DEQ Water Quality Division

2009

Oregon Nonpoint Source Pollution Program 2009 Annual Report

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Oregon Nonpoint Source Pollution Program 2009 Annual Report

State of Oregon
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EXECUTIVE SUMMARY

Background

This Nonpoint Source Pollution (NPS) program update report is to meet the requirements of section 319 (h) (8) and (11) of the Federal Clean Water Act (CWA) (33 USC 1329). The report documents the activities and accomplishments of the State of Oregon in general and the Oregon Department of Environmental Quality (DEQ) in particular regarding the administration of the State's NPS Program during the period January – December 2009.

For this year's Oregon NPS Program Annual Report, DEQ worked with the U.S. Environmental Protection Agency (EPA), Region 10 staff early in 2009 to develop a workplan for the NPS Program Annual Report. This included developing the contents of the report.

EPA also provided assistance in the review of 319-grant work plans and processing Oregon's grant; GRTS technical assistance and training to develop pollutant load reduction estimates of the 2009 funded projects; identify how required nine element watershed plans may be achieved and developed; and to write success stories for WQ-10, SP-12, and environmental progress on the Tillamook River Basin. EPA is also in the process of writing additional success stories and developing pollutant load reduction models for the most prevalent 303(d) listed pollutants in Oregon for temperature and bacteria.

General Description of Report

Following EPA Section 319 Grant reporting guidelines, the report contains the following required elements:

- Description of Oregon's NPS Program.
- Description of Oregon's Baseline Regulatory Statutes and Non-Regulatory NPS Programs.
- Program Directions and Priorities in 2009.
- Nonpoint Source Management and Administration, Including a Description of Oregon's Performance Partnership Agreement (PPA) and Use of Incremental and Base Funds.

- Identification of the 2009 Project Implementation Activities, which Included the Following Programs/Projects:

    - Total Maximum Daily Loads
    - New Water Quality Standards
    - Toxic Chemicals
    - Water Quality Issues on Agricultural Lands
    - Pesticide Management
    - Water Quality Issues on State and Private Forest Lands
    - Water Quality Issues on Federal Forest Lands
    - Clean Water State Revolving Loan Fund
    - Drinking Water Protection in Oregon
    - Coastal Zone NPS Program
    - Monitoring and Data
    - Groundwater Management Areas (GWMAs)

- Progress of 319 Grant Funded Projects, including Grant Performance Report Summary, Description of Geographic and Programmatic Priorities for 2009 319 Funding, of 2009 – 319-Grant Funded Projects and Categories.

- Calculated Nitrogen, Phosphorus, Sediment, and Biological Oxygen Demand (BOD) Pollutant Load Reduction Estimates of the 2009 Funded Projects.

- Description of DEQ's Watershed-Based Plans.

- Success Stories/Environmental Improvement (WQ-10 Projects and SP-12 Projects).

Major Accomplishments

- In 2009, DEQ distributed over $1,387,400 in 319 NPS source grants to 35 projects.

- Twelve (12) of the thirty-five (35) 2009 319 funded projects were identified to produce an estimated total load reduction of 49,471 Pounds/Year Nitrogen Reduction, 17,407 Pounds/Year Phosphorous Reduction, 94,556 Pounds/Year Biological Oxygen Demand Reduction, 16,461 Tons/Year Sediment Reduction.

- The Clean Water State Revolving Fund (CWSRF) Loan Program provided loans of $9,656,650 towards NPS water quality improvements.

- Seventy-four (74) 319-funded projects are still open; including the thirty-five (35), 2009 funded projects.

- DEQ received approval from EPA on the Miles Creeks (Middle Columbia-Hood) Total Maximum Daily Load (TMDL).

- DEQ has been developing TMDLs in several basins impaired by NPS pollution and expects to issue TMDLs for the following basins: Klamath and Lost River; Wallowa, Imnaha, and Lower Grande Ronde; Malheur; John Day; and Mid-Coast Basins.

- ODA, in 2009, initiated 62 compliance investigation cases statewide with the majority in the northwest part of the state.

- DEQ began the rulemaking process that will set new water quality standards for toxic pollutants based on a new fish consumption rate, a review of Oregon's turbidity standard, and developing strategies for implementing the sedimentation narrative criterion. In addition, DEQ began developing a Toxics Reduction Strategy.

- DEQ reviewed five Willamette River Basin TMDL Implementation Plans using EPA's Watershed Planning components and Nine Key NPS elements. In general, the plans adequately addressed three out of the nine key elements. The five key elements were either partially met or not met at all.

- One EPA defined Environmental Success Story was provided for the Wilson River, Tillamook Bay as an SP-12 Project. No WQ-10 Project success story was written for 2009.

- For the 2010 319 NPS Implementation Grants, Oregon has received project requests for a total of $1,556,193 in the following project categories: BMP Implementation (45%), BMP Planning (24%), Restoration (22%), GWMA Implementation (5%), Effectiveness Monitoring (4%), and Information and Education (<1%).

Program Directions

DEQ continues to implement the NPS Program and direct funding into basins impaired by NPS pollution. In addition, DEQ is continuing to work toward implementation of the watershed approach, which would incorporate the use of the EPA's key watershed planning components with the nine key NPS elements. In addition, DEQ is committed to a continual improvement in coordination between the various DEQ Water Quality Programs including NPS, TMDLs, Integrated Report, Source Water Protection, Groundwater, Clean Water State Revolving Loan Fund, and 319 Project Grants. In addition, DEQ has been working with staff from the Oregon Water Enhancement Board (OWEB), Natural Resource Conservation Service (NRCS), and other funding entities to prioritize and coordinate our efforts to address nonpoint sources of pollution.

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OREGON WATER QUALITY NPS PROGRAM
2009 ANNUAL REPORT

1. Introduction

General Description of Report

This NPS program update report is to meet the requirements of section 319 (h) (8) and (11) of the Federal Clean Water Act (CWA) (33 USC 1329). The report documents the activities and accomplishments of the State of Oregon in general and the Oregon Department of Environmental Quality (DEQ) in particular regarding the administration of the State's Nonpoint Source (NPS) Pollution Water Program.

The report covers an update on the NPS activities implemented by the state during the period January – December 2009. Like many other years in the Oregon program, this period was productive. As described below, Oregon is making progress toward meeting the substantial challenges presented by NPS water pollution.

Highlights

The State program continues to find innovative, cooperative, and community-based methods to improve water quality and enhance watersheds. Some of the activities and accomplishments for 2009 were:

- Distributed over **$1,387,400** in 319 NPS source grants to **35 projects**.
- DEQ for the first time completed load reductions estimates for twelve (12) 2009 319 funded projects. Total load reduction estimates by pollutant are as follows: **49,471 Pounds/Year Nitrogen Reduction, 17,407 Pounds/Year Phosphorous Reduction, 94,556 Pounds/Year Biological Oxygen Demand Reduction, 16,461 Tons/Year Sediment Reduction.** Load reduction estimates were included in the EPA database GRTS (Grants Reporting and Tracking System).
- DEQ received approval from the Environmental Protection Agency (EPA) on the Miles Creeks (Middle Columbia-Hood) Total Maximum Daily Load (TMDL).
- DEQ has been developing TMDLs in several basins impaired by NPS pollution and expects to issue TMDLs for the following basins: Klamath and Lost River; Wallowa, Imnaha, and Lower Grande Ronde; Malheur; and John Day Basins.
- DEQ began the rulemaking process for revising the human health criteria based on a fish consumption rate of 175 g/d (or about 23 fishmeals per month) and expects to be ready for the Oregon Environmental Quality Commission (EQC) adoption of revised criteria by late 2010.

- DEQ began the rulemaking process that will set new water quality standards for toxic pollutants based on a new fish consumption rate that is much more protective of human health than the existing rate in Oregon and expects to be ready for EQC adoption of revised criteria by late 2010.
- In addition, DEQ began reviewing the criteria for three naturally occurring earth metals: arsenic, iron, and manganese.
- DEQ resumed review of the state's turbidity standard. This review is expected to be completed by mid-2011.
- DEQ convened an internal Sediment Work Group to work on strategies for implementing our narrative criterion regarding sedimentation. A technical analysis of physical habitat and biological data and a set of sediment indicators and potential benchmarks for Oregon was completed and forwarded to the Independent Multidisciplinary Science Team (IMST) for peer review.
- DEQ has adopted a comprehensive, integrated approach to address toxic pollutants in the environment. DEQ formed an external Toxics Reduction Strategy stakeholder group to help complete a draft of the strategy by early 2010. A draft DEQ Priority Toxics Focus List was released by DEQ on July 27, 2009.
- DEQ completed the *Willamette Basin Rivers and Streams Assessment Report* that summarizes over 10 years of data collected in the Willamette Basin by DEQ, watershed councils, municipalities, EPA, and university students using a random study design.
- DEQ issued the *Willamette Basin Rivers and Streams Assessment Report* that was written as a resource for water quality managers, watershed councils, municipalities and citizens to help understand the status of watershed conditions in the Willamette basin.
- Facilitated and participated in the Forestland Conversions Workgroup that was composed of seven state agencies to help improve coordination among the state agencies on forestlands being converted to other uses. Seven training sessions were conducted in all areas of the state where there is forest cover.
- DEQ, Bureau of Land Management (BLM), and the U.S. Forest Service (FS) prepared the draft 5-Year Progress report to evaluate and make recommendations on revisions to DEQ/BLM and DEQ/FS MOU.
- On FS and BLM lands throughout Oregon, from 2003 to 2007, over $80.3 million dollars has been spent on active restoration. Over 1,600 miles of road have been improved, 484 miles have been decommissioned, riparian treatment was completed on 452 miles or approximately 25,000 acres, upland areas have had approximately 32,000 acres treated through various methods including slope stabilization, revegetation, silvicultural treatments, or livestock exclusion fencing and freshwater and coastal wetland restoration occurred on 4,807 and 1,500 acres.
- DEQ provided additional comments to BLM's Western Oregon Plan Revision (WOPR). DEQ expressed concerns in response to BLM's Riparian Management Area (RMA) Strategy contained in the final Resource Management Plans. In July 2009, the BLM announced that the WOPR was being withdrawn.

- Oregon Department of Agriculture (ODA) and Soil and Water Conservation Districts (SWCDs) produced fourteen reports associated with Agricultural Water Quality Management Area (TMDL Implementation) Plan biennial reviews. The reports include updates on compliance and monitoring efforts as well as a summary of progress toward plan objectives, including targets on outreach and projects.
- ODA and SWCDs used various venues to reach agricultural producers and rural land residents to promote conservation practices with ODA reaching about 4,000 people and SWCDs collectively made close to 22,000 contacts.
- ODA, in 2009, initiated 62 compliance investigation cases statewide with the majority in the northwest part of the state.
- The Water Quality Pesticide Management team (WQPMT) and ODA finalized the Oregon Pesticide Management Plan (PMP) and submitted it to EPA for approval. The PMP was reviewed by EPA and returned with comments to the WQPMT in August 2009 for upgrades. Comments and refinement by the WQPMT are pending.
- The DEQ and Oregon Department of Forestry (ODF) RipStream project has completed the initial analysis to test whether current riparian protections on fish-bearing streams are adequate to meet water quality standards for temperature. The results were presented to the Board of Forestry (BOF) in September 2009.
- The Clean Water State Revolving Fund (CWSRF) Loan Program provided loans of **$9,656,650** towards NPS water quality improvements.

State of Oregon Water Quality Program

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, the state also adopted another landmark program: in 1996, the state adopted the Oregon Plan for Salmon and Watersheds to focus work on watershed restoration and recovery of endangered salmonid populations.

The state water quality program can be divided into the ten interdependent program elements listed below. The water quality program components are:

1. Water quality standards that establish beneficial uses for the waterbody as well as maximum levels of pollutants that can be in the waterbody without adversely affecting the designated use.
2. Permits for point sources, including stormwater, discharging pollutants to waters of the state.
3. Water Quality 401-Certifications for hydroelectric projects and dredge and fill activities.
4. NPS TMDLs specifically developed for forestry, agriculture, and urban activities.
5. Biennial assessment of State waters to identify those waters that are not meeting water quality standards.
6. Pretreatment, Sewage Sludge Management, and On-Site System programs to ensure that water quality is not compromised by other land-based activities.

7. Development of TMDLs, which are limits on pollution intended to bring rivers, lakes, and streams into compliance with 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. Information and education outreach activities to create awareness by the public about the importance of NPS pollution and its impact groundwater and surface water quality.
10. Facility or activity-specific compliance assessment, a pilot NPS effectiveness monitoring effort, technical assistance, and enforcement as warranted ensuring State water quality requirements are met.

Partners

The cornerstone of the Oregon water quality program is, to the maximum extent practical, to identify solutions at the local community level. Watershed Councils, Soil and Water Conservation and Irrigation Districts, cities and counties all play an important part in the state's strategy.

Oregon has relied on longstanding partnerships to address various activities and sources of nonpoint source pollution. Many of the state's departments, boards, and commissions are now actively involved in addressing nonpoint source pollution and other watershed concerns. In addition, federal agencies are also partners. DEQ partners include but are not limited to the following:

State Agencies

- Department of Agriculture www.oda.state.or.us
- Department of Forestry www.odf.state.or.us
- Parks and Recreation Department http://egov.oregon.gov/OPRD/index.shtml
- Department of State Lands http://www.oregon.gov/DSL/index.shtml
- Department of Geology and Mineral Industries http://egov.oregon.gov/DOGAMI/index.shtml
- Marine Board (Boat Ramps and Other Access Points) http://www.boatoregon.com/
- Oregon Watershed Enhancement Board www.oweb.state.or.us
- Department of Fish and Wildlife www.dfw.state.or.us
- Department of Land, Conservation and Development www.lcd.state.or.us
- Department of Economic & Community Development www.econ.state.or.us
- Department of Transportation www.odot.state.or.us

Federal Agencies

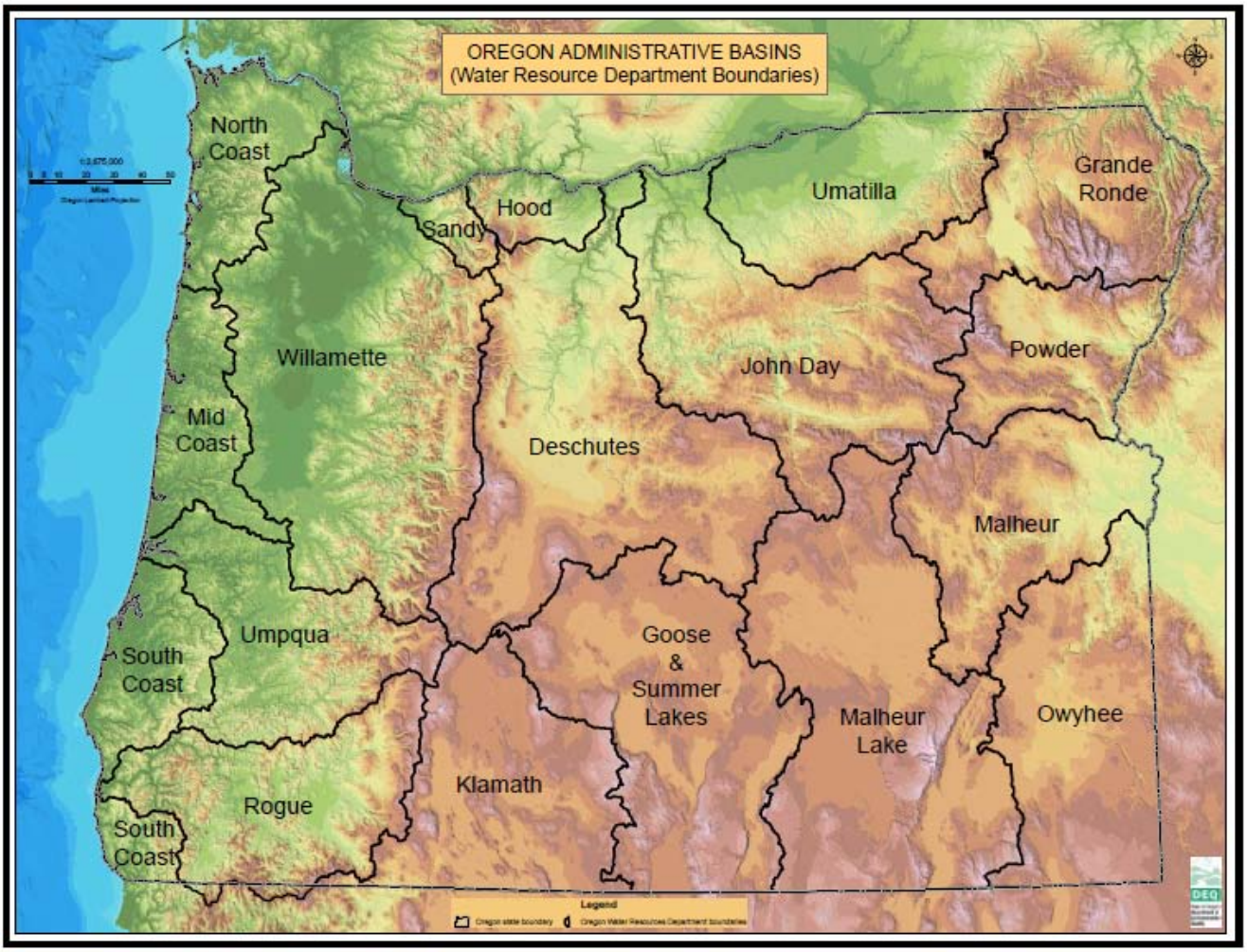
- U.S. Forest Service http://www.fs.fed.us/r6/water/
- U.S. Bureau of Land Management http://www.blm.gov/or/st/en.html
- U.S. Fish and Wildlife Service http://www.fws.gov/oregonfwo/
- US Army Corps of Engineers (USACE) http://www.nwd.usace.army.mil/home.asp

2. Oregon's Water Resources

Oregon ranks as the tenth largest state in the nation with its nearly 97,000 square miles. The Oregon landscape is diverse and surface water resources are a major feature of Oregon. The state has over, 6,200 lakes, 9 major estuaries, over 360 miles of coastline, and 111,619 miles of rivers. End to end; Oregon's rivers could circle the Earth four and a half times.

At present, responsibility for managing its water resources is divided between several state agencies that work in an active and effective partnership to protect state waters.

Figure 1. Waterbodies of Oregon



3. Oregon's Nonpoint Source Program

Description of NPS Program

Oregon's NPS Program is intended to control or prevent nonpoint source pollution to attain water quality standards and thereby protect the beneficial uses of all state waters. Oregon will promote and support programs and activities that are guided by best available science and implemented through an adaptive management approach. In addition, Oregon will realize these goals by striving for broad community acceptance and involvement.

Oregon's strategy for improving state waters is on a watershed basis. The state has 21 river basins and 91 sub-basins. The state's NPDES permitting, assessment, and TMDL work has been aligned and prioritized according to these sub-basins. There are Ground Water Management Area (GWMA) and basin coordinators assigned to each GWMA and basin/subbasin. They take the lead role as GWMAs and TMDLs are developed and implemented. The types and extent of water quality impairments, as well as available resources and impediments vary geographically. It is therefore critical to consider GWMA/basin specific conditions and develop local priorities and solution for local problems to achieve water quality improvements.

Baseline Regulatory Statutes

The NPS program relies on the following State of Oregon and federal rules and regulations:

- Federal Clean Water Act;
- Federal Safe Drinking Water Act (SDWA);
- EPA National Estuary Program;
- NOAA CZARA Section 6217 Coastal NPS Control Program;
- Oregon water quality standards;
- Oregon TMDL rule ;
- State and EPA NPS and stormwater pollution control rules;
- Oregon Forest Practices Act;
- Oregon Plan for Salmon and Watersheds;
- Oregon Agricultural Water Quality Act;
- Oregon State Land Use Planning Program, specifically Goal 5 (protection of riparian and wetlands) and Goal 6 (protection of air, water and land resources); and
- Oregon Groundwater Quality Protection rules.

Non-Regulatory NPS Programs

Oregon's Nonpoint Source Control Program Plan, October 2000, http://www.deq.state.or.us/wq/nonpoint/plan.htm identifies the pollution management programs, strategies, and resources that are currently in place or that are needed to minimize or prevent nonpoint source pollution effects. DEQ has the responsibility of overseeing and implementing the States NPS Management Program by coordinating with many local, state, and federal agencies and organizations throughout the State of Oregon. The NPS Management Plan represents the unified effort of many agencies and individuals to outline the various pollution control strategies that are currently taking place or are proposed for future implementation. In addition, category goals and implementation milestones are described for each of the eight EPA designated NPS pollution categories.

Since its inception, Oregon's NPS Program has supported and promoted the collaborative efforts of state, federal, and local agencies as well as private organizations in order to achieve NPS goals. The State of Oregon is committed to implementing an environmentally sensitive program that focuses on the attainment of water quality goals by using a balanced approach of education, research, technical assistance, financial incentives, and regulation. These programs include the management or regulation of forestry, agriculture, grazing, transportation, recreation, hydromodification, marinas, urban development, land use planning, fish and wildlife habitat, riparian and wetlands protection/restoration, public education, water resources, and other activities that affect the quality of the state's waters.

319-Funded Project
Nestucca Bend (Post Planting Photo)

Program Directions and Priorities in 2009

DEQ continues to implement the NPS Program and direct funding into basins impaired by NPS pollution. In addition, DEQ is continuing to work toward implementation of the watershed approach, which would incorporate the use of the EPA's key watershed planning components with the nine key NPS elements. This includes continued improvement in coordination between the various DEQ Water Quality Programs including NPS, TMDLs, Integrated Report, Source Water Protection, Groundwater, Clean Water State Revolving Loan Fund, and 319 Project Grants.

In addition, DEQ has been working with staff from the Oregon Water Enhancement Board (OWEB), Natural Resource Conservation Service (NRCS), and other funding entities to prioritize and coordinate our efforts to address nonpoint sources of pollution. In addition, development of an Oregon Watershed Approach that would integrate TMDL Implementation Plan requirements (Oregon TMDL Rule, OAR 340-042-0025); EPA's Key Watershed Planning Components with Nine Key NPS elements; and drinking water protection program elements is planned. However, one of the major impediments to reducing pollutants from nonpoint sources is that federal funding of the state's Nonpoint Source Program has been at the same level for several years.

Prioritization of NPS Activities in 2009

Prioritization of program activities is important to best use our limited resources for reducing NPS pollution and improving water quality. In addition, recommendations from a long-term water quality program planning effort were used to help prioritize work.

<u>The following criteria were used to prioritize activities for 2009:</u>

a. Actions that are measurable and achievable – clear environmental result.
b. Actions that act as a catalyst to move the NPS Program forward.
c. Actions that can guide other program efforts such as setting policy or developing tools.
d. Actions that enable the program to leverage internal and external resources.
e. Actions that invest in and or develop political will and community support.
f. Actions that develop an internal process to increase efficiency and consistency.
g. Actions that include an ongoing assessment of monitoring and particularly 319 funding for projects that include monitoring.

This prioritization process focused DEQ's NPS efforts in 2009 on agricultural, federal, state, and private forestry land use activities, and the Oregon Coastal Nonpoint Pollution Control Program (CNPCP).

4. Nonpoint Source Activities and Accomplishments in 2009

Programmatic - NPS Management and Administration

Performance Partnership Agreement (PPA)

A portion of DEQ's nonpoint source program activities are funded through the EPA and DEQ Performance Partnership Agreement (PPA). This funding used in waters impaired by NPS pollution supports program management, administration, TMDL development and implementation, mainstem Columbia water quality management, and agency coordination. These funds support approximately 11 positions within DEQ that were involved in the following programs/projects:

- Develop TMDLs for the Klamath and Lost River; Wallowa, Imnaha, and Lower Grande Ronde; Malheur; John Day; and Mid-Coast Basins.
- Implement TMDLs for NPS in subbasins where TMDLs/WQMPs have been completed, such as the Willamette River and Columbia River Basins.
- Implement the Willamette Mercury TMDL (Phase I) using DEQ's Mercury Reduction Strategy and mercury source characterization work to help identify priorities and strategies.
- Implement strategies for GWMA's with established Action Plans.
- Review and update Oregon's 319 grant guidelines to include EPA's Key Watershed Planning components with NPS Guidance 9 key points' criteria.
- Distribute 319 grants to fund project proposals in Oregon's priority basins based on TMDL development and implementation, and GWMAs.
- 319-Grant Administration.
- Prepare an annual report of NPS program accomplishments.
- Determine with EPA available NPS Environmental Progress Stories documenting either water quality progress or partial/full restoration under EPA's Program Activity Measures (PAMs).
- Enter GRTS 319 project tracking data by national deadlines, including pollutant load reductions, as available.
- DEQ coordination with the Oregon Department of Land Conservation and Development (DLCD) on the Oregon Coastal Nonpoint Pollution Control Program (CNPCP).
- DEQ coordination with state and federal natural resource managers on meeting water quality goals and objectives.

The following table is a compilation and summary of elements 2 and 8 sections from the actual 2008-2010 PPG workplan.

Table 1. 2008-2010 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component.

2008-2010 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component		
	DEQ Commitment	**Outputs**
	Element 2: TMDLS	
2.1 Total Maximum Daily Loads (TMDLs) and Water Quality Management Plans	DEQ staff actively implement TMDLs by: • Revising industrial and municipal wastewater permits to incorporate revised permit limits. • Working with local communities and the Oregon Department of Agriculture through the SB 1010 process to implement the TMDLs effectively on agricultural lands. • Working with the Oregon Department of Forestry, for implementation on state and private forestlands, through the Oregon Forest Practices Act and long-range management plans. • Assisting local governments in developing TMDL Implementation plans for urban areas. • Working with the U.S. Forest Service and the Bureau of Land Management on developing water quality restoration plans for lands under their jurisdiction. DEQ has defined development of TMDLs as a High Priority Outcome for the Water Quality Division. DEQ has committed to meet the Consent Decree requiring that specific target numbers of TMDLs be completed by 2008 and by 2010. We have defined a parallel goal that, by 2008, there will be a general recognition of the importance of TMDLs and their implementation for water quality protection and restoration.	By December 31, 2008 DEQ plans to submit to EPA for approval an additional 119 TMDLs (863 TMDLs approved by EPA as of October 2, 2007) to achieve the interim milestone of 982 TMDLs contained in the Consent Decree. The TMDLs could include any of the following basins: - Rogue Basin - Klamath Basin - Molalla & Pudding Basins - Miles Creeks Basins By December 31, 2010, DEQ plans to submit to EPA for approval additional TMDLs to achieve the milestone of 1,153 TMDLs completed contained in the consent decree. The TMDLs could include any of the following basins: - John Day Basin - Malheur Basin - Wallowa County Basin - Yamhill Basin - Mid Coast - Molalla & Pudding Basins - Miles Creeks Basins

Table 1. 2008-2010 Performance Partnership Agreement (Cont.)

2008-2010 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component		
	DEQ Commitment	**Outputs**
2.3 Implement the Willamette River Basin TMDL. Work with watershed councils, local governments, and other DMAs to develop appropriate management practices and plans for controlling pollutants to the Willamette River.	DEQ will work with watershed councils, local governments, and other DMAs to develop Implementation plans throughout Willamette Basin that guide management practices, pollutant controls to meet load allocations in TMDLs. Facilitate projects that result in improvements in water quality.	Completed Implementation plans throughout Willamette Basin that guide management practices, pollutant controls to meet load allocations in TMDLs. Facilitate projects that result in improvements in water quality.
2.4 Implement the Willamette Mercury TMDL (Phase I) using DEQ's Mercury Reduction Strategy and mercury source characterization work to help identify priorities and strategies. Work with stakeholders to identify sources and implement strategies to reduce the use of mercury and increase the amount of mercury that is safely managed or disposed.	Complete characterization of mercury sources in Willamette basin and data required for final monitoring.	Ongoing. This work is dependent upon award of competitive Extramural Funding for mercury analysis and mercury minimization planning.
2.5 Implement TMDLs for Nonpoint Sources in subbasins where TMDLs/WQMPs have been completed.	Completed Implementation plans that guide management practices, pollutant controls to meet load allocations in TMDLs. Facilitate projects that result in improvements in water quality.	DEQ is on track to meet the Consent Decree number of TMDLs required to be completed by the end of 2010. Ongoing. DEQ is encouraging DMAs to submit TMDL implementation plans that will be reviewed by DEQ.

Table 1. 2008-2010 Performance Partnership Agreement (Cont.)

2008-2010 Performance Partnership Agreement NPS and 319 Funded Related Water Quality Components		
	DEQ Commitment	**Outputs**
Element 8: Management of Nonpoint Sources of Pollution		
8.1 Review and update Oregon's 319 grant guidelines to include EPA's NPS 9 points guidance. Distribute 319 grants to fund project proposals to Oregon's priority basins based on TMDL development and implementation, and GWMAs. Work with EPA to review basins plans containing EPA's 9-point guidance.	DEQ's NPS program also includes staff, which performs the following activities: • Characterization of NPS problems/concerns. • Monitoring to support and determine effectiveness of BMP programs. • BMPs development/implementation. • Coordination between stakeholders. • Liaison support staff to other state and federal agencies. • Restoration activities. • Development and modeling for NPS TMDLs. • Development of UAA/SSC as related to NPS activities; and • Public education. • Solicit and select projects.	Funding criteria used to prioritize proposals. DEQ continues to develop watershed approach, TMDL implementation, and integration of EPA's NPS 9 points guidance into watershed implementation plans. DEQ has implemented a coordinated approach between 319, nonpoint source, and TMDL implementation to address critical water quality needs.
8.2 Prepare an annual report of NPS program accomplishments.	2009 NPS Annual Report	Place on website. The 2008 Annual Report was submitted by DEQ and approved by EPA. The report is on DEQ's website.
8.3 (08-10) Determine with EPA available NPS Success Stories documenting either water quality progress or partial/full restoration under PAM	Provide assistance in development of NPS Success Stories.	All stories on EPA website, stories documenting partial or full attainment count towards WQ-10.
8.4 (08-10) Enter GRTS 319 project tracking data by national deadlines, including load reductions as available	Data reflecting progress and status of 319 implementation	In progress. 2/09, 2/10 load reduction, 4/09, 4/10

Use of Incremental vs. Base Funds

Oregon's total 2009 319-Grant allocation of $2,675,700 was distributed as follows: $1,387,400 or 52% was directed to the 319 projects grant (in addition to $299,709 in previous year carry-over funds) and the remainder, $1,288,300 or 48%, was directed to the PPA grant to fund staff efforts under the NPS program.

Table 2. 2009 Oregon's 319 Grant Incremental and Base Funds Use

2009 OREGON'S 319 GRANT INCREMENTAL AND BASE FUNDS USE		
Fund	**Dollar Amount**	**Use**
Base Funds	**$1,288,300**	**11 DEQ Staff Positions**
Incremental Funds	**$1,387,400**	**35 Projects**
TOTAL	**$2,675,700**	**--**

Base Funds

Oregon's "base funds" supports approximately 11 positions within DEQ on the following programs:

- TMDL Development.
- TMDL Implementation.
- Update Oregon's 319 Grant Guidelines.
- Distribute 319 Grants For Projects.
- 319-Grant Administration and GRTS reporting of 319 activities.
- Annual NPS Report.
- NPS Success Stories.
- NPS Load Reductions.
- Columbia Water Quality Management.
- Oregon Coastal Nonpoint Pollution Control Program (CNPCP).
- State and Federal Coordination.

