

# ROGUE RIVER BASIN TMDL

## CHAPTER 4: WATER QUALITY MANAGEMENT PLAN

HUC # 17100307

HUC # 17100308

HUC # 17100310

HUC # 17100311



Stream restoration project in the Middle Rogue designed to improve aquatic habitat and riparian vegetation



Watershed council members plant trees along a tributary of the Rogue River to reduce solar loading



Gold Hill Diversion Dam removal



Push up dams along Little Butte Creek are removed as pumps and irrigation lines are installed

**December 2008**

Prepared by Oregon Department of Environmental Quality with Submissions by:  
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### **Statement of Purpose**

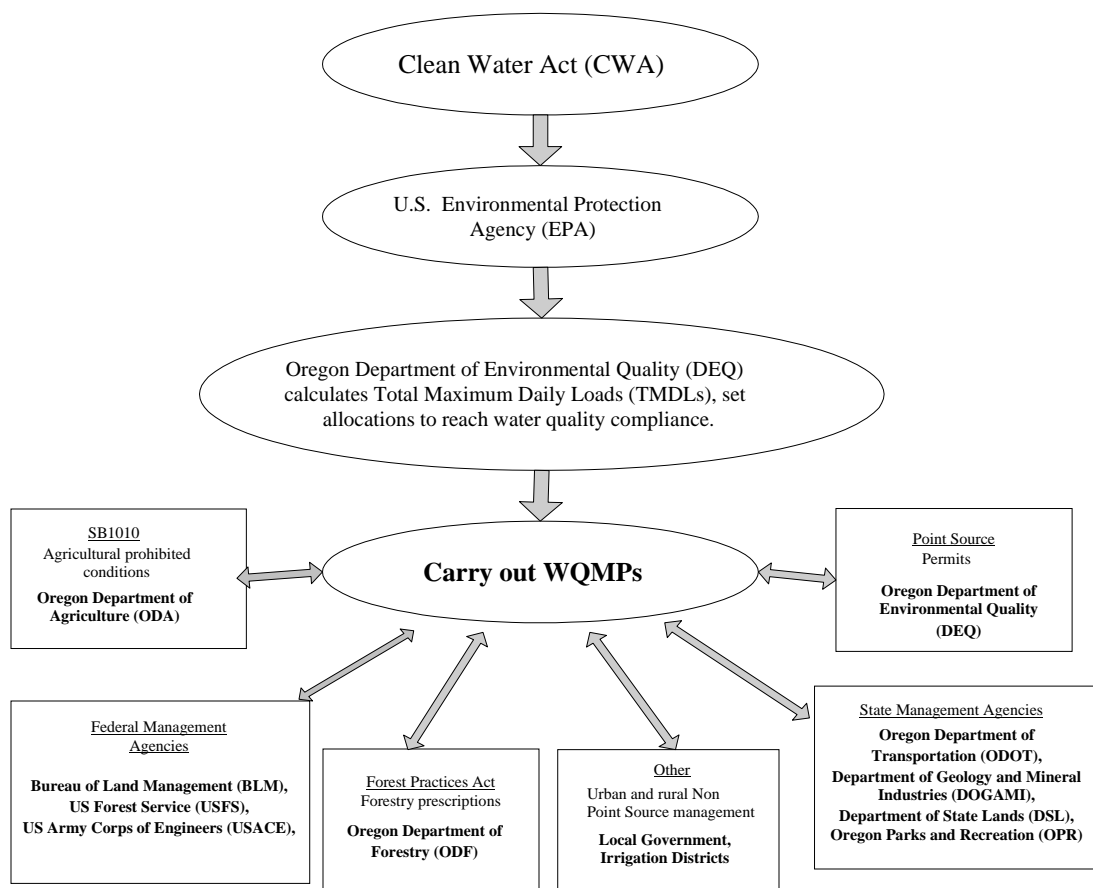
This Water Quality Management (WQMP) document has been prepared as part of Oregon's commitment to meet the requirements of Section 303(d) of the 1972 Federal Clean Water Act.

## 4.1 INTRODUCTION

This Water Quality Management Plan (WQMP) describes strategies for implementing and achieving the Rogue River Basin Total Maximum Daily Load (TMDL). The main body of this text has been compiled by the Department of Environmental Quality (DEQ) with assistance from the Designated Management Agencies (DMAs) in the watershed and includes a description of activities, programs, legal authorities and other measures for which DEQ and the other DMAs have regulatory authority. A DMA is “a federal, state or local governmental agency that has legal authority of a sector or source contributing pollutants, and is identified as such by the Department of Environmental Quality in a TMDL” (Oregon Administrative Rules [OAR] 340-042-0030(2)). This relationship is presented schematically in **Figure 4.1**, below.

This WQMP provides the overall framework describing the management efforts which will be implemented to attain the Rogue River Basin TMDL. Its organization incorporates the 10 plan elements described in the 2000 Memorandum of Agreement (MOA) between DEQ and the US Environmental Protection Agency (EPA). It builds upon existing point and nonpoint source Implementation Plans to outline a management approach for all land uses in the basin.

**Figure 4.1. TMDL/WQMP/Implementation Plan Schematic**



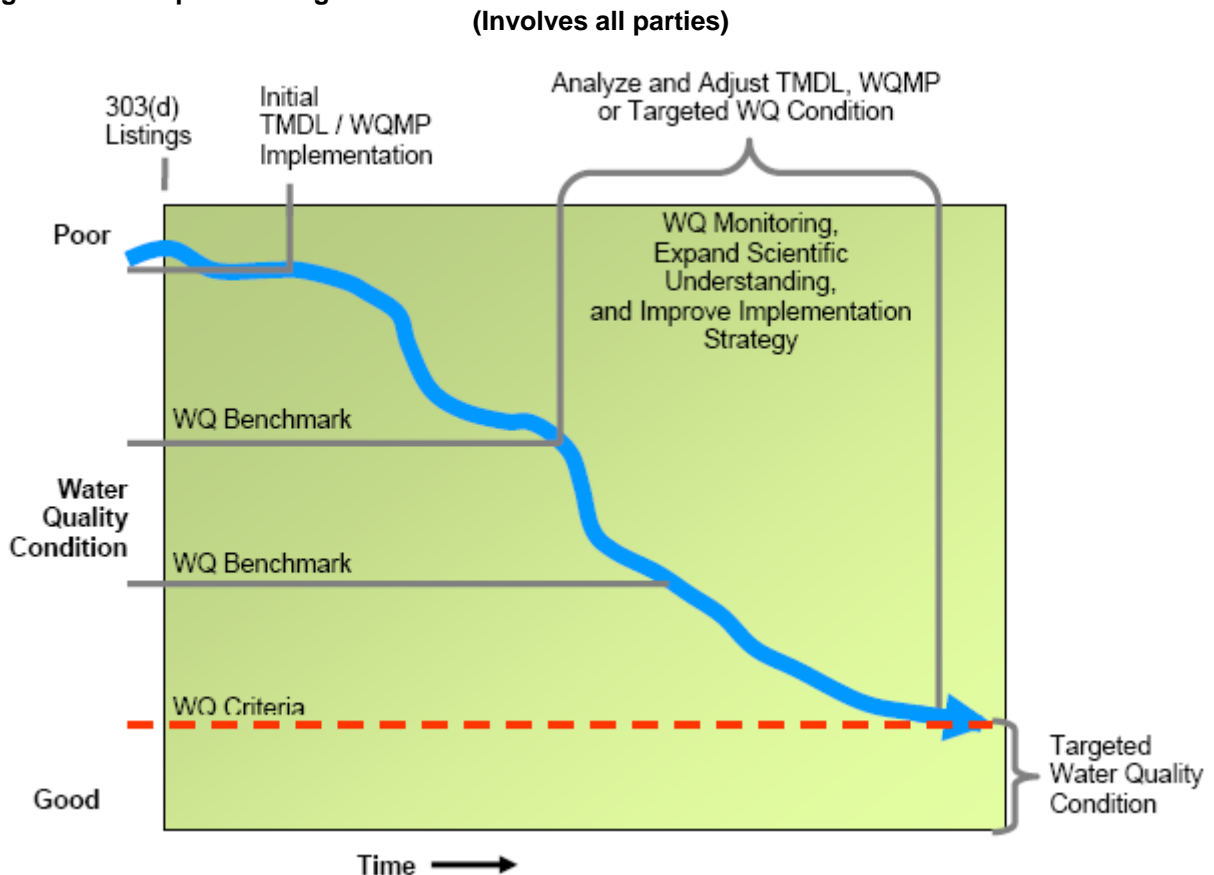
**Adaptive Management**

The goal of the Clean Water Act and associated Oregon Administrative Rules (OARs) is that water quality standards shall be met or that all feasible steps will be taken toward achieving the highest quality water attainable. This is a long-term goal in many watersheds, particularly where nonpoint sources are the main concern. To achieve this goal, implementation must commence as soon as possible.

