



State of Oregon
Department of
Environmental
Quality

Oregon Nonpoint Source Pollution Program 2011 Annual Report

As required by the Federal Clean Water Act

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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 2011. It should be noted that Oregon plans to revise the NPS Control Program Plan once EPA guidance becomes available.

For this year's Oregon NPS Program Annual Report, the U.S. Environmental Protection Agency (EPA), Region 10 staff provided assistance in the development of the **Oregon Nonpoint Source Pollution Program 2011 Annual Report**. This included writing success stories for WQ-10, SP-12, and environmental progress on the Tualatin subbasin. In addition, EPA provided assistance in the development of the 2011 review of 319-grant work plans and processing Oregon's grant; and GRTS technical assistance and training to develop pollutant load reduction estimates of the 2011 funded projects. 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 2011.
- 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 2011 Project Implementation Activities, which Included the Following Programs/Projects:
 - Total Maximum Daily Loads
 - New Water Quality Standards
 - Watershed Plan Development
 - 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 2011 319 Funding, and progress of 2011 – 319-Grant Funded Projects and Categories.
- Calculated Nitrogen, Phosphorus, and Sedimentation-Siltation Pollutant Load Reduction Estimates of 2011 Funded Projects.
- Description of DEQ's Watershed-Based Plans.
- Success Stories/Environmental Improvement (WQ-10 and SP-12 Projects and Other DEQ).

Major Accomplishments

- For eleven (11) 319 funded projects, the total load reduction estimates by pollutant are as follows: 2,720 Pounds/Year Nitrogen Reduction, 1,940 Pounds/Year Phosphorous Reduction, and 385 Tons/Year Sedimentation-Siltation Reduction.
- For the 2011 319 NPS Implementation Grants, the \$1,111,832 total funds for 2011 was divided in four areas of emphasis, as follows: BMP Implementation (20%), TMDL Implementation, (53%) Pesticide Stewardship Program, (3%) and Information and Education (24%).
- The Clean Water State Revolving Fund (CWSRF) Loan Program provided loans of \$8,637,100 towards (7) seven NPS water quality improvement projects.
- Seventy-one (71) 319-funded projects are still open; including the thirty-three (33), 2011 funded projects.
- Oregon Environmental Quality Commission (EQC) adopted revised human health criteria based on a fish consumption rate of 175 g/d (or about 23 fish meals per month) in June 2011.
- DEQ drafted a Toxics Reduction Strategy and presented to EQC.
- SP-12 and WQ-10 Project success story was written for 2011 for the Tualatin River Basin. Data show that levels of many pollutants have declined significantly.

Program Directions

DEQ continues to implement the NPS Program and direct funding into basins impaired by NPS pollution. DEQ is working on prioritizing the work by continuing to develop watershed plans and implementation of the watershed approach. It should be noted that Oregon plans to revise the NPS Management Program Plan once EPA guidance becomes available. In addition, DEQ began developing Implementation-Ready TMDLs, which would incorporate the use of the EPA's key watershed planning components with the nine key NPS elements. 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. DEQ has also 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.

1. Introduction

1.1 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 2011. 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.

1.2 Highlights

The State program continues to use innovative, cooperative, and community-based methods to improve water quality and enhance watersheds. Some of the activities and accomplishments for 2011 were:

The **\$1,111,832** total funds for 2011 was divided in four areas of emphasis, as follows: BMP Implementation (20%), TMDL Implementation, (53%) Pesticide Stewardship Program, (3%) and Information and Education (24%). Note that “BMP Implementation” did not include implementation of BMPs identified in a TMDL Implementation Plan and “TMDL Implementation” primarily focused on effectiveness monitoring.

- Distributed over **\$1,111,832** in 319 NPS source grants to **33 projects**.
- The total **2011** load reduction estimates by pollutant are as follows: **2,720 Pounds/Year Nitrogen Reduction, 1,940 Pounds/Year Phosphorous Reduction, and 385 Tons/Year Sedimentation-Siltation Reduction**. Load reduction estimates were included in the EPA database GRTS (Grants Reporting and Tracking System).
- Oregon Environmental Quality Commission (EQC) adopted revised human health criteria based on a fish consumption rate of 175 g/d (or about 23 fish meals per month) in June 2011.
- DEQ continued its development of a toxics reduction strategy, which is an integrated approach to address toxic pollutants in the environment. DEQ completed the draft strategy and presented to EQC in 2011.
- SP-12 and WQ-10 Project success story was written for 2011 for the Tualatin River Basin. Nonpoint and point sources of pollution caused water quality problems in Oregon's Tualatin River basin. Data show that levels of many pollutants have declined significantly.
- 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 of the RipStream project were presented to the BOF and the Board directed ODF to begin rulemaking to address the issue.
- The Clean Water State Revolving Fund (CWSRF) Loan Program provided loans of \$8,637,100 towards (7) seven NPS water quality improvement projects.

1.3 State or 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, 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.

1.4 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:

1.4.1 State Agencies

- Department of Agriculture (ODA) www.oda.state.or.us
- Department of Forestry (ODF) www.odf.state.or.us
- Parks and Recreation Department (OPRD) <http://egov.oregon.gov/OPRD/index.shtml>
- Department of State Lands (DSL) <http://www.oregon.gov/DSL/index.shtml>
- Department of Geology and Mineral Industries (DOGAMI) <http://egov.oregon.gov/DOGAMI/index.shtml>
- Oregon State Marine Board (OSMB) (Boat Ramps and Other Access Points) (Marine Board) <http://www.boatoregon.com/>
- Oregon Watershed Enhancement Board (OWEB) www.oweb.state.or.us
- Department of Fish and Wildlife (ODFW) www.dfw.state.or.us
- Department of Land, Conservation and Development (DLCD) www.lcd.state.or.us
- Department of Oregon Business Development (OBD) <http://www.oregon.gov/OBDD/index.shtml>
- Department of Transportation (ODOT) <http://egov.oregon.gov/ODOT/index.shtml>

1.4.2 Federal Agencies

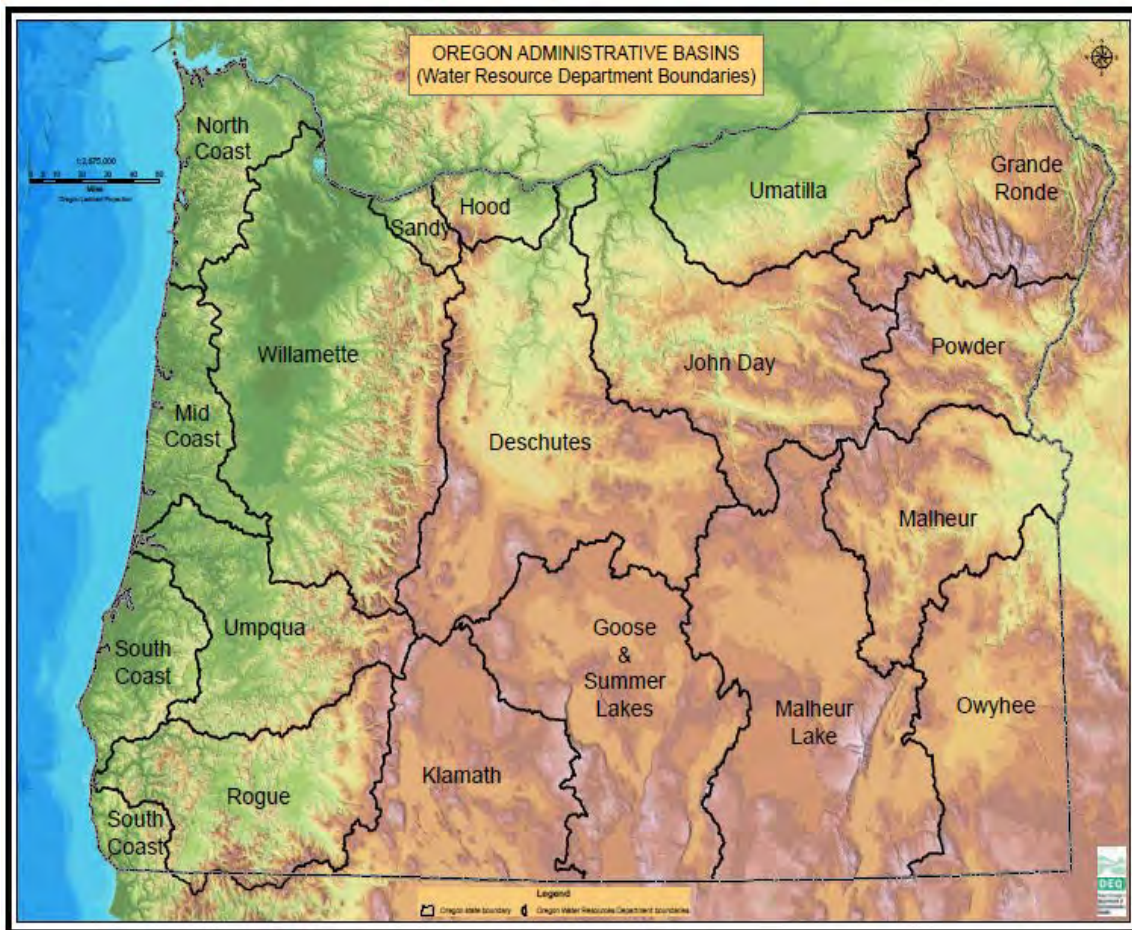
- U.S. Forest Service (USFS) <http://www.fs.fed.us/r6/water/>
- U.S. Bureau of Land Management (BLM) <http://www.blm.gov/or/st/en.html>
- U.S. Fish and Wildlife Service (USFWS) <http://www.fws.gov/oregonfwo/>
- US Army Corps of Engineers (USACE) <http://www.nwd.usace.army.mil/home.asp>

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

3.1 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 geographic 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 GWMA 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.

3.1.1 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.
- 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).
- Oregon Groundwater Quality Protection rules.

3.1.2 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.

It should be noted that EPA has been working on a guidance document for the states to use to update the NPS Management Program Plans. Oregon plans to revise the NPS Control Program Plan once EPA guidance becomes available.

3.2 Program Directions and Priorities in 2011

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. Development of an Oregon Watershed Approach that would integrate implementation ready 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.

3.2.1 Prioritization of NPS Activities in 2011

Prioritization of program activities is important to best use Oregon's limited resources for preventing or 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.

The following criteria were used to prioritize activities for 2011:

1. Actions that are measurable and achievable – known environmental result.
2. Actions that act as a catalyst to move the NPS Program forward.
3. Actions that can guide other program efforts such as setting policy or developing tools.
4. Actions that enable the program to leverage internal and external resources.
5. Actions that invest in and or develop political will and community support.
6. Actions that develop an internal process to increase efficiency and consistency.
7. 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 2011 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 2011

4.1 Programmatic – NPS Management and Administration

4.1.1 Performance Partnership Agreement

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 10.51 FTE positions within DEQ that were involved in the following programs/projects:

- With Oregon's 319 Grant Incremental Funds 32 NPS Projects were funded.
- 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.
- Distribute 319 grants to fund project proposals in Oregon's priority basins based on TMDL implementation, 303(d) listings, GWMA's, and Drinking Water Source Areas.
- Administer 319 Grants.
- Prepare an annual report of NPS program accomplishments.
- Determine with EPA potential NPS success stories documenting either that the water body is meeting WQS or making water quality progress under EPA's national measures.
- Enter GRTS 319 project tracking mandated data elements by national deadlines, including pollutant load reductions, as available.
- Coordinate with the Oregon Department of Land Conservation and Development (DLCD) on the Oregon Coastal Nonpoint Pollution Control Program (CNPCP).
- Coordinate with state and federal natural resource managers on meeting water quality goals and objectives.

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.
- Best management practices 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.
- Public education.

The following **Table 1** is a compilation and summary of elements 2 and 8 sections from the actual 2010-2012 PPG Work plan.

Table 1. 2010-2012 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component.

2010-2012 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component		
Number	DEQ Commitment	Outputs
<i>Element 2: TMDLS</i>		
2.1	Develop TMDLs and WQMPs in accordance with 303(d) List schedule, the February 2000 Memorandum of Agreement between DEQ and EPA (as updated by the Amendment to the MOA signed December 13, 2007) and the July 26, 2000 Federal District Court Consent Decree.	<p>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:</p> <ul style="list-style-type: none"> - John Day Basin - Malheur Basin - Wallowa County Basin - Klamath Basin <p>Issuance of TMDLs for the:</p> <ul style="list-style-type: none"> - Coquille Basin - Deschutes Basin - MidCoast Basins
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. Work with United States Department of Agriculture (USDA) agencies to leverage Farm Bill resources to implement priority best management practices in critical areas.	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.

Table 1. 2010-2012 Performance Partnership Agreement (Cont.)