DEQ's use of the "base" 319 funds meets EPA's guidelines in supporting state 319 programs and projects. States may use the base funds for the full range of activities addressed in their approved nonpoint source management programs. EPA allows states to use up to 20% of the base funds to develop NPS TMDLs (consistent with their TMDL development schedule) and watershed-based plans to implement NPS TMDLs; develop watershed-based plans in the absence of or prior to completion of TMDLs

(incorporating the TMDL's load allocations once it has been completed and approved); develop watershed-based plans that focus on the protection of threatened waters, source water, or other high-priority unimpaired waters; and conduct other NPS monitoring and program assessment/development activities. (Monitoring the results of implementing a watershed project is not subject to this 20% limitation.)

Incremental Funds

In 2009, 319-Grant "incremental funds" funded 35 projects as follows:

- TMDL Implementation (41%)
- Watershed Improvement (16%)
- Pesticide Stewardship (16%)
- GWMA Plan Implementation (14%)
- BMP Implementation (11%)
- Information and Education (2%)

Incremental funds are restricted, per EPA's 319 guidance, but are principally to be used to develop and implement watershed-based plans that address nonpoint source impairments in watersheds that contain Section 303(d)-listed waters. States may use up to 20% of incremental funds to develop NPS TMDLs, watershed-based plans to implement NPS TMDLs, and watershed-based plans in the absence of or prior to completion of TMDLs in Section 303(d)-listed waters (incorporating the TMDL's load allocations once it has been completed and approved).

EPA Region 10 has included in the past few annual grant issuance letters, a condition that Oregon begin developing watershed-based plans that includes EPA's Key Watershed Planning Components with Nine Key NPS elements. DEQ in 2009, in response to EPA's request, began developing an Oregon Watershed Approach. The plan would integrate TMDL Implementation Plan requirements (Oregon TMDL Rule, OAR 340-042-0025), EPA's Key Watershed Planning Components with Nine Key NPS elements (**Table 14),** and drinking water protection program elements. DEQ plans to eventually develop watershed-based plans, where feasible, for future/ongoing implementation.

Project Implementation (2009 Activities)

Programs

Total Maximum Daily Loads (TMDLs)

TMDLs describe the amount of pollutant a waterway can receive and not violate water quality standards. TMDLs take into account the pollution from all sources, including discharges from industry and sewage treatment facilities; runoff from farms, forests and urban areas; and natural sources such as decaying organic matter or nutrients in soil. TMDLs include a safety margin for uncertainty and growth that allows for future discharges to a river or stream without exceeding water quality standards. DEQ develops TMDLs on a watershed basis and attempts to address all 303(d) listed pollutants for that watershed.

Federal law requires that streams, rivers, lakes, and estuaries that appear on the 303(d) list have a TMDL developed in order to meet state water quality standards. In most cases, rivers and streams receive discharges from both point and nonpoint sources of pollution. DEQ is committed to having 1,153 federally approved TMDLs by the end of 2010.

TMDLS are Developed Using the Following General Process:

1. Review existing data and monitor to determine the type and amount of pollutants that are causing water quality problems. The review and monitoring attempts to determine how much of the pollution comes from point sources, nonpoint pollution, such as surface runoff, and naturally occurring.
2. Use techniques such as computer modeling to determine what effect the pollution is having on the stream or river and how much of the pollutant can be discharged without exceeding water quality standards.
3. Use this information to establish permit limits on the amount of pollutant each pipe can discharge and limits on nonpoint sources that are controlled through TMDL Implementation Plans.

DEQ Issued TMDLs for 2009:

No TMDLs were issued by DEQ in 2009. DEQ expects to issue TMDLs for the Klamath and Lost River; Wallowa, Imnaha, and Lower Grande Ronde; Malheur; John Day; and Mid-Coast Basins to meet the “Consent Decree” deadline of 1,153 TMDLs by December 31, 2010.

EPA Approved TMDLs for 2009:

The following table outlines the one TMDL approved by EPA in 2009.

Table 3. Oregon TMDLs Approved by EPA in 2009.

Oregon TMDLs Approved by EPA for 2009					
Waterbody (Basin)	**Water Quality Concern Addressed**	**TMDL Parameters**	**USEPA Approval Date**	**Completed TMDL Segments by Basin**	**Completed TMDL Segments (cumulative)**
Miles Creeks (Middle Columbia-Hood)	**Temperature**	**Temperature**	**02/05/2009**	**15**	**1013**

319-Funded Project
Upper Crabtree Creek – Alex Property: Planting

TMDL Implementation Process Timeline for the TMDL issued by DEQ in 2009:

Within 20 days after the TMDL is issued as an EQC Order, DEQ sends notification letters to all DMAs that outline the following requirements:

Table 4. TMDL Implementation Requirements to DMAs.

Requirement	Timeline	Expectations
DMAs develop/submit Implementation Plans to DEQ.	18 months, as indicated in the WQMP and DEQ notification letter.	TMDL Implementation Plans should be developed based on the TMDL Implementation Plan Guidance http://www.deq.state.or.us/wq/TMDLs/TMDLs.htm.
DEQ acknowledgement, review, and approval of submitted TMDL Implementation Plans.	Review and approval within 30-60 days after receiving the plan.[1]	DEQ will provide feedback on the TMDL Implementation Plan and inform the submitter if your plan has been approved. DEQ will also provide specific recommendations if your plan is not adequate.
DMAs undertake actions to implement their plans.	As described in plan.	This could include continuation of existing actions, developing new ordinances, enforcement, outreach and education efforts, etc.
DMAs submit annual status reports.	Due date will be based on date plan was approved.[2]	This could be a summary of an annual status review with DEQ and/or a brief written statement of status of actions taken.
DMA reviews and revises the plan if data or other information indicates the plan is not adequate to achieve pollution reduction goals.	As necessary.	Adaptive management through review and revision results in pollution reduction.
DMA submits five-year evaluation.	Serves as the Fifth Annual Report.	Written evaluation of effectiveness of plan relative to pollutant reduction goals as can be demonstrated by existing data and/or qualitative reports (i.e., does not require data collection), and description of changes that will be made if necessary.
DMA and DEQ collaborate on plan Review and Revision.		Following DEQ's reevaluation of a TMDL. Per guidelines in web site information.

1. If DEQ is unable to complete within this period, DEQ will acknowledge receipt of plan, and clarify the date when DEQ will complete review.

2. The precise date will be one mutually agreeable to DEQ and the DMA and can coincide with other reporting dates to DEQ, such as in MS4 or other permits.

Designated Management Agencies (DMAs) for Each TMDL Issued in 2009:

No TMDLs were completed by DEQ in 2009.

New Water Quality Standards

Introduction

Every three years, Oregon is required to review and revise its water quality standards and submit any new or revised standard to EPA for review and approval. The Oregon water quality standards, including the narrative and numeric criteria, are in Chapter 340, Division 41 of the Oregon Administrative Rules.

Toxic Chemicals

In May of 2004, the EQC adopted new water quality criteria for over 150 toxic pollutants and submitted these criteria to the EPA for approval. These criteria are not yet effective for CWA purposes because they have not been approved by EPA. In February of 2005, DEQ began using those new criteria that are more stringent than the previous criteria for NPDES permitting.

On October 23, 2008, the EQC gave DEQ unanimous approval to pursue rule revisions that will set new water quality standards for toxic pollutants in Oregon. The new standards will be based on a new fish consumption rate that is much more protective of human health than the existing rate. In addition, DEQ is reviewing the criteria for three naturally occurring earth metals: arsenic, iron, and manganese.

During 2009, DEQ began the rulemaking process and expects to be ready for EQC adoption of revised criteria by late 2010. The new standards would go into effect following approval by EPA.

Fish Consumption Rates in Human Health Criteria

Oregon's 2004 numeric human health criteria are based on EPA's recommended CWA Section 304(a) Water Quality Criteria guidance values. One of the exposure parameters used in calculating the criteria is the amount of fish that people consume.

EPA's current recommended CWA Section 304(a) Water Quality Criteria guidance values are calculated using the national fish consumption rate of 17.5 g/day. The choice of the fish consumption rate used in deriving human health criteria is a risk management decision. The risk management decision specifically considers the population to protect in the human health criteria: the general population, tribal populations, other sensitive populations (e.g. women and children), etc.

DEQ is in the process of revising Oregon's human health criteria based on a fish consumption rate of 175 g/d (or about 23 fishmeals per month). Studies show that the Northwest Tribes eat substantially more fish than the national average. An increase in the fish consumption rate will result in more stringent human health criteria.
DEQ, during 2009, began a rulemaking process and expects to be ready for EQC adoption of revised criteria by late 2010.

Turbidity

In late 2009, DEQ resumed review of the state's turbidity standard. This review is expected to be completed by mid-2011.

Sedimentation

During 2008 and 2009, DEQ convened an internal Sediment Work Group to work on strategies for implementing our narrative criterion regarding sedimentation. The group includes DEQ staff from Headquarters and Regional offices. The following tasks were completed during 2009:

- Under EPA contract, the consulting group Tetra Tech, Inc. completed a technical analysis of physical habitat and biological data and developed a set of sediment indicators and potential benchmarks for Oregon.
- The work group considered the analysis, developed an approach, and selected potential benchmarks that could be used for 305b/303d purposes.
- DEQ asked the Independent Multidisciplinary Science Team (IMST) for peer review of the approach and benchmarks. DEQ staff briefed the IMST on October 1, 2009 and formally requested their review. The IMST agreed to review the approach and to provide comments back by January 15, 2010.
- Discussion and decisions are pending.

Cross Program Efforts to Address Toxic Chemicals

DEQ Toxics Reduction Strategy

DEQ has adopted a comprehensive, integrated approach to address toxic pollutants in the environment. An integrated approach is essential because these pollutants readily transfer from one environmental media to another (e.g., mercury can be released to the air, deposit on the land, and run off to the water). DEQ's cross-media toxics reduction strategy will help ensure that DEQ is addressing the problem of toxics in the environment in the most effective and efficient way.

The objectives of this strategy are to:

1. Optimize agency resources by focusing on the highest priority pollutants in a coordinated way.
2. Implement actions that reduce toxic pollutants at the source.
3. Establish partnerships with other agencies and organizations to increase the effective use of public and private resources.
4. Use environmental outcome metrics to measure the effectiveness of strategy implementation where feasible.

DEQ formed an external stakeholder group to help complete a draft of the strategy. The draft strategy will then be shared broadly to gather input from the public on the recommended actions. A draft **DEQ Priority Toxics Focus List** (available at http://www.deq.state.or.us/toxics/docs/DraftToxicsFocusList.pdf) was released by DEQ on July 27, 2009. The final draft Strategy will be presented to the EQC for approval. Currently, the goal is to complete the draft Strategy by late summer 2010.

Senate Bill 737: Development of a Priority Persistent Pollutant (P3) List for Oregon

The 2007 Oregon Legislature directed DEQ to compile a prioritized list of persistent pollutants (the P3 List) to guide DEQ's pollution prevention efforts. Senate Bill 737 (SB 737) sets specific guidelines for DEQ to follow in compiling this list. The statute requires DEQ to present a list of priority persistent pollutants to the Legislature by June 1, 2009. An Interim Final P3 List was submitted to the Legislature at that time, and a final P3 List was submitted in October 2009. DEQ's Final P3 List identifies 118 toxic pollutants, divided into two categories (available at http://www.deq.state.or.us/wq/SB737/index.htm).

By June 1, 2010, DEQ will submit a report to the Legislature identifying sources of pollutants on the list and opportunities to reduce their discharge to water. Oregon's 52 large municipal wastewater treatment plants (WWTPs) must also develop persistent pollutant reduction plans by July 2011 to reduce persistent pollutants occurring in their effluent at levels above "trigger levels" set by DEQ. These WWTPs have funded this work for two years, and continue to be closely involved.

Pesticide Management

Pesticides Stewardship Partnerships (PSPs)

Since 1999, DEQ has been using a voluntary, collaborative approach called PSPs to identify problems and improve water quality associated with pesticide use. The PSP approach uses local expertise in combination with water quality sampling and DEQ's toxicology expertise to encourage and support voluntary changes that cause measurable environmental improvements.

The key elements of the PSP approach include:

- Use stream monitoring to identify local, pesticide-related water quality concerns,
- Share results early and often with partners in the watershed,
- Explain data in terms of the effects of pesticides on the health of streams,
- Engage the agricultural community and other pesticide user groups in identifying and implementing solutions, and
- Use ongoing effectiveness monitoring to measure success and provide feedback to support water quality management.

Due to state budget cuts, DEQ was not able to secure permanent funding for the PSP program. However, 319 funds are used to continue monitoring to measure success and provide feedback to support water quality management in the PSP basins. Although pesticide levels in streams fluctuate from year-to-year, monitoring in the Hood River watershed still shows that concentrations of toxic organophosphate insecticides generally remain below state water quality standards.

Most recently, significant pesticide reductions were observed between 2006 and 2007 in Walla Walla River tributaries near Milton-Freewater after the OSU Extension Service and tree fruit growers worked together on training programs and implementation of a

range of Best Management Practices (BMPs). Results for 2009 appear to show even further reductions in the frequency and concentrations of organophosphate insecticides in the Walla Walla tributaries.

In addition to continuing PSP projects in the Hood and Walla Walla watersheds, DEQ has secured additional grant funds to re-start the Mill Creek PSP project near the city of The Dalles, based on strong local interest.

DEQ also continued PSP work with partners in three other watersheds in the north Willamette Valley: Clackamas, Pudding, and Yamhill River Basins. The multitude of different agricultural commodity groups in the Willamette Valley, as well as forestry and urban land uses, creates a major challenge for DEQ and its partners in achieving short-term improvements in water quality related to pesticide use.

However, new and expanded partnership efforts in Yamhill and Pudding basins will be important for reducing in-stream pesticide concentrations and improving water quality. DEQ has tentatively secured adequate funds (EPA 319 grant funds) to support the continuation of existing PSP projects, as well as the proposed expansion of the Yamhill project, through 2010 and part of 2011.

Water Quality Pesticide Management Team

The Water Quality Pesticide Management Team (WQPMT) is an inter-agency team composed of representatives from Oregon DEQ, ODA, Oregon Department of Human Services (DHS), and ODF. The WQPMT was formed to coordinate, communicate, support, and facilitate cooperative water quality protection programs, within the four agencies, related to pesticides in the State of Oregon. ODA is the lead coordinating agency under the EPA - ODA Consolidated Pesticide Cooperative Agreement. EPA's Office of Pesticide Program supports this team approach and the implementation of the PMP in Oregon.

The major goals of the WQPMT are to:

- Develop and implement a statewide Pesticide Management Plan (PMP) by coordinating resources across the agencies, and
- Facilitate efforts of local watershed agencies and interested organizations to prevent and/or reduce pesticide contamination in Oregon surface or groundwaters.

Accomplishments and Highlights during 2009:

- Memorandum of Understanding (MOU), formalizing the establishment of the WQPMT and clarifying the roles and responsibilities of the member agencies, was finalized, approved, and passed to the cooperating Agency Director's for their signatures. Signed by agency directors during the first week of 2010.
- Held 10 monthly meetings during 2009.

- The Oregon Pesticide Management Plan (PMP) was reviewed by EPA and returned with comments to the WQPMT in August 2009 for upgrades. Comments and refinement by the WQPMT are pending.
- Launched WQPMT/pesticide water quality website on the ODA website.
- Ongoing coordination between the WQPMT (as a key stakeholder) and the DEQ program for establishing Priority Persistent Pollutants aquatic-life and human health trigger levels under SB-737. This should have a direct impact on our efforts to establish benchmarks that can be used to evaluate pesticide-monitoring data within the "Response Matrix".
- Established a Pesticide of Interest (POI) and Pesticide of Concern (POC) ranking system based on the inclusion of these pesticides on other lists (e.g. Salmon Safe) and environmental-fate risk factors.
- Reviewed and selected new Oregon POIs and POCs for 2009-2010.
- ODA, Natural Resources Division (NRD) water quality staff incorporated pesticide-related tasks (e.g. monitoring, outreach, coordination with PSPs, etc.) into SWCD scope of work contracts.
- Provided letters of support for various grant proposals from OSU and SWCDs.
- Coordinated the improvement of buffer language for new Special Local Needs (SLN/24(c)) labels providing added protection of water bodies.
- Coordinated activities with the Pesticide Stewardship Partnerships (PSPs).
- Provided support for various pesticide water monitoring programs by the Clackamas and Marion County SWCDs.
- Initiated discussions to help coordinate future pesticide monitoring efforts by DEQ and other local stakeholders.
- Numerous presentations to pesticide applicators, water basin personnel, and growers regarding the WQPMT and issues we all face around the potential impact of pesticide use on the State's water quality.
- Support for and active input to DEQ's Toxics Reduction Strategy.
- Representation on the EPA Region 10 Water Quality Team and advancement of the WQPMT's efforts.
- Continued communication among team members regarding changes in (1) pesticide label language on buffer requirements, (2) the impact of the NMFS rulings and EPA's actions on new use requirements for three OP insecticides (chlorpyrifos, malathion and Diazinon,) and (3) possible impacts of new NPDES permitting requirements for aquatic herbicides and mosquito abatement insecticides.

Challenges and Activities for 2010:

- Further refinement of the PMP (adaptive management process) and submission to EPA for final approval.
- Coordination of state agencies in implementing the PMP.
    - Coordination of state agencies and local partners.

  - Refinement and communication of the PMP.
  - Coordination and support of monitoring efforts.
  - WQPMT assessment of monitoring data and responsive decision-making.
  - Improvement of data management issues.
- Minimize duplicate work by coordinating with TMDL, PSP, and other implementation and monitoring efforts.
- Watershed vulnerability assessments and prioritization.
- Continued outreach, communication, and maintenance of interest/resources on pesticide impacts on water quality.
- Actively engage in EPA's effort to integrate OPP and OW program efforts around benchmarks.
- Coordination with various DEQ toxics programs: Oregon Toxics Reduction Strategy, Toxics Standards/Rulemaking Review, SB737, Willamette Toxics Monitoring, etc.
- Work with ODA NRD water quality staff to increase incorporation of pesticide-related tasks (e.g. monitoring, outreach, coordination with PSPs, etc.) into SWCD scope of work contracts where prompted by water quality data, watershed vulnerability assessments, or other information.
- Continue to maintain and build communication between each agency's water quality programs and key stakeholders.
- Initiate “Knowledge Mapping” effort for key stakeholders, their expertise, etc.

Clean Water State Revolving Fund

In its commitment to support the funding of NPS projects, the Clean Water State Revolving Fund (CWSRF) loan program continues to evaluate both point source and nonpoint source projects on the merits of their water quality benefits rather than focusing heavily on compliance issues which in the past favored wastewater treatment projects.

The number of NPS projects funded by the loan program continues to grow. In 2009, four additional loans were made: two of these address onsite sewage systems replacements, the other two fund irrigation projects. Clackamas County Sewer District #1 and the City of Milwaukie received loans to jointly-build sanitary sewer collector sewers to replace failing septic systems and cesspools that have contributed to elevated bacterial contamination in Johnson Creek, a tributary of the lower Willamette. These loans were funded with $4 million each of federal stimulus funds.

Two NPS loans were made to the Three Sister’s Irrigation District in Sisters. The first loan for $465,000 in stimulus funds is being used to pipe a conveyance canal to address water loss due to ground seepage and evaporation. The second loan to the District is a $2 million loan being used to pipe the district’s main canal that irrigates 8,000 acres. When complete, the more efficient pipeline will restore 6 feet per second of instream flow to Whychus Creek.

The “sponsorship option” loan, which allows a water restoration project to be funded in conjunction with a traditional wastewater project - at a reduced interest rate -, continues to be available for public agencies. This loan is an excellent avenue to fund NPS projects when the project can be paired with the needs of a municipality and then be paid over time with sewer revenues.

From January 1, 2004 through December 31, 2009, the CWSRF Program has provided $29,144,419 towards NPS water quality improvements. The CWSRF program continues to promote its low interest loans as a tool to address NPS needs. DEQ anticipates an increasing number of NPS loans will be made annually through the CWSRF program’s traditional loan, its local community loan, or sponsorship option loan.

In 2009, the following was accomplished:

1. $9,656,650 of CWSRF loans funded NPS projects in Oregon.

Table 5. 2009 State Revolving Fund Activity on Nonpoint Source Projects.

STATE REVOLVING FUND ACTIVITY ON NONPOINT SOURCE PROJECTS 2009										
SRF Loan #	Watershed	Project Title	FY	SRF Borrower	Loan Amount	Disbursements To Date	Remaining to Disburse	Project Status	Project Officer	Project Completion
R-65580	LOWER WILLAMETTE / KELLOGG CREEK	New Sewers to replace onsite systems	2009	City of Milwaukie	$3,610,150	$0	$3,610,150	Not Started	Richard Santner	Sep. 2009
R-06914	UPPER DESCHUTES WATERSHED	Irrigation Pipeline	2009	Three Sisters Irrigation Dist.	$465,000	$0	$465,000	Not Started	Manette Simpson	Sep. 2010
R-06224	LOWER WILLAMETTE / KELLOGG CREEK	New Sewers to replace onsite systems	2009	Clackamas County Sewer Dist.	$4,000,000	$0	$4,000,000	Not Started	Manette Simpson	Nov. 2010
R-91410	UPPER DESCHUTES WATERSHED	Irrigation Pipeline	2009	Three Sisters Irrigation Dist.	$2,000,000	S0	$2,000,000	Not Started	Shanna Olson	Sep. 2010
TOTAL					$9,656,650	$0	$9,656,650			

319-Funded Project
Zweifel Property on the Kilchis River
(Before)

319-Funded Project
Zweifel Property on the Kilchis River
(After)

Drinking Water Protection in Oregon

Approximately 75% of Oregon's citizens get their drinking water from public water systems. The goal of having a healthy source water area is accomplished through "drinking water protection" efforts. Mandated by the 1996 Federal Safe Drinking Water Act (SDWA), Source Water Assessments must be done for all systems that have at least 15 hookups, or serve more than 25 people year-round. These assessments include identification of risk associated with the land management activities in the source water areas. Refer to ODEQ's drinking water website for more information, http://www.deq.state.or.us/wq/dwp/dwp.htm.

Small Systems Report

Sediment delivery could be increased from the effects of large storm events and/or forestry activities on drinking water systems in small communities who rely on Coast Range forests for clean water. The turbidity and case study report should be in final form in early 2010.

Ground Water Nitrate Contamination

An evaluation of contamination of public drinking water systems that rely on groundwater is being conducted. The evaluation will use existing data to look at trends in nitrate concentrations as an indicator of surface activities affecting groundwater quality and catalog potential contaminant sources.

Drinking Water Protection in Oregon

The data generated from the Source Water Assessments (SWA) that were performed from 2000 through 2005 continues to be of use to the NPS Program and is readily accessible by others. It is utilized to assist other DEQ programs identify priority areas for permit modifications, inspections, technical assistance and cleanup. It has been provided to several other state and federal agencies including Oregon Emergency Response System, Oregon Department of Transportation, ODF, ODA, DLCD, FS, and the BLM to facilitate incorporation of protection strategies into their respective programs.

Both maps and downloadable statewide GIS shape files of drinking water source area coverages and identified potential sources of contamination are available to the public on the DEQ Drinking Water Protection website at http://www.deq.state.or.us/wq/dwp/dwp.htm. The drinking water source areas can also be identified (and selected as a search criteria) for both DEQ's Facility Profiler (a location based system showing DEQ permit holders and cleanup sites) and LASAR (DEQ's Laboratory Analytical Storage and Recovery for air and water quality monitoring data).

The point and nonpoint contaminant source inventories in the drinking water protection areas provide useful information as the community or agencies evaluate the risks and prioritize protection strategies. Typical contaminant sources identified in groundwater source areas include high-density housing, septic systems, auto repair shops, gas

stations, irrigated crops, managed forestland, grazing animals, and transportation corridors.

DEQ developed a BMPs database for the 88 most common potential contaminant sources in Oregon (available under "technical assistance" in DEQ's DWP website). The database provides activities that range from educational outreach to regulatory approaches that public water systems or communities can take to reduce their risk. The database can be used to pull the BMPs for a public water system or geographic area from our GIS layers into a format that communities can use to choose their drinking water protection strategies for groundwater or surface water.

One of the primary tasks of DWP staff has been to work directly with public water systems to collect data and document water quality issues associated with nonpoint sources, especially turbidity. There are approximately 15 systems that have chronic problems with high turbidity levels. Several systems are impacted so severely that the intake must be shut down periodically due to extremely high turbid water. Research and assessment to date has included collection of raw water data, interviews with operators, GIS research on land uses, and field inspections. A draft report should be available in early 2010.

Examples of Nonpoint Source Coordination

DEQ's drinking water protection program is actively recommending "Smart Growth" as a tool for protecting drinking water - part of focused or regional efforts to achieve water resource management, conservation, and other local water quality goals. Several outreach efforts, including periodic Bulletins and direct mailings have been provided to public water system officials across the state to raise the awareness of the need to become involved in land use planning and new development proposals within their drinking water source areas.

When new developments are proposed that may impact public water systems, we recommend local communities communicate their concerns about drinking water protection to regional or county planning agencies. Many planning officials do not know about the source areas that supply local drinking water, even though they are generally supportive and recognize the importance of incorporating water quality protection measures into new construction. We provide maps and GIS layers of the drinking water source areas to communities and counties to help identify the sensitive areas to protect. The actual tools used for drinking water protection can vary according to local conditions and needs, often bundled together into what is referred to as "Low Impact Development (LID)".

DEQ and DHS has recently provided input to ten cities and counties that are reviewing their land use plans under Oregon's comprehensive land use planning process ("Periodic Review"). The letters to communities included detailed information regarding their water sources, maps of the source areas, and specific recommendations and guidance for drinking water protection. As part of DEQ and DHS' ongoing participation in periodic reviews, we anticipate continuing to review and comment on an average of

5-6 per year. Many of these comprehensive land use plans directly address nonpoint source issues in their drinking water source areas.

DEQ continues to work with other state and federal agencies to raise the profile of the need for drinking water protection in Oregon, including the ODA, ODF, the EPA, USDA NRCS, FS, and the BLM. SWA data has also been provided to several other state agencies to facilitate incorporation of protection strategies into their respective programs.

319-Funded Project
The Children's Clean Water Festival (Tillamook)

A number of communities and public water systems are currently working to develop plans to protect their drinking water source area. The plan completed by Junction City with assistance from the Lane Council of Governments was one of the first plans certified by DEQ and is an example of a successful collaborative approach taken by the community (available on-line at http://www.deq.state.or.us/wq/dwp/DWPPlanJC.pdf). The communities of Fairview, Gresham, and Portland have also developed a comprehensive drinking water protection plan in the Columbia South Shore Wellfield to incorporate the information from their groundwater sources; details are available online at http://www.water.ci.portland.or.us/groundwater/wellheadpro.htm.

In 2008, DEQ initiated a "Drinking Water Source Monitoring" project that included collecting groundwater and surface water samples from 13 high-risk sources as identified through the SWA. DEQ Laboratory staff collected the samples above the surface water intakes and at wells for analysis of a list of Oregon-specific herbicides, insecticides, pharmaceuticals, VOCs (including cleaners), fire retardants, PAHs, and plasticizers. The purpose of the Source Monitoring was to collect data from multiple contaminant sources to assist in determining priorities for technical assistance and prevention, and to collect screening level data on whether there are potential human health risks beyond those routinely monitored with the SDWA regulations.

The results of the sampling show that low levels of contaminants are in most source waters - including pharmaceuticals, pesticides, and personal care products. The final report with lab data will be available in early 2010 (accessible via the DEQ Drinking Water Protection website).

The following tasks were completed in 2009:

1. Completed analysis of sediment delivery and turbidity to drinking water systems in small coastal communities and prepared a draft report.
2. Began an evaluation of nitrate contamination of public water systems that rely on groundwater.
3. Conducted outreach to public water systems on the benefits of 'Smart Growth" and 'LID".
4. Developed a drinking water systems draft report of the results of groundwater and surface toxics sampling in 13 high-risk areas.

Groundwater Management Areas (GWMAs)

Groundwater Management Areas (GWMAs) are designated by ODEQ when groundwater in an area has elevated contaminant concentrations resulting, at least in part, from Nonpoint sources. Once the GWMA is declared, a local Groundwater Management Committee comprised of affected and interested parties is formed. The Committee then works with and advises the state agencies that are required to develop an action plan that will reduce groundwater contamination in the area. Oregon has designated three GWMAs because of elevated nitrate concentrations in groundwater.

These include the Lower Umatilla Basin GWMA, the Northern Malheur County GWMA, and the Southern Willamette Valley GWMA. Each one has developed a voluntary action plan to reduce nitrate concentrations in groundwater.

Southern Willamette Valley GWMA

The Southern Willamette Valley has been the focus of studies for 20 years because of concerns about elevated levels of nitrate in the shallow groundwater. The nitrate contamination originates from many everyday sources, such as fertilizer, septic systems, and animal waste. In 2004, DEQ designated the Southern Willamette Valley as a Groundwater Management Area (GWMA) to help ensure that Willamette Valley groundwater could continue to provide a high quality resource for present and future use. Since then, local stakeholders have been engaged in planning to protect and improve the groundwater resource in the Southern Willamette Valley. To view the website for this project, go to http://gwma.oregonstate.edu/.

A graduate student at OSU has recently conducted a survey in the Southern Willamette Valley GWMA. In order to change the way people do things, it is important to know where they get trusted information, their level of understanding and attitudes about the nitrate problem. OSU obtained a random sample of the GWMA population (which is about 22,000), and mailed out 1,000 surveys. There was a 47% response rate, which is an astonishing rate of return. The conclusion from OSU is that this issue resonates with the residents of the area.

Agricultural Chemical Removal Project in the Southern Willamette Valley GWM

Lane Council of Governments (LCOG), a committed partner in the Southern Willamette Valley GWMA, worked with DEQ, Oregon State University Extension Service, and the Southern Willamette Valley Groundwater Management Area Committee to host a Pesticide Collection Event, and removed more than 40,000 pounds of agricultural chemicals from Benton, Linn and Lane counties.

Over 30 farmers were able to safely dispose of more than 20 tons of unwanted and unusable agricultural chemicals during this two-day event, at no cost to them.

319-Funded Project
Agricultural Chemical Removal Project in the Southern Willamette Valley GWM

Recently, the NRCS has requested additional funds to work with the farmers in the Southern Willamette Valley (SWV) GWMA, in order to improve irrigation and fertilizer practices that have previously contributed excess nitrogen to the groundwater. This funding is expected to be granted by fall 2010.

The following tasks were completed in 2009:

1. OSU graduate student survey of resident's sources of water quality information in the SWV GWMA.
2. 319-Funded Kids Day for Conservation where ~450 children built edible aquifers.
3. Agricultural Chemical Removal project that focused on removing ~20 tons of unwanted and unusable chemicals were brought in for disposal by the growers in the SWV GWMA, protecting both surface water and groundwater. DEQ's NPS staff provided support.
4. DEQ's NPS staff were involved in training high school teachers through the "Oregon Environthon" (http://oregonenvirothon.org/), a hands-on environmental problem-solving competition for high school-age students in the United States. This year, Oregon chose the "Protection of Groundwater through Urban, Agricultural, and Environmental Planning" (i.e., the GWMA model).
5. Completion of a survey of knowledge and attitudes of SWV GWMA residents, with a 47% response rate.
6. DEQ completed a Synoptic Sampling Event where approximately 100 additional private wells were added to the spring 2009 routine nitrate monitoring.

