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Background Brief on...

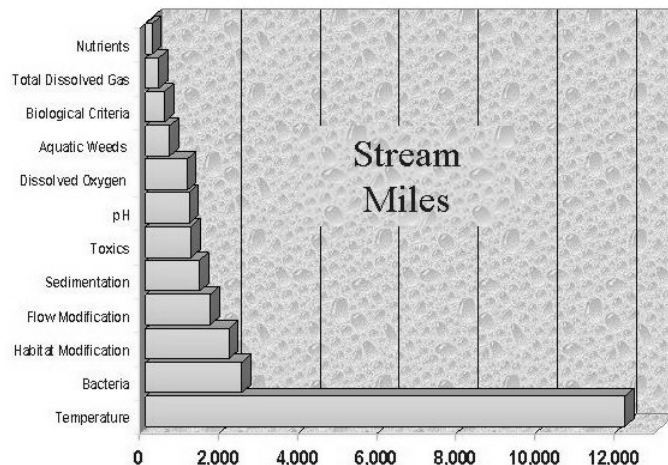
# Water Quality

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## Background

The federal Water Pollution Control Act, known as the Clean Water Act (CWA), is the primary law protecting surface water quality that establishes water quality standards and authorizes enforcement. The U.S. Environmental Protection Agency (EPA) has delegated authority to the Department of Environmental Quality (DEQ) to implement many CWA requirements in Oregon except on Tribal lands where the EPA has retained jurisdiction. States must submit proposed water quality standards to the EPA for approval. If not approved, the EPA may set state standards. Below is a discussion of key components of the Clean Water Act. Other federal laws that address water quality include, but are not limited to, the Safe Drinking Water Act, which protects surface and ground water supplies, and the Water Resources and Development Act, which addresses contaminated sediments.

Oregon water quality regulations primarily implement federal law. One important difference is that Oregon defines *waters of the state* to include groundwater. The DEQ protects groundwater through a number of programs including: groundwater management areas, remedial investigation and action regulations, on-site sewage disposal regulations, underground injection control program, waste disposal well regulations, and the wellhead protection program.



2002 Section 303(d) list  
Number of stream miles impaired  
for each parameter\*

**13,300 stream miles are listed for at least one water quality pollutant**

\*Note: stream miles are repeated when listed for multiple parameters

## Point versus Nonpoint Sources

Point source pollution means discharges of wastewater from discrete conveyances (i.e. pipes, canals) to waterways or wastewater applied to land and regulated by DEQ. Nonpoint source pollution refers to overland runoff which is regulated in a variety of ways. The CWA requires that stormwater and erosion from urban areas and construction sites of certain sizes be controlled under permits, which DEQ issues (in some instances, these permits are issued by a municipality through agreement with DEQ). In rural areas, water quality impacts from forest and agricultural activities are regulated by the Oregon Department of Forestry (Forest Practices Act) and the Oregon Department of Agriculture (Senate Bill 1010 (1993) Agricultural Water Quality Area Management Plans).

## Clean Water Act: Key Components

*Water Quality Standards* – Water quality standards are described in terms of: 1) designated uses, and 2) water quality criteria to protect those uses. Oregon adopts water quality standards for various criteria such as total dissolved solids, concentrations of toxins, dissolved oxygen and temperature. The state must set water quality criteria to protect all designated uses of a water body. Water quality standards are reviewed and revised every three years and must be approved by EPA.

The list of water bodies that violate water quality standards is known as the **303(d) list** referring to section 303(d) of the Clean Water Act. In 2002, Oregon submitted a 303(d) list that included 13,300 stream miles that violate at least one water quality parameter. Temperature and bacteria are the most prevalent violations. Since the previous list was submitted in 1998, 5,000 stream miles were added to the list while 6,000 stream miles were removed due to improved water quality for individual water quality parameters.

*Antidegradation Policy* – As required by the EPA, Oregon has adopted an antidegradation policy as part of water quality standards. Waters that just meet or fail to meet water quality criteria (Tier I) must, at minimum, maintain current quality levels. Water bodies that currently exceed criteria (Tier II) must maintain those levels unless “the State finds...that allowing lower water quality is necessary to accommodate important economic or social development

in the area in which the waters are located” 40 CFR&131.12(a)(2) with the standard being the floor.

*Total Maximum Daily Loads (TMDLs)* –For water bodies that do not meet water quality standards, the state must develop total maximum daily loads. Total maximum daily loads determine the amount of pollutants that a water body can absorb and still meet clean water standards. TMDL levels take into account pollution from all sources, including discharges from industry and sewage treatment facilities; runoff from farms, forests and urban areas; and natural sources. TMDLs also include a safety margin to account for uncertainty. This information is then used to determine what changes must take place – to control both point and nonpoint sources of pollution – to achieve water quality improvements. Currently, 13,300 miles of streams in Oregon fail to meet clean water standards.

*National Pollutant Discharge Elimination System (NPDES)* – Point sources discharging any pollutant into surface waters must obtain an NPDES permit. The DEQ currently manages more than 3500 NPDES permits, as well as permits under state law for discharges to land. Point sources requiring an NPDES permit include wastewater treatment plants, various industries such as pulp and paper plants and food processors, as well as municipal stormwater systems for Oregon’s larger urban areas.

## Recent Legislation

Senate Bill 820 (2003) directs the DEQ to encourage wastewater reuse in urban areas and requires the DEQ to submit a report to an interim natural resources committee by December 2004. It also authorizes the DEQ to seek federal funds to be used for one or more demonstration projects within urban areas of the Willamette River basin.

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