TMDLs are numerical loadings that are set to limit pollutant levels such that in-stream water quality standards are met. DEQ recognizes that TMDLs are values calculated from mathematical models and other analytical techniques designed to simulate and/or predict very complex physical, chemical and biological processes. Models and techniques are simplifications of these complex processes and, as such, are unlikely to produce an exact prediction of how streams and other waterbodies will respond to the application of various management measures. It is for this reason that the TMDL has been established with a margin of safety.

WQMPs are plans designed to reduce pollutant loads to meet TMDLs. DEQ recognizes that it may take some period of time - from several years to several decades - after full implementation before management practices identified in a WQMP become fully effective in reducing and controlling pollution. In addition, DEQ recognizes that technology for controlling nonpoint source pollution is, in many cases, in the development stages and will likely take one or more iterations to develop effective techniques. It is possible that after application of all reasonable best management practices, some TMDLs or their associated surrogates cannot be achieved as originally established. If DEQ determines that all appropriate measures are being taken by the DMAs and that water quality standards will still not be met, DEQ may revise the TMDL. **Figure 4.2** is a graphical representation of this adaptive management concept.

**Figure 4.2. Adaptive Management**



DEQ also recognizes that, despite the best and most sincere efforts, natural events beyond the control of

humans may interfere with or delay attainment of the TMDL and/or its associated surrogates. Such events could be, but are not limited to, floods, fire, insect infestations, and drought.

In the Rogue River Basin TMDLs, pollutant surrogates have been defined as alternative targets for meeting the TMDLs. The purpose of the surrogates is not to bar or eliminate human access or activity in the basin or its riparian areas. It is the expectation, however, that this WQMP and the associated DMA-specific Implementation Plans will address how human activities will be managed to achieve the surrogates. It is also recognized that full attainment of pollutant surrogates (system potential vegetation, for example) at all locations may not be feasible due to physical, legal or other regulatory constraints. To the extent possible, the Implementation Plans should identify potential constraints, but should also provide the ability to mitigate those constraints should the opportunity arise. For instance, at this time, the existing location of a road or highway may preclude attainment of system potential vegetation due to safety considerations. In the future, however, should the road be expanded or upgraded, consideration should be given to designs that support TMDL load allocations and pollutant surrogates such as system potential vegetation.

If a source is not given a load allocation, it does not necessarily mean that the source is prohibited from discharging any wastes. A source may be permitted to discharge by DEQ if the holder can adequately demonstrate that the discharge will not have a significant impact on water quality over that achieved by a zero allocation. For instance, a permit applicant may be able to demonstrate that a proposed thermal discharge would not have a measurable detrimental impact on projected stream temperatures when site temperature is achieved. Alternatively, in the case where a TMDL is set based upon attainment of a specific pollutant concentration, a source may be permitted to discharge at that concentration and still be considered as meeting a zero allocation.

If a nonpoint source that is covered by the TMDLs complies with its finalized Implementation Plan it will be considered in compliance with the TMDL. In employing an adaptive management approach to the TMDLs and the WQMP, DEQ has the following expectations and intentions:

- Subject to available resources, on a five-year basis, DEQ intends to review the progress of the TMDLs and the WQMP.
- In conducting this review, DEQ will evaluate the progress towards achieving the TMDLs (and water quality standards) and the success of implementing the WQMP.
- DEQ expects that each DMA will also monitor and document its progress in implementing the provisions of its Implementation Plan. This information will be provided to DEQ for its use in reviewing the TMDL.
- As implementation of the WQMP and the associated Implementation Plans proceeds, DEQ expects that DMAs will develop benchmarks for attainment of TMDL surrogates, which can then be used to measure progress.
- Where implementation of the Implementation Plans or effectiveness of management techniques is found to be inadequate, DEQ expects management agencies to revise the components of their Implementation Plan to address these deficiencies.

If DEQ determines that all appropriate measures are being taken by the DMAs and that water quality standards will still not be met, DEQ may revise the TMDL. If use attainability analysis (UAA) and/or site specific criteria show that the targeted standard or beneficial uses cannot be achieved then revisions to the TMDL may include recalculating the TMDL loading capacity and allocations. DEQ would also consider reopening the TMDL, subject to available resources, should new information become available indicating that the TMDL or its associated surrogates should be modified.

The implementation of TMDLs and the associated plans is generally enforceable by DEQ, other state agencies and local government. However, it is envisioned that sufficient initiative exists to achieve water

quality goals with minimal enforcement. Should the need for additional effort emerge, it is expected that the responsible agency will work with land managers to overcome impediments to progress through education, technical support or enforcement. Enforcement may be necessary in instances of insufficient action towards progress. This could occur first through direct intervention from land management agencies (e.g. Oregon Department of Forestry [ODF], Oregon Department of Agriculture [ODA], Counties and Cities), and secondarily through DEQ. The latter may be based on departmental orders to implement management goals leading to water quality standards.

## **4.2 TMDL Water Quality Management Plan Guidance**

In February 2000, DEQ entered into a MOA with the EPA that describes the basic elements needed in a WQMP. That MOA was endorsed by the Courts in a Consent Order signed by United States District Judge Michael R. Hogan in July 2000. These elements, as outlined below, will serve as the framework for this WQMP.

### **WQMP Elements**

1. Condition assessment and problem description
2. Goals and objectives
3. Identification of responsible participants
4. Proposed management measures
5. Timeline for implementation
6. Reasonable assurance
7. Monitoring and evaluation
8. Public involvement
9. Costs and funding
10. Citation to legal authorities

### **1. Condition Assessment and Problem Description**

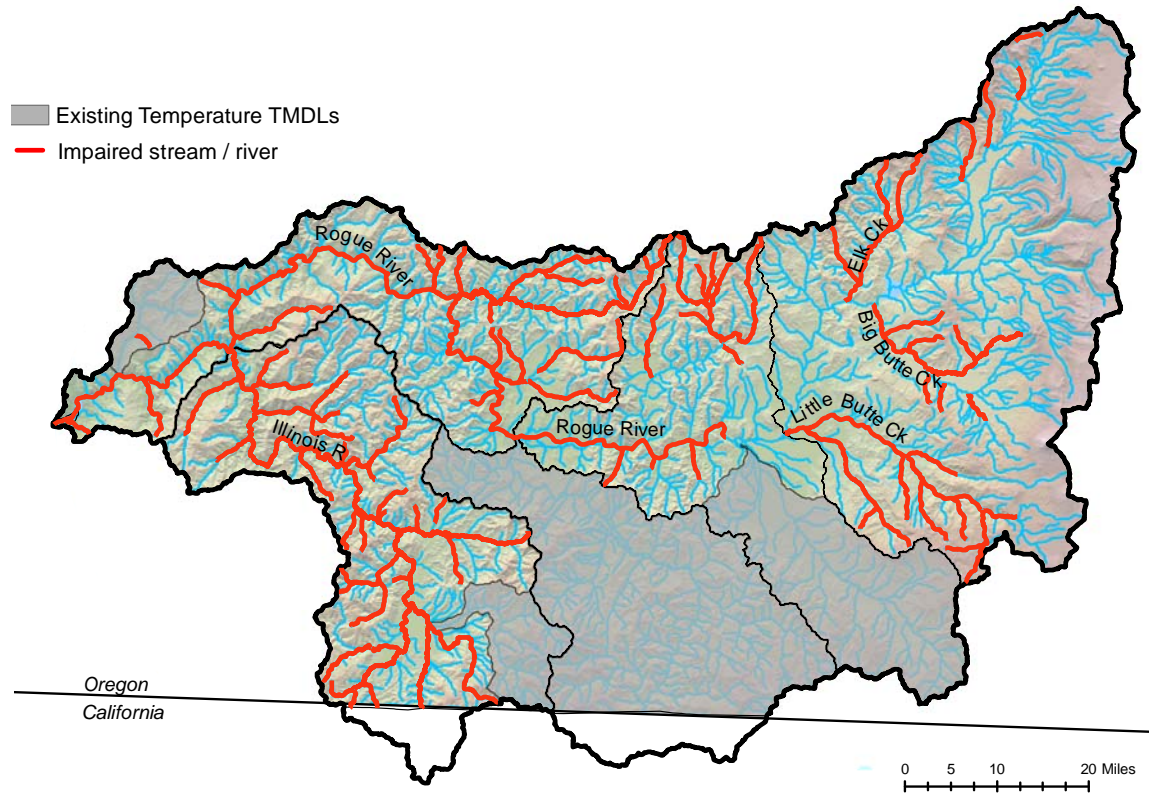
Condition assessment and problem description are presented in **Chapters 1, 2 and 3** of this TMDL.

