

## Working for Clean Water: Coquille River Sub-basin

### Introduction

The 1972 federal Clean Water Act requires protection of rivers, lakes and other waters for fish and wildlife, human consumption, industry, agriculture, recreation, navigation and other uses. The Oregon Department of Environmental Quality (DEQ) is responsible for carrying out the Clean Water Act in Oregon. As part of that responsibility, DEQ has established standards to protect waters for these uses.

If a river or stream does not meet clean water standards, it is identified as water quality limited (Oregon's 303(d) list). DEQ is then required to identify the sources of pollution causing the violation of standards and to calculate how much reduction from those sources is necessary to meet water quality standards. This is commonly referred to as a Total Maximum Daily Load (TMDL).

DEQ is releasing for public review a draft TMDL for the Upper South Fork of the Coquille River. In addition to the TMDL, an associated draft Water Quality Management Plan (WQMP) has also been developed.

### South Fork of the Coquille River Sub-basin

The geographic scope of this TMDL focuses on the upper portion of the South Fork of the Coquille watershed. It comprises an area managed primarily by the U.S. Forest Service (USFS) with smaller holdings managed by private timber interests. The lower portion of the South Fork Coquille watershed will be submitted as a separate piece. The watershed was divided that way to facilitate subsequent planning efforts. The lower watershed has diverse ownership and ongoing TMDL assessment in this area is well served by utilizing this completed assessment for the upper hydrologic unit.

The South Fork Coquille, part of the Coquille river sub-basin, is home to productive forested lands and has the distinction of containing streams with historically abundant salmonid populations. Data gleaned from forestry, fisheries, and local watershed organizations in the Coquille watershed aided DEQ officials in assessing the interaction between land use and water quality in the area. Land managers have used this data to design strategies to address water quality issues, and have included them in the development of the TMDL and Water Quality Management Plan.

The development of this TMDL and WQMP provides improved assessment information from which to plan restoration and enhancement efforts.

### Water Quality Improvements

This TMDL builds upon the protection and restoration measures prescribed by the President's Northwest Forest Plan and Oregon Forest Practices Act. The area covered by the TMDL and WQMP includes land managed primarily by the USFS with private timber ownership in the upper fringes of the watershed. This portion of the South Fork Coquille River is a key watershed for salmon recovery as defined by the Northwest Forest Plan. Private forested lands are managed under the Forest Practices Act. Of the 84,750 acres within this portion of the South Fork Coquille Watershed, 60,670 are managed by USFS, and 24,080 by private timber interests.

### Improved Management Leads to Improved Water Quality

Past timber management, agricultural activities, and mining land uses have led to losses of some streamside vegetation and widening of stream channels. These activities have caused water temperature to increase because of the increased amount of solar radiation striking the stream's surface.

This assessment determined that water quality will respond favorably to management activities directed toward ameliorating these factors.

Currently there are nine stream segments in the South Fork Coquille included on the 303d list. Three of these segments are addressed in this assessment.

*(Please see reverse side for commonly asked questions with corresponding answers about the TMDL process.)*



State of Oregon  
Department of  
Environmental  
Quality

### Water Quality Program

Western Region  
340 N. Front St.  
Coos Bay, OR 97420  
Phone: (541) 269-  
2721, ext. 27  
Fax: (541) 269-7984

Contact: Pamela Blake

[www.deq.state.or.us](http://www.deq.state.or.us)

**Q: What is a Total Maximum Daily Load (TMDL)?**

A: A "Total Maximum Daily Load," or TMDL, is a science-based calculation of the maximum amount of pollutants from all sources that a river or stream can receive and still meet water quality standards. Natural- and human-caused sources of pollutants are taken into account in this calculation. The TMDL identifies the difference between how much pollution a river or stream is currently receiving and how much it can receive and still meet standards. This difference indicates how much pollution must be reduced.

**Q: What are Water Quality Management Plans?**

A: Water Quality Management Plans (WQMP) identify the actions that will be taken to reduce the pollutants identified in the TMDL and meet clean water standards. Every management agency is responsible for identifying actions to help reduce pollution and clean up the river.

**Q: What land uses are present in the Upper South Fork Coquille ?**

A: This assessment covers timberlands managed by private interests and by the federal government. The TMDL and WQMP address each of these management activities. Managers of privately owned forests address water quality issues through the Oregon Forest Practices Act, administered by the Oregon Department of Forestry. Federal lands are managed through the Siskiyou National Forest Land and Resource Management Plan as amended by the President's Northwest Forest Plan.

The proposed WQMP also includes additional site-specific efforts being implemented and planned by land managers in the area to address water quality concerns.

No agricultural activities are currently conducted in the area.

**Q: Are point sources of pollution present in the assessed area?**

A: There are no individual industrial or municipal sewage discharge permits in the assessed area. Recreational mining activities require a general discharge permit. The influences of this activity on the stream are discussed in the assessment.

**Q: What are the water quality concerns in this area?**

A: Temperature and sediment are important concerns in this area. A total of 97 stream miles was included within this assessment. Of these, 51 miles appear on the 303 (d) list of Water Quality Limited streams. This comprises

more than half of significant perennial stream miles in this area.

**Q: Why are these water quality problems important to correct?**

A: The importance of correcting each problem depends on the "beneficial uses" a pollutant affects. The beneficial uses approach to cleaning up streams emphasizes reaching water quality levels that protect the most sensitive uses. In this case, these uses involve cold-water fish such as salmon, steelhead and trout. While elevated water temperature may not harm other beneficial uses like swimming, temperatures that are too high can certainly harm juvenile fish. Also, Threatened and Endangered salmon species are present.

**Q: What impacts will these TMDLs and the associated management plans have?**

A: The remedy depends on the problem. In this case, private as well as federal land managers have assessed current shading conditions and site potential for future shading. These land managers have committed to manage for streamside vegetation, known as riparian conditions, that will provide effective shade equal to site potential in the future. As you can imagine, growing trees to maturity to provide improved shade is a lengthy process. Most of the riparian stands are in place now and will need time to grow to maximize shading.

**Q: What did the assessment say about stream temperature ?**

A: Riparian area and channel morphology disturbances have resulted from past timber management, agricultural activities, and mining land uses. These activities have affected the water quality parameter temperature by increasing the amount of solar radiation striking the stream's surface.

**Q: If these management actions are taken, will water quality standards be met?**

A: Modeling of the Upper South Fork Coquille has found that the effective shade target derived from site potentials, and the WQMPs to reach those effective shade targets, will not result in meeting the standard in all places at all times. The South Fork modeling represented extreme climatic and low flow conditions and provides a large margin of safety. While the project results state that under these conditions the stream will not always attain the standard, it does indicate that with improved riparian conditions, temperatures will decrease and likely attain the standard the vast majority of the time.