7. NRCS grant request was submitted to improve farmer's irrigation and fertilization practices.

319-Funded Project
Upper Crabtree Creek – Wolfe Property: Planting and Bank Shaping

319-Funded Project
Thomas Creek – Allard Property: Fencing and Planting

Coastal Zone NPS Program

Oregon's Coastal Nonpoint Pollution Control Program (CNPCP) is being developed in compliance with requirements adopted as part of the National Ocean and Atmospheric Administration (NOAA) Coastal Zone Act Reauthorization Amendments of 1990 (CZARA). The CNPCP developed by DEQ and DLCD received conditional approval by NOAA and EPA, with the exception of three components that were conditionally approved:

1. New development,
2. Operating onsite disposal systems, and
3. Additional management measure for forestry.

In December 2009, EPA and NOAA received a "Sixty-Day Notice of Intent (NOI) to Sue" from the Washington Forest Law Center on behalf of the Northwest Environmental Advocates (NWEA) due to EPA and NOAA's failure to consult NMFS and take final action on Oregon's CNPCP. This litigation may go to court; however, DEQ is not a party to the lawsuit but could be affected by the outcome.

Monitoring and Data

DEQ conducts various types of monitoring as required by the state statute and federal CWA.

<u>The Existing Monitoring Programs that Address NPS Pollution Include, But are Not Limited To:</u>

- TMDL Development – Collect data to develop TMDLs for 303(d) listed streams. The data is used for a subbasin scale cumulative effects analysis for the development of the TMDLs.
- Groundwater – Identify areas of groundwater contamination and determine trends in Groundwater Management Areas.
- Large River Ambient – Collect data for long term trending at fixed sites across the state.
- Volunteer Monitoring – Improve data quality collected by third party and increases the data accessibility for local and state assessments.
- Coastal Environmental Monitoring – Collects data to determine the need for beach advisories.
- Toxics Monitoring -- Toxics Monitoring Project for surface waters in the Willamette Valley and for drinking water throughout the State. This project will give information about current and emerging contaminants that threaten aquatic life and human health.

Two Monitoring Reports were completed in 2009:

1. **Oregon Toxics Monitoring Program Willamette River Basin: Year One (2008) Summary Report DRAFT, September 29, 2009 (http://www.deq.state.or.us/about/eqc/agendas/attachments/2009oct/E-AttA-ToxicsMonitoring.pdf).**

   DEQ issued the **Oregon Toxics Monitoring Program Willamette River Basin Year One (2008) Summary Report DRAFT** on September 29, 2009. In 2008, DEQ initiated a long-term program to monitor surface waters for toxic pollutants. Monitoring objectives were to collect data on pollutants known to present a substantial threat to human health or aquatic life and to gather information about the occurrence of chemicals of emerging concern in the Willamette River Basin. Water samples and fish were collected from mainstem and tributary locations throughout the basin and analyzed for a wide range of organic pollutants and metals. Most of the pesticides of interest and concern identified by the pesticide management team were included on the Toxics Monitoring Program's 2008 list of target pollutants.

2. **Willamette Basin Rivers and Streams Assessment Report, December 2009 (http://www.deq.state.or.us/lab/wqm/docs/WillametteBasinAssessment2009.pdf)**

   DEQ issued the **Willamette Basin Rivers and Streams Assessment Report,** in December 2009. This report was written as a resource for water quality managers, watershed councils, municipalities and citizens to help understand the status of watershed conditions in the Willamette basin. It provides a status assessment of the water quality, biological and physical habitat conditions at the basin, subbasin, and land use spatial extents. These spatial scales are ecologically relevant and useful for understanding cumulative management effects. While this report does not address all the water quality parameters listed in the Willamette basin TMDL, it does include many parameters that are useful surrogates for understanding potential loading pathways for bacteria and mercury. It also includes a variety of parameters that are not listed in the Willamette TMDL that may warrant careful consideration for future management activities

Land Uses

Water Quality Issues on Agricultural Lands

The 2010 Integrated Report, GWMAs, TMDLs, Willamette Basin Rivers and Streams Assessment, as well as visual inspections suggest that water quality is impaired in many areas on agricultural lands. Although there is not adequate information available to determine whether water quality on agricultural lands is improving across the state, there are documented individual local successes such as establishing partnerships, implementing conservation practices, restoring riparian vegetation, and improving water quality.

Water quality and habitat enhancement work on agricultural lands in the state is characterized by strong working relationships and leveraging of resources among partner agencies at the federal, state, and local level. There is an extensive history of working together to solve complex and challenging water quality, and threatened and endangered species issues. In 2009, DEQ continued its work with agencies such as the ODA, USDA Natural Resources Conservation Service (NRCS), and USDA Farm Service Agency (FSA) as well as with SWCD, watershed councils, irrigation and drainage, and nonprofit organizations to protect and restore water quality affected by agricultural lands.

Agricultural Water Quality Management Program

ODA as a DMA is responsible for meeting the water quality standards and TMDL load allocations on agricultural and rural lands. The process developed in the Agricultural Water Quality Management Program (AgWQMP) is the main regulatory mechanism to prevent and control nonpoint source pollution and meet water quality standards, TMDL load allocations, and GWMA action plans affected by agricultural lands. In addition, SWCDs have contractual relationships with ODA to act as a local management agency (LMA) to meet water quality goals on agricultural lands.

DEQ works with ODA's state office as well as regionally based water quality specialists to prevent pollution and improve water quality on agricultural lands. In 2009, DEQ's NPS program and ODA's Water Quality Program staff and management held bimonthly coordination meetings to discuss issues related to ODA and DEQ's water quality programs. DEQ's basin coordinators provide input on revisions of AgWQMP plans. Moreover, as resources allowed, DEQ's basin coordinators and ODA staff coordinate on the review and implementation of water quality programs as well as local water quality issues related to drinking water.

319-Funded Project
Brown Creek – Knebel Property: Fencing, Planting, and Bank Shaping
(Before)

319-Funded Project
Brown Creek – Knebel Property: Fencing, Planting, and Bank Shaping
(After)

Reporting

ODA and SWCDs also produced fourteen reports in 2009 associated with Agricultural Water Quality Management Area (AgWQMA) Plan biennial reviews. The reports include updates on compliance and monitoring efforts as well as a summary of progress toward plan objectives, including targets on outreach and on the ground projects. DEQ's regional staff provides technical assistance and coordinates with ODA's water quality specialists to review the area plans and provide information for the reports as resources allow. The area plans as well as the reports can be found at the following link: http://egov.oregon.gov/ODA/NRD/water_agplans.shtml.

Outreach and Education Summary

In 2009, ODA and SWCDs used various venues to reach agricultural producers and rural land residents to promote conservation practices. The types of activities and topics are shown below. In total, ODA reached about 4,000 people through various outreach activities in 2009. SWCDs collectively made close to 22,000 contacts through their outreach efforts, with the bulk from distribution of brochures.

Figure 2. ODA Water Quality Staff Outreach Activities -- 2009

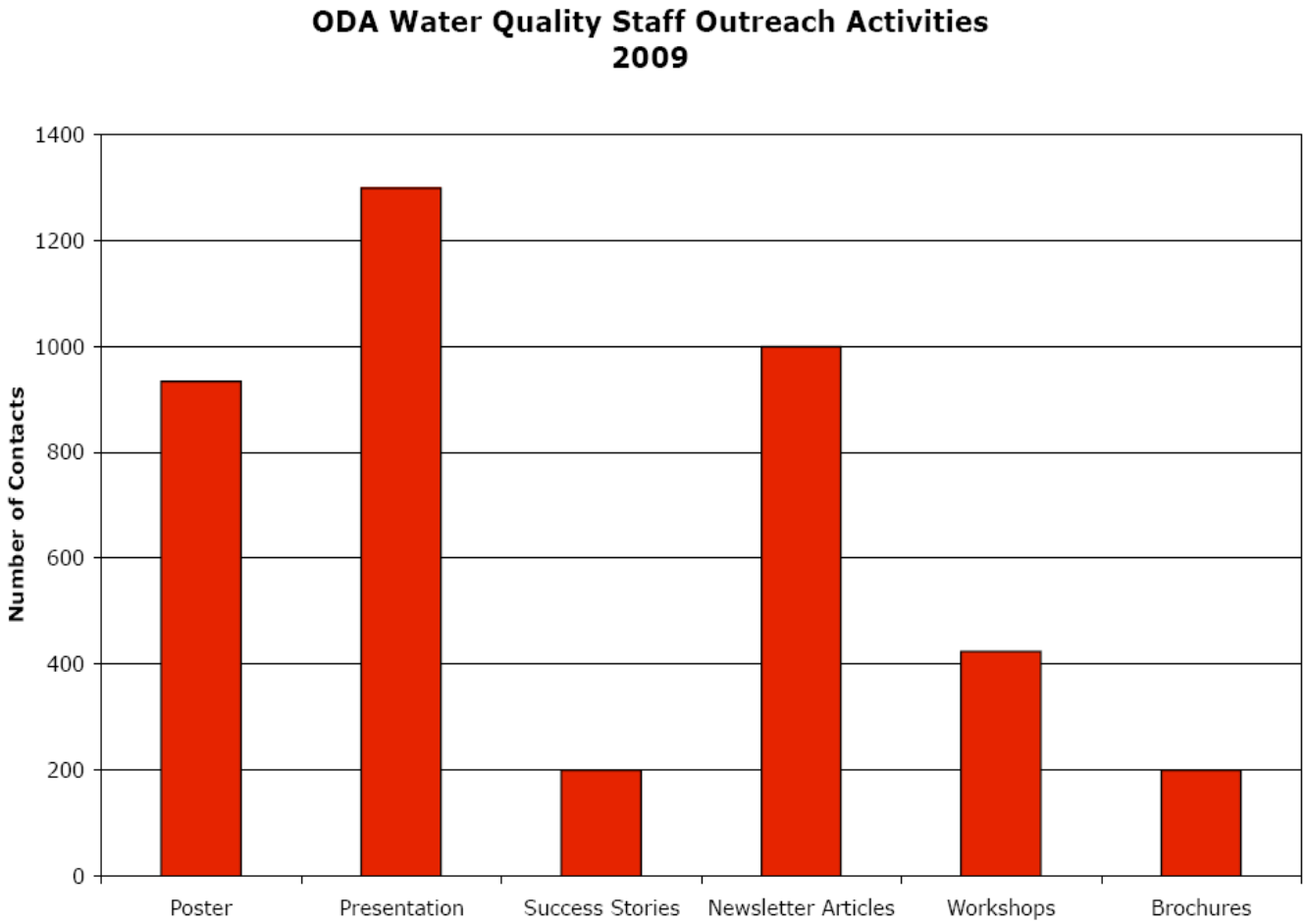
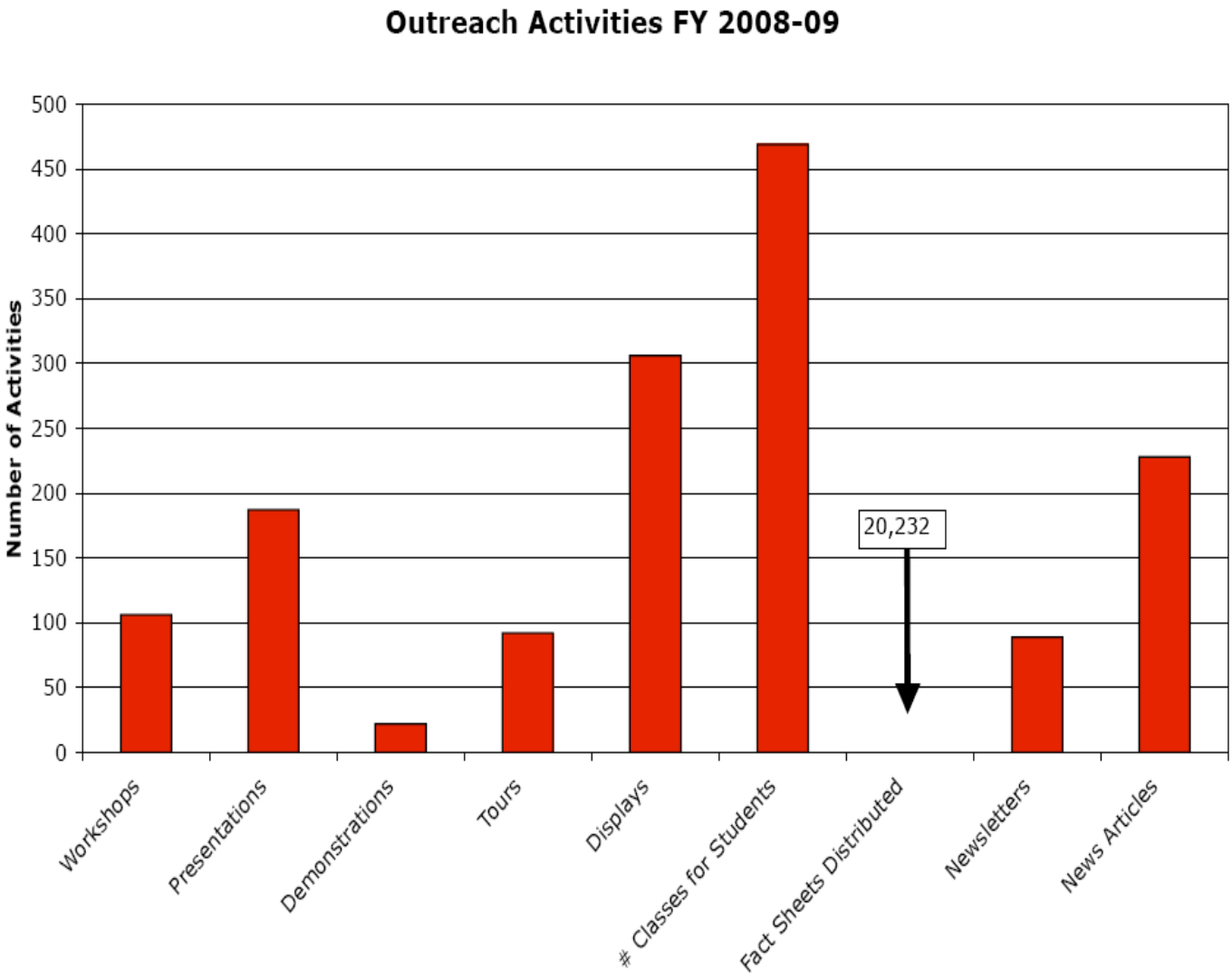


Figure 3. Soil and Water Conservation District – Number of Activities – 2008-2009



Compliance Summary for ODA

ODA's compliance program is mostly initiated by complaints by the public and other agencies. ODA has roughly two (2) FTEs allocated to the work. Sixty-two (62) new cases were initiated statewide and the majority of them were in the northwest part of the state. In 2009, ODA began initiating investigations based on observations by ODA staff after they received support by the AgWQMA Program Advisory Committee to do so.

Table 6. ODA Compliance Investigations Initiated By Complaint, Staff Observation, and Landowner Request – 1998 through 2009.

REASON FOR INITIATING COMPLIANCE INVESTIGATION	NUMBER OF INVESTIGATIONS
Public Complaint (Includes Public Complaints Forwarded To ODA By Other Agencies/Programs)	**227**
ODA/Other Agency Staff Observation	**196**
Requested By Landowner	**2**

Table 7. 2009 Compliance Investigations Conducted by ODA Region.

ODA REGION	NUMBER OF INVESTIGATIONS
Lower Willamette	**23**
Upper Willamette/Mid Coast	**17**
Southern Oregon	**9**
Central Oregon	**6**
Northeastern Oregon	**2**
Eastern Oregon	**5**
Total 2009 Water Quality Complaints	**62**

The majority of the complaints received by ODA are made due to polluted runoff, followed by riparian area management concerns.

Table 8. Types of Water Quality Concerns Identified In Complaints or During Investigations.

WATER QUALITY CONCERN	NUMBER OF COMPLAINTS 2009	NUMBER OF COMPLAINTS 1998 - 2009
Potential Manure Runoff to Surface or Groundwater	21	180
Potential Sediment Runoff to Surface Water	4	118
Riparian Area Management Concerns	19	104
Other Issues	4	29
Other 468B Potential Violations	21	48

ODA takes agency actions that are formal Department decisions following a site visit to determine compliance. The number of agency actions is greater than the number of complaints for the year because the total includes follow-up visits that are often required before compliance is attained.

Table 9. Total Agency Actions Taken in 2009.

AGENCY ACTIONS	NUMBER
Letter of Compliance	37
Water Quality Advisory	30
Letter of Warning	29
Notice of Noncompliance	1
Civil Penalty	0
Other	9
TOTAL	106

Partnerships with USDA Natural Resource Conservation Service (NRCS)

DEQ's NPS and TMDL programs have been putting an emphasis on our coordination with the USDA NRCS in order to address agricultural issues through sharing priorities and incentives. DEQ and NRCS partnership relationships are institutionalized at various intergovernmental levels due to NRCS's effort to promote collaboration between the various natural resource agencies and agricultural stakeholder groups:

1. At the agency headquarters level (USDA-NRCS state office, USDA-FSA state office, DEQ headquarters, OWEB, etc).
2. Oregon Technical Advisory Meetings are held quarterly to leverage each other's resources to the greatest degree possible to address agricultural related water quality issues of common interest and to steer agency programs toward high priority water quality issues and geographic areas.
3. Through NRCS "regional working groups", programmatic and geographic priorities are set regionally, generally, at the basin scale to allocate program funds under the Farm Bill.
4. The NRCS/SWCD "local working groups" direct technical assistance and funding to specific landowner projects that fit the priorities set via regional working groups. These groups are driven primarily by local SWCDs, often in cooperation with local Watershed Councils.

Examples of Leveraged Partnerships Including DEQ and NRCS

The following are a few examples of how partnerships leverage each other's programs:

1. NRCS Conservation Innovation Grants (CIG), Agricultural Water Enhancement Program (AWEP), Cooperative Conservation Partnership Initiative (CCPI), and Conservation Reserve Enhancement Program (CREP) and Projects.

   As a member of NRCS' "Oregon Technical Advisory Committee", DEQ is afforded an opportunity to review NRCS Conservation Innovation Grant and Agricultural Water Enhancement Program (AWEP) Projects that are proposed for funding. Given this opportunity by NRCS, DEQ can help to assure that significant water quality issues are addressed through projects proposed by sponsors. DEQ understands that such opportunity for review is unique to Oregon, and DEQ appreciates NRCS willingness to seek broad input on proposals. DEQ's active involvement helps ensure that projects solve high priority water quality issues. In addition, since the inception of the CREP program in Oregon, the USDA agencies (NRCS and FSA) have reached out to various agencies. DEQ assists in the design of the program so that priority water quality issues and geographic areas obtain priority funding. This helps to assure appropriate leveraging of funding sources.

2. Hood River and Willamette Basin Pesticide Stewardship Partnerships (PSPs)

   Since late 1999, DEQ has been allocating a portion of Oregon's 319 funds to monitor and assess the presence of organophosphate pesticides in surface water in the Hood River watershed (a commercial pear growing area). Both the Confederated Tribes of the Warm Springs Reservation and NRCS have provided funding to support continued monitoring, for NRCS' programs, and projects for landowners that promote integrated pest management to reduce environmental loading of organophosphate pesticides. The monitoring information has been extremely useful in informing the agricultural producers about where and when pesticides are found in surface water. The produce uses this information to define and refine integrated pest management strategies.

   For the Willamette Basin PSP, DEQ has been allocating a portion of Oregon's 319 funds to monitor organophosphates and other current use pesticides in three subbasins in the Willamette Basin. In 2008, NRCS awarded a Conservation Innovation Grant to the Oregon State University (OSU) Extension Service to provide intensive technical assistance to landowners in parts of the Pudding and Yamhill subbasins where elevated levels of pesticides were detected under the monitoring conducted by DEQ.

3. Zollner Creek Agricultural Water Enhancement Program (AWEP) Project

   Pursuant to an AWEP application from the Marion SWCD, NRCS is allocating $1.5 million in AWEP ($300,000 in FFY09) funding to go toward Zollner Creek, an area of intensive, diverse irrigated agriculture in the Pudding River subbasin of the Willamette Basin. Significant detections of legacy and current use pesticides in Zollner Creek has been documented by USGS (through NAWQA studies) and DEQ (through Pesticide Stewardship Partnership work). Zollner Creek is a high priority area for DEQ for water quality improvements to achieve TMDL load reductions and to address non-TMDL water quality issues. The focus of the NRCS AWEP project is to reduce water use and enhance water quality through improved irrigation practices, along with improved conservation practices. This project was selected in part due to the strong advocacy of DEQ and direct involvement in the review process.

4. Targeted 319 funds in Clackamas and Multnomah Counties

   DEQ awarded a portion of Oregon's 319 funds to the Clackamas and Multnomah SWCDs to install conservation practices in targeted areas within the Lower Willamette and Clackamas subbasins to address water quality issues identified in Willamette River Basin TMDL. SWCD specialists and landowners used 319 funds as match to access funds through NRCS cost share programs, to assure that practices are installed in areas of significance to assist with TMDL load reductions.

Water Quality Issues on State and Private Forest Land

High Level Indicator and Land Use Monitoring

ODF and DEQ finished a report of the status of water quality and biological integrity of forested lands in Oregon. The report assessed conditions of water and biological quality among differing forest uses (federal, state, private industrial and private non-industrial forests) in forestlands at the state and basin scales. The water quality data show elevated total solids and phosphorous, particularly in private ownerships. The biological data show potential aquatic life impairments from sediment and temperature. Overall, streams on forestland are in fair shape compared to other land uses, but there are indications of cause for concern. The report can be found at http://www.deq.state.or.us/lab/techrpts/bioreports.htm. The report reference number is DEQ09-LAB-0041-TR.

RipStream (Riparian Function and Stream Temperature)

ODF's RipStream project has been developed to provide a coordinated monitoring effort with which to evaluate effectiveness of Oregon Forest Practices Act (FPA) rules and strategies in protecting stream temperature, and promoting riparian structure that provides necessary functions for the protection of fish and wildlife habitat. DEQ is participating in the RipStream project by providing analyses of data and study results in cooperation with ODF staff.

In order to meet this objective, the following questions were addressed:

1. Are the FPA riparian rules and strategies effective in meeting DEQ water quality standards regarding anti-degradation of stream temperature and the water quality standard?
2. Are the FPA riparian rules and strategies effective in maintaining large wood recruitment to streams, downed wood in riparian areas, and shade?
3. What are the trends in riparian area regeneration?
4. What are the trends in overstory and understory riparian characteristics? How do they along with channel and valley characteristics relate to stream temperature and shade?

ODF has completed their initial analysis to test whether current riparian protections on fish-bearing streams are adequate to meet water quality standards for temperature. In this study, streams in State Forests are meeting both numeric and Protecting Cold Water (PCW) criteria of the temperature standard. However, streams on private forests are not meeting the PCW criterion. Private streams are meeting the numeric criteria, but it should be noted that the starting temperatures in these streams are far below the numeric targets.

The results were presented to the BOF in September 2009, http://www.oregon.gov/ODF/BOARD/docs/September_2009/5_Att_1.pdf. In addition, results have been submitted for publication in a peer-reviewed scientific journal.

Ongoing analyses will show the absolute magnitude of temperature changes and examine what physical processes are driving those increases.

Forestland Conversions

ODF, ODA, Oregon Division of State Lands (DSL), Oregon DLCD, Oregon Department of Fish and Wildlife (ODFW), Oregon Parks and Recreation Department (OPRD), and DEQ have common interests and responsibilities in protecting waters of the state and other natural resources during the conversion of forestland to non-forest uses. The Memorandum of Understanding, signed (November 2006) calls for closely coordinated efforts to insure agency coordination and minimize duplication, and to work towards common goals for a smooth transition between agencies during the conversion process.

The purpose of this agreement is to clarify the roles and responsibilities of the state agencies involved during the conversion of forestland to other non-forest uses on publicly or privately owned lands, to ensure that state water quality and other resources are protected throughout the process, and to ensure a smooth transition of jurisdiction between the agencies. In addition, the MOA states that the seven state agencies will conduct training sessions to explain the forestland conversion process and to ensure communication and collaboration between the staff of each agency.

The Forestland Conversions Training Workgroup, composed of representatives from the seven state agencies, organized the training sessions for all state agency staff. The first task of the workgroup was to develop and approve the forestland conversions process memo that was used to guide the training. In addition, the workgroup developed numerous handouts and PowerPoint presentations to present the training to staff. The training was conducted following a detailed agenda.

The following table identifies the date, area, and site locations of the training that were held:

Table 10. Forestland Conversions State Agencies Training Location and Schedule.

FORESTLAND CONVERSIONS STATE AGENCIES TRAINING LOCATION AND SCHEDULE			
DATE	**CITY**	**AREA**	**LOCATION / FACILITY**
Tuesday March 3, 2009	**Salem**	**Lower Willamette**	**Oregon Dept. of Fish and Wildlife Board Meeting Room**
Thursday March 5, 2009	**Springfield**	**Upper Willamette**	**Oregon Dept. of Forestry Building**
Tuesday March 10, 2009	**Myrtle Point**	**South Coast**	**OSU Extension Service Office**
Wednesday March 11, 2009	**Central Point**	**Southern Oregon**	**Oregon Dept. of Forestry Building**
Wednesday March 18, 2009	**Tillamook**	**North Coast**	**Oregon Dept. of Forestry Building**
Tuesday March 24, 2009	**LaGrande**	**Northeast Oregon**	**U.S. Forest Service Building**
Wednesday March 25, 2009	**Prineville**	**Central Oregon**	**Crook County Fire and Rescue Building**

The training sessions were conducted in all areas of the state where there is forest cover. This was done because ODF land use data shows that forestland throughout the state is being converted to either urban, including rural residential, or to agriculture, including hobby farms. Even though many of the staff attending were either not aware of the conversions occurring or were not receiving clear notice from the landowners that such conversion was planned (as what the workgroup calls “Backdoor Conversions”), the sessions where helpful to educate all agency staff.

The workgroup prepared an evaluation form that most participants filled-out to help guide the training sessions. This was particularly useful to the workgroup in modifying the presentations given. Not all that attended returned evaluation forms, so the total number attending all sessions is more like 75. Overall, the training sessions were well attended by most agency staff. This was particularly true on the westside of Oregon. On the eastside, there was less staff in attendance and for some agencies, either none or only a few staff attended.

The training was well received. Most learned a lot from the training and found it to be informative and beneficial. Evaluations rating the session for its usefulness had an average score of four (4) on a scale of one (1) (poor) to five (5) (excellent).

The following tasks were completed in 2009:

1. Held seven training sessions for the seven state agencies who are signatories of the MOA throughout the state in 2009.

Dynamic Ecosystem Policy Project

ODF's Dynamic Ecosystem Policy Project purpose is to integrate the dynamic nature of ecosystem into policy frameworks. A group of scientists from the Institute for Natural Resources at OSU was funded by ODF to complete the project. DEQ has participated in project meetings to discuss meeting water quality objectives in the context of changing ecosystems and has provided information about the federal CWA and the Oregon TMDL process in addition to making comments on proposed changes to the study/literature review. The final draft is complete. In 2009, DEQ participated in four seminars based around the report and focused on aquatic ecosystems, fire ecology, climate change, and wildlife protection. Four white papers were written to summarize the seminars. In September, a policy workshop was held with citizens, scientists, industry, and agency personnel, followed by a final report.

Reports and additional information are available at this website: http://egov.oregon.gov/ODF/STATE_FORESTS/FRP/RP_Home.shtml#Dynamic_Forest_Ecosystems.

Water Quality Issues on Federal Forest Lands

Federal Forestlands Advisory Committee (FFAC)

On January 2009, the Federal Forestlands Advisory Committee (FFAC) issued the final "Achieving Oregon's Vision for Federal Forestland", (http://egov.oregon.gov/ODF/BOARD/docs/FFAC_Color_Report_and_Cover_for_Web.pdf). During 2009, DEQ helped the Committee implement the guidance document to ensure that water and air quality area high-ranking concern.

In October 2004, the Governor directed the Oregon BOF to "create a unified vision of how federal lands should contribute" to sustainability, and to "make that vision action-oriented and comprehensive – following through to the last step, including implementation". In 2005, the Oregon Legislature passed Senate Bill 1072 into law that encourages the Board, in consultation with the Governor, to create a forum for interagency cooperation and collaborative public involvement regarding federal forest management issues. DEQ provided information to clarify how water and air quality standards and regulation apply to forestry activities.

BLM Western Oregon Revised Plan (WOPR)

In 2009, DEQ provided additional comments to BLM's Western Oregon Plan Revision (WOPR). The WOPR proposed revisions to the five and one-half Western Oregon District Resource Management Plans (RMPs). DEQ expressed concerns in response to BLM's Riparian Management Area (RMA) Strategy contained in the final RMPs. In particular, DEQ's concerns related to the modeling and scientific studies that supported shade (surrogate for stream temperature) and sediment analyses in the Final Environmental Impact Statement (FEIS) written to support the final RMPs.

BLM, on April 21, 2009, indicated to DEQ that the Northwest Forest Plan (NWFP) would be used through 2009 to meet State and Federal water quality rules and regulations for current planning and activities, including timber sales, in Western Oregon.

In July 2009, the BLM announced that the WOPR was being withdrawn due, in part, to federal Clean Water Act and Endangered Species Act considerations.

FS/BLM/DEQ MOAs Update and 5-Year Progress Report

In 2002, the DEQ, the US Forest Service (FS), and the Bureau of Land Management (BLM) outlined a process to work in a proactive, collaborative, and adaptive manner to meet State and Federal Water quality rules and regulations. The resulting agreements were signed between DEQ, the FS, and the BLM in 2002 and 2003, respectively. Both were extended in 2006 for one year. The Memorandum of Agreements (MOAs) updated the previous 1990 MOAs. The FS agreement is a Memorandum of Understanding (MU) and the BLM agreement is a MOA.

These memoranda require that a 5-year progress review and report on the implementation and effectiveness of the BLM MOA and the FS MU with DEQ be prepared and used as the basis for change to future agreements.

The specific purposes of the 5-year progress report are to document MOA implementation and effectiveness, summarize agency accomplishments, and recommend programmatic and language changes to the expired MOAs.

The major accomplishments identified in the final draft report are:

Monitoring

The FS and BLM agency records showed that about 89 percent of the plan-prescribed watershed analyses, covering an average of more than 85 percent of the federal land area for all units, were reported as completed. A preliminary assessment of watershed condition throughout the NWFP area was done for 250 watersheds as part of a NWFP 10-year assessment in 2004 (Gallo et al, 2005). Most of the monitored watersheds had higher condition scores after implementation of the NWFP than before, across the entire Plan area, and in each of the land use allocations (except nonfederal). Relatively few watersheds decreased in condition.

Over 70 percent of key watersheds identified as first priority for restoration activities increased in condition. Those watersheds that had lower condition scores were all exposed to wildfire. Less than 50 percent of the non-key watersheds increased in condition.

Water Quality Restoration Plans (WQRPs)

By 2009, there have been 90 WQRPs completed by the federal agencies. Out of that total, 42 WQRPs have been submitted before TMDLs have been completed. Currently BLM has land in the Molalla River subbasin that has no WQRP completed and less then18 months have elapsed since TMDL approval. The FS

currently has two (2) TMDLs where there is no WQRP coverage and 18 months have elapsed since TMDL approval: Sandy and Rogue River (FS). FS and BLM have 22 existing WQRPs that may need revision once TMDLs have been approved. Nine WQRPs have received DEQ comment, which need to be incorporated into the WQRP revision.

Restoration

From 2003 to 2007, over $80.3 million dollars has been spent on active restoration on FS and BLM lands throughout Oregon. Over 1,600 miles of road have been improved and 484 miles have been decommissioned reducing sediment delivery and floodplain encroachment. Riparian treatment was completed on 452 miles. Instream structure has been added to over 750 miles of stream and aquatic passage projects have provided fish access to 478 miles of habitat. Upland areas have had approximately 32,000 acres treated through various methods including slope stabilization, revegetation, silvicultural treatments, or livestock exclusion fencing. Riparian areas received similar treatments on approximately 25,000 acres. Both freshwater and coastal wetland restoration occurred on 4,807 and 1,500 acres.