2010-2012 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component		
Number	DEQ Commitment	Outputs
<i>Element 2: TMDLS</i>		
2.1	Develop TMDLs and WQMPs in accordance with 303(d) List schedule, the February 2000 Memorandum of Agreement between DEQ and EPA (as updated by the Amendment to the MOA signed December 13, 2007) and the July 26, 2000 Federal District Court Consent Decree.	<p>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:</p> <ul style="list-style-type: none"> - John Day Basin - Malheur Basin - Wallowa County Basin - Klamath Basin <p>Issuance of TMDLs for the:</p> <ul style="list-style-type: none"> - Coquille Basin - Deschutes Basin - MidCoast Basins
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. Work with United States Department of Agriculture (USDA) agencies to leverage Farm Bill resources to implement priority best management practices in critical areas.	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.

Table 1. 2010-2012 Performance Partnership Agreement (Cont.)

2008-2010 Performance Partnership Agreement NPS and 319 Funded Related Water Quality Components		
Number	DEQ Commitment	Outputs
<i>Element 8: Management of Nonpoint Sources of Pollution</i>		
8.1	Distribute 319 grants to fund project proposals to Oregon's priority basins based on TMDL development and implementation, drinking water source areas and GWMA's.	Solicit and select projects.
8.2	2010 NPS Annual Report.	Place on website. The 2010 Annual Report was submitted by DEQ and approved by EPA. The report is on DEQ's website.
8.3	Determine with EPA available NPS Success Stories documenting either water quality progress or full restoration under Program Activity Measure (PAM) ¹ .	NPS Success Stories.
8.4	Enter GRTS 319 mandated elements to 319 project tracking data by national deadlines, including load reductions as available.	Data reflecting progress and status of 319 implementation.

¹ From the "National Water Program Guidance Appendix: FY 2006 Final Measures and Commitments". "Program Activity Measures (PAMs) address activities to be implemented by EPA Headquarters, EPA Regional Offices, or by States/Tribes that administer national programs. They are the basis for monitoring progress in implementing programs to accomplish the environmental improvements described in the new Strategic plan."

Table 1. 2010-2012 Performance Partnership Agreement (Cont.)

2008-2010 Performance Partnership Agreement NPS and 319 Funded Related Water Quality Components		
Number	DEQ Commitment	Outputs
<i>Element 8: Management of Nonpoint Sources of Pollution</i>		
8.5	Work with EPA to review TMDLs and other basins plans for meeting EPA's 9 Key Element watershed guidance.	Develop strategy to leverage current resources for development of a watershed framework that integrates TMDLs and NPS Programs and is consistent with EPA's 9 Key Elements watershed plan model. Inform DEQ HQ and Regional staff about the Watershed Framework and the linkages between the various DEQ Water Quality subprograms. Develop conceptual model for management practice reporting system for implementation monitoring of WQMPs.
8.6	Develop BMPs and other measures/rules to address NPS pollution from forestry, new developments, and on-site disposal within the Coastal Zone.	Outstanding conditions related to Oregon's Coastal NPS Pollution Control Plan are addressed.
8.7	Develop Agency Toxics Reduction Strategy.	A toxics reduction strategy that incorporates air, land, and water.

4.2 Use of Incremental vs. Base Funds

Oregon's total 2011 319-Grant allocation of \$2,324,000 was distributed as follows: \$1,111,832 or approximately 47.8% was directed to the thirty-three (33) 319 projects grant and the remainder, \$1,212,168 or approximately 52.2%, was directed to the PPA grant to fund staff efforts under the NPS program.

Table 2. 2011 Oregon's 319 Grant Incremental and Base Funds Use

2011 OREGON'S 319 GRANT INCREMENTAL AND BASE FUNDS USE			
Fund	Dollar Amount	Percent	Use
Base Funds	\$1,212,168	52.2 %	10.51 DEQ Staff Positions*
Incremental Funds	\$1,111,832	47.8 %	33 Projects
TOTAL	\$2,324,000	100.0 %	--

*1.11 FTE were shifted from PPG-319 to PPG-106 because of the reduction in the FY-2011 319 allocation and an increase in the FY-2011 PPG-106 allocation.

4.2.1 Base Funds

Oregon's "base funds" supports 10.51 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.

The following **Table 3** identifies how the PPG Base Funds dollars and FTE were used in 2011 to support the various NPS program activities:

Table 3. 2011 Oregon's 319 Grant Funded Positions and NPS Program Activities Costs

2011 OREGON'S 319 GRANT FUNDED POSITIONS / NPS PROGRAM ACTIVITIES	FTE	Dollars
NPS TMDL Modeler	1.00	\$109,898
Regional NPS Staff (Incl. 0.50 FTE NPS TMDL Development)	3.00	\$381,257
Volunteer Monitoring Coordinator	1.00	\$125,723
Prorates and Management and Administrative Support (Includes 0.22 FTE in Regions and 0.18 FTE at HQ)	0.40	\$49,819
Grant Administration	1.00	\$130,007
Columbia Basin Coordination	1.00	\$144,733
Nonpoint Source Coordination	2.00	\$262,511
Attorney General	--	\$8,220
TOTALS	9.4	\$1,212,168

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.)

BMP Implementation (20%), TMDL Implementation, (53%) Pesticide Stewardship Program, (3%) and Information and Education (24%).

4.2.2 Incremental Funds

In 2011, the \$1,111,832 319-Grant of "incremental funds" funded 33 projects as follows:

- TMDL Implementation (53%)
- Pesticide Stewardship (3%)
- BMP Implementation (20%)
- Information and Education (24%)

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).

4.3 Project Implementation (2011 Activities)

4.3.1 Assessing Oregon's Basins

To help protect, improve and enhance the quality of Oregon waterways, DEQ conducts in-depth assessments of the state's basins. These assessments take the form of local water quality status and action plans, which describe water quality conditions and include recommendations for actions that DEQ and others who are interested in these basins can take to improve water quality.

DEQ completed its first three basin status/action plans (links below) in 2011. It will post three more assessments later in 2012. DEQ plans to cover the state's major basins in the next few years then re-visit each to mark progress and reassess how to deal with lingering water quality problems.

To produce these basin documents, DEQ follows a "watershed approach" that looks at all factors influencing water quality in a certain region. This approach combines the expertise of DEQ's 17 water quality sub-programs with a commitment to working with local stakeholders (communities, watershed councils and conservation districts) to find smart solutions to local water quality issues. It also includes working with applicable local, state and federal agencies on these issues.

- [North Coast Water Quality Status/Action Plan - Summary PDF](#)
- [North Coast Water Quality Status/Action Plan- Full Report PDF](#)
- [Deschutes Water Quality Status/Action Plan - Summary PDF](#)
- [Deschutes Water Quality Status/Action Plan - Full Report PDF](#)
- [Rogue Basin Water Quality Status/Action Plan - Summary PDF](#)
- [Rogue Basin Water Quality Status/Action Plan - Full Report PDF](#)

4.3.2 Total Maximum Daily Loads

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 margin of safety to account for uncertainty. They also may include a reserve capacity that allows for future discharges to a river or stream without exceeding water quality standards. DEQ develop TMDLs on a watershed and reach basis depending on the impairments and attempts to address all 303(d) listed impairments 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 has completed and submitted to EPA more than 1,153 TMDLs at the end of 2010.

Process for TMDL Development:

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 sources such as wildlife.
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 waste load allocations for point sources (the amount of pollutant each pipe can discharge) which will be incorporated into NPDES permits) and load allocations on nonpoint sources, which are, implemented through TMDL Implementation Plans.

No TMDLs were approved by EPA in 2011.

Development of TMDL IMD

For the past decade, DEQ's TMDL program had been driven by a consent decree between the US Environmental Protection Agency (EPA) and Northwest Environmental Defense Center (NEDC), John R. Churchill, and Northwest Environmental Advocates (NWEA) that required DEQ to develop a specified number of TMDLs by the end of 2010. DEQ met this ambitious schedule imposed by the consent decree by developing TMDLs on a geographically large, basin-wide scale.

DEQ began evaluating the effectiveness of the way TMDLs are developed and implemented in Oregon in anticipation of meeting the consent decree. In an issue paper Total Maximum Daily Loads for Reducing Toxic Pollutants in Oregon Waters from non-NPDES (National Pollutant Discharge Elimination System) Sources (DEQ, 2011) DEQ proposed to improve TMDLs by providing better source assessment information to guide implementation planning where needed. The modifications DEQ is proposing to the TMDL program will be reflected in the internal management directive (IMD) DEQ began drafting in 2011. The subjects of these modifications are based on feedback received from stakeholders, tribal nations, and DEQ staff.

The IMD provides two approaches to the development of TMDLs. One is the "Basin Scale" approach used to meet the consent decree. This approach maximizes the number of stream segments addressed by developing the TMDL over a large geographic area, such as a river basin. After meeting the consent decree, DEQ will begin shifting some of its resources to develop "Implementation Ready TMDLs", which incorporate more rigorous implementation planning during TMDL development. These two approaches to TMDL development are defined as:

Basin Scale TMDLs: TMDLs developed at the scale of 6 or 8 digit HUC (Basin and Subbasin scale) for impairments such as temperature and bacteria.

Implementation Ready TMDLs: TMDLs developed at a scale of 12 to 14 digit HUC (watershed and subwatershed scale) to include more detailed source analysis and implementation planning in the TMDL development process.

The IMD is scheduled to be completed in 2012, and will provide DEQ staff with a consistent framework for developing and implementing TMDLs. This purpose will be achieved by providing a common reference source of terms and policies, suggesting standards to be used for TMDL development and implementation planning, and supplying tools and examples when applying the standards.

TMDL Implementation Process Timeline for the TMDL issued prior to 2011:

Within 20 days after the TMDL is issued as an EQC Order, DEQ sends notification letters to all DMAs that outline the following TMDL implementation 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. The plan review and revision guidelines are provided on DEQ's web site http://www.deq.state.or.us/WQ/TMDLs/TMDLs.htm

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.

4.3.3 Water Quality Standards

Introduction

At least once every three years, Oregon is required to review 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 contained in Chapter 340, Division 41 of the Oregon Administrative Rules, http://arcweb.sos.state.or.us/pages/rules/oars_300/oar_340/340_041.html.

Water Quality Standards for Toxic Pollutants

On June 16, 2011 the OR EQC adopted more stringent water quality standards for toxic pollutants affecting human health. EPA Region 10 approved these standards on Oct. 17, 2011. DEQ's revised water quality standards incorporate a per capita fish consumption rate of 175 grams per day (g/day) which is ten times higher than the previous fish consumption rate of 17.5 g/day. These standards establish goals for Oregon's surface waters; including protecting sources of drinking water and helping ensure that fish from Oregon's waters are safe to eat. This rulemaking also included several NPDES permitting rule provisions and revisions related to DEQ's coordination with the state Departments of Agriculture and Forestry in carrying out the agencies' roles related to nonpoint sources of pollution.

Because toxic pollutants come from a variety of sources, including pollutants carried in runoff from cities, agricultural fields and forestry activities, DEQ worked with stakeholders to revise regulatory language to clarify that forestry and agricultural activities regulated under the Oregon Forest Practices Act and state Agriculture Water Quality Management Act must meet water quality standards and can be subject to Total Maximum Daily Load allocations where adequate data exists. These revisions do not, however, provide DEQ with additional authority over agricultural and forestry land uses.

Additional revisions clarified and formalized processes between DEQ and the Oregon Departments of Agriculture and Forestry in situations where pollution reduction practices do not meet pollution load limits set forth in a Total Maximum Daily Load or in the water quality standards.

Toxic Chemicals

In June of 2010, EPA disapproved most of the human health water quality criteria revisions for toxic pollutants that the EQC adopted in 2004. This means that DEQ's effective human health toxics criteria under the Clean Water Act are primarily those contained in Table 20. A table of effective human health toxics criteria and Table 20 are available on the DEQ water quality standards web site (see standards rules). Toxics criteria for aquatic life are also found on Table 20. If there is an aquatic life criterion on Table 33A, however, that criterion is used for NPDES permitting. (See DEQ's Water Quality Standards for Toxic Pollutants webpage for both Table 20 and 33A at: <http://www.deq.state.or.us/wq/standards/toxics.htm#Cur>).

On October 23, 2008, the EQC gave DEQ unanimous approval to pursue rule revisions that set new human health water quality criteria for toxic pollutants in Oregon. The new standards were to be based on a new fish consumption rate (175 grams/day) that is much more protective of human health than the existing rate. DEQ's current human health toxics criteria are based on a fish consumption rate that does not provide adequate protection for the amounts of fish and shellfish that Oregonians eat. The EQC adopted the revised criteria, based on the increased fish consumption rate, in June 2011 and revisions to Oregon's human health criteria for arsenic in April 2011. EPA approved all of these criteria revisions in October 2011.

