

EXECUTIVE SUMMARY

The Oregon Department of Environmental Quality (DEQ) is proposing pollution limits to protect human health and salmon and trout in the Lower Grande Ronde Subbasins. The geographic scope of these limits includes the watersheds (subbasins) of the Imnaha, Wallowa and Lower Grande Ronde Rivers, which are referred to collectively as “Lower Grande Ronde Subbasins” in this document. This document specifies Total Maximum Daily Loads (TMDLs) of pollution and planning to address water quality in the Lower Grande Ronde Subbasins.

Area water quality concerns include temperature, bacteria, sedimentation, dissolved oxygen and pH. Temperature impairment is the most widespread. **TMDLs are reported in this document for temperature and bacteria.** The sedimentation, dissolved oxygen and pH concerns were evaluated during TMDL development. Sedimentation TMDL methods and benchmarks are in development. Accordingly, a TMDL addressing sedimentation has not been prepared at this time. Sufficient data has not been collected to adequately evaluate the causes of dissolved oxygen and pH violations. Once the necessary data has been collected, TMDLs will be developed to address these parameters at a later date.

The TMDLs address discrete human sources (point sources) and diffuse landscape sources (nonpoint sources). The temperature TMDL objectives apply throughout the stream network for all three subbasins, whether perennial or not. Limits for the bacteria TMDL were set for the Wallowa River, Spring Creek and Prairie Creek and apply to upstream contributing waters.

Temperature

Waterbodies are water quality limited for temperature in all three subbasins, with 303(d) listings occurring on 533.6 miles of streams. The temperature TMDL (**Chapter 2**) identifies the primary source of human caused heating as the removal or reduction in natural streamside vegetation which increases the amount of solar radiation the stream receives. Point sources contribute very little (<1%) of the total heat load relative to nonpoint sources.

Temperature simulations carried out on the Wallowa River demonstrated that natural thermal potential (NTP) temperatures exceed the biologically based numeric criteria for most of the Wallowa River. Based on this analysis (and a similar one done for the Upper Grande Ronde River in 2000), the natural conditions criteria apply throughout the Lower Grande Ronde Subbasins and NTP (system potential) conditions are the TMDL target. Heat load allocations were calculated and expressed as the surrogate measure of system potential effective shade.

Wasteload allocations were developed for the Wallowa, Joseph and Enterprise sewage treatment plants for the critical period of April through October. All three plants were able to meet their wasteload allocations under their existing condition.

In order to implement the temperature TMDL, the DEQ requires designated management agencies to prepare plans and implement management strategies to restore or protect streamside vegetation, as well as encourage best management practices to increase stream flows, decrease warm irrigation return flows and restore more natural stream channels.

Bacteria

Waterbodies are water quality limited for fecal coliform or *E. coli* bacteria in the Wallowa River Subbasin, with 303(d) listings occurring on 69.4 miles of streams. Identified waterbodies of concern are the Wallowa River, Spring Creek and Prairie Creek. Although there are potential sources of bacteria in other parts of the Lower Grande Ronde Subbasins, at present no data are available which demonstrate bacteria impairment in these areas. The bacteria TMDL is presented in **Chapter 3** of this document.

Bacteria sources may include both point sources and nonpoint sources. There are 13 point sources with NPDES permits in the Wallowa Subbasin. Seven of these are permitted by DEQ and include sewage treatment plants, industrial facilities and fish hatcheries. There are also six Confined Animal Feeding Operations (CAFOs). The numeric criteria in the bacteria standard serve as wasteload allocation targets for the point sources administered by DEQ. When operating in compliance with the requirements of their NPDES permits, these point sources do not cause or contribute to bacteria standard violations. Because CAFOs are not allowed to discharge to waters of the state, CAFOs were allocated zero allowable loading to streams.

Bacteria loading in the Wallowa River Subbasin is dominated by non-point sources. Nonpoint source pollution comes from diffuse sources such as livestock waste, failing septic systems, pets, illegal discharges, and urban runoff. Stream flow based TMDL limits were developed for the Wallowa River. For Spring Creek and Prairie Creek, *E. coli* limits (as percent reductions) were calculated as a load allocation surrogate.

TMDL Implementation

Chapter 4 of this document is a water quality management plan (WQMP) laying out the expectations for planning and improvements through designated participants (called Designated Management Agencies). These organizations are called on to submit water quality implementation plans addressing load allocations in the TMDLs, generally within 18 months of the date of TMDL issuance. The designated participants include: Oregon Departments of Agriculture (ODA), Forestry (ODF), Transportation (ODOT), State lands (DSL) and Geology and Mine Industries (DOGAMI); U.S. Forest Service (USFS, Umatilla and Wallowa-Whitman National Forests), U.S. Bureau of Land Management (BLM), Wallowa County, and the cities of Enterprise, Joseph, Wallowa and Lostine.