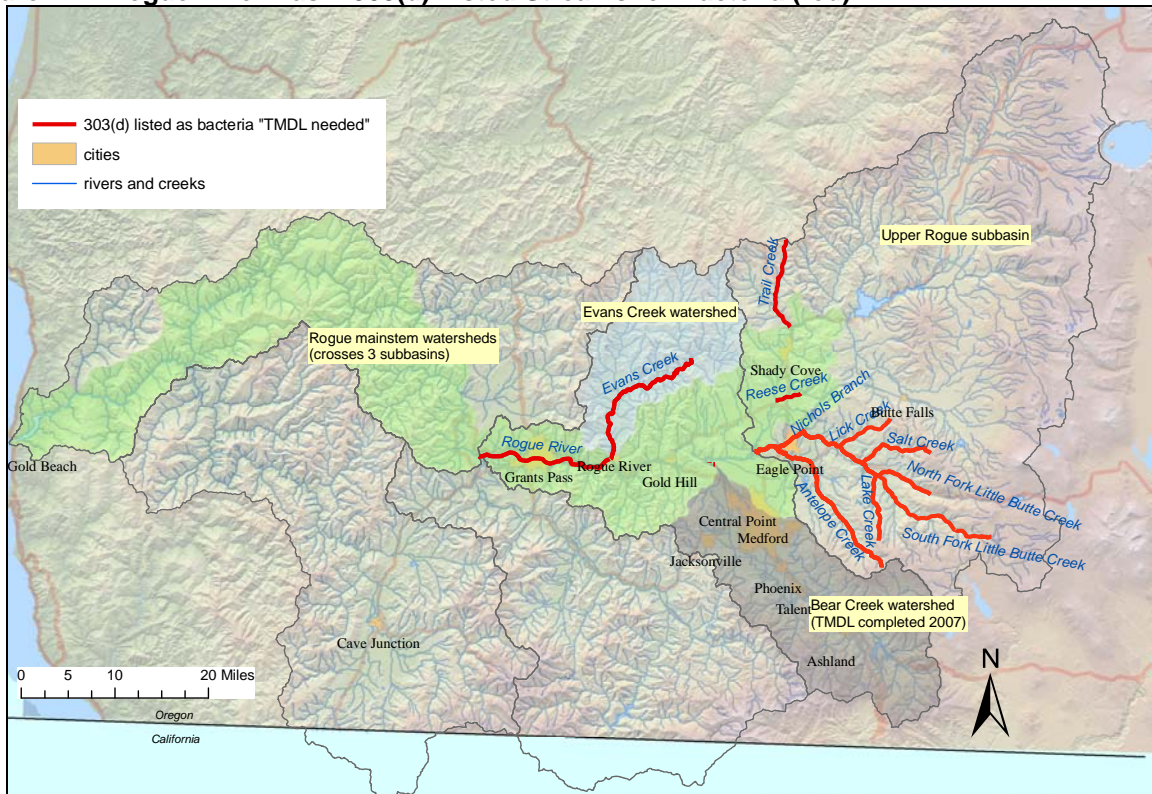
#### **Water Quality Parameters Addressed**

Temperature and bacteria are the 303(d) parameters addressed in this TMDL. **Figure 4.3** highlights the streams on the 2004/2006 303(d) list for temperature. **Figure 4.4** highlights the streams on the 2004/2006 303(d) list for coliform bacteria in the Rogue River Basin.



**Figure 4.3. Rogue River Basin 303(d) Listed Streams for Temperature (red)**



**Figure 4.4. Rogue River Basin 303(d) Listed Streams for Bacteria (red)**

## 2. Goals and Objectives

The overall goal of the WQMP is to identify the DMAs, associated land use, and legal authority to achieve compliance with water quality standards for temperature and bacteria in the Rogue River Basin. The WQMP combines a description of all DMA plans that are in place or will be developed to address the load and wasteload allocations in the TMDL. This WQMP is preliminary in nature and is designed to be adaptive as more information and knowledge is gained regarding the pollutants, allocations, management measures, and other related areas. As defined in OAR 340-042-0080(3), it is expected that all DMAs will develop Implementation Plans, which will serve as the tool for implementing the TMDL and will include the following:

- Develop Best Management Practices (BMPs) to achieve Load Allocations and Waste Load allocations
- Give reasonable assurance that management measures will meet load allocations, through both quantitative and qualitative analysis of management measures
- Adhere to measurable milestones for progress
- Develop a timeline for implementation, with reference to costs and funding
- Develop a monitoring plan to determine if:
  - BMPs are being implemented
  - Individual BMPs are effective
  - Load and wasteload allocations are being met

- Water quality standards are being met

### **Oregon Administrative Rules (OAR) Chapter 340 Division 042 – Total Maximum Daily Loads (TMDLs)**

#### **340-042-0080**

- **Implementing a Total Maximum Daily Load**
- (1) Management strategies identified in a WQMP to achieve wasteload and load allocations in a TMDL will be implemented through water quality permits for those sources subject to permit requirements in ORS 468B.050 and through sector-specific or source-specific implementation plans for other sources. WQMPs will identify the sector and source-specific implementation plans required and the persons, including DMAs, responsible for developing and revising those plans.
- (2) The Oregon Department of Forestry will develop and enforce implementation plans addressing state and private forestry sources as authorized by ORS 527.610 through 527.992 and according to OAR chapter 629, divisions 600 through 665. The Oregon Department of Agriculture will develop implementation plans for agricultural activities and soil erosion and enforce associated rules as authorized by ORS 568.900 through 568.933 and according to OAR chapter 603, divisions 90 and 95.
- (3) Persons, including DMAs other than the Oregon Department of Forestry or the Oregon Department of Agriculture, identified in a WQMP as responsible for developing and revising sector-specific or source-specific implementation plans must:
  - (a) Prepare an implementation plan and submit the plan to the Department for review and approval according to the schedule specified in the WQMP. The implementation plan must:
    - (A) Identify the management strategies the DMA or other responsible person will use to achieve load allocations and reduce pollutant loading;
    - (B) Provide a timeline for implementing management strategies and a schedule for completing measurable milestones;
    - (C) Provide for performance monitoring with a plan for periodic review and revision of the implementation plan;
    - (D) To the extent required by ORS 197.180 and OAR chapter 340, division 18, provide evidence of compliance with applicable statewide land use requirements; and
    - (E) Provide any other analyses or information specified in the WQMP.
  - (b) Implement and revise the plan as needed.
- (4) For sources subject to permit requirements in ORS 468B.050, wasteload allocations and other management strategies will be incorporated into permit requirements.

- Stat. Auth.: ORS 468.020, ORS 468B.020, ORS 468B.030, ORS 468B.035 & ORS 468B.110  
Stats. Implemented: ORS 468B.020, ORS 468B.110  
Hist.: DEQ 18-2002, f. & cert. ef. 12-20-02

### 3. Identification of Responsible Participants

The purpose of this element is to identify the DMAs responsible with the authority to meet the Rogue River Basin TMDL and to list the major responsibilities of each. DMAs are recognized by the State of Oregon as being those entities with the legal authority to ensure that the targets set forth in the TMDL are met (OAR 340-042-0030 (2)). What follows is a listing of the DMAs in the Rogue River Basin by land use and their responsibilities under the TMDL. DMAs are responsible for implementing management strategies and developing and revising sector-specific or source-specific implementation plans. The management strategies necessary to meet the TMDL load and wasteload allocations differ based upon the source of pollution and the responsibilities and resources of the DMAs. Many DMAs are already implementing or planning to implement management strategies for improving and protecting water quality, but may need to take additional actions to meet the TMDL allocations.

This is not intended to be an exhaustive list of every participant that bears some responsibility for improving water quality in the Rogue River Basin. Because this is a community-wide effort, a complete listing would have to include every business, every industry, every farm, and ultimately every citizen living or working within the basin. We are all contributors to the existing quality of the waters in the Rogue River Basin and we all must be participants in the efforts to improve water quality.

For certain DMAs, TMDL implementation responsibilities will be carried out through existing regulatory and non-regulatory programs and activities. These DMAs, and examples of the programs and activities they will implement to achieve TMDL allocation, include those listed below:

#### Designated Management Agencies with Existing Plans

*NOTE: The term "zoning" may be used synonymously with "land use" in this document. However, in many cases it is the land use itself which determines which DMA has the authority and, therefore, which Implementation Plan is applicable.*

#### **DMA: Oregon Department of Environmental Quality (DEQ)**

##### **Land Use: Various Permitted Sources**

The following permits are issued by DEQ. Contact the DEQ Medford office at (541) 776-6010 for more information.