Non-NPDES Elements of Water Quality Toxics Rulemaking

The EQC also directed DEQ to propose rule language or develop other implementation strategies to reduce the adverse impacts of toxic substances in Oregon's waters that are the result of nonpoint source pollution or other sources not subject to permitting. The proposed rule language must allow DEQ to implement the standards in an environmentally meaningful and cost-effective manner.

In 2010, DEQ worked with a number of stakeholders and staff to address EQC's directive. DEQ drafted an issue paper to evaluate rulemaking options related to non-NPDES sources, to document discussions with the workgroups, and to provide supporting analysis and documentation of proposed rule provisions.

Nonpoint Source Pollution

Revision of the water quality standards rules related to agriculture and forestry were adopted to clarify DEQ's regulatory authority to control nonpoint sources of pollution.

Total Maximum Daily Loads (TMDLS)

Revision of Water Quality Toxics Rules also included the process of assigning load allocations to clarify DEQ's authority to allocate loads to air and land sources in TMDLs. DEQ determined that these clarifications will facilitate NPS program implementation and lead to reduction of the adverse impacts of toxic pollutants from nonpoint sources.

The following tasks were completed in 2011:

- In June 2011, the EQC adopted revised human health toxics criteria rules, based on the increased fish consumption rate, on implementing water quality standards through various water quality control programs, including National Pollutant Discharge Elimination System (NPDES) permits and nonpoint source pollution programs.
- The EQC adopted revisions to Oregon's human health criteria for arsenic in April 2011.
- EPA approved all of these criteria revisions in October 2011.

4.3.4 Cross Program Efforts to Address Toxic Chemicals

DEQ Toxics Reduction Strategy

DEQ is developing 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.

The Draft Strategy information is now available for public review. A short summary of the Draft Toxics Reduction and Assessment Actions, and a document providing more detailed (1-2 page) descriptions of each of the draft actions can be found on DEQ's Toxics Reduction web page:

<http://www.deq.state.or.us/toxics/index.htm>. After obtaining initial input and direction from the Environmental Quality Commission on the draft Strategy, at its December 2011 meeting, DEQ plans to conduct public involvement and comment activities in early 2012 before finalizing the Strategy.

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>).

The following tasks were completed in 2011:

- On June 1, 2010, DEQ submitted a report to the Legislature identifying sources of pollutants on the list and opportunities to reduce their discharge to water.
- Municipalities sampled their effluent for persistent pollutants in summer and fall 2010.

Future activities include:

- 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 "Plan Initiation Levels" set by DEQ. These WWTPs have funded this work for two years, and continue to be closely involved.
- Final sampling results will be available in spring 2011.

Pesticide General Permit (2300A)

The Department has developed a new general permit to cover pesticide applications that result in the discharge to waters of the state from the use of biological pesticides or chemical pesticides that leave a residue. The need for the permit resulted from federal court decision requiring National Pollutant Discharge Elimination System permits for pesticide applications in, over or near water.

On November 27, 2006, EPA issued a regulation that interpreted the CWA as not requiring NPDES permits for pesticide applications. The regulation was challenged and invalidated in *National Cotton Council of America, et al. v. United States Environmental Protection Agency*, 553 F.3d 927 (2009). The Court held that NPDES permits are required for all biological pesticide applications that are made in, over and near waters of the U.S., and chemical pesticide applications that leave a residue or excess pesticide in water when such applications are made in or over including near waters of the U.S. The Court of Appeals stayed the decision invalidating EPA's regulation until April 9, 2011. Subsequently, EPA requested and received an extension of the stay until October 31, 2011. On October 31, 2011, the EPA's general NPDES permit was issued and became effective. EPA's general NPDES permit covers certain types of pesticide applications in those areas of the country that not subject to authorized state NPDES permit programs. Detailed information relating to this matter is available on EPA's web site.
http://cfpub.epa.gov/npdes/home.cfm?program_id=410.

The effective date of the DEQ permit is October 31, 2011. The permit is a general permit that is issued under OAR 340-045-0033 and covers activities that involve similar types of operations, similar types of wastes and similar monitoring conditions. The permit covers a limited range of pesticide applications. The covered pollutants are biological pesticides and chemical pesticide residuals that are applied from a point source. The permit considers that all chemical pesticide applications will leave a residual and constitute the discharge of a pollutant once the product has performed its intended purpose. The pesticide applications covered under this permit include Mosquito and Other Flying Insect Pest Control, Weed and Algae Control, Nuisance Animal Control, Forest Canopy Pest Control, and Area-wide Pest Control. These permits affect about 1,500 entities that decide to apply pesticides or have day-to-day control over pesticide application. These operators include weed control districts, vector control districts, golf courses, lake and marina managers, public utilities, and federal, state and municipal agencies who apply pesticides in, over or near water.

Mosquito and other flying insect pest control for the protection of public health and prevention of nuisance. Coverage extends to mosquitoes, black flies and other flying insect pests that develop or are present during a portion of their life cycle in or above standing or flowing water.

Weed and Algae Control for invasive or other nuisance weeds, algae and pathogens such as, fungi and bacteria in water or at the water's edge. The term "in water" includes, but is not limited to, applications made to creeks, rivers, lakes, riparian areas, wetlands, and other seasonally wet areas when water is present. The term "water's edge" means within 3 feet of waters of the state and conveyances with a hydrologic surface connection to waters of the state at the time of pesticide application. The 3 feet is measured horizontally from the water's edge and conveyance.

A separate general permit is being developed for irrigation districts, such that pesticide applications for weed and algae control approved and regulated under the irrigation district general permit are not included in this category.

Nuisance Animal Control for invasive or other nuisance animals and pathogens in water and at the water's edge. Coverage extends to but is not limited to, control of fish, mollusks, fungi and bacteria. The term "in water" includes, but is not limited to applications made to creeks, rivers, lakes, riparian areas, wetlands, and other seasonally wet areas when water is present. The term "water's edge" means within 3 feet of waters of

the state and conveyances with a hydrologic surface connection to waters of the state at the time of pesticide application. The 3 feet is measured horizontally from the water's edge and conveyance.

Forest Canopy Pest Control for the control of pest species, including but not limited to an insect or pathogen, by using aerial application of a pesticide over a forest environment or from the ground when in order to target pests effectively, a portion of the pesticide unavoidably will be applied over and deposited in water.

Area-wide Pest Control for the control of pest species by using aerial pesticide application to cover a large area to avoid substantial and widespread economic and social impact, when in order to target pests effectively, a portion of the pesticide unavoidably will be applied over and deposited in water. The pest control under this category is not included in the above categories.

The pest control covered under this permit does not include the control of agriculture, ornamental or silvicultural terrestrial pests that are routinely controlled as part of agricultural production, ornamental plantings and in forestry management operations, as long as the pest control does not result in a discharge of pesticides in, over or near the water. The pest control covered under this permit does not address every activity that may involve a point source discharge of pollutants to water that would require a permit. However, any pesticide application activities that do not have coverage under this permit will require coverage under some other NPDES permit if those pesticide application activities result in point source discharges to waters of the state.

The general permit does not cover the discharge to a water body that has been identified as water quality limited on the 303(d) list for a pesticide, its chemical residual or degrades when a waste load allocation for the relevant pollutant parameter does not exist. A discharge to a water quality limited water body may require an individual permit with more detailed site-specific evaluation that results in additional technology-based and/or water quality-based effluent limitations.

Coverage under this permit is not available if the discharges are covered by another NPDES permit. For example, many of the best management practices in the pesticide general permit would also be effective in reducing pesticide runoff in water. DEQ will look at incorporating and consolidating the permit conditions from the pesticide general permit into the MS4 permit for pesticide applications conducted by the MS4 co-permittees on a case-by-case basis.

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 management measure changes that lead to measurable pesticide detection reduction in surface water.

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.

DEQ has not been able to secure permanent funding for the PSP program, however, 319 funds have been used to continue monitoring and outreach by local PSP partners.

In 2009, DEQ expanded the number of pesticides included in its laboratory analytical suite from 12 to approximately 100. These increased lab capability allows DEQ to gain a more comprehensive understanding of the pesticide stressors in local waterbodies. Although many of these newly monitored pesticides do not have in-stream water quality criteria, the EPA Office of Pesticides has established aquatic life benchmarks that can assist DEQ and others in assessing the potential effects of pesticides detected.

In 2011, PSP work continued in Eastern Oregon with partners in Hood River and Walla Walla basins. Outreach efforts continued to be focused on communicating PSP monitoring results and providing technical assistance to orchards. In addition, DEQ and its local partners in Wasco County continued monitoring in 2011.

In 2011, DEQ continued PSP work with partners in three subbasins in the north Willamette Valley: Clackamas, Pudding, and Yamhill River Basins. In addition to existing sites in urban and agricultural areas, samples were collected at three additional sites in Yamhill subbasin that are downstream from private forests to better assess pesticide-related water quality concerns from forest land use. DEQ and its local partners began PSP monitoring in Amazon Creek.

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.

The following are a few examples of outreach efforts that rely on PSP monitoring results:

- PSP partners have been able to obtain funding to provide technical assistance in PSP basins due in part to PSP data indicating water quality concerns from pesticides use.
- Numerous presentations have been given by DEQ and PSP partners to pesticide applicators, basin natural resource personnel, and growers about PSP monitoring results.
- Local partners identified priority areas for technical assistance based on PSP monitoring results.

Water Quality Pesticide Management Team (WQPMT)

The Water Quality Pesticide Management team (WQPMT) is an inter-agency team composed of representatives from DEQ, ODA, DHS, and ODF. The WQPMT was formed to coordinate, communicate, support, and facilitate water quality protection programs, within the four agencies, related to pesticides in the State of Oregon. The WQPMT operates under a Memorandum of Understanding (MOU) established in 2009. ODA is the lead coordinating agency under the Environmental Protection Agency (EPA) - ODA Consolidated Pesticide Cooperative Agreement.

Current WQPMT Participants include the following:

- Department of Agriculture.
- Department of Forestry.
- Department of Human Services.
- Department of Environmental Quality.
- Oregon State University.

The following WQPMT tasks were completed in 2011:

- Revised the *draft* Oregon Pesticide Management Plan (PMP) based on feedback and comments from EPA Region 10 and received approval of the plan in 2011.
- The WQPMT agreed, in the short-term, to use the EPA OPP Aquatic Life Benchmarks as a screening tool to evaluate monitoring data for pesticides of interest and pesticides of concern when numerical Water Quality Standards are unavailable.
- Evaluated 2010 pesticide monitoring data.
- 2010 - 2011 POCs: atrazine, azinphosmethyl, carbaryl, chlorpyrifos, diazinon, diuron, ethoprop, and simazine. 2010 - 2011 Oregon POIs: chlorothalonil, pendamethalin, Terbacil, and triallate.
- Coordinated activities with the Pesticide Stewardship Partnerships (PSPs). Involved in the planning and implementation of the PSPs. The PSPs are the primary source of monitoring data that are evaluated by the WQPMT.

- Ongoing coordination between the WQPMT (as a key stakeholder) and DEQ's toxic reduction programs, the newly proposed NPDES stormwater permit requirements and the Umatilla Basin artificial recharge feasibility project.
- NRD WQ staff continues to incorporate pesticide-related tasks (e.g. monitoring, outreach, coordination with PSPs, etc.) into SWCD scope of work contracts.
- Initiated discussions to help coordinate future pesticide monitoring efforts by DEQ and other local stakeholders.
- Provided input and participated in NRDC Buffer Workshop in April 2011.
- 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.
- Continuing interactions with various stakeholders such as the Clackamas Water Providers and Clackamas River Basin Council.
- Held regularly scheduled WQPMT meetings to provide agency updates and for coordination.
- Developed a poster describing the role of the WQPMT and the state of pesticide-related water quality based on 2009 monitoring results. Presented at the SETAC North America's Annual Meeting in Portland and the OWEB Conference in Pendleton.
- 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 under the Endangered Species Act, and (3) possible impacts of new NPDES permitting requirements for aquatic herbicides and mosquito abatement insecticides.
- Continued seeking consistent and relatively long-term sources of funding for pesticide monitoring programs.

Future Challenges

- Expansion and coordination of PSP-type monitoring programs; integrated into overall WQPMT member activities. Expansion should include urban pesticide use and groundwater monitoring efforts.
- Possibly expand scope of WQPMT to include legacy pesticides and fertilizers.
- Watershed vulnerability assessments and prioritization.
- Coordination of state agencies in implementing management activities described in the PMP especially based on the assessment of monitoring data using the established Response Matrix.
- Standardize reporting of monitoring data and WQPMT assessments and recommendations.
- Develop position on how to assess the presence of mixtures in monitoring samples.
- Actively engage in policy discussions/decisions regarding the coordination and overlap of CWA-FIFRA issues.
- Minimize duplicate work by coordinating with TMDL, PSP and other management and monitoring efforts.
- Continue coordination with various DEQ toxics programs: Oregon Toxics Reduction Strategy
- Continue to maintain and build communication between each agency's water quality programs and key stakeholders.
- Continue outreach, communication, and maintenance of interest/resources on pesticide impact on water quality.
- Pursue additional partnership opportunities with OSU.

