

Three Phases: Control of Toxic Chemicals in Puget Sound



Copper, lead, mercury, zinc, PCBs, phthalates, flame retardants, and other persistent chemicals are found in Puget Sound where they concentrate and enter the food chain. They threaten both the health of people who eat the fish and shellfish harvested from Puget Sound and the health of the fish and marine birds and mammals that live in the Sound.

The Puget Sound Initiative is a collaborative effort by local, tribal, state and federal governments, business, agricultural and environmental interests, and the public to restore and protect Puget Sound. In 2007, the Washington Legislature created the Puget Sound Partnership and charged it with leading this effort. The Partnership's first "Action Agenda" is due in September 2008.

The Washington Department of Ecology (Ecology) is working in collaboration with the Partnership and other state and federal agencies to deliver three phases of scientific data related to toxic chemicals that will help jump-start actions to restore Puget Sound.

Phases 1 and 2 will inform policy options for the Action Agenda to reduce and control releases of toxic chemicals. Phase 3 will support implementation of the actions that the Partnership identifies in the Action Agenda, such as improved wastewater permitting.

Phase 1: Initial Estimate of Loadings

Ecology, in collaboration with other agencies, has completed an initial investigation of toxic chemical loading into Puget Sound. The report identifies major gaps of information that must be filled to inform decisions to restore Puget Sound.

WHY TOXIC CHEMICALS ARE A PROBLEM

Tens of thousands of chemicals go into making up the products we use every day to improve the quality of our lives. They are in the products we buy and use at home and at work. Unfortunately, many of these chemicals have entered our food chain, and we know very little about their toxic effects on our health. Infants, children, and the elderly have special concerns regarding exposure to toxic chemicals.

Details about all three phases are online at:
<http://www.ecy.wa.gov/programs/wq/pstoxics/index.html>

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The report of this work is titled, "Control of Toxic Chemicals in Puget Sound, Phase 1: Initial Estimate of Loadings." It is available online at:

<http://www.ecy.wa.gov/programs/wq/pstoxics/index.html>

One finding of the Phase 1 report is that "surface-water runoff" from the land is generally the largest contributor of many toxic chemicals to Puget Sound.

The report also says that other toxic chemicals, including certain flame retardants now banned in Washington, reach Puget Sound from polluted air.

During particularly rainy weather, overflows from older combined sewer/stormwater collection systems may produce harmful local effects, but they contribute relatively little to Puget Sound's total toxics problem.

Even though the potential of a catastrophic oil spill is a significant threat to the health of Puget Sound, the report points out that oil spills directly into surface waters in the Puget Sound watershed during the past six years were a relatively small source of toxics compared with the amount of oil that reached Puget Sound from surface runoff. The report recommends that the state improve its estimates of the amounts of toxic pollutants getting into the Sound and better identify the contributions from the various sources and pathways.

A \$135,000 grant from the U.S. Environmental Protection Agency (EPA) funded the Phase 1 work.

Phase 2: Improve Loading Estimates

Ecology, EPA, NOAA (National Oceanic and Atmospheric Administration), and the Washington Department of Fish & Wildlife have received funding to begin eight Phase 2 toxics loadings projects to be completed by summer 2008.

The Phase 2 work includes improving estimates of the amounts of toxic pollutants entering Puget Sound from roads, wastewater treatment plants, and industries. It will help us understand how toxic chemicals move within the Sound between the water, marine sediments, and the many biological organisms there. It will compile information about toxic substances at the boundary between the Pacific Ocean and Puget Sound. Phase 2 will support a human health risk assessment, upgrade a computer model of the Sound, and begin the design of a biological observing system.

EPA and Ecology each contributed \$300,000 to fund the projects.

Phase 3: Targeting Priority Toxic Sources

Phase 3 work, if fully funded, will include quantifying how much pollution is getting into Puget Sound from roadways, combined sewer overflows, air deposition, and exchange with the Pacific Ocean. Phase 3 will also refine a computer model of the Sound to allow scientists to evaluate the success of various pollution reduction scenarios.

Ecology estimates it will cost \$1.57 million to complete this work by June 2009. Governor Gregoire's 2008 supplemental budget includes \$310,000 to fund the air deposition portion of this project.