- NPDES Permitting and Enforcement
- WPCF Permitting and Enforcement
- Municipal Separate Storm Sewer System (MS4) Discharge Permit
- 401 Hydroelectric Certifications
- 401 Dredge and Fill Certifications
- On-Site Septic System Permitting and Enforcement (except where delegated to specific county)
- Nonpoint Source TMDL Implementation Program
- Technical Assistance
- Financial Assistance
- Sewer and septic systems related to human habitation

**DMA: Oregon Department of Agriculture (ODA)****Land Use: Agriculture**

Agricultural land uses are addressed in the *Inland Rogue Agricultural Water Quality Management Area Plan* and the *Curry County Agricultural Water Quality Management Area* as required by Senate Bill 1010. Contact the Oregon Department of Agriculture at (503) 986-4550 for more information regarding agricultural or farm related activities including confined animals feeding operations (CAFOs). The land uses falling under this category include:

- Agricultural or farm-related activities, both commercial and noncommercial including livestock stable and pastures, both inside and outside of municipal boundaries
- Agricultural Water Quality Management Plan Development, Implementation, Enforcement and Revision
- CAFO Permitting and Enforcement
- Container nursery operations
- Technical Assistance
- Rules under Senate Bill (SB) 1010 to clearly address TMDL and Load Allocations as necessary
- Riparian area management
- Oregon Conservation Reserve Enhancement Program

**DMA: Oregon Department of Forestry (ODF)****Land Use: Forestry on Private Lands**

Private lands' forestry uses are addressed in the Forest Practices Act. If additional actions are needed to meet the TMDL, ODF may revise statewide FPA rules and/or adopt subbasin specific rules as necessary. Contact the ODF, Southwest Oregon District Office at (541) 664-3328 for more information. The forest management activities covered under the Forest Practices Act are included in the following general categories:

- Harvesting or Salvaging Trees
- Site Preparation and Reforestation
- Chemical Application
- Clearing Forest Land for Nonforest Uses
- Road Construction and Improvements
- Riparain area managment
- Precommercial Thinning/Slash Disposal

**DMA: Oregon Department of Transportation (ODOT)****Land Use: Roads, Highways and Bridges**

State road issues will be addressed in a Memorandum of Understanding between ODOT and DEQ. Contact ODOT, District Manager at (541) 774-6355 for more information.

- Routine Road Maintenance, Water Quality and Habitat Guide Best Management practices
- Pollution Control Plan and Erosion Control Plan
- Design, Construction, Operation and Maintenance of state highways and state highway storm systems

**DMA's Required to Develop Implementation Plans**

Other DMA's are required to develop TMDL implementation plans that describe the management measures they will take to achieve their load allocations. These DMA's are listed below. TMDL implementation plans must be submitted to DEQ for approval within 18 months from the time this TMDL becomes an executive order. DMA's that wish to may submit a joint TMDL implementation plan. DEQ encourages the development of statewide implementation plans by other state agencies. The required elements of these plans, and the process for monitoring progress under these plans and revising them as necessary, are described in DEQ's TMDL Implementation Plan Guidance<sup>1</sup>.

**DMA: US Army Corps of Engineers (USACE)**  
**Land Use: Lost Creek Reservoir and Elk Creek Dam**

The US Army Corps of Engineers controls all operations related to Lost Creek Reservoir and Elk Creek Dam. Contact the USACE Rogue River Basin Project Manager at (541) 878-2255 for more information.

**DMA: USDI-Bureau of Land Management**  
**Land Use: Federal Lands (BLM administered land)**

In July 2003, the Bureau of Land Management (BLM) signed a memorandum of agreement (MOA) with DEQ defining how water quality rules and regulations regarding TMDLs will be met. BLM will develop or revise existing Water Quality Restoration Plans (WQRPs) as described in MOA, and they will be the TMDL Implementation Plans for BLM. Contact BLM, Medford District Hydrologist at (541) 618-2200 for more information.

**DMA: USDA-Forest Service**  
**Land Use: Federal Lands (National Forests)**

In 2002, the US Forest Service (USFS) signed a memorandum of understanding (MOU) with DEQ defining how water quality rules and regulations regarding TMDLs will be met. USFS will develop or revise existing Water Quality Restoration Plans (WQRPs) as described in the MOU, and they will be the TMDL Implementation Plans for USFS. Contact USFS, District Hydrologist at (541) 858-2200 for more information.

**DMA: Oregon Department of Geology and Mineral Industries (DOGAMI)**  
**Land Use: Aggregate Mining**

DOGAMI's regulation of aggregate mines, many located in the flood plain of rivers, qualifies DOGAMI as a DMA. Contact DOGAMI, Southwest Oregon Section Leader at (541) 476-2496 for more information.

**DMA: Oregon Department of State Land (DSL)**  
**Land Use: Publicly Owned Lands and Removal-Fill Activities**

DSL holds public owned lands in trust and manages these lands in the public's best interests. DSL administers the state's removal-fill permits and is responsible for leasing range and agricultural land and waterways for a variety of business activities. Contact DSL, Jackson/Josephine Resource Coordinator at (503) 986-5250 for more information.

**DMA: Oregon Parks and Recreation Department (PRD)**  
**Land Use: State Park Lands**

Oregon Parks and Recreation Department is responsible for land stewardship, overseeing Oregon scenic waterways, several permit programs, and park plants and animals. Contact PRD, Rogue Valley District Manager at (541) 582-1118 for more information.

**DMA: Irrigation Districts including; Eagle Point Irrigation District (EPID), Rogue River Valley Irrigation District (RRVID), Medford Irrigation District (MID), Gold Hill Irrigation District (GHID), Grants Pass Irrigation District (GPID), other Irrigation Districts and Ditch Associations where appropriate in the Rogue River Basin.**  
**Land Use: Irrigation water transport and delivery**

Irrigation Districts control operations related to irrigation water transport and delivery in the Rogue River Basin. Irrigation diversion dams fall under the authority of the designated Irrigation District. Irrigation districts and dam operations are considered nonpoint sources that influence the quantity and timing of heat and bacteria delivery to down stream river reaches.

For more information, please contact the appropriate district.

- EPID, (541) 823-3411
- RRVID, (541) 773-6127
- MID, (541) 779-1462
- GHID, (541) 582-1802
- GPID, (541) 476-2582

**DMA: Jackson, Josephine and Curry Counties, Cities of Shady Cove, Butte Falls, Eagle Point, Gold Hill, Rogue River, Cave Junction, Grants Pass, and Gold Beach.****Land Use: Rural/Urban Nonresource Land Uses in the Rogue River Basin**

Rural and urban land uses are under the authority of the designated County/City. The Counties and Cities are responsible for their governmental operations, as well as zoning and permitting, urban runoff and drainage systems, streets and roads, and riparian protection. The land uses include:

- All nonagricultural, nonforestry-related land uses including transportation uses (road, bridge, and ditch maintenance and construction practices)
- Sewer and septic systems as related to human habitation, On-Site Septic System Permitting and Enforcement (where delegated to specific county)
- Designing and siting of housing/home, commercial, and industrial sites in urban and rural areas
- Golf courses and parks
- Land use planning/permitting
- Maintenance, construction and operation of parks and other county/city-owned facilities and infrastructure
- Construction, operation and maintenance of county/city roads and county storm sewer system
- Riparian area management
- Operation of Gold Hill Intake Diversion (Gold Hill), operation of Gold Ray Dam (Jackson County) or other small dams owned by the jurisdiction
- Other land uses as applicable to the TMDL

**4. Proposed Management Measures**

The management measures to meet the TMDL load and wasteload allocations differ depending on the source of the pollutant. This section of the plan describes management measures, organized by categories of pollutant sources, which may be used to meet the TMDL load allocations and wasteload allocations. **Figure 4.5** lists general management strategies to address each of the pollutants in the Rogue River Basin TMDL. The list is not intended to be comprehensive nor prescriptive. Each DMA is responsible for source assessment and identification, which may result in additional categories. DMAs are also responsible for identifying the appropriate management strategies to address the sources over which they have jurisdiction.

**Figure 4.5: Pollutant sources and example management strategies to address TMDL pollutants. Pollutants addressed by each strategy are indicated with a grey box.**

Pollutant	Temperature	Bacteria
<b>General Strategies</b>	Increase effective shade through riparian restoration and protection; restore natural stream channel hydrology; increase stream flow.	Reduce bacteria delivered to streams by various means including riparian protection, erosion control and stormwater control and treatment; low impact development; various agriculture and irrigation practices.
<b>New Construction and Development</b>		Temperature    Bacteria
<b>Planning, Permitting, Zoning and Development Codes</b> <ul style="list-style-type: none"> <li>• Develop Low Impact Development Ordinance</li> <li>• Develop a Goal 5 ordinance</li> <li>• Protect buffers, riparian, wetland, and native vegetation areas</li> <li>• Limit increase of impervious areas</li> <li>• Forest conversions follow measures/procedures in Memorandum of Agreement, Conversions of Forestland</li> </ul>		
<b>Construction Stormwater Quantity and Quality Control Activities</b> <ul style="list-style-type: none"> <li>• Use existing open space/landscape areas for stormwater retention and treatment</li> <li>• Maintain post-development peak runoff rate and average volume at levels that are similar to pre-development levels</li> <li>• Porous pavement</li> <li>• Grass swales</li> <li>• Reduce erosion and retain sediment on-site during and after construction</li> </ul>		
<b>Education/Inspection/Enforcement</b> <ul style="list-style-type: none"> <li>• Develop training and education programs for those involved with the design, installation, operation, inspection, and maintenance of erosion and stormwater BMPs</li> <li>• Develop schedule of regular and long-term inspection and maintenance</li> <li>• Education and outreach, enforcement of riparian ordinances</li> </ul>		
<b>Existing Urban and Rural Development</b>		
<b>Planning, Permitting, Zoning and Development Codes</b> <ul style="list-style-type: none"> <li>• Implement watershed management programs to reduce runoff pollutant concentrations and volumes from existing development</li> <li>• Promote redevelopment by assessing previously contaminated sites</li> </ul>		
<b>Stormwater Quantity and Quality Controls, Parking Lots</b> <ul style="list-style-type: none"> <li>• Implement BMPs to promote infiltration, filtration, retention, and detention</li> <li>• Perform routine maintenance of stormwater systems</li> <li>• Conduct regular street maintenance and sweeping</li> </ul>		
<b>Sewers, Septic Systems, Animal Waste</b> <ul style="list-style-type: none"> <li>• Identify and eliminate illicit discharges and cross connections</li> <li>• Conduct onsite septic systems inspection and maintenance</li> <li>• Develop and implement animal waste controls</li> </ul>		
<b>Education and Outreach</b> Conduct public education and outreach on the following: <ul style="list-style-type: none"> <li>• Stormwater</li> <li>• Illegal dumping</li> <li>• Septic system maintenance</li> <li>• Riparian protection and local zoning/ordinances</li> <li>• Landscape design and maintenance</li> </ul>		
<b>Monitoring and Reporting</b> <ul style="list-style-type: none"> <li>• Conduct implementation monitoring and evaluation</li> <li>• Conduct instream and effectiveness monitoring</li> <li>• Provide adequate records and report results</li> </ul>		