Table 11. FS and BLM Accomplishments by Basin 2003 to 2007.

FS AND BLM ACCOMPLISHMENTS BY BASIN 2003 TO 2007 (FROM IRDA)										
BASIN	Restoration Dollars	Roads Improved (Miles)	Roads De-commiss-ioned (Miles)	Riparian Treatment (Miles)	Instream Structure (Miles)	Instream Passage (Miles)	Wetland Fresh (Acres)	Wetland Coastal (Acres)	Upland (Acres)	Riparian (Acres)
FS/BLM	FS/BLM	FS/BLM	FS/BLM	FS/BLM	FS/BLM	FS/BLM	FS/BLM	FS/BLM	FS/BLM	FS/BLM
Deschutes River Basin	$7.8 Million	19	70	109	64	58	472	---	5,717	1,869
John Day River Basin	$3 Million	15	40	71	3	39	20	---	2,160	2,485
Klamath Basin	$2 Million	71	27	1	---	10	206	---	3,476	2,386
Lower Columbia Basin	$4.28 Million	169	31	20	90	5	167	---	11	4,346
Lower Snake Basin	$3.9 Million	15	99	59	45	13	1	---	435	1,632
Malheur Basin	$4.5 Million	54	6	37	23	79	591	---	7,696	2,474
Middle Columbia Basin	$4.7 Million	123	38	19	9	5	19	---	1,213	2,493
Middle Snake Boise Basin	$632 Thousand	---	5	25	---	9	---	---	1,286	3,629
Northern Oregon Coastal Basin	$7.9 Million	146	28	31	62	24	---	---	---	414
Southern Oregon Coastal Basin	$32.2 Million	492	72	56	385	199	3,326	1,500	5,067	2,569
Willamette Basin	$8.9 Million	498	68	24	73	37	5	---	5,012	929
TOTALS	$80.3 Million	1,602 Miles	484 Miles	452 Miles	754 Miles	478 Miles	4,807 Acres	1,500 Acres	32,073 Acres	25,226 Acres

The key report findings, conclusions, and recommendations are:

The new MOAs now need to evolve to focus more on implementation and monitoring of activities that lead to attainment of water quality goals and standards, and the documentation and tracking of those actions. Other key conclusions important to guide development and implementation of the new MOA follow:

1. There are tangible savings of work, such as cooperation in the completion of WQRPs leading to approval of the DMA TMDL Implementation Plans. The sharing of data, collaborating at multiple levels on use of resources for data collection and monitoring was very effective and efficient.
2. Establishing a process for joint review (both office and field) of ongoing watershed work/priorities is important, which was not carried out during the tenure of the existing MOAs. Joint review of planning and upcoming activities will assist with identifying and adjusting where feasible agency priorities, resources and funding, and facilitate development of current and future work plans. Joint review of implemented activities will provide accountability and assurances.
3. Participation and engagement of line officers and EPA throughout the implementation of the MOAs was beneficial and should be continued throughout the development and life of the new MOAs.
4. One of the primary areas, which is incomplete in the current MOAs and requires attention in the new MOAs, is the BMP process. The BLM and FS rely on the BMP process (as specified in the FS Nonpoint Source Plan) for protection, restoration, and maintenance of water quality through NEPA planning documents, aquatic conservation strategies, WQRPs, and most importantly project implementation. Implementation and effectiveness of BMPs are the legal and policy mechanism for control and management of nonpoint source pollution. This important process was not effectively documented and communicated in the past, and should receive high priority for development, reporting, tracking, and approval by DEQ.
5. The second major area needing improvement is the reporting and tracking of administrative and implemented project activities for water quality protection and improvement. This is essential to evaluate success and ensure legacy and ongoing work is accounted for and therefore not lost. This was not carried out in the current MOAs and failed to provide assurances and accountability of progress towards collective goals for water quality. This lack of documentation and tracking made it difficult to develop the 5-Year Report. This is particularly important to demonstrate that TMDL load allocations and instream water quality standards are being met.

In 2009, the following was accomplished:

1. Provided additional comments on BLM's WOPR with its eventual withdrawal.
2. Prepared the final draft of the MOA required 5-Year Progress report that will be used to update MOAs.
3. Began revisions and update to DEQ/FS and DEQ/BLM MOA.

Progress of 319 Grant Funded Projects

Description of Types of 319 Nonpoint Source Projects

Two primary programs provide funding for various NPS pollution and watershed enhancement projects in Oregon. One is administered by DEQ, and the other is administered by OWEB. A third program is administered by the ODA (Fertilizer Tax Fund Program), which supports research and demonstration of BMPs as it pertains to groundwater quality protection.

Section 319 funds are competitively awarded to projects consistent with the Revised Oregon Nonpoint Source (NPS) Control Program Plan (2000). This plan is available for downloading or viewing on DEQ's web site:
http://www.deq.state.or.us/wq/nonpoint/plan.htm

The criterion for evaluation of 319 proposals has evolved over time. This is due in part to the progress of the TMDL development/implementation work needs and other priority water quality work, such as groundwater management areas. In the recent past and for the 2009 RFP we have received an increasing number of proposals linking restoration work over time and with each other, while also addressing important water quality impairments from NPS pollution.

For a more detailed description of DEQ's geographic and programmatic priorities for 319 funded projects in 2009 as identified in the 2009 319 RFP, see the Geographic and Programmatic Priorities for 319 Funding section below.

Grant Performance Report Summary

The progress of NPS 319 Funded (Pass-Through) Projects is identified in **Table 18** in **Appendix 1**. The data used in the table is as of December 31, 2009. Seventy-four (74) 319-funded projects are still open; including the thirty-five (35), 2009 funded projects.

Geographic and Programmatic Priorities for 319 Funding

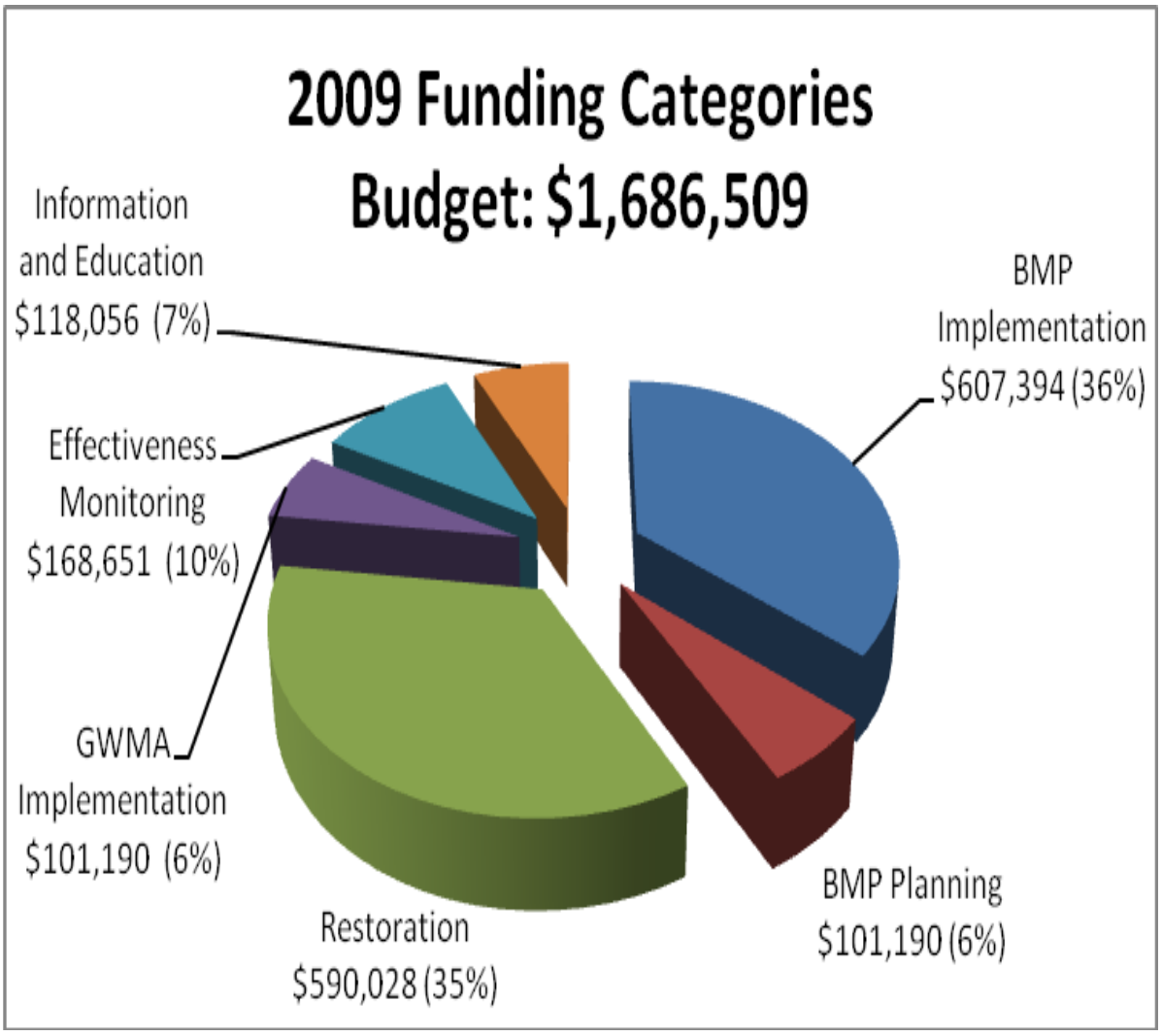
Table 19, in **Appendix 2**, identifies DEQ's geographic and programmatic priorities for 319 funded projects in 2009 as outlined in the 2009 319 RFP, available at: http://www.deq.state.or.us/wq/nonpoint/grants.htm . These priorities were used to select the 2009 319 Funded Projects. The identification of priority basins (as listed below) does not exclude the submission of proposals for work outside these basins. Exceptional project proposals for stream restoration, effectiveness monitoring, and pollutant reduction in non-priority basins will be considered. To determine how the "project need" was met by region and basin/subbasin; please refer to **Table 14** for a list of the 2009 - 319 Grant Funded Projects in Response to the RFP.

2009 – 319 Funding Categories

The following figure identifies the 2009 – 319 funding categories and funded amounts. The $1,686,509 total funds for 2009 includes the re-obligated funds from the funding

years 2002-04 in the amount of $299,109. The 2009 319 funded projects were funded in following six (6) categories: BMP Implementation (36%), BMP Planning (6%), Restoration (35%), Effectiveness Monitoring (10%), Information and Education (7%), and GWMA Implementation (6%).

Figure 4. 2009 Funding Categories



2009 - 319 Grant Funded Projects

The following tables identify the projects funded in response to the 2009 RFP:

Table 12. 319 Projects Funded in Response to the 2009 RFP by Region and Basin/Subbasin.

OREGON 319 2009 LIST OF PROJECTS FUNDED BY REGION AND BASIN/SUBBASIN				
Project Number	**Project Name**	**Region**	**Submitted by**	**Basin/Sub-basin**
W09700	WQ and effectiveness monitoring in the Crooked R. WS	ER	Crooked river WSC	Deschutes
W09701	Willow Creek Effectiveness Monitoring	ER	Malheur WSC	Malheur
W09702	Alkali Creek Water Quality Enhancement	ER	Malheur SWCD	Malheur
W09703	Strip Tillage in Malheur and Owyhee Watersheds	ER	OSU ES, Malheur Co.	Malheur
W09704	Owyhee River Improvement Project- Phase 2	ER	Malheur County SWCD	Malheur
W09705	City of Prineville Stormwater Pollution Reduction Plan	ER	City of Prineville	Deschutes
W09706	LUBGWMA Action Plan Effectiveness Monitoring & Outreach	ER	Umatilla Co. SWCD	LUB GWMA
W09707	Apple sunburn prevention using organic biofilms	ER	OSU AES	Middle Columbia Hood
W09708	Clackamas Planting and Outreach Project	NWR	Clackamas River Council	Clackamas
W09709	2009-10 NNWC Streamside Planting and Maintenance	NWR	Nestucca-Neskowin WSC	Nestucca-Neskowin
W09710	North Coast Watersheds Enhancement Project	NWR	Sp. District Government	North Coast
W09711	Pilot Scale SW Master Planning w/Ecosystem Services Approach	NWR	City of Damascus	Lower Will/Clackamas
W09712	Upper Nehalem Riparian Restoration and Basin WQ Monitoring	NWR	UNWC	Nehalem
W09713	Circle Creek Enhancement Project Phase Three	NWR	N. C. Land Conservancy	Lower Nehalem
W09714	Scapoose Creek Riparian Restoration	NWR	Scappoose Creek WSC	Scappoose Bay

Table 12. 319 Projects Funded in Response to the 2009 RFP by Region and Basin/Subbasin. (Cont.)

OREGON 319 2009 LIST OF PROJECTS FUNDED BY REGION AND BASIN/SUBBASIN				
Project Number	**Project Name**	**Region**	**Submitted By**	**Basin/Subbasin**
W09715	2010 Tillamook Co Children's Clean Water Festival	NWR	TEP	North Coast
W09716	BYPP Year 7	NWR	TEP	Tillamook
W09717	Tillamook SWCD 2009 Stream Enhancement & Restoration	NWR	Tillamook Co SWCD	Tillamook
W09718	Devil's lake and D River WQ	WR1	Devil's lake water Improvement	Mid Coast
W09719	Coquille North Fork Drinking Water Source Protection	WR1	Coquille WS Assoc	South Coast
W09720	Targeted WQ Outreach to Isthmus & Coalbank Sloughs of Coos Bay	WR1	Coos WS Association	South Coast
W09721	Low-Impact Development Workshops and Technical Assistance, Year 2	WR1	OEC	Mid-Coast
W09722	Sucker/Kelly Creeks Comm. Ed. Outreach Project	WR2	Forestry Action Committee	Rogue
W09723	Coordinated Rogue B. WQ Implementation Plan Development	WR2	RVCOG	Rogue
W09724	Little Butte Creek WQ Enhancement Project	WR2	Special SWCD (Jackson)	Upper Rogue
W09725	Santiam-Calapooia Landowner Recruitment & Restoration	WR3	S. Santiam WSC	S. Santiam
W09726	School restoration program: restoration, design and SW management	WR3	Camas Educational Net	Mid Willamette
W09727	Implementation Monitoring Of Umpqua Basin, Diamond Lake TMDL	WR4	Partnership Umpqua R.	N. Umpqua
W09728	PUR Water Quality Monitoring and Thermal Refugia Investigation	WR4	Partnership Umpqua R.	N. Umpqua
W09729	GW Protection Ed. to Promote Citizen Involvement in S. Willamette Valley	WR5	OSU ES, Benton County	Upper Will GWMA

Table 12. 319 Projects Funded in Response to the 2009 RFP by Region and Basin/Subbasin. (Cont.)

OREGON 319 2009 LIST OF PROJECTS FUNDED BY REGION AND BASIN/SUBBASIN				
Project Number	**Project Name**	**Region**	**Submitted By**	**Basin/Subbasin**
W09730	Mid Coast Basin NPS Implementation Initiative	WR6	Lincoln SWCD	Mid Coast
W09731	StreamBank—Willamette Basin Riparian Restoration Focus	HQ/SW/WR	Freshwater Trust	McKenzie, Lower/Up Willamette
W09732	Pesticide Stewardship Partnership	HQ/SW	Various basins	Mid Coast
W09733	KOIN WQ Campaign	HQ/SW	KOIN TV Ch 6	Willamette

Table 13. 319 Projects Funded in Response to the 2009 RFP by Type of Project, BMPs, and Parameters of Concern.

OREGON 319 2009 PROJECTS FUNDED BY TYPE OF PROJECT, BMPS, AND PARAMETERS OF CONCERN						
Project Number	**Project Name**	**Type of Project**	**BMPS**	**Parameters of Concern**	**Where**	**Budget**
W09700	WQ and Effectiveness Monitoring in the Crooked R. WS	Effectiveness Monitoring	Monitoring	Temperature, pH, DO, Nutrients, Bacteria	Crooked River	$80,000
W09701	Willow Creek Effectiveness Monitoring	Effectiveness Monitoring	Instream Bacteria Sampling	Bacteria, Sediment	L Malheur, Willow Ck, NMCGMA	$50,000
W09702	Alkali Creek Water Quality Enhancement	Wetland Creation	Riparian/Stream Habitat Improvement	Bacteria, Sediment, Nutrients	Owyhee WS, Alkali Creek	$35,000
W09703	Strip Tillage in Malheur and Owyhee Watersheds	TMDL Implementation	NO Till/Direct Drill/BMP Incentives	Sediment	L. Malheur and Owyhee	$73,565
W09704	Owyhee River Improvement Project- Phase 2	Effectiveness Monitoring	Sprinkler vs. Furrow Irrigation	Nutrients, Sediment	Owyhee	$35,000
W09705	City of Prineville Stormwater Pollution Reduction Plan	Stormwater Plan Development	BMP Developing	Sediment	Lower Crooked River and Ochoco Creek	$70,000
W09706	LUBGWMA Action Plan Effectiveness Monitoring & Outreach	GWMA Effectiveness Monitoring	BMP Info And Education	Nitrates In Groundwater	LUB GWMA & Critical Groundwater Area.	$38,000
W09707	Apple Sunburn Prevention Using Organic Biofilms	Ag BMP Development	Water Management	Pesticides	Walla Walla	$93,435

Table 13. 319 Projects Funded in Response to the 2009 RFP by Type of Project, BMPs, and Parameters of Concern. (Cont.)

OREGON 319 2009 PROJECTS FUNDED BY TYPE OF PROJECT, BMPS, AND PARAMETERS OF CONCERN						
Project Number	**Project Name**	**Type of Project**	**BMPS**	**Parameters of Concern**	**Where**	**Budget**
W09708	Clackamas Planting and Outreach Project	Restoration	Streamside Planting/Info And Education	Pesticides	L. Clackamas R.	$59,928
W09709	2009-10 NNWC Streamside Planting and Maintenance	Streamside Planting	Temperature, Bacteria, Sediment	Nestucca-Neskowin WS	Nestucca, Neskowin & Sand Lake	$60,000
W09710	North Coast Watersheds Enhancement Project	Restoration	Riparian/Stream Habitat Improvement	Temperature, Nutrients, Bacteria	L. Columbia & N. Coast	$40,000
W09711	Pilot Scale SW Master Planning w/Ecosystem Services Approach	TMDL Implementation	Riparian Restoration	Sediment, Temperature	Clackamas River	$40,000
W09712	Upper Nehalem Riparian Restoration and Basin WQ Monitoring	TMDL Implementation	Riparian Restoration	Temperature, Bacteria	Upper Nehalem	$84,652
W09713	Circle Creek Enhancement Project Phase Three	Riparian Restoration	Stream Bank Improvements	Temperature, Bacteria	Necanicum WS, Circle Ck Sub watershed	$30,495

Table 13. 319 Projects Funded in Response to the 2009 RFP by Type of Project, BMPs, and Parameters of Concern. (Cont.)

OREGON 319 2009 PROJECTS FUNDED BY TYPE OF PROJECT, BMPS, AND PARAMETERS OF CONCERN						
Project Number	**Project Name**	**Type of Project**	**BMPS**	**Parameters of Concern**	**Where**	**Budget**
W09714	Scapoose Creek Riparian Restoration	TMDL Implementation	Riparian Restoration, Fencing	Habitat	North Coast	$30,000
W09715	2010 Tillamook Co Children's Clean Water Festival	Information and Education	Watershed Education	Children	North Coast	$5,000
W09716	BYPP Year 7	Riparian Restoration	Noxious Weeds/Non-Natives	Tillamook/Nehalem WS	North Coast	$60,000
W09717	Tillamook SWCD 2009 Stream Enhancement & Restoration	TMDL Implementation	Fencing, Riparian Planting, Off Stream	Nutrients, Sediment, Bacteria, Temp.	North Coast	$40,000
W09718	Devil's lake and D River WQ	303(d) Listed Stream	BMP Developing	Algal Blooms	Devil's Lake	$15,000
W09719	Coquille North Fork Drinking Water Source Protection	303(d) Listed Stream	Public Outreach, BMP Developing	Bacteria, Nutrients	Coquille Ws, N/E Fork	$15,246
W09720	Targeted WQ Outreach to Isthmus & Coalbank Sloughs of Coos Bay	303(d) Listed Stream	LID, Public Outreach, BMP Development.	Bacteria, Nutrients	Isthmus, Davis, Coalbank Sloughs	$20,608
W09721	Low-Impact Development Workshops and Technical Assistance, Year 2	Public Awareness	LID, Public Outreach, BMP Development.	Stormwater/Sediments	Coos Estuary, Chetco, Mid-Up Willamette	$17,500
W09722	Sucker/Kelly Creeks Comm. Ed. Outreach Project	TMDL Implementation	Public Outreach, BMP Developing	Sediment	E. Fork Illinois river	$5,000

Table 13. 319 Projects Funded in Response to the 2009 RFP by Type of Project, BMPs, and Parameters of Concern. (Cont.)

OREGON 319 2009 PROJECTS FUNDED BY TYPE OF PROJECT, BMPS, AND PARAMETERS OF CONCERN						
Project Number	**Project Name**	**Type of Project**	**BMPS**	**Parameters of Concern**	**Where**	**Budget**
W09723	Coordinated Rogue B. WQ Implementation Plan Development	TMDL Implementation	BMP Developing/Riparian Restoration	Temperature	Rogue	$55,287
W09724	Little Butte Creek WQ Enhancement Project	303(d) Listed Stream	Irrigation Management	Temperature, Sediment	N. Fork Little Butte Creek	$20,000
W09725	Santiam-Calapooia Landowner Recruitment & Restoration	TMDL Implementation	Riparian Restoration/Buffers	Sediment	N/S. Santiam, Calapooia	$79,868
W09726	School restoration program: restoration, design and SW management	TMDL Implementation	Public Outreach, Riparian Restoration	Temperature, Toxics, Sediment, Bacteria	Upper Willamette	$20,000
W09727	Implementation Monitoring Of Umpqua Basin, Diamond Lake TMDL	TMDL Implementation	Water Quality Assessment	Macrophytes	Diamond Lake/Up N Umpqua	$35,500
W09728	PUR Water Quality Monitoring and Thermal Refugia Investigation	Monitoring	BMP development/effectiveness Monitoring	Temperature	Umpqua	$32,425
W09729	GW Protection Ed. to Promote Citizen Involvement in S. Willamette Valley	GWMA Public Outreach	School Information And Education	Nutrients In Groundwater	Southern Willamette Valley GWMA	$67,985

Table 13. 319 Projects Funded in Response to the 2009 RFP by Type of Project, BMPs, and Parameters of Concern. (Cont.)

OREGON 319 2009 PROJECTS FUNDED BY TYPE OF PROJECT, BMPS, AND PARAMETERS OF CONCERN						
Project Number	**Project Name**	**Type of Project**	**BMPS**	**Parameters of Concern**	**Where**	**Budget**
W09730	Mid Coast Basin NPS Implementation Initiative	TMDL Implementation	BMP Development	Temperature, Bacteria	Alsea, Siletz-Yaquina, Siuslaw and Siltcoos	$75,581
W09731	StreamBank—Willamette Basin Riparian Restoration Focus	TMDL Implementation	BMP Planning, Riparian Restoration	Temperature, Bacteria, Nutrients	Marys River, Long Tom River, Scappoose	$15,000
W09732	Pesticide Stewardship Partnership	Pesticide Stewardship	Public Awareness	Pesticides	Various	$233,700
W09733	KOIN WQ Campaign	Public Awareness	Media/Broadcasting	Runoff, Nutrients, Toxics	Metro	$8,334
W09731	StreamBank—Willamette Basin Riparian Restoration Focus	TMDL Implementation	BMP Planning, Riparian Restoration	Temperature, Bacteria, Nutrients	Marys River, Long Tom River, Scappoose	$45,000

Estimates of NPS Load Reductions

EPA has requested that DEQ complete NPS pollutant load reductions using EPA's Section 319 Grants Reporting and Tracking System (GRTS). DEQ's 319-Grant Coordinator attended EPA's 2009 annual GRTS training, which focused on helping states to develop estimates of NPS load reductions.

Section 319 (h) (11) requires states to "*report annually on what their nonpoint source programs are accomplishing, including available information on load reductions and actual water quality improvements*". The load reduction estimates need to be completed for projects funded by 319 funds annually.

DEQ used the load reduction model, "Spreadsheet Tool for Estimating Pollutant Load" (STEPL), within GRTS to estimate nitrogen (pounds per year), phosphorus (pounds per year), sediment (tons per year), and Biological Oxygen Demand (BOD) (pounds per year) for twelve (12) of the thirty-five (35) 2009 319 funded projects.

Total load reduction estimates by pollutant are as follows: 49,471 Pounds/Year Nitrogen Reduction; 17,407 Pounds/Year Phosphorous Reduction; 94,556 Pounds/Year Biological Oxygen Demand Reduction; and 16,461 Tons/Year Sediment Reduction

EPA Region 10, during 2010, has offered to develop region-wide pollutant load reduction models for temperature and bacteria, which are the most 303(d) listed pollutants in Oregon and the region.

The following table identifies the estimated NPS load reductions of nitrogen, phosphorous, BOD, and sediment for twelve (12) of the thirty-five (35) 2009 319 grant funded projects:

Table 14. Estimates of NPS Load Reductions of Selected 319 Funded Projects.

2009 NPS PROJECTS – ESTIMATED NPS LOAD REDUCTION (USING STEPL)							
Project No.	Title	Basin/ Subbasin	Type	Nitrogen Reduction Pounds/Year	Phosphorous Reduction Pounds/Year	Biological Oxygen Demand Reduction Pounds/Year	Sediment Reduction Tons/Year
W09702	Alkali Creek Water Quality Enhancement	Owyhee WS, Alkali Creek	303(d) listed	4,941	1,791	9,903	1,403
W09703	Strip Tillage in Malheur and Owyhee Watersheds	Lower Malheur and Owyhee	SB1010 & GWMA Implementation	7,246	2,650	14,546	2,148
W09708	Clackamas Planting and Outreach Project	Lower Clackamas River	TMDL Implementation	235	59	174	27
W09709	2009-10 NNWC Streamside Planting and Maintenance	Nestucca, Neskowin & Sand Lake	TMDL Implementation	797	129	2,840	27
W09712	Upper Nehalem Riparian Restoration and Basin WQ Monitoring	Upper Nehalem	TMDL Implementation	3,3183	1,2075	60,038	9,377
W09713	Circle Creek Enhancement Project Phase Three	Necanicum WS, Circle Ck Sub Watershed	303(d) listed	166	58	338	45
W09714	Scapoose Creek Riparian Restoration	North Coast	TMDL Implementation	670	90	1207	680

Table 14. Estimates of NPS Load Reductions of Selected 319 Funded Projects. (Cont.)

2009 NPS PROJECTS – ESTIMATED LOADING REDUCTION (USING STEPL)							
Project No.	Title	Basin/ Subbasin	Type	Nitrogen Reduction Pounds/Year	Phosphorous Reduction Pounds/Year	Biological Oxygen Demand Reduction Pounds/Year	Sediment Reduction Tons/Year
W09716	BYPP Year 7	North Coast	TMDL Implementation	450	115	1,050	430
W09717	Tillamook SWCD 2009 Stream Enhancement & Restoration	North Coast	TMDL Implementation	553	135	1,230	1,020
W09726	School Restoration Program: Restoration, Design and SW Management	Upper Willamette	TMDL Implementation	320	85	770	404
W09731	StreamBank—Willamette Basin Riparian Restoration Focus	Marys River, Long Tom River, Scappoose	TMDL Implementation	455	110	1,230	450
W09731	StreamBank—Willamette Basin Riparian Restoration Focus	Marys River, Long Tom River, Scappoose	TMDL Implementation	455	110	1230	450
TOTAL REDUCTION				49,471	17,407	94,556	16,461

The following accomplishments occurred in 2009:

1. DEQ's 319 Grants Coordinator received GRTS load reduction training from EPA.
2. DEQ for the first time completed load reductions estimates for 12 2009 319 funded projects.
3. Total load reduction estimates by pollutant are as follows:
    - 49,471 Pounds/Year Nitrogen Reduction
    - 17,407 Pounds/Year Phosphorous Reduction
    - 94,556 Pounds/Year Biological Oxygen Demand Reduction
    - 16,461 Tons/Year Sediment Reduction

Watershed-Based Plans

During 2009, DEQ began developing an Oregon Watershed Approach (DEQ Northwest Region (NWR) Watershed Approach). The proposed watershed-based plan would integrate TMDL Implementation Plan requirements (Oregon TMDL Rule, OAR 340-042-0025), EPA's Key Watershed Planning Components with Nine Key NPS elements (**Table 15)**, and drinking water protection program elements. DEQ plans to eventually develop watershed-based plans, where feasible, for future/ongoing implementation.

Oregon's strategy for improving state surface waters has always been on a watershed basis. The state has 21 river basins and 91 sub-basins. The state's NPDES permitting, assessment, and TMDL work is aligned and prioritized according to these sub-basins. For groundwater areas, there are GWMA and basin coordinators assigned to each GWMA and basin/subbasin. They take the lead role as GWMAs and TMDLs are developed and implemented.

DEQ's current Watershed Approach for protecting water quality is to develop TMDLs for both point and nonpoint sources. TMDL implementation is addressed through a variety of mechanisms including AgWQMA plans, Forest Practices Act, Federal/State MOUs, NPDES permits, 401 certification, and plans developed by DMAs or other entities responsible for pollution not addressed by permit or the Oregon Revised Statutes (ORS). These mechanisms are used to implement the TMDL as outlined in the TMDL Water Quality Management Plan so impaired waters will eventually meet water quality standards.

EPA has encouraged Oregon to add EPA's nine key NPS element watershed-based plan elements to the current TMDL process. Based on EPA's past review of several TMDL Implementation Plans, EPA has stated that these plans do not meet Section 319 grant requirements to develop and implement EPA's nine key NPS element watershed-based plans in impaired waters.

DEQ uses the TMDL and DMA required TMDL Implementation Plans in prioritizing and directing 319-project funding to where implementation work is needed. This approach is a work in progress. The Watershed Approach will improve with time.

The following table identifies EPA's key watershed planning components with the nine key NPS elements:

Table 15. EPA's Basic Components of a Watershed Plan.

Key Watershed Planning Components with Nine Key NPS Elements
Element 1
a. Include the geographic extent of the watershed covered by the plan.
b. Identify the measurable water quality goals, including the appropriate water quality standards and designated uses.
c. Identify the causes and sources or groups of similar sources that need to be controlled to achieve the water quality standards.
d. Break down the sources to the subcategory level.
e. Estimate the pollutant loads entering the waterbody.
Element 2
Determine the pollutant load reductions needed to meet the water quality goals.
Element 3
a. Identify management measures need to be implemented to achieve the load reductions.
b. Identify critical areas in which management measures are needed.
Element 4
a. Estimate the costs to implement the plan, including management measures, administration, information/education activities, and monitoring.
b. Identify the sources and amounts of financial and technical assistance and associated authorities available to implement the management measures.
Element 5
Prepare an information/education component that identifies the education and outreach activities needed for implementing the watershed management plan.
Element 6
Develop a schedule for implementing the plan.
Element 7
Develop interim, measurable milestones for determining whether management measures are being implemented.

Table 15. EPA's Basic Components of a Watershed Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements (Cont.)
Element 8
Develop a set of criteria to determine whether loading reductions are being achieved and progress is being made toward attaining (or maintaining) water quality goals, and specify what measures will be taken if progress has not been demonstrated.
Element 9
a. Develop a monitoring component to determine whether the plan is being implemented appropriately and whether progress toward attainment or maintenance of water quality goals is being achieved.
b. Develop an evaluation framework.

