

STATE of OREGON

**NONPOINT  
SOURCE  
PROGRAM  
ANNUAL  
REPORT,  
for 2000**

*A Report on Best Opportunities  
to Protect and Restore Oregon's  
Fragile Watersheds*





# Oregon

John A. Kitzhaber, M.D., Governor

## Department of Environmental Quality

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May 30, 2001

Elbert Moore, Director  
The Office of Ecosystems and Communities (ECO-086)  
U.S. Environmental Protection Agency, Region X  
1200 Sixth Ave.  
Seattle, WA 98101-1128

RE: Submittal of Oregon's Nonpoint Source Program Annual Report For 2000

Dear Mr. Moore:

Please find enclosed a copy of Oregon's Nonpoint Source Program Annual Report for the year 2000. As you know, this report is written in response to section 319(h)(8) and (11) of the Clean Water Act (33 U.S.C 1329). The document highlights the activities and accomplishments of the State of Oregon in general and the Oregon Department of Environmental Quality in particular regarding the administration of the State's Nonpoint Source Program.

We believe the report documents Oregon's commitments to addressing nonpoint source pollution and watershed restoration. We intend to submit a similar report each January, in the future.

If you have any questions regarding this document, please call me at (503) 229-5324, or call Ivan Camacho of my staff at (503) 229-5088.

Sincerely,

Michael T. Llewelyn, Administrator  
Water Quality Division

Enclosure: NPS Program Report For 2000

Cc Mark Charles, DEQ  
Christina Reichgott, EPA



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## Executive Summary

This annual report is written in response to section 319 (h)(8) and (11) of the Clean Water Act (33 USC 1329). The report documents the activities and accomplishments of the State of Oregon in general and the Oregon Department of Environmental Quality (ODEQ) in particular regarding the administration of the State's nonpoint source program.

Like many other years in the Oregon program, 2000 was extremely rewarding and productive. As described below, Oregon is clearly making significant progress toward meeting the substantial challenges presented by nonpoint source water pollution.

The State program continues to find innovative, cooperative, community-based, methods to improve water quality and enhance watersheds.

Some of the highlights from this year include the following accomplishments:

- ◆ EPA re-authorized the State's nonpoint source program.
- ◆ Distribution of over \$2.2 million dollars in nonpoint source grants and another \$16 million in OWEB watershed restoration money to projects all across the State.
- ◆ The issuance of several Sub-basin Scale, total maximum daily loads (TMDLs) addressing nonpoint source pollution concerns.
- ◆ Creation of a substantial, 50% state tax credit incentive for reducing nonpoint source pollution.
- ◆ Strengthened partnerships at all levels of government as well as cooperative ventures with private individuals and organizations, and
- ◆ Conducting vigorous and effective outreach and education events to inform Oregon citizens about nonpoint source concerns, and to motivate better stewardship of our waters.

### Next Year's Anticipated Activities

In 2001, we will continue to focus our efforts on development of TMDLs to address nonpoint sources of water pollution.

We also expect to continue to distribute grants and loans to projects that will advance the mission and effectiveness of the nonpoint source program.

We expect to make significant progress toward satisfying the federal conditions placed upon the State's coastal nonpoint source program.

We will look for additional ways of improving our partnership with various State, Tribal, Federal, and Local government agencies, as well as watershed councils, soil and water conservation districts and private individuals and organizations.

We continue to work with out partner agencies to discuss the application of the antidegradation component of our water quality standards to nonpoint sources.

### *Conclusion*

Oregon is tackling the hard issues and meeting the significant challenges posed by the nonpoint source water pollution. We are well on our way along the road towards greater accountability for our investments in Oregon's watersheds; partnering to advance restoration efforts; and greater citizen understanding of the health of their local watershed.

## I. Oregon's Water Resources

With its nearly 97,000 square miles, Oregon ranks as the tenth largest state in the nation. The Oregon landscape is as diverse as it is beautiful. Surface water resources are a major feature of Oregon. The State has over 100,000 miles of rivers, 6,200 lakes, nine major estuaries, and over 360 miles of coastline.

State programs to protect or improve Oregon's water quality date back to 1938. Oregon's point source permit program was the second approved state program in the Country (September 26, 1973). More recently, in 1996 the State adopted the Oregon Plan for Salmon and Watersheds to focus work on watershed restoration and recovery of endangered salmonid populations.

At present, responsibility is divided between several State agencies that work in an active and effective partnership to protect State waters. The State water quality program can be divided into the ten interdependent program elements listed below. The 10 basic water quality program components are as follows (not listed in order of priority):

1. Water quality standards that establish, for each watershed basin, beneficial uses for the waterbody as well as maximum levels of pollutants that can be discharged without adversely affecting the designated use.
2. Permits for point sources, including storm water, discharging pollutants to State waters.
3. Water quality [401] certifications of certain nonpoint source pollutant discharges including hydroelectric projects, and dredge and fill activities.

4. Nonpoint source water quality management plans specifically developed for forestry, agriculture and urban activities.
5. Pretreatment, Sewage Sludge Management and On-Site System programs to ensure that water quality is not compromised by other land-based activities.
6. Biennial assessment of State waters to identify those waters that are not meeting water quality standards



7. Development of total maximum daily loads (TMDLs) to correct those waters that are not meeting water quality standards.
8. Cost-share grants and low interest loan programs to address municipal sewage treatment and disposal needs, and activities to reduce or eliminate nonpoint sources of pollution.





9. Education and outreach activities to continuously remind point and nonpoint sources, as well as members of the public about the importance of water quality.
10. Facility or activity-specific compliance assessment, a pilot NPS effectiveness monitoring effort, technical assistance and enforcement as warranted to ensure State water quality requirements are met.

## II. Oregon's Nonpoint Source Program

Nonpoint source pollution refers to pollutants that reach State waters by non-discreet means (primarily runoff during rain events). Nonpoint sources are often linked with land use activities through which the runoff passes. Nonpoint sources also include atmospheric deposition and pollutants in groundwater or soils that migrate or travel to surface waters.

Nonpoint sources continue to be a leading cause of significant water quality impacts across the State and the nation as a whole.

DEQ first began to address nonpoint source issues in October 1976. A comprehensive survey of nonpoint source

pollution was first undertaken in 1978 and again in 1988.

Oregon first received EPA approval of its nonpoint source program in 1989. NOAA and EPA conditionally approved the State's Coastal Nonpoint Program under section 6217 of the Coastal Zone Management Act in 1998. The base program was updated and re-approved in 2000.

In Oregon, the most prevalent nonpoint source pollutants are temperature, sediment, bacteria and nutrients. These pollutants are most effectively controlling through the use of best management practices (BMPs). BMPs offer a range of both efficient and cost effective solutions to water quality problems.

Oregon's nonpoint source program primarily focuses on 4 land use sectors: *agriculture, forestry, urban storm water and hydromodification.*



Oregon and the Federal government continue to make a significant investment in addressing nonpoint sources of pollution as well as watershed restoration.

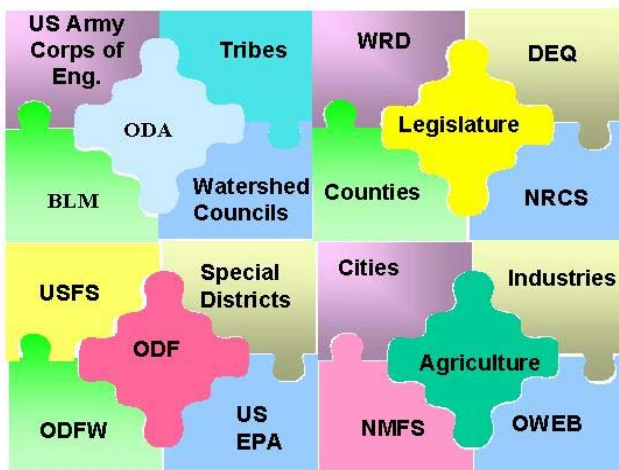
Oregon's strategy for improving State waters is to approach the problem holistically. The State has been divided into 21 watershed basins and 91 sub-basins.

The State's permitting assessment and

TMDL work has been aligned and prioritized according to these sub-basins.

Another major component of the State strategy is to involve as many partners and leverage as many resources and technical perspectives as possible.

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Oregon's Nonpoint Source program primarily focuses on 4 land use sectors: *agriculture, forestry, urban storm water and hydromodification.*

Oregon has relied on longstanding partnerships to address these various activities and sources. As noted above, many of the State's Departments, Boards and Commissions are now actively involved in addressing nonpoint source and watershed concerns. They include but are not limited to:

Department of Environmental Quality (*see [www.waterquality.deq.state.or.us](http://www.waterquality.deq.state.or.us)*)

Department of Agriculture (*see [www.oda.state.or.us](http://www.oda.state.or.us)*)

Department of Forestry (*see [www.odf.state.or.us](http://www.odf.state.or.us)*)

Oregon Watershed Enhancement Board (*see [www.oweb.state.or.us](http://www.oweb.state.or.us)*)

Department of Fish and Wildlife (*see [www.dfw.state.or.us](http://www.dfw.state.or.us)*)

Department of Land, Conservation and Development (*see [www.lcd.state.or.us](http://www.lcd.state.or.us)*)

Department of Economic & Community Development (*see [www.econ.state.or.us](http://www.econ.state.or.us)*)

Department of Transportation (*see [www.odot.state.or.us](http://www.odot.state.or.us)*), and many others.

Finally, another cornerstone of the Oregon water quality program is, to the maximum extent practical, ensure that solutions are developed at the local community level. Watershed Councils, Soil and Water Conservation and Irrigation Districts, cities and counties play an important part in the State's strategy.

### III. Nonpoint Source Activities and Accomplishments in 2000

Oregon's Nonpoint Source program has been extremely active in 2000. Significant accomplishments were made in various aspects of the State program including program improvement, relationships with partners, and enhancements in watersheds throughout the State. The highlights for this reporting period are set out below:

#### A. STATE NONPOINT SOURCE MANAGEMENT PLAN UPDATE AND EPA APPROVAL

One of the most significant accomplishments of year 2000 was

receiving EPA approval for Oregon's Nonpoint Program.

In order to be re-approved, DEQ was required to prepare a comprehensive program description similar to the original document prepared in 1989.

This effort involved significant strategic planning activities and public involvement. The updated plan discusses State priorities for TMDL development and grant distribution. It also contains long and short-term strategies for addressing pollutants commonly associated with nonpoint source pollution discharges.

Finally, the year 2000 program plan also contains

an updated discussion of the activities of other Federal, State, Tribal, and Local governments as well as private partners.

#### B. TEMPERATURE WATER QUALITY CRITERIA

Oregon continues to work with EPA, the Federal Fish Services, the Tribes and other States in the Pacific Northwest to find an acceptable temperature criteria that will support salmonid recovery. Oregon has had water quality temperature criteria since 1967.

Oregon adopted its current water quality temperature criteria in 1996. As part of its triennial review of the State's water quality standards, EPA in 1999, approved in part and rejected in part the temperature criteria. Shortly thereafter, Oregon agreed to participate in a regional task force to examine the scientific literature available on salmonids and temperature, and identify acceptable temperature criteria.

Since October 1999, Oregon has played an active role in this effort which is scheduled to conclude in the fall of 2001. Note that any recommendations for a revised

criteria must still be formally adopted through the State's rulemaking procedures.

In the interim, DEQ has drafted interpretive guidance on the meaning and intent of the existing criteria as it applies to salmonid spawning and threatened and endangered species.

#### C. NONPOINT SOURCE POLLUTION TAX CREDITS

**Oregon DEQ's address for retrieving the 2000 Nonpoint Source Control Program Plan is:**  
**[www.waterquality.deq.state.or.us/wq/nonpoint/nonpoint.htm](http://www.waterquality.deq.state.or.us/wq/nonpoint/nonpoint.htm)**  
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In 1999, the Legislature

authorized a tax credit for nonpoint sources of pollution. This authorization required Department rulemaking before the tax credit program was effective. This rulemaking effort was completed in January 2001 and expenses incurred for nonpoint source controls are now, for the first time in Oregon, eligible for tax credits.

Oregon Administrative Rules [ORS 340-16-0005-0080] now establishes a process for nonpoint sources to follow to obtain a pollution control tax credit. The rules allow a 50% credit for nonpoint source control expenses approved or "certified" by the Department.

The Nonpoint Source Pollution Tax Credit is intended to cover expenditures for "on-the-ground" management practices and improvements. It is not intended to cover education, outreach or monitoring costs.

To be eligible, the applicant must

- Be an Oregon taxpayer;
- Make a qualifying investment; and
- Be the owner and operator of the facility or property in question.

The nonpoint source pollution expense must

- Be for the purchase of land, or a structure, building, installation, excavation, machinery, equipment or devices.
- Be documented.

Expenses that do not qualify for the tax credit include

- Septic tanks or other facilities for human waste;
- Asbestos abatement; or any investment used for cleanup of emergency spills or unauthorized releases;
- Other insignificant nonpoint source control measures

Items that do qualify include

- Vehicles
- Landscaping and fencing,
- Reconstruction of parking lots, and roadways so long as they have a pollution-control purpose.

In addition, the expense must meet at least one of the following circumstances:

Be incurred as a result of a U.S. Environmental Protection Agency or Oregon Department of Environmental Quality requirement, including TMDLs and groundwater management area action plans; or

Exclusively function to control, prevent or reduce nonpoint source pollution and be effective in controlling, reducing or preventing water pollution; and be authorized by one or more of the partner agencies listed in the State Nonpoint Source Control Program Plan.

The partners and activities include expenses incurred pursuant to the following:

- Agricultural water quality management plans administered by the Oregon Department of Agriculture.
- Forest management practices administered by the Oregon Department of Forestry.
- Estuary plans.
- Match expenses for a Nonpoint Source or watershed grant agreement by either DEQ or OWEB.
- Expenses verified by research conducted by Oregon State University's agricultural experiment station, U.S. Department of Agriculture's research service, or the Oregon Department of Agriculture.

The rule allows nonpoint expenses incurred after January 2000 to be eligible for the credit.

The Department has been accepting applications for the credit since February 1, 2001.

An applicant has two years after the completion of construction to file an application with the Department.

#### D. TMDLS ADDRESSING NONPOINT SOURCE POLLUTION

According to the most recent (1998) assessment of the State's water quality, 13,687 miles of State waters are not currently achieving water quality standards. Over 12,100 of these miles are impaired due to temperature. Under Federal law, a total maximum daily load (TMDL) analysis and allocation must be undertaken for these water bodies. Given the numbers of impaired waters, DEQ has elected to perform its TMDL work on a sub-basin basis, rather than water segment by segment.

The majority of the State's TMDL work involves nonpoint sources of pollution. DEQ estimates that 75 percent (68) of the 91 watershed sub-basins are primarily

affected by forestry, agriculture, urban development and other nonpoint sources. Nonpoint sources of pollution also play a significant role in the remaining 23 sub-basin where impairment may be attributed to both point and nonpoint sources. Once a TMDL is completed, DEQ will require each point and nonpoint source to participate in implementing a corrective action plan to achieve all applicable water quality standards.

On February 1, 2000, DEQ and EPA entered into an MOA formalizing Oregon's commitment to develop TMDLs for its impaired water bodies. The MOA (attached as Appendix B) describes the basic elements of a TMDL, opportunities for public involvement and establishes the sub-basin sequence for TMDL development in all 91 sub-basins. The agreement calls for all currently known impaired waters to have completed TMDLs by June 30, 2007.

Since the agreement, four sub-basin TMDLs were completed and sent to EPA for review:

- ◆ Upper Grand Ronde [temperature, sedimentation, pH, nutrients, aquatic weeds/algae and dissolved oxygen];

- ◆ Umatilla [Flow, bacteria, temperature, and sediment]
- ◆ Tualatin [phosphorus and ammonia in the main stem of the river, and bacteria, dissolved oxygen, temperature and chlorophyll *a* in the tributaries], and
- ◆ South Fork of the Coquille [temperature]

These sub-basin TMDLs cover 118 separate water segments listed as impaired on the State's 303(d) list.

In addition, the TMDL for the Tillamook [bacteria and temperature] has been drafted and was published for public comment in early 2001.

#### **Columbia/Snake Rivers MOA**

In January 2001, DEQ signed a Memorandum of Agreement with the EPA and the State of Idaho regarding the development of the TMDLs for Total Dissolved Gas and Temperature. This agreement lays out how EPA, Idaho, Washington and Oregon will coordinate efforts on this TMDL.

For a complete status on TMDLs, please refer to the tables set out below.

TABLE 1: COMPLETED AND PENDING TMDLS

Subbasin	# TMDLs/ Subbasin	# River Miles	Year Due	Year Submitted
Columbia & Willamette	8		-	1991 (APPROVED)
Bear Creek	3		-	1992 (APPROVED)
Clear Lake	1		-	1992 (APPROVED)
Garrison Lake	1		-	1992 (APPROVED)
Yamhill River	3	201	-	1992 (APPROVED)
Pudding River	16		-	1993 (APPROVED)
Rickreall Creek	1		-	1994 (APPROVED)

Coast Fork, Willamette	2	66	-	1996 (APPROVED)
Coquille River	3	346	-	1996 (APPROVED)
Columbia Slough	10	19	-	1998 (APPROVED)
Tualatin	97	277	1999	2001
Upper Grande Ronde	74	469	1999	2000
Sprague	15	324	2000	7/2001
Umatilla	34	379	2000	2001
Upper Klamath Lake	8	6	2000	7/2001
Tillamook Bay	39	224	2000	Public comment completed in 2001
Nestucca Bay	6		2000	7/2001
Wallowa	18	145	2000	
Williamson	3	93	2000	7/2001
Upper Sucker Grayback	1	0.6	2004	1999
Upper S. Fork Coquille	7	90	2005	2001
<b>TOTAL SUBMITTED (1999-7/2001)</b>	<b>350</b>	<b>2438.6</b>		

TABLE 2. FULL SCHEDULE FOR TMDL DEVELOPMENT

<b>Year</b>	<b># TMDL's Approved by EPA</b>	<b># TMDL's Submitted to EPA</b>	<b># TMDL's Required To Be Submitted to EPA Under Oregon Plan</b>	<b>TMDL's Required to be Approved by EPA, Cumulative Totals, Under Court Decree</b>
1991	8	-		
1992	20	-		
1993	16	-		
1994	13	-		
1995	-	-		
1996	5	-		
1997	-	-		
1998	10	-		
1999	-	1	207	
2000		73	160	
2001		154 (as of 3/13/01)	124	
2002			310	
2003			324	
2004			311	310
2005			143	
2006			134	
2007			112	
2008				982
2010				1153

#### E. MODEL WATER QUALITY LOCAL ORDINANCE

In October 2000 DEQ and the Department of Land Conservation and Development published guidance for communities addressing urban storm water runoff. The guidance explains the basic requirements of Oregon land development use law, the Clean Water Act, the Safe Drinking Water Act, and the Endangered Species Act. Local government's role in protecting water quality is also discussed. Model language for addressing nonpoint source issues in a

community's comprehensive [land use] plan is included, as are comprehensive recommendations for building best management practices requirements into a community's local zoning ordinance. Finally, the guidance identifies several helpful resources for small communities to use in developing their approach to nonpoint source controls, including internet web pages.

DEQ and DLCD contracted with the South Slough National Estuarine Research Reserve to develop an education outreach program for coastal local government officials. A series of workshops were held in coastal communities during 2000 and



early 2001. The document can be obtained on the DLCD web site at [www.lcd.state.or.us](http://www.lcd.state.or.us).

## F. NONPOINT SOURCE GRANTS

There are two State grant programs that provide funding for various nonpoint source pollution and watershed enhancement projects in Oregon. One is administered by DEQ, and the other is administered by OWEB. Each of these programs is described briefly below.

