

Too Much Phosphorus for Lake Sawyer

Phosphorus is a basic element found in nature and a primary nutrient that all living organisms need to survive. Lakes typically build up phosphorus levels as they age, and ultimately fill in with vegetation and sediment. This process, called eutrophication, usually takes thousands of years.

High lake phosphorus can cause excessive plant and algae growth and drastically speed up it's aging process. Human activities such as home building, road construction, failing septic tanks, lawn fertilizers, soaps, and deforestation are some of the primary sources of phosphorus that can increase amounts of phosphorus in a lake and may cause algae blooms.

Many of these pollution sources are transported to nearby water bodies by stormwater and have negative affects by degrading water clarity, aquatic habitat, fish survival, swimming, boating and aesthetic enjoyment.

Lake Sawyer

Lake Sawyer, along with Rock Creek and Ginder Creek, have had poor water quality since the 1970s. In 1981, City of Black Diamond obtained funding to develop their wastewater treatment plant and designed it to discharge into a natural wetland that ultimately drains to Lake Sawyer.

The wetland portion of the treatment plant system soon failed resulting in increased amounts of phosphorus polluting Lake Sawyer. This led to moving Black Diamond's wastewater discharges to the King County Metro wastewater treatment plant at Renton.

In 1993, the Department of Ecology's (Ecology) Lake Sawyer Total Maximum Daily Load (TMDL) assessment was approved. Then in 2000, King County developed a Lake Management Plan for Lake Sawyer that provides recommendations to help reduce the amount of phosphorus to the lake. Lack of funding has prevented many of these recommendations from being implemented.

MORE INFORMATION

The Department of Ecology's Freshwater Algae Program provides identification and toxicity testing of algae for Washington State water bodies.



To learn more about the program, visit our website at:

<http://www.ecy.wa.gov/program/s/wq/plants/algae/index.html>

Contact information:

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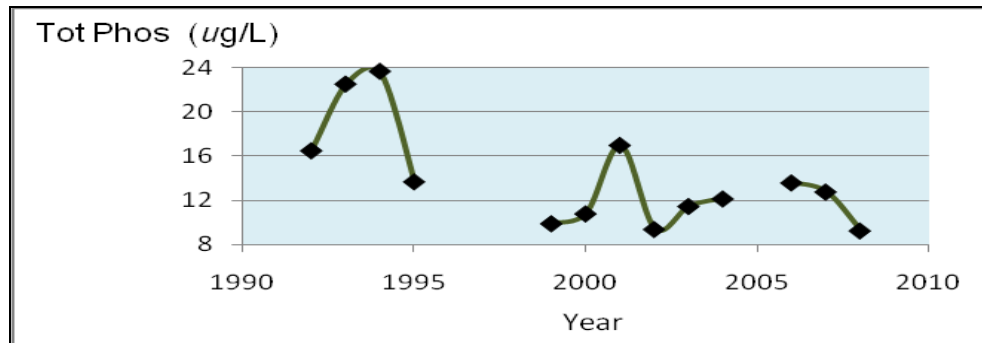
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Special accommodations:

If you need this publication in an alternate format, call the Water Quality Program at 360-407-6404. Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.

What's being done?

Since re-directing Black Diamond waste water away from Lake Sawyer there has been a general decline in phosphorus but the lake still has too much. In 2008, Ecology and the Lake Sawyer community did follow-up work to the 1993 TMDL and produced the *Lake Sawyer Total Phosphorus Total Maximum Daily Load Water Quality Implementation Plan*. It incorporates recommendations from the Lake Sawyer Management Plan and other documents developed for the lake, and provides a framework for corrective actions to address sources of phosphorus pollution.



Upper Lake Sawyer Annual Total Phosphorus (micrograms per liter)

Data provided by King County

What you can do

We all live in a watershed and can take actions to reduce polluted runoff and nutrients from our property that reach our lakes and streams. Here are some things you can do:

- Cover and store manure, yard waste, fertilizers, and other chemicals away from the water. Contact **King County** at 206-296-4692 or 1-888-TOXIC-ED or <http://www.govlink.org/hazwaste/house/index.cfm>
- Maintain or enhance vegetation alongside water bodies, to filter pollutants from run-off water. Never remove the natural riparian (stream or lakeside) vegetation.
- If you have large animals, keep them away from the lake or stream. Animals trample shorelines, destroy riparian vegetation, and directly add nutrients to the stream.
- If you must clear or grade the land or build a road, be careful to prevent erosion and keep sediments (dirt with contaminants) out of the waterways.
- If you use a septic system, inspect it regularly to make sure its functioning properly. For more information about the King County Wastewater Program, call 206-296-4932 or go to: <http://www.kingcounty.gov/healthservices/health/ehs/wastewater>
- Carefully use only phosphate-free soaps, detergents and cleaners in your home or business.
- Reduce or eliminate the use of fertilizers and chemicals on your lawn and garden. Rain carries these nutrients into our nearby water bodies. For more information, visit: <http://your.kingcounty.gov/solidwaste/naturalyardcare/index.asp>

*See 'Washington Waters - Ours to Protect' website: http://www.ecy.wa.gov/washington_waters