Oregon's first step in developing a Watershed-Based Plan Strategy is to assess the extent that this approach was already in use. To do this, DEQ decided to review the most recent TMDL Implementation Plans, which were completed for the Willamette River Basin TMDL that was issued by DEQ in 2006. The DMAs submitted their TMDL Implementation Plans throughout 2008. Several plans were reviewed using the components listed in **Table 15** as evaluation criteria to determine how closely the plans meet EPA's Watershed Planning components and Nine Key NPS elements.

It is important to note that this information is for program review only. None of the DMA TMDL Implementation plans will be required to be revised based on this evaluation. These plans have been determined by DEQ to meet Oregon's TMDL rule, OAR 340-042-0025 and DEQ's current TMDL Implementation Plan Guidance Document (http://www.deq.state.or.us/WQ/TMDLs/docs/impl/07wq004tmdlimplplan.pdf). The guidance document specifically states that DEQ would accept a Plan that includes some measures that would be implemented over time as "progress not perfection". DEQ understands and accepts that most DMAs do not have the resources to do all the management measures identified in their approved plan immediately, but will be implemented over time as identified in their DEQ approved Plan.

The following plans were reviewed and the results (worksheets) of the evaluation are included **Appendix 3**:

- City of Eugene
- City of Creswell
- City of Lowell
- Benton County
- Upper Willamette and Upper Siuslaw Agricultural Water Quality Management Area Plan (AgWQMAP)
- BLM Water Quality Restoration Plan (TMDL Implementation Plan)

In general, the reviewed Willamette River Basin TMDL Implementation Plans adequately address some of the nine key elements, except for the following:

Element 1.d. Break down the sources to the subcategory level.
The TMDL load allocations are included in the TMDL Implementation Plan. However, specific pollutant load reductions needed to meet the load allocations by category and subcategory is not included in the TMDL Implementation Plan.

Element 1.e. Estimate the pollutant loads entering the waterbody.
The TMDL load allocations are included in the TMDL Implementation Plan. However, specific pollutant load estimates by category and subcategory, as per EPA's Element 1.d., above, is not included in the TMDL Implementation Plan.

Element 2. Determine the pollutant load reductions needed to meet the water quality goals.
The TMDL load allocations are included in the TMDL Implementation Plan. However, specific pollutant load reductions needed to meet the load allocations by category and subcategory is not included in the TMDL Implementation Plan.

Element 3.a. Identify the management measures that need to be implemented to achieve the load reductions.
General management measures are mostly identified in the TMDL Implementation Plan. However, specific measures identified in the plan, such as location of all needed riparian and wetland restoration areas, locations of streambank erosion needing repair, or locations of existing septic onsite systems with known failing systems are not identified in the plan.

Element 3.b. Identify critical areas in which management measures are needed.
The TMDL Implementation Plan identifies some critical areas for riparian and wetland restoration but not all areas. The management measures identified in Element 3.a., above, are not identified as required by this element.

Element 4.a. Estimate the costs to implement the plan, including management measures, administration, information/education activities, and monitoring.
Not included in the TMDL Implementation Plan.

Element 4.b. Identify the sources and amounts of financial and technical assistance and associated authorities available to implement the management measures.
The TMDL Implementation Plan includes the sources of financial assistance available to implement the management measures. However, the Plan does not address the amounts of financial and technical assistance and associated authorities available to implement the management measures as per EPA's requirements for this element.

Element 8. Develop a set of criteria to determine whether loading reductions are being achieved and progress is being made toward attaining (or maintaining) water quality goals, and specify what measures will be taken if progress has not been demonstrated.
The TMDL Implementation Plan meets one of this Element needs: *"... indicate how you will determine whether the watershed plan needs to be revised if interim targets are not met"*. However, the Plan does not include tracking water quality benchmarks such as direct measurements (e.g., fecal coliform concentrations) or indirect indicators of load reduction (e.g., number of beach closings) that may require changing management practices, updating the loading analyses, and reassessing the time it takes for pollution concentrations to respond to treatment.

Element 9.a. Develop a monitoring component to determine whether the plan is being implemented appropriately and whether progress toward attainment or maintenance of water quality goals is being achieved.
The TMDL Implementation Plan includes a TMDL Implementation Tracking Matrix and a monitoring component to determine whether the plan is being implemented appropriately. However, the Plan does mention the need for but does not include a monitoring component to determine whether progress toward attainment or maintenance of water quality goals is being achieved as per this element.

Table 16. Summary of Review of Willamette Basin TMDL Implementation Plans in Meeting Watershed Planning Components with Nine Key NPS Elements.

EPA Key Watershed Planning Components with Nine Key NPS Elements	City of Eugene	City of Creswell	City of Lowell	Benton County	Upper Willamette/Upper Siuslaw Agricultural WQ Management Area Plan (AgWQMAP)	BLM Water Quality Restora-tion Plan	Average For Six Reviewed TMDL Imp. Plans
Meets Element	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**
Element 1							
a. Include the geographic extent of the watershed covered by the plan.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
b. Identify the measurable water quality goals, including the appropriate water quality standards and designated uses.	**Yes**	**Yes/No**	**Yes/No**	**Yes/No**	**Yes**	**Yes**	**Yes (1/2)**
c. Identify the causes & sources or groups of similar sources that need to be controlled to achieve the water quality standards.	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
d. Break down the sources to the subcategory level.	**Yes/No**	**No**	**No**	**No**	**No**	**Yes**	**No**
e. Estimate the pollutant loads entering the waterbody.	**No**	**Yes/No**	**Yes/No**	**No**	**No**	**Yes/No**	**Yes/No (1/2)**

Table 16. Summary of Review of Willamette Basin TMDL Implementation Plans in Meeting Watershed Planning Components with Nine Key NPS Elements. (Cont.)

EPA Key Watershed Planning Components with Nine Key NPS Elements	City of Eugene	City of Creswell	City of Lowell	Benton County	Upper Willamette/Upper Siuslaw Agricultural WQ Management Area Plan (AgWQMAP)	BLM Water Quality Restora-tion Plan	Average For Six Reviewed TMDL Imp. Plans
Meets Element	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	
Element 2							
Determine the pollutant load reductions needed to meet the water quality goals.	**No**	**Yes/No**	**Yes/No**	**No**	**No**	**Yes/No**	**Yes/No (1/2)**
Element 3							
a. Identify the management measures that need to be implemented to achieve the load reductions.	**Yes/No**	**Yes/No**	**Yes/No**	**Yes/No**	**Yes/No**	**Yes/No**	**Yes/No**
b. Identify critical areas in which management measures are needed.	**Yes/No**	**Yes/No**	**Yes/No**	**Yes/No**	**No**	**Yes/No**	**Yes/No**
Element 4							
a. Estimate the costs to implement the plan, including management measures, administration, information/education activities, and monitoring.	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Table 16. Summary of Review of Willamette Basin TMDL Implementation Plans in Meeting Watershed Planning Components with Nine Key NPS Elements. (Cont.)

EPA Key Watershed Planning Components with Nine Key NPS Elements	City of Eugene	City of Creswell	City of Lowell	Benton County	Upper Willamette/Upper Siuslaw Agricultural WQ Management Area Plan (AgWQMAP)	BLM Water Quality Restora-tion Plan	Average For Six Reviewed TMDL Imp. Plans
Meets Element	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	
Element 4							
b. Identify the sources and amounts of financial and technical assistance and associated authorities available to implement the management measures.	**Yes/No**	**Yes/No**	**No**	**Yes/No**	**Yes/No**	**No**	**Yes/No**
Element 5							
Prepare an information/education component that identifies the education and outreach activities needed for implementing the watershed management plan.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes/No**	**Yes**
Element 6							
Develop a schedule for implementing the plan.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes/No**	**Yes/No**	**Yes**

Table 16. Summary of Review of Willamette Basin TMDL Implementation Plans in Meeting Watershed Planning Components with Nine Key NPS Elements. (Cont.)

EPA Key Watershed Planning Components with Nine Key NPS Elements	City of Eugene	City of Creswell	City of Lowell	Benton County	Upper Willamette/Upper Siuslaw Agricultural WQ Management Area Plan (AgWQMAP)	BLM Water Quality Restora-tion Plan	Average For Six Reviewed TMDL Imp. Plans
Meets Element	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	
Element 7							
Develop interim, measurable milestones for determining whether management measures are being implemented.	**Yes**	**Yes**	**Yes**	**Yes**	**No**	**No**	**Yes**
Element 8							
Develop a set of criteria to determine whether loading reductions are being achieved and progress is being made toward attaining (or maintaining) water quality goals, and specify what measures will be taken if progress has not been demonstrated.	**No**	**Yes/No**	**No**	**No**	**No**	**No**	**No**

Table 16. Summary of Review of Willamette Basin TMDL Implementation Plans in Meeting Watershed Planning Components with Nine Key NPS Elements. (Cont.)

EPA Key Watershed Planning Components with Nine Key NPS Elements	City of Eugene	City of Creswell	City of Lowell	Benton County	Upper Willamette/Upper Siuslaw Agricultural WQ Management Area Plan (AgWQMAP)	BLM Water Quality Restora-tion Plan	Average For Six Reviewed TMDL Imp. Plans
Meets Element	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	**(Yes/No)**	
Element 9							
a. Develop a monitoring component to determine whether the plan is being implemented appropriately and whether progress toward attainment or maintenance of water quality goals is being achieved.	**Yes/No**	**Yes/No**	**Yes/No**	**Yes/No**	**Yes/No**	**Yes/No**	**Yes/No**
b. Develop an evaluation framework.	**Yes**	**Yes/No**	**Yes**	**Yes**	**Yes/No**	**Yes**	**Yes**

5. Success Stories/Environmental Improvement

WQ-10 Projects

None available for this year's report. Although, EPA's consultant, Tetra Tech, is working with DEQ's basin coordinator to develop a success story for the Bear Creek watershed. This success story may be included in next year's (2010) NPS Annual report. Also for next year's report, a Tualatin River Basin success story will most likely be included.

SP-12 Projects

Wilson River, Tillamook Bay

Waterbody Improved

Bacteria from livestock and human sources caused Oregon's Wilson River to exceed water quality standards, prompting DEQ to add an 8.5-mile segment of the lower Wilson River to the state's 1998 Clean Water Act (CWA) Section 303(d) list of impaired waters. With support from multiple organizations, landowners installed BMPs throughout the Wilson River watershed and beyond. Data show a statistically significant decreasing trend in bacteria levels. In fact, the river has met water quality standards since 2005. However, DEQ still lists the river as impaired while DEQ performs a final data review and upload to the assessment database.

Problem

The 194-square-mile Wilson River watershed is the largest of five main drainage basins feeding Tillamook Bay on Oregon's northern coast. The dominant land use in the watershed is state and federal forestlands (81 percent of the watershed's total area). Dairy pastures dominate the lowland areas of the watershed. Development pressures from the city of Tillamook are also affecting the lower portions of the watershed.

The Wilson River (**Figure 4**) is protected for recreational contact use (swimming and wading). Oregon's recreational use water quality standard requires that (1) the 30-day log mean not exceed 126 *Escherichia Coli* counts per 100 milliliters (ml) from a minimum of five samples, and (2) no single sample exceed 406 *E. coli* counts per 100 ml.

Figure 5. Oregon's Wilson River Is Popular Site for Kayakers and Canoeists.

In the mid-1990s, data showed that bacteria concentrations were relatively low in the upper, forested part of the watershed. However, data indicated that bacteria concentrations exceeded water quality standards throughout the year near the river's mouth. Therefore, DEQ added an 8.5-mile segment of the river (mouth to Little North Fork Wilson River) to Oregon's 1998 CWA Section 303(d) list of impaired waters.

Project Highlights

The Tillamook Bay National Estuary Program, now known as the Tillamook Estuaries Partnership (TEP), worked closely with community, state, and federal entities to develop and implement the Tillamook Bay Comprehensive Conservation and Management Plan beginning in 1999. The plan recommended 63 actions that could help improve water quality, enhance aquatic habitat and mitigate flooding.

DEQ completed a Tillamook Bay watershed TMDL for temperature and bacteria in 2001. Also in 2001, the NRCS and the Tillamook SWCD published a Watershed Plan/Environmental Assessment for the Lower Tillamook Bay watershed. That document outlines agricultural facilities, practices, and restoration activities needed to address TMDL-related water quality issues in the Tillamook Bay watershed.

On a smaller scale, the Tillamook County Performance Partnership and a local citizens' group called the Tillamook Bay Watershed Council (TBWC) developed a watershed assessment report specifically for the Wilson River in 2001. The report describes watershed conditions and recommends actions that address issues of water quality, fisheries and fish habitat, and watershed hydrology.

In 2001, TEP began working with OSU on a three-year genetic marker study on bacteria in the watershed. The study indicates that livestock and other ruminants contributed most of the bacteria in the lower Wilson River. Using the data, watershed managers began targeting practices to reduce bacteria. In 2003, TEP began offering its Backyard Planting Program (BYPP), a cost-free, voluntary assistance program to help private landowners remove invasive species and improve habitats for fish and wildlife. The program's coordinator works with landowners to develop site-specific riparian restoration plans. Between 2003 and 2007, the program helped plant almost 10,000 trees along more than 17 miles of streams in the Tillamook Bay watershed.

Between 2002 and 2007, stakeholders implemented numerous BMPs in the lower Wilson River watershed **(Figure 6)**. The TBWC, TEP, and Tillamook SWCD worked with landowners to complete 20 riparian enhancement projects (12 of which were BYPP projects) that included planting, fencing, and invasive species removal. The projects stabilized streambanks and removed livestock from the river's riparian area. In addition, TEP acquired three sensitive wetland parcels, which will be restored in the coming years and maintained by Tillamook County as permanent wetland areas.

Figure 6. Stakeholders Completed Numerous Restoration Projects In The Lower Wilson River Watershed.

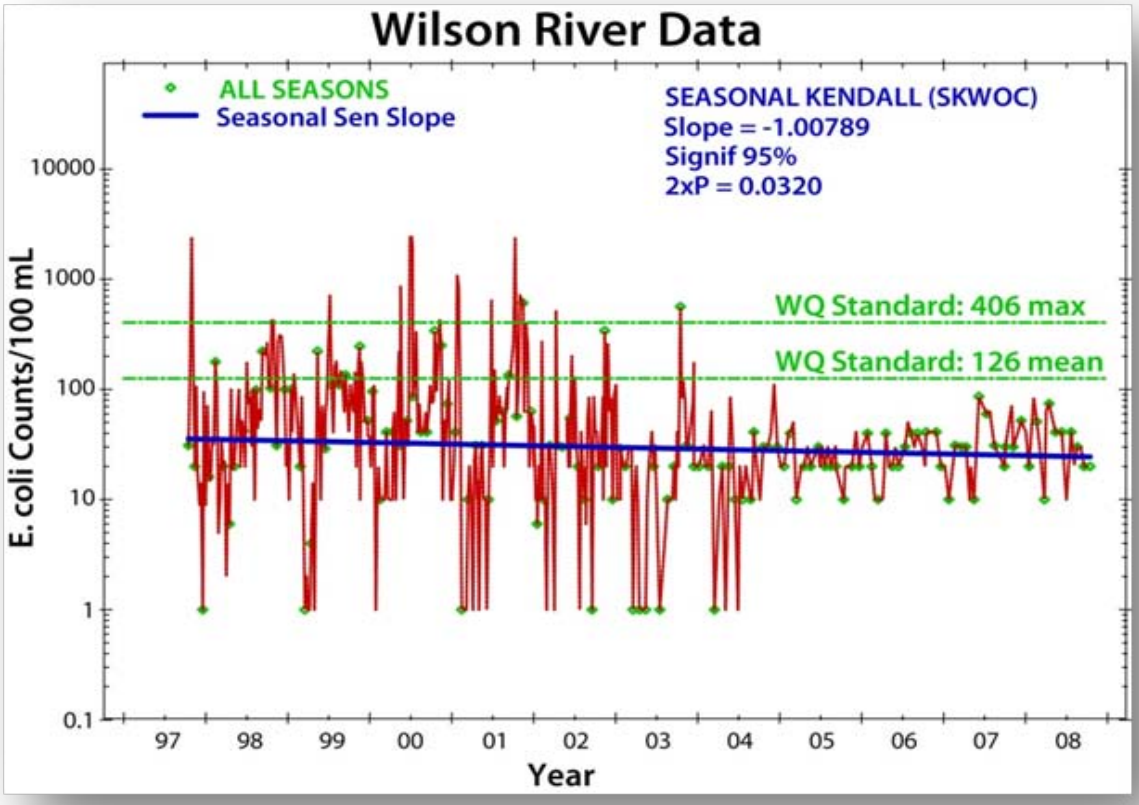
Two wastewater treatment systems discharge to the Wilson River, including a campground and the Tillamook County Creamery Association (TCCA). Improvements to the TCCA system helped to reduce bacteria levels released to the river.
TBWC is also collaborating with the ODF, Bonneville Power Administration, and ODFW to remove vehicle access roads and primitive camping areas from more than four acres of upper Wilson River riparian areas.

Results

Stakeholders' efforts to target and reduce bacteria pollution throughout the Tillamook Bay watershed appear to be working. Data show that bacteria levels in the Wilson River have met water quality standards since 2005 **(Figure 7)**. The lower sections of the other four main tributaries in the Tillamook Bay watershed—Miami, Kilchis, Trask, and Tillamook rivers - still violate Oregon's water quality standards for recreational use; however, data indicate that bacteria levels in those rivers are declining steadily. Although the Wilson River now meets standards for bacteria, it remains on the impaired waters list until DEQ does a final review of recent data and uploads it to DEQ's assessment database.

Bacteria Levels In The Wilson River have steadily declined since 1997 and now consistently meet the two-part recreational use water quality standard, which requires (1) that the 30-day log mean not exceed 126 *E. Coli* Counts per 100 ml from a minimum of five samples and (2) that no single sample exceed 406 *E. Coli* Counts per 100 Ml.

Figure 7. Bacteria Levels in the Wilson River.



Partners and Funding

Numerous partners have worked to restore Tillamook Bay and its watershed, including the OWEB, ODA, DEQ, ODFW, TEP, Tillamook County, TBWC, U.S. Fish and Wildlife Service (USFWS), TCCA, Tillamook SWCD, Tillamook Native Plant Cooperative, and private landowners.

Partners spent more than $1.4 million restoring and protecting the lower Wilson River watershed. TEP spent the majority of the funds ($1.3 million, mostly through USFWS grant programs) to purchase three sensitive wetland tracts. Partners also completed 20 riparian restoration projects at a cost of $68,000, which included $26,000 in CWA section 319 funds; $13,000 in matching funds from OWEB; and a variety of other federal, state, private, and in-kind funds.

For additional information contact:

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Oregon Nonpoint Source Pollution Program
2009 Annual Report

State of Oregon
Department of Environmental Quality
Water Quality Division

APPENDICES

APPENDIX 1

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W05550	Central Canal Pipeline Middle Phase	2005	ER	East Fork Irrigation District	$200,000.00	$200,000	$0	CLOSED	Lamb, Bonnie	30-Jun-06
W05551	Upper Deschutes WQ Restoration Monitoring Project	2005	ER	Upper Deschutes Watershed	$79,861.74	$79,862	$0	CLOSED	Lamb, Bonnie	31-Dec-07
W05552	Agency Lake Fringe Wetland Restoration	2005	ER	Klamath Basin Rangeland Trust	$38,600.00	$38,600	$0	CLOSED	Kirk, Steve	31-Dec-07
W05553	Implementation Monitoring Of Diamond Lake	2005	ER	USDA Umpqua National Forest	$30,098.00	$30,098	$0	CLOSED	Kirk, Steve	31-Dec-06
W05554	Cedar Hill Farm Wetland Enhancement Wallowa	2005	ER	?	$0.00	$0	$0	CLOSED	Dombrowski Tonya	31-Dec-07

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W05555	WQ Monitoring For Up. Grande Ronde R. Basin	2005	ER	Union SWCD	$30,000.00	$30,000	$0	CLOSED	Dombrowski Tonya	31-Dec-07
W05556	Umatilla TMDL & Wildhorse Nitrate/Bmp Monitoring	2005	ER	Umatilla Basin Watershed Foundation	$101,521.00	$25,711	FINAL PAYMENT	CLOSED	Dombrowski Tonya	31-Dec-09
W05557	New Water Quality Programs In The Metro Area	2005	NWR	Metro	$74,997.43	$74,997	$0	CLOSED	Simpson, Manette	31-Dec-07
W05558	Upper Nehalem Riparian Enhancement & Monitoring	2005	NWR	Upper Nehalem Watershed Council	$86,059.68	$86,060	$0	CLOSED	Apple, Bruce	31-Dec-06
W05559	2005 Maintenance Of Nestucca - Neskowin Ws	2005	NWR	Nestucca Neskowin Watershed Council	$26,740.25	$26,740	$0	CLOSED	Apple, Bruce	31-Dec-07
W05560	2005-06 Nestucca Neskowin WSC Streamside	2005	NWR	Nestucca Neskowin Watershed Council	$47,020.00	$47,020	$0	CLOSED	Apple, Bruce	31-Dec-06
W05561	Tillamook SWCD Stream Enhancement	2005	NWR	?	$0.00	$0	$0	CANCELLED	Camacho, Ivan	31-Dec-07

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W05562	Willow Creek Riparian Restoration & Demo	2005	NWR	Malheur SWCD	$6,868.94	$6,869	$0	CLOSED	Dombrowski, Tonya	30-Sep-08
W05563	Organizing 2006 Children's Clean Water Fest	2005	NWR	Tillamook County Estuary Partnership	$5,000.00	$5,000	$0	CLOSED	Apple, Bruce	31-Aug-06
W05564	Agriculture WQ Landowner Implementation Project	2005	NWR	Clackamas Co Soil & Water Conservation District	$88,972.82	$88,973	$0	CLOSED	Simpson, Manette	31-Dec-07
W05565	North Fork Nehalem River Enhancement	2005	NWR	Tillamook County Estuary Partnership	$43,500.00	$43,500	$0	CLOSED	Apple, Bruce	30-May-07
W05579	Blue Lake Bottom Barrier Installation	2005	NWR	?	$0.00	$0	$0	CANCELLED	Camacho, Ivan	31-Dec-07
W05566	Sucker Creek TMDL Implementation, Outreach	2005	WR	Forestry Action Committee	$21,206.05	$21,206	$0	CLOSED	Wright, Pamela	30-Jun-07
W05567	Pudding R. Pesticide Reduction Partnership	2005	WR	Marion County SWCD	$14,473.50	$14,474	$0	CLOSED	Masterson, Kevin	30-Mar-07

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W05568	Elk Creek Ws Bacteria Source Tracking Project	2005	WR	?	$0.00	$0	$0	CLOSED	Lindberg, Bobbi	31-Dec-07
W05569	Sixes Sub-Basin Weed Ws Restoration Plan	2005	WR	Curry County SWCD	$47,115.00	$47,115	$0	CLOSED	Waltz, David	30-Jun-07
W05570	Coquille Mainstem Riparian Assessment	2005	WR	Coquille Watershed Association	$17,238.77	$17,239	$0	CLOSED	Blake, Pam	30-Mar-06
W05571	Tenmile Lakes WQ Implementation	2005	WR	City of Lakeside	$168,922.58	$168,923	$0	CLOSED	Waltz, David	30-Nov-07
W05572	Mill Creek Riparian Restoration	2005	WR	Douglas SWCD	$11,523.35	$11,523	$0	CLOSED	Lindberg, Bobbi	31-Dec-07
W05573	Dixon Creek Riparian Restoration	2005	WR	Douglas SWCD	$20,097.11	$20,097	$0	CLOSED	Lindberg, Bobbi	31-Dec-07
W05574	Myrtle Creek Watershed Restoration & Outreach	2005	WR	Partnership for Umpqua Rivers	$22,145.45	$22,145	$0	CLOSED	Paul Heberling	31-Dec-07

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W05575	Middle Rogue & Bear Creek Comprehensive WQMP	2005	WR	Rogue Valley Council of Governments	$47,000.00	$47,000	$0	CLOSED	Tugaw, Heather	30-Jun-07
W05576	Partnership For NPS Monitoring & Assessment	2005	WR	Curry County SWCD	$93,238.02	$93,238	$0	CLOSED	Waltz, David	28-Feb-08
W05577	LID Workshops / Technical Assistance	2005	WR	Oregon Environmental Council	$75,000.00	$38,136	FINAL PAYMENT	CLOSED	Wright, Pamela	15-Dec-09
W05578	Coordinated Rogue Basin WQIP Development	2005	WR	Rogue Valley Council of Governments	$9,518.00	$9,518	$0	CLOSED	Tugaw, Heather	30-Sep-09
W05580	Diamond Lake Post-Treatment Monitoring	2005	ER	To be re-contracted	$30,000.00	$0	$30,000	OPEN	Heberling, Paul	31-Dec-09
W06700	Rogue MAP	2006	ER	Rogue Basin Coordinating Council	$28,645.00	$28,645	$0	CLOSED	Tugaw, Heather	31-Dec-08
W06701	Lower Umatilla Basin GWMA Outreach and Survey	2006	ER	Umatilla County SWCD	$20,550.00	$20,550	$0	CLOSED	Dombrowski, Tonya	28-Feb-09
W06702	Walla Walla Basin Pesticide Stewardship Partnership	2006	ER	Walla Walla Basin Watershed Council	$89,538.24	$84,944	FINAL PAYMENT	OPEN	Masterson, Kevin	31-Oct-09

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W06703	Roadside Filter Strip Demo for U. G. R. Basin	2006	ER	Union SWCD	$0.00	$0	$0	CANCELLED	Dombrowski, Tonya	31-Dec-09
W06704	Crooked River TMDL Implement & WQ Monitoring	2006	ER	Crooked River Watershed Council	$49,525.00	$37,078	FINAL PAYMENT	OPEN	Lamb, Bonnie	31-Dec-09
W06705	Bridge Creek Watershed BMP Implement Outreach & Education	2006	ER	Wheeler Soil & Water Conservation District	$61,794.00	$50,262	FINAL PAYMENT	OPEN	Dombrowski, Tonya	31-Dec-09
W06706	Precision Agriculture In The Umatilla Basin	2006	ER	Umatilla County SWCD	$27,540.00	$27,540	$0	CLOSED	Dombrowski, Tonya	31-Mar-09
W06707	Umatilla TMDL & Wildhorse Nitrate/Bmp Monit.	2006	ER	Umatilla Basin Watershed Foundation	$56,786.75	$56,787	$0	CLOSED	Dombrowski, Tonya	31-Mar-09
W06708	Legacy Pesticide Collection Umatilla Basin	2006	ER	?	$4,974.60	$4,975	$0	CLOSED	Masterson, Kevin	31-Dec-08
W06709	2006-07 NNWC Streamside Planting And Maintenance	2006	NWR	Nestucca Neskowin Watershed Council	$59,997.25	$59,997	$0	CLOSED	Apple, Bruce	30-Jun-07

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W06710	Tillamook County Children Clean Water Festival TMDL Ed.	2006	NWR	Tillamook County Estuary Partnership	$2,382.01	$2,382	$0	CLOSED	Apple, Bruce	31-Jul-07
W06711	Ag. & Backyard Planting Program Yr 4	2006	NWR	Tillamook County Estuary Partnership	$50,250.00	$50,250	$0	CLOSED	Apple, Bruce	30-Jun-07
W06712	Upper Nehalem Riparian Restoration & Monitoring	2006	NWR	Upper Nehalem Watershed Council	$54,769.55	$54,770	$0	CLOSED	Apple, Bruce	31-Dec-07
W06713	Willamette TMDL: Creating Dialog & Tools	2006	NWR	Lower Nehalem Watershed Council	$74,967.87	$ 74,968	$0	CLOSED	Wright, Pamela	30-Jun-09
W06714	Marketing Green Certified Landscaping	2006	NWR	Oregon Environmental Council	$31,000.00	$24,261	FINAL PAYMENT	OPEN	Apple, Bruce	30-Nov-09
W06715	Implementation Monitoring of Diamond Lake R	2006	WR	Partnership for Umpqua Rivers	$67,240.00	$67,240	$0	CLOSED	Heberling, Paul	30-Nov-08
W06716	Dawson Ranch Riparian Restoration Project	2006	WR	Douglas SWCD	$20,541.55	$20,542	$0	CLOSED	Heberling, Paul	30-Sep-07
W06717	Coquille Watershed Effectiveness Monitoring	2006	WR	Coquille Watershed Association	$42,260.00	$42,260	$0	CLOSED	Waltz, David	31-Mar-09

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W06718	Coquille Watershed Riparian Enhancement	2006	WR	Coquille Watershed Association	$81,600.00	$81,600	$0	CLOSED	Waltz, David	30-Apr-08
W06719	Siuslaw Basin TMDL Development	2006	WR	Siuslaw Watershed Council	$40,319.98	$40,320	$0	CLOSED	Lindberg, Bobbi	31-Dec-08
W06720	Outreach & Assessment of S Coast WQ Limited	2006	WR	Curry County SWCD	$48,004.00	$48,004	$0	CLOSED	Waltz, David	15-Jan-08
W06721	L.S. Fork Coos R. Assessments, Outreach & Education	2006	WR	Coos Watershed Association	$106,317.00	$106,317	$0	CLOSED	Waltz, David	30-Sep-08
W06722	West Fork Williams Ck. Salmon Habitat Rest	2006	WR	Williams Creek Watershed	$21,000.00	$21,000	$0	CLOSED	Tugaw, Heather	30-Jun-08
W06723	S Willamette Val GWMA Plan & Implementation	2006	WR	Lane Council of Governments	$116,530.00	$116,530	$0	CLOSED	Eldridge, Audrey	31-Jan-08
W06724	Midcoast Basin Monitoring & Data Mgt (TMDL Dev.)	2006	WR	Lincoln SWCD	$188,100.00	$188,100	$0	CLOSED	Lindberg, Bobbi	30-Jun-09
W06725	Little Butte & Bear Creek Water Enhancement	2006	WR	Jackson County	$18,418.84	$18,419	$0	CLOSED	Tugaw, Heather	30-Jun-08

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W06726	Spring 2009 Pesticide Stewardship Partnership Monitoring	2006	WR	Yamhill Soil and Water Conservation District	$64,721.96	$62,385	FINAL PAYMENT	OPEN	Masterson, Kevin	31-Dec-09
W07700	Powder River WQ Enhancement Project	2007	ER	Baker Valley Soil & Water Conservation District	$52,500.00	$52,500	$0	CLOSED	Dombrowski, Tonya	31-Dec-08
W07701	Owyhee River Improvement Project	2007	ER	Malheur SWCD	$37,652.00	$23,173	$14,479	OPEN	Dombrowski, Tonya	30-Jun-10
W07702	Choir Boys Construct Wetland Project	2007	ER	Malheur SWCD	$52,248.00	$52,248	$0	CLOSED	Dombrowski, Tonya	30-Sep-09
W07703	Middle Fork of The John Day River Aquatic	2007	ER	Nature Conservancy	$174,850.00	$103,888	$70,962	OPEN	Dombrowski, Tonya	31-Dec-09
W07704	Restoration Effectiveness Monitoring in Priority Basin	2007	ER	Upper Deschutes Watershed	$80,823.00	$72,741	$8,082	OPEN	Lamb, Bonnie	30-Apr-10
WRC#17	Wash Rack Solution	2007	ER	To Be Re-Contracted	$0.00	$0	$0	CLOSED	Dombrowski Tonya	31-Dec-11

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W07705	Little North Fork, Nehalem Riparian Enhancement	2007	NWR	Lower Nehalem Watershed Council	$7,840.29	$7,840	$0	CLOSED	Apple, Bruce	31-Dec-08
W07706	Wolfe Creek Enhancement Project	2007	NWR	Tillamook County Estuary Partnership	$18,024.50	$18,025	$0	CLOSED	Apple, Bruce	31-Dec-08
W07707	Circle Creek Enhancement Project	2007	NWR	North Coast Land Conservancy	$27,535.00	$24,782	$2,754	OPEN	Apple, Bruce	30-Oct-09
W07708	2008 Tillamook Co. Children's Water Fest	2007	NWR	Tillamook County Estuary Partnership	$4,617.00	$4,617	$0	CLOSED	Apple, Bruce	31-Aug-08
W07709	Backyard Planting Program - Year 5	2007	NWR	Tillamook County Estuary Partnership	$49,449.94	$49,450	$0	CLOSED	Apple, Bruce	31-Dec-08
W07710	Cedar Island Demonstration Restoration P	2007	NWR	Willamette Riverkeeper	$11,730.00	$4,622	$7,108	OPEN	Apple, Bruce	31-Dec-09
W07711	Upper Nehalem Riparian Restoration	2007	NWR	Upper Nehalem Watershed Council	$54,360.00	$54,360	$0	CLOSED	Apple, Bruce	31-Dec-08
W07712	Multnomah Co. Central Library Eco-Roof	2007	NWR	Multnomah County	$102,148.00	$102,148	$0	CLOSED	Apple, Bruce	30-Jun-09

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W07713	Tillamook SWCD 2007 Stream Enhancement	2007	NWR	Tillamook County SWCD	$47,872.00	$29,587	$18,285	OPEN	Apple, Apple	30-Jun-10
W07714	2007-08 NNWC Streamside Planting	2007	NWR	Nestucca Neskowin WS Council	$60,000.00	$60,000	$0	CLOSED	Apple, Bruce	31-Dec-08
W07715	WQ Investment: Streamside Restoration	2007	NWR	Metro	$90,000.00	$46,501	$43,499	OPEN	Apple, Bruce	30-Nov-09
W07716	Pudding Basin Pesticide Stewardship Partnership	2007	NWR	?	$27,351.87	$27,352	$0	CLOSED	Masterson, Kevin	28-Feb-09
W07717	Clackamas Basin Pesticide Stewardship	2007	NWR	?	$25,002.33	$25,002	$0	CLOSED	Masterson, Kevin	28-Feb-09
W07718	Yamhill Basin Pesticide Stewardship Partnership	2007	NWR	?	$20,794.55	$ 20,795	$0	CLOSED	Masterson, Kevin	28-Feb-09
W07719	NPS #17 319 Recycled Project Dollars	2007	NWR	?	$1,104.52	$0	$1,105	OPEN	?	31-Dec-11
W07720	Scholfield Creek Riparian Enhancement	2007	WR	Umpqua SWCD	$21,030.00	$6,917	$14,113	OPEN	Heberling, Paul	31-Dec-09

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W07721	Applegate Ws TMDL Implementation	2007	WR	Applegate River Watershed Council	$112,514.00	$49,084	$63,430	OPEN	Meyers, Bill	30-Jun-10
W07722	Medford Sports & Community Park Urban Re	2007	WR	City of Medford	$49,000.00	$18,961	$30,039	OPEN	Tugaw, Heather	31-Dec-09
W07723	Private Well Outreach And Monitoring	2007	WR	Oregon State University	$53,503.00	$53,503	$0	CLOSED	Eldridge, Audrey	30-Aug-08
W07724	Calapooia & Santiam Landowner Outreach and Education	2007	WR	South Santiam Watershed Council	$73,766.00	$73,581	$185	OPEN	Gramlich, Nancy	31-Aug-09
W07725	McKenzie River Septic System Assistance	2007	WR	Eugene Water & Electric Board	$68,000.00	$68,000	$0	CLOSED	Rubin, Jared	30-Jun-09
W07726	Integration TMDL and GW Priorities	2007	WR	Benton Soil & Water Conservation District	$171,000.00	$55,644	$115,356	OPEN	Eldridge, Audrey	30-Nov-10
W08700	Meacham Ck. Restoration Bioassessment	2008	ER	Oregon State University	$44,034.00	$37,617	$6,417	OPEN	Dombrowski Tonya	30-Jan-11
W08701	Herbicides In Fifteen Mile Watershed Investigation	2008	ER	Wasco Co SWCD	$34,267.00	$0	$34,267	OPEN	Dombrowski, Tonya	?

