

Potential Sources of Dioxins and Furans Within the Range of the Eastern North Pacific Southern Resident Killer Whales



The National Oceanic and Atmospheric Administration (NOAA) has determined that one of the primary potential risk factors for the Southern Residents is pollution in their habitat. To address this risk, NOAA gathered and analyzed marine sediment quality data from the Sediment Quality Information System (SEDQUAL) managed by the Washington State Department of Ecology and Marine Sediment Data for the Middle and Hylebos Waterways in Commencement Bay, Tacoma, Washington, and Harbor Island Site, Seattle, Washington, managed by the U.S. Environmental Protection Agency, Region 10.

NOAA integrated the marine sediment quality data from these sources into a geodatabase. In some instances, the data from these datasets were excluded from subsequent analysis because no sampling location information was available (e.g., latitude and longitude), the data did not address sediment samples or contaminants of interest, or the data could not be integrated readily into the geodatabase.

NOAA then used the data in the geodatabase to identify locations where sediment samples have been analyzed for dioxins and furans. No Washington State Sediment Quality Standards (WAC 173-204) or U.S. Army Corps of Engineers screening levels for dredging exist for dioxins and furans (U.S. Army Corps of Engineers Accessed 2005). Therefore, NOAA identified those locations where analysis of sediment samples detected the presence of these compounds. The following is a list of the compounds included in this analysis: 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin; 1,2,3,4,7,8,9-heptachlorodibenzofuran; and pentachlorodibenzofurans, total.

References:

- Washington Administrative Code (WAC). Chapter 173-204.
- Washington State Department of Ecology. Sediment Quality Information System (SEDQUAL) Release 5. October 2004.
- U.S. Army Corps of Engineers. Dredged Material Evaluation and Disposal Procedures (Users Manual). February 2000.
- U.S. Environmental Protection Agency. Marine Sediment Data: Commencement Bay, Tacoma, Washington: Harbor Island. <http://www.epa.gov/>. Accessed May 17, 2005.
- U.S. Environmental Protection Agency. Marine Sediment Data: Commencement Bay, Tacoma, Washington: Hylebos Waterway. <http://www.epa.gov/>. Accessed May 17, 2005.
- U.S. Environmental Protection Agency. Marine Sediment Data: Commencement Bay, Tacoma, Washington: Middle Waterway. <http://www.epa.gov/>. Accessed January 13, 2005.

