

Project Update
Deschutes River/Capitol Lake/Budd Inlet Total Maximum Daily Load (TMDL)
February 2012

BACKGROUND

- Portions of the Deschutes River, Percival Creek, Capitol Lake, Budd Inlet, and tributaries do not meet state water quality standards for one or more of the following parameters: fecal coliform bacteria, temperature, dissolved oxygen, pH, and fine sediment. These water bodies are on the state's Clean Water Act Section 303(d) list of impaired waters and must be cleaned up.
 - Fecal coliform bacteria pose a human health threat due to ingestion or recreational contact.
 - Warm temperatures, too little dissolved oxygen, pH values outside of healthy ranges, and too much fine sediment harm aquatic life in either freshwater or marine water.
- Ecology has been working with an Advisory Group to develop a Total Maximum Daily Load (TMDL) evaluation to identify what contributes to the water quality problems and to quantify what contaminants need to be reduced to meet the water quality standards.
- Advisory Group partners include representatives from the Squaxin Island Tribe, cities of Tumwater and Olympia, LOTT Clean Water Alliance, Thurston County, Thurston Conservation District, Environmental Protection Agency, Washington State University, Weyerhaeuser, and state agencies as well as independent citizens and representatives from environmental groups such as Black Hills Audubon Society, Capitol Lake Improvement and Protection Association and Deschutes Estuary Restoration Team.
- Ecology intends to submit the TMDL, commonly called a cleanup plan, for approval to the U.S Environmental Protection Agency (EPA) by January 2013. The first piece of this TMDL is a technical report.
- The water quality implementation strategy and the subsequent plan will be developed with Capitol Lake in place because it is the existing condition. The Environmental Protection Agency approves cleanup plans based on current conditions and not on possible changes in the future.

TMDL TECHNICAL FOUNDATION

- Ecology recently released a revised technical report that will be used as the basis for developing the water quality cleanup plan for the Deschutes River watershed, Capitol Lake, and Budd Inlet. Ecology developed a previous draft in October 2008 and received comments from many stakeholders. Since that time, Ecology reassessed the technical analyses and updated the report to reflect comments.
- The technical report serves as a foundation for developing an implementation strategy to reduce pollution. The report coupled with this strategy will form the TMDL Water Quality Improvement Report, which will be submitted to the EPA for approval. The study addresses five parameters, fecal coliform bacteria, temperature, dissolved oxygen, pH, and fine sediment, throughout the Deschutes River and Budd Inlet watershed.
- Ecology briefed the Advisory Group in January 2012 and provided both a revised draft report for review and response to comments received on the October 2008 draft report. Ecology is seeking Advisory Group feedback on the changes. The Advisory Group has until Feb. 27 to comment.

MAJOR TECHNICAL FINDINGS

- The majority of the findings described in the 2008 draft report did not change significantly.
- The Capitol Lake and Budd Inlet models were recalibrated and the model software was updated since the 2008 draft report.

- Both point and nonpoint sources contribute to violations of the water quality standards for dissolved oxygen in both Budd Inlet and Capitol Lake. Nutrient reductions are needed. The report also explored water quality comparisons between a lake and an estuary. If the lake were to become an estuary, dissolved oxygen (DO) concentrations in southern Budd Inlet would be higher than if the lake remains in place. The area currently covered by Capitol Lake would meet the DO water quality standards.
- Water quality improvements are needed throughout the Deschutes watershed because there are violations of water quality standards. There are water quality violations for fecal coliform bacteria, temperature, dissolved oxygen, pH, and fine sediments throughout the watershed.
- Ecology recommends nutrient load reductions within the Deschutes River watershed to meet the standards for freshwater dissolved oxygen and pH levels. Future analyses will determine whether additional reductions are needed to meet the standards in Capitol Lake and Budd Inlet. Those water bodies may be more sensitive than the Deschutes River and could require more stringent reductions.
- Fecal coliform reductions are needed in the upper Deschutes, Percival Creek, and tributaries to Budd Inlet to meet standards during both summer and winter seasons.
- Fine sediment targets for gravels in the Deschutes River were decreased to no more than 12 percent. Thus, the interim target of 17 percent in the 2008 draft report was removed.
- Groundwater influences on surface water are critical in certain areas of the Deschutes watershed. Septic systems could be contributing excess nutrient loads. Control strategies may be needed in areas with high surface or groundwater nutrient concentrations, such as upstream of Offut Lake, Chambers Lake and its outlet creek, Tempo Lake and its outlet creek, and the Ayer Creek watershed.

NEXT STEPS

- The public will have an opportunity in fall 2012 to review the entire draft water quality improvement report, commonly called a TMDL or water quality cleanup plan, during a 60-day comment period. This is twice as long as the usual time allotted.
- Ecology will publish the technical study by June 2012 in advance of the TMDL (water cleanup plan) submittal to EPA.
- The final step is for Ecology to work with the Advisory Group to develop the Water Quality Implementation Plan. This is a subsequent document that outlines the details of how to achieve clean water through the Deschutes River and Budd Inlet watershed. The report will include information on who does what.
- As implementation of the TMDL (water cleanup plan) occurs in the future, an adaptive management process will be used to determine whether the recommended actions are successful in meeting pollution reduction targets. If they fall short, Ecology will work to modify implementation actions or identify new ones.

FOR MORE INFORMATION

Technical Report

- Mindy Roberts, Environmental Engineer
- Mindy.Roberts@ecy.wa.gov
- 360-407-6804

Water Cleanup Plan

- Lydia Wagner, Water Cleanup Plan Coordinator
- Lydia.Wagner@ecy.wa.gov
- 360-407-6329