4.3.5 Clean Water Revolving Loan Funds

The number of nonpoint source projects funded by DEQ's loan program continues to grow. To date, nonpoint source projects have received nearly \$60 million in funding statewide from DEQ's CWSRF loan program.

In 2011, five loans totaling just over \$5 million were made for NPS projects. Four loans, totaling \$4.7 million, were signed with irrigation districts serving central Oregon. A majority of this money was loaned to projects within the Deschutes watershed including a \$237,000 loan to the Swalley Irrigation District, a \$1.5 million loan to Central Oregon Irrigation District, and a \$2 million loan to the Tumalo Irrigation District. Additionally, a \$1 million loan was provided to Farmer's Irrigation District in Hood River. These funds were substantially used to install large-diameter pipes to replace open conveyance canals to reduce water loss due to ground seepage and evaporation.

In addition to funding irrigation districts, DEQ also provided a \$350,000 increase to an existing loan to Clackamas County Service District #1. The District is using DEQ's loan to install sewer collectors to serve an area of the county with old and often failing septic systems.

Although no loans using DEQ's "sponsorship option" occurred in 2011, this option continues to be available to public entities. The sponsorship option allows a water restoration project to be funded in conjunction with a community's traditional wastewater project. Linking the funding of a nonpoint source project with a traditional wastewater improvement project provides a unique method of funding nonpoint source projects.

Table 5. 2011 State Revolving Fund Activity on Nonpoint Source Projects

STATE REVOLVING FUND ACTIVITY ON NONPOINT SOURCE PROJECTS 2011										
SRF Loan #	Watershed	Project Title	FY	SRF Borrower	Loan Amount	Disbursements To Date	Remaining to Disburse	Project Status	Project Officer	Project Completion
R-21640	UPPER DESCHUTES WATERSHED	Replace Open Irrigation Ditch With Piping	2011	Central Oregon Irrigation District	\$1,500,000	\$1,500,000	\$0	Complete	Shanna Bailey	Mid-2011
R-22403	CLACKAMAS RIVER WATERSHED	Replace septic systems with sewer collector	2011	Clackamas County Service District #1	\$350,000	\$0	\$350,000	Under construction	Tiffany Yelton-Bram	June, 2012
R-32243	HOOD RIVER WATERSHED	Replace Open Irrigation Ditch With Piping	2011	Farmer's Irrigation District	\$1,000,000	\$908,568	\$91,432	Under Construction	Shanna Bailey	August, 2012
R-89600	UPPER DESCHUTES WATERSHED	Replace Open Irrigation Ditch With Piping	2011	Swalley Irrigation District	\$237,000	\$237,000	\$0	Complete	Shanna Bailey	Mid-2011
R-92580	UPPER DESCHUTES WATERSHED	Replace Open Irrigation Ditch With Piping	2011	Tumalo Irrigation District	\$2,000,000	\$325,771	\$1,674,229	Complete	Shanna Bailey	April, 2012
TOTAL					\$5,087,000	\$2,971,339	\$2,115,661			

4.3.6 Drinking Water Protection

Approximately 75% of Oregon's citizens get their drinking water from public water systems. Oregon's drinking water protection program works to implement strategies ensuring the highest quality water is provided to the intakes and wells. Mandated by the 1996 Federal Safe Drinking Water Act (SDWA), Source Water Assessments have been completed for all public water 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 DEQ's drinking water website for more information on the assessments: <http://www.deq.state.or.us/wq/dwp/dwp.htm>.

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, Oregon State Marine Board (OSMB), Oregon Water Resources Department (OWRD), United States Forest Service (USFS), USDA, 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 SWA data is also available from other Oregon websites, including the Oregon State University (OSU) Institute for Natural Resources and the Oregon Geospatial Data Clearinghouse. DEQ receives an average of 3-4 requests for data every month from local governments, federal contractors, and consultants. GIS shape files and coverages are provided when effective security of the data is provided.

The inventories of point and nonpoint contaminant sources within the drinking water source 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. Typical contaminant sources identified in surface water source areas include managed forestland, irrigated crops, grazing animals, residential land uses, and transportation corridors.

DEQ developed a BMPs database for the 88 most common potential contaminant sources for drinking water in Oregon (available under "technical assistance" in DEQ's Drinking Water Program (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. Many of these BMPs address nonpoint sources of pollution.

DEQ's nonpoint source specialist for drinking water regularly assists the DEQ Nonpoint Source program with forestry and agriculture issues, provides reviews of NPS program efforts, and participates in committees working on the "RipStream" project to improve the Oregon Forest Practices Act (FPA) rules for stream protection benefiting fish and drinking water, especially in Oregon Coast Range. Staff reviewed the technical basis for turbidity standard revisions, participated as part of Internal Review Team, and wrote a draft document detailing drinking water protection options for private forestlands. Please refer to the RipStream discussion in the "Water Quality Issues on State and Private Forest Land" section of this report.

Examples of Nonpoint Source Coordination

Coordination with State and Federal Agencies. 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,

USFS, USDA NRCS, and the BLM. SWA data has also been provided to several other state agencies to facilitate incorporation of protection strategies into their respective programs.

ASDWA Nutrients Group. DEQ's drinking water protection coordinator continues to participate in the Association of Drinking Water Administrators (ASDWA) national nitrate/nutrients advisory committee and assists ASDWA in preparing guidance and comments for public water systems.

US Highway 36 Project. DEQ in coordination with other state agencies continues to work on pesticide exposure concerns in the US Highway 36 area near Triangle Lake. DWP staff work includes communicating with residents, mapping potential sample locations, developing a Sampling and Analysis Plan, and participating in multi-agency coordination meetings.

Pesticide Collection Events. The Clackamas River Water Providers (representing seven Public Water Systems (PWSs) that serve over 400,000 people) in partnership with the Clackamas County Soil and Water Conservation District (SWCD) and the Clackamas River Basin Council (CRBC) received a 319 NPS Grant to hold two Pesticide Round Up Events in 2011. A total of 35,134 pounds of pesticide waste was collected from 61 participants at the first event held in March 2011. The second was held in October 2011. The collection event served a wide area and a majority of the pesticide wastes were collected from Clackamas and Marion county watersheds that provide drinking water. The highest participation rate was from the nursery industry but there was also significant participation from other sectors such as vegetable and berry growers, golf courses, and several smaller PWSs including a school district and manufactured home park.

Turbidity Analysis. The DEQ *Turbidity Analysis for Oregon Public Water Systems Water Quality in Coast Range Drinking Water Source Areas Report*, June 2010, <http://www.deq.state.or.us/wq/dwp/docs/TurbidityAnalysisOregonPWS201006.pdf> continues to be useful for public water systems addressing those issues in their source waters. DWP staff worked directly with 15 public water systems that have chronic problems with high turbidity levels. Several of these systems must 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.

DEQ is currently working to use the data from the report to promote more active protection and awareness of potential violations to the turbidity standards in public water supply watersheds. The data from the report is also being used as input in DEQ's current process of revising the turbidity standard.

Nitrate Analysis. DEQ has completed an analysis of groundwater nitrate and toxics data for 70 public water systems with high nitrate levels or risks of high nitrate levels. Included in the report is a soil nitrate sensitivity analysis, analysis of the effects of well construction and aquifer confinement, research on technical information on nitrate sources, and an evaluation of agricultural data and mapping of septic systems in sensitive areas adjacent to wells. There are currently 70 Oregon public water systems that are or at risk of having nitrate water quality standard violations. The nitrate data has been statistically analyzed and the sources of nitrates were evaluated to gain an understanding of the need for outreach and prevention planning. One of the goals of the statistical analysis is to develop plans to reduce the loading within the 2- and 5-year time-of-travel zones for each well. DEQ and the Oregon Health Authority (OHA) are already working with a few of these systems to implement nitrate-reduction plans.

Watershed Planning. DEQ is working directly with multiple public water systems in several basins to encourage protection strategies on a watershed scale basis. This includes coordinating with surface water providers in the Rogue, Umpqua, and Siletz River, and Clackamas subbasins.

For example, DEQ staff continue providing technical assistance to the Clackamas Water Providers and watershed council to minimize the risks from high risk contaminants identified in the United States Geological Survey (USGS) National Water-Quality Assessment (NAWQA) studies on the Clackamas River

http://water.usgs.gov/nawqa/bib/pubs.php?search=Clackamas+River+&submit=submit&start_year=&end_year=&fields=both&type=term_all. The NAWQA study focused on the raw water sources, drinking water intakes, and finished water quality serving 325,000 Oregon citizens and provided Oregon-specific data on the lack of treatment removal for many types of contaminants found in the river.

DEQ is also working within a small tributary watershed in the Umpqua to do some focused bacteria and nitrate reduction work to benefit the downstream intakes. Data and drinking water protection information is provided to DEQ Basin Coordinators as they work to complete 2010 and 2011 Basin Assessments for the Deschutes, Clackamas/Sandy, North Coast, Powder/Burnt, Rogue, and South Coast Basins.

Input for DEQ's Internal Draft Harmful Algal Bloom (HAB) Strategy. DWP staff provided assistance in drafting the agency's HAB strategy, which outlines DEQ's current approach for identifying and addressing HABs in Oregon and makes recommendations for improvements to the strategy. DWP provides technical assistance to PWSs that may be impacted by HABs by providing data to identify and characterize potential sources (with data) and by assisting with the funding and development of pollutant reduction strategies. For example, four community water systems using coastal lakes (Clear, Eel, Siltcoos, and Woahink Lakes) as their water source partnered to apply for a Safe Drinking Water Protection grant to build local capacity related to HABs. The project was starting its second monitoring season in 2011 and has trained a number of interested parties and volunteers, including local PWS and watershed council staff. These stakeholders have identified two HAB events at their lakes and were key links in the identification and sampling chain.

Tualatin River Watershed GIS Demonstration Project. The GIS products from the Tualatin River project continue to be used by partners working within the watershed. This was a national demonstration project integrating land use and water quality issues, called "[*Enabling Source Water Protection: Aligning State Land Use and Water Protection Programs*](#)". The work was completed in June 2010, under a grant from the US Environmental Protection Agency, in partnership with The Trust for Public Land, Smart Growth Leadership Institute, Association of State Drinking Water Administrators, and River Network. The goal of Oregon's project was to create a replicable GIS-based tool to assist in prioritizing lands and sensitive areas for protection in the watershed above drinking water intake(s). The project's primary purpose was to identify healthy lands most important for conservation of water quality and identifying impaired lands that ought to be restored to help protect water quality.

The Tualatin River watershed was selected for the demonstration project due to its mix of urban, rural, forest, and agricultural land uses. In addition, due to its potential for increasing population growth and land use changes that may threaten the quality of the drinking water supply for the region. The methods used can be used to create the GIS mapping tool that are being used now in other watersheds in Oregon (and in other states).

Drinking Water Source Monitoring. DEQ completed Phase I and Phase II of the Drinking Water Source Monitoring project that included collecting groundwater and surface water samples from 34 high-risk drinking water sources as identified through the SWAs. A total of 17 surface water intakes, 16 wells, and 1 spring were tested by DEQ to determine characteristics and detections in the source waters. The samples were taken above the surface water intakes and at wells for analysis of a list of over 250 Oregon-specific herbicides, insecticides, pharmaceuticals, VOCs (including cleaners), fire retardants, PAHs, personal care products, 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. In addition, to collect screening level data on whether there are potential human health risks beyond those routinely monitored with the SDWA regulations. The results of both the Phase I and Phase II sampling (accessible through DEQ's LASAR database, <http://www.deq.state.or.us/lab/lasar.htm>) show that low levels of contaminants are in most source waters - including pharmaceuticals, phthalates, pesticides, and human waste byproducts.

Analytical results for the Phase II monitoring were interpreted and a short report was sent to each of the public water systems in 2011. Planning for Phase III includes selecting locations for sampling public water systems that request assistance in determining the sources of detections of nitrates and other contaminants; those samples will be taken in March-April 2012.

Coordination with the Oregon Toxics Reduction Strategy. DEQ is working to develop a comprehensive, integrated approach to address toxic pollutants in the environment that includes pesticides. An integrated approach is essential because these pollutants readily transfer from one environmental media to another, such as from air to water. DEQ's cross-media toxics reduction strategy is being developed through the assistance of 11 separate DEQ programs that already address some aspect of toxic management, including drinking water protection.

The objectives of this strategy include optimizing agency resources by focusing on the highest priority pollutants in a coordinated way, implementing actions that reduce toxic pollutants at the source, and establishing partnerships with other agencies and organizations to increase the effective use of public and private resources. The DWP input has been useful for assistance in identifying sources of toxics, selecting toxic reduction priorities, and prioritizing the statewide human health risks.