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W08702	Whychus Creek Restoration at Camp Polk	2008	ER	Upper Deschutes Watershed Council	$176,300.00	$58,128	$118,172	OPEN	Lamb, Bonnie	30-Apr-11
W08703	Ochoco Ck Stream Enhancement and Greenway Expansion	2008	ER	Crooked River Watershed Council	$77,316.00	$69,584	$7,732	OPEN	Lamb, Bonnie	30-Jun-10
W08704	Lampson Levee Setback & Channel Stability Project	2008	ER	Confederated Tribes of Umatilla Indian Reservation	$155,000.00	$0	$155,000	OPEN	Dombrowski Tonya	30-Jan-11
W08705	Nestucca Neskowin Streamside Planting /Maintenance	2008	NWR	Nestucca Neskowin Watershed Council	$60,000.00	$60,000	$0	OPEN	Apple, Bruce	31-Dec-09
W08706	Agriculture & Rural Residential Planting	2008	NWR	Tillamook County Estuary Partnership	$48,500.00	$48,473	$27	OPEN	Apple, Bruce	31-Dec-09
W08707	CCWF 2009	2008	NWR	Tillamook County Estuary Partnership	$5,000.00	$5,000	$0	CLOSED	Apple, Bruce	31-Aug-09
W08708	Gresham NPS Red. Program. Stream Outreach/Rest.	2008	NWR	City of Gresham	$58,350.00	$0	$58,350	OPEN	Apple, Bruce	30-Jun-10

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W08709	Upper Nehalem Riparian Rest & Basin WQ Monitoring	2008	NWR	Upper Nehalem Watershed Council	$53,786.00	$48,091	$5,695	OPEN	Apple, Bruce	31-Dec-09
W08710	Riparian & Wetland Restoration	2008	NWR	Columbia SWCD	$44,285.00	$33,547	$10,738	OPEN	Apple, Bruce	30-Apr-10
W08711	Dry Manure Storage Initiative	2008	NWR	Clatsop SWCD	$23,660.00	$23,660	$0	OPEN	Apple, Bruce	31-Dec-09
W08712	Rinearson Creek Project	2008	NWR	Willamette Riverkeeper	$22,101.00	$11,072	$11,029	OPEN	Apple, Bruce	30-Jun-10
W08713	N. Willamette Chemical Waste Collection	2008	NWR	Marion County SWCD	$19,469.82	$19,470	$0	CLOSED	Apple, Bruce	31-Dec-09
WRC#18	NPS #18 319 Recycled Project Dollars	2008	HQ SW	?	$2,919.18	$0	$2,919	OPEN	Camacho, Ivan	?
W08714	Siltcoos L. WQ & Macro Data Acquisition For TMDL	2008	WR	Portland State University	$85,953.00	$77,269	$8,684	OPEN	Waltz, David	31-Oct-09
W08715	Pringle Creek Riparian Pilot Project	2008	WR	City of Salem	$6,415.00	$990	$5,425	OPEN	Gramlich, Nancy	30-Sep-10

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W08716	Southern Willamette Valley GWMA Action Plan/Imp	2008	WR	Lane Council of Governments	$99,893.00	$46,379	$53,514	OPEN	Eldridge, Audrey	30-May-10
W08717	Mid-Coast Sediment Ass. & Source Ctrl Program	2008	WR	Siuslaw Watershed Council	$69,608.00	$54,588	$15,020	OPEN	Lindberg, Bobbie	31-Dec-09
W08718	Upper Willamette WQ Monitoring & Outreach Program	2008	WR	Middle Fork Willamette WS Council	$107,791.00	$49,792	$57,999	OPEN	Rubin, Jared	30-Dec-10
W08719	Purchase Water Quality Monitoring	2008	WR	Partnership for Umpqua Rivers	$33,220.00	$12,306	$20,914	OPEN	Heberling, Paul	31-Dec-10
W08720	Tenmile Lakes WQ Impl. Plan Phase Ii	2008	WR	City of Lakeside	$109,725.00	$28,729	$80,996	OPEN	Waltz, David	31-Jan-11
W08721	Bear Ck Ws WQIP Dev. & TMDL Implementation	2008	WR	Rogue Valley Council of Governments	$49,807.00	$40,264	$9,543	OPEN	Tugaw, Heather	31-Dec-09
W09700	WQ And Effect Monitoring in the Crooked R. WS	2009	ER	?	$80,000.00	$0	$80,000	OPEN	Lamb, Bonnie	?
W09701	Willow Creek Effectiveness Monitoring	2009	ER	Malheur Watershed Council	$50,000.00	$0	$50,000	OPEN	Dombrowski Tonya	21-Dec-12

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W09702	Alkali Creek Water Quality Enhancement	2009	ER	?	$35,000.00	$0	$35,000	OPEN	Dombrowski Tonya	?
W09703	Strip Tillage In Malheur & Owyhee Watersheds	2009	ER	Oregon State University	$83,565.00	$0	$83,565	OPEN	Dombrowski Tonya	01-Feb-11
W09704	Owyhee River Improvement Project - Phase 2	2009	ER	?	$35,000.00	$0	$35,000	OPEN	Dombrowski Tonya	?
W09705	City of Prineville Stormwater Pollution Reduction	2009	ER	City of Prineville	$70,000.00	$0	$70,000	OPEN	Dombrowski Tonya	31-Jul-11
W09706	LUBGWMA Action Plan Effectiveness Monitoring & Outreach	2009	ER	?	$38,000.00	$0	$38,000	OPEN	Richerson, Phil	?
W09707	Apple Sunburn Prevention Using Organic Biofilms	2009	ER	Oregon State University	$93,435.00	$0	$93,435	OPEN	Dombrowski Tonya	31-Jul-11
W09708	Clackamas Planting Outreach Project	2009	NWR	Clackamas River Basin Council	$40,928.00	$0	$40,928	OPEN	Apple, Bruce	31-Dec-10

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W09709	2009-10 NNWC Streamside Planting & Maintenance	2009	NWR	Nestucca Neskowin Watershed Council	$60,000.00	$6,342	$53,658	OPEN	Apple, Bruce	31-Dec-10
W09710	North Coast Watersheds Enhancement Project	2009	NWR	?	$40,000.00	$0	$40,000	OPEN	Apple, Bruce	?
W09711	Pilot Scale SW Master Planning W/Ecosystem Approach	2009	NWR	City of Damascus	$40,000.00	$0	$40,000	OPEN	Apple, Bruce	31-Dec-10
W09712	Up Nehalem Riparian Restoration & Basin WQ Monitor	2009	NWR	Upper Nehalem Watershed Council	$84,652.00	$0	$84,652	OPEN	Apple, Bruce	31-Dec-10
W09713	Circle Creek Enhancement Project Phase Three	2009	NWR	North Coast Land Conservancy	$30,495.00	$0	$30,495	OPEN	Apple, Bruce	31-Dec-10
W09714	Scapoose Creek Riparian Restoration	2009	NWR	Scappoose Bay Watershed Council	$30,000.00	$0	$30,000	OPEN	Apple, Bruce	31-Dec-10
W09715	2010 Tillamook Co Children Clean Water Festival	2009	NWR	Tillamook County Estuary Partnership	$5,000.00	$0	$5,000	OPEN	Apple, Bruce	31-Dec-10

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W09716	BYPP Year 7	2009	NWR	Tillamook County Estuary Partnership	$60,000.00	$0	$60,000	OPEN	Apple, Bruce	31-Dec-10
W09717	Tillamook SWCD 2007 Stream Enhance & Restoration	2009	NWR	Tillamook County SWCD	$40,000.00	$0	$40,000	OPEN	Apple, Bruce	31-Dec-10
W09718	Pesticide Stewardship Partnership	2009	NWR	?	$233,700.00	$97,559	$136,141	OPEN	Kishida, Koto	?
W09719	KOIN TV WQ Campaign	2009	NWR	?	$8,334.00	$8,334	$0	CLOSED	Danab, Marcia	?
WRC#19	Nps#19 Recycled Project Dollars	2009	HQ SW	?	$18,518.00	$0	$18,518	OPEN	Camacho, Ivan	?
W09720	Devil's Lake and D River WQ	2009	WR	?	$15,000.00	$0	$15,000	OPEN	Waltz, David	?
W09721	Coquille North Fork Drinking Water Source Protection	2009	WR	Coquille Watershed Association	$15,246.00	$0	$15,246	OPEN	Fern, Jackie	31-Mar-11
W09722	Targeted WQ Outreach to Isthmus & Coalbank Sloughs	2009	WR	Coos Watershed Association	$20,608.00	$0	$20,608	OPEN	Waltz, David	30-Nov-11

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W09723	Low Impact Dev. Workshops & Tech. Assist. Year 2	2009	WR	Oregon Environmental Council	$17,500.00	$0	$17,500	OPEN	Waltz, David	15-Dec-10
W09724	Sucker/Kelly Creeks Comm. Ed. Outreach	2009	WR	Forestry Action Committee	$5,000.00	$0	$5,000	OPEN	Tugaw, Heather	31-Dec-11
W09725	Coordinated Rogue Basin WQ Implementation Plan Dev	2009	WR	Rogue Valley Council of Governments	$45,769.00	$1,608	$44,161	OPEN	Tugaw, Heather	31-Dec-11
W09726	Little Butte Creek WQ Enhancement Project	2009	WR	Jackson County SWCD	$20,000.00	$0	$20,000	OPEN	Tugaw, Heather	30-Jun-11
W09727	Santiam-Calapooia Landowner Recruitment & Restoration	2009	WR	South Santiam Watershed Council	$79,868.00	$0	$79,868	OPEN	Wright, Pamela	30-Sep-11
W09728	School Restoration Program: Restoration, Design And Stormwater Management	2009	WR	Camas Education Network	$20,000.00	$0	$20,000	OPEN	Rubin, Jared	30-Jun-11
W09729	Impl. Monit. of Umpqua Basin, Diamond Lake TMDL	2009	WR	Partnership for Umpqua Rivers	$35,500.00	$0	$35,500	OPEN	Heberling, Paul	31-Dec-11

Table 17. Progress of NPS 319 Funded Projects (Grant Performance Report) (Cont.)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPENDITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W09730	Purchase Water Quality Monitoring & Thermal Refugia Equipment	2009	WR	Partnership for Umpqua Rivers	$32,425.00	$0	$32,425	OPEN	Heberling, Paul	30-Sep-11
W09731	GW Protection Ed. to Promote Citizen Involvement	2009	WR	Oregon State University	$67,985.00	$0	$67,985	OPEN	Eldridge, Audrey	30-Jun-11
W09732	Mid Coast Basin NPS Implementation Initiative	2009	WR	Lincoln SWCD	$75,581.00	$19,790	$55,791	OPEN	Lindberg, Bobbi	30-Sep-10
W09733	Streambank - Willamette Basin Riparian Restoration	2009	WR	Freshwater Trust	$60,000.00	$51,500	$8,500	OPEN	Michie, Ryan	30-Sep-12

APPENDIX 2

Table 18. DEQ's Geographic and Programmatic Priorities for 319 Funded Projects in 2009

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
EASTERN REGION **Storm-water**	Region Wide		Bacteria, nutrients, metals, turbidity, sediment	Targeted projects include water quality improvement specific to stormwater impacts including local planning, stakeholder and homeowner education and information program development, feasibility studies and similar efforts.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
John Day Basin Channel and Riparian Restoration Effectiveness Monitoring	Lower John Day, Middle Fork John Day, North Fork John Day, Upper John Day	TMDL in progress	Temperature Bacteria Biological criteria Dissolved oxygen Sediment	On the Middle Fork John Day River, targeted restoration projects include stream restoration activities in the area of on-going multi-year, multi-agency project work. On the North Fork and Upper John Day River, targeted restoration projects include those activities addressing bacteria, sediment and low dissolved oxygen. Basin-wide targeted restoration project elements include restoring morphologic function (increased sinuosity, decreased width/depth ratios, floodplain reconnection), revegetation of riparian area, increased instream flow. Targeted effectiveness monitoring projects include development and implementation of monitoring protocols to characterize the effectiveness of implementation projects and project types/elements specific to improving water quality and habitat in the Basin. Proposed project(s) are expected to include an extensive portion of the stream channel over time rather than isolated small-length segments. Projects correlated with and/or adjacent to other restoration work will be given priority.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Mid-Columbia – Hood Subbasin Channel and Riparian Restoration Effectiveness Monitoring	Western Hood Subbasin, Miles Creeks Subbasin	Western Hood TMDL approved by EPA (Jan 2002) Miles Creeks TMDL approved by EPA (Feb 2009)	Temperature Sediment Bacteria Pesticides	Targeted projects include activities addressing temperature, sediment, bacteria, and pesticides. Targeted restoration projects include stream restoration activity in the area of on-going multi-year, multi-agency project work. Targeted restoration project elements include restoring morphologic function (increased sinuosity, decreased width/depth ratios, floodplain reconnection), revegetation of riparian area, increased instream flow. Targeted effectiveness monitoring projects include development and implementation of monitoring protocols to characterize the effectiveness of implementation projects and project types/elements specific to improving water quality and habitat in the Basin. Proposed project(s) are expected to include an extensive portion of the stream channel over time rather than isolated small-length segments. Projects correlated with and/or adjacent to other restoration work will be given priority.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Mid-Columbia – Hood Subbasin Pesticide Stewardship Activities	Western Hood Subbasin, Miles Creeks Subbasin	Western Hood TMDL approved by EPA (Jan 2002) Miles Creeks TMDL approved by EPA (Feb 2009)	Pesticides	Targeted projects include the design and implementation of programs to reduce pesticide transport to surface and ground waters and related impacts to water quality and increase public awareness of improved pesticide use and application practices. Targeted project elements include development of methodologies to monitor and track trends associated with changes in application practices and development of a public education program to increase public awareness of water quality concerns and their role in the solution of identified problems, designing and implementing tools for outreach specific to reduction of pesticides in surface and ground waters and analysis of outreach success. Projects correlated with and/or adjacent to other implementation work will be given priority.
Malheur River Basin Pollutant Source Characterization	Lower Malheur Subbasin	TMDL in progress	Temperature Dissolved Oxygen Bacteria Pesticides Nutrients	Targeted projects include development and implementation of monitoring programs specific to source characterization of elevated water temperatures, nutrients, bacteria, and pesticide concentrations, and depressed dissolved oxygen in local surface and groundwater, and agricultural drains in support of targeting and refining TMDL implementation efforts and changes in management practices. Proposed project(s) are expected to include an extensive portion of the stream channel over time rather than isolated small-length segments. Projects correlated with and/or adjacent to other restoration work will be given priority.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Malheur River Basin Nutrient Reduction	Lower Malheur River, Willow Creek, and Bully Creek Subbasins	TMDL in progress	Temperature Dissolved Oxygen Bacteria Pesticides Nutrients	Targeted projects include research, design, and implementation activities that will reduce nutrient loading to the Lower Malheur River, its tributaries and groundwater in the Northern Malheur County GWMA. Projects correlated with and/or adjacent to other restoration work will be given priority.
Malheur River Basin Agricultural Implementation	Upper Malheur River Subbasin, Warm Springs Reservoir, Bully Creek	TMDL in progress	Temperature Dissolved Oxygen Bacteria Pesticides Nutrients	Targeted projects include riparian area restoration activities in the Malheur River Basin. Targeted project elements include revegetation, fencing, grazing management, irrigation management, and effectiveness monitoring to characterize watershed response to implementation projects. Proposed project(s) are expected to include an extensive portion of the stream channel over time rather than isolated small-length segments. Projects correlated with and/or adjacent to other restoration work will be given priority.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Malheur River Basin Changes in Agricultural Tillage Practices	Lower Malheur Subbasin	TMDL in progress	Pesticides Nutrients	Targeted projects include the design and implementation of programs to reduce tillage related impacts to water quality and increase public awareness of improved tillage practices. Targeted project elements include identification of mechanisms to provide ready local access to conservation tillage equipment for multiple producers/landowners, development of a public education program to increase public awareness of water quality concerns and their role in the solution of identified problems, designing and implementing tools for outreach specific to conservation tillage and analysis of outreach success. Proposed project(s) are expected to include substantial cropped acreage rather than small isolated sections. Projects correlated with and/or adjacent to other implementation work will be given priority.
Walla Walla River **Mid Columbia Basin** Milton-Freewater Levee Assessment and Potential Restructure	Walla Walla River	TMDL approved by EPA (Sept 2005)	Temperature	Targeted projects include the design and implementation of levee setbacks or restructure to allow increased sinuosity and floodplain reconnection while not contributing to downstream flooding risks. Targeted projects also include design and implementation of a community education program specific to the benefits and concerns associated with a levee setback. Projects should be designed to increase public awareness of water quality, fishery habitat and aesthetic improvements related to levee restructure. The Milton-Freewater Levee has been identified as a primary contributor to temperature increases in the river system. Feasibility, design, implementation, and public information projects should be constructed with the goal of allowing water-quality issues to help guide the identification of future levee construction/repair options.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Walla Walla River **Mid Columbia Basin** Upstream Levee Set back / Removal Assistance Opportunities	Walla Walla River	TMDL approved by EPA (Sept 2005)	Temperature	Targeted projects include the design and implementation of levee setbacks or removal on stream segments upstream of the Milton-Freewater levee to allow the river to reconnect with the historic floodplain while not contributing to downstream flooding risks. These projects should be designed to increase public awareness of water quality, fishery habitat and aesthetic improvements related to levee restructure. Projects correlated with and/or adjacent to other implementation work will be given priority.
Walla Walla River **Mid Columbia Basin** Pesticide Stewardship Activities	Walla Walla River	TMDL approved by EPA (Sept 2005)	Pesticides	Targeted projects include the design and implementation of programs to reduce pesticide transport to surface and ground waters and related impacts to water quality and increase public awareness of improved pesticide use and application practices. Targeted project elements include development of methodologies to monitor and track trends associated with changes in application practices and development of a public education program to increase public awareness of water quality concerns and their role in the solution of identified problems, designing and implementing tools for outreach specific to reduction of pesticides in surface and ground waters and analysis of outreach success. Projects correlated with and/or adjacent to other implementation work will be given priority.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

EASTERN REGION PROJECT PRIORITIES: GROUNDWATER MANAGEMENT AREAS (GWMAS)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(d)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Lower Umatilla Basin Ground Water Management Area (LUB-GWMA) Action Plan	Umatilla Subbasin Middle Columbia Basin	Lower Umatilla Basin GWMA established in 1990	Nitrate-Nitrogen	Targeted projects include those specific to reduction of nitrogen concentrations in groundwater including: • Research and development of activities or products, which will reduce nitrate loading to groundwater – Targeted projects should address one of the five potential nitrate sources identified in the GWMA. • Revise fertilizer guides and recommended BMPs – Revised guidelines should describe the deficiencies of the current documentation and the number of acres that will be affected by the revisions; as well as evaluate the environmental aspects of the revisions. • Document BMP implementation on the GWMA scale in a system that allows spatial analysis (e.g., GIS) – Develop and implement a program to track BMP implementation (temporally and spatially) to facilitate quantification and documentation of projects and allow analysis of and linkage to monitoring well water quality relative to BMP implementation. • Perform field scale BMP performance evaluations – Identify appropriate locations and mechanisms to perform evaluations of BMPs (both existing and experimental) at the field scale. Proposed project plans should have very well developed monitoring plans capable of documenting BMP performance. • Evaluation of the Mineralization N Test – Comparison of the mineralization N test to other commonly used analyses to allow more accurate budgeting of nitrogen in the GWMA.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

EASTERN REGION PROJECT PRIORITIES: GROUNDWATER MANAGEMENT AREAS (GWMAS)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(d)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Lower Umatilla Basin Ground Water Management Area (LUB-GWMA) (Cont.)				• Develop and implement groundwater workshop for growers and certified crop advisors – Develop and sponsor workshops specific to groundwater protection. Ensure that the content is consistent with the intent of the action plans and with groundwater protection goals of DEQ and ODA. • Develop outreach material/strategy for small acreage growers and/or lawn and garden care – Develop targeted outreach and education programs to educate and reduce loading from small acreage growers and homeowners within the GWMA.
Northern Malheur County Ground Water Management Area (NMC-GWMA) Nitrate Reduction	Lower Malheur River Subbasin	Northern Malheur County GWMA established in 1989	Nitrate-Nitrogen	Targeted projects include: • Research and development of activities or products, which will reduce nitrate loading to groundwater – Targeted projects should address a potential nitrate source identified in the GWMA. • Document BMP implementation on the GWMA scale in a system that allows spatial analysis (e.g., GIS) – Develop and implement a program to track BMP implementation (temporally and spatially) to facilitate quantification and documentation of projects and allow analysis of and linkage to monitoring well water quality relative to BMP implementation.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(d)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Coos Sub-basin ***4th field HUC**	Tenmile Lakes Basin - 5th field HUC	TMDL Implementation	Sediment & nutrient delivery from land management activities in the watershed; Nuisance and Harmful algae blooms; cyan toxins exceeding human health guidelines	Evaluation and interpretation of data acquired post-TMDL (e.g., cyanobacteria/algae monitoring data) to derive information and develop technical reports; explore relationships among pollutant loading, water quality and lake and environmental conditions. Determine if data adequately address data needs identified in the TMDL and WQMP, and identify data gaps and data needs. Data management: format and submit data for upload into LASAR. Establish/maintain an effective, accessible system for managing water quality and environmental data that is not currently categorized in the LASAR database (e.g., cyanobacteria/algae monitoring data). Monitoring water quality parameters to address remaining data gaps identified in the TMDL and WQMP. Engage in Partnerships to implement high priority projects identified in Designated Management Agencies' Implementation Plans.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(d)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Coos Sub-basin **4th field HUC**	Coos Estuary – Isthmus and Coalbank Sloughs	303(d) listed segments; TMDLs are currently pending development	Land development and management practices resulting in increased pollutant delivery and modified hydrology	Outreach and Education on pollution prevention (P2) measures to landowners, developers, and light industrial entities present on Isthmus Slough. Identification of specific areas for implementation of stormwater BMPs and/or Low Impact Development (LID) Demonstration projects. LID projects that reduce pollutant loading and interrupt accelerated pollutant delivery, including those resulting from stream channel modifications. Partnerships involving local jurisdictions (Cities of Coos Bay and North Bend) to better define pollutant loading into urban streams and into Coos Bay from stormwater runoff and stormwater conveyance systems (Pony & Blossom Creeks, Coalbank Slough)
Coos Sub-basin **4th field HUC**	Coos Estuary	303(d) listed segments; TMDLs are currently pending development	Elevated bacteria - Recreational Contact and Shellfish Growing Waters standards exceedance	Source assessment and "hotspot" identification to identify high priority projects with measurable bacterial reduction targets and that have demonstration potential

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Mid Coast Basin – TMDL Implementation and effectiveness monitoring	Siletz-Yaquina, Alsea, Siuslaw and Siltcoos Subbasins	In development; to be completed in 2010	Bacteria, temperature, Dissolved oxygen, Sedimentation	Funds for the Mid Coast Basin have already been allocated to a two-year project that began last year; however, smaller projects that fill gaps in effectiveness monitoring will be considered for this year.
Diamond Lake/Lemolo Reservoir / North Umpqua River	Diamond Lake Lake Creek Lemolo Reservoir North Umpqua River	TMDLs Adopted	Aquatic Weeds Algae pH	Continued monitoring of lake water quality and biology trends tracking restoration efforts and lake health. Includes impacts to downstream waters
Umpqua Basin **Umpqua, South Umpqua**	Streams providing & having potential to provide temperature refugia for main stems	TMDLs Adopted	Elevated water temperature	Improving and protecting riparian conditions. Riparian planting enhancement and/or restoration. Structures enhancing hyporheic flow. Needs includes identification of such areas of refugia and potential areas.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Umpqua Basin	Streams lacking system potential vegetation	TMDLs Adopted	Elevated water temperature	Improving and protecting riparian conditions. Riparian planting enhancement and/or restoration. Including structures enhancing hyporheic flow.
Umpqua Basin	Watersheds with specific load reduction needs as noted in TMDLs	TMDLs Adopted	Elevated bacteria and nutrients	Improving and protecting riparian conditions; Riparian planting enhancement and/or restoration, livestock fencing, and off-channel watering, and "other" source reduction implementation BMPs (RR, Urban, Cities, etc.)
Umpqua Basin	Streams with elevated levels above background	TMDLs Adopted	Bacteria and nutrients	Additional monitoring to further identify existing elevated levels of NP source loading. Also includes pre and post monitoring documenting effectiveness of project implementation measures
Umpqua Basin	Water Quality Plan Development and Implementation	TMDLs Adopted	All Parameters	Assistance to Designated Management Agencies (predominantly Cities and Douglas County) for WQMP development and Implementation. Refinement of Action Plans to WQIP

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Umpqua Basin	Areas of need (such as Sutherlin storm-water impacts to Sutherlin and Cook Creeks reducing toxics)	303(d) listed waters	Accelerated pollutant delivery	Storm-water management planning and implementation assistance for Local jurisdictions not required to develop storm-water plans (i.e., Urbanized Area not meeting designation for MS4 permit)
Umpqua Basin **Diamond Lake priority area**	All waters		Invasive Species	Outreach and Education Development of materials and programs to provide educational opportunities and awareness noting water quality beneficial use impairment possible from invasive species introductions

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Willamette River Basin (Outside Portland Metro) Subbasins: **Middle Willamette (River Mile** **50-108)** **North Santiam** **Upper Willamette Subbasin (River Mile108-187)**	Gibson Gulch Labish Ditch Amazon Creek Long Tom River Lukiamute River Tributaries Beaver, Boulder Pierce, Mackey, Morgan Creeks/ Tributaries to North Santiam Mission and Champoeg Creeks /Middle Willamette Tributaries	TMDLs Adopted and 303(d) listings	Arsenic Bacteria Dissolved Oxygen Mercury Pesticides Temperature Turbidity	Temperature reduction proposals addressing water quality conditions in both urban and rural settings Outreach for and implementation of collaborative riparian restoration projects in both urban and rural settings to address temperature and/or erosion of sediment on TMDL streams and tributaries and projects identified in TMDL Implementation Plans Stormwater planning and implementation of stormwater runoff control strategy or management practice to address erosion of sediments laden with parameters such as, bacteria, metals, pesticides (ex., retrofit surveys and project list; retrofit project; LID urban projects; conveyance mapping) Specific toxic/parameter reduction projects &/or special partner projects

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Willamette River Basin (Outside Portland Metro) Subbasins: **Middle Willamette (River Mile 50-108)** **South Santiam**	Rickreall Creek and Tributaries South Santiam River Tributaries/Hamilton, Ames, and Noble Creek tributaries	TMDLs Adopted and 303(d) listings	Bacteria Dissolved Oxygen Iron Mercury Nitrates Pesticides Temperature	Stormwater planning and implementation of stormwater runoff control strategy or management practice to address erosion of sediments laden with parameters such as, bacteria, metals, pesticides (ex., retrofit surveys and project list; retrofit project; LID urban projects; conveyance mapping) Special partner projects for the implementation of educational measures addressing illicit discharge for the protection of water quality in urban areas
Willamette River Basin (Outside Portland Metro) Subbasins: **Coast Fork** **McKenzie** **Middle Fork**	Mohawk River Tributaries Little Fall Creek and Tributaries Coast Fork Tributaries	TMDLs Adopted and 303(d) Listings	Bacteria Dissolved Oxygen Mercury Pesticides Temperature	Stormwater planning and implementation of stormwater runoff control strategy or management measure to address erosion of sediments laden with parameters such as, bacteria, metals, pesticides(ex., retrofit surveys and project list; retrofit project; LID urban projects; conveyance mapping) Outreach for and implementation of collaborative riparian restoration projects in urban and/or rural settings to address temperature and/or erosion of sediment on TMDL streams and tributaries and projects identified in TMDL Implementation Plans