### DEQ Nonpoint Source Grants

During 2000, DEQ made over \$2 million dollars available for 47 nonpoint source projects. The projects may be described as follows:

Best Management Practices	\$492,879
Watershed Restoration	\$482,068
Education and Outreach	\$364,224
Monitoring and Assessment	\$290,917
Research	\$184,505
TMDL Support	\$126,728
On site Systems	\$ 74,000
Fish Passage Enhancements	<u>\$ 59,840</u>
TOTAL	\$2,075,161

In order to qualify for this funding, each recipient agreed to match these funds with (40%) value in either in kind services or

other funds to support the project, or both. This means the total combined value of these projects is at least \$ 3.458 million. A description and status for each of these projects may be found in Appendix B.

### OWEB Watershed Enhancement Grants

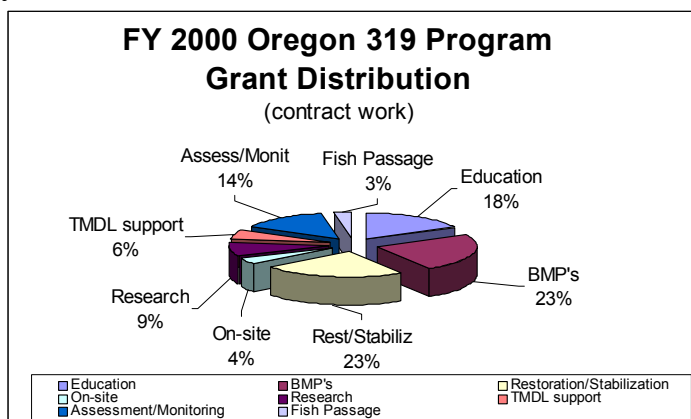
Complementing the nonpoint source grants are the watershed grants. During 2000, OWEB distributed over \$16.1 million in grants for watershed enhancement and salmon recovery.

These projects include education and outreach, water quality monitoring and assessments, support for watershed council personnel, and restoration projects such as erosion control, vegetation management, wetlands, habitat restoration and fish passage improvements.

A brief description of the location and type of OWEB's recent projects is set out in the figure below.

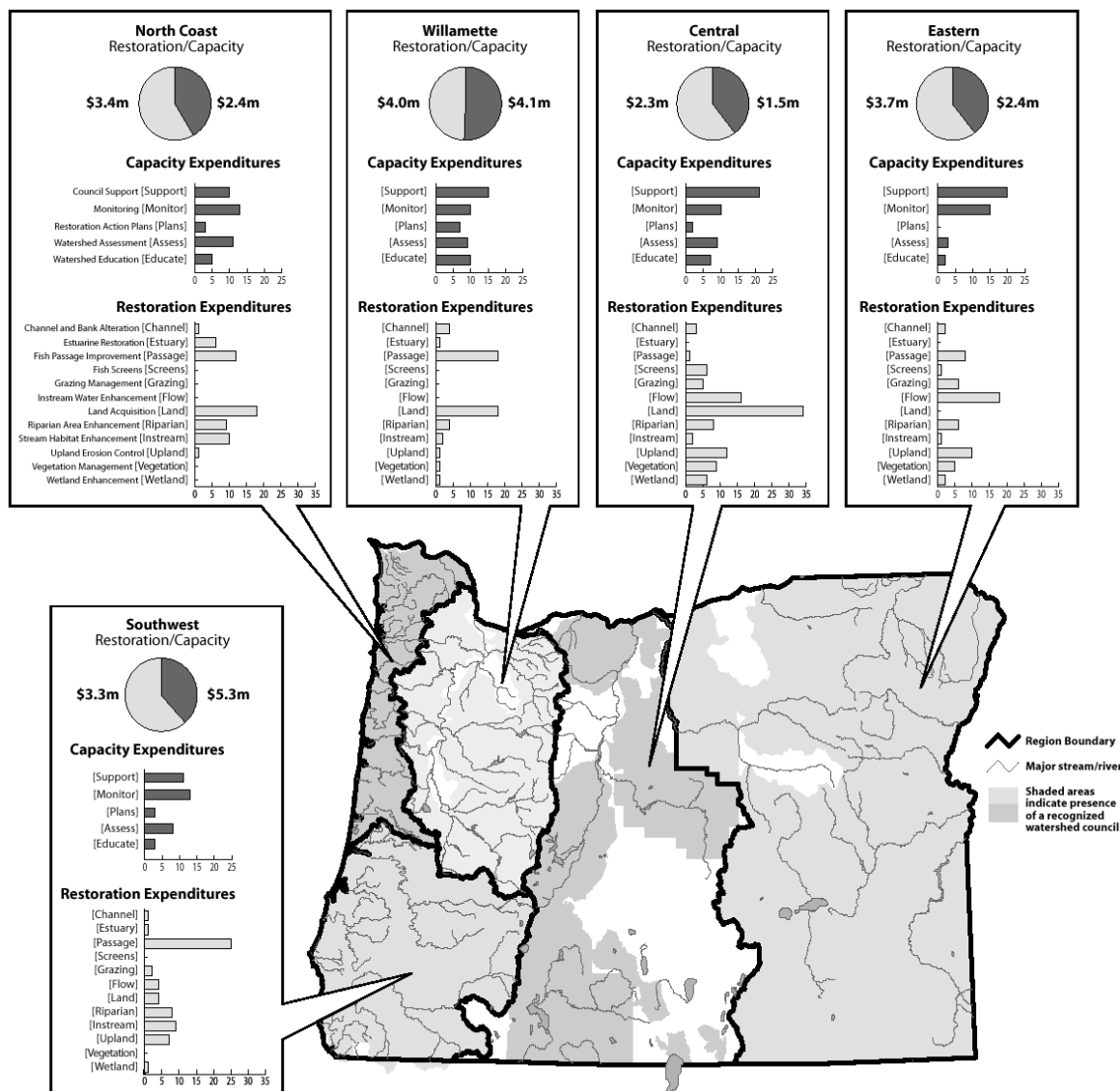
Similar to DEQ's nonpoint source grants, OWEB grant recipients must pledge at least 25% in matching funds in order to receive their grants. Therefore, the total value of these combined projects is at least \$ 20 million each year. For more detailed information on the OWEB program, the reader is referred to the OWEB website [See also a discussion of OWEB in Section IV, below].

Together, the Nonpoint Source and the watershed restoration grants promote the shared vision of healthy watersheds and natural habitats that support thriving communities and strong economies





**FIGURE 1: DESCRIPTION OF OWEB PROJECTS**



OWEB issued grants for more than \$32 million during the 1999–2001 biennium. These figures illustrate the approximate distribution of funds by OWEB within each of the five OWEB Regions.

#### IV. Activities With and By Other Nonpoint Source Partners

##### REGIONAL WATERSHED COORDINATION TEAM

In 2000, DEQ agreed to participate in the Regional Watershed Coordination

Team (RWCT). This forum includes representatives of the U.S. Forest Service, U.S. EPA, the National Marine Fisheries Service, U.S. Fish and Wildlife Service, the Army Corps of Engineers, the Federal Natural Resources Conservation Service, the Bureau of Land Management, the National Park Service, Bonneville Power Administration, the Washington Department of Ecology, the Idaho

Department of Environmental Quality and others.

The purposes of this forum are to enhance and coordinate collaborative State and Federal activities related to watershed preservation and improvements in the Pacific Northwest. The team intends to pursue Tribal participation in the future. The RWCT will meet periodically and discuss watershed issues, including nonpoint source impacts, control strategies and funding needs. In addition, the group will provide direct technical and programmatic assistance to watershed organizations, conservation districts and local governments on an “as needed” basis. Finally, the RWCT will look for opportunities to promote ecosystem protection and restoration with the public. The group plans to periodically sponsor watershed round tables or workshops and respond to ideas and recommendations from the public.

addressing water quality issues associated with these agricultural activities [see Oregon Revised Statutes Chapter 568.900 through 568.933].

ODA is responsible for developing and implementing agricultural water quality management area plans. The purposes of these plans are to correct existing water quality concerns and prevent any additional future pollution. These plans will also serve as the principal implementation mechanism for TMDLs as they affect agricultural activities. The plans are adopted in the form of administrative rules and are issued for designated geographic areas (impaired waters). Once adopted, they carry the force of law and noncompliance is subject to enforcement.

ODA progress in adopting these plans is described as follows:

#### DEPARTMENT OF AGRICULTURE

Of the 91 sub-basins in Oregon, 39 of them flow through primarily agricultural lands. The Oregon Department of Agriculture (ODA) is the designated lead agency for

#### SUMMARY OF ODA'S AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLANS (AWQMAP)

Plans already adopted	Plans proposed for public comment	Plans currently in development	Plans yet to be initiated
10/39	5/39	15/39	9/39

The ten AWQMA plans already adopted are:

- Tualatin River sub-basin
- Bear Creek sub-basin
- Upper Grande Ronde sub-basin
- Umatilla River sub-basin
- Lower Deschutes
- North Coast Basin

- Yamhill River sub-basin
- Umpqua Basin
- Malheur Basin
- Hood River Basin

Additional plans that are pending include the following:

- Clackamas sub-basin

- Lower Columbia-Sandy sub-basin
- Inland Rogue Basin
- Middle Deschutes subbasin

ODA expects to have all plans in place in 2001. Of course, once a corresponding TMDL is issued for an area with an existing agricultural water quality management plan, the plan may have to be revised to ensure consistency with the final TMDL.

In addition to developing agricultural water quality plans, the Oregon Departments of Agriculture and Forestry are conducting a technical assistance program. This program is designed to raise awareness of agriculture and forestry nonpoint sources of pollution issues through demonstration events, workshops, BMP field days, and water resource education activities. Special emphasis is placed on conducting work within the Natural Resources Conservation Service (NRCS) priority areas (i.e., impaired water bodies flowing through agricultural lands), as well as in wellhead protection areas. This project has been very successful in informing farmers and landowners about nonpoint issues.

#### OREGON DEPARTMENT OF FORESTRY

Over 45% of Oregon is forested. Oregon has historically been an innovator in addressing nonpoint sources of pollution related to forestry. The first mandatory reforestation law was adopted in 1941. The Oregon Forest Practices Act of 1971 represented the first of its kind legislation nationally. The EPA recognized the Department of Forestry (ODF) as the lead agency for nonpoint source pollution control efforts on State and private forest lands in 1979. Today's Forest Practice Program is more effective than ever at minimizing water quality impacts from timber harvests, road building, clearing and thinning.

The Department of Forestry has the lead in developing water quality management plans for state and privately-owned, forest lands. ODF has established a series of regulatory management practices which state and private foresters must comply. Further, ODF continuously tries to motivate landowners and operators to go beyond these requirements whenever possible.

This year the Board of Forestry approved long range plans for managing Northwest and Southwest state forests, addressing over 633,000 acres. Using a more comprehensive approach to watershed management as compared to previous efforts, these plans envision "the greatest permanent value" for the state of Oregon, providing, ecological as well as economic benefits.

ODF is also involved in monitoring and assessment activities. As part of its 2000 monitoring activities, Forestry collected stream-side shade measurements at 31 sites in the Blue Mountain area, and 30 sites in the Coast Range. Extensive channel and riparian vegetation data were also collected, including: channel measurements, tree species composition, tree height, canopy measurements, tree distance from stream, topographic shade angle, grazing effects, fire effects, and insects and disease.

The data collected from this study is currently being used to help test the effectiveness of the Oregon Forest Practices Rules in providing shade conditions that are sufficient to meet state water quality standards.

DEQ provides technical assistance to ODF on water quality issues related to forestry activities. Through a 1998 MOU, the two agencies have established a cooperative work relationship for evaluating forestry

BMPs and for achieving state water quality standards and TMDLs.

#### OREGON WATERSHED ENHANCEMENT BOARD

The 1999 legislature replaced GWEB with OWEB -- a new, independent state agency with cabinet status, an Executive Director and expanded Board membership and responsibilities.

Funding for salmon and watershed restoration was increased to \$32.6 million in the 1999-2001 biennium. Of that sum, \$26.5 million were directed toward on-the-ground restoration projects, \$3.7 million were used for watershed monitoring, assessment, action plans and local outreach, and \$2.4 million for direct support to watershed councils.

#### OREGON STATE UNIVERSITY

The Oregon State University Agricultural Experimental Stations are currently engaged in updating its existing BMP manuals for agricultural commodities. Upon completion, these documents will become an integral tool in DEQ's agricultural NPS efforts. Completed manuals will feature in-depth descriptions, photographs and diagrams.

## **V. FUTURE DIRECTION FOR THE OREGON NONPOINT SOURCE PROGRAM**

#### WATER QUALITY STANDARDS

DEQ will continue to work with EPA, the tribes, other Pacific Northwest States, and the Federal Fisheries Services to identify

improvements to the State's water quality temperature criteria.

On March 15, 2001, DEQ sponsored the first of several public workshops on this initiative. The session was highly successful attracting over 150 environmental professionals from around the State. The workshop provided a forum to discuss the issues and concerns of controlling water temperature. The target date for completing the interagency initiative is October 2001. State adoption of the criteria is expected approximately 1 year later (October 2002).

In addition to exploring potential improvements to the criteria, DEQ has published a series of guidance interpreting our existing water quality temperature criteria. These include spawning requirements in specific basins, the use of temperature management plans for point and nonpoint sources, and draft guidance on the narrative temperature criteria for threatened and endangered species. DEQ plans to also publish guidance on the cold water refugia and dissolved oxygen criteria. Training on these new protocols is expected later this year.

#### TMDLS

DEQ will continue to develop and implement TMDLs that address Nonpoint Source pollution throughout Oregon. During 2001, DEQ is expected to complete the TMDL for the Tillamook Basin, Hood Basin, Lower Sucker Creek, Little River (Umpqua), Lower Grande Ronde, Tillamook Bay and Upper Klamath Lake.

#### GRANTS

In 2001, DEQ will continue to provide approximately \$2.2 million in Nonpoint Source grant money. Similarly, OWEB

will continue to fund watershed council personnel and restoration projects.

Priorities for Funding in 2001 include:

- Working with watershed councils to complete watershed assessments in the John Day, Grande Ronde, Umatilla, Deschutes, Hood River, and Willamette Basins, and minor tributaries to the Columbia.
- Develop guidance for creating restoration strategies that will support the Northwest Power Planning Council sub-basin planning program; and recognition of these strategies as being compatible with the Endangered Species Act (ESA).
- Provide a spatial picture of the limiting factors in each hydrologic basin by compiling priority problems identified by local assessments and entities.
- Compile restoration priorities for each basin in areas where assessments are complete or other information is available.

Given the extremely high demand for these dollars, and given the increasing need to begin focusing on TMDL implementation, DEQ expects to revisit its decision criteria for prioritizing grant requests. The purpose of this effort is to ensure that those project proposals offering the greatest contributions to pollution control and the achievement of water quality standards receive funding.

In addition, DEQ may undertake rulemaking in our State Revolving Fund (SRF) Loan Program to clarify the eligibility criteria for community nonpoint source projects. Historically, the SRF has been used to provide low interest loans to “public entities” to construct domestic wastewater infrastructure. Existing law already allows public entities to borrow money for nonpoint source control purposes, but to date, few public agencies

have sought to use the money in this manner. DEQ will consider changing its rules to ensure community nonpoint source pollution projects are given appropriate access to the SRF.

## TRAINING AND OUTREACH

The Oregon State University Extension Service is currently in the process of developing a Watershed Steward Educational Program (WSEP). WSEP is a comprehensive watershed enhancement educational program (consisting of curriculum, training materials and learning aids) that will enable target audiences to learn to form effective partnerships, to assess conditions and develop strategies for mitigating or enhancing watershed resources, and to implement effective enhancement projects. WSEP is a joint program of the agriculture, forestry and Sea Grant Extension program areas.

## PARTNERS

The State and Federal agencies operating in Oregon have a long history of cooperation in water quality programs. Many of these relationships have been formalized in memoranda of agreement as early as 1976. These documents reflect commitments to share information and work cooperatively on matters of mutual interest.

Although these agreements have been revised from time to time, the most recent one was signed more than ten years ago. Consequently, these agreements do not directly address many of the existing features of the State water quality program including the Nonpoint Source Program, monitoring and assessments, and TMDLs. Therefore, negotiations are already underway to revise many of these

agreements and ensure that the combined agency efforts are as efficient and effective as possible.

#### THE COASTAL NPS PROGRAM

Oregon's Coastal Nonpoint Pollution Control Program (CNPCP) was developed in compliance with requirements of the Coastal Zone Act Reauthorization Act of 1990 (CZARA). The requirements were designed to restore and protect coastal waters from Nonpoint Source pollution from the following activities: agriculture, forestry, urban stormwater, marinas, boatyards, and hydromodification of coastal waterways and wetlands.

As noted above, EPA and NOAA conditionally approved the State's program in January 1998. DEQ and DLCD have divided the tasks needed to satisfy these conditions into 40 discrete

tasks. Of these, approximately 25% are completed.

The remaining 75% have been prioritized and should be completed by December 2002.

#### PROGRAM CONTACTS

For More information on the Oregon Nonpoint Source Program, contact any of the following individuals:

For information on Nonpoint Source Grants, contact Ivan Camacho at (1) (800) 452-4011 ext. 5088/(503) 229-5088.  
[camacho.ivan@deq.state.or.us](mailto:camacho.ivan@deq.state.or.us).

For information on coastal Nonpoint Source programs, contact Don Yon at (1) (800) 452-4011 ext. 5076/(503) 229-5076.  
[yon.donald@deq.state.or.us](mailto:yon.donald@deq.state.or.us).

For general information on the Nonpoint Source program, contact Mark Charles at (1) (800) 452-4011 ext. 5589/(503) 229-5589.  
[charles.mark@deq.state.or.us](mailto:charles.mark@deq.state.or.us).

## **APPENDIX A: Nonpoint Source Projects FY 2001**

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**Name of Project:**

**OREGON NPS PROGRAMS: ADMINISTRATION, COORDINATION  
AND PLANNING**

**Project Number:** OR-01-01-319

---

**Location:** Statewide

**Watershed:** All Statewide

**Contact Person:** Mark Charles

**Address:** Oregon Department of  
Environmental Quality  
811 SW Sixth Avenue  
Portland, OR 97204

**Summary of Project:** This project will continue to support of seven DEQ staff positions committed to addressing Nonpoint Source pollution throughout Oregon's high priority basins. This project consists of two positions located in Southwest, one in Northwest, one in Eastern, one position allocated to the long-term Monitoring in the Grande Ronde, part of the National Monitoring Network, Columbia Coordinator position and one position for 319 administration and coordination.

**Budget:** \$1,033,538

**319 Funds:** \$663,538

**Status of Project:**

Active, on schedule.

This project provides technical and administrative assistance to implement Nonpoint Source pollution control/prevention strategies in DEQ's Eastern Region. Emphasis is given to priority areas (streams where TMDLs are being implemented or actively being developed and groundwater management areas) but assistance is also provided to local groups in other areas as resources allow. The goal is to implement effective NPS control projects and foster environmental stewardship throughout the region (all of Oregon east of the crest of the Cascade Mountains) through the efforts of locally based staff. Objectives include: Take lead role on DEQ NPS efforts in the Region; maintain partnerships with local watershed councils or similar groups; oversee implementation of all projects funded with 319 or related EPA funding; assist with NPS groundwater issues and priorities in the region.

**Accomplishments:**

- Administered assigned 319 projects
- Participated with WQ program in selection of next FY 319 projects
- Maintains expertise in NPS issues particularly as related to agriculture

- Maintains working relationships with state and federal agencies on NPS issues in the different regions.
- Involvement in a number of on-the-ground projects, including 319 projects and many watershed council projects (serve on technical committees of two councils) is leading to improvement.

