfish) had elevated levels of waterway chemicals in their stomachs. In addition, scientists found adverse changes in the fish's genetic material and reproductive cycles, increased occurrence of cancerous lesions, and other signs of chemical stress. Salmon, including the highly valued Chinook, are known to spawn in the Hylebos.

EPA Clears the Way for Hylebos Cleanup

In a much celebrated action, EPA issued orders in March 2002 compelling four responsible parties to begin the multimillion-dollar Hylebos cleanup during the summer of 2002. After years of negotiations, EPA's orders signify a major step in completing a comprehensive cleanup of Commencement Bay. "The Hylebos cleanup is a large piece of the puzzle of finishing the cleanup of Commencement Bay," said L. John Iani, Regional EPA Administrator. "Today, we're much closer to having this piece in the right place." (*Port Applauds EPA Action that Clears the Way for Hylebos Waterway Cleanup, Tacoma News Tribune, March 28, 2002.*) EPA has indicated that the cleanup will cost approximately \$56 million and will involve dredging 940,000 cubic yards of contaminated sediments. The cleanup goal is to once again have a healthy marine environment and protect people from eating contaminated seafood. While EPA had been negotiating with about 60 potentially responsible parties since January 2001, it decided to go forward with the unilateral orders to compel initial cleanup actions during the summer of 2002.

EPA issued three orders: one to the Port of Tacoma and Occidental Chemical, another order to Occidental, and a third one to General Metals and Atofina Chemicals. The Port and Occidental—which have worked in partnership on efforts to move the Hylebos cleanup actions forward with EPA—will clean up approximately two-thirds of the waterway by filling Blair Slip 1 with the contaminated sediment (640,000 cubic yards). The filled area will be capped with concrete or asphalt and the resulting land used to expand an adjacent container terminal (which is currently occupied by a Taiwanese shipping line). Occidental is currently dredging 32,000 cubic yards of sediment from Area 5106A, a former Occidental facility. Occidental is treating this sediment using slurry aeration before disposal at Slip 1. General Metals and Atofina Chemicals are responsible for cleaning the remaining area of the waterway. Under the order, they will send the contaminated material to a solid waste landfill in Klickitat County, in eastern Washington.



Cleanup activities will help restore salmon, which are known to spawn in the Hylebos.

Working with Stakeholders on Disposal Site Selection

The multi-year disposal site selection process for Hylebos stands out as a national example that large-scale dredging of contaminated sediment can be a success story. EPA first proposed an in-water disposal site at the Mouth of Hylebos Waterway, about 300 feet offshore from a small residential community. This proposed disposal location was strongly opposed by the community and State congressional representatives. As a result, the EPA team participated in a 3-month, intensive series of meetings sponsored by three local companies, bringing all interested parties together again to discuss the disposal site, its pros and cons, and its alternatives. The team also answered written requests for information from congressmen, testified at a State Congressional committee hearing, and held two meetings at the residents' homes to hear and address their concerns.

continued ►►

After thoughtful consideration of the homeowners' and others' concerns, EPA devised a disposal alternative more acceptable to the community. EPA's Explanation of Significant Differences (August 2000 ESD), now accepted by the general public, combined contaminated sediments disposal with two economic development projects. The result was one nearshore disposal site (Blair Slip 1) that will be developed into a new Port terminal, and another (St. Paul Waterway) that will allow for expansion of a paper mill and recycling plant. The third disposal option is disposal in an upland landfill. EPA has allowed those conducting the cleanup the flexibility to choose from among these disposal options to best meet their needs.

Remaining Cleanup Actions Scheduled

Two other cleanup actions at the Middle Waterway and Thea Foss/Wheeler-Osgood Waterway will complete Superfund actions at the CB/NT site. These cleanup actions will also use the three disposal sites selected in EPA's August 2000 ESD. An additional 600,000 cubic yards of sediment will be dredged from these waterways. Over 30 acres will be capped and 25 acres will be monitored for natural recovery. Cleanup actions for all of the remaining CB/NT areas are expected to begin the long-term monitoring phase in 2006.

Protecting and Restoring Natural Resources

Because the cleanup at the CB/NT site utilizes in-water disposal sites, habitat improvements are required to compensate for filling aquatic land. In addition to removing over 1.5 million cubic yards of contaminated sediment from the CB/NT waterways, over 30 acres of habitat will be created, restored or enhanced; 39 acres of habitat improvements have already been made as a result of prior Superfund cleanup actions at the CB/NT site. In response to EPA's responsibility under the Endangered Species Act (ESA), the Agency has required that habitat improvements be focused primarily on areas of benefit to Chinook salmon in Commencement Bay, which are listed as threatened species under ESA.

CONTACTS:

Peter Contreras, Remedial Project Manager
EPA Region 10, (206) 553-6708

Visit the EPA Region 10 web site at:

<http://www.epa.gov/region10/Superfund>