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Willamette River Basin (Outside Portland Metro) Subbasins: **- Pudding** **- Yamhill**	Pudding River and tributaries (e.g., Brush, Mill, Little Pudding, Senecal, Zollner and Silver Creeks; Labish Ditch; Walker Ditch) Yamhill River and tributaries	TMDLs Adopted, TMDLs Under Development, and 303(d) Listings	Bacteria Dissolved Oxygen Iron Mercury Nitrates Temperature Legacy and Current Use Pesticides	Temperature reduction proposals addressing water quality conditions in both urban and rural settings (e.g., Temperature trading plan) Specific toxic/parameter reduction or bacteria reduction projects &/or special partner projects (e.g., pesticide collection events, legacy pesticide hotspot monitoring, education/outreach to rural and agricultural landowners in areas of reduced pesticides, manure management, fertilizer management) Development of riparian or stormwater control ordinances for small sized communities Stormwater planning and implementation of stormwater runoff control strategy or management measure (ex., retrofit project; LID urban project, conveyance mapping) Outreach for and implementation of collaborative riparian restoration projects in urban and/or rural settings to address temperature and/or erosion of sediment on TMDL streams and tributaries and projects identified in TMDL Implementation Plans

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Rogue Basin	Upper Rogue HUC 17100307 Middle Rogue HUC 17100308 Lower Rogue HUC 17100310 Illinois HUC 17100311	TMDLs Adopted	Temperature Bacteria	Implementation of efforts identified in Water Quality Implementation Plans (WQIP) or Water Quality Management Plans (WQMP). Potentially including: • development of riparian ordinance, • stormwater management for non-phase II communities, • low impact development projects, • improvement of riparian shade and function, • control livestock access to streams, • irrigation improvement projects • Science-based projects to restore floodplain connectivity and natural wood recruitment.
Rogue Basin	Applegate HUC 17100309	TMDLs Adopted	Temperature Sedimentation	Implementation of efforts identified in Water Quality Implementation Plans (WQIP) or Water Quality Management Plans (WQMP). Potentially including: • improvement of riparian shade and function, • control sediment sources, • control livestock access to stream • Science-based projects to restore floodplain connectivity and natural wood recruitment.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Rogue Basin	Lobster Creek HUC 1710031007 Sucker Creek HUC 1710031103	TMDLs Adopted	Temperature	Implementation of efforts identified in Water Quality Implementation Plans (WQIP) or Water Quality Management Plans (WQMP). Potentially including: • improvement of riparian shade and function, • control sediment sources, • control livestock access to stream • Science-based projects to restore floodplain connectivity and natural wood recruitment.
Rogue Basin	Bear Creek HUC 1710030801	TMDLs Adopted	Temperature bacteria sedimentation aquatic weeds or algae phosphorus dissolved oxygen	Implementation of efforts identified in Water Quality Implementation Plans (WQIP) or Water Quality Management Plans (WQMP). Potentially including: • development of riparian ordinance, • stormwater management for non-phase II communities, • low impact development projects, • improvement of riparian shade and function, • irrigation improvement projects, • control livestock access to streams, • Science-based projects to restore floodplain connectivity and natural wood recruitment.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Rogue Basin	Bear Creek HUC 1710030801	303(d) listing	mercury	Investigation of Emigrant Lake 303(d) listing for mercury.
Rogue Basin	Upper Rogue, HUC 17100307	303(d) listing	Cyanobacteria (Blue-Green Algae)	Investigation of lost Creek Lake, Lake Slemac or other 303-(d) listed waterbodies for Cyanobacteria (blue-green algae).
Rogue Basin	Lower Rogue, HUC 17100310	Category 3B	bacteria – shellfish standard	Investigation of the Rogue estuary 303(d) listing for bacteria.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: DRINKING WATER SOURCE PROTECTION (DWSP)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Siletz-Yaquina Sub-basin	Drinking water source areas upstream of Newport intake	Source water assessments complete	Bacteria, toxics, sediment, nutrients	Projects addressing higher risk nonpoint source potential contamination documented in DEQ/DHS Source Water Assessments including: stormwater, forest management, agricultural activities, land application sites, and/or river recreation. Projects that include multiple stakeholders/water systems will be given priority. Project activities can supplement TMDL implementation efforts.
Umpqua Basin – South Umpqua	Tributaries and sections of the South Umpqua River within Drinking Water Source Areas	Approved TMDLs; Source Water Assessments Complete	Elevated bacteria and nutrients, toxics, sediment; public water systems reporting high E. coli counts to EPA	Projects addressing higher risk nonpoint source potential contamination documented in DEQ/DHS Source Water Assessments including agriculture and forest management. Projects that also address TMDL implementation efforts are encouraged.
Rogue Basin	Drinking Water Source Areas upstream of Gold Beach intake	Approved TMDLs, Source Water Assessments Complete	Bacteria, toxics, sediment, nutrients	Projects addressing higher risk nonpoint source potential contamination documented in DEQ/DHS Source Water Assessments including: forest management, stormwater, agriculture, and residential land-use activities. Projects that include multiple stakeholders/water systems will be given priority. Projects that also address TMDL implementation efforts are encouraged.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: DRINKING WATER SOURCE PROTECTION (DWSP)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Coquille Sub-basin	Drinking water source areas within sub-basin	Source water assessments complete	Bacteria, toxics, sediment, nutrients	Projects addressing higher risk nonpoint source potential contamination documented in DEQ/DHS Source Water Assessments including stormwater, agricultural activities, and forest management. Project activities can supplement TMDL development efforts.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

WESTERN REGION PROJECT PRIORITIES: GROUNDWATER MANAGEMENT AREAS (GWMAS)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Western Region	Southern Willamette Valley Groundwater Management Area	GWMA	Nitrate in groundwater	Analysis: Gaps analysis based on the GWMA Action Plan Evaluation. Identify any actions needed to complete strategies, and any strategies that are either missing or require some modifications to arrive at the GWMA goal. Prioritize based on GWMA Committee criteria. Marketing: Prepare and implement a social marketing program. Include the use of focus Groups for branding the GWMA, identifying barriers for recognition; and/or targeting residents and farmers and their barriers for testing water/using aquifer-safe fertilizer/irrigation practices. Outreach: Prepare GWMA materials for other agencies. Include a train-the- trainer program. Follow-up on commitment from other agencies to use and present. Tour with involved agencies, staff, etc. Implementation: Implement priority strategies in the GWMA Action Plan, as identified by the GWMA Committee. Assist with GWMA Committee meeting preparations, schedule, and follow-up with meeting minutes.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

NORTHWEST REGION PROJECT PRIORITIES: DRINKING WATER SOURCE PROTECTION (DWSP) *AREAS IDENTIFIED CAN BE FOUND AT: HTTP://WWW.DEQ.STATE.OR.US/WQ/DWP/RESULTS.HTM*				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
All NWR Basins	Drinking water source areas with focus on riparian areas/sensitive areas affecting intakes and sensitive areas contributing to groundwater wells.	Source Water Assessments should be completed prior to awarding 319 funding	Bacteria, Blue green algae Toxics (emerging pollutants) Sediment Nutrients	Projects addressing higher risk nonpoint source potential contamination within sensitive areas based on data and recommendations from the DEQ/DHS Source Water Assessment reports and surface water sampling (by USGS and DEQ) including: household hazardous waste, stormwater, pesticides, agricultural crops, nurseries, forestry, and onsite septic systems. Activities can supplement TMDL implementation activities.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

NORTHWEST REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
All NWR Basins/ TMDL **Implementation**	Clackamas, Lower Willamette, Molalla, North Coast, Tillamook, Tualatin.	TMDLs completed	Temperature Bacteria Dissolved Oxygen Nutrients (phosphorus) Sediment Toxics (mercury)	**Riparian & In-channel restoration** (erosion control, Large wood placement). **Pesticide partnership projects** and/or specific toxic reduction projects. **Innovative stormwater planning/tools, education and demonstration projects** (includes hydromodification modeling, tools, and low impact development approaches practices (LIDA)). **Agriculture BMPs** (includes fencing & digester projects)
All NWR Basins/ TMDL **Implementation**	Clackamas, Lower Willamette, North Coast, Tillamook, Tualatin,	TMDLs completed Implementation plans in place	Temperature Bacteria Nutrients (phosphorus) Sediment Toxics (mercury)	**Project or TMDL (watershed) Effectiveness Monitoring.** Evaluating effectiveness of projects, strategies, and desired outcomes (e.g., increased shade, lower pollutant levels, water quality TMDLs targets met).

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

NORTHWEST REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Molalla River/TMDL Implementation	Mainstem	Completed December 2008	Temperature	Restoration/protection activities in upper mainstem coordinated with BLM recreation corridor planning and Molalla River Alliance planning; TMDL implementation monitoring for cities of Canby, Molalla, Scotts Mills, Clackamas County, and DOGAMI. Molalla Irrigation District TMDL implementation plan Field studies and/or models to quantify hyporheic flow; Studies to better understand geomorphology and hydrology (specifically channel widening) that help identify stable restoration areas and reaches that should be protected.
	North Fork		Temperature	Riparian restoration Monitoring pre/post logging; Land acquisition Road abandonment.
	Milk Creek		Temperature	Riparian restoration; Stream flow monitoring.
	Table Rock Fork		Temperature	Riparian restoration/protection activities coordinated with BLM recreation corridor planning and Molalla River Alliance planning; Road abandonment.

Table 18. DEQ's Geographic and Programmatic Priorities for 319-Funded Projects in 2009 (Cont.)

NORTHWEST REGION PROJECT PRIORITIES: TMDLS/303(d)				
BASIN / PRIORITY ACTIVITY	**SPECIFIC LOCATION**	**STATUS: TMDLS/ 303(D)**	**WATER QUALITY PROBLEM**	**PROJECT NEED**
Lakes	Blue Lake	Data Collection	Nutrients Algae Invasive Weeds pH	Invasive weed harvesting/prevention/education efforts; Pilot projects demonstrating invasive weed control techniques; Boat cleaning station; Equipment and apparatus associated with aquatic weed and blue-green algae control; Water quality, phytoplankton, and plankton project effectiveness monitoring.

APPENDIX 3

Review of Willamette Basin TMDL Implementation Plans in Meeting Watershed Planning Components with Nine Key NPS Elements.

The following Willamette River Basin TMDL Implementation Plans were reviewed to determine how closely these most recent plans meet EPA's Watershed Planning components and Nine Key NPS elements:

- City of Eugene
- City of Creswell
- City Of Lowell
- Benton County
- Upper Willamette and Upper Siuslaw Agricultural Water Quality Management Area Plan (AgWQMAP)
- BLM Water Quality Restoration Plan (WQRP) (TMDL Implementation Plan)

It is important to note that this information is for program review only. None of the DMA TMDL Implementation plans will be required to be revised based on this evaluation. These plans have been determined by DEQ to meet Oregon's TMDL rule, OAR 340-042-0025 and DEQ's current TMDL Implementation Plan Guidance Document (http://www.deq.state.or.us/WQ/TMDLs/docs/impl/07wq004tmdlimplplan.pdf).

CITY OF EUGENE

Table 19. City of Eugene TMDL Implementation Plan.

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 1		
a. Include the geographic extent of the watershed covered by the plan.	Yes	Geographic information is included in the TMDL Implementation Plan and attached City Stormwater Management Plan (SWMP).
b. Identify the measurable water quality goals, including the appropriate water quality standards and designated uses.	Yes	Water quality standards and designated uses were identified in the TMDL Implementation Plan and SWMP.
c. Identify the causes & sources or groups of similar sources that need to be controlled to achieve the water quality standards.	Yes	Included in the TMDL Implementation Plan and SWMP.
d. Break down the sources to the subcategory level.	Yes/No	The TMDL Implementation Plan and SWMP partially identifies the subcategories of pollutant sources and states that the city will develop plans/maps of the sources. However, it is unclear whether this portion of the EPA element will be completed: "*Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X linear miles of eroded streambank needing remediation)*".
e. Estimate the pollutant loads entering the waterbody.	No	The TMDL load allocations and specific pollutant load estimates by category and subcategory, as per EPA's Element 1.d., above are not included in the TMDL Implementation Plan.

CITY OF EUGENE

Table 19. City of Eugene TMDL Implementation Plan. (Cont.)

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 2		
Determine the pollutant load reductions needed to meet the water quality goals.	No	Specific pollutant load reductions needed to meet the TMDL Load Allocations (NPS) by category and subcategory is not included in the TMDL Implementation Plan. However, pollutant load reductions to meet the TMDL Waste Load Allocations (WLAs) from urban stormwater runoff covered by MS4 NPDES permits were included in the SWMP. This Element specifically requires: *"On the basis of the existing source, loads estimated for element 1, you will similarly determine the reductions needed to meet the water quality standards. You will then identify various management measures (see element 3 below) that will help to reduce the pollutant loads and estimate the load reductions expected as a result of these management measures to be implemented, recognizing the difficulty in precisely predicting the performance of management measures over time. Estimates should be provided at the same level as that required in the scale and scope component in paragraph 1 (e.g., the total load reduction expected for dairy cattle feedlots, row crops, or eroded streambanks)."*

CITY OF EUGENE

Table 19. City of Eugene TMDL Implementation Plan. (Cont.)

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 3		
a. Identify the management measures that need to be implemented to achieve the load reductions.	Yes/No	General management measures are mostly identified in the TMDL Implementation Plan. Except for locations of NPDES MS4 regulated stormwater systems; specific measures for NPS sources of pollution, such as location of all needed riparian and wetland restoration areas and locations of streambank erosion needing repair, are not identified in the plan as required by this EPA Element: *"The plan should describe the management measures that need to be implemented to achieve the load reductions estimated under element 2, as well as to achieve any additional pollution prevention goals called out in the watershed plan (e.g., habitat conservation & protection)."*
b. Identify critical areas in which management measures are needed.	Yes/No	The TMDL Implementation Plan & SWMP include development of a stormwater systems & a water quality overlay map that identify critical riparian areas where water quality protection actions are needed. However, there is no mention of identifying the need for & specific riparian & wetland restoration areas. In addition, the management measures identified in Element 3.a. are not identified as per: *"Pollutant loads will vary even within land use types, so the plan should also identify the critical areas in which those measures will be needed to implement the plan. This description should be detailed enough to guide implementation activities and can be greatly enhanced by identifying on a map priority areas & practices."*
Element 4		
a. Estimate the costs to implement the plan, including management measures, administration, information/education activities, and monitoring.	No	Not included in the TMDL Implementation Plan. The SWMP for permitted stormwater does include detailed cost figures.

CITY OF EUGENE

Table 19. City of Eugene TMDL Implementation Plan. (Cont.)

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 4		
b. Identify the sources and amounts of financial and technical assistance and associated authorities available to implement the management measures.	Yes/No	The TMDL Implementation Plan does include the associated authorities available, but not the sources or amounts, of financial assistance to implement the NPS management measures as per EPA's requirements for this Element: "*This includes implementation and long-term operation and maintenance of management measures, information/education activities, monitoring, and evaluation activities. You should also document which relevant authorities might play a role in implementing the plan. Shortfalls between needs and available resources should be identified and addressed in the plan.*"
Element 5		
Prepare an information/education component that identifies the education and outreach activities needed for implementing the watershed management plan.	Yes	The TMDL Implementation Plan includes information/education activities that may support the adoption and long-term operation and maintenance of management practices and support stakeholder involvement efforts.
Element 6		
Develop a schedule for implementing the plan.	Yes	The TMDL Implementation Plan includes a schedule for the completion of selected management actions.
Element 7		
Develop interim, measurable milestones for determining whether management measures are being implemented.	Yes	The TMDL Implementation Plan does identify the process and timing for review of the Implementation Plan, implementation progress, and revision of the Plan as necessary.

CITY OF EUGENE

Table 19. City of Eugene TMDL Implementation Plan. (Cont.)

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 8		
Develop a set of criteria to determine whether loading reductions are being achieved and progress is being made toward attaining (or maintaining) water quality goals, and specify what measures will be taken if progress has not been demonstrated.	No	The TMDL Implementation Plan does not meet this element: *"... indicate how you will determine whether the watershed plan needs to be revised if interim targets are not met. As projects are implemented in the watershed, you will need water quality benchmarks to track progress. The criteria in element 8 (not to be confused with water quality criteria in state regulations) are the benchmarks or waypoints to measure against through monitoring. These interim targets can be direct measurements (e.g., fecal coliform concentrations) or indirect indicators of load reduction (e.g., number of beach closings). These revisions could involve changing management practices, updating the loading analyses, & reassessing the time it takes for pollution concentrations to respond to treatment."*
Element 9		
a. Develop a monitoring component to determine whether the plan is being implemented appropriately and whether progress toward attainment or maintenance of water quality goals is being achieved.	Yes/No	The TMDL Implementation Plan includes a TMDL Implementation Tracking Matrix and a monitoring component to determine whether the plan is being implemented appropriately. However, the plan does mention the need for but does not include a monitoring component to determine whether progress toward attainment or maintenance of water quality goals is being achieved as per this element requirement: *"The watershed plan should include a monitoring component to determine whether progress is being made toward attaining or maintaining the applicable water quality standards. The monitoring program should be fully integrated with the established schedule and interim milestone criteria identified above. The monitoring component should be designed to determine whether loading reductions are being achieved over time and substantial progress in meeting water quality standards is being made. Watershed-scale monitoring can be used to measure the effects of multiple programs, projects, and trends over time. Instream monitoring does not have to be conducted for individual BMPs unless that type of monitoring is particularly relevant to the project."*

CITY OF EUGENE

Table 19. City of Eugene TMDL Implementation Plan. (Cont.)

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 9		
b. Evaluation framework.	Yes	The TMDL Implementation Plan does include an evaluation process.

CITY OF CRESWELL

Table 20. City of Creswell TMDL Implementation Plan.

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 1		
a. Include the geographic extent of the watershed covered by the plan.	Yes	Geographic information in the TMDL Implementation Plan.
b. Identify the measurable water quality goals, including the appropriate water quality standards and designated uses.	Yes/No	Designated uses were only identified in the TMDL. The water quality standards were identified partially in the TMDL Implementation Plan and all in the TMDL.
c. Identify the causes & sources or groups of similar sources that need to be controlled to achieve the water quality standards.	Yes	Included in the TMDL Implementation Plan.
d. Break down the sources to the subcategory level.	No	The TMDL Implementation Plan does not include this EPA element: *"Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation)".*
e. Estimate the pollutant loads entering the waterbody.	Yes/No	The TMDL load allocations are included in the TMDL Implementation Plan. However, specific pollutant load estimates by category and subcategory, as per EPA's Element 1.d., above, is not included in the TMDL Implementation Plan.

CITY OF CRESWELL

Table 20. City of Creswell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 2		
Determine the pollutant load reductions needed to meet the water quality goals.	Yes/No	The TMDL load allocations are included in the TMDL Implementation Plan. However, specific pollutant load reductions needed to meet the load allocations by category and subcategory is not included in the TMDL Implementation Plan. This Element specifically requires: *"On the basis of the existing source, loads estimated for element 1, you will similarly determine the reductions needed to meet the water quality standards. You will then identify various management measures (see element 3 below) that will help to reduce the pollutant loads and estimate the load reductions expected as a result of these management measures to be implemented, recognizing the difficulty in precisely predicting the performance of management measures over time. Estimates should be provided at the same level as that required in the scale and scope component in paragraph 1 (e.g., the total load reduction expected for dairy cattle feedlots, row crops, or eroded streambanks)."*
Element 3		
a. Identify the management measures that need to be implemented to achieve the load reductions.	Yes/No	General management measures are mostly identified in the TMDL Implementation Plan. However, specific measures identified in Table 2, such as location of all needed riparian and wetland restoration areas, locations of streambank erosion needing repair, and locations of existing septic onsite systems with known failing systems are not identified in the plan as required by this EPA Element: *"The plan should describe the management measures that need to be implemented to achieve the load reductions estimated under element 2, as well as to achieve any additional pollution prevention goals called out in the watershed plan (e.g., habitat conservation and protection)."*

CITY OF CRESWELL

Table 20. City of Creswell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 3		
b. Identify critical areas in which management measures are needed.	Yes/No	The TMDL Implementation Plan identifies some critical areas for riparian and wetland restoration but not all areas. The Plan also includes development of a City of Creswell Stormwater Master Plan which will include a stormwater systems map that identifies areas where water quality protection actions. However, there is no mention of whether or the timing of sending to DEQ or incorporating the map into the TMDL Implementation Plan. In addition, the management measures identified in Element 3 a., above, is not identified as required by this EPA Element: *"Pollutant loads will vary even within land use types, so the plan should also identify the critical areas in which those measures will be needed to implement the plan. This description should be detailed enough to guide implementation activities & can be greatly enhanced by identifying on a map priority areas & practices."*
Element 4		
a. Estimate the costs to implement the plan, including management measures, administration, information/education activities, and monitoring.	No	Not included in the TMDL Implementation Plan.

CITY OF CRESWELL

Table 20. City of Creswell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 4		
b. Identify the sources and amounts of financial and technical assistance and associated authorities available to implement the management measures.	Yes/No	The TMDL Implementation Plan includes the sources of financial assistance available to implement the management measures. However, the Plan does not address the amounts of financial and technical assistance and associated authorities available to implement the management measures as per EPA's requirements for this Element: "*This includes implementation and long-term operation and maintenance of management measures, information/education activities, monitoring, and evaluation activities. You should also document which relevant authorities might play a role in implementing the plan. Shortfalls between needs and available resources should be identified and addressed in the plan.*"
Element 5		
Prepare an information/education component that identifies the education and outreach activities needed for implementing the watershed management plan.	Yes	The TMDL Implementation Plan includes information/education activities that may support the adoption and long-term operation and maintenance of management practices and support stakeholder involvement efforts.
Element 6		
Develop a schedule for implementing the plan.	Yes	The TMDL Implementation Plan includes a schedule for the completion of selected management actions.

CITY OF CRESWELL

Table 20. City of Creswell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 7		
Develop interim, measurable milestones for determining whether management measures are being implemented.	Yes	The TMDL Implementation Plan generally identifies that the City of Creswell and the DEQ will periodically review the Implementation Plan and implementation progress and will revise the Plan as necessary.
Element 8		
Develop a set of criteria to determine whether loading reductions are being achieved and progress is being made toward attaining (or maintaining) water quality goals, and specify what measures will be taken if progress has not been demonstrated.	Yes/No	The TMDL Implementation Plan meets one of this Element needs: *"... indicate how you will determine whether the watershed plan needs to be revised if interim targets are not met*". However, the following parts of the Element are not met: *"As projects are implemented in the watershed, you will need water quality benchmarks to track progress. The criteria in element 8 (not to be confused with water quality criteria in state regulations) are the benchmarks or waypoints to measure against through monitoring. These interim targets can be direct measurements (e.g., fecal coliform concentrations) or indirect indicators of load reduction (e.g., number of beach closings). These revisions could involve changing management practices, updating the loading analyses, and reassessing the time it takes for pollution concentrations to respond to treatment."*

CITY OF CRESWELL

Table 20. City of Creswell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 9		
a. Develop a monitoring component to determine whether the plan is being implemented appropriately and whether progress toward attainment or maintenance of water quality goals is being achieved.	Yes/No	The TMDL Implementation Plan includes a TMDL Implementation Tracking Matrix, which includes status reporting every five years. The Plan does state that an annual evaluation could occur if the city or DEQ requests. Regarding monitoring, the Plan includes the following discussion: *"The ultimate success of TMDL implementation activities will be measured by the delisting of 303(d) listed streams throughout the Willamette Basin. Those de-listings will occur once supported by water quality monitoring data at key points throughout the Basin. Those sampling activities are best conducted by entities with broad oversight and/or involvement rather than by individual jurisdictions like Creswell. However, if an organization, such as the DEQ or the Coast Fork Watershed Council determines that a sampling site within the City of Creswell is important to an overall sampling program the City will support them in their efforts to establish a consistent sampling location."* This, however, does not fully meet the monitoring component as required by this Element: *"The watershed plan should include a monitoring component to determine whether progress is being made toward attaining or maintaining the applicable water quality standards. The monitoring program should be fully integrated with the established schedule and interim milestone criteria identified above. The monitoring component should be designed to determine whether loading reductions are being achieved over time and substantial progress in meeting water quality standards is being made. Watershed-scale monitoring can be used to measure the effects of multiple programs, projects, and trends over time. Instream monitoring does not have to be conducted for individual BMPs unless that type of monitoring is particularly relevant to the project."*
b. Develop an evaluation framework.	Yes/No	The TMDL Implementation Plan includes an evaluation process, but does not fully meet this Element as noted above.

CITY OF LOWELL

Table 21. City of Lowell TMDL Implementation Plan.

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 1		
a. Include the geographic extent of the watershed covered by the plan.	Yes	Geographic information in the TMDL Implementation Plan.
b. Identify the measurable water quality goals, including the appropriate water quality standards and designated uses.	Yes/No	Water quality standards and designated uses were identified partially in the TMDL Implementation Plan and all in the TMDL.
c. Identify the causes & sources or groups of similar sources that need to be controlled to achieve the water quality standards.	Yes	Included in the TMDL Implementation Plan.
d. Break down the sources to the subcategory level.	No	The TMDL Implementation Plan does not include this EPA element: "*Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation)*".
e. Estimate the pollutant loads entering the waterbody.	Yes/No	The TMDL load allocations are included in the TMDL Implementation Plan. However, specific pollutant load estimates by category and subcategory, as per EPA's Element 1.d., above, is not included in the TMDL Implementation Plan.

CITY OF LOWELL

Table 21. City of Lowell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 2		
Determine the pollutant load reductions needed to meet the water quality goals.	Yes/No	The TMDL load allocations are included in the TMDL Implementation Plan. However, specific pollutant load reductions needed to meet the load allocations by category and subcategory is not included in the TMDL Implementation Plan. This Element specifically requires: *"On the basis of the existing source, loads estimated for element 1, you will similarly determine the reductions needed to meet the water quality standards. You will then identify various management measures (see element 3 below) that will help to reduce the pollutant loads and estimate the load reductions expected as a result of these management measures to be implemented, recognizing the difficulty in precisely predicting the performance of management measures over time. Estimates should be provided at the same level as that required in the scale and scope component in paragraph 1 (e.g., the total load reduction expected for dairy cattle feedlots, row crops, or eroded streambanks)."*
Element 3		
a. Identify the management measures that need to be implemented to achieve the load reductions.	Yes/No	General management measures are mostly identified in the TMDL Implementation Plan. However, specific measures, such as location of all needed riparian and wetland restoration areas, locations of streambank erosion needing repair, and locations of existing septic onsite systems with known failing systems are not identified in the plan as required by this EPA Element: *"The plan should describe the management measures that need to be implemented to achieve the load reductions estimated under element 2, as well as to achieve any additional pollution prevention goals called out in the watershed plan (e.g., habitat conservation and protection)."*

CITY OF LOWELL

Table 21. City of Lowell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 3		
b. Identify critical areas in which management measures are needed.	Yes/No	The TMDL Implementation Plan identifies the need to identify critical areas for riparian and wetland restoration. The Plan also includes development of a Stormwater Master Plan which will include a stormwater systems map that identifies areas where water quality protection actions. However, there is no mention of whether or the timing of sending to DEQ or incorporating the map into the TMDL Implementation Plan. In addition, the management measures identified in Element 3 a., above, is not identified as required by this EPA Element: *"Pollutant loads will vary even within land use types, so the plan should also identify the critical areas in which those measures will be needed to implement the plan. This description should be detailed enough to guide implementation activities and can be greatly enhanced by identifying on a map priority areas and practices."*
Element 4		
a. Estimate the costs to implement the plan, including management measures, administration, information/education activities, and monitoring.	No	Not included in the TMDL Implementation Plan.

CITY OF LOWELL

Table 21. City of Lowell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 4		
b. Identify the sources and amounts of financial and technical assistance and associated authorities available to implement the management measures.	No	The TMDL Implementation Plan does not include the source, amounts of financial assistance, and associated authorities available to implement the management measures as per EPA's requirements for this Element: "*This includes implementation and long-term operation and maintenance of management measures, information/education activities, monitoring, and evaluation activities. You should also document which relevant authorities might play a role in implementing the plan. Shortfalls between needs and available resources should be identified and addressed in the plan.*"
Element 5		
Prepare an information/education component that identifies the education and outreach activities needed for implementing the watershed management plan.	Yes	The TMDL Implementation Plan includes information/education activities that may support the adoption and long-term operation and maintenance of management practices and support stakeholder involvement efforts.
Element 6		
Develop a schedule for implementing the plan.	Yes	The TMDL Implementation Plan includes a schedule for the completion of selected management actions.
Element 7		
Develop interim, measurable milestones for determining whether management measures are being implemented.	No	The TMDL Implementation Plan does not identify a process or timing for review of the Implementation Plan, implementation progress, and revision of the Plan as necessary.

CITY OF LOWELL

Table 21. City of Lowell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 8		
Develop a set of criteria to determine whether loading reductions are being achieved and progress is being made toward attaining (or maintaining) water quality goals, and specify what measures will be taken if progress has not been demonstrated.	No	The TMDL Implementation Plan does not meet this element: *"... indicate how you will determine whether the watershed plan needs to be revised if interim targets are not met. As projects are implemented in the watershed, you will need water quality benchmarks to track progress. The criteria in element 8 (not to be confused with water quality criteria in state regulations) are the benchmarks or waypoints to measure against through monitoring. These interim targets can be direct measurements (e.g., fecal coliform concentrations) or indirect indicators of load reduction (e.g., number of beach closings). These revisions could involve changing management practices, updating the loading analyses, and reassessing the time it takes for pollution concentrations to respond to treatment."*
Element 9		
a. Develop a monitoring component to determine whether the plan is being implemented appropriately and whether progress toward attainment or maintenance of water quality goals is being achieved.	Yes/No	The TMDL Implementation Plan includes a TMDL Implementation Tracking Matrix and stormwater point discharges for bacteria and mercury. However, the plan does not fully meet this element requirement: *"The watershed plan should include a monitoring component to determine whether progress is being made toward attaining or maintaining the applicable water quality standards. The monitoring program should be fully integrated with the established schedule and interim milestone criteria identified above. The monitoring component should be designed to determine whether loading reductions are being achieved over time and substantial progress in meeting water quality standards is being made. Watershed-scale monitoring can be used to measure the effects of multiple programs, projects, and trends over time. Instream monitoring does not have to be conducted for individual BMPs unless that type of monitoring is particularly relevant to the project."*

CITY OF LOWELL

Table 21. City of Lowell TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 9		
b. Develop an evaluation framework.	No	The TMDL Implementation Plan does not include an evaluation process.

BENTON COUNTY

Table 22. Benton County TMDL Implementation Plan.

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 1		
a. Include the geographic extent of the watershed covered by the plan.	Yes	Geographic information is included in the TMDL Implementation Plan as a narrative description of Benton County and the major and minor tributaries that flow into the Willamette.
b. Identify the measurable water quality goals, including the appropriate water quality standards and designated uses.	Yes/No	Water quality standards and designated uses were partially identified in the TMDL Implementation Plan and all in the TMDL.
c. Identify the causes & sources or groups of similar sources that need to be controlled to achieve the water quality standards.	Yes	Included in the TMDL Implementation Plan.
d. Break down the sources to the subcategory level.	No	The TMDL Implementation Plan does not include this EPA element: "*Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation)*".
e. Estimate the pollutant loads entering the waterbody.	No	The TMDL load allocations and specific pollutant load estimates by category and subcategory, as per EPA's Element 1.d., above are not included in the TMDL Implementation Plan.

