

Restoring Our Resources

The Natural Resource Damage Assessment and Restoration Program

Commencement Bay, Puget Sound, Washington

When harmful substances enter the environment, fish, wildlife and other natural resources are often injured. The Department of the Interior, along with State, Tribal, and other Federal Partners, act as “trustees” for these public resources. Trustees seek to identify the natural resources injured and determine the extent of the injuries, to recover damages from the polluters, and to plan and carry out natural resource restoration activities. These efforts are possible under the Natural Resource Damage Assessment and Restoration Program, whose goal is to restore natural resources injured by contamination. The Department, along with other trustees, is accomplishing this goal in Puget Sound, Washington, bringing a cleaner, healthier environment to the people of the area.

A Marine Estuary and River

Commencement Bay is an urbanized estuary located in the southern part of Puget Sound, Washington. The City of Tacoma occupies the southern shore of the bay and the Port of Tacoma and its associated industrial area occupies the Puyallup River delta and the eastern end of the bay. The active harbor area and waterways serve as important migratory pathways and rearing areas for numerous marine species including fish and migratory birds. South Puget Sound and the bay provide for approximately 30% of the total midwinter waterfowl use of Washington’s coastal areas. Tribal and State fish hatcheries have historically contributed approximately 4 million commercially and culturally important salmon annually into the Puyallup River watershed.



The Problem

Extensively dredged and filled since the 1800’s, this 12-square mile site consists of eight industrialized waterways, shorelines and uplands. Nearly 300 industries have produced a variety of hazardous substances such as solvents, metals, PCBs, pesticides, and PAHs which end up in the air, surface and ground water, as well as the sediments and soils of the Commencement Bay area. Concentrations of 100 to 1000 times those in reference areas were measured for 28 contaminants or contaminant groups. This widespread contamination led the Environmental Protection Agency (EPA) to list the site in 1981 as a Superfund site. The EPA, in partnership with the State of Washington, sub-divided the site into nine problem areas.

Contaminants released from activities such as ship building and repair, timber-related pulp and kraft milling, oil refining, chemical manufacturing and storage, aluminum and specialty ore smelting, and automotive repair and recycling, have impacted fish and wildlife of South Puget Sound. These contaminant related impacts include fishery closures and warnings, exceedences of State water and sediment quality standards, fin erosion, tumors in fish, reproductive and behavioral effects, suppressed disease resistance, and reduced populations.

Restoring the Resources

In 1991, the natural resource trustees, who include the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, the State of Washington, and the Puyallup and Muckleshoot Indian Tribes, initiated a Natural Resource Damage Assessment to determine and scale the effects of the contamination on trust resources of Commencement Bay. The impacted estuary and river system support important commercial, cultural, and recreational natural resources including four salmon species, steelhead trout, and migratory bull trout.



Commencement Bay Waterways. Photo by Kemer Nelson, Aequalis Aerial Photography.

Puget Sound Chinook, bull trout, and steelhead trout are Federally listed as threatened under the Endangered Species Act. The estuary also supports several commercially important species of flatfish and shellfish. Migratory birds including seabirds, waterfowl, shorebirds, songbirds, and the Federally listed bald eagle and marbled murrelet may feed or utilize the limited resources available in the bay. Urbanization has reduced important intertidal habitat to 11% of what was originally present, and emergent marsh habitat to 1% of what was surveyed in the late 1800's. Since 1991, the Trustees have obtained 10 settlements with 33 parties for injuries to natural resources. Additional settlements for natural resources are pending.



Pulling piles on a future restoration site. Photo by Commencement Bay Trustees.

A Partnership for Success

Together, the federal, state, and tribal trustees have received over \$18 million in combined damages and assessment costs and completed 23 restoration projects restoring over 107 acres of fish and wildlife habitat in Commencement Bay and the Puyallup River watershed. The trustees seek successful partnerships to maximize restoration actions. For example, in September of 2005, the trustees contributed to and completed a \$224,000 culvert replacement project which reestablished a river oxbow and provided 18 additional acres of wetland for juvenile salmon and other fish and wildlife along the Puyallup River.



Planting activities at the Mowich Restoration Project along Hylebos Creek, Commencement Bay. Photo by USFWS.



Developing marsh habitat on the Middle Waterway Restoration Site. Photo by J. Krausmann, USFWS. 2006.



Newly sculpted intertidal mudflats on the Middle Waterway Restoration Site. Photo by J. Krausmann, USFWS. 2006.

Other contributors included the Pierce County Conservation District and Water Program, the South Puget Sound Salmon Enhancement Group, the Puyallup Tribe, and the Sumner Sportsmen's Association. A similar project is being planned by 23 participating parties and the trustees for 2007 with partnerships between Pierce County and the Salmon Recovery Funding Board to move a setback levee along the Puyallup River and create 66 acres of salmon habitat on a 92-acre parcel owned by the County. These cooperative efforts toward restoration will continue with additional pending settlements and partnerships in Commencement Bay.

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