<i>Figure 4.5 continued</i>		
<b>Forestry</b>	Temperature	Bacteria
Implement Forest Practices Act and federal resource management plans		
Protection/enhancement of riparian zone, wetlands, seeps, etc. with buffers		
Conduct pre-harvest planning		
Replace/restore roads/culverts		
Stabilize stream banks		
Onsite systems inspections/maintenance campground facilities		
Uplands management		
Inspection/enforcement		
BMP monitoring and evaluation		
Instream monitoring		
BMP implementation monitoring		
Education and outreach to operators and landowners		
<b>Agriculture and Irrigation</b>		
Implement SB 1010 Ag Water Quality Management Area Plans		
Manure, pasture, and nutrient management		
Riparian protection/enhancement; streambank stabilization		
CAFO program implementation		
Uplands management, plant cover crops on sloping lands or erosion-sensitive areas		
Irrigation management to prevent soil erosion and excess nutrient loss		
Education and outreach		
BMP monitoring and evaluation		
Instream monitoring		
Flow management to reduce stream heating, erosion, sediment delivery to streams		
Piping of irrigation canals		
<b>Transportation Roads and Bridges</b>		
<b>Siting and Construction</b>		
<ul style="list-style-type: none"> <li>• Prepare a stormwater management plan to ensure that pre- and post-construction stormwater runoff from roads, highways, and bridges is treated prior to discharge to a waterbody</li> <li>• Protect sensitive ecosystems, including wetlands, by minimizing road-building in those systems, minimizing the number of water crossings, and establishing protective measures, including setbacks, during construction</li> </ul>		
<b>Stormwater, Erosion, Sediment, and Chemical Control</b>		
<ul style="list-style-type: none"> <li>• Develop an approved erosion, sediment, and chemical control plan prior to construction</li> <li>• Implement erosion, sediment, and chemical control plan</li> <li>• Construct runoff management systems to reduce pollutant concentrations in runoff from existing roads, highways, and bridges</li> </ul>		
<b>Maintenance and Repair</b>		
<ul style="list-style-type: none"> <li>• Develop and implement a plan for a integrated vegetation/roadside maintenance controls</li> <li>• Limit generation of pollutants from maintenance operations by minimizing the use of pesticides, herbicides, fertilizers, deicing salts and other chemicals</li> </ul>		
<b>Mining and Instream Work</b>		
Implementation and enforcement of permits		
Education and outreach (DOGAMIs BMP manual)		
Riparian protection/enhancement; streambank stabilization		
<b>Parks</b>		
Riparian protection/enhancement; streambank stabilization		
Limit increase of impervious areas		
Siting and maintenance of docks		
Use existing open space/landscape areas for stormwater retention and treatment		
Develop and implement animal waste controls		
Conduct onsite septic systems inspection and maintenance		

### Trading as a Management Strategy

Water quality trading, or simply trading, is one approach that may be used to achieve water quality goals more efficiently. Trading programs allow regulated parties to meet their obligations by purchasing environmentally equivalent or greater protection from another point or nonpoint source. Trading can be a cost-effective alternative to conventional approaches to achieving compliance with water quality objectives. Trading may also allow a subbasin to achieve water quality improvements more quickly than possible with conventional approaches. In the Rogue River Basin, the pollutant most amenable to trading is temperature.

Trading allows DEQ and stakeholders to look at a watershed holistically. This is important, since the best opportunities for improving water quality and watershed health are not always located at point source outfalls. There may also be ancillary benefits to trading such as the restoration of riparian areas and wildlife habitat.

DEQ intends to encourage and support trading where it will result in a greater benefit to the environment than might be achieved via a conventional regulatory approach. DEQ currently has an established work group whose purpose is to develop an Internal Management Directive (IMD) on Water Quality Trading. The purpose of the IMD is to provide a consistent framework within which trading opportunities can be pursued and implemented, and to identify key features of acceptable trades. DEQ's IMD will be based in part on the 2003 Water Quality Trading Policy developed by EPA<sup>1</sup> and DEQ's experiences to date with trading in Oregon, in particular the authorized temperature and dissolved oxygen trading program in the Tualatin River Subbasin. The IMD will provide direction to staff on acceptable water quality trades between and among point sources and nonpoint sources, but should not be construed as containing requirements of rule or statute.

## 5. Timeline for Implementing Management Strategies

The purpose of this element of the WQMP is to demonstrate a strategy for implementing and maintaining the plan and the resulting water quality improvements over the long term. Included in this section are timelines for the implementation of DEQ activities. Each DMA-specific TMDL Implementation Plan will also include timelines for the implementation of the milestones described under Goals and Objectives. Timelines should be as specific as possible and should include a schedule for BMP installation and/or evaluation, monitoring schedules, reporting dates and milestones for evaluating progress. TMDL Implementation Plans must be submitted to DEQ for approval within 18 months of the issuance of the TMDL.

The DMA-specific Implementation Plans are designed to reduce pollutant loads from sources to meet TMDLs' associated loads and water quality standards. The Department recognizes that where implementation involves significant habitat restoration or reforestation, water quality standards may not be met for decades. In addition, the Department recognizes that technology for controlling nonpoint-source pollution is, in some cases, in the development stages and will likely take one or more iterations to develop effective techniques.

DEQ intends to regularly review the progress of the Implementation Plans. Individual Implementation Plans, this WQMP, and the TMDLs are part of an adaptive management process. Modifications to the WQMP and the Implementation Plans are expected to occur on an annual basis. Reviews of the TMDLs are expected to occur approximately five years after the final approval of the TMDLs, or whenever deemed necessary by DEQ. **Figure 4.6**, below, gives the timeline for activities related to this WQMP and associated DMA Implementation Plans.

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<sup>2</sup>EPA's Final Water Quality Trading Policy may be viewed at:  
<http://www.epa.gov/owow/watershed/trading/tradingpolicy.html>.

**Figure 4.6. Water Quality Management Plan and DMA Specific Implementation Plan Timeline**

Activity and DMA	Year Activity is to Be Undertaken				
	2009	2010	2011	2012	2013
DEQ Modification of MS4 Permits	X				
DEQ Review/Modification of WWTP Permits	<b>5 Year Cycle</b>				
DEQ Modification of General and Minor Permits	<b>5 Year Cycle</b>				
DMA Development and Submittal of Implementation and Monitoring Plans – includes: Jackson County, Josephine County, Curry County, Cities of Shady Cove, Butte Falls, Eagle Point, Gold Hill, Rogue River, Cave Junction, Grants Pass, Gold Beach, EPID, RRVID, MID, GHID, GPID, Ditch Associations where appropriate*.		X			
Development of MOU or other agreement - DOGAMI, DSL, OPRD*		X			
Development and submittal of Temperature Management Plans - USACE (Lost Creek Reservoir and Elk Creek Dam)*.		X			
Revision of Inland Rogue and Curry County Agricultural Water Quality Management Area Plans	<b>2 Year Cycle</b>				
Development and submittal of water quality restoration plans as per MOA / MOU: BLM and USFS		X			
DMA Implementation of Plans			X	X	X
DEQ/DMA/Public Review of TMDL and WQMP (five years after approval)					X
DMA Submittal of Annual Reports	<b>December 1 of Each Year</b>				

\* DMA Specific Implementation Plans must be submitted to DEQ for approval within 18 months of the issuance of the TMDL.

## 6. Reasonable Assurance of Implementation

This section of the WQMP is intended to provide reasonable assurance that the WQMP (along with the associated DMA-specific Implementation Plans) will be implemented and that the TMDL and associated allocations will be met.

Programs are already in place or will be put in place to help assure that the Rogue River Basin TMDL will be met. Some of these are traditional regulatory programs such as specific requirements under NPDES discharge permits. Other programs address nonpoint sources under the auspices of state law (for forested and agricultural lands) or as voluntary efforts.