The 319 funds in Southwest Oregon two positions working out of Eugene and Coos Bay. One of the Eugene staff is the basin specialist for the Umpqua basin, while the other is a modeler working on TMDLs for all of Southwest Oregon. Other FTE has been distributed through the South Coast and Applegate basin regions. These positions are filled and staff is actively working focussing on the objectives laid out in the funding proposal.

### **Accomplishments:**

- The Umpqua Basin Specialist has been in charge of the 319 program in the Umpqua basin, which includes developing grant priorities for the basin; communicating priorities to potential applicants; assisting applicants with grant applications; convening a local review team to evaluate the

applications; developing workplans and agreements for successful grants; reviewing invoices and match reports; ensuring timely reports from recipients; maintaining files and spreadsheets reflecting current grant status and balance; and other related tasks. The Umpqua Basin Specialist is funded half-time with state general funds, and works primarily on Watershed Council liaison and technical assistance and TMDL development in the Umpqua basin. Technical assistance involves working on assessment and prioritization with the Watershed Council Technical Advisory Committee; reviewing proposed watershed restoration and enhancement projects for technical merit; and providing water quality and GIS data and products. TMDL development includes analytical work, drafting and editing, developing maps and graphics, field data collection, gathering data and information from other agencies, and other related tasks.

- The other Eugene staff funded half-time by this project focuses primarily on TMDL development throughout the Southwest basins. Accomplishments include temperature (Heat Source) modeling for the Sucker Creek

TMDL, South Fork Coquille TMDL, and the Little River TMDL; Heat Source temperature modeling has begun for the Bear Creek and Lobster Creek TMDLs. In addition, SWAT bacteria modeling has begun for the Bear Creek TMDL.

- In addition to TMDL development, the other staff member has completed the following additional tasks:
- Completed GIS data dictionary;
- Updated existing GIS data layers and Gathered complete regional collection of digital USGS quad
- The remainder of the funding for the Western Region has been used to support the 319 work in the South Coast area, where there is high activity in regards to watershed restoration, and water quality NPS work. Work in Applegate has become a priority for staff in the Western Region area. Various projects in the Applegate are being implemented, please refer to the project descriptions for additional information..

The coordinator for the northwestern region has unique challenges, including:

- Administer EPA/DEQ 319 Regional Program. Efforts

included assisting applicants in planning of YR-2000 grant proposals, working with the Regional 319 Grant Review Committee to evaluate, prioritize, and recommend projects for 319 funding, work with the Regional Technical Advisory Team to provide on-the-ground project assistance, and evaluation of completed projects, and assist the 319 Recipients in the development of project invoices, data management, and project reports.

- Assists the Oregon Department of Agriculture in the development of SB 1010 plans, Water Quality Management Plans. Final plan completed and adopted.
- Participates in the Oregon Plan to recover salmon populations. Efforts included assisting applicants in planning OWEB grant proposals, integrating or enhancing the proposals to reflect NPS water quality objectives, as a member of the OWEB Regional Review Committee, reviewed, prioritized, and recommended projects for OWEB funding.
- Assists the Tillamook County Performance Partnership in the implementation of the National

## Estuary Project Comprehensive Conservation Management Plan.

- Provides assistance the development of Regional TMDLs. Efforts include the preparation of the Water Quality Management Plan for the Tillamook Basin TMDL. and coordination of local Watershed Council volunteers in the collection of TMDL relevant data .

### **To Be Accomplished:**

Although all of the above mentioned accomplishments are ongoing efforts, there are specific efforts planned, including:

- Assisting applicants in the development of FY-2001 319 projects.
- Working with the Regional 319 Review Committee in the review,

evaluation, prioritization and recommendation of projects for 319 funding.

- Working with the Regional TAC to provide Recipients with on-the-ground technical assistance.
- Assisting recipients with project invoices, data management, and project reports.
- Working with the ODA in the implementation of SB 1010 plans.
- Preparing of TMDL WQMP for the Nestucca Watershed.
- Assisting the Tillamook County Performance Partnership in the implementation of the NEP CCMP.
- Assisting the OWEB in developing, evaluating, prioritization of projects for OWEB funding.

**Name of Project:**

**AGRICULTURAL NONPOINT SOURCE POLLUTION EDUCATION PROGRAM**

**Project number:** OR-01-2-319

---

**Location:** Southwest

**Watershed:** Rogue

**Contact Person:**

Ron Miner

**Address:**

Water Quality Initiative Team  
Bioresource Engineering  
Department  
Oregon State University  
Corvallis, OR 97331

**Budget:** \$183,333

**319 Funds:** \$110,000

**Summary of Project:**

This is the third and last year of a successful project to complement the various efforts occurring in the Rogue in regards to watershed / public involvement in watershed restoration/pollution prevention. The main idea is to provide leadership to agricultural water quality educational efforts. Including in this effort includes support to watershed councils and

participating in the full range of inter-agency activities that were anticipated for this position. There is every indication that the model proposed is working satisfactory.

**Status of Project:**

On-going

**Accomplishments**

A sample of the accomplishments to date, include:

- Serving as a member for the Regional OWEB Grant review team twice a year.
- Developing curriculum for educating real-estate agents on natural resource conservation
- Part of a 7-member team writing a western-region educational curriculum targeted at small acreage landowners. Funded by a SARE grant.
- Coordinating a series of 6 land-owner workshops with the

Applegate Watershed Council for May, June, and July. Subjects are soil and water management, weeds, and pasture management.

- Will coordinate and co- teach two workshops in May on river systems and flooding. Program is being offered through courses in the Rogue Community College Catalog.
- Developing an educational outreach program for the Little Applegate River watershed, where major funding was obtained to change a point of diversion, and open fish passage to 11 miles of stream habitat during summer months, and increase the number of landowners who will be able to irrigate. This also is part of a greater effort of trying to integrate the Clean Water Act and the Endangered Species Act on the ground, so landowners will be able to comply with both by applying wise natural resource management principles on their property.
- Coordinating a 42 hour Watershed Educational program with Derek Godwin and Max Bennett of OSU Extension. The program will serve the 7

watershed councils of the Rogue Basin and will run from September 2000 to May 2001.

- Currently working on a riparian restoration/ demonstration project at the Experiment Station. The project involves removing blackberries using several methods, including goat grazing, and replacing the blackberries with native vegetation. In the course of this project we are also working with about 10 at-risk youth. The project is being coordinated with the BLM, southern Oregon Historical Society, and the Oregon Youth Authority.
- Serving as an advisor to the Little Butte Watershed Council Water Quality Committee
- Serving as advisor and participating member of the Middle Rogue Watershed Association. This is a new group and still in the process of completing its assessment.
- Serving member of Grants Pass Recycling committee

**Name of Project:**

**IMPLEMENTATION OF AGRICULTURAL WATER QUALITY  
MANAGEMENT (AGWQM) PLANS**

**Project Number:** OR-01-03-319

---

**Location:** Statewide

Active. Nothing to report yet.

**Watershed** Priority basins

**To Be Accomplished:**

**Contact Person:**

Ray Jandhl

Address: 635 Capitol St.  
Salem, OR 97301

**Summary of Project:**

Work for this grant supports Local Management Agencies (LMAs) implementation of AGWQM plans. Such efforts include education and outreach activities to promote actions that meet environmental program needs while maintaining the economic viability of rural communities. Implementation also includes technical assistance, planning and development of demonstration sites, and compliance monitoring.

**Budget:** \$225,000

**319 Funds:** \$306,506

- Task 1: Conduct a public information and education program for agricultural and rural land owners and the public in all listed basins.
- Task 2: Work with landowners to develop individual farm and ranch conservation plans in all listed basins.
- Task 3: Develop and assist landowner projects to improve onsite conditions and create demonstration projects.
- Task 4: Local basin monitoring in all listed basins. Specific types will vary with individual basin needs.
- Task 5: Field work to create Site Potential Assessments to evaluate restoration potential in basins where needed.
- Task 6: Administrative support for AgWQM plan implementation in all listed basins.

**Status of Project:**

**Name of Project:**

**OREGON WATERSHED HEALTH OUTREACH**

**Project number:** OR-01-04-319

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**Location:** Statewide

**Watershed:** Various

**Contact Person:**

**Bill Hastie**

**Address:**

Governors' Natural Resources  
Office  
900 Court St NE St 160  
Salem OR 97301-4047

**Budget:** \$160,000

**319 Funds:** \$95,566

**Summary of Project:**

Activities have been planned  
designed to supplement pathways

of public involvement in the Oregon  
Plan for Salmon and Watersheds  
program.

- Provide technical services to assist the Oregon Department of Environmental Quality (DEQ) water quality staff in development of Total Enhanced presence at the State fair
- Interpretive signs
- Media Campaign
- Watershed and salmon self-assessment guide
- Upgrade current display
- Develop educational materials

**Status of Project:**

Contract is not signed yet. It will be  
in the next few weeks



**Name of Project:**

**LOWER WILLIAMSON RIVERBANK STABILIZATION**

**Project Number:** OR-01-05-319

---

**Location:** Klamath County

**Status of Project:**

**Watershed:** Lower Williamson

SWCD has submitted a draft scope of work and budget for DEQ approval. There are a couple of remaining budget issues to resolve. The field work can not be started until August 20)1 as approved by ODFW.

**Contact Person:** Joyce Wiest

**Address:** 1749 Sheldon Ave  
Medford, OR 97501

**Summary of Project:** This project will allow 2100 feet of lower Williamson River bank to naturally recover from years of grazing by cattle. As the natural vegetation and willow plantings begin to stabilize the bank, less erosion will occur from wave action caused by wind and boats. This objective will be achieved by fencing the riparian area and excluding cattle.

**Accomplishments:** SWCD has submitted a draft scope of work and budget for DEQ approval. There are a couple of remaining budget issues to resolve.

The field work can not be started until August 20)1 as approved by ODFW.

**Budget:** \$2,515

**To Be Accomplished:** Approval of scope of work needs to be completed. Weather does not permit the initiation of the scope of work until mid-Summer 2001.

**319 Funds:** \$1,250

**Name of Project:**

**KLAMATH RIVER BANK STABILIZATION**

**Project Number:** OR-01-06-319

---

**Location:** Klamath County

**Watershed** Upper Klamath

**Contact Person:**

Larry Peacor

Address: PO Box 1079  
Keno, OR 97627

**Summary of Project:**

The proposed actions for this project include: dredging to rebuild eroded banks to a sustainable height, installing coconut fiber roll to limit erosion caused by waves from wind and boats, an aggressive replanting of native vegetation, and installation of a five strand barb wire fence to exclude large grazing herbivores. Approximately 1520 feet of bank will be stabilized and fenced.

**Budget:** \$19,058

**319 Funds:** \$8,140

**Status of Project:**

SWCD has submitted a draft scope of work and budget for DEQ

approval. There are a couple of remaining budget issues to resolve.

The field work can not be started until August 2001 as approved by ODFW.

**Accomplishments:**

The project was on hold for some time in 200 because of change in personnel at Klamath SWCD and negotiation between the landowner and ODFW. Following a series of meetings, a detailed scope of work and budget were successfully developed.

**To Be Accomplished:** The scope of work can be initiated following approval of 319 agreement and SWCD has submitted a draft scope of work and budget for DEQ approval. There are a couple of remaining budget issues to resolve.

The field work can not be started until August 20)1 as approved by ODFW to start field work by ODFW.



**Name of Project:**

**BUCKAROO CREEK WATERSHED/WATER QUALITY RESTORATION PROJECT**

**Project Number:** OR-01-07-319

---

**Location:** Umatilla & Morrow Co.

available for other watershed restoration efforts.

**Watershed:** Buckaroo Creek

**Budget:** \$21,625

**Contact Person:**

**319 Funds:** \$4,930

**Address:**

Confederated Tribes of the Umatilla  
Indian Reservation  
PO Box 638  
Pendleton, OR 97801

**Status of Project:**

In progress.

**Summary of Project:**

This project proposes to reconnect isolated refugia or habitat areas via instream flow and water quality improvements. Restoration will attempt to increase the compatibility of existing land uses and watershed function. Restoration will attempt to demonstrate the potential for vegetation and water quality improvement so that a model is A noxious weed survey was conducted. A treatment plant was developed and implementation treatments have been conducted.

**Accomplishments:**

The impact of domestic grazing has been assessed, and the percent-utilization standard has been reduced accordingly. Twenty-four off-channel watering sites have been identified. Native plant seeds and cuttings have been collected. A portion of the planting took place during May 2000, focusing on bank stability. An electric fence has been utilized to control grazing. Completion of a Buckaroo Creek restoration plan is underway. Another phase of planting is scheduled for next season, Nov-April.

**To Be Accomplished:**

Additional noxious weed treatments are scheduled.

Continued implementation of the Buckaroo Creek restoration plan.

**Name of Project:**

**DEMONSTRATIONS AND INNOVATIONS TO EXPAND SUBSURFACE DRIP IRRIGATION (SDI) IN OREGON.**

**Project Number:** OR-01-08-319

---

**Location:** Malheur County

**Watershed:** Malheur, Owyhee Basins

**Contact Person:** Clinton Shock

**Address:** Oregon State University.  
Malheur Experiment Agricultural Station  
595 Onion Avenue  
Ontario, OR 97914

**Summary of Project:** Some of the most advanced irrigation technology is subsurface drip irrigation (SDI). SDI allows highly productive crop production without leaching or runoff. Only the amount of water consumed by the crop need be diverted from a stream or reservoir, helping to protect stream water quality in a large number of ways.

**Budget:** \$103,600

**319 Funds:** \$74,000

**Status of Project:**

Project completion is progressing as expected. Onion yield and grade was tested in response to a combination of seven nitrogen fertilizer rates and four plant populations under subsurface drip irrigation.

**Accomplishments:**

Valuable information regarding optimum nitrogen rate and plant population combination for drip-irrigated onions has been collected which will be used to maximize crop yield, quality, and economic return while minimizing the quantity of water used and contaminant leaching to groundwater.

**To Be Accomplished:**

The project report will be finalized. Results will be shared with local growers and environmental agencies during a field day in Summer 2001.

**Name of Project:**

**FULTON AND GORDON CANYONS WATERSHED MANAGEMENT**

**Project Number:** OR-01-09-19

---

**Location:** Sherman County

**Watershed:** Fulton & Gordon  
Canyons

**Contact Person:** Jeff Clark

**Address:**

Sherman County SWCD  
PO Box 405  
Moro, OR 97039

**Summary of Project:**

Project will implement best management practices (BMPs) on cropland in the Fulton and Gordon Canyons area of Northwestern Sherman County. Practices will consist mostly of terraces and sediment basins. Implementation will take place on four farms and will be based on resource management system (RMS) plans.

**Budget:** \$61,447

**319 Funds:** \$25,441

**Status of Project:**

The project is approximately 20% completed. Erosion control practices have been implemented on one ranch. Four other ranches are expected to participate in spring 2001.

**Accomplishments:** Sediment basins and erosions control terraces have been installed on one ranch, protecting two previously unprotected draws that feed to Fulton Canyon from a dryland crop field. The practices should reduce soil erosion by an average of approximately 5 tons per year.

**To Be Accomplished:**

Best management practices to reduce runoff and erosion and to improve water quality will be installed on three or four more ranches in the Fulton and Gordon Canyons Watershed.

**Name of Project:**

**ORGANOPHOSPHATE PESTICIDE USE, RUNOFF INTO STREAMS AND EFFECTS ON SALMONIDS IN THE HOOD RIVER BASIN**

**Project Number:** OR-01-10-19

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**Location:** Hood River/Wasco Co.

**Watershed:** Middle  
Columbia/Hood

**Contact Person:** Jeffrey Jenkins

**Address:**

Agricultural Chemistry Extension  
OSU Dept. of Environmental and  
Molecular Toxicology -  
Weniger 333  
Corvallis, OR 97331

**Summary of Project:**

Organophosphate (OP) pesticides are used in the Hood River Basin orchards to control insects late winter, spring and early summer. During these times, the OP used could runoff into streams when sensitive populations of salmonids are present.

Understanding the meteorological and hydrologic processes responsible for mobilizing these chemicals is important for determining changes in reducing stream levels.

**Budget:** \$169,700

**319 Funds:** \$92,700

**Status of Project:**

The project is 50% complete. Sampling occurred during May/June 2000 and will be repeated in March 2001.

**Accomplishments:** Three sites were instrumented for collecting meteorological and hydrological data.

Water samples were collected at the same sites during May and June, 2000 and analyzed for azinphos methyl and imidan. During the same time period, water samples were collected from five different sites in the watershed and analyzed for a suite of OP pesticides.

An assessment of the growth and mortality of steelhead smolts was also conducted and macro-invertebrate populations were sampled at these five sites.

Preliminary results suggest that OP pesticide concentrations were lower



and detected less frequently than in monitoring conducted in 1999. QA data has not yet been completely analyzed, and results will not be released until this analysis has been completed.

The study will be repeated in March 2001 to assess presence in streams and biological impacts of the chlorpyrifos spray season.

**To Be Accomplished:**

**Name of Project:**

**FIFTEENMILE WATERSHED IMPROVEMENT PROJECT**

**Project Number:** OR-01-11-319

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**Location:** Wasco Count

**Watershed:** Fifteenmile  
Hood River County

**Contact Person:** Ron Graves

**Address:**  
Wasco County SWCD  
2325 River Road, Suite 3  
The Dalles, OR 97058

**Summary of Project:**  
The purpose of this project is to provide technical and financial assistance on private lands to implement best management practices in the High Priority Miles Creek sub-basin of the Eastern Hood Basin. Implementation of best management practices on crop and range land will reduce runoff

and erosion and will reduce agricultural Nonpoint Sources of pollution affecting all major streams in the watershed.

**Budget:** \$135,000

**319 Funds:** \$60,000

**Status of Project:** The project is nearly completed. Best management practices still need to be installed for one landowner, which is expected to be completed in March, 2001.

**Accomplishments:** No-till practices were implemented by five landowners on over 1800 acres. Sediment basins were installed by three landowners (a total of 43 basins).

**To Be Accomplished:** Sediment basins still need to be installed for one landowner. Other remaining tasks include: final inspection of projects, photo documentation of projects, determination of

conservation effects, and completion of final report.

**Name of Project:**

**BALDWIN/TIEMAN CREEK AREA ACTION PLAN**

**Project Number:** OR-01-12-319

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**Location:** Hood River/Wasco Co.

**319 Funds:** \$34,097

**Watershed:** Hood River

**Status of Project:**

**Contact Person:** Holly Coccoli

The project is approximately 25% complete.

**Address:**

Hood River SWCD  
PO Box 1656  
Hood River, OR 97031

**Accomplishments:** One fencing project has been completed on Tieman Creek, a draft water quality monitoring plan has been developed, several months of temperature data were collected on Baldwin Creek in late summer/early fall 2000, and stream survey data was obtained on habitat conditions on Baldwin and Graham Creeks from a recent stream survey.

**Summary of Project:**

A project is proposed to improve water quality in the Baldwin/Tieman Creek drainage area. Project elements include (1) cooperative riparian fencing and revegetation, (2) water quality monitoring, (3) public education activities and promotion of best management practices for agricultural and residential landowners, and (4) collaboration with Hood River County and ODOT to identify needs and opportunities to address failing on-site septic systems and road drainage, ditch ravel and storm runoff.

**To Be Accomplished:** Remaining tasks include: completion of at least one more fencing project; water quality monitoring for temperature, nutrients, dissolved oxygen, pH, and bacteria; development and implementation of the public education component; and collaboration with Hood River County and Oregon Dept. of Transportation.