Land Use Planning Assistance. DEQ regularly provides input to cities and counties that are reviewing their land use plans under Oregon's comprehensive land use planning process ("Periodic Review"). DEQ's input letters to communities include detailed information regarding their water sources, maps of the source areas, and specific recommendations and guidance for drinking water protection.

DEQ's DWP 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.

When new developments are proposed that may impact public water systems, we recommend local communities communicate their concerns about drinking water protection to regional, county, or city 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.

DEQ provides 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)".

Model Ordinance Development. DEQ and the Oregon Department of Land Conservation and Development (DLCD) updated model ordinance language that jurisdictions can use to protect groundwater and surface water sources of drinking water. The model ordinances will also be added to an updated version of Oregon's Water Quality Model Code and Guidebook, which was published in 2001.

The following tasks were completed in 2011:

1. Finalized and published *Factors Influencing Nitrate Risks at Oregon Public Water Systems*.
2. Finalized Phase II of drinking water source monitoring to evaluate potential toxics in groundwater and surface water used by high-risk public water systems.
3. Encourage protection strategies on a watershed scale basis in the Rogue, Umpqua, Siletz, Tualatin, and Clackamas Sub-basins.
4. Participated in stakeholder meetings to explain needs and provide clarification on the impact of turbidity to PWSs. Collected data to documented turbidity-caused impairments to drinking water.
5. Developed and implemented a plan for toxics sampling in the Siletz River for City of Siletz PWS.
6. Assisted Clackamas River Water Providers, Clackamas SWCD, and the watershed council as they implemented a 319 NPS Grant for two Pesticide Collection Events in 2011. The events served 108 participants that brought in over 56,000 pounds of unused pesticides.
7. DWP staff supplied maps, data, and write-ups on drinking water resources and quality for the Clackamas/Sandy, South Coast, and Powder/Burnt basins Watershed Assessments.
8. Collaborated with a Douglas SWCD and ODA project to assess watershed conditions and conduct landowner outreach within priority South Umpqua Basin drinking water source areas.
9. Developed a new drinking water section for DEQ's Harmful Algal Bloom Strategic Planning report.

4.3.7 Groundwater Management Areas (GWMA)

Groundwater Management Areas (GWMA) are designated by DEQ 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 GWMA 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.

DEQ's objectives for groundwater quality protection in the future include the following activities:

- Continued sampling of Northern Malheur County GWMA well network consisting of 36 wells sampled quarterly. The next regional trend analysis is scheduled for early 2013.
- Continued sampling of Lower Umatilla Basin GWMA well network consisting of 31 wells sampled quarterly.
- Complete the document titled *Third Four-Year Evaluation of Action Plan Success in the Lower Umatilla Basin GWMA* that is currently in preparation.
- Once the *Third Four-Year Evaluation of Action Plan Success in the Lower Umatilla Basin GWMA* is finalized, the next Lower Umatilla Basin GWMA Action Plan will be prepared.
- Complete the Communications and Outreach Plan that the Lower Umatilla Basin GWMA Committee is currently working on.
- DEQ will work with the City of Irrigon to develop their voluntary Source Water Protection Plan.
- Coordinate the Southern Willamette Valley GWMA committee and implementation activities to reduce area-wide groundwater contamination.
- Continue monitoring 41 wells in the Southern Willamette Valley GWMA to determine groundwater trends.
- Evaluate the effectiveness of conservation enhancement practices in reducing nitrate pollution to the groundwater in the Southern Willamette Valley GWMA.
- Conduct focus groups to determine how to best incorporate groundwater protection into the daily life of GWMA residents.
- Use a social marketing approach to facilitate behavior change regarding groundwater protection.
- Use the analyses to direct future work and GWMA Committee meeting topics.
- Start looking at funding sources for the Southern Willamette Valley GWMA, which may become a non-profit entity.
- Evaluate the potential nitrate impact to a 'deeper' aquifer in the Linn County area of the Southern Willamette Valley GWMA.
- Continue to implement the Lower Umatilla Basin and the North Malheur County GWMA Action Plans and evaluate the performance or success of the management plans in reducing groundwater contamination. Also, continue regional groundwater monitoring networks in the two GWMA.
- Continue to work cooperatively with Deschutes County to implement groundwater protection programs in the La Pine area.
- Complete additional Drinking Water Source Water Assessments as new systems come online and provide technical assistance to communities developing drinking water protection plans.
- Continue funding and support of research, education, and implementation of BMPs for groundwater protection, as funding allows.

Northern Malheur County GWMA

The Northern Malheur County (NMC) GWMA was declared in 1989. An Action Plan was adopted in 1991 that identifies the source of contamination and measures to be taken to reduce the contamination. The nitrate trend in the Northern Malheur County GWMA is slightly declining.

The following NMC GWMA tasks were completed in 2011:

- Continued sampling of NMC GWMA well network consisting of 36 wells.
- Finalized a NMC GWMA Action Plan Amendment that (1) allowed the use of the Seasonal Kendall technique to assess nitrate trends, (2) removed the unattainable goal of an area-wide nitrate concentration of 7 mg/l by 2000, and (3) reduced the sampling frequency from six times per year to four times per year.

Lower Umatilla Basin Groundwater Management Area

The Lower Umatilla Basin (LUB) GWMA was declared in 1990. An Action Plan was adopted in 1997 that details the sources of nitrate and measures to be taken to reduce the nitrate contamination. The nitrate trend in the LUB GWMA continues to increase, although at a slower and slower rate.

The following LUB GWMA tasks were completed in 2011:

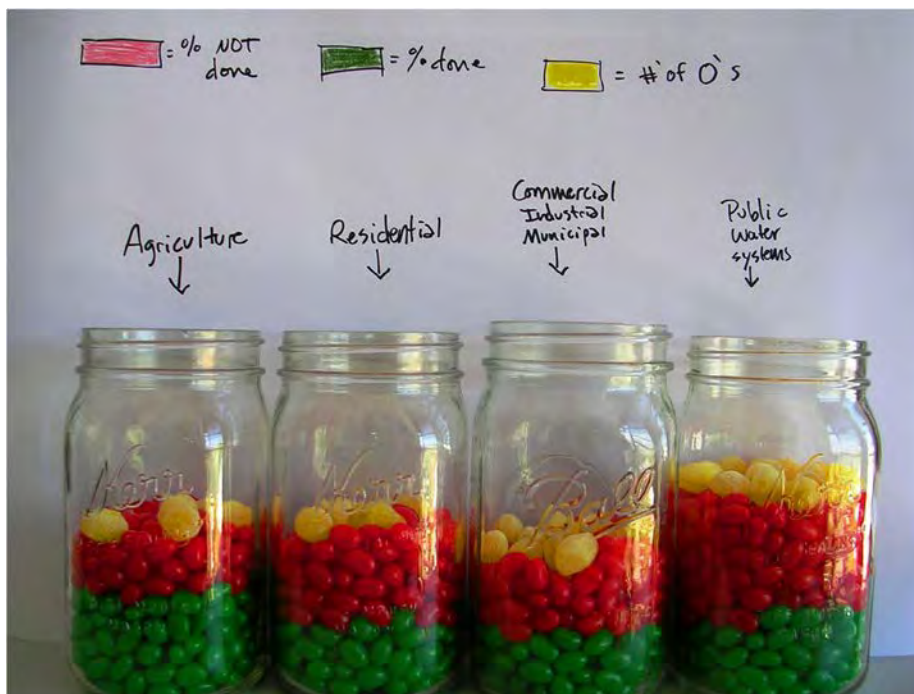
- The document titled *Estimation of Nitrogen Sources, Nitrogen Applied, and Nitrogen Leached to Groundwater in the Lower Umatilla Basin Groundwater Management Area*, <http://www.deq.state.or.us/er/reports/11er001.pdf> was finalized.
- The document titled *Third Trend Analysis of Food Processor Land Application Sites in the Lower Umatilla Basin Groundwater Management Area*, <http://www.deq.state.or.us/wq/groundwater/docs/lubgwma/trendrpt3/Report.pdf> was finalized.
- The document titled *Analysis of Groundwater Nitrate Concentrations and Trends in the LUB GWMA* was finalized.
- DEQ and Oregon Health Authority staff (coordinated by the Governor's Regional Solutions Team) conducted a Source Water Assessment for the City of Irrigon.

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/>.

DEQ continues to monitor the 24 monitoring wells DEQ installed in the Southern Willamette Valley, as well as the 17 domestic wells that make up the a long term monitoring program. The 2009 "Synoptic Event" (included one-time sampling of a little over 100 additional wells) brought new understanding to the depth of nitrate impacts in some areas of the SWV GWMA. We have added a couple of additional wells to the long term monitoring program, in order to better assess this concern.

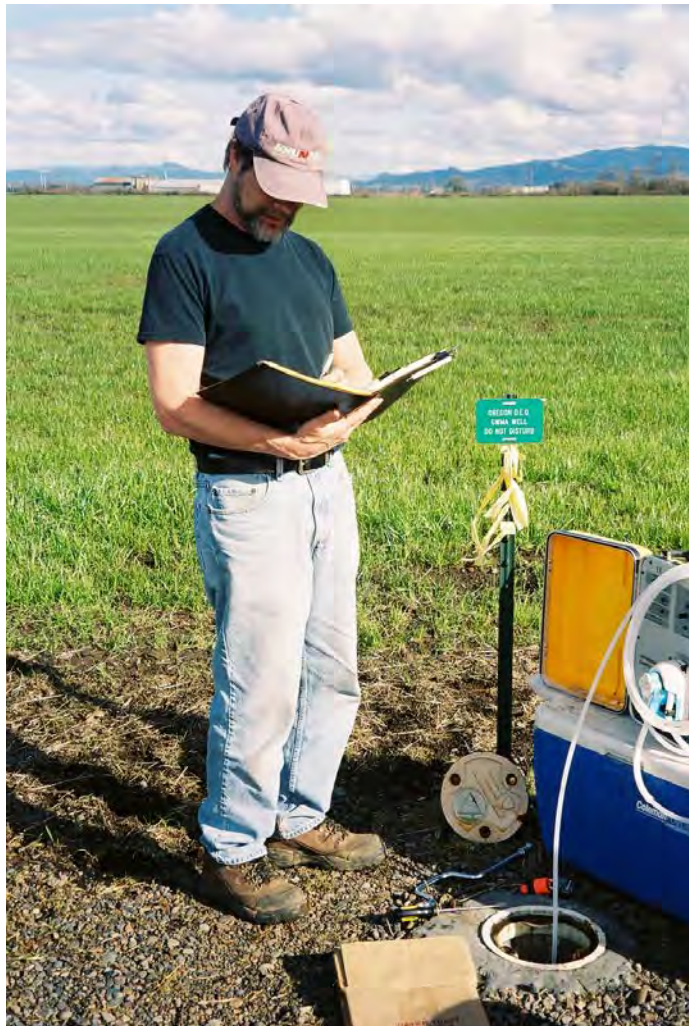
Visual display presented at a SWV GWMA Committee meeting of what Action Plan work has been completed per working Group



The following tasks were completed in 2011:

1. For the **third** year, the GWMA Booth was a major hit at the *Kids Day for Conservation* event in Corvallis, where over **500** kids created an edible aquifer, polluted it with their land use of choice (fertilizer, manure, pet waste and/or pesticides – all edible replicates). In addition, they then added rain to the system, and followed that by drilling a well (straw) to learn how easy groundwater – and their drinking water - can be polluted.
2. A Strength, Weakness, Opportunity and Threat analyses was conducted for the SWV GWMA, and will be used to target future actions and meeting agendas.
3. The SWV GWMA was part of an EPA tour of Western Region Water Quality Issues, and Region X EPA staff attended a GWMA committee meeting and an anaerobic digester tour that was hosted by a GWMA Committee member.
4. DEQ continues to monitor the 24 monitoring wells DEQ installed in the Southern Willamette Valley, as well as ~ 17 domestic wells that make up the a long term monitoring program.
5. The Southern Willamette Valley GWMA Committee continues to meet 3-4 times a year, to address and assess ongoing issues.
6. USGS presented a possible investigation plan to the SWV GWMA Committee, and future funding remains a priority.

DEQ Well Water Sampling – Southern Willamette Valley GWMA (Jack Arendt, DEQ Groundwater Staff)



Groundwater Water Quality Monitoring Well Drilling



4.3.8 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 approval by NOAA and EPA, with the exception of three components that were conditionally approved:

1. New development.
2. Operating onsite disposal systems.
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.

DEQ received a letter from NOAA and EPA on May 12, 2010 outlining how Oregon could "...receive full approval of its Coastal Nonpoint Program". The letter also stated that "...If sufficient progress is not being made, EPA and NOAA may disapprove Oregon's program and withhold a portion of the state's Clean Water Act Section 319 and Coastal Zone Management Act Section 306 funding pursuant to 16 U.S.C. Section 1455b(c)."