### Point Sources

Reasonable assurance that point-source wasteload allocations will be met is addressed through the issuance or revision of National Pollution Discharge Elimination System (NPDES) and Water Pollution Control Facilities (WPCF) permits. Provisions to address the appropriate wasteload allocations (WLAs)

will be incorporated into NPDES permits when permits are renewed by DEQ. It is likely each point source will be given a reasonable time to upgrade, if necessary, to meet its new permit limits. A schedule for meeting the requirements will be incorporated into the permit. Adherence to permit conditions is required by State and Federal Law, and DEQ has the responsibility to ensure compliance.

### Management Strategies for Nonpoint Sources

**DMA:** Jackson County, Josephine County, Curry County, Cities of Shady Cove, Butte Falls, Eagle Point, Gold Hill, Rogue River, Cave Junction, Grants Pass, and Gold Beach.

**Land Use:** All urban and rural residential land uses within the Rogue River Basin

**Plan Title:** No Implementation Plan at this time

**Status:** Plan needs to be developed.

Oregon Cities and Counties have the authority to regulate land use activities through local comprehensive plans and related development regulations. This authority begins with a broad charge given to them by the Oregon constitution and the Oregon legislature to protect the public's health, safety, and general welfare. The Oregon land use planning system, administered through the Oregon Department of Land Conservation and Development, provides a unique opportunity for local jurisdictions to address water quality protection and enhancement. Every City and County is required to have a comprehensive plan and accompanying development ordinance to be in compliance with state land use planning goals. While the comprehensive plan must serve to implement the statewide planning goals mandated by state law, cities and counties have a wide degree of local control over how resource protection is addressed in their community.

Many of the goals have a direct connection to water quality, particularly Goal 5 (Natural Resources, scenic, and historic areas and open spaces, OAR 660-015-0000(5)), Goal 6 (Air, water, and land resources quality, 660-015-0000(6)), and Goal 7 (Areas subject to natural hazards). We expect that the efforts of local jurisdictions to address Goal 5, 6, and 7 requirements, when incorporated into a TMDL Implementation Plan, will help a DMA to meet the allocations in this TMDL.

Cities and Counties identified as a DMA under this TMDL are responsible for developing and implementing TMDL implementation plans that describe the management strategies they will take to control nonpoint source pollution arising from land use activities under their jurisdiction. DEQ encourages DMAs to work cooperatively to address these requirements when such an approach would be advantageous.

**DMA:** EPID, RRVID, MID, GHID, GPID, other irrigation districts and ditch associations where appropriate.

**Land Use:** Irrigation Water Transport and Delivery

**Plan Title:** No Implementation Plan at this time

**Status:** Plan needs to be developed.

Irrigation districts are considered nonpoint sources that influence the quantity and timing of both heat and bacteria delivery to downstream river reaches. While irrigation district operations themselves do not create fecal bacteria, the laterals and canals that are used to convey water can play a major role in transporting bacterial contamination across the landscape and into surface waters. Irrigation districts are required to develop implementation plans that include management measures to address heating and fecal loading to irrigation canals and dams.

The plan must include a description of best management practices, measures, and/or control technologies (including eliminating the heat impact and fecal loading on the stream) that districts intend to use to reduce its impact, a monitoring plan, and a compliance schedule for undertaking each measure. To reduce the potential of polluted return flows districts may contact users directly or in conjunction with ODA and the Soil and Water Conservation Districts to inform irrigation users of effective irrigation

practices, manure management and other practices to keep fecal organisms and heat out of the irrigation system and out of surface waters.

As the owner and operator of Fish Lake the Medford Irrigation District must mitigate the impact of the Fish Lake dam so that there is no warming of tailwater above the natural thermal potential at the dam site. Because the reservoir is fed exclusively by springs, a conservative value for determining compliance could be to target temperatures of springs in the area (approximately 8.0 °C). The owners/operators of low head dams must mitigate the impact of the existing dam so that there is no individual or cumulative warming of river temperatures. The DEQ may periodically require irrigation districts to revise temperature management plans to ensure that all practical steps have been taken to mitigate or eliminate the temperature effect of the source on the water body.

**DMA:** US Army Corps of Engineers  
**Land Use:** Management of Lost Creek Reservoir and Elk Creek Dam  
**Plan Title:** No Implementation Plan at this time  
**Status:** Plan needs to be developed.

The US Army Corps of Engineers (USACE) in consultation with ODFW has successfully managed their operations to improve fall chinook runs in the Rogue River Basin. The USACE will continue to work with ODFW and DEQ to set temperature and flow targets on an annual basis. At the time of this writing, DEQ and ODFW are developing an MOU which will define the process by which the ODFW and DEQ will cooperatively work to provide a single set of annual temperature targets to the United States Army Corp of Engineers (USACE) for the operation of the Lost Creek Dam on the Rogue River to protect beneficial uses and meet established thermal load allocations. These discussions to meet numeric targets and protect beneficial uses form the foundation of a temperature management plan. If numeric targets conflict with the protection of beneficial uses, the temperature management plan should lay out the rationale for how temperature and flow targets determined by USACE in conjunction with ODFW and DEQ best protect fish use

USACE will work with ODFW and DEQ to submit a formal temperature management plan. A plan must include a description of best management practices, measures, and/or control technologies (including eliminating the heat impact on the stream) that the source intends to use to reduce its temperature effect, a monitoring plan, and a compliance schedule for undertaking each measure. DEQ may periodically require USACE to revise its temperature management plan to ensure that all practical steps have been taken to mitigate or eliminate the temperature effect of the source on the water body. Reservoir models, currently being developed by USACE and others, may be employed to optimize reservoir operations and evaluate the potential for achieving beneficial uses.

**DMA:** Bureau of Land Management (BLM) and US Forest Service (USFS)  
**Land Use:** A portion of the federally managed lands within the Rogue River Basin  
**Plan Title:** Portions of the Rogue River Basin have been addressed in the following water quality restoration plans (WQRP).

- **BLM WQRP:** Althouse Creek Watershed, Upper Sucker Creek-Grayback, Lower Sucker Creek, North and South Forks Little Butte Creek Key Watersheds, McMullin Creek, South Rogue River-Gold Hill, West Fork Illinois River Watershed, Lower East Fork Illinois River Watershed, Rogue River Horseshoe Bend Illinois-Kerby Watershed, Grave Creek Watershed.
- **Pending BLM WQRP:** Evans Creek, Upper Bear Creek Analysis Area, and Elk Creek Watershed, Big Butte Creek Watershed, Jumpoff Joe Creek Watershed.
- **USFS WQRP:** Upper Rogue River Watershed.
- **Joint WQRP:** Applegate Subbasin.

**Status:** Plan needs to be developed for areas not covered by the listed plans

Both agencies, BLM and USFS, will develop WQRPs as described in §4.2.3 In addition, BLM and USFS

developed *the Northwest Forest Plan (NWFP) Temperature TMDL Implementation Strategies, Evaluation of the Northwest Forest Plan Aquatic Conservation Strategy (ACS) and Associated Tools* (the Strategy). DEQ conditionally approved the Strategy in September 2005 as the temperature TMDL implementation mechanism under the Clean Water Act.

**DMA:** Oregon Department of Geology and Mineral Industries (DOGAMI)  
**Land Use:** Aggregate mining activities  
**Plan Title:** No Implementation Plan at this time  
**Status:** Plan needs to be developed

DOGAMI's regulation of aggregate mines, many located in the flood plain of rivers, qualifies DOGAMI as a DMA. As with other state agencies that have been identified as DMAs, DOGAMI is required to submit an implementation plan but may work with DEQ to develop a statewide implementation plan. Many of the elements required in an implementation plan will likely be met through the implementation of the 1200A General Permit and through DOGAMI's Best Management Practices Manual.

**DMA:** Oregon Department of State Lands (DSL)  
**Land Use:** Public land and waterway management, removal-fill activities, wetland management, land leasing and mining activities  
**Plan Title:** No Implementation Plan at this time  
**Status:** Plan needs to be developed

The Rogue River is publicly owned from the mouth, in Gold Beach, to Lost Creek Reservoir. DSL hold these lands in trust for the public and are managed in the public's best interests. DSL administers the state's removal-fill permits and is responsible for leasing range and agricultural land and waterways for a variety of business activities. Many of the elements required in an implementation plan will likely be addressed through the implementation of existing regulatory programs and activities. As with other state agencies that have been identified as DMAs, DSL is required to submit an implementation plan but may work with DEQ to develop a statewide implementation plan.

**DMA:** Oregon Parks and Recreation Department (OPRD)  
**Land Use:** Public Park Lands  
**Plan Title:** No Implementation Plan at this time  
**Status:** Plan needs to be developed

The Parks and Recreation Department manages sections of land located along the Rogue River and its tributaries. Many of the elements required in an implementation plan will likely be addressed through the implementation of existing regulatory programs and activities. As with other state agencies that have been identified as DMAs, OPRD is required to submit an implementation plan but may work with DEQ to develop a statewide implementation plan.