**Budget:** \$58,199



**Name of Project:**

**BIOASSESSMENT OF RESTORATION ACTIVITIES AND BEST MANAGEMENT PRACTICES IN THE UPPER SOUTH FORK OF THE OF THE JOHN DAY RIVER SUB-BASIN.**

**Project Number:** OR-01-13-319

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**Location:** Grant County

**Budget:** \$15,618

**319 Funds:** \$8,800.40

**Watershed:** Upper South Fork of the John Day

**Status of Project:**

**Contact Person:**

Active. Running a little behind schedule but no seriously so. Final report expect by end of March.

Phil St. Clair

**Address:**

**Accomplishments:**

Upper South Fork of the John Day River Watershed Council  
Izee Rt  
Canyon City, OR 97820

- Field collection of Macroinvertebrate samples, physical habitat, and water chemistry data.
- Laboratory analysis of water chemistry
- Macroinvertebrate sorting and identification
- Completion of data analysis and draft report

**Summary of Project:** The objectives of this proposal are to

- (1) Assess and monitor the effectiveness of in-place and future restoration work in the upper watershed, and to:
- (2) Evaluate the upper South Fork of the John Day River sub-basins' current instream conditions in advance of TMDL work.

**To Be Accomplished:**

Final report writing.



**Name of Project:**

**LOWER COLUMBIA RIVER CRITICAL WETLAND HABITAT  
PROTECTION AND RESTORATION PROJECT**

**Project Number:** OR-01-14-319

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**Location:**

Extreme Northwestern Oregon

**Watershed:**

Lower Columbia

**Contact Person:**

Bruce Sutherland

**Address:**

The Columbia River Foundation  
811 SW Sixth Avenue  
Portland, OR 97204

**Summary of Project:**

This proposal is to assess habitat  
inventory data on the lower 46 miles

of the Columbia River and identify  
critical wetland habitat and habitat  
functions in need of protection,  
enhancement and/or restoration.  
This project will also establish a  
technical assistance team to assess  
critical habitat condition, identify  
ways to protect, enhance and restore  
critical habitat and set up a process  
to maintain and monitor them.

**Budget:** \$58,500

**319 Funds:** \$35,600

**Status of Project:**

The project was contracted on 06-07-  
00. Due to difficulties with the  
subcontractor, the project has been  
delayed. Extension granted until  
12-30-02.

**Name of Project:**

**GILLIAM AND WHEELER COUNTIES TECHNICAL ASSISTANCE FOR  
BEST MANAGEMENT PRACTICES PLANNING AND  
IMPLEMENTATION.**

**Project Number:** OR-01-15-319

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**Location:** Gilliam & Wheeler  
Counties

**319 Funds:** \$9,794.35

**Watershed:** Mid Columbia, Willow  
& John Day Basins

**Contact Person:**

Jason Outlaw

**Status of Project:**

Complete except receipt of final  
report.

**Address:**

Gilliam/Wheeler SWCD  
PO Box 106  
Condon, OR 97823

**Accomplishments:**

- Assisted agricultural producers & a watershed group with NPS out-reach on NPS issues.
- Developed 2 riparian buffer forest proposals for landowners.
- Assisted 1 producer with BMPs associated with a CREP project.
- Assisted landowners with voluntary water quality farm planning.
- Assisted 3 landowners with stream bank stabilization practices.

**Summary of Project:** This project will continue to provide technical assistance to landowners in Gilliam and Wheeler Counties in planning and implementing Best Management Practices (BMPs). These BMPs will address Nonpoint Sources (NPS) of water pollution, including sedimentation, temperature and habitat modification on agricultural lands.

**To Be Accomplished:**

Submission of final report.

**Budget:** \$49,262.98



**Name of Project:**

**UMATILLA LONG TERM BMP IMPLEMENTATION (DIRECT SEEDING)  
AND DEMONSTRATION PROJECT**

**Project Number:** OR-01-16-319

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**Location:** Umatilla & Morrow Co.

**Watershed:** Umatilla

**Status of Project:**

In progress.

**Contact Person:**

**Address:** Umatilla County SWCD  
1229 SE Third  
Pendleton, OR 97801

**Accomplishments:**

Ongoing education and information sharing.

**Summary of Project:** This Project will provide incentive monies to six selected operators in the traditional wheat fallow area for up to 960 acres of direct seed each season. Operators will qualify for up to 160 acres of incentive payments at \$20 per acre when they apply direct seeding methods into existing crop residues with the agreement that they will apply the BMP on the same land in following years.

**To Be Accomplished:**

Implementation of direct seeding and associated reporting is scheduled for fall 2001. Storm monitoring related to sediment runoff - a job announcement has been placed for this technician.

**Budget:** \$101,800

**319 Funds:** \$44,200

**Name of Project:**

**UMATILLA SUSTAINABLE AGRICULTURE/SUSTAINABLE  
COMMUNITY DIRECT SEED DEMONSTRATION PROJECT**

**Project Number:** OR-01-17-319

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**Location:** Umatilla & Morrow  
Counties

**Budget:** \$309,500

**Watershed:** Umatilla

**319 Funds:** \$69,500

**Address:**

Umatilla County SWCD  
1229 SE Third  
Pendleton, OR 97801

**Status of Project:**

In progress.

**Summary of Project:** This Project will provide incentive monies for a minimum of twenty operators in the traditional wheat fallow area to seed 4000 acres of direct seeded crop each season. Operators will qualify for up to 200 acres of incentive payments at \$10 per acre when they apply direct seeding methods into existing crop residue.

**Accomplishments:**

Ongoing education and information sharing.

**To Be Accomplished:**

Implementation of direct seeding and associated reporting is scheduled for fall 2001.

**Name of Project:**

**UPPER KLAMATH LAKE TMDL MODELING SUPPORT**

**Project Number:** OR-01-18-319

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**Location:** Klamath County

**Watershed:** Klamath Lake

**Address:**

Steve Kirk  
Oregon Department of  
Environmental Quality  
811 SW Sixth Avenue  
Portland, OR 97204

**Summary of Project:**

Provide technical services to assist the Oregon Department of Environmental Quality (DEQ) water quality staff in development of Total Maximum Daily Loads (TMDLs) for Upper Klamath Lake (UKL) and Agency Lake.

**Budget:** \$75,000

**319 Funds:** \$45,000

**Status of Project:**

The project is approaching successful completion. The Recipient has submitted a draft report and DEQ has submitted comments to the recipient. Final report will be submitted by March 1, 2001.

**Accomplishments:**

The Recipient's report is an integral part of the Upper Klamath Lake TMDLs.

**To Be Accomplished:** DEQ needs to approve the final report.

**Name of Project:**

**BUTTER CREEK RANGE AND RIPARIAN ENHANCEMENT PROJECT,  
PHASE 3: STREAM ASSESSMENT AND WETLANDS RESTORATION  
FEASIBILITY STUDY**

**Project Number:** OR-01-19-319

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**Location:**

Umatilla & Morrow Counties

**319 Funds:** \$35,000

**Watershed:** Umatilla

**Status of Project:**

**Address:**

Umatilla County SWCD

1229 SE Third

Pendleton, OR 97801

Un-contracted. The recipient made a tentative decision to drop the project early on due to reduced funding. Subsequently they have identified possible means to implement the project, but we've agreed that at this point the funding is not practically available. It is a beneficial project and the recipient is encouraged to re-apply next cycle.

**Summary of Project:**

This project is a ridge-top to ridge-top planning effort involving the upper one-third of the Butter Creek Basin. The project area includes much of the upper watershed of Butter Creek, a major tributary of the Umatilla that has 303d concerns for temperature, pH, bacteria and sediment. Salmonids including Redband Trout spawn in this system.

**Accomplishments:**

N/A

**To Be Accomplished:**

N/A

**Budget:** \$38,333

**Name of Project:**

**LOWER UMATILLA BASIN GROUNDWATER MANAGEMENT  
AREA/EDUCATIONAL**

**Project Number:** OR-01-20-319

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**Location:** Umatilla & Morrow  
Counties

**Watershed:** Umatilla

**Contact Person:** Ray Denny

**Address:**  
Umatilla County SWCD  
1229 SE Third  
Pendleton, OR 97801

**Summary of Project:** Implement an element of continuity in the Educational plan by supporting Water Quality Coordination position in the LMA at the level of .25 FTE. Provide funding for .5 FTE of a RARE participant to be engaged in the community educational outreach effort of the LMA.

**Budget:** \$42,900

**319 Funds:** \$25,740

**Status of Project:**

Project completion is progressing largely as expected. Certain project items have been completed while others remain to be completed. A co-sponsor for one task (Envirothon) no longer has

matching funds so the timing/completion of that task is not certain.

**Accomplishments:**

A booth at the 12/00 Farm Fair was manned where groundwater protection was discussed with the public. SWCD staff participated in Stewardship Week in 5/00.

**To Be Accomplished:**

A "groundwater class" will be organized and presented for local residents through a community college. A "wellness seminar" will be organized and presented for local medical/health community to raise awareness of nitrate health issues. Participation in Envirothon will be determined.

**Name of Project:**

**UMATILLA TMDL IMPLEMENTATION, OUTREACH AND PLANNING**

**Project Number:** OR-01-21-319

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**Location:**

Umatilla & Morrow Counties

In progress

**Watershed:** Umatilla

**Contact Person:**

**Address:**

Umatilla Basin Watershed Council  
1 SW Nye  
Pendleton, OR 97801

**Accomplishments:**

- Task 3: Two outreach and education community forums were conducted for the soon to be issued Umatilla Basin TMDL.
- Tasks 4 & 6: Watershed Council has organized TMDL presentations and promoted landowner involvement with the Umatilla County Cattleman's Association and the Oregon Wheat Growers League and has made numerous presentations to city councils.
- Task 5: The watershed council maintains ongoing media interaction regarding TMDL development and promotion of watershed restoration.

**Summary of Project:**

The overall project is implementation of the Umatilla Sub-Basin TMDL. This will be accomplished through application of multi-sector management plans prepared for TMDL implementation, education and monitoring. TMDL development has been guided by a vision of basin-wide watershed restoration.

**To Be Accomplished:**

- Identify methods of outreach most suitable to local stakeholders.

**Budget:** \$100,460

**319 Funds:** \$58,056

**Status of Project:**

- Develop plan for basin-wide outreach.
- Ongoing implementation of the tasks listed above (3,4,5,6).

**Name of Project:**

**DEEP SOIL/WATER SOURCE SAMPLING IN THE LOWER UMATILLA BASIN, PHASE-3**

**Project Number:** OR-01-22-319

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**Location:** Umatilla & Morrow Counties

contamination by excess nitrogen applications.

**Watershed:** Lower Umatilla

**Budget:** \$80,805

**319 Funds:** \$30,305

**Contact Person:** Fred Ziari

**Address:**

IRZ Consulting  
505 East Main  
Hermiston, OR 97838

**Status of Project:**

The project is progressing as expected.

**Summary of Project:** The primary goal of this project will be to demonstrate to growers in the Lower Umatilla Basin the direct benefits of using deep soil sampling and irrigation water analysis as part of their fertilizer and water management programs. Improved management of fertilizer in the basin should have a direct benefit by reducing the risk of groundwater

**Accomplishments:**

All sampling and monitoring has been completed. Data are being analyzed and the final report is being written.

**To Be Accomplished:**

Final report to be completed before March 1, 2001.



**Name of Project:**

**WALLA WALLA WATER QUALITY ASSESSMENT AND TMDL DEVELOPMENT**

**Project Number:** OR-01-23-319

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**Location:** Northeastern Oregon

**Watershed:** Walla Walla

**Address:**

Walla Walla Basin Watershed  
Council  
PO Box 68  
Milton-Freewater, OR 97862

**Summary of Project:**

The overall project is assessment of water quality conditions and development of the Walla Walla Sub-Basin TMDL. This will be accomplished through analysis of available data, collection of more data where needed and applying this information to TMDL planning, implementation, education and monitoring.

**Budget:** \$46,800

**319 Funds:** \$19,700

**Status of Project:**

In progress.

**Accomplishments:**

Task 1. In support of bi-state TMDL development, the council has provided personnel, key resources and outreach (gained landowner support), accomplishing the following in partnership with DEQ (completed tasks):

Summer 2000

- Temperature monitoring and data processing,
- Rosgen Level II channel morphology inventories, shade characterization,
- Flow monitoring.

In negotiations with NMFS regarding Bull Trout and Steelhead ESA listings, the watershed council has conducted substantial monitoring and planning that links ESA-based goals to TMDLs.

**To Be Accomplished:**

Task 2 is underway - developing numeric endpoints for "site potential" channel morphology and shade.

Task 3 is underway - coordinate meetings and conduct public outreach.

**Name of Project:**

**PORT OF GARIBALDI, CONTROL OF NONPOINT SOURCE STORM WATER AND CONTAMINANTS THROUGH MODIFICATIONS AND INSTALLATION OF SEDIMENT TRAPPING CATCH BASINS STORM WATER PROJECT - PHASE II**

**Project Number:** OR-01-24-319

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**Location:** Tillamook Bay/ Garibaldi

**Watershed:** Wilson-Trask-Nestucca

**Contact:** Don Bacon

**Address:** Port of Garibaldi  
PO Box 10  
Garibaldi, OR 97118

**Summary of Project:**

The Port will install two stormwater sediment trapping manholes. We will then reroute 14 existing storm drains to the baffle type manholes. The Port will also modify four existing catch basins to act as sediment trapping basins.

**Budget:** \$52,169

**319 Funds:** \$17,538

**Status of Project:**

Project Complete

Accomplishments: The project, through the placement of sediment trapping manholes, rerouting existing storm drains to the manholes, and modifying existing catch basins, has resulted in a closed system within the Port of Garibaldi. The effort should significantly reduce the amounts of surface water pollutants entering Tillamook Bay.

**To Be Accomplished:** This project completed the last phase of surface water treatment of the Port property.

**Name of Project:**

**TILLAMOOK SWCD LITTLE NESTUCCA RIVER 2000 PROJECT**

**Project Number:** OR-01-25-319

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**Location:** Tillamook Area

**319 Funds:** \$54,785

**Watershed:** Little Nestucca

Status of Project: The Project was contracted on 01-30-01.

**Contact Person:** Eric Mallery

**Address:** Tillamook County SWCD  
6415 Signal Street  
Tillamook, OR 97141

**Accomplishments:**

The project site has been surveyed by the NRCS engineer.

**Summary of Project:**

The Little Nestucca River Project involves placing four bio-technical stream barbs to 1) reduce stream temperature by narrowing the low flow channel, 2) enhance spawning and rearing habitat, 3) reduce sedimentation, 4) maintain/enhance channel diversity. In addition, tree revetments shall be placed between the barbs. The tree revetments will consist of 8 mature conifer trees anchored to the bank with cable and a buried log as an anchor.

**To Be Accomplished:**

1. Complete hydrological analysis of the project site.
2. Develop preliminary project design.
3. Finalize project design.
4. Obtain necessary permits.
5. Shape and contour streambank.
6. Install rock barbs and tree revetments.
7. Install livestock exclusion fence.
8. Plant vegetation.
9. Complete final report.

Budget: \$103,000



**Name of Project:**

TILLAMOOK TIDEGATES

**Project Number:** OR-01-26-319

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**Location:** Tillamook Bay

**Watershed:** Wilson-Trask-Nestucca

**Contact Person:** Don Reynolds

**Address:** Tillamook County  
Performance Partnership  
PO Box 493  
Garibaldi, OR 97118

**To Be Accomplished:**

- Pre-construction site visit by the TAC.
- Install side-by-side effectiveness monitoring tide gate.
- Install all fish-friendly tide gates.
- Revegetate project site.
- Complete final report.

**Summary of Project:** This project continues the effort to replace worn out and deteriorating tide gates with new fish friendly models.

**Budget:** \$122,400

**319 Funds:** \$59,840

**Status of Project:** Project was contracted on 12-06-00. The project is underway.

**Accomplishments:**

- Potential projects have been prioritized by the Technical Advisory Committee.
- Maps of selected project sites developed.
- Quotes on bids for materials and installation costs received.

**Name of Project:**

**NEHALEM WATERSHED HEALTH - RIPARIAN RESTORATION**

**Project Number:** OR-01-27-319

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**Location:** Clatsop, Columbia &  
Tillamook Counties

increase salmon and wildlife habitat opportunities.

**Budget:** \$64,183

**Watershed:** Upper Nehalem

**319 Funds:** \$34,298

**Contact Person:**

Maggie Peyton

**Status of Project:**

Project contract negotiations underway. Contracted by 02-20-01.

Address: Upper Nehalem  
Watershed Council  
16747 Timber Road  
Vernonia, OR 97064

**Summary of Project:**

This proposal will continue restoration and monitoring activities in the Nehalem Watershed. Activities will improve riparian condition by installing streamside fencing, off-channel livestock watering stations, replanting of riparian forests and applying erosion control measures using bio-engineering techniques to reduce Nonpoint Source pollution and

**Name of Project:**

**COLUMBIA RIVER NEMO PROJECT NONPOINT EDUCATION FOR MUNICIPAL OFFICIALS**

Project Number: OR-01-29-319

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**Location:** Northwest Oregon

**319 Funds:** \$95,868

**Watershed:** Lower Columbia Basin

**Status of Project:** Project contracted on 01-10-01. Project is underway.

**Contact Person:** Chris Hathaway

**Accomplishments:** Process developed to select the Pilot Community.

**Address:**

The Columbia River Foundation  
811 SW Sixth Avenue  
Portland, OR 97204

**To Be Accomplished:**

**Summary of Project:** The Columbia River NEMO (Nonpoint education for municipal officials) Project will adapt the NEMO model developed by the University of Connecticut Cooperative Extension System, to educate local land use decision makers on the land-use NPS pollution water quality connection.

- Establish Partnership Agreement with the Pilot Community.
- Initiate actions to facilitate citizen's involvement.
- Host National NEMO workshop in Pilot Community.
- Workshop evaluation.
- Provide follow-up technical (GIS), and educational support.
- Complete final report.

**Budget:** \$160,203



**Name of Project:**

**BACTERIA MONITORING IN THE TILLAMOOK BAY WATERSHED**

**Project Number:** OR-01-30-319

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**Location:** Clatsop, Columbia & Tillamook Counties

**Watershed:** Wilson-Trask-Nestucca

**Contact Person:** Kerry Griffin

**Address:**

Tillamook County Performance  
Partnership  
613 Commercial Street,  
PO Box 493  
Garibaldi, OR 97118

**Summary of Project:**

This project addresses the problem of fecal coliform bacteria (fcb) pollution in the Tillamook Bay Watershed. Bacteria input from the local dairy industry has caused frequent closures of commercial shellfish beds in the Tillamook Bay. Fcb levels often exceed state and federal standards for contact and consumption.

**Budget:** \$14,522

**319 Funds:** \$10,362

**Status of Project:** Project was contracted on 07-10-00. Project is approximately 60% complete.

**Accomplishments:**

1,500 bacteria samples have been collected.

All samples analyzed.

Data transferred to ODEQ and Coastal Resource Center.

**To Be Accomplished:**

- Collect, analyze, and submit data for an additional 750 bacteria samples.
- Prepare final report.



**Name of Project:**

**ORGANIZING RIVER EDUCATION FESTIVALS: TOOLS, SUPPORT  
AND GUIDANCE**

**Project Number:** OR-01-31-319

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**Location:** Tillamook

**Watershed:** Wilson-Trask-Nestucca

**Contact Person:** Julie Magers

**Address:** Portland State University,  
Center for Science Education  
PO Box 751  
Portland, OR 97207

**Summary of Project:** This project will serve to facilitate the start-up of River Educational Festivals in the Tillamook area, where high priority water bodies exist under DEQ's TMDL program and the Oregon Plan for Salmon and Watersheds.