The Attachment to the letter identified “*What NOAA and EPA Need from Oregon for Coastal Nonpoint Program Approval*”. EPA and NOAA require the following actions:

New Development Management Measure

1. “*Complete TMDL Implementation Guidelines for the Coastal Nonpoint Program management area that incorporate the new development management measure requirements or practices consistent with the new development measure.*”
2. *Submit a strategy and schedule for completing and updating TMDL Implementation Plans within the Coastal Nonpoint Program management area to be consistent with the new TMDL Implementation Guidance.*”

Onsite Sewage Disposal Systems (OSDS)

1. “*Adopt new rules requiring regular inspections for OSDS. Inspecting the systems at time of property transfer by trained/certified inspectors as laid out in Oregon's October 29, 2009 draft strategy is sufficient. Please provide NOAA/EPA with a copy of the draft rules to review to ensure the final rules will meet Coastal Nonpoint Program requirements.*”

Additional Management Measures for Forestry

1. “*Commit to the prescriptive TMDL, Implementation Plan, and "safe harbor" BMP approach ("Option 1" under the State's proposal) that will satisfy the additional management measures for forestry condition, specifically addressing riparian and landslide-prone areas, and road Issues.*”
2. *Provide a legal opinion from the Oregon Attorney General's Office that clearly concludes Oregon DEQ has the authority to prevent nonpoint source pollution and require implementation of the additional management measures for forestry. Specifically, under the state's current proposal, the legal opinion must conclude that DEQ has the authority to enforce TMDLs, including "safe harbor" BMPs, with regard to riparian buffers, landslide prone areas, and legacy roads.*
3. *Provide a more detailed description of the new prescriptive TMDL process. This revised description should:*
 - a. *Clarify the mechanism DEQ plans on using to require prescriptive, "safe harbor" BMPs. Will the BMPs (or possibly a menu of "safe harbor" BMPs to select from) be placed in the TMDLs themselves or only included in the TMDL Implementation Plans? Does DEQ's enforcement authority apply to both TMDLs and Implementation Plans?*
 - b. *Briefly describe how the prescriptive TMDL approach will address NOAA and EPA's concerns with landslide prone areas and road density and maintenance, particularly on "legacy roads". During our January 14th meeting/conference call, the state discussed the potential use of DOGAMI LIDAR coverages, Relative Bed Stability, and GRAIP methodologies to assess, target, and address landslide prone areas and road issues in support of the new prescriptive TMDL process. DEQ should briefly describe these methodologies and/or others and how they will be used in the new TMDL process. The description should include how these tools will help target and, where needed, develop "safe harbor" BMPs.*
 - c. *Provide a few examples of the types of "safe harbor" BMPs Oregon would use to address our concerns about adequate protection of riparian and landslide-prone areas and management/maintenance of forestry roads, specifically legacy roads, and meet load allocations and surrogate targets. We recognize that the BMPs could vary from parcel to parcel based on the site conditions but we need a reasonable assurance that the types of "safe harbor" BMPs Oregon is developing link to, and would meet, water quality standards and protect beneficial uses. For example, requirements for restricting harvest intensities and methods on high risk landslide prone areas should be described along with the triggers or thresholds for their application. We recommend providing comparable examples of harvest restrictions on high risk landslide prone areas such as those applied under the Washington Forests and Fish rules as well as the harvest restrictions under the Oregon Forest Practices Act rules related to high risk landslide areas above roads and buildings. The Northwest Forest Plan also includes measures for landslide prone areas that DEQ could consider.*

- d. *Briefly describe DEQ's approval/disapproval process for TMDL Implementation Plans. To address the additional management measures for forestry condition, decisions to approve or disapprove need to be based on the plan's ability to meet load allocations or surrogate targets. If DEQ's decisions are based on a basin-specific rule adopted by BOF, then such rule must have the ability to meet load allocations or surrogate targets.*
4. *Provide a schedule for developing new prescriptive TMDLs and safe harbor BMPs, updating existing TMDLs, and Implementation Plans within the 6217 boundary following the new prescriptive TMDL process.*
5. *Complete and submit to EPA and NOAA a prescriptive TMDL that includes safe harbor BMPs and a TMDL Implementation Plan for the Mid-Coast basins and that addresses the outstanding additional management measures for forestry condition."*

The following tasks were completed in 2011:

1. On June 30, 2010, the initial draft guidance document was completed and provided to NOAA and EPA for review and comment.
2. By November 30, 2010, DEQ developed a Policy Option Package for Rules Development.
3. DEQ provided to EPA and NOAA by June 30, 2010, a legal opinion from Oregon's Attorney General's Office that states DEQ has the authority to prevent nonpoint source pollution and require implementation of the additional management measures for forestry.
4. The DEQ Water Quality Division Administrator by September 30, 2010 provided to EPA and NOAA, DEQ's commitment to pursue prescriptive TMDL process for addressing the additional management measures for forestry condition.

4.3.9 Monitoring and Data

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

The existing monitoring programs that address NPS pollution include, but are not limited to:

- 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 parties 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.

Watershed-based Toxics Monitoring Program.

Information generated by the Toxics Monitoring Program supports the Agency's mission of protecting the environment and human health from the effects of toxic pollutants by identifying new problems and/or validating earlier findings. In 2011, DEQ collected/analyzed surface water from 18 sites located in the Rogue and surrounding basins (including the Umpqua, Williamson, Klamath Lake, Klamath and Lost River) and 17 sites located in the Umatilla and surrounding Basins (including Grande Ronde, Powder, Brownlee Reservoir, Malheur and Owyhee).

Surface water samples were collected during three hydrologic periods in 2011 in order to assess the impacts of differing flow regimes on contaminant concentrations. Surface water was sampled in the Spring (May-June) to reflect elevated flows, Summer (August) to reflect low-flows and early Winter (November) to reflect rising flows. As part of the Agency's continuing commitment to process improvement, staff of the Toxics Monitoring Program completely revised the field protocols it used in 2011 for collecting surface

water samples intended for inorganic analysis thereby eliminating sample contamination recognized in earlier collections. Surface water was analyzed for a broad suite of organic pollutants including current use pesticides, pharmaceutical and personal care products, industrial chemicals and chemical/combustion by-products and priority pollutant metals. Final analytical results from the three sampling events conducted in Southwest and Northeast Basins will be available by June 2012 and a report of findings will be prepared by the end of 2012. In addition to collecting water samples from Southwest and Northeast Basins for chemical analysis, fish (composite fillets) collected in 2010 from a total of 7 sites in the Rogue and Umatilla River basins were initiated and will be released by mid-year.

Staff from the Toxics Monitoring Program supported implementation of the Agency's integrated watershed assessments in the Clackamas and Powder River Basins by summarizing and interpreting available toxic pollutant data for inclusion in the basin report. Toxics staff also commented on the potential for volatile organic contaminants to impact the quality of water pumped from the Columbia River into the Umatilla groundwater aquifer in Eastern Oregon. Toxics Monitoring Program staff updated internal and external stakeholders regarding findings and plans for completing the Agency's first state-wide survey of Oregon's 15 basins in 2013 during the strategic planning process carried out by the Laboratories Watershed Assessment and Monitoring Section. Though consultations with DEQ's TMDL Basin Coordinators, staff of the Toxics Monitoring Program initiated a planning to collect and analyze surface water fish and sediment from sites located in the Hood, Sandy, Deschutes and John Day Basins.

Volunteer Monitoring Coordination.

DEQ conducted outreach and education activities and provide technical assistance to support volunteer monitoring in watersheds throughout Oregon. Staff reviewed and assisted in the development of seven sampling plans for seven organizations and worked with additional organizations to refine monitoring strategies or goals outside of the sampling plan process.

Sampling Plans Reviewed:

1. Lincoln SWCD.
2. Rogue Riverkeeper.
3. Johnson Creek Watershed Council.
4. Jefferson County SWCD.
5. City of Florence.
6. Polk County SWCD.
7. Wasco SWCD.

Staff provided high quality water quality testing equipment or supplies to 15 different organizations. There are 46 organizations currently with equipment around the state. Provided technical assistance on equipment and protocols to 23 organizations over the phone and conducted six trainings in water quality monitoring techniques.

Staff also worked to review data generated by volunteer organizations for inclusion in the DEQ's online database. The datasets included over 10 years of data from 380 different locations. The primary purpose for collection of this data was for local volunteer organizations to characterize NPS pollution impacts. The data were made available to inform the South Coast Watershed Assessment and development of the Mid Coast TMDL.

Groundwater Management Areas.

DEQ staff performed routine sampling of three Groundwater Management Areas (GWMAs) in the state. Two areas, the Lower Umatilla Basin and the Northern Malheur County GWMAs are sampled six times per year and the Southern Willamette Valley GWMA is sampled four times per year. Lab staff also sampled additional wells for an expanded list of analytes in the Lower Umatilla Basin GWMA during a synoptic event that ended in January 2011. Data has been released, or is pending, on recent sampling events.

4.4 Land Uses

4.4.1 Agricultural Lands

Coordination Between DEQ and ODA.

DEQ's Nonpoint Source program works mainly with ODA's Pesticides and Natural Resource Divisions to prevent pollution and improve water quality on agricultural lands. In 2011, DEQ and ODA's program staff and management worked on various water quality related projects to address agricultural nonpoint sources.

- ODA's Water Quality Program in Natural Resource Division and DEQ's Watershed Management Section held coordination meetings to discuss issues related to nonpoint source pollution on agricultural lands.
- DEQ's basin coordinators provide input on revisions of AgWQMP plans.
- Directors of ODA and DEQ met or held conference calls on a monthly basis.
- DEQ and ODA participated in monthly WQ Pesticide Management Team meetings and activities to reduce frequency and detection of current use pesticides (See list of WQPMT Accomplishments).
- ODA participated in a stakeholder process for DEQ's toxics rulemaking.
<http://www.deq.state.or.us/wq/standards/toxics.htm>
- 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.
- ODA participated in Pesticide Stewardship Partnerships local partnership meetings.

Agricultural Water Quality Management Program.

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 and TMDL load allocations for agricultural lands. The program also is involved with the development of GWMA action plans and leads implementation for agricultural nonpoint sources. In addition, SWCDs have contractual relationships with ODA to act as a local management agency (LMA) to meet water quality goals on agricultural lands.

ODA's Water Quality Program Compliance Summary.

The State Statute authorizes ODA to develop Agricultural Water Quality Management Area Plans (area plans) throughout the state when required by state or federal laws. The Statute also authorizes the development of Agricultural Water Quality Management Area Rules (area rules) to serve as a regulatory backstop to the voluntary efforts described in the area plans. The following **Table 7** is a summary of compliance actions taken by ODA. (Note: Information summarized and provided by ODA.)

Table 6. ODA's Water Quality Program Compliance – Total Investigation

TOTAL INVESTIGATIONS INITIATED DURING 2011	
Investigations By Issue (If Multiple Issues, Issues Counted Multiple Times)	
Sediment Delivery	5
Manure Management	28
Riparian Management	29
Irrigation Return Flows	0
Other 468B Concern	2
TOTAL	55

Table 7. ODA's Water Quality Program Compliance – Compliance Action Issued

Compliance Actions Issued	
Compliance Action	Issued in 2011
Letter Of Compliance	21
Water Quality Advisory	11
Letter Of Warning	19
Notice Of Noncompliance	5
No WQ Issues Identified	5
Referred to another agency or program	5

Table 8. ODA's Water Quality Program Compliance – Investigation by Management Area

Investigations by Management Area	
Bear Creek	0
Clackamas	4
Coos	0
Crooked River	0
Curry	0
Grande Ronde	0
Hood River	0
Inland Rogue	1
Lower Deschutes	0

Table 8. ODA's Water Quality Program Compliance Summary (Cont.)

Investigations by Management Area	
Lower Willamette	1
Mid Coast	0
Middle Deschutes	1
Mid Willamette	2
Molalla-Pudding	8
North Coast	4
North Fork/Middle Fork John Day	0
Powder Brownlee	0
Sandy	3
South Santiam	4
Southern Willamette Valley	1
Tualatin	9
Umpqua	4
Upper Willamette/Siuslaw	2
Umatilla	0
Upper Deschutes	0
Upper John Day	2
Walla Walla	0
Yamhill	3
TOTAL	55

AgWQMA Plan Biennial Review Reporting. ODA and the SWCDs also produced seventeen reports in 2011 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 and 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 2010, ODA and the 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:

Table 9. ODA and the SWCDs Outreach and Education Summary (2011)

ODA and the SWCDs Outreach and Education Summary (2011)	
84 Tours	1,834 Attendees
179 Newsletters	75,142 Readers
150 Workshops	3,797 Attendees
239 Presentations	5,559 Attendees
41,245 Landowners contacted	Provided TA to 6,397 Landowners
56 Demonstrations	662 Attendees

Conservation Effectiveness Partnership

The partnership MOU was signed in 2010 between USDA-NRCS, Oregon Water Enhancement Board (OWEB), and ODEQ. The Partnership is aimed at collaboratively monitoring, evaluating, and reporting the effectiveness of cumulative conservation and restoration actions. The three partner agencies began meeting in 2010 to explore opportunities for collaboration on the shared grant program goals of improving water quality, watershed functions and processes.