**DMA:** Oregon Department of Forestry (ODF)  
**Land Use:** All private commercial timber operations  
**Plan Title:** Oregon Forest Practices Act  
**Status:** Completed

The Oregon Department of Forestry (ODF) is the DMA, by statute, for water quality protection from nonpoint source discharges or pollutants resulting from forest operations on non-federal forestlands in the Rogue River Basin, as well as statewide. Water protection rules are applied per OAR 629-635-0000 through 629-660-0060. Forest operators conducting operations in accordance with the Forest Practices Act (FPA) are considered to be in compliance with water quality standards. The FPA does have provisions for both criminal and civil penalties if forest operators do not comply with water protection

regulations.

Examples of forestland water protection best management practices include:

- Roads not located in riparian management areas, flood plains, or wetlands;
- Stream crossing structures designed for 50 year flows;
- Maintain riparian vegetation with a 20-foot no harvest zone of trees and a 10-foot zone no disturbance of all understory vegetation that is near the high water level of the stream or river (except all intermittent streams which have no protections);
- And minimize disturbance to beds and banks of streams, lakes, and all wetlands more than ¼ acre in size; and
- Minimize slash that may enter waters of the state during felling, bucking, limbing or yarding.

ODF entered into an MOA with DEQ and other state agencies to clarify the roles and responsibilities of each state agency during the conversion of forestland to other non-forest uses on publicly or privately owned lands, to ensure that state water quality and other resources are protected throughout the process, and to ensure a smooth transition of jurisdiction between the agencies. For additional information about the Oregon Department of Forestry link to <http://www.oregon.gov/ODF/>.

**DMA:** Oregon Department of Transportation  
**Land Use:** Roads, highways and bridges under the jurisdiction of ODOT  
**Plan Title:** Routine Road Maintenance. Water Quality and Habitat Guide Best Management Practices, July 1999  
**Status:** MOA in development

Oregon Department of Transportation (ODOT) has worked with DEQ to develop a statewide TMDL program focused on managing TMDL pollutants associated with the operation, construction, and maintenance of ODOT roads, highways, and bridges. A Memorandum Of Understanding (MOU) is being developed that will formalize a proactive, collaborative, and adaptive manner whereby the TMDL management goals and requirements as defined in Oregon Administrative Rules (OAR, Division 42) will be met. The MOU should be in place by December 2008.

ODOT has developed a single TMDL management plan that is implemented statewide rather than individual TMDL management plans for multiple water quality limited waterbodies across the state. By developing a single, statewide, management plan, ODOT:

- Streamlines the evaluation and approval process for TMDL watershed management plans.
- Provides consistency to ODOT highway management practices in all TMDL watersheds.
- Eliminates duplicative paperwork and staff time developing and participating in numerous TMDL management plans.

The ODOT TMDL management plan addresses management of all TMDL pollutants associated with ODOT facilities. Of TMDL pollutants, ODOT considers sediment and temperature to be the primary pollutants of concern associated with ODOT owned and maintained facilities, properties located within the highway right-of-way, and maintenance facilities. DEQ is still in the process of identifying TMDL pollutants that limit beneficial uses of waterways across Oregon. TMDL allocations are established by watershed. Because of this, some individual watersheds may have unique pollutant management needs that require special consideration under the ODOT TMDL management plan. ODOT will work with DEQ or local watershed management agencies (e.g. County and Municipal Road Departments), to address local transportation related watershed concerns as needs arise.

Major components of a statewide TMDL management plan will be executed through the core regulatory programs that ODOT is already required to comply with. These regulatory programs are; NPDES Municipal Separate Storm Sewer System (MS4) Phase I and 1200CA permits, 401 Dredge & Fill

Certification, and the Underground Injection Control (UIC) programs.

These programs are the core elements of their statewide TMDL management plan, however the MOU also describes the process that will be used to identify any gaps relative to meeting the TMDL requirements in a given basin or sub-basin. This process will allow an efficient use of both ODOT and DEQ staff in implementing specific actions and goals and identifying appropriate effectiveness monitoring to gauge how its actions are contributing to achieving TMDLs goals in each basin and across the state.

**DMA:** Oregon Department of Agriculture  
**Land Use:** All agricultural operations  
**Plan Title:** Inland Rogue Agricultural Water Quality Management Area Plan (revised 2008) and Curry County Agricultural Water Quality Management Area Plan (revised 2006)  
**Status:** 2-year revision cycle.

The Oregon Department of Agriculture (ODA) is the DMA responsible for regulating agricultural activities that affect water quality through the Agricultural Water Quality Management Act (SB1010) and Senate Bill 502.

SB1010 directs ODA to work with local communities, including farmers, ranchers, and environmental representatives, to develop Agricultural Water Quality Management Area Plans (AWQMAP) and rules in the Rogue River Basin, as well as statewide. SB502 stipulates that ODA “*shall develop and implement any program or rules that directly regulate farming practices that are for the purpose of protecting water quality and that are applicable to areas of the state designated as exclusive farm use zones or other agricultural lands.*” Further, ODA policy states that plans and rules will be “*reviewed on a biennial basis and ODA in consultation with ODEQ will assess whether the plan and rules are sufficient to meet and address water quality concerns established under the 303(d) or TMDL process or other triggering mechanisms*”. Progress reports, which are submitted to the Board of Agriculture after the biennial review of implementation of the plans and rules. Reports to the Board of Agriculture and Director will include statistics on numbers of farms plans developed and types of management practices being employed. These reports will be available to DEQ for review in assessing implementation progress.

The Rogue River Basin is managed under two AWQMAPs. Areas within Josephine and Jackson Counties are managed under the *Inland Rogue Agricultural Water Quality Management Area Plan*. Those areas downstream of the Josephine county border will operate under the conditions of the *Curry Agricultural Water Quality Management*<sup>2</sup>. The AWQMAP stresses voluntary cooperation but ODA, like other state agencies, has the ability to assess civil penalties when local operators do not follow their local Agricultural Water Quality Management Area rules. The Inland Rogue AWQMAP was reviewed and updated in 2008. Curry County AWQMAP was reviewed and revised in 2006.

Local Management Agencies are funded to conduct outreach and education, develop individual farm plans for operations in the planning area, work with landowners to implement management practices, and help landowners secure funding to cost-share water quality improvement practices. Local Management Agencies are generally the Soil and Water Conservation Districts working under contract to ODA.

Examples of best management practices that protect water quality on agricultural lands include:

- Manure, pasture, and nutrient management;
- Plant cover crops on sloping lands or erosion-sensitive areas;
- Provide streamside buffer of site appropriate vegetation;
- Attract livestock to upland areas with off-stream shade, water and salt;
- Improve water distribution method.

<sup>2</sup> Agricultural Water Quality Management Area Plan are located here:  
[http://oregon.gov/ODA/NRD/water\\_agplans.shtml](http://oregon.gov/ODA/NRD/water_agplans.shtml)



## Voluntary Measures

**Land Use: All privately-owned lands in the Upper Rogue Watershed**

Plan Title: Upper Rogue Watershed Assessment

Author: Upper Rogue Watershed Council, Cascade Earth Sciences, ESA Adolfson and Watershed Professionals Network - 2006

Status: Completed

**Land Use: All privately-owned lands in the Little Butte Creek Watershed**

Plan Title: Little Butte Creek Watershed Assessment

Author: Little Butte Creek Watershed Council – August 2003

Status: Completed

**Land Use: All privately-owned lands in the Seven Basins Watershed**

Plan Title: Seven Basins Watershed Assessment and Action Plan

Author: Seven Basins Watershed Council – February 2004

Status: Completed

**Land Use: All privately-owned lands in the Middle Rogue Watershed**

Plan Title: Middle Rogue Watershed Assessment and the Middle Rogue Watershed Action Plan

Author: Middle Rogue Watershed Council – July 2001

Status: Completed

**Land Use: All privately-owned lands in the Illinois Valley Watershed**

Plan Title: Illinois River Watershed Assessment

Author: Illinois Valley Soil and Water Conservation District/Watershed Council – December 1999

Status: Completed

**Land Use: All privately-owned lands in the Lower Rogue Watershed**

Plan Title: Lower Rogue Watershed Assessment and Associated Action Plans

Author: Lower Rogue Watershed Council – August 2005

Status: Completed

## 7. Monitoring and Evaluation

Monitoring and evaluation has two basic components: 1) monitoring the implementation of DMA-specific water quality Implementation Plans identified in this document and 2) monitoring the physical, chemical and biological parameters for water quality. Monitoring information will provide a check on progress being made toward achieving the TMDL allocations, meeting water quality standards, and will be used as part of the Adaptive Management process.

The objectives of this monitoring effort are to demonstrate long-term recovery, better understand natural variability, track implementation of projects and BMPs, and track effectiveness of TMDL implementation. This monitoring and feedback mechanism is a major component of the “reasonable assurance of implementation” for the Rogue River Basin WQIP.

DMA-specific Implementation Plans will be tracked by accounting for the numbers, types, locations of projects, BMPs, educational activities, or other actions taken to improve or protect water quality. The mechanism for tracking DMA implementation efforts will be annual reports to be submitted to DEQ.