**Budget:** \$139,768

**319 Funds:** \$40,000

**Status of Project:** Project contracted 08-15-00. Project is underway. Approximately %50 complete.

**Accomplishments:**

- Cooperation and buy-in by all three school districts in Tillamook county.
- Briefing information presented to teachers involved.
- Speaker and presenters sign-on.
- Festival site selected and agreement signed.

**To Be Accomplished:**

- Completion of materials to be used in the festival.
- Completion of displays for the festival.
- Hosting festival.
- Follow-up of results of the festival.
- Complete final report.

**Name of Project:**

**REPLACE FAILED CULVERTS AND RELOCATE CATTLE ON  
DRAINAGE DITCH TO THE MIAMI RIVER**

**Project Number:** OR-01-33-319

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**Location:** Tillamook Area

**Watershed:** Wilson-Trask-Nestucca

**Contact Person:** Shawn Reiersgaard

**Address:**

Tillamook County Creamery  
Association  
PO Box 313  
Tillamook, OR 97141

The new culvert will be 30-feet long and 30-inches in diameter, constructed to withstand winter flow rates and fenced to keep livestock from entering the water. The new, larger diameter culvert will facilitate water exchange and promote salmon passage.

**Budget:** \$2,500

**319 Funds:** \$1,500

**Summary of Project:**

Resolving gravel deposition and damaged cattle crossing problems, requires the removal of existing culvert/cattle crossing and the installation of a new culvert/cattle crossing further up a drainage ditch.

**Status of Project:** Project not yet contracted. Contract has been delayed while OWEB, DEQ, ODFW and other agencies have developed a system to prioritize culvert replacement projects. Anticipate contract completion by 02-20-01.

**Name of Project:**

**NORTON CREEK RIPARIAN FENCING PROJECT**

**Project Number:** OR-01-34-319

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**Location:** Douglas County

**Watershed:** Norton Creek

**Contact Person:** Bill Hillman

**Address:**

Sam Dunnavant - ODFW  
4192 North Umpqua Highway  
Roseburg, OR 97470

**Summary of Project:**

The purpose of this project is to erect riparian fencing along 3000 feet of Norton Creek.

**Budget:** \$14,566

**319 Funds:** \$4,500

**Status of Project:** DEQ Agreement 1138-00 was executed on May 10, 2000, to implement this project. The 319 portion of this project has been completed.

**Accomplishments:** Fence construction was completed; stock water systems have all been installed; hardened rock crossing were completed at four sites.

**To Be Accomplished:** Still to be accomplished with funding from other partners:

- Culvert installation;
- Power drops/extensions;
- Electric pumps for stock water;
- Nose pumps for stock water;
- Presence/absence fish surveys;
- Implementation monitoring;
- Water quality/quantity monitoring.

**Name of Project:**

**TENMILE LAKES NONPOINT SOURCE IDENTIFICATION**

**Project Number:** OR-01-35-319

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**Location:** Coos County/South Coast

**Watershed:** Tenmile Lakes

**Contact Person:**

Mike Mader 541-759-2414

**Address:**

Tenmile Lakes Basin Partnership  
PO Box "L"  
Lakeside, OR 97449

**Summary of Project:**

The Tenmile Lakes are eutrophic coastal lakes experiencing harmful algal blooms which contribute to impairment of beneficial uses (drinking water aesthetics, fishery, recreational contact) and violation of water quality standards. The Tenmile Lake Basin Partnership with financial assistance from OWEB and past FY 319 funding, initiated a watershed and lake monitoring program to locate and quantify watershed sources of nutrients contributing to excessive nutrient loading. This phase 2 portion of this project will allow monitoring to occur at two additional stream monitoring sites

in this complex watershed and to extend the temporal period of sampling for three existing sampling sites for which funding has expired. The focus of the monitoring is on measuring inputs of nitrogen, phosphorus, and sediment using a flow based design linked to watershed modeling with SWAT. This phase 2 funding will pay for collection and analyses of 300 additional water quality samples, final calibration of the SWAT model, and reinterpretation of the nutrient budget for the TMDL process.

This additional data will help resolve temporal uncertainties in the nutrient loading during a portion of the year for which data currently are not available and will provide information on nutrient loading for about 35 % of the watershed for which nutrient loading data are not now available. This additional data will substantially reduce uncertainty in the TMDL process scheduled for this watershed and increase the likelihood of a successful nutrient reduction program.

**Budget:** \$128,381

**319 Funds:** \$49,332

**Status of Project:**

This phase 2 project is fully contracted and currently active

**Accomplishments:**

- Contractor has deployed continuous monitoring equipment at one site and three additional grab sample sites.
- Additional baseflow information was collected from two phase 1 monitoring sites.
- Contractor will continue monitoring storm events throughout the winter of 2001.
- Three additional sediment cores have been collected and are being analyzed for TN, TP, and sediment accumulation rates.
- Algae sampling was conducted as proposed this summer and complimented the Tenmile Lake Microcystis sampling program. This algae sampling focused on near shore areas likely to harbor significant colonies of the cyanobacteria.

- No additional model calibration has been conducted pending this winter's data set.

**To Be Accomplished:**

- Water quality sampling targeting nutrient loading will continue through the winter and spring storms of 2000-2001.
- Analytical work will be completed on sediment samples.
- Existing modeling will be augmented and updated utilizing data gathered through this phase of the project.
- A revised nutrient budget report will be completed. The report will include loading (allocation and capacity) information under current and future management scenarios.

**Name of Project:**

**TENMILE LAKES' WATERSHED RIPARIAN AND SEDIMENT ASSESSMENT**

**Project Number:** OR-01-36-319

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**Location:** Coos County/South Coast

**Watershed:** Tenmile Lakes

**Contact Person:** Mike Mader 541-759-2414

**Address:** Tenmile Lakes Basin  
Partnership  
PO Box "L"  
Lakeside, OR 97449

**Summary of Project:**

This project proposes to accomplish the following Objectives:

- To provide an estimate of existing and potential shade on perennial streams for the OWEB Watershed Assessment and DEQ's Water Quality Management Planning.
- Assess sediment sources and relative magnitudes of potential risks for water quality management planning and sediment abatement activities.
- Sedimentation in the Tenmile Lakes Basin is of concern due to

the increased nutrient loading of the Tenmile Lakes and the resultant water quality problems, changes to channel morphology and stream temperature regimes.

- Eliminate two chronic sediment sources on Adams Creek. Identified through previous sediment risk surveys.
- To continue and expand the Watershed Council's outreach programs that are already in place and working focusing on water quality, on-site education, and outreach for riparian and channel assessment.

**Budget:** \$81,925

**319 Funds:** \$34,113

**Status of Project:**

This project is fully contracted and currently active

**Accomplishments:**

- Contractor has completed the riparian and channel assessments



- Ground truthing of aerial interpretations has been conducted.
- SHADOW shade modeling has been completed for existing shade and site potential future conditions are being determined.
- GIS mapping has been completed.
- Aerial photo interpretation, mapping, and field sediment risk surveys have been conducted.
- An analysis of the sediment field data is ongoing.
- Two chronic sediment sources on Adams Creek were corrected . These problem culvert sites were identified through previous sediment risk surveys.
- The outreach component is focusing on a more coordinated On-site Septic program and a better public understanding of the water quality issues within the Tenmile Watershed.
- The Watershed Council will continue to act as liaison between

landowners and DEQ and assist in setting priorities for water quality improvements.

- Informational meetings, telephone surveys, and newsletters have delivered WQ related information to watershed landowners and users.

### **To Be Accomplished:**

- Potential shade has needs some additional work.
- Buffer widths need to be discussed in a more detailed fashion.
- Streambank stability assessment needs additional work.
- Sediment risk maps will be produced as a final product of the sediment risk survey.
- Outreach activities will continue through the duration of the project.
- Future telephone surveys will involve local citizens and volunteer assistance.

**Name of Project:**

**BEAR CREEK REGIONAL STORM WATER MANAGEMENT PLANNING**

**Project Number:** OR-01-37-319

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**Location:** Jackson County

**Watershed:** Bear Creek

**Contact Person:** Dave Jacob

**Address:** Rogue Valley Council of  
Governments

PO Box 3275

Central Point, OR 97502

**Summary of Project**

Project seeks to substantially reduce urban sources of Nonpoint Source inputs from urban storm water and construction site erosion through focused regional planning efforts, which will result in the implementation of storm water management phase II regulations and the attainment of water quality standards as required by the Clean Water Act.

**Budget:** \$36,100

**319 Funds:** \$19,600

**Status of Project:** P

Project contract signed 15JUN00;  
Recipient has not requested reimbursement for any expenditures to date.

**Accomplishments:**

Discussions held with URS Corp. (consultants) regarding the timeline and approach for the project  
Tentative timeline developed for upcoming meetings and workshops

Research has been conducted by RVCOG regarding stormwater studies, codes, standards and ordinances from different areas in the Northwest and other parts of the country.

Supplemental funding has been sought (OWEB application sent in Feb. 1, 2001)

Additional partnerships have been developed including Jackson County and the City of Central Point Planning Departments, and Medford, Jacksonville and Talent City Councilors.

**To Be Accomplished:**

- A formal organizational meeting with URS Corp. to be held in March 2001.
- Product: timeline for informational meeting with

jurisdictions and educational workshops

- TMDL Committee meeting is scheduled for March 14<sup>th</sup>, during which a general timeline, including a tentative workshop schedule, and project overview will be presented (most partners will be present at this meeting).
- First formal informational meeting with partners and jurisdictions to be held in May, 2001.
- First educational workshop to be held in July 2001.
- Ongoing research on Storm Water Phase II regulations and how they pertain to our region: to be done by URS Corp. and RVCOG.
- Begin researching funding options for implementing Storm Water Phase II regulations.

**Name of Project:**

**DOCUMENTATION OF SEDIMENT SOURCES AND MAJOR HEAT SOURCES IN THE UPPER APPLGATE**

**Project Number:** OR-01-38-319

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**Location:** Jackson County

**Watershed:** Beaver Creek, Palmer Creek & Star Gulch

**Contact Person:** Hans Rilling

**Address:** Applegate River  
Watershed Council  
710 Haven Road  
Jacksonville, OR 97530

**Summary of Project:**

We will evaluate the sources of sediment and heat input, as well as stream flow, in three sub-basins of the upper Applegate River.

**Budget:** \$86,000

**319 Funds:** \$41,800

**Status of Project:**

Project contract #162-00 signed 16 Jun00. \$4,904.81 in 319 grant funds paid to Recipient to date.

**Accomplishments:** Temperature recorders were placed in Beaver and Palmer Creeks to isolate warming

reaches. Staff plates were installed and discharge measurements representing a range of flows recorded. Sediment studies including pool sediment volumes, pebble counts and barrel sampling were conducted in Beaver Creek. For the Beaver Creek sediment TMDL study, a QAAP plan has been completed; the proposed study resulted from watershed council, forest service and DEQ Collaboration. Collection of sediment discharge at key locations is ongoing and will continue through next year.

**To Be Accomplished:** Temperature will be continuously monitored throughout the summer. Water quality will be measured continuously on a five-day cycle. Discharge measurements will be collected during the summer to relate flow with water quality.

**Name of Project:**

**APPLEGATE WATERSHED TREE PLANTING AND RESTORATION**

**Project Number:** OR-01-39-319

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**Location:** Jackson County

**Watershed:** Applegate

**Contact Person:** Mary Maier

**Address:**

Applegate River Watershed Council  
6941 Upper Applegate Road  
Jacksonville, OR 97530

**Summary of Project:**

The Applegate River Watershed Council (ARWC) proposes to continue its tree planting and restoration program to promote the establishment of healthy riparian areas. We will plant 35,000 trees and shrubs in riparian and erosion-prone upland sites that will be identified through our assessment process and Water Quality Monitoring Program.

**Budget:** \$87,928

**319 Funds:** \$20,500

**Status of Project:**

Project contract #025-01 signed 24 OCT 00.\$3,715.63 in 319 grant funds paid to Recipient to date (Recipient

has spent about \$12,000 so far).

Preparation work for this project began in November 2000. Outreach was conducted, plants were packed and supplies were gathered. Having found increased survival (especially with Ponderosa Pine) with early planting, Recipient negotiated with the BLM and the USFS to get plants early. Planting began the first week in December.

**Accomplishments:** At present, Recipient has planted over 25,000 native trees and shrubs in riparian zones and upslope areas that are prone to erosion and have high potential for contributing excessive sediment to the waterways. Recipient has worked with over 100 landowners this season and has established good working relationships with most of them.

**To Be Accomplished:** Recipient's goal is to complete planting by the end of February. The funds then remaining in the 319 grant budget will be used to enter data, follow-up with landowners, conduct propagation for the upcoming

seasons, monitor survival and write reports.

**Name of Project:**

**DITCH & DAM REMOVAL**

**Project Number:** OR-01-40-319

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**Location:** Douglas County

**Watershed:** Middle Cow Creek & Myrtle Creek, Umpqua Basin

**Contact** Person: Bob Kinyon

**Address:** Umpqua Basin Watershed Council  
1758 N.E. Airport Road  
Roseburg, OR 97470

**Summary of Project:** The landowners at four dam sites have agreed to collaborate on projects to remove the diversion and transport structures, change their points of diversion to instream, and change to more efficient sprinkler irrigation from flood irrigation.

**Budget:** \$11,500

**319 Funds:** \$11,500

**Status of Project:** DEQ Agreement 134-00 was executed on April 28, 2000, to implement this project. An agreement between the recipient, landowners, and funding agencies has been completed.

**Accomplishments:** Currently, the project is at the stage of detailed planning and permit applications. A Certified Water Rights Examiner is preparing maps of the water rights and changes in points of diversion.

**To Be Accomplished:** The following tasks remain on this project:

- Purchase pumps, connections, mainline and handlines;
- Install pumps and pipes;
- Power drops/extensions;
- Install fish screens on all pump intakes;
- Remove diversion structures;
- Seed and fertilize disturbed sites;
- File water right application;
- Presence/absence fish surveys;
- Implementation monitoring.

**Name of Project:**

**UMPQUA STREAM TEMPERATURE CHARACTERIZATION 2000: COW CREEK & MAINSTEM**

**Project Number:** OR-01-41-319

**Location:** Douglas County

Looking Infrared Radiometry (FLIR) imagery on Cow Creek.

**Watershed:** Umpqua

**Contact Person:** Bob Kinyon

Address: Umpqua Basin Watershed Council  
1758 N.E. Airport Road  
Roseburg, OR 97470

**Summary of Project:** This project proposes to continue with the deployment of 45 temperature loggers in Cow Creek. The entire Cow Creek watershed will be characterized for temperature distribution.

**Budget:** \$21,120

**319 Funds:** \$21,120

**Status of Project:**

DEQ Agreement 169-00 was executed on June 16, 2000, to implement this project. The project is currently underway. In addition, \$10,000 of the project funds were used for purchase of Forward-

**Accomplishments:** To date, the following tasks have been accomplished:

- Project design;
- Sensor pre-deployment calibration;
- Sensor deployment;
- Field audits;
- Video documentation;
- Sensor removal;
- Post-deployment calibration;
- FLIR flight on Cow Creek.

**To Be Accomplished:**

The data is currently being analyzed, following which the final report will be completed and submitted to DEQ and the Umpqua Basin Watershed Council.



**Name of Project:**

**CLOVER CREEK RIPARIAN RESTORATION.**

**Project Number:** OR-01-42-319

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**Location:** Douglas County

**Watershed:** Clover Creek, Umpqua Basin

**Contact Person:** Bob Kinyon

**Address:** Umpqua Basin Watershed Council

1758 N.E. Airport Road  
Roseburg, OR 97470

**Summary of Project:** The landowners along Clover Creek have agreed collaboratively to fix their stream by agreeing to fence 4 miles of streambank to exclude livestock; install off-channel stock watering to draw livestock away from the creek and install designated crossings.

**Budget:** \$10,000

**319 Funds:** \$10,000

**Status of Project:**

DEQ Agreement 137-00 was executed on May 23, 2000, to implement this project. The project is currently underway and on

schedule except for three tasks, which have had to be delayed until the 2001 summer instream work window.

**Accomplishments:** The following work plan tasks have been completed:

- Fence construction;
- Stock water system installation;
- Permit obtained for bridge installation;
- Hardened rock crossings installed at four sites;
- Plans and permit applications drafted for four additional hardened rock crossings.

**To Be Accomplished:** The following work plan tasks remain:

- Installation of four additional hardened rock crossings;
- Installation of bridge;
- Culvert installation;
- Power drops/extension;
- Electric pumps and nose pumps for stock water;
- Presence/absence fish surveys;
- Implementation monitoring;
- Water quality and quantity monitoring.



**Name of Project:**

**MACROINVERTEBRATE STUDY**

**Project Number:** OR-01-43-319

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**Location:** Lincoln, Benton & Lane

**Watershed:** Siletz-Yaquina

Counties/Mid-Coast

**Contact Person:** Wayne Hoffman

**Address:**

Mid-Coast Watershed Councils  
344 SW Seventh Ave  
Newport, OR 97365

**Summary of Project:** The purpose of this study is to establish water quality baselines within the basins in the geographic area from Cascade Head to Heceta Head.

Macroinvertebrate information, in conjunction with temperature, DO, coliform, turbidity and flow data, will contribute towards understanding the health of our watersheds.

**Budget:** \$22,052

**319 Funds:** \$1,500

**Status of Project:** This project is at the contract signing stage.

**Accomplishments:** None yet.

**To Be Accomplished:**

Analysis and typing of macroinvertebrate samples already gathered.

**Name of Project:**

**RIPARIAN RESTORATION DEMONSTRATION PROJECT - MIDDLE COAST**

**Project Number:** OR-01-44-319

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**Location:** Lincoln County/Mid Coast

**Status of Project:**

**Watershed:** Siletz-Yaquina

DEQ Agreement 119-00 was executed on April 19, 2000, and the project is currently active and on schedule.

**Contact Person:** Lance Gatchell

**Accomplishments:** The following work plan tasks have been completed:

**Address:**  
Lincoln SWCD  
344 SW Seventh Street, Suite A  
Newport, OR 97365

- Planning and project design;
- Fencing and bioengineering;
- Tree planting is underway.

**Summary of Project:**

**To Be Accomplished:** The following work plan tasks remain to be completed:

Demonstrate riparian restoration and enhancement techniques in the Mid Coast Basin. Restoration will include:

- 1) planting willows, other hardwoods and conifers,
- 2) bio-engineering of excessively eroding stream banks,
- 3) implementing fences and enclosures to protect riparian plantings from animal damage, and
- 4) constructing fish habitat structures.

- Complete tree planting;
- Two years of project maintenance;
- Photo monitoring;
- Final report.

**Budget:** \$453,136

**319 Funds:** \$127,965

**Name of Project:**

**USE OF A SONDE FOR LOCALIZING WATER QUALITY PROBLEM  
AREAS AND AS A SURROGATE FOR EVALUATING PRODUCTIVITY**

**Project Number:** OR-01-45-319

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**Location:** Jackson County

**Watershed:** Applegate

**Contact Person:** Hans Rilling

**Address:**

Applegate River Watershed Council  
710 Haven Road  
Jacksonville, OR 97530

**Summary of Project:** We propose to continue our monitoring of water quality in the Applegate with a sonde. This piece of equipment continuously collects pH, Dissolved Oxygen (DO), temperature and conductivity data. This information on pH and DO enables us to identify areas of questionable water quality that cannot be detected by grab samples.

