

NPL Site Narrative for Lower Duwamish Waterway

LOWER DUWAMISH WATERWAY Seattle, Washington

Conditions at Proposal (December 1, 2000): Sediments in the lower Duwamish River are contaminated with semivolatile organic compounds, PCBs, inorganics, and organotins. In order to address the long-term threat to the human food chain and sensitive environments in the river, the EPA is adding this site to the NPL. The Duwamish River originates at the confluence of the Green and Black Rivers near Tukwila, Washington, then flows northeast for approximately 21 river kilometers, dividing at the southern end of Harbor Island to form the East and West waterways prior to discharging into Elliot Bay at Seattle, Washington. A segment of the river is maintained by the US Army Corps of Engineers as a federal navigation channel (i.e., the reach downchannel of Turning Basin #3).

The shorelines along the majority of the Duwamish Waterway have been developed for industrial and commercial operations. Much of the upland areas are heavily industrialized. In addition, this reach of the river is the receiving water body for discharges from over 100 storm drains, combined sewer overflows (CSOs), and other outfalls. Historical or current commercial and industrial operations include cargo handling and storage; marine construction; boat manufacturing; marina operations; paper and metals fabrication; food processing; and airplane parts manufacturing. Contaminants may have entered the river via several transport mechanisms, including spillage during product shipping and handling, direct disposal or discharge, contaminated ground water discharge, surface water runoff, storm water discharge, or contaminated soil erosion.

The presence of polychlorinated terphenyl (PCT), polychlorinated biphenyl (PCB), inorganic, semivolatile organic compound, and organotin contamination to surface sediments has been documented in the lower Duwamish River. In addition, subsurface sample results indicate that semivolatile organic compound, inorganic, and organotin contamination exists up to a depth of 1.2 meters (i.e., 4 feet) at some locations within the river. Numerous investigations performed by USEPA, the Boeing Company, King County Department of Natural Resources, and the National Oceanographic and Atmospheric Administration (NOAA) have been conducted with varying scopes and have led to the documentation of the contamination in the lower Duwamish River.

The lower Duwamish River is fished for recreational, commercial, and subsistence purposes. Three salmon hatcheries within the Green-Duwamish River system release approximately 10 million juvenile salmon each year. The Duwamish River is part of the traditional fishing grounds for the Muckleshoot and Suquamish Indian tribes. The National Marine Fisheries Service, has conducted numerous studies on the effects of contaminated sediments on biotic resources in the Duwamish River and elsewhere in Puget Sound. This research has shown that juvenile salmon from the Duwamish River exhibit reduced growth and immune system function relative to salmon from uncontaminated areas.

The lower Duwamish River serves as a migratory route, nursery, and osmoregulatory transition zone for several species of Pacific salmon. Puget Sound Chinook salmon are federally listed as threatened and utilize the lower Duwamish River during a critical stage of their migration from a fresh water to a salt

water environment. The federal candidate species Coho salmon also occurs in this area as does a nesting territory for the federal listed threatened Bald eagle and a wetland.

Status (September 2001): EPA is considering various alternatives for this site.

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. ATSDR ToxFAQs can be found on the Internet at [ATSDR - ToxFAQs](http://www.atsdr.cdc.gov/toxfaqs/index.asp) (<http://www.atsdr.cdc.gov/toxfaqs/index.asp>) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.