The following is an excerpt from a staff report written for December 2011 Environmental Quality Commission:

The agencies share program elements, and recognized a benefit to the public and agencies if the programs could more readily share information. The Oregon Watershed Enhancement Board, the Natural Resources Conservation Service and the Oregon Department of Environmental Quality into a memorandum of understanding in 2010 to formalize this collaboration and allow the sharing of certain types of data. The goals of the partnership are to:

- Build an understanding of the extent of the investment in watershed improvement actions through the agencies' collective grant programs
- Develop a better understanding of how local organizations are utilizing the agencies' respective grant programs, in concert
- Evaluate the impacts of grant investments on water quality and watershed health;
- Describe gaps in the treatment of watersheds; and
- Design tools and methods to report accomplishments to the public.

The partner agencies selected two "pilot watersheds," the Wilson River in Tillamook Bay, and Wychus Creek along the Upper Deschutes River, due to the length of time and investment of grant program dollars, the magnitude of projects undertaken, the availability of current data sets for these watersheds, and the potential to detect trends of change. The Wilson River evaluation focused on evaluating trends of in-stream bacteria, and the Wychus Creek evaluation focused on stream temperature trends in response to conservation projects intended to increase stream flow.

Wilson River

Over the past year, the partnership completed analyses of water quality monitoring data collected in the Wilson River. Results indicate that the suite of conservation and restoration actions accomplished by the local partners, and made possible or supported by the three partner agencies' grant programs, have reduced the chance of exceeding the water quality standard for bacteria. Modeling results also indicate that the chance of

exceeding the water quality standard will continue to decrease over time. Prior to 2003, the Wilson River regularly violated this water quality standard. The benefit of a long-term reliable data set made this analysis possible and practical.

Wychus Creek

Results from Wychus Creek are also promising. Analysis of stream temperature data from 1995 to 2009 indicates that Wychus Creek stream temperatures have decreased following investments in irrigation efficiency projects that caused an increase in stream flow. In addition, an effectiveness monitoring project approved by OWEB in 2008 demonstrated a change in the Macroinvertebrate community in Wychus Creek from 2005 to 2009, which suggests the stream is experiencing decreasing stream temperatures and reduction in transports of sediment.

With information and results from the pilot areas now available, the partnership has initiated outreach efforts. Recently, the Natural Resources Conservation Service secured additional funding for contracted outreach services. The partnership will use the contractor's expertise, and outreach and communications staff at the three agencies, to identify the most efficient and effective method to deliver the results of the program. Landowners and agency field staff will benefit from having the partnership's pilot study results as communication tools to encourage additional restoration and conservation opportunities for the respective agency grant programs.

Coordination between DEQ and NRCS. DEQ's Nonpoint Source program works with several NRCS programs both at statewide and local levels.

- DEQ attended Oregon Technical Advisory Committee meetings that are co-chaired by NRCS and FSA. DE staff also served on several subcommittees of OTAC to rank funding proposals and identify natural resource priorities.
- DEQ entered into an MOA with NRCS and OWEB to help document success stories for a couple of watersheds where NRCS and OWEB made significant investments for restoration.

4.4.2 State and Private Forest Lands

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 319 funds and assisting in 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 correlate 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 typically meeting the numeric criteria, although 3 of 18 experimental stream reaches showed an exceedance due to harvest. It should be noted that the starting temperatures in these streams are usually far below the numeric targets.

Streams managed by private land riparian rules showed a post-harvest average increase of 0.7 degrees C in the daily maximum temperature. State forest rules resulted in no change in the average daily maximum. Subsequent analysis has shown that reductions in shade are the primary factor driving these temperature changes, and shade decreases are primarily connected to lower basal areas. These results demonstrate the need for changes in riparian protection rules for private forestlands in Oregon.

ODF staff presented the results to the Oregon Board of Forestry (BOF) in September 2009, September 2010, and November 2011.

- http://egov.oregon.gov/ODF/BOARD/docs/2011_November/BOFSR_20111103_04.pdf,
- http://egov.oregon.gov/ODF/BOARD/docs/2011_November/BOFATTCH_20111103_04_01.pdf,
- http://egov.oregon.gov/ODF/BOARD/docs/2011_November/BOFATTCH_20111103_04_02.pdf.

In addition, results have been accepted for publication in a peer-reviewed scientific journal (references available).

In 2011, the following was accomplished:

The results of the RipStream project were presented to the BOF in November 2011.

4.4.3 Federal Forest Lands

DEQ/BLM MOU.

A final draft of the Memorandum of Understanding between United States Department of The Interior Bureau of Land Management and State of Oregon Department of Environmental Quality To Meet State and Federal Water Quality Rules and Regulations was completed. Clean Water Act (CWA) Section 319(k) directs federal compliance with the “Oregon Nonpoint Source Pollution Plan” which identifies the need for Federal Agency MOUs. This Oregon plan states: “*MOUs will be developed to ensure that federal land management agencies comply with federal CWA and state water quality requirements and programs*”. The existing 2003 MOU between the DEQ and BLM expired in 2008. The 2003 MOU had been renewed “informally”, pending a “5 -Year Progress report” completion. A collective DEQ – BLM – USFS; 5-Year Report” was completed in June 2010. A final draft of the 2010 MOU incorporating appropriate 5-Year report recommendations has been completed.

Draft US Forest Service National Best Management Practices for Water Quality Management on National Forest System Lands.

DEQ provided extensive comments to the FS Headquarters, Washington, D.C. on the Draft *US Forest Service National Best Management Practices for Water Quality Management on National Forest System Lands, Volume 1: National Core BMP Technical Guide*, United States Department of Agriculture, Forest Service, FS-990a, April 2012,

http://www.fs.fed.us/biology/resources/pubs/watershed/FS_National_Core_BMPs_April2012.pdf.

The FS guide provides recommendations on how to complete a Plan for General Planning Activities and to select site specific BMPs for all activities that occur on FS Administered Lands. **Part 3. National Core Best Management Practices** contains both programmatic and structural BMPs for a variety of forest management activities, as follows:

- Aquatic Ecosystems Management Activities.
- Chemical Use Management Activities.
- Facilities and Nonrecreation Special Uses Management Activities.
- Wildland Fire Management Activities.
- Minerals Management Activities.
- Rangeland Management Activities.
- Recreation Management Activities.
- Road Management Activities.
- Mechanical Vegetation Management Activities.
- Water Uses Management Activities.

In 2011, the following was accomplished:

1. Finalized memorandum of understanding with BLM.
2. DEQ provided extensive comments on the Draft *US Forest Service National Best Management Practices for Water Quality Management on National Forest System Lands, Volume 1: National Core BMP Technical Guide*.

<http://www.deq.state.or.us/wq/nonpoint/docs/USFSDEQMOU.pdf>

4.5 Progress of 319 Grant Funded Projects

4.5.1 Description of Types of 319 NPS Projects

DEQ continually seeks projects from government agencies, tribal nations, and nonprofit organizations to address nonpoint sources (NPS) of pollution affecting coastal, river, lake, drinking, and ground water resources of the state. The solicitation occurs annually during the months of October through December as part of the 319 Nonpoint Source Implementation Grants.

The 319 Nonpoint Source Implementation Grant funds target geographically and for specific parameters to effectively improve water quality. The four general focus areas used to develop DEQ project priorities are:

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

For a more detailed description of DEQ's geographic and programmatic priorities for the thirty-three (33) 319 funded projects in 2011 as identified in the 2011 319 RFP, see the Geographic and Programmatic Priorities for 319 Funding section below.

4.5.2 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, 2011. Seventy-one (71) 319-funded projects are still open; including the thirty-three (33), 2011 funded projects.

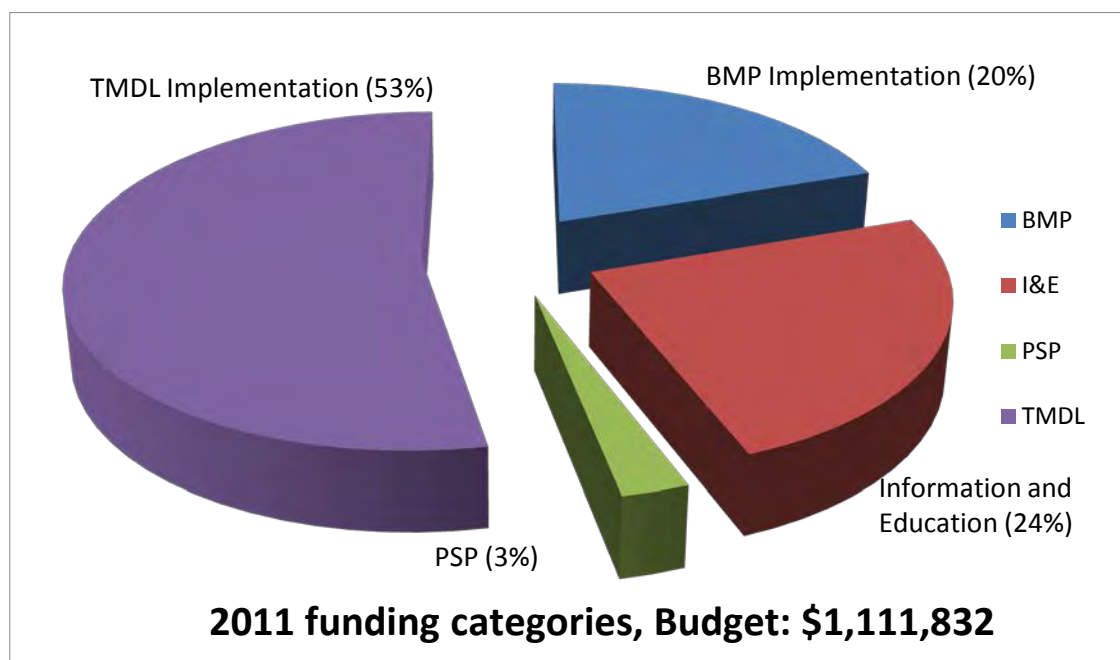
4.5.3 Geographic and Programmatic Priorities for 319 Funding

Table 13 in **Appendix 2** identifies DEQ's geographic and programmatic priorities for 319 funded projects in 2011 as outlined in the 2011 319 RFP (**Appendix 3**). These priorities were used to prioritize the 2011 319 Funded Projects. The identification of priority basins (as listed below) does not exclude the submission of proposals for work outside these basins. To determine how the "project need" was met by region and basin/subbasin; please refer to **Tables 10 and 11** for a list of the 2011 319 Grant Funded Projects in Response to the RFP.

4.5.4 2011 319 Grant Funding Categories

The following **Figure 2** identifies the 2011 – 319 funding categories and funded amounts. The **\$1,111,832** total funds for 2011 was divided in four areas of emphasis, as follows: BMP Implementation (20%), TMDL Implementation, (53%) Pesticide Stewardship Program, (3%) and Information and Education (24%). Note that "BMP Implementation" did not include implementation of BMPs identified in a TMDL Implementation Plan and "TMDL Implementation" primarily focused on effectiveness monitoring.