**Budget:** \$39,629

**319 Funds:** \$19,674

**Status of Project:**

Project contract #161-00 signed 16 JUN 00. \$5,368.97 in 319 grant funds paid to Recipient to date.

**Accomplishments:** Two continuous multi parameter water quality recorders (Sondes) were deployed in 2000. The instruments were rotated throughout the Applegate valley, covering over 15 stream reaches. Sites selected for monitoring included stream segments with known temperature/water quality problems, in-channel restoration sites, and riparian restoration sites.

**To Be Accomplished:** During the winter and spring runoff, the Sondes will be deployed to continuously measure turbidity as part of a TMDL study. From June 15 to September 15, the Sondes will be rotated every five days to capture data on as many stream reaches as possible. In many cases they will be located next to continuous flow recorders to better define water quality/ water quantity relationships.

**Name of Project:**

**MACRONUTRIENT AND WATER QUALITY MONITORING OF FOUR DAIRY FARMS, A DEMONSTRATION USING PERFORMANCE MEASURES TO DETERMINE BEST MANAGEMENT PRACTICES AND ENVIRONMENTAL COMPLIANCE**

**Project Number:** OR-01-46-319

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**Location:**

Clackamas, Marion & Polk Counties.

**Watershed:** Beaver, Chehulpum & Spring Valley Creeks

**Contact Person:** Mike Gangwer

**Address:**

Oregon State University - Marion County Extension Office  
3180 Center Street, NE  
Salem, OR 97301

**Summary of Project:** This project has helped the dairy industry move towards a performance based planning and operating program. The foundation of performance planning is the monitoring of activities that reduce and eliminate NPS impacts of the dairy industry.

**Budget:** \$99,626

**319 Funds:** \$42,126

**Status of Project:** DEQ Agreement

128-00 was executed on April 19, 2000, and DEQ Agreement 021-01 was executed on August 30, 2000. (Two agreements were necessary since DEQ did not receive all of its 319 funds at one time) The project is on schedule and nearly complete.

**Accomplishments:** The following work plan tasks have been completed:

- Installation of four Measure-Tek Research Weather Stations with Irrrometer Watermark soil tension sensors planted in six fields per four farms to calibrate manure and irrigation applications with soil hydrology;
- Analysis of soil samples taken fall, 1999; spring, 2000; and fall, 2000;
- Update of GIS system to accommodate field data and make presentations;
- Presentation of preliminary results to Pacific Northwest Water Quality Conference, Eugene, Oregon.

**To Be Accomplished:** The following work plan tasks remain:

- Soil sample collection and analysis, spring, 2001;
- Final report.

**Name of Project:**

**FOREST FERTILIZATION IMPACTS ON WATER QUALITY IN THE  
LITTLE RIVER ADAPTIVE MANAGEMENT AREA**

**Project Number:** OR-01-47-319

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**Location:** Douglas County

**Watershed:** Little River, Umpqua  
Basin

**Contact Person:** Bob Kinyon

Address: Umpqua Basin Watershed  
Council  
1758 N.E. Airport Road  
Roseburg, OR 97470

**Summary of Project:** Point-source  
impacts from forest fertilization to  
adjacent streams have been  
extensively studied, but little  
information exists on the  
cumulative impacts to basins.  
Localized impacts on nutrient  
concentrations seem to be well  
understood; however, there has  
been little research on downstream  
cumulative effects.

**Budget:** \$200,000

**319 Funds:** \$60,000

**Status of Project:** The 319 portion  
of this project has not yet begun.  
The project will study the  
cumulative impacts of forest  
fertilization on streams on federal  
land in the Umpqua basin.

However, at the present time, forest  
fertilization has been enjoined on  
federal lands in the Umpqua basin  
as a result of a lawsuit brought by  
environmental groups.

**Accomplishments:**

Pre-fertilization water quality  
monitoring has already been  
conducted by DEQ and the USGS.

**To Be Accomplished:**

Study of the cumulative impacts of  
forest fertilization.



**Name of Project:**

**SMITH RIVER VEGETATION TYPING - AERIAL PHOTOGRAPH  
INTERPRETATION**

**Project Number:** OR-01-48-319

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**Location:** Douglas County

**Watershed:** North Fork/Lower  
Smith Rivers, Umpqua Basin

**Contact Person:** Bob Kinyon

**Address:**

Umpqua Basin Watershed Council  
1758 N.E. Airport Road  
Roseburg, OR 97470

**Summary of Project:** This proposal  
is to map the entire North Fork  
Smith/Lower Smith watershed for  
all vegetation, emphasizing riparian  
vegetation. Both forested and non-  
forest attributes will be mapped

**Budget:** \$119,500

**319 Funds:** \$33,000

**Status of Project:**

DEQ Agreement 056-01 was  
executed on January 30, 2001, and  
work will begin on the project  
shortly. The Agreement was  
delayed in order to explore

obtaining the vegetation coverage  
through another source. However,  
the necessary detail is not available  
from the other source, so the project  
will proceed.

**Accomplishments:** None yet.

**To Be Accomplished:** Smith River  
vegetation photo interpretation.

**Name of Project:**

**ROSGEN GEOMORPHIC ASSESSMENT IN THE UMPQUA BASIN**

**Project Number:** OR-01-49-319

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**Location:** Douglas County

**Budget:** \$14,800

**Watershed:** Umpqua Basin

**319 Funds:** \$9,000

**Contact Person:** Bob Kinyon

**Status of Project:** This project is still in the negotiation stage. At this point it is likely the project will focus on the West Fork Cow Creek Watershed, which is currently in TMDL development. The Rosgen stream channel assessment will be used in developing loading allocations.

**Address:**

Umpqua Basin Watershed Council  
1758 N.E. Airport  
Roseburg, OR 97470

**Summary of Project:**

This project involves the application of the Rosgen Methodology to a specific, to be determined, in the Umpqua basin. The size of this watershed will be in the range between 50 and 150 square miles.

**Accomplishments:** None yet.

**To Be Accomplished:** Rosgen channel assessment.

sheets (with Digital Raster Graphics data;

Gathered complete regional collection of digital elevation data (DEM data) and prepared GIS layer of 100 foot contours for the region; Assisted in field data collection for the Grave Creek TMDL.

The activities funded by this grant are ongoing, and will continue throughout the grant period.

**To Be Accomplished:**

**Name of Project:**

**RIPARIAN ESTABLISHMENT & MAINTENANCE TRIALS**

Project Number: OR-01-50-319

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**Location:** Curry County

**Watershed:** Sixes, Chetco & Lower  
Rogue

**Budget:** \$76,692

**319 Funds:** \$49,222

**Contact Person:**

Bruce Follansbee 541-247-2755

**Status of Project:**

This project is fully contracted and currently active.

**Address:**

Curry County SWCD  
PO Box 666  
Gold Beach, OR 97444

**Accomplishments:**

**Summary of Project:** This project seeks to conduct test plots to better determine driving factors relating to vegetation survival at riparian enhancement and restoration sites. These sites are primarily located on agricultural lands where vegetative measures have met mixed success. Extensive riparian enhancement work has been conducted in the South Coast Basin. Survival trials at this time will serve to better hone future efforts aimed at producing vegetation at a free to grow state. This project seeks to address the temperature-limited parameter of the 303(d) list.

- Completed fencing of four test sites, all fencing has been completed.
- Three of these sites have developed planting layouts and competing vegetation has been removed.
- Three sites have planting holes augured in preparation for winter of 2000-2001 planting season.
- First semi annual report has been produced.

**To Be Accomplished:**

Trees will be planted as designed for specific site during the winter of 00/01

Competing vegetation will be removed once or twice (depending on the treatment) during the growing season for the first two years (FY 01 and 02).

Trees will be watered periodically during the summer seasons.

Fences will be maintained to exclude livestock.

Survival/mortality and height growth of the trees will be measured once at the close of the growing season for two years.

Semiannual and annual reports will be prepared for two years following establishment of the trees. These reports will define activities, treatment outcomes, and seek to make recommendation for use in guidance of future riparian enhancement activities.

Administration of the grant funds will run continuously from the beginning of the project through completion of the final report.

**Name of Project:**

**LOWER COLUMBIA RIVER WATERSHED COUNCIL WATER QUALITY  
MONITORING PROJECT**

**Project Number:** OR-01-51-319

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**Location:** Columbia & Clatsop  
Counties

**Status of Project:**

Project was contracted on 06-27-00.  
The project is underway.

**Watershed:** Lower Columbia-  
Clatskanie

**Contact Person:**

Margaret Magruder

**Address:**

Lower Columbia Watershed  
Council  
12589 HWY 30  
Clatskanie, OR 97016

**Summary of Project:** This project implements a water quality monitoring project, which will include sampling for temperature, dissolved oxygen, conductivity, pH, turbidity, bacteria and macroinvertebrate parameters. Sampling will take place on the Clatskanie River, Goble Creek, Plympton Creek and Fox Creek.

**Budget:** \$58,801

**319 Funds:** \$33,235

**Table 3. Work plans in progress, FY 2000 Oregon 319 Program**

#	PROJECT NAME	SUBMITTED by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGORY	OREGON REGION	FOCUS
1	Oregon NPS programs: administration, coordination and planning	DEQ	Mark Charles	\$663,538	On-going support of seven DEQ staff positions committed to addressing Nonpoint Source pollution throughout Oregon's high priority basins.	Coordination /technical support	Statewide/ Priority basins	Watershed restoration/ environmental stewardship
2	Agricultural Nonpoint Source pollution educational program	OSU	Ivan Camacho	\$110,000	Third and last year of a successful project to complement the various efforts occurring in the Rogue in regards to watershed / public involvement in watershed restoration/pollution prevention	BMP/ Information and education	Rogue	Watershed restoration/ community involvement
3	Implementation of agricultural water quality management plans	ODA	Ivan Camacho	\$306,506	Work for this grant supports Local Management Agencies (LMAs) implementation of AGWQM plans	BMP/ Information and education	Priority basins	Watershed restoration/ agriculture
4	Oregon watershed health outreach	State of Oregon	Ivan Camacho	\$95,566	Activities have been planned designed to supplement pathways of public involvement in the Oregon Plan for Salmon and Watersheds program	Information and education	Priority basins	Community involvement
5	Lower Williamson riverbank stabilization	Klamath SWCD	Steve Kirk	\$1,265	Project to allow 2100 feet of lower Williamson River bank to naturally recover from years of grazing by cattle. As the natural vegetation and willow plantings begin to stabilize the bank, less erosion will occur from wave action caused by wind and boats. This objective will be achieved by fencing the riparian area and excluding cattle.	BMP	Lower Williamson	Watershed restoration

#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
6	Klamath river bank stabilization	Klamath SWCD	Steve Kirk	\$19,058	Dredging to rebuild eroded banks to a sustainable height, installing coconut fiber roll to limit erosion caused by waves from wind and boats, an aggressive replanting of native vegetation, and installation of a five strand barb wire fence to exclude large grazing herbivores. Approximately 1520 feet of bank will be stabilized and fenced	BMP	Upper Klamath	Watershed restoration
7	Buckaroo creek watershed/water quality restoration project	CTUIR	Don Butcher	\$21,625	Reconnecting isolated refugia or habitat areas via instream flow and water quality improvements. Restoration will attempt to increase the compatibility of existing land uses and watershed function. Restoration will attempt to demonstrate the potential for vegetation and water quality improvement so that a model is available for other watershed restoration efforts.	BMP	Buckaroo Creek	Watershed restoration
8	Demonstrations and innovations to expand subsurface drip irrigation (sdi) in Oregon.	OSU	Phil Richardson	\$74,000	Demonstrations and Innovations to Expand Subsurface Drip Irrigation (SDI) in Oregon.	BMP	Malheur, Owyhee Basins	Agriculture
9	Fulton and Gordon canyons watershed management	Sherman Co SWCD	Bonnie Lamb	\$25,441	Project will implement best management practices (BMPs) on cropland in the Fulton and Gordon Canyons area of Northwestern Sherman County. Practices will consist mostly of terraces and sediment basins. Implementation will take place on four farms and will be based on resource management system (RMS) plans.	BMP	Fulton & Gordon Canyons	Watershed restoration/ agriculture

#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
10	Organophosphate pesticide use, runoff into streams, and effects on salmonids in the Hood River basin	OSU	Bonnie Lamb	\$92,700	Organophosphate Pesticide Use, Runoff into Streams and Effects on Salmonids in the Hood River Basin	Water quality monitoring	Middle Columbia/ Hood	Watershed restoration
11	Fifteenmile watershed improvement project	15 <sup>th</sup> mile WSC	Bonnie Lamb	\$60,000	Technical and financial assistance on private lands to implement best management practices in the High Priority Miles Creek sub-basin of the Eastern Hood Basin.	BMP	Hood River Basin	Watershed restoration
12	Baldwin/Tieman creek area action plan	Hood R. WSC	Bonnie Lamb	\$10,000	Improvement of the water quality in the Baldwin/Tieman Creek drainage area. Project elements include (1) cooperative riparian fencing and revegetation, (2) water quality monitoring, (3) public education activities and promotion of best management practices for agricultural and residential landowners, and (4) collaboration with Hood River County and ODOT to identify needs and opportunities to address failing on-site septic systems and road drainage, ditch ravel and storm runoff.	BMP	Hood River Basin	Watershed restoration/ Agriculture
13	Bio-assessment of restoration activities and best management practices in the upper south fork of the John Day river basin	John Day WSC	Mitch Wolgamott	\$8,800	Bioassessment of Restoration Activities and Best Management Practices in the Upper South Fork of the of the John Day River Sub-basin.	BMP	John Day River Basin	Watershed restoration



#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
14	Lower Columbia river critical wetland habitat protection and enhancement	Columbi a River Foundati on	Bruce Apple	\$35,600	This proposal is to assess habitat inventory data on the lower 46 miles of the Columbia River and identify critical wetland habitat and habitat functions in need of protection, enhancement and/or restoration. This project will also establish a technical assistance team to asses critical habitat condition, identify ways to protect, enhance and restore critical habitat and set up a process to maintain and monitor them.	Water quality monitoring	Lower Columbia Basin	Watershed assessment
15	Gilliam and wheeler counties technical assistance for best management practices planning and implementation	Wheeler Co SWCD	Mitch Wolgamott	\$9,794	Gilliam and Wheeler Counties Technical Assistance for Best Management Practices Planning and Implementation.	BMP	Mid Columbia, Willow & John Day Basins	Agriculture/ watershed restoration
16	Long term bmp implementation (direct seed) project	Umatilla Co. SWCD	Don Butcher	\$44,200	Providing incentive monies to six selected operators in the traditional wheat fallow area for up to 960 acres of direct seed each season. Operators will qualify for up to 160 acres of incentive payments at \$20 per acre when they apply direct seeding methods into existing crop residues with the agreement that they will apply the BMP on the same land in following years.	BMPS information and education	Umatilla	Agriculture/ watershed restoration
17	Umatilla sustainable agriculture/sustainable communities direct seed demonstration project	Umatilla Co. SWCD	Don Butcher	\$56,500	Umatilla Sustainable Agriculture/Sustainable Community Direct Seed Demonstration Project	BMPs information and education	Umatilla	Agriculture/ watershed restoration
18	Upper Klamath lake TMDL modeling support	DEQ	Steve Kirk	\$45,000	Technical services to assist the Oregon Department of Environmental Quality (DEQ) water quality staff in development of Total Maximum Daily Loads (TMDLs) for Upper Klamath Lake (UKL) and Agency Lake.	TMDL development / Water quality monitoring	Upper Klamath Lake	Watershed assessment

#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
19	Butter creek range and riparian enhancement project (phase 3): stream assessment and wetlands restoration feasibility study	Umatilla WSC	Don Butcher	\$26,250	Butter Creek Range and Riparian Enhancement Project, Phase 3: Stream Assessment and Wetlands Restoration Feasibility Study	Water quality assessment	Umatilla	Agriculture/ watershed restoration
20	Lower Umatilla basin groundwater management area/educational	Umatilla Co. SWCD	Phil Richardson	\$12,870	Lower Umatilla Basin Groundwater Management Area/Educational	Information and education	Umatilla	Groundwater-Community involvement
21	Umatilla tmdl implementation , tracking and outreach	Umatilla WSC	Don Butcher	\$29,028	Implementation of the Umatilla Sub-Basin TMDL. This will be accomplished through application of multi-sector management plans prepared for TMDL implementation, education and monitoring. TMDL development has been guided by a vision of basin-wide watershed restoration	BMP	Umatilla	TMDL implementation
22	Deep soil and water source sampling in the lower Umatilla basin, phase 3	IRZ Consultant	Phil Richerson	\$30,305	Demonstration of the direct benefits of using deep soil sampling and irrigation water analysis as part of their fertilizer and water management programs.	Water quality data/ assessment	Umatilla Basin	Groundwater - Agriculture
23	Walla Walla water quality assessment and TMDL development	Walla Walla WSC	Don Butcher	\$19,700	Assessment of water quality conditions and development of the Walla Walla Sub-Basin TMDL.	Water quality assessment	Walla Walla	TMDL development
24	Port of Garibaldi stormwater abatement	Port of Garibaldi	Bruce Apple	\$17,538	Port of Garibaldi, Control of Nonpoint Source Storm Water and Contaminants through Modifications and Installation of Sediment Trapping Catch Basins Storm Water Project - Phase II	BMP	Tillamook Basin - Tillamook bay	Watershed restoration

#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
25	Little Nestucca river restoration project	Tillamook SWCD	Bruce Apple	\$54,785	Placing four bio-technical stream barbs to in the Little Nestucca River to: 1) reduce stream temperature by narrowing the low flow channel, 2) enhance spawning and rearing habitat, 3) reduce sedimentation, 4) maintain/enhance channel diversity. In addition, tree revetments shall be placed between the barbs. The tree revetments will consist of 8 mature conifer trees anchored to the bank with cable and a buried log as an anchor.	BMP	Little Nestucca	Watershed restoration
26	Tillamook county tidegates	TCPD	Bruce Apple	\$59,840	Tillamook Tidegates: This project continues the effort to replace worn out and deteriorating tide gates with new fish friendly models.	BMP	Wilson-Trask-Nestucca	Watershed restoration
27	Nehalem watershed restoration projects	Nehalem WSC	Bruce Apple	\$34,298	Restoration and monitoring activities in the Nehalem Watershed. Activities will improve riparian condition by installing streamside fencing, off-channel livestock watering stations, replanting of riparian forests and applying erosion control measures using bio-engineering techniques to reduce Nonpoint Source pollution and increase salmon and wildlife habitat opportunities.	BMP	Upper Nehalem Watershed Council	Watershed restoration
28	ODEQ FLIR temperature assessment of the Nehalem watershed	DEQ	Eric Nigg	\$53,390				
29	Lower Columbia river NEMO project	Columbia River Foundation	Bruce Apple	\$62,868	Columbia River NEMO (Nonpoint education for municipal officials) Project will adapt the NEMO model to educate local land use decision makers on the land-use NPS pollution water quality connection.	BMP, information and education	Lower Columbia Basin	Watershed restoration

