Fact Sheet

Reducing Water Pollution in the Lower Grande Ronde, Wallowa and Imnaha Subbasins

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Department of Environmental Quality

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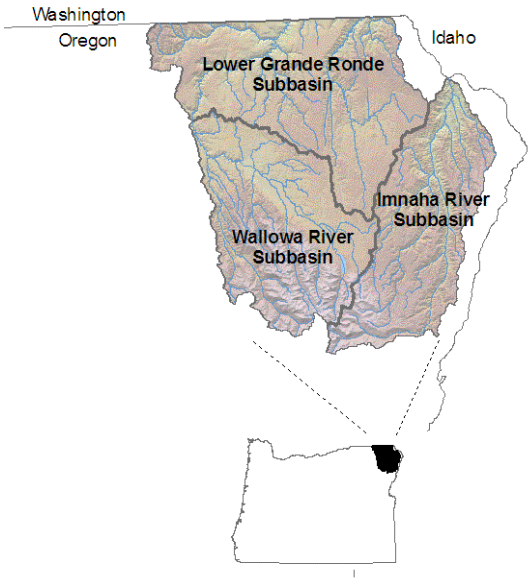
Background

The Lower Grande Ronde, Wallowa River and Imnaha River Subbasins are located in northeast Oregon. This fact sheet summarizes DEQ's efforts to reduce water pollution in these three subbasins, which are collectively referred to as the Lower Grande Ronde Subbasins.

The combined area of the three subbasins is approximately 2, 982 square miles. The majority of the area is contained within the boundaries of Wallowa County, although there are small strips of land within Union and Baker County. The Lower Grande Ronde Subbasins are home to a wide variety of natural landscapes, from arid plateaus typical of eastern Oregon to alpine lakes and meadows at elevations up to 10,000 feet. The area is naturally divided into three large watersheds (subbasins) based on the river network: the Wallowa River flows in to the Grande Ronde River, the Grande Ronde River and the Imnaha River both flow into the Snake River.



Lower Grande Ronde Subbasins TMDL Area.

Water quality problems identified

Section 303d of the federal Clean Water act requires each state to develop a list of water bodies that do not meet water quality standards, and submit this list (called the 303(d) list) to the U.S. Environmental Protection Agency. The list is updated every two years. A number of streams in all three subbasins are listed as "water quality limited" for temperature. In addition to temperature, there are 303(d) listings for dissolved oxygen and sedimentation in the Lower Grande Ronde Subbasin and 303(d) listings for bacteria, dissolved oxygen, pH and sedimentation in the Wallowa River Subbasin.

A plan to improve water quality

The federal Clean Water Act requires DEQ to develop a plan with goals and pollution control targets for improving water quality in watersheds where water quality standards are not met. DEQ is doing this in the Lower Grande Ronde Subbasins by establishing limits known as Total Maximum Daily Loads – often referred to as "TMDLs"- for each pollutant entering the water. A TMDL describes the amount (load) of each pollutant a waterway can receive and still meet water quality standards. A TMDL takes into account the pollution from all sources. Sources can include point source discharges like sewage treatment plants and nonpoint sources like runoff and deteriorated vegetation.

Total Maximum Daily Loads

The Lower Grand Ronde Subbasins TMDLs address the violation of standards for temperature and bacteria. DEQ will develop TMDLs for dissolved oxygen, pH and sedimentation at a later date when more data becomes available.

In the **temperature** TMDL, the pollutant is heat. Water temperature can be greatly affected by a variety of human activities. The principal human-caused sources of stream heating identified in the Lower Grande Ronde Subbasins are from non-point sources and include:

- removal of trees and other shade-producing vegetation from stream banks which allows direct sunlight to heat the water;
- reduction of summertime stream flows which can cause larger temperature increases in stream segments where flows are reduced;
- widening of stream channels which increases the stream surface exposed to solar radiation.

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In addition, discharges of warm water from sewage treatment plants also have the potential to increase stream temperatures. The thermal impacts of the Enterprise, Joseph, and Wallowa sewage treatment plants were evaluated in this TMDL.

In the **bacteria** TMDL, the pollutant is *E coli* bacteria from warm-blooded animals. Principal sources are from non-point sources, which can include livestock, wildlife, failing septic systems, illegal discharges and urban runoff which occur. Determining the source of bacteria is not always easy as many of these sources overlap in time and space and are spread throughout the landscape. DEQ does not expect the sewage treatment plants to contribute to bacterial pollution because wastewater permits require these facilities to meet water quality criteria prior to wastewater discharge.

Allocating loads

The TMDLs define the amount of heat and bacteria that can be added and still be protective of the water bodies. These amounts are known as "loads." The TMDLs divide these load amounts among the various sources, with the results called "allocations."

For **temperature**, DEQ has allocated most non-point source loading to natural sources. This approach requires that nonpoint sources manage near stream areas to achieve *site potential* conditions, where any human-caused increases in stream temperature are minimized. The means of achieving these conditions is through restoring and protecting riparian vegetation and, where appropriate, increasing stream flows and narrowing stream channel widths.

DEQ developed thermal limits for the sewage treatment plants which ensure that their discharges will have no measureable impact on stream temperatures. In this TMDL, the sewage treatment plants are allowed to increase stream temperatures by no more than 0.2 degrees Centigrade during the critical period of April to October. The sewage treatment plants are able to meet their allocations under their current operating conditions.

For **bacteria**, load duration curves were used to determine the amount of load reduction that is needed to meet water quality criteria on the Wallowa River. For Spring Creek, Prairie Creek and other Wallow River tributaries, *E. coli* limits are expressed as percent reductions needed to meet water quality criteria. Agricultural best management practices are proposed as the principal method for meeting water quality criteria.

Plan implementation

State water quality standards require that a Water Quality Management Plan be developed and implemented by all sources that may impair water quality in the Lower Grande Ronde Subbasins.

The plan identifies strategies and approaches for accomplishing water quality improvements. The plan identifies the local, state and federal government with responsibility for addressing pollution under their control. These entities are often referred to as "designated management agencies." The plan proposes management strategies designed to meet the allocations in the TMDLs and establishes a schedule for the submission of implementation plans by the designated management agencies.

Some implementation plans already exist. For example, the implementation plan for agriculture, the Wallowa County Agricultural Water Quality Management Area Plan, has already has been developed by local stakeholders and approved by the Oregon Department of Agriculture. This document will be revised as needed for TMDL implementation. Other implementation plans, such as those describing activities on Federal lands or city and county jurisdictions, have not yet been developed. DEQ expects all implementation Plans to be developed within 18 months of TMDL issuance.

Public participation

DEQ has conducted numerous meetings with stakeholders during the development of the TMDLs. DEQ will hold an information meeting and public hearing on July 7 in Enterprise. For details go to the Grande Ronde Basin TMDL web page at:
http://www.deq.state.or.us/WQ/TMDLs/granderonde.htm

If you have questions regarding the TMDL documents or process, please contact Don Butcher, Basin Coordinator, at (541) 278-4603 or by email: butcher.don@deq.state.or.us.

Alternative Formats

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