The information generated by each of the agencies/entities gathering data in the Rogue River Basin will be pooled and used to determine whether management actions are having the desired effects or if changes in management actions and/or TMDLs are needed. This detailed evaluation will typically occur on a 5-year cycle. If progress is not occurring, then the appropriate management agency will be contacted with a request for action.

## 8. Public Involvement

DEQ believes that public involvement is essential to any successful water quality improvement process. When developing and implementing TMDL Implementation Plans, DMAs will determine how best to provide for public involvement based on their local needs and requirements.

DEQ will also promote public involvement through direct association and contact with existing groups that have an interest in the Rogue River Basin TMDL, such as watershed councils, Council of Governments, SB 1010 Local Advisory Committees, federal and state agencies, and others.

## 9. Costs and Funding

The purpose of this element is to describe estimated costs and demonstrate there is sufficient funding available to begin implementation of the WQMP. Another purpose is to identify potential future funding sources for project implementation. There are many natural resource enhancement efforts and projects occurring in the subbasin which are relevant to the goals of the plan. These efforts, in addition to proposed future actions, are described in the Responsible Participants element of this Plan.

DMAs will be expected to provide a fiscal analysis of the resources needed to develop, execute and maintain the programs described in their Implementation Plans.

### Potential Sources of Project Funding

Funding is essential to implementing projects associated with this WQMP. There are currently several sources of local, state, and federal funds. The following is a partial list of assistance programs available to aid in water quality protection in the Rogue River Basin.

<u>Program</u>	<u>Agency/Source</u>
Oregon Plan for Salmon and Watersheds	OWEB
Environmental Quality Incentives Program	USDA-NRCS
Wetland Reserve Program	USDA-NRCS
Conservation Reserve Enhancement Program	USDA-NRCS
Forest Health Protection	USDA
Stewardship Incentive Program	ODF
Access and Habitat Program	ODFW
Partners for Wildlife Program	USDI-FSA
Conservation Implementation Grants	ODA
Water Projects	WRD
Nonpoint-Source Water Quality Control (EPA 319)	DEQ-EPA
Riparian Protection/Enhancement	COE
Oregon Community Foundation	OCF
Bonneville Environmental Foundation	BPA

Grant funds are available for improvement projects on a competitive basis. Field agency personnel assist landowners in identifying, designing, and submitting eligible projects for these grant funds. For private landowners, the recipient and administrator of these grants is generally the local Soil and Water Conservation District.

## 10. Citation to Legal Authorities

The implementation of TMDL waste load and load allocations and the associated implementation plans are generally enforceable by DEQ, other state and federal agencies, or local governments. It is envisioned that sufficient initiative exists to achieve water quality goals with minimal enforcement. Should the need for additional effort emerge, it is expected that the responsible agency will work with land managers to overcome impediments to progress through education, technical support or enforcement. Enforcement may be necessary in instances of insufficient action towards progress. This could occur first through direct intervention from land management agencies (e.g. ODF, ODA, Counties and Cities), and

secondarily through DEQ. The latter may be based on departmental orders to implement management strategies leading to attainment of water quality standards.

### **Clean Water Act Section 303(d)**

Section 303(d) of the 1972 Federal Clean Water Act as amended requires states to develop a list of rivers, streams and lakes that cannot meet water quality standards without application of additional pollution controls beyond the existing requirements on industrial sources and sewage treatment plants. Waters that need this additional help are referred to as "water quality limited" (WQL). WQL waterbodies must be identified by the EPA or by a state agency which has been delegated this responsibility by EPA. In Oregon, this responsibility rests with DEQ. DEQ updates the list of water quality limited waters every two years. The list is referred to as the 303(d) list. Section 303 of the Clean Water Act further requires that TMDLs be developed for all waters on the 303(d) list. A TMDL defines the amount of pollution that can be present in the waterbody without causing water quality standards to be violated. A WQMP is developed to describe a strategy for reducing water pollution to the level of the load allocations and waste load allocations prescribed in the TMDL, which is designed to restore the water quality and result in compliance with the water quality standards. In this way, the designated beneficial uses of the water will be protected for all citizens.

DEQ is authorized by law to prevent and abate water pollution within the State of Oregon pursuant to the following statute:

### **ORS 468B.020 Prevention of pollution**

- (1) Pollution of any of the waters of the state is declared to be not a reasonable or natural use of such waters and to be contrary to the public policy of the State or Oregon, as set forth in ORS 468B.015.
- (2) In order to carry out the public policy set forth in ORS 468B.015, the Department shall take such action as is necessary for the prevention of new pollution and the abatement of existing pollution by:
  - (a) Fostering and encouraging the cooperation of the people, industry, cities and counties, in order to prevent, control and reduce pollution of the waters of the state; and
  - (b) Requiring the use of all available and reasonable methods necessary to achieve the purposes of ORS 468B.015 and to conform to the standards of water quality and purity established under ORS 468B.048.

### **NPDES and WPCF Permit Programs**

DEQ administers two different types of wastewater permits in implementing Oregon Revised Statute (ORS) 468B.050. These are: the NPDES permits for waste discharge into waters of the United States; and Water Pollution Control Facilities (WPCF) permits for waste disposal on land. The NPDES permit is also a federal permit and is required under the Clean Water Act. The WPCF permit is a state program. As permits are renewed, they will be revised to ensure that all 303(d) related issues are addressed in the permit.

### **401 Water Quality Certification**

Section 401 of the CWA requires that any applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the state must provide the licensing or permitting agency a certificate from DEQ that the activity complies with water quality requirements and standards. These include certifications for hydroelectric projects and for 'dredge and fill' projects. The legal citations are: 33 U.S.C. 1341; ORS 468B.035 – 468B.047; and OAR 340-048-0005 – 340-048-0040.

### **Endangered Species Act, Section 6**

Section 6 of the 1973 federal Endangered Species Act as amended encourages States to develop and maintain conservation programs for federally listed threatened and endangered species. In addition, Section 4(d) of the ESA requires that NMFS list the activities that could result in a take. NMFS has also described certain precautions that, if followed, would preclude prosecution for take even if a listed species were harmed inadvertently. Such a provision is called a *limit on the take prohibition*. The intent is to provide local governments and other entities greater certainty regarding their liability for take.

NMFS published their rule in response to Section 4(d) in July of 2000 (see 65 FR 42421, July 10, 2000). The NMFS 4(d) rule lists 12 criteria that will be used to determine whether a local program incorporates sufficient precautionary measures to adequately conserve fish. The rule provides for local jurisdictions to submit development ordinances for review by NMFS under one, several or all of the criteria. The criteria for the Municipal, Residential, Commercial and Industrial Development and Redevelopment (MRCI) *limit* are listed below:

1. Avoid inappropriate areas such as unstable slopes, wetlands, and areas of high habitat value;
2. Prevent stormwater discharge impacts on water quality;
3. Protect riparian areas;
4. Avoid stream crossings – whether by roads, utilities, or other linear development;
5. Protect historic stream meander patterns;
6. Protect wetlands, wetland buffers, and wetland function;
7. Preserve the ability of permanent and intermittent streams to pass peak flows (hydrologic capacity);
8. Stress landscaping with native vegetation;
9. Prevent erosion and sediment run-off during and after construction;
10. Ensure water supply demand can be met without affecting salmon needs;
11. Provide mechanisms for monitoring, enforcing, funding and implementing; and
12. Comply with all other state and federal environmental laws and permits.

### **Oregon Forest Practices Act**

The Oregon Department of Forestry is the designated management agency for regulating land management actions on non-federal forestry lands that impact water quality. The Board of Forestry has adopted water protection rules, including but not limited to OAR Chapter 629, Divisions 635-660, which describes BMPs for forest operations. The Environmental Quality Commission, Board of Forestry, DEQ, and ODF have agreed that these pollution control measures will be relied upon to result in achievement of state water quality standards.

ODF and DEQ statutes and rules also include provisions for adaptive management that provide for revisions to FPA practices where necessary to meet water quality standards. These provisions are described in ORS 527.710, ORS 527.765, ORS 183.310, OAR 340-041-0026, OAR 629-635-110, and OAR 340-041-0120.

### **Senate Bill 1010**

The Oregon Department of Agriculture has primary responsibility for control of pollution from agricultural sources. This is accomplished through the Agriculture Water Quality Management (AWQM) program authorities granted ODA under Senate Bill 1010 adopted by the Oregon State Legislature in 1993. The Agricultural Water Quality Management Plan Act directs the ODA to work with local communities to develop water quality management plans for specific watersheds that have been identified as violating water quality standards and have agriculture water pollution contributions. The agriculture water quality management plans are expected to identify problems in the watershed that need to be addressed and outline ways to correct the problems.

### **Local Ordinances**

Local governments are expected to describe in their Implementation Plans their specific legal authorities to carry out the management strategies chosen to meet the TMDL allocations. Legal authority to enforce the provisions of a City's NPDES permit would be a specific example of legal authority to carry out management strategies.