#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
30	Bacteria monitoring in the Tillamook Bay watershed	TCCP	Bruce Apple	\$10,362	This project addresses the problem of fecal coliform bacteria (fcb) pollution in the Tillamook Bay Watershed. Bacteria input from the local dairy industry has caused frequent closures of commercial shellfish beds in the Tillamook Bay. Fcb levels often exceed state and federal standards for contact and consumption	Water quality monitoring	Tillamook Basin - Tillamook Bay	Watershed assessment
31	Organizing river education festivals	PSU Center for Science Education	Bruce Apple	\$40,000	This project is facilitate the start-up of River Educational Festivals in the Tillamook area, where high priority water bodies exist under DEQ's TMDL program and the Oregon Plan for Salmon and Watersheds.	Water quality education	Tillamook Bay	Watershed community involvement
32	OEC urban NPS pollution education campaign	OEC	Gregg Geist	\$42,920				
33	TCCA culvert replacement	Tillamook Co. Creamery Association	Bruce Apple	\$1,500	Replace Failed Culverts and Relocate Cattle on Drainage Ditch to the Miami River	BMP	Tillamook Basin	Watershed restoration
34	Norton creek riparian fencing	Bill Hillman / ODFW	Bobbi Lindberg	\$4,500	Erecting riparian fencing along 3,000 feet of Norton Creek	BMP	Norton Creek	Watershed restoration

#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
35	Tenmile lakes NPS identification	Tenmile basin partners hip	Pam Blake	\$49,332	The Tenmile Lake Basin Partnership with financial assistance from OWEB and past FY 319 funding, initiated a watershed and lake monitoring program to locate and quantify watershed sources of nutrients contributing to excessive nutrient loading. This phase 2 portion of this project will allow monitoring to occur at two additional stream monitoring sites in this complex watershed and to extend the temporal period of sampling for three existing sampling sites for which funding has expired	Water quality monitoring	Tenmile Lakes	Watershed assessment
36	Tenmile watershed riparian and sediment assessment	Tenmile basin partners hip	Pam Blake	\$34,113	<p>Tenmile Lakes' Watershed Riparian and Sediment Assessment</p> <p>Estimate existing and potential shade on perennial streams for the OWEB Watershed Assessment and DEQ's Water Quality Management Planning.</p> <p>Assess sediment sources and relative magnitudes of potential risks for water quality management planning and sediment abatement activities.</p> <p>Eliminate two chronic sediment sources on Adams Creek.</p> <p>Continue and expand the Watershed Council's outreach programs that are already in place and working focusing on water quality, on-site education, and outreach for riparian and channel assessment.</p>	Waters quality monitoring/ assessment	Tenmile Lakes	Watershed assessment

#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
37	Bear creek regional stormwater management planning	RCOG	Brad Prior	\$19,600	Project seeks to substantially reduce urban NPS of pollution from urban storm water and construction site erosion through focused regional planning efforts. We anticipate that this will result in the implementation of storm water management phase II regulations and the attainment of water quality standards as required by the Clean Water Act	BMP	Bear Creek	Stormwater
38	Documentation of sediment and major heat sources in the upper Applegate basin	Applegate R. WSC	Brad Prior	\$41,800	Documentation of Sediment Sources and Major Heat Sources in the Upper Applegate	TMDL development	Beaver Creek, Palmer Creek & Star Gulch	Watershed assessment/restoration
39	Applegate watershed tree planting and restoration	Applegate R. WSC	Brad Prior	\$20,500		BMP	Applegate basin	Watershed restoration
40	Ditch and dam removal	Umpqua Basin WSC	Bobbi Lindberg	\$11,500	The landowners at four dam sites have agreed to collaborate on projects to remove the diversion and transport structures, change their points of diversion to instream, and change to more efficient sprinkler irrigation from flood irrigation.	BMP	Middle Cow Creek & Myrtle Creek, Umpqua Basin	Watershed restoration
41	Umpqua stream temperature 2000	Umpqua Basin WSC	Bobbi Lindberg	\$21,120	This project continues the deployment of 45 temperature loggers in Cow Creek. The entire Cow Creek watershed will be characterized for temperature distribution.	Water quality monitoring	Umpqua Basin	Watershed assessment

#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
42	Clover creek riparian restoration	Umpqua Basin WSC	Bobbi Lindberg	\$10,000	Landowners along Clover Creek have agreed collaboratively to fix their stream by agreeing to fence 4 miles of streambank to exclude livestock; install off-channel stock watering to draw livestock away from the creek and install designated crossings.	BMP	Clover Creek, Umpqua Basin	Watershed restoration
43	Macroinvertebrate study	Mid-Coast WSC	Pam Blake	\$1,500	Establishing water quality baselines within the basins in the geographic area from Cascade Head to Heceta Head. Macroinvertebrate information, in conjunction with temperature, DO, coliform, turbidity and flow data, will contribute towards understanding the health of our watersheds.	Water quality monitoring	Siletz-Yaquina Counties/ Mid-Coast	Watershed assessment
44	Riparian restoration demo - midcoast	Lincoln Co. SWCD	Bobbi Lindberg	\$127,965	Demonstration of riparian restoration and enhancement techniques in the. Restoration will include: 5) planting willows, other hardwoods and conifers, 6) bio-engineering of excessively eroding stream banks, 7) implementing fences and enclosures to protect riparian plantings from animal damage, and 8) constructing fish habitat structures.	BMP, information and education	Mid Coast Basin, Siletz-Yaquina subbasins	Watershed restoration
45	Use of a sonde for localizing water quality problem areas	Applegate R. WSC	Brad Prior	\$19,674	Use of a Sonde for Localizing Water Quality Problem Areas and as a Surrogate for Evaluating Productivity	Water quality monitoring	APPLEGATE BASIN	Watershed assessment

#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
46	Macronutrient and wq monitoring	Marion Co SWCD	Bobbi Lindberg	\$42,126	Macronutrient and Water Quality Monitoring of Four Dairy Farms, A Demonstration Using Performance Measures to Determine Best Management Practices and Environmental Compliance	BMP, information and education	Beaver, Chehulpum & Spring Valley Creeks (Clackamas, Marion & Polk Counties)	Water quality assessment
47	Forest fertilization impacts	Umpqua Basin WSC	Bobbi Lindberg	\$60,000	Forest Fertilization Impacts on Water Quality in the Little River Adaptive Management Area	BMP, information and education	LITTLE RIVER, UMPQUA BASIN	Forestry/ Water quality
48	Smith river vegetation typing	Umpqua Basin WSC	Bobbi Lindberg	\$33,000	Mapping of the entire North Fork Smith/Lower Smith watershed for all vegetation, emphasizing riparian vegetation. Both forested and non- forest attributes will be mapped	Water quality assessment	North Fork/Lower Smith Rivers, Umpqua Basin	Watershed assessment
49	Rosgen geomorphic assessment	Umpqua Basin WSC	Bobbi Lindberg	\$9,000	This project involves the application of the Rosgen Methodology to a specific, to be determined (West Fork Cow Creek Watershed), in the Umpqua basin. The size of this watershed will be in the range between 50 and 150 square miles.	TMDL Developmen t	Umpqua Basin	Watershed assessment
50	Riparian establishment and maintenance trials	Curry Co. SWCD	Pam Blake	\$49,222				



#	PROJECT NAME	SUB-MITTE D by	PROJECT OFFICER	GRANT \$\$	DESCRIPTION of WORK in PROGRESS	CATEGOR Y	OREGON REGION	FOCUS
51	Lower Columbia water quality monitoring	LCRWS C	Bruce Apple	\$10,000	A project implementing a water quality monitoring effort, including sampling for temperature, dissolved oxygen, conductivity, pH, turbidity, bacteria and macroinvertebrate parameters. Sampling is occurring in the Clatskanie River, Goble Creek, Plympton Creek and Fox Creek	Water quality monitoring	LOWER COLUMBIA - CLATSKAN IE BASIN	Watershed assessment
			TOTAL	\$2,740,199				

**Table 4. Status of TMDL and WQMP in the Willamette Basin Elements (December 2000)**

Task	Willamette Basin TMDLs ( by subbasin/other document)													
	Middle Fork Willamette	McKenzie	Coast Fork Willamette	Upper Willamette	South Santiam	North Santiam	Middle Willamette	Clackamas	Lower Willamette	Mainstem River	Mercury (Up)	Yamhill <sup>1</sup>	Molalla-Pudding <sup>1</sup>	Tualatin
<b>TMDLs</b>														
Develop individual TMDL workplan	x	o	o	o	x	x	o	x	o	o	o			x
Review 303(d) listings	x	o	o	o	x	x		x		x	o			x
Review beneficial uses	x	o	o	o	x			x		x				x
Assemble available data	x	o	o	o	x	x	x	x	o	x				x
Review/analyze available data	x				x	x		x		x				x
Develop tools to calculate loading capacities (LC)	o				o			o		o				x
Develop monitoring plan	x				x	o		x		o				x
Conduct Field Monitoring	x				o	o		x						x
Calculate numeric TMDLs														x
Draft TMDL document														x
Final TMDL document														o
<b>WQMP</b>														
Contact organizations needed for WQMP implementation.	o	o	o	o	o	o	o	o	o	o	o			x
Develop WQMP goals and objectives														x
Develop management measures														x
Estimate time required for TMDL implementation.														x
Gather evidence of commitments														x
Develop monitoring plan														x
Public involvement plan										o				x
Strategy for maintaining effort														x
Estimate costs and identify funding														x
Draft WQMP document														x
Final WQMP document														

**Key:**

**o = work has begun**

**x = task is substantially complete**

<sup>1</sup> TMDLs for Yamhill and Molalla/Pudding Subbasins are not due till 2007.

## **APPENDIX B: Total Maximum Daily Loads Memorandum of Agreement with EPA**

### **MEMORANDUM OF AGREEMENT BETWEEN THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND THE STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY REGARDING THE IMPLEMENTATION OF SECTION 303(d) OF THE FEDERAL CLEAN WATER ACT**

#### **Preamble**

WHEREAS, this AGREEMENT is made and entered into by and between the U.S. Environmental Protection Agency, Region 10 (hereinafter referred to as EPA) and the State of Oregon Department of Environmental Quality (hereinafter referred to as DEQ).

WHEREAS, the parties agree that the terms of this agreement, including but not limited to any statements of policy and obligations contained herein, are not intended to be statements of national policy or requirements;

WHEREAS, it is the purpose of this agreement to provide a framework, schedule, and strategy to restore the quality of impaired waters within the State of Oregon to achieve Water Quality Standards, and to describe the methods and processes that the State of Oregon will use to develop and implement the requisite Total Maximum Daily Loads for waters listed on the 1998 303(d) list of Water Quality Limited Waterbodies;

WHEREAS, the Clean Water Act (CWA) §303(d), 33 U.S.C. §1313(d), and EPA's implementing regulations provide for: (1) identification of waters for which (A) applicable technology-based effluent limitations and other required controls are not stringent enough to implement Water Quality Standards applicable to such waters, or (B) controls on thermal discharges under Section 301 of the CWA are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife (collectively, the Section 303(d) list); (2) establishment of a priority ranking for such waters; and (3) establishment of total maximum daily loads (TMDLs) for those waters which are identified on the Section 303(d) list;

WHEREAS, TMDLs shall be established at levels necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality;

WHEREAS, it is acknowledged that other state agencies, most notably the Oregon Department of Agriculture (hereinafter referred to as ODA) and the Oregon Department of Forestry (hereinafter referred to as DOF) have responsibilities for regulating state and private agricultural lands and forestry operations respectively;

WHEREAS, DEQ has the responsibility for the designation of Water Quality Limited Segments and the establishment of TMDLs pursuant to Section 303(d) of the CWA, 33 U.S.C. §1313(d), within the State of Oregon;

WHEREAS, DEQ will develop and submit to EPA a schedule, in conjunction with the 1998 303(d) list, for development and submittal of TMDLs as appropriate (see Section III.B) for all waters listed on the 1998 303(d) list over a time period ending June 30, 2007;

WHEREAS, the Healthy Streams Partnership Agreement, the Coastal Salmon Restoration Initiative (CSRI), and the Steelhead Supplement together comprise the Oregon Plan;

WHEREAS, EPA and DEQ seek to implement a strategy for development and implementation of TMDLs in the State of Oregon consistent with the Clean Water Act and the Oregon Plan for Healthy Salmon and Streams (Attachment B);

WHEREAS, the State of Oregon has entered into the Healthy Streams Partnership agreement with various stakeholders to work together to improve the health and function of aquatic systems and to enhance beneficial uses of water in Oregon;

WHEREAS, the Healthy Streams Partnership agreement is based upon a willingness of the parties to work together to mobilize public and private funding and efforts to improve water quality in Oregon;

WHEREAS, the Oregon legislature has established by statute a Healthy Streams Partnership in ORS 541.405 to 541.413;

WHEREAS, EPA and DEQ experience limitations of resources available for the TMDL process, and DEQ desires to partner with EPA to implement a TMDL process that results in improvements to water quality and complies with applicable legal requirements;

WHEREAS, on November 1, 1997 DEQ issued guidance to assist in TMDL development and implementation;

THEREFORE, EPA AND DEQ MUTUALLY AGREE THAT:

### **I. Schedule for Development of TMDLs**

A. DEQ will prioritize, schedule, scope, develop and submit Total Maximum Daily Loads (TMDLs) for water quality limited segments on the state's 1998 303(d) list in accordance with the "Schedule For TMDL Submittal" (Attachment A) by June 30, 2007. Submittal within one year of the date specified on the Schedule will be deemed timely.

B. In fulfilling its commitments under this Agreement, DEQ is under no obligation to establish TMDLs for any water quality limited segments that are determined not to need TMDLs consistent with Section 303(d) of the CWA and its implementing regulations, including 40 CFR § 130.7(b)(1), as amended, or are removed from Oregon's 303(d) list consistent with the provisions of the Clean Water Act and its implementing regulations.

C. DEQ and EPA understand that future CWA Section 303(d) lists for Oregon State may include additional waters that may warrant TMDL development prior to waters listed on the 1998 Section 303(d) list. The parties agree that DEQ may substitute one or more such future listed waters for one or more waters on the 1998 303(d) list. However, DEQ intends to develop TMDLs in a manner generally consistent with time frames set out in Attachment A.

Any decisions to change the Schedule For TMDL Submittal will be made in the context of DEQ's biennial preparation of its Section 303(d) list. Because DEQ generally intends to develop TMDLs on a sub-basin basis, any changes to the schedule would likely address entire sub-basins, rather than addressing specific waterbodies or water quality limited segments. If waterbodies on lists subsequent to the 1998 list are proposed to be substituted, DEQ shall submit a letter to EPA at the time of submission of its 303(d) list notifying EPA of the waters so substituted. No

substitution shall result in numerically fewer waters being addressed than appear on the 1998 list at the expiration of the period contained in the schedule appended at Attachment A.

## **II. TMDL Prioritization**

TMDLs shall be completed according to the priority established in the schedule at attachment A. Nothing in the schedule, though, shall preclude another TMDL being completed out of sequence in the event another agency or group or person has completed the work required. Nothing in this schedule shall prevent DEQ from receiving money pursuant to ORS 468.073 to be used for the purposes of completing TMDLs, provided that TMDLs developed through the use of such funding shall not detract from DEQ's development of TMDLs in accordance with the schedule appended at Attachment A.

For the 1997-1999 biennium (July 1, 1997 - June 30, 1999), the priority basins are:

Umpqua

Rogue

Tillamook Sub-Basin

## **III. DEQ's Approach to Water Quality Management**

DEQ will submit TMDLs developed in accord with the schedule appended at Attachment A, and will do so on a geographic scale appropriate to the pollutants being considered. DEQ will strive, where appropriate, to address TMDLs in accord with US Geological Survey's fifth field hydrologic units.

### **DEQ's Role**

DEQ estimates that 75 percent (68 subbasins) of the 91 subbasins in Oregon are primarily affected by forestry and/or agricultural nonpoint source activity. Of these 68 subbasins, 50 percent are wholly federally owned and/or managed lands. The other 50 percent are either privately owned lands or mixed federal, state and private ownership.

The remaining 25 percent of the 91 subbasins (23) are affected by both point and nonpoint sources, including municipal sewage treatment plants, industrial discharges, urban stormwater runoff, construction activities, agriculture and forestry.

DEQ agrees to the following:

#### **A. Listing and Prioritization**

1. Based on existing and readily available data and information, as defined at 40 C.F.R. § 130.7(b)(5), DEQ will list on the 303(d) list those stream segments, lakes, and estuaries that do not meet applicable water quality standards, or are not expected to meet applicable water quality standards prior to the required date for the next 303(d) list, even after the application of technology-based effluent limitations or other required controls, as specified in 40 C.F.R. § 130.7(b)(1).
2. In consultation with affected agencies and interests, DEQ will develop criteria for ranks, and prioritize water quality limited waterbodies for TMDL development. Prioritization shall take into account the severity of the pollution and the uses to be made of the waters.
3. See Paragraph XI for circumstances under which a water quality limited segment will be re-listed where source controls specified in an implementation plan have not been substantially put in place.

#### **B. Delisting**

DEQ intends to remove a previously listed waterbody from the 303(d) list if:

1. The waterbody is meeting all applicable water quality standards (including numeric and narrative criteria and designated uses) or is expected to meet these standards prior to the required date for the next 303(d) list (i.e., within the next two years) as a result of other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority; or
2. Upon re-examination, the original basis for listing is determined to be inaccurate; or
3. A TMDL for all the pollutants listed has been approved by EPA for that waterbody. However, if a waterbody is listed for more than one pollutant and a TMDL for one of the pollutants has been approved, that waterbody may be removed from the list for that pollutant, but not for the remaining pollutants.

### C.TMDL Development

DEQ will develop TMDLs for waterbodies listed on the 1998 303(d) list in the order in which they appear in the schedule attached at Attachment A, subject to I. B. and C. above.

Three distinct types of TMDL will be undertaken by DEQ:

1. Point Source TMDLs. These comprise TMDLs in which the contributors are solely point sources.
2. Nonpoint Source TMDLs. These comprise TMDLs in which the sources are solely non-point, including agriculture, forestry, or urban runoff.
3. Combination TMDLs. These comprise TMDLs with both point source and nonpoint source components.

### Elements of All TMDLs

For those waters listed on the 1998 303(d) list, DEQ will submit to EPA for approval TMDLs which will contain the following elements:

1. A description of the geographic area to which the TMDL applies;
2. Specification of the applicable water quality standards;
3. An assessment of the problem, including the extent of deviation of ambient conditions from water quality standards;
4. Development of a loading capacity including those based on surrogate measures and, including flow assumptions used in developing the TMDL;
5. Identification of point sources and nonpoint sources;
6. Development of Waste Load Allocations for point sources and Load Allocations for nonpoint sources;
7. Development of a margin of safety;
8. Evaluation of seasonal variations.

### Point Source TMDLs

For those waters listed on the 1998 303(d) list that are impaired solely by point sources, DEQ will, in most cases, take the lead in addressing all of the TMDL elements identified above.

### Nonpoint Source TMDLs

For nonpoint source TMDLs, DEQ contemplates that the following approach will commonly be used: DEQ will establish the appropriate geographic areas (basin, subbasin, watershed or segment) and pollutants to be addressed. A local advisory group will be established to assist DEQ in obtaining the maximum amount of local input to the TMDL development process. Meetings of the advisory group will be public.

In areas where water quality problems are related primarily to nonpoint sources, DEQ will work with federal and state agencies, watershed councils, communities, counties, SWCD's, citizens'

groups, and others to identify data needs, collect, manage and analyze data and provide results to the public.

DEQ, in conjunction with Designated Management Agencies, the advisory group and other members of the public, will conduct an assessment of the area characterizing the water quality problem, identifying potential causes and sources (nonpoint and natural conditions) and estimating relative contributions to the problem.

After the above work has been accomplished, DEQ anticipates taking the lead in certain key technical decisions, especially in determining the loading capacity and the margin of safety of the waterbody(ies) in question. Recommendations on other TMDL elements such as load allocations to particular sources may be made in the first instance by advisory groups, but DEQ will review these recommendations and ultimately make these determinations as well.