BENTON COUNTY

Table 22. Benton County TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 2		
Determine the pollutant load reductions needed to meet the water quality goals.	No	Specific pollutant load reductions needed to meet the load allocations by category and subcategory is not included in the TMDL Implementation Plan. This Element specifically requires: *"On the basis of the existing source, loads estimated for element 1, you will similarly determine the reductions needed to meet the water quality standards. You will then identify various management measures (see element 3 below) that will help to reduce the pollutant loads and estimate the load reductions expected as a result of these management measures to be implemented, recognizing the difficulty in precisely predicting the performance of management measures over time. Estimates should be provided at the same level as that required in the scale and scope component in paragraph 1 (e.g., the total load reduction expected for dairy cattle feedlots, row crops, or eroded streambanks)."*
Element 3		
a. Identify the management measures that need to be implemented to achieve the load reductions.	Yes/No	General management measures are mostly identified in the TMDL Implementation Plan. Except for locations of existing septic onsite systems with known failing systems; specific measures for other sources of pollution, such as location of all needed riparian and wetland restoration areas and locations of streambank erosion needing repair, are not identified in the plan as required by this EPA Element: *"The plan should describe the management measures that need to be implemented to achieve the load reductions estimated under element 2, as well as to achieve any additional pollution prevention goals called out in the watershed plan (e.g., habitat conservation and protection)."*

BENTON COUNTY

Table 22. Benton County TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
b. Identify critical areas in which management measures are needed.	Yes/No	The TMDL Implementation Plan includes an Environmental Assessment Priority List that identifies critical areas for onsite septic systems needing correction. The Plan also includes development of a Stormwater Master Plan that will include a stormwater systems map that identifies areas where water quality protection actions are needed. However, there is no mention of identifying riparian and wetland restoration areas. In addition, the management measures identified in Element 3 a., above, is not identified as required by this EPA Element: *"Pollutant loads will vary even within land use types, so the plan should also identify the critical areas in which those measures will be needed to implement the plan. This description should be detailed enough to guide implementation activities and can be greatly enhanced by identifying on a map priority areas and practices."*
Element 4		
a. Estimate the costs to implement the plan, including management measures, administration, information/education activities, and monitoring.	No	Not included in the TMDL Implementation Plan.
b. Identify the sources and amounts of financial and technical assistance and associated authorities available to implement the management measures.	Yes/No	The TMDL Implementation Plan does include the associated authorities available and the source, but not amounts, of financial assistance to implement the management measures as per EPA's requirements for this Element: "*This includes implementation and long-term operation and maintenance of management measures, information/education activities, monitoring, and evaluation activities. You should also document which relevant authorities might play a role in implementing the plan. Shortfalls between needs and available resources should be identified and addressed in the plan."*

BENTON COUNTY

Table 22. Benton County TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 5		
Prepare an information/education component that identifies the education and outreach activities needed for implementing the watershed management plan.	Yes	The TMDL Implementation Plan includes information/education activities that may support the adoption and long-term operation and maintenance of management practices and support stakeholder involvement efforts.
Element 6		
Develop a schedule for implementing the plan.	Yes	The TMDL Implementation Plan includes a schedule for the completion of selected management actions.
Element 7		
Develop interim, measurable milestones for determining whether management measures are being implemented.	Yes	The TMDL Implementation Plan does identify the process and timing for review of the Implementation Plan, implementation progress, and revision of the Plan as necessary.

BENTON COUNTY

Table 22. Benton County TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 8		
Develop a set of criteria to determine whether loading reductions are being achieved and progress is being made toward attaining (or maintaining) water quality goals, and specify what measures will be taken if progress has not been demonstrated.	No	The TMDL Implementation Plan does not meet this element: *"... indicate how you will determine whether the watershed plan needs to be revised if interim targets are not met. As projects are implemented in the watershed, you will need water quality benchmarks to track progress. The criteria in element 8 (not to be confused with water quality criteria in state regulations) are the benchmarks or waypoints to measure against through monitoring. These interim targets can be direct measurements (e.g., fecal coliform concentrations) or indirect indicators of load reduction (e.g., number of beach closings). These revisions could involve changing management practices, updating the loading analyses, and reassessing the time it takes for pollution concentrations to respond to treatment."*
Element 9		
a. Develop a monitoring component to determine whether the plan is being implemented appropriately and whether progress toward attainment or maintenance of water quality goals is being achieved.	Yes/No	The TMDL Implementation Plan includes a TMDL Implementation Tracking Matrix and a monitoring component to determine whether the plan is being implemented appropriately. However, the plan does mention the need for but does not include a monitoring component to determine whether progress toward attainment or maintenance of water quality goals is being achieved as per this element requirement: *"The watershed plan should include a monitoring component to determine whether progress is being made toward attaining or maintaining the applicable water quality standards. The monitoring program should be fully integrated with the established schedule and interim milestone criteria identified above. The monitoring component should be designed to determine whether loading reductions are being achieved over time and substantial progress in meeting water quality standards is being made. Watershed-scale monitoring can be used to measure the effects of multiple programs, projects, and trends over time. Instream monitoring does not have to be conducted for individual BMPs unless that type of monitoring is particularly relevant to the project."*

BENTON COUNTY

Table 22. Benton County TMDL Implementation Plan. (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 9		
b. Develop an evaluation framework.	Yes	The TMDL Implementation Plan does include an evaluation process.

UPPER WILLAMETTE AND UPPER SIUSLAW AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLAN

Table 23. Upper Willamette and Upper Siuslaw Agricultural Water Quality Management Area Plan (AgWQMAP).

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 1		
a. Include the geographic extent of the watershed covered by the plan.	Yes	Geographic information in the AgWQMAP.
b. Identify the measurable water quality goals, including the appropriate water quality standards and designated uses.	Yes	The water quality standards and designated uses were identified in the AgWQMAP.
c. Identify the causes & sources or groups of similar sources that need to be controlled to achieve the water quality standards.	No	This element is not specifically identified in the AgWQMAP, but is identified in the TMDL.
d. Break down the sources to the subcategory level.	No	The AgWQMAP does not include this EPA element: *"Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation)"*.
e. Estimate the pollutant loads entering the waterbody.	No	The TMDL load allocations are not included in the AgWQMAP.

UPPER WILLAMETTE AND UPPER SIUSLAW AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLAN

Table 23. Upper Willamette and Upper Siuslaw Agricultural Water Quality Management Area Plan (AgWQMAP). (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 2		
Determine the pollutant load reductions needed to meet the water quality goals.	No	The TMDL load allocations and specific pollutant load reductions needed to meet the load allocations by category and subcategory are not included in the AgWQMAP. This Element specifically requires: "*On the basis of the existing source, loads estimated for element 1, you will similarly determine the reductions needed to meet the water quality standards. You will then identify various management measures (see element 3 below) that will help to reduce the pollutant loads and estimate the load reductions expected as a result of these management measures to be implemented, recognizing the difficulty in precisely predicting the performance of management measures over time. Estimates should be provided at the same level as that required in the scale and scope component in paragraph 1 (e.g., the total load reduction expected for dairy cattle feedlots, row crops, or eroded streambanks).*"
Element 3		
a. Identify the management measures that need to be implemented to achieve the load reductions.	Yes/No	General and recommended only management measures are identified in the AgWQMAP. However, specific required measures, such as location of all needed riparian and wetland restoration areas, locations of streambank erosion needing repair, and locations of existing sources and types of bacteria needing control and/or treatment are not identified in the plan as required by this EPA Element: "*The plan should describe the management measures that need to be implemented to achieve the load reductions estimated under element 2, as well as to achieve any additional pollution prevention goals called out in the watershed plan (e.g., habitat conservation and protection).*"

UPPER WILLAMETTE AND UPPER SIUSLAW AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLAN

Table 23. Upper Willamette and Upper Siuslaw Agricultural Water Quality Management Area Plan (AgWQMAP). (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 3		
b. Identify critical areas in which management measures are needed.	No	The AgWQMAP does not identify critical areas for riparian and wetland restoration but not all areas. In addition, the management measures identified in Element 3 a., above, is not identified as required by this EPA Element: *"Pollutant loads will vary even within land use types, so the plan should also identify the critical areas in which those measures will be needed to implement the plan. This description should be detailed enough to guide implementation activities and can be greatly enhanced by identifying on a map priority areas and practices."*
Element 4		
b. Estimate the costs to implement the plan, including management measures, administration, information/education activities, and monitoring.	No	Not included in the AgWQMAP.
c. Identify the sources and amounts of financial and technical assistance and associated authorities available to implement the management measures.	Yes/No	The AgWQMAP includes the sources of financial assistance available to implement the management measures. However, the Plan does not address the amounts of financial and technical assistance and associated authorities available to implement the management measures as per EPA's requirements for this Element: "*This includes implementation and long-term operation and maintenance of management measures, information/education activities, monitoring, and evaluation activities. You should also document which relevant authorities might play a role in implementing the plan. Shortfalls between needs and available resources should be identified and addressed in the plan."*

UPPER WILLAMETTE AND UPPER SIUSLAW AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLAN

Table 23. Upper Willamette and Upper Siuslaw Agricultural Water Quality Management Area Plan (AgWQMAP). (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 5		
Prepare an information/education component that identifies the education and outreach activities needed for implementing the watershed management plan.	Yes	The AgWQMAP includes information/education activities that may support the adoption and long-term operation and maintenance of management practices and support stakeholder involvement efforts.
Element 6		
Develop a schedule for implementing the plan.	Yes/No	The AgWQMAP includes a schedule for education and technical/financial assistance to agricultural farm owners. However, for all other management measures, the plan does not include a schedule for the completion.
Element 7		
Develop interim, measurable milestones for determining whether management measures are being implemented.	No	Not included in the AgWQMAP.

UPPER WILLAMETTE AND UPPER SIUSLAW AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLAN

Table 23. Upper Willamette and Upper Siuslaw Agricultural Water Quality Management Area Plan (AgWQMAP). (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 8		
Develop a set of criteria to determine whether loading reductions are being achieved and progress is being made toward attaining (or maintaining) water quality goals, and specify what measures will be taken if progress has not been demonstrated.	No	The AgWQMAP includes recommended management measures, such as Area Rules that are goal-oriented and describe characteristics that should be achieved on agricultural lands, rather than practices that must be implemented. As such, the plan does not meet this element: *"As projects are implemented in the watershed, you will need water quality benchmarks to track progress. The criteria in element 8 (not to be confused with water quality criteria in state regulations) are the benchmarks or waypoints to measure against through monitoring. These interim targets can be direct measurements (e.g., fecal coliform concentrations) or indirect indicators of load reduction (e.g., number of beach closings). You should also indicate how you will determine whether the watershed plan needs to be revised if interim targets are not met. These revisions could involve changing management practices, updating the loading analyses, and reassessing the time it takes for pollution concentrations to respond to treatment."*
Element 9		
a. Develop a monitoring component to determine whether the plan is being implemented appropriately and whether progress toward attainment or maintenance of water quality goals is being achieved.	Yes/No	The AgWQMAP partially meets this element by providing biennial assessment reporting to ODA and recommends developing an instream monitoring program. However, the plan does not fully meet this element: *"The monitoring program should be fully integrated with the established schedule and interim milestone criteria identified above. The monitoring component should be designed to determine whether loading reductions are being achieved over time and substantial progress in meeting water quality standards is being made. Watershed-scale monitoring can be used to measure the effects of multiple programs, projects, and trends over time. Instream monitoring does not have to be conducted for individual BMPs unless that type of monitoring is particularly relevant to the project."*

UPPER WILLAMETTE AND UPPER SIUSLAW AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLAN

Table 23. Upper Willamette and Upper Siuslaw Agricultural Water Quality Management Area Plan (AgWQMAP). (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 9		
b. Develop an evaluation framework.	Yes/No	The AgWQMAP includes a general evaluation process, but does not fully meet this element as noted above.

BLM WATER QUALITY RESTORATION PLAN (WQRP)

Table 24. BLM Water Quality Restoration Plan (WQRP) (TMDL Implementation Plan).

EPA Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 1		
a. Include the geographic extent of the watershed covered by the plan.	Yes	Geographic information in the WQRP (TMDL Implementation Plan).
b. Identify the measurable water quality goals, including the appropriate water quality standards and designated uses.	Yes	Water quality standards and designated uses were identified in the WQRP.
c. Identify the causes & sources or groups of similar sources that need to be controlled to achieve the water quality standards.	Yes	Included in the WQRP.
d. Break down the sources to the subcategory level.	Yes	The WQRP includes this EPA element: "*Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation)*".
e. Estimate the pollutant loads entering the waterbody.	Yes/No	The TMDL load allocations are included in the WQRP. However, specific pollutant load estimates by category and subcategory, as per EPA's Element 1.d., above, is not included in the WQRP.

BLM WATER QUALITY RESTORATION PLAN (WQRP)

Table 24. BLM Water Quality Restoration Plan (WQRP) (TMDL Implementation Plan). (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 2		
Determine the pollutant load reductions needed to meet the water quality goals.	Yes/No	The TMDL load allocations are included in the WQRP. Specific pollutant load reductions needed to meet the temperature load allocations by category and subcategory are included in the WQRP. However, specific pollutant load reductions needed to meet the mercury load allocations by category and subcategory are not included in the WQRP. This Element specifically requires: *"On the basis of the existing source, loads estimated for element 1, you will similarly determine the reductions needed to meet the water quality standards. You will then identify various management measures (see element 3 below) that will help to reduce the pollutant loads and estimate the load reductions expected as a result of these management measures to be implemented, recognizing the difficulty in precisely predicting the performance of management measures over time. Estimates should be provided at the same level as that required in the scale and scope component in paragraph 1 (e.g., the total load reduction expected for dairy cattle feedlots, row crops, or eroded streambanks)."*
Element 3		
a. Identify the management measures that need to be implemented to achieve the load reductions.	Yes/No	Management measures to achieve load reductions for temperature are identified in the WQRP. The WQRP identifies specific management measures and their load reduction estimates that would be needed to achieve the temperature load allocations in each subbasin. Whereas for mercury, BLM does propose to use BMPs listed in Appendix A for any forest management or land use activity, such as timber harvesting, road building, etc. However, BLM does not identify specific management measures by location with their load reduction estimates that would be needed to achieve the mercury load allocations in each subbasin. This element requires: *"The plan should describe the management measures that need to be implemented to achieve the load reductions estimated under element 2, as well as to achieve any additional pollution prevention goals called out in the watershed plan (e.g., habitat conservation and protection)."*

BLM WATER QUALITY RESTORATION PLAN (WQRP)

Table 24. BLM Water Quality Restoration Plan (WQRP) (TMDL Implementation Plan). (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
b. Identify critical areas in which management measures are needed.	Yes/No	The WQRP identifies the specific locations of critical areas for riparian restoration to meet the temperature load allocation. However, the WQRP does not identify the specific sources of erosion by type or location of critical areas to meet the mercury load allocation. This would include the locations of roads, active landslides, streambank erosion, or other existing erosion sources needing restoration. To meet this element for mercury, the following are required by EPA: *"Pollutant loads will vary even within land use types, so the plan should also identify the critical areas in which those measures will be needed to implement the plan. This description should be detailed enough to guide implementation activities and can be greatly enhanced by identifying on a map priority areas and practices."*
Element 4		
a. Estimate the costs to implement the plan, including management measures, administration, information/education activities, and monitoring.	No	Not included in the WQRP.
b. Identify the sources and amounts of financial and technical assistance and associated authorities available to implement the management measures.	No	The WQRP does not include the source, amounts of financial assistance, and associated authorities available to implement the management measures as per EPA's requirements for this Element: "*This includes implementation and long-term operation and maintenance of management measures, information/education activities, monitoring, and evaluation activities. You should also document which relevant authorities might play a role in implementing the plan. Shortfalls between needs and available resources should be identified and addressed in the plan."*

BLM WATER QUALITY RESTORATION PLAN (WQRP)

Table 24. BLM Water Quality Restoration Plan (WQRP) (TMDL Implementation Plan). (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 5		
Prepare an information/education component that identifies the education and outreach activities needed for implementing the watershed management plan.	Yes/No	The WQRP does not include information/education activities that may support the adoption of the plan. Instead, for individual restoration projects and proposals, developed as elements of this plan, BLM will go through public review pursuant to the National Environmental Protection Act [NEPA]. The WQRP states: *"…the Water Quality Restoration Plan will not be distributed for public comment, unless the review is conducted as a function of an Oregon DEQ or Environmental Protection Agency's administrative proceeding"*.
Element 6		
Develop a schedule for implementing the plan.	Yes/No	The WQRP includes a schedule for the completion of management actions to meet the temperature load allocation, but not for mercury.
Element 7		
Develop interim, measurable milestones for determining whether management measures are being implemented.	No	The WQRP does not identify a process or timing for review of the Implementation Plan, implementation progress, and revision of the Plan as necessary.

BLM WATER QUALITY RESTORATION PLAN (WQRP)

Table 24. BLM Water Quality Restoration Plan (WQRP) (TMDL Implementation Plan). (Cont.)

Key Watershed Planning Components with Nine Key NPS Elements	Done?	Comments
Element 8		
Develop a set of criteria to determine whether loading reductions are being achieved and progress is being made toward attaining (or maintaining) water quality goals, and specify what measures will be taken if progress has not been demonstrated.	No	The WQRP does not meet this element: *"... indicate how you will determine whether the watershed plan needs to be revised if interim targets are not met. As projects are implemented in the watershed, you will need water quality benchmarks to track progress. The criteria in element 8 (not to be confused with water quality criteria in state regulations) are the benchmarks or waypoints to measure against through monitoring. These interim targets can be direct measurements (e.g., fecal coliform concentrations) or indirect indicators of load reduction (e.g., number of beach closings). These revisions could involve changing management practices, updating the loading analyses, and reassessing the time it takes for pollution concentrations to respond to treatment."*
Element 9		
1. Develop a monitoring component to determine whether the plan is being implemented appropriately and whether progress toward attainment or maintenance of water quality goals is being achieved.	Yes/No	The WQRP generally describes WQRP implementation and effectiveness monitoring. However, the plan does not fully meet this element requirement: *"The watershed plan should include a monitoring component to determine whether progress is being made toward attaining or maintaining the applicable water quality standards. The monitoring program should be fully integrated with the established schedule and interim milestone criteria identified above. The monitoring component should be designed to determine whether loading reductions are being achieved over time and substantial progress in meeting water quality standards is being made. Watershed-scale monitoring can be used to measure the effects of multiple programs, projects, and trends over time. Instream monitoring does not have to be conducted for individual BMPs unless that type of monitoring is particularly relevant to the project."*
2. Develop an evaluation framework.	Yes	The WQRP does include an evaluation process.

Appendix 4

2010 - 319 Grant Request for Proposal

Evaluation Criteria for 2010 - 319 Project Proposals

Project's Emphasis

The 2010 RFP encourages projects that will benefit water quality in the focus areas, especially impaired waters.

It emphasizes the concept of on-the-ground implementation activities or measurement of pollution reduction programs in the following areas:

- TMDL Implementation
- 303(d) listings
- Ground Water Management Areas (GWMAs)
- Drinking Water Source Areas

Eligibility

Those eligible to apply include public and private nonprofit organizations and institutions, including watershed councils and SWCDs. Also, eligible are state, local, tribal, and federal governments.

Selection Process for This Year

DEQ continues to implement a similar strategy used for the 2009 319 Grant Request for Proposal, which is to rely on DEQ's regional staff recommendation for funding. Regions should select and prioritize the proposals they received for their Region. DEQ Headquarter staff will review the prioritized proposals.

EPA Region 10 will be involved early in the process of ranking. EPA comments will be addressed as needed. Finally, the DEQ Regional and Headquarter Managers will make the final recommendation to the DEQ Water Quality Division Administrator.

The process will be:

- Regional review and prioritization of proposals received for that Region or by HQ staff where appropriate,
- Review of Regional recommendations by HQ and EPA Region 10,
- Feedback to Regions on proposals to be recommended for funding,
- Recommendation to DEQ Regional and Headquarter Managers and WQ DA for funding, and
- Submittal to EPA Region 10.

Only projects that are ranked “high” by the DEQ Headquarters (HQ) and Regions will be funded.

Ranking Criteria

The 319 project priorities are updated yearly and included in the annual Request For Proposals (RFPs). The priorities provide the guidance for on the ground activities at the watershed level. As such, the review for the proposed workplans received, as a result of the RFP, are initially reviewed at the regional level, and then given a final perusal at the statewide level.

We encourage our stakeholders considering applying for 319 funds to develop a strategy for implementation of the on-the-ground projects and cultivate the working relationships at various levels, including leveraging our funds. This aspect of the proposed workplan is considered in the review. This review at the regional level provides the proposed work a very thorough input that has proved very valuable for the applicants for its focused plan.

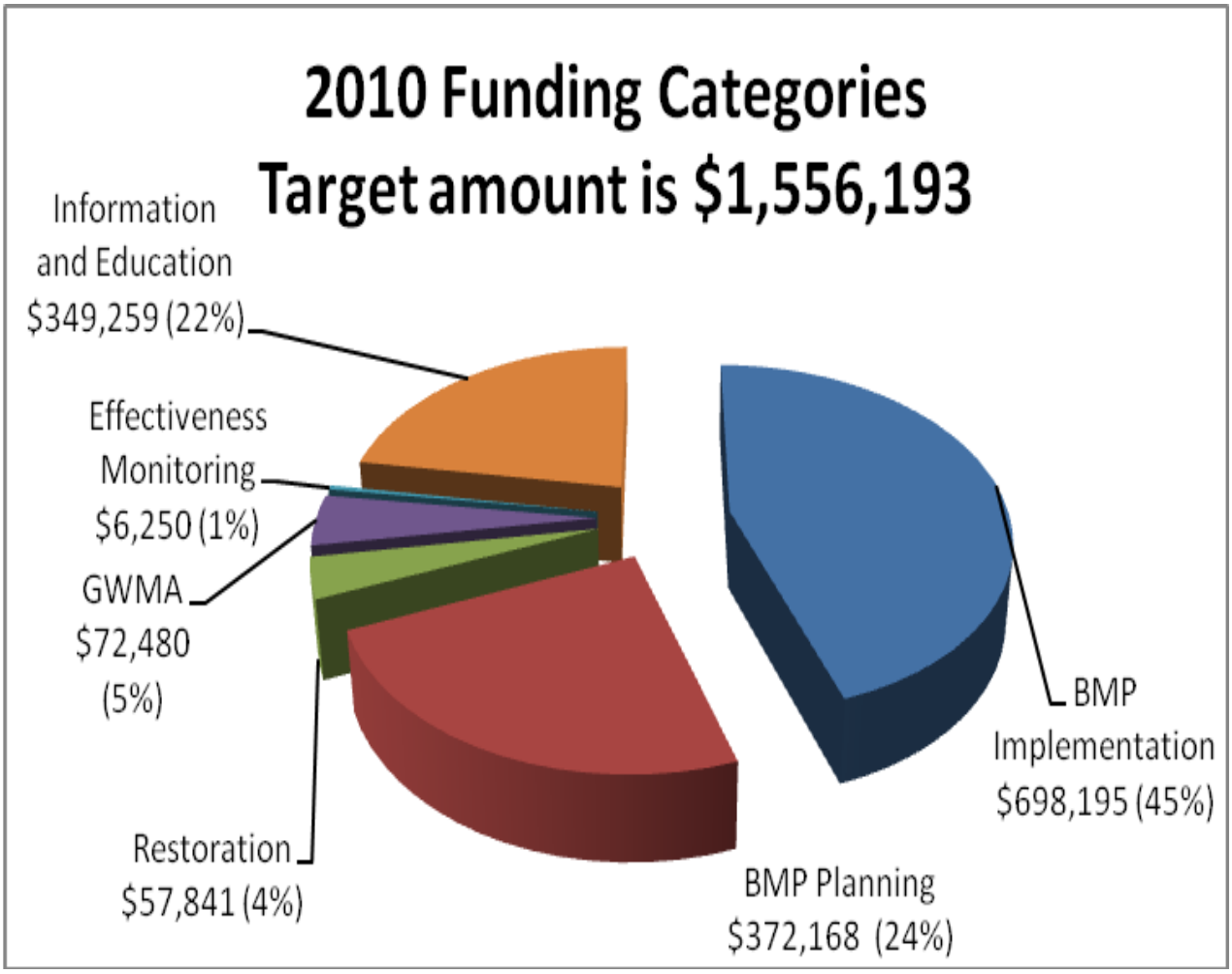
Project proposals will be evaluated and prioritized for funding based on how well the proposal addresses a DEQ geographic and programmatic priority identified in Appendix A of the 2010 319 RFP for 319 funded projects, available at: http://www.deq.state.or.us/wq/nonpoint/grants.htm .priority. The 2010 RFP states that for projects not in Appendix A, contact the DEQ 319 Grant Project Officer to determine if your project would be a priority for DEQ. Contact your DEQ 319 Grant Project Officer for specifics on the ranking criteria and the selection process that will be used in that DEQ Region.

The amount of funding per Region is around $390,000. The amount of funding for HQ is approximately $382,000. If not all funds are used by a Region or HQ, then a group will be convened to recommend how the remaining funds should be spent. The group will be one person from each Region and one person from HQ.

2010 – 319 Funding Categories

In **Figure 8**, the 2010 – 319 funding categories and funded amount are identified. The total funds for 2010 includes re-obligated funds from the funding years 2005-06 in the amount of $131,000. For the 2010 319 NPS Implementation Grants, Oregon has received project requests for a total of $1,556,193 in the following project categories: BMP Implementation (45%), BMP Planning (24%), Restoration (22%), GWMA Implementation (5%), Effectiveness Monitoring (4%), and Information and Education (<1%).

Figure 8. 2010 Funding Categories of Project Proposals Received in Response to the 2010 RFP.



Project Proposals Received

Table 25. Project Proposals Received in Response to the 2010 RFP.

PROJECT PROPOSALS RECEIVED, OREGON DEQ 2010 319 PROJECT SOLICITATION						
Project #	Region	Basin	Applicant	Title	Match	Proposed 319 Budget
010-21	HQ, Cross Regions (CR)-	Willamette	Oregon Assoc. of Clean Water Agencies	Incorporate Oregon Priority PPP List into Prominent Product Ranking Tools	$10,000	$11,057
010-48	HQ, CR	Willamette	Pesticide Stewardship Program	DEQ	$148,000	$222,000
010-22	HQ, CR-WR/NWR	Statewide	ODF	ODF Ripstream: Stream Temperature Changes Over Time	$77,280	$83,000
010-06	HQ, CR-WR/NWR	Willamette/S. Santiam	Freshwater Trust	StreamBank: Upper Willamette and South Santiam Subbasin NPS Reduction Project	$60,000	$30,000
010-07	ER	Powder River	Powder River WSC	Powder River Restoration – Kirkway Reach	$223,655	$23,400
010-09	ER	Deschutes	OEC	Central Oregon LID	$20,000	$27,000
010-18	ER	Umatilla	OSU	Meacham Ck Restoration and Bioassessment	$34,528	$48,489
010-43	ER	Owyhee/Malheur	Malheur Co SWCD	Warmsprings Irrigation District Return Flow And Land Use Evaluation	$45,000	$65,542
010-44	ER	Owyhee/Malheur	Malheur Co Extension	Strip tillage in Malheur and Owyhee Watersheds	$88,201	$85,730
010-45	ER	Umatilla	Umatilla Co Extension	Apple Sunburn Prevention Using Organic Biofilms	$80,000	$80,000
010-46	ER	Walla Walla	Walla Walla Basin WSC	Milton Freewater Levee Assessment	$103,473	$120,000
010-05	NWR	Tillamook	Nestucca-Neskowin Watersheds Council (NNWC)	2010-11 NNWC Streamside Planting and Maintenance	$26,800	$40,000
010-10	NWR	Tualatin	Tualatin River Keepers	5000 Acres Initiative	$245,000	$51,914

Table 25. Project Proposals Received in Response to the 2010 RFP. (Cont.)

PROJECT PROPOSALS RECEIVED, OREGON DEQ 2010 319 PROJECT SOLICITATION						
Project #	Region	Basin	Applicant	Title	Match	Proposed 319 Budget
010-13	NWR	Willamette	City Repair	DEPAVE	$6,162	$9,245
010-14	NWR	Willamette	Blue Lake Improvement Association Inc	Blue Lake Invasive Weed Harvesting Project	$20,000	$17,600
010-15	NWR	Willamette	West Multnomah SWCD	Sauvie Island Pesticide Collection Event	$8,250	$11,720
010-16	NWR	Clackamas	Clackamas Co WES	Regional BMP Sizing Tool Development To Address Hydromodification	$80,600	$51,385
010-17	NWR	Tillamook	Up Nehalem WSC	Up Nehalem Riparian Restoration and Basin WQ Monitoring	$49,000	$42,841
010-26	NWR	Tillamook	Tillamook Co SWCD	Tillamook SWCD 2010 Stream Enhancement and Restoration	$46,000	$44,045
010-35	NWR	Tillamook	TEP	2011 Tillamook Co CWF	$4,300	$6,250
010-36	NWR	Tillamook	TEP	BYPP Year 8	$26,800	$40,000
010-38	NWR	Clackamas	Clackamas RWP	Pesticide Roundup Events	$43,440	$44,000
010-08	HQ, CR-WR-NWR	Willamette	OSU CES	L.I.D. Academy – A Cohort Education And Technical Assistance Program For Small To Medium-Sized Communities	$76,650	$6,000
010-06	HQ, CR-WR/NWR	Willamette	Freshwater Trust	StreamBank: Upper Willamette and South Santiam Subbasin NPS Reduction Project	$10,000	$15,000
010-03	WR	Umpqua	PUR	Implementation Monitoring of Umpqua Basin, Diamond Lake TMDL	$12,000	$15,000
010-08	WR	Willamette	OSU CES	L.I.D. Academy – A Cohort Education And Technical Assistance Program For Small To Medium-Sized Communities	$76,650	$60,100
010-11	WR	Mid-coast	Lincoln County SWCD	Mid Coast Basin NPS Implementation Initiative, Part II	$72,025	$72,480

Table 25. Project Proposals Received in Response to the 2010 RFP. (Cont.)

PROJECT PROPOSALS RECEIVED, OREGON DEQ 2010 319 PROJECT SOLICITATION						
Project #	Region	Basin	Applicant	Title	Match	Proposed 319 Budget
010-25	WR	Upper Willamette GWMA	LCOG	SWVGWMA Action Plan Analysis, Marketing and Implementation	$117,378	$72,480
010-27	WR	Ten Miles	Ten Mile Lakes TMDL Partnership	Ten Mile Lakes TMDL Implementation	$117,000	$25,000
010-28	WR	Illinois Valley	Illinois Valley SWCD	Sucker Creek Channel and Floodplain Restoration Phase II	$516,000	$20,000
010-29	WR	Rogue	OSU ES Jackson County	Streamside Gardening: An Innovative Approach To Improving Riparian Shade And Function	$11,000	$21,555
010-31	WR	Bear Creek	City of Medford	Medford Bacteria Source Roundup	$9,600	$7,320
010-40	WR	Umpqua	Partnership for the Umpqua Rivers	Diamond Lake Modeling Project, 2010-2011	$35,982	$41,184
010-47	WR	South Coast	Targeted Water Quality Outreach to Coos Bay	Coos Watershed Association	$30,000	$29,856
010-06	HQ, CR-WR/NWR	Willamette	Freshwater Trust	StreamBank: Upper Willamette and South Santiam Subbasin NPS Reduction Project	$10,000	$15,000
				Totals	$2,540,774	$1,556,193

Oregon Nonpoint Source Program 2009 Annual Report