



Focus

Lake Whatcom

Cleaning up Water Pollution

Background

Located in Whatcom County and Bellingham, Washington, 5,000-acre Lake Whatcom serves as a drinking water reservoir for an estimated 87,000 residents.

Land around the northern half of the lake primarily is in urban residential development. Those land uses are governed by the City of Bellingham and Whatcom County. Lands surrounding the southern part of Lake Whatcom are primarily forested and commercially logged under regulation by the Washington State Department of Natural Resources. Historic land uses around the lake included coal mining and sawmill operations.

Lake Whatcom supports a variety of fish, including Kokanee salmon managed by the Washington State Department of Fish and Wildlife for stocking throughout the state. The lake is a popular destination for fishing, swimming, and boating.

Threats to Lake Whatcom

Lake Whatcom is affected by pollution from land disturbances, including forestry and construction, and stormwater run-off from roads and residences. Other pollution sources may include area-wide air deposition, failing septic systems, and improper waste dumping.

Pollutants in Lake Whatcom include polychlorinated biphenyls (PCBs), bacteria, too much phosphorus, and depleted amounts of oxygen in water. Bacteria, pesticides, and heavy metals have also been found in one or more lake tributaries. Mercury in lake fish prompted a 2001 health advisory for smallmouth bass and yellow perch caught from the lake. Mercury from lake sediments enters plants and animals when it combines with carbon to form the more toxic methylmercury.

Diminished oxygen in water threatens survivability of fish and other aquatic animals. Low oxygen in lake water also can facilitate conversion of mercury to methylmercury. While oxygen levels naturally decline over time as lakes mature, the lake's aging process can be greatly accelerated by human influences. The aging—or eutrophication—of large healthy lakes is typically measured in thousands of years. But eutrophication can be accelerated and witnessed over decades when human influences change the clear blue characteristics of a young lake to the soupy green of older lakes.

Excess amounts of phosphorus contribute to diminished oxygen levels in lake water. Naturally occurring in soil, phosphorus also is a major ingredient in fertilizers. Phosphorus can leach into waterbodies from soil erosion and from lawns and yards when it rains. Too much phosphorus causes rapid growth of plants and algae that compete with salmon and other fish for oxygen.

Developing a Water Cleanup Plan

In 1998, Lake Whatcom was among 650 waterbodies statewide that were listed by Ecology for failing water quality standards. In 2000, the lake was targeted for development of a water cleanup plan. The Lake Whatcom cleanup plan, called a “total maximum daily load” (TMDL) analysis under requirements of the federal Clean Water Act, will address low levels of dissolved oxygen (DO) and

fecal coliform bacteria in Silver Beach and Austin creeks. Other pollutants, including mercury and bacteria at the Bloedel Donovan public swimming beach, are being investigated in parallel efforts. (See contacts, below.)

The overall cleanup plan will be carried out over a five-year period.

- 2001 Developing a detailed water sampling and data analysis plan in collaboration with local partners.
- 2002 Initiating water sampling at 9 tributaries and 4 sites in the lake over a 15-month period extending into summer 2003.
- 2003 Analyzing water sampling data and computer modeling.
- 2004 Recommending any necessary pollution limits and pollution reduction targets or goals.
- 2005 Designing strategies to meet pollution reduction targets and a system for tracking and quarterly reporting of progress.

Public Information and Involvement

Comments and questions from citizens are welcomed throughout the Lake Whatcom TMDL process. To receive periodic updates, meeting minutes, and documents, contact Ecology engineer Steve Hood at shoo461@ecy.wa.gov or phone (360) 738-6254.

All public drafts and published documents relating to the Lake Whatcom cleanup effort can be found at www.ecy.wa.gov/programs/wq/wqhome.html

If your organization would like to have a presentation about the Lake Whatcom cleanup plan, contact Joan Pelley at jpel461@ecy.wa.gov or phone (360) 738-6247.

Briefings to the Lake Whatcom Management Team and corresponding councils of Bellingham and Whatcom County will occur periodically throughout the TMDL process.

A 28-minute WaterWhys video, "Scoring Points Against Pollution," was produced by the city of Bellingham to describe Lake Whatcom pollution problems and the water cleanup plan. Copies of the tape can be obtained for checkout at any public library in Whatcom County. It also can be viewed in the Whatcom County area on EGTV Channel 10 at 8 p.m. on Sunday, Monday, and Friday; 4 p.m. on Monday and Tuesday; and 10 a.m. on Saturday.

Additional Lake Whatcom Contacts

For information about. . .

- A study under way to identify sources of mercury in Lake Whatcom sediment, contact Don Vesper at Whatcom County Health and Human Services, (360) 676-6724.
- Bacteria pollution at the Bloedel Donovan public swimming area, Dick McKinley of Bellingham Public Works, (360) 676-6961, or Paul Chudek of Whatcom County Health and Human Services, (360) 676-6724.
- Lake Whatcom Watersheds Pledge, a pollution prevention program for households, contact David Laws at Dept. of Ecology in Bellingham, (360) 676-6573.
- Lake-friendly gardening practices and programs, contact Scarlet Tang, WSU Cooperative Extension, (360) 676-6707 ext. 50281.

Ecology is an equal opportunity agency. If you have special accommodation needs, please call Diane DeFries at (360) 738-6248. The TTY number is 711 or 1-800-833-6388.