#### Combination TMDLs

Combination TMDLs comprise that group of listed waterbodies to which the contributing sources are a combination of point and nonpoint. In this instance, the TMDL will likely be a blend of the point source and nonpoint source approaches described above. DEQ will ensure that the loading capacity is determined and that waste load allocations are assigned to point sources and load allocations are assigned to nonpoint sources (agriculture, forestry, urban and federal). For TMDLs in which waste load allocations to point sources are based on the assumption that loads from nonpoint sources will be reduced, DEQ will demonstrate reasonable assurance that the nonpoint load allocations will be achieved.

#### Third Party Participation in TMDL Development

Consistent with the Oregon Plan, DEQ will encourage other parties to participate in the development of TMDLs. DEQ will independently review the data, the interpretation of the applicable water quality standards, and recommendations for loading capacity, margin of safety, waste load allocations and load allocations. DEQ will ensure that the materials submitted to EPA constitute a proper TMDL before submission to EPA, and that the submitted materials supporting the TMDL adequately document and justify the bases for the elements of the TMDL. DEQ will ensure that all TMDLs developed through this process and submitted to EPA meet the requirements of the Clean Water Act, its implementing regulations, and other applicable laws and regulations.

Within the constraints of its resources, DEQ undertakes to work with other parties who wish to develop TMDLs at as early a stage as possible. To this end, DEQ will develop and disseminate guidance documents on such issues as data collection and the required elements of a TMDL.

### **IV. TMDL Implementation**

Implementation of TMDLs is critical to the attainment of water quality standards. Additionally, the support of Designated Management Agencies (DMAs) in implementing TMDLs is essential. In instances where DEQ has no direct authority for implementation, it will work with Designated Management Agencies on implementation to ensure attainment of water quality standards. Where DEQ has indirect authority, DEQ will use that authority to ensure attainment of water quality standards. DEQ intends to submit TMDL implementation plans to EPA concurrently with submission of TMDLs. This will impact the TMDL schedule, as a number of TMDLs are already well advanced in development.

DEQ shall, if applicable, apply to the Oregon Water Resources Department for an instream water right for pollution abatement to protect flows associated with TMDLs. Such applications



shall be coordinated with the Oregon Department of Fish and Wildlife and the Oregon Parks and Recreation Department.

Both TMDLs and their associated implementation plans shall be submitted by DEQ to EPA as updates to the state's Water Quality Management Plan pursuant to 40 CFR 130.6(e). Such submissions will be a continuing update of the Continuing Planning Process.

DEQ expects that TMDLs will be implemented as described below.

#### A.TMDL Implementation Plans for All Sources

DEQ will assemble the various implementation plans and forward them to EPA. In so doing, DEQ shall review all plans for any waterbody to ensure that the following elements are clearly identifiable:

1. Proposed management measures tied to attainment of the TMDL. This will include a list of sources by category or sub-category of activity;
2. Timeline for implementation, including a schedule for revising permits, and a schedule for completion of measurable milestones (including appropriate incremental, measurable water quality targets and milestones for implementing control actions);
3. Timeline for attainment of water quality standards, including an explanation of how implementation is expected to result in the attainment of water quality standards;
4. Identification of responsible participants demonstrating who is responsible for implementing the various measures;
5. Reasonable assurance of implementation;
6. Monitoring and evaluation, including identification of parties responsible for monitoring, and a plan and schedule for revision of the TMDL and/or implementation plan;
7. Public involvement;
8. Maintenance of effort over time;
9. Discussion of cost and funding;
10. Citation to legal authorities under which the implementation will be conducted.

#### B.Point Source TMDL Implementation

(1) DEQ will implement point source TMDLs through the issuance or reissuance of NPDES permits.

(2) DEQ will apply the State's antidegradation policy where applicable to applications for NPDES permits for new or expanded loads if a TMDL contains an allocation for future growth. If there is no allocation for future growth, no permits will be issued for new or expanded loads, unless offset by reductions.

#### C.Nonpoint Source TMDL Implementation

With respect to Section 303(d) of the CWA, the legislature has given DEQ specific statutory authority to develop load allocations for nonpoint sources. ORS 468B.110. To the extent allowed under the CWA, however, the rules adopted by the Board of Forestry under the Forest Practices Act will be used to implement load allocations for nonpoint sources pollution from forest operations on state and private timber lands. ORS 468B.110; 527.765; 527.770. Similarly, Agricultural Water Quality Management Area Plans developed by the Oregon Department of Agriculture or other statutorily available authority will be used to implement load allocations for nonpoint sources of pollution arising from farming practices on lands zoned for farm or other agricultural uses. ORS 561.191; 568.900 to 568.933.

Nonpoint source implementation will be undertaken as follows:

### Forestry Sources

Pollution control measures necessary to address forestry sources shall be implemented through the Forest Practices Program pursuant to ORS 527.765 as well as through voluntary landowner actions consistent with the Oregon Plan. The Forest Practices Program is implemented through best management practices adopted as administrative rules, operator/landowner education and assistance, and rule enforcement through civil orders, civil penalties and in extreme cases, criminal prosecution. The Oregon Department of Forestry is the DMA for private and non-federal public forestlands. The forestry component of TMDLs will be implemented as follows:

1. Where DEQ and ODF agree that the current forest practice rule BMPs are adequate to achieve the forestry load allocation in an applicable TMDL, these BMPs will be used to implement the TMDL.
2. Where water quality impairment on a particular listed waterbody is due to past forestry practices that are beyond the legal authority of ODF to regulate, but DEQ and ODF agree in the preparation of the relevant implementation plan that current BMPs under the forest practices rules are adequately regulating or will adequately regulate forest practices to meet TMDL load allocations and are not further degrading or will not further degrade water quality, then the forest practices rules will be implemented.
3. In preparing the applicable implementation plan, where DEQ and ODF do not agree on whether current forest practice rule BMPs will achieve the forestry load allocation in an applicable TMDL, these BMPs will, nonetheless, be referenced in the TMDL implementation plan. However, ODF in consultation with DEQ will work diligently to design and implement a mutually agreeable monitoring program to gain information sufficient to determine whether or not current forest practice BMPs will achieve the forestry load allocation. This monitoring program during implementation shall be a component of an implementation plan. If such monitoring demonstrates that current forest practice BMPs will not achieve the forestry load allocation, then the Board of Forestry in consultation with the Environmental Quality Commission (EQC) will create watershed specific protection rules or make other rule or program changes necessary to implement the load allocations and assure attainment of water quality standards in accordance with ORS 527.765.
4. Where DEQ and ODF agree, in the preparation of the relevant implementation plan, that despite application of and compliance with current BMPs forest operations will result or are resulting in non-achievement of TMDL load allocations, the Board of Forestry in consultation with the EQC will create watershed specific protection rules. If watershed-specific protection rules are not applicable under the Forest Practices Act, then ODF will use any other existing authority to ensure achievement of the TMDL load allocations in accordance with ORS 527.765, subject to limitations on that authority.

### Agricultural Sources

For load allocations for agricultural contributions to water quality impairment, the Oregon Department of Agriculture (ODA) is the DMA. ODA has responsibility under ORS 568.900-933 and ORS 561.191 for regulating farming practices for water quality improvement. In the case of listed waters in agricultural areas, ODA will prepare an Agricultural Water Quality Management Area Plan (AWQMAP).

Through the AWQMAP process it is ODA's intent to work proactively with landowners to provide information and technical assistance for implementation of measures protective of

water quality. All AWQMAPs will be adopted as administrative rules, and will contain regulatory backstops. Any enforcement undertaken by ODA shall be pursued in accordance with OAR 603-90-060 through 120.

ODA will convene an advisory committee in developing AWQMAPs to assist in development, and to determine the boundary within which the plan will apply. ODA, in conjunction with the advisory committee, will gather relevant data and information from other committees or councils in the defined area.

ODA and DEQ have committed to working closely together during AWQMAP development. If an AWQMAP is prepared before a TMDL, the AWQMAP will be re-evaluated after the TMDL is prepared to ensure that the load allocation for agricultural sources is met.

#### Urban Nonpoint Sources

DEQ will work with cities, counties and special districts to develop or modify existing water quality management plans where listed waters are significantly affected by the discharge or runoff of pollutants in urban stormwater. These plans may include elements, among others, such as road maintenance policies, NPDES stormwater permits and local erosion, flood or water quality control ordinances.

#### Federal Lands

DEQ will work with federal agencies (BLM, USFS, USACOE) to develop and modify water quality management plans to address waters listed on federal lands.

#### D.Accountability and Reporting

DEQ shall provide reports as follows:

1. Periodic reports to the Legislative Oversight Committee established pursuant to Senate Bill 924; and
2. Reports to EPA Region X on TMDL development in conjunction with the Performance Partnership discussions including the following elements:
  - a. Number and identity of TMDLs completed since last report;
  - b. Number and identity of listed segments for which TMDLs completed since last report;
  - c. Number and identity of any waters removed from the 303(d) list and reasons for removal;
  - d. Number and identity of TMDLs submitted but not approved and dates of submission and disapproval or other action;
  - e. An analysis of progress made to date on the TMDL schedule and projections for the rest of the schedule.

#### **V. Agreements with other Agencies**

This memorandum of agreement is strictly between EPA and DEQ. It does not incorporate or approve any other inter-agency agreements made by EPA or DEQ that also pertain to the development of TMDLs and implementation plans in Oregon.

DEQ has entered into and may enter into memoranda of agreement, memoranda of understanding or other agreements with other state agencies or entities. Those agreements are intended to be consistent with this agreement. However, in the event that any other such agreement is inconsistent with the Clean Water Act, EPA's regulations, or this Memorandum of Agreement (MOA), DEQ will initiate discussions with its co-signatories of other agreements as necessary to resolve the inconsistency.

#### **VI. Public Participation**

- A. DEQ will include specific interactions with the public designed to ensure adequate consultation and public involvement in TMDL decision making. DEQ's TMDL submittals will include copies of materials showing that an adequate public process has been conducted. DEQ will ensure that adequate public participation has been undertaken by designated management agencies in conjunction with TMDL development.
- B. DEQ will seek public input on TMDL prioritization in conjunction with the release of its 303(d) list each biennium.
- C. TMDL Development: DEQ will ensure public participation which will at a minimum meet federal requirements for public involvement (40 CFR 25, part 25.4).

## **VII. Tribal Involvement**

DEQ will coordinate with tribal governments as follows with respect to off-reservation waters:

- A. DEQ will provide opportunities for tribal government involvement in its 303(d) listing process. The specific opportunities and methods of tribal involvement shall be described in DEQ's 303(d) listing procedure and any agreements that may be entered into between DEQ and any specific tribal government.
- B. DEQ will provide opportunities for appropriate tribal government involvement in development and implementation of TMDLs. The specific opportunities and methods of tribal involvement may be determined in agreements entered into between DEQ and any specific tribal government.

## **VIII. EPA Review of TMDLs**

EPA will review -- and approve or disapprove -- the TMDLs submitted by DEQ in accordance with the CWA and EPA's implementing regulations and guidance. EPA does not approve or disapprove implementation plans.

Under current EPA guidance, for a TMDL in which wasteload allocations to point sources are based on the assumption that loads from nonpoint sources will be reduced, DEQ will demonstrate reasonable assurance that the nonpoint load allocations will be achieved. EPA will review the TMDLs submitted by DEQ where loads are allocated in such a manner to determine whether such reasonable assurance exists.

## **IX. Federal Agencies**

EPA will pursue the development of appropriate mechanisms (e.g., memorandums of agreement, standards and guidelines in forest plans, etc.) to encourage federal agencies to participate in the development and implementation of TMDLs. Such agencies will include, but not be limited to, the US Forest Service, US Army Corps of Engineers, US Bureau of Reclamation, National Marine Fisheries Service, US Bureau of Land Management, National Park Service, Natural Resources Conservation Service and US Fish and Wildlife Service.

## **X. Role of EPA in Developing TMDLs for Interstate or Interjurisdictional Waters**

- A. Where one or more states or tribes are developing a TMDL for interstate or interjurisdictional waters and requests assistance from EPA, EPA will participate in the development process either as the lead or other appropriate role as agreed upon by the states, tribes and/or EPA.
- B. In instances where EPA develops TMDLs for 303(d) listed waters within the state's jurisdiction, responsibility for the implementation plans for the TMDLs will be determined through the Performance Partnership Agreement process.

## **XI. TMDL Tracking**

DEQ will maintain information on water quality limited segments in a tracking system or database. The tracking system will contain information on (1) water quality limited segments for which TMDLs have been developed, and (2) water quality limited segments for which TMDLs have not been developed because other pollution controls have been deemed stringent enough to implement applicable water quality standards. The tracking system will be updated periodically and will be available to EPA and the public. Elements that will be tracked include:

- Waters covered under the TMDL;

- EPA Approval date;

- Who are the responsible DMAs;

- Key elements of the TMDL (e.g. what are the targets to be achieved, what are key progress dates);

- Anticipated date of achieving water quality standards;

- Any indicator of progress (i.e. what has been achieved to date) or a "hot key" to an appropriate web site regarding work being done on the TMDL put together by the DMA.

- DEQ contact for the TMDL

DEQ intends to check periodically on the progress of implementation measures and attainment of water quality standards after TMDLs are developed. If, for any particular TMDL, DEQ determines that implementation is not proceeding because source controls specified in an implementation plan have not substantially been put in place, then DEQ will place the waterbody on the 303(d) list when the next list is submitted to EPA for approval. If implementation measures are in put in place as proposed, but water quality standards are not or will not be attained, or the load allocations or wasteload allocations for the TMDL are not or will not be attained, then DEQ will assess the situation and take appropriate action. Such action may include additional implementation measure, modifications to the TMDL, and/or placing the waterbody on the 303(d) list when the next list is submitted to EPA for approval.

## **XII. Evaluation of TMDL Development and Submittal**

A. At meetings called to develop the DEQ/EPA Performance Partnership Agreement, EPA and DEQ will evaluate the pace of development and submittal of TMDLs for waters on the 1998 303(d) list. If the evaluation indicates that the pace of development and submittal of TMDLs is inadequate, EPA and DEQ will identify causative factors and appropriate remedies.

B. If EPA determines that DEQ has failed to submit TMDLs for waters identified on the 1998 list in substantial compliance with the schedule set forth in Attachment A, then EPA will take such steps as it deems appropriate and are authorized by law. EPA shall provide reasonable notice to DEQ of any such steps.

## **XIII. Limitations**

EPA and DEQ recognize that the performance of this Agreement is subject to fiscal and procurement laws and regulations of the United States and the State of Oregon. The possibility exists that circumstances outside the reasonable control of DEQ and EPA could delay compliance with the timetables and requirements contained in this Agreement. Such situations include, but are not limited to, sufficient funds not being appropriated as requested, appropriated funds not being available for expenditure, or catastrophic environmental events requiring an immediate and/or time consuming response by EPA or DEQ. Should a delay occur due to such circumstances, any resulting failure by DEQ to meet the timetables and requirements of the Agreement shall not constitute a failure to comply with the terms of the Agreement. DEQ shall provide to EPA reasonable notice in the event that DEQ invokes this term of the Agreement.

Should this term be invoked, EPA may take such steps as it determines reasonable and appropriate to ensure EPA's compliance with relevant CWA and judicial requirements. EPA shall provide reasonable notice to DEQ of any such steps.

#### **XIV. Property Rights**

The parties recognize that the Oregon State Constitution reserves the waters of the State for the people of Oregon for their common use; such waters are subject to appropriation as provided for by State law. No TMDL, Wasteload Allocation, or Load Allocation established by EPA or DEQ shall create or vest any property rights, including but not limited to any water rights, in any person, provided that DEQ can apply for instream water rights from the Oregon Water Resources Department.

#### **XV. Reservation of Rights**

A. In executing the Memorandum of Agreement, DEQ does not waive any rights it may have to challenge EPA's interpretation or implementation of any CWA provision, including but not limited to regulations, guidance, and policies related to CWA §303(d), in any administrative or judicial forum. EPA does not waive its right to challenge DEQ's interpretation or implementation of the requirements of § 303(d), to approve or disapprove any TMDLs proposed by the State, or to establish TMDLs as otherwise required by law.

B. This Memorandum of Agreement does not constitute an explicit or implicit agreement by DEQ or EPA to subject itself to the jurisdiction of any federal or State court. Nor shall this Agreement be construed as creating any right or benefit, substantive or procedural, enforceable at law or in equity, by any person or entity against EPA or DEQ. This Agreement shall not be construed to create any right to judicial review involving the compliance or noncompliance of EPA or DEQ with this Agreement.

#### **XVI. Amendments**

A. EPA and DEQ agree that difficulties may arise in implementing requirements of § 303(d). Therefore, both parties agree to periodically evaluate this Memorandum of Agreement and make recommendations for alterations and amendments. This Agreement may be amended by mutual agreement of EPA and DEQ. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the parties.

B. The parties anticipate that, during the life of this Agreement, there may be changes to the Clean Water Act, EPA's implementing regulations and guidance, and State statutes and regulations that pertain to matters addressed in this Agreement. Where EPA and DEQ determine that new provisions in statutes, regulations, or guidance are inconsistent with this Agreement, the statutes, regulations and guidance shall govern. In such cases, EPA and DEQ will amend this Agreement as provided in paragraph A. However, in cases where EPA and DEQ determine that provisions in this Agreement are merely different from new statutes, regulations and guidance, but not inconsistent with those statutes, regulations and guidance, then the provisions in this Agreement shall continue in force.

#### **XVII. Communications and Dispute Resolution**

A. While implementing this Agreement, EPA and DEQ are committed to on-going, timely and open communications. EPA and DEQ commit to the identification of issues and problems at early stages of development in order to provide time to plan potential resolutions in furtherance of this Agreement.

B. Each party to the Agreement will identify in writing a staff person who will serve as the primary contact for activities under this Agreement, and will notify the other party when the primary contact is replaced.

C. Communications concerning major documents, comments, and major decisions shall be in writing. Verbal communications on important matters will be followed by written notification as soon as possible.

D. EPA and DEQ will generally communicate and strive to address matters at a staff level. In the event that staff are unable to resolve a dispute, the staffs will present the matter to progressively higher levels of management until consensus is reached. In the event consensus is not reached, the Director of DEQ and the Regional Administrator of EPA Region X shall resolve the matter.

### **XVIII. Period of Performance**

A. Subject to its other provisions, the period of performance of this Agreement shall commence when it is signed by the parties hereto. This Agreement, and all obligations arising hereunder, shall terminate on June 30, 2007. Specific commitments and agency roles and responsibilities will be incorporated into the biennial State-EPA Performance Partnership Agreement (PPA) after June 30, 1998.

B. Notwithstanding subsection A above, either of the parties may terminate this Agreement upon 180 days prior written notification to the other party.

### **XIX. Severability**

If any provision of this Agreement or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provisions of this Agreement which can be given effect without the invalid provision, if such remainder conforms to the requirements of applicable law and the fundamental purpose of the Agreement, and to that end the provisions of this Agreement are declared to be severable.

### **XX. All Writings Contained Herein**

This Agreement contains all the terms and conditions agreed upon by the parties. No other understandings, oral or otherwise, regarding the subject matter of the Agreement shall be deemed to exist or to bind either of the parties hereto.

DATED this 1 day of February, 2000.

United States Environmental Protection Agency

By: Chuck Clarke  
Chuck Clarke  
Regional Administrator  
U.S. Environmental Protection Agency

State of Oregon, Department of Environmental Quality

By: Langdon Marsh  
Langdon Marsh  
Director  
Oregon Department of Environmental Quality

For more information please contact Dick Pedersen at (503) 229-6345 or via email at [pedersen.dick@deq.state.or.us](mailto:pedersen.dick@deq.state.or.us).



