Fact Sheet

Bear Creek Watershed TMDLs

State of Oregon
Department of
Environmental
Quality

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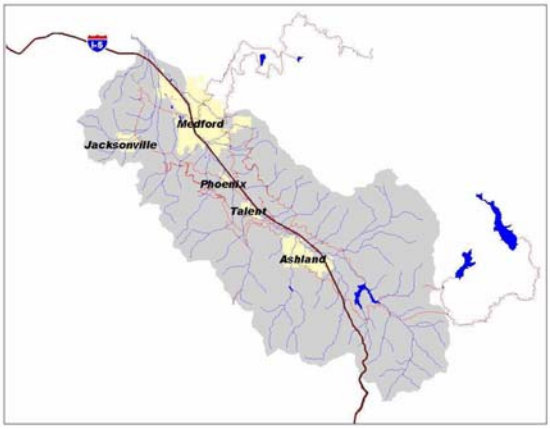
Watershed Health and Total Maximum Daily Loads

The health of any watershed depends on good water quality. Many waterbodies in Oregon do not meet all water quality standards. In the Bear Creek Watershed, over 311 miles of creeks do not meet standards for bacteria, temperature, and sedimentation. When waterbodies do not meet water quality standards, DEQ is required to develop limits for how much of a pollutant a waterbody can receive and still meet water quality standards. The limits are designed to restore the health of the watershed. These limits are called Total Maximum Daily Loads (TMDLs).



Bear Creek Watershed TMDL Area

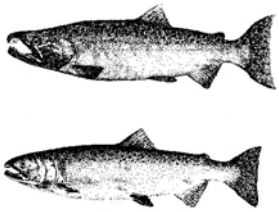
Background

DEQ initially developed a TMDL for Bear Creek in 1992. Approved by the Environmental Protection Agency (EPA) at that time, it was among the first TMDLs in the State of Oregon. The 1992 TMDL addressed non-attainment of standards for pH, aquatic weeds and algae, and dissolved oxygen (DO). To bring the watershed back to a healthy status and meet those standards, the TMDL established water concentration targets for total phosphorus, ammonia nitrogen and biochemical oxygen demand. The 1992 TMDL is currently adequate to protect water quality for these parameters.

The 2007 Bear Creek TMDL deals with the violation of three additional water quality parameters: bacteria, temperature and sedimentation. The 2007 Bear Creek Watershed TMDL has been approved and is now being implemented.

Temperature TMDL

DEQ's water quality standards are applied to protect the most sensitive beneficial uses in a waterbody. Numeric criteria in the temperature standard were developed to protect different aspects of the life stages of salmon and trout: spawning, rearing, and migration.



Coho salmon
(Oncorhynchus kisutch)
Photo Courtesy Washington DFW

For point sources of heat such as wastewater treatment plants, waste load allocations have been developed that will allow increasing the temperature of the receiving stream no more than 0.1°C above the applicable criterion. For nonpoint sources (water runoff), the load allocation is based on the attainment of maximum shade provided by riparian vegetation under site-potential conditions. Tree species and heights were determined by ecoregion, a geographic concept that takes into account climate, soils, slope, elevation and natural vegetation. When point sources achieve their waste load targets, and site potential vegetation is reached, the TMDL will be met and water temperatures will meet standards.

Bacteria TMDLs

High bacteria levels can impact the health of those who use Bear Creek and its tributaries for recreation. Water quality will be restored when contributions from sources of bacterial pollution are reduced to the levels identified in the TMDL. The reductions needed to meet water quality specifically apply to landscape runoff. These sources are referred to as "nonpoint" sources. Various land uses including urban, rural residential, agricultural, and others are potential sources of nonpoint source bacterial runoff.

Sedimentation TMDL

In the sedimentation TMDL, the pollutant is sediments that enter Ashland Creek and are deposited into Reeder Reservoir located above the City of Ashland. The sources for these additional sediments include forest management, and road construction and maintenance practices that may destabilize slopes and increase the

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velocity of runoff. Excessive levels of sediment may result in impaired salmonid habitat or spawning.

Water Quality Management Plan

The WQMP identifies the Designated Management Agencies (local, state and federal government agencies) with responsibility for addressing pollution problems, as well as outlining management strategies designed to meet the targets in the TMDLs. It also establishes a schedule for the submission of Implementation Plans, and incorporates action plans already in place.

An agricultural water quality management plan, which addresses stream heating, bacteria, and sedimentation from agricultural activities, has been adopted for the watershed. Impacts from forestry activities on private lands will be controlled through the implementation of the measures in the Oregon Forest Practices Act. On federal forestlands the Northwest Forest Plan will serve to protect water quality.

For other land uses implementation plans will be developed by the entity with jurisdiction over the particular land use. These include Jackson County, the cities of Ashland, Talent, Phoenix, Medford, Jacksonville and Central Point as well as the Irrigation Districts: Medford, Talent, and Rogue River Valley. These jurisdictions will identify appropriate limits, best management practices, measures and approaches to best meet the TMDL.

Public Process

The Bear Creek Watershed TMDL has been developed over the course of several years and has included participation by city and county staff at various levels, the Bear Creek Watershed Council and many others. Comments and recommendations made by these groups during the development process have been incorporated into this TMDL.

Copies of the TMDL document or updates on its implementation are available on the internet at **http://www.deq.state.or.us/WQ/TMDLs/Rogue.htm or by contacting** Bill Meyers 541-776-6010 extension 253 or by email at Meyers.bill@deq.state.or.us

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