Figure 2. 2011 Funding Categories



4.5.5 2011 319 Grant Funded Projects

The following **Tables 10 and 11** identify the projects funded in response to the 2011 RFP:

Table 10. 319 Projects Funded in Response to the 2011 RFP by Region and Basin/Subbasin

319 PROJECTS FUNDED IN RESPONSE TO THE 2011 RFP BY REGION							
Number	Region	Project Name	Organization	Basin	319 \$	Match	Total
W11-02	ER	Milton-Freewater Levee Design Phase 2	WWBWSC	Walla Walla	\$82,702	\$55,135	\$156,281
W11-05	ER	Urban issues working group NPS education project	Klamath WS Partnership	Klamath	\$23,414	\$16,476	\$39,890
W11-20	ER	Preserving Umatilla's Natural resources through education	Umatilla SWCD	LWB GWMA	\$59,300	\$96,000	\$155,300
W11-30	ER	Powder Basin Monitoring Program – Phase I	Powder Basin WSC	Powder Basin	\$25,385	\$50,000	\$75,385
W11-32	ER	NFJDWC Landowner & Community Outreach Program	N. Fork John Day WSC	John Day	\$54,646	\$40,000	\$94,646
W11-35	ER	Red Boy Mine Assessment and Restoration project	N. Fork John Day WSC	John Day	\$35,716	\$82,000	\$117,716
W11-37	ER	Rock Creek Restoration Design	Wasco Co SWCD	Rock Creek	\$43,680	\$36,000	\$79,680
W11-38	ER	Reducing Pesticide Cont of Surf W in Hood R Thru' Area Codling Moth Management	OSU HREC	Hood Basin	\$19,526	\$130,000	\$198,376
W11-07	NWR	Love Your River	OEC	various	\$15,000	\$30,830	\$49,830
W11-06	NWR	Upper Nehalem-riparian restoration and Nehalem Basin WQ monitoring	Upper Nehalem WSC	Nehalem	\$61,000	\$93,960	\$164,960
W11-08	NWR	2011 Tillamook County Children Clean Water Festival	TEP	Tillamook	\$6,250	\$4,276	\$10,526
W11-09	NWR	B.Y.P.P. Year 9	TEP	Tillamook	\$55,000	\$42,000	\$102,000
W11-10	NWR	NC Ws. And Riparian Enhancement Project	Col. River Estuary St. Tf.	Clatsop	\$30,000	\$61,200	\$96,200
W11-11	NWR	Johnson Ck Effective Monit: Temperature, Bacteria, and Hydrology	Johnson Creek WSC	Willamette	\$44,306	\$84,400	\$133,556
W11-18	NWR	NNWC streamside planting and maintenance year 11	NNWSC	Nestucca/Neskowin	\$55,000	\$40,200	\$100,200
W11-19	NWR	Clatsop Nutrient Management	Clatsop SWCD	Abercombie Creek	\$28,640	\$32,000	\$60,640
W11-28	NWR	Milk Creek Streambank and Riparian Buffer Restoration Project	Clackamas Co SWCD	Molalla R/Milk Crk	\$35,500	\$45,000	\$80,050
W11-42	NWR	Cannon Beach Stormwater Planning	City of Cannon Beach	various	\$30,000	\$939,477	\$1,635,186
W11-16	WR	Non-Structural and Structural Tools &	U of O	various	\$32,000	\$28,780	\$70,780

319 PROJECTS FUNDED IN RESPONSE TO THE 2011 RFP BY REGION							
Number	Region	Project Name	Organization	Basin	319 \$	Match	Total
		Tech. Assist. To Address NPS					
W11-12	WR	GW Protection Ed to Promote Community Involvement in S. Will Valley	OSU	S. Willamette	\$48,800	\$54,935	\$132,421
W11-13	WR	S. Umpqua Water Quality/HABs Monitoring & Project Development	PUR	Umpqua	\$43,474	\$26,812	\$75,286
W11-14	WR	Upper Siletz Assessment and Restoration Project	LC SWCD	Mid coast	\$41,994	\$70,000	\$111,994
W11-15	WR	Recruiting landowners beyond early adopters to restore riparian function	S. Santiam WSC	Santiam	\$34,900	\$80,330	\$169,100
W11-17	WR	School restoration program: recruitment, rest. Design and water manag.	Camas Education Network.	Up. Willamette	\$28,750	\$32,845	\$62,845
W11-22	WR	L.I.D. Acad, cohort ed & tech assist progr for small to med sized comm.	OSU	Willamette	\$35,281	\$23,544	\$58,825
W11-25	WR	Bear Creek and Rogue Basin TMDL Implementation Coordination	RVCOG	Rogue	\$30,000	\$37,800	\$67,800
W11-26	WR	Siuslaw WS WQ Salmon Habitat Preservation	Oregon Toxic Alliance	Siuslaw	\$3,000	\$21,580	\$24,580
W11-27	WR	Sucker Cr. Channel and floodplain restoration - Phase IIA	Illinois Valley SWCD/WSC	Sucker Creek	\$19,519	\$276,651	\$316,651
W11-39	WR	Coos Bay Estuary Watershed Approach to Water Quality Improvement	Coos Watershed Association	Coos Bay	\$39,988	\$40,931	\$80,920
W11-46	WR	MidCoast TMDL Facilitation-Mediation	TBD	MidCoast	\$4,000	\$2,000	\$6,000
W11-43	HQ	Pesticide Stewardship Partnerships	DEQ	DEQ/NWR-ER stakeholders	\$10,136	\$6,800	\$16,936
W11-44	HQ	ODF RipStream: Stream Temperature Changes Over Time	Dept of Forestry		\$34,925	\$23,283	\$58,208
		TOTAL			\$1,111,832	\$2,605,245	\$4,602,768

319 PROJECTS FUNDED IN RESPONSE TO THE 2011 RFP BY BASIN

Number	Region	Project Name	Organization	Basin	319 \$	Match	Total
W11-19	NWR	Clatsop Nutrient Management	Clatsop SWCD	Abercrombie Creek	\$28,640	\$32,000	\$60,640
W11-10	NWR	NC Ws. And Riparian Enhancement Project	Col. River Estuary St. Tf.	Clatsop	\$30,000	\$61,200	\$96,200
W11-39	WR	Coos Bay Estuary Watershed Approach to Water Quality Improvement	Coos Watershed Association	Coos Bay	\$39,988	\$40,931	\$80,920
W11-38	ER	Reducing Pesticide Cont of Surf W in Hood R 'Thru' Area Codling Moth Management	OSU HREC	Hood Basin	\$19,526	\$130,000	\$198,376
W11-35	ER	Red Boy Mine Assessment and Restoration project	N. Fork John Day WSC	John Day	\$35,716	\$82,000	\$117,716
W11-32	ER	NFJDWC Landowner & Community Outreach Program	N. Fork John Day WSC	John Day	\$54,646	\$40,000	\$94,646
W11-05	ER	Urban issues working group NPS education project	Klamath WS Partnership	Klamath	\$23,414	\$16,476	\$39,890
W11-20	ER	Preserving Umatilla's Natural resources through education	Umatilla SWCD	LWB GWMA	\$59,300	\$96,000	\$155,300
W11-14	WR	Upper Siletz Assessment and Restoration Project	LC SWCD	Mid coast	\$41,994	\$70,000	\$111,994
W11-46	WR	MidCoast TMDL Facilitation-Mediation	TBD	MidCoast	\$4,000	\$2,000	\$6,000
W11-28	NWR	Milk Creek Streambank and Riparian Buffer Restoration Project	Clackamas Co SWCD	Molalla R/Milk Crk.	\$35,500	\$45,000	\$80,050
W11-06	NWR	Upper Nehalem-riparian restoration and Nehalem Basin WQ monitoring	Upper Nehalem WSC	Nehalem	\$61,000	\$93,960	\$164,960
W11-18	NWR	NNWC streamside planting and maintenance year 11	NNWSC	Nestucca/Neskowin	\$55,000	\$40,200	\$100,200
W11-30	ER	Powder Basin Monitoring Program – Phase I	Powder Basin WSC	Powder Basin	\$25,385	\$50,000	\$75,385
W11-37	ER	Rock Creek Restoration Design	Wasco Co SWCD	Rock Creek	\$43,680	\$36,000	\$79,680
W11-25	WR	Bear Creek and Rogue Basin TMDL Implementation Coordination	RVCOG	Rogue	\$30,000	\$37,800	\$67,800
W11-12	WR	GW Protection Ed to Promote Community Involvement in S. Will Valley	OSU	S. Willamette	\$48,800	\$54,935	\$132,421
W11-15	WR	Recruiting landowners beyond early adopters to restore riparian function	S. Santiam WSC	Santiam	\$34,900	\$80,330	\$169,100
W11-26	WR	Siuslaw WS WQ Salmon Habitat Preservation	Oregon Toxic Alliance	Siuslaw	\$3,000	\$21,580	\$24,580
W11-27	WR	Sucker Cr. Channel and floodplain restoration - Phase IIA	Illinois Valley SWCD/WSC	Sucker Creek	\$19,519	\$276,651	\$316,651

319 PROJECTS FUNDED IN RESPONSE TO THE 2011 RFP BY BASIN

Number	Region	Project Name	Organization	Basin	319 \$	Match	Total
W11-08	NWR	2011 Tillamook County Children Clean Water Festival	TEP	Tillamook	\$6,250	\$4,276	\$10,526
W11-09	NWR	B.Y.P.P. Year 9	TEP	Tillamook	\$55,000	\$42,000	\$102,000
W11-13	WR	S. Umpqua Water Quality/HABs Monitoring & Project Development	PUR	Umpqua	\$43,474	\$26,812	\$75,286
W11-17	WR	School restoration program: recruitment, rest. Design and water manag.	Camas Education Network.	Up. Willamette	\$28,750	\$32,845	\$62,845
W11-44	HQ	ODF RipStream: Stream Temperature Changes Over Time	Dept of Forestry	Various	\$34,925	\$23,283	\$58,208
W11-43	HQ	Pesticide Stewardship Partnerships	DEQ	Various	\$10,136	\$6,800	\$16,936
W11-07	NWR	Love Your River	OEC	Various	\$15,000	\$30,830	\$49,830
W11-42	NWR	Cannon Beach Stormwater Planning	City of Cannon Beach	Various	\$30,000	\$939,477	\$1,635,186
W11-16	WR	Non-Structural and Structural Tools & Tech. Assist. To Address NPS	U of O	Various	\$32,000	\$28,780	\$70,780
W11-02	ER	Milton-Freewater Levee Design Phase 2	WWBWSC	Walla Walla	\$82,702	\$55,135	\$156,281
W11-22	WR	L.I.D. Acad, cohort ed. & tech assist progr for small to med sized comm.	OSU	Willamette	\$35,281	\$23,544	\$58,825
W11-11	NWR	Johnson Ck Effective Monit: Temperature, Bacteria, and Hydrology	Johnson Creek WSC	Willamette	\$44,306	\$84,400	\$133,556
		TOTAL			\$1,111,832	\$2,605,245	\$4,602,768

Table 11. 319 Projects Funded in Response to the 2011 RFP by Type of Project, BMPs, and Parameters of Concern.

OREGON 319 2011 PROJECTS FUNDED BY TYPE OF PROJECT, BMPS, AND PARAMETERS OF CONCERN					
Project Name	Type of Project	BMPS	Parameters of Concern	Where	Budget
Milton-Freewater Levee Design Phase 2	BMP I	Instream, riparian, and uplands habitat restoration	temperature	Walla Walla River	\$82,702
Clatsop Nutrient Management	BMP I	Manure Management	Nutrients, bacteria	Abercrombie Creek	\$28,640
Cannon Beach Stormwater Planning	BMP I	Stormwater management	Bacteria	Ecola Creek	\$30,000
Non-Structural and Structural Tools & Tech. Assist. To Address NPS	BMP I	Information and Education	Temperature Nutrients, Sediment	Various, Mid Willamette / Mid Coast	\$32,000
S. Umpqua Water Quality/HABs Monitoring & Project Development	BMP I	Riparian restoration planning	DO, bacteria, Nutrients, Sediment	Umpqua Days creek Winston	\$43,474
Siuslaw WS WQ Salmon Habitat Preservation	BMP I	Irrigation Management	Nutrients, Sediment	Siuslaw	\$3,000
Urban issues working group NPS education project	I&E	Minimum Tillage	Sediment, Nutrients	Klamath	\$23,414
Preserving Umatilla's Natural resources through education	I&E	Public outreach	All NPS pollution sources	LWB GWMA	\$59,300
NFJDWC Landowner & Community Outreach Program	I&E	Riparian Management	Temperature Nutrients, Sediment	John Day	\$54,646
Love Your River	I&E	Riparian Management	Temperature Nutrients, Sediment	various	\$15,000
2011 Tillamook County Children Clean Water Festival	I&E	Public outreach	All NPS pollution sources	Tillamook	\$6,250
GW Protection Ed. to Promote Community Involvement in S. Will Valley	I&E	Public outreach	All NPS pollution sources	S. Willamette	\$48,800
School restoration program: recruitment, rest. Design and water management	I&E	Riparian restoration	Temperature turbidity	Up. Willamette	\$28,750
Reducing Pesticide Contamination of Surf Water in Hood River	PSP	Pesticide management	Pesticides	Hood Basin	\$19,526

L.I.D. Academy for small to medium sized communities	I&E	Public outreach	Stormwater runoff	Willamette	\$35,281
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Table 12. 319 Projects Funded in Response to the 2011 RFP by Type of Project, BMPs, and Parameters of Concern. (Cont.)

OREGON 319 2011 PROJECTS FUNDED BY TYPE OF PROJECT, BMPS, AND PARAMETERS OF CONCERN					
Project Name	Type of Project	BMPS	Parameters of Concern	Where	Budget
Powder Basin Monitoring Program – Phase I	TMDL	BMP Development	Runoff, nutrients	Powder Basin	\$25,385
Red Boy Mine Assessment and Restoration project	TMDL	Riparian Management	Temperature Runoff	John Day	\$35,716
Rock Creek Restoration Design	TMDL	Riparian Management	Sediment, Temperature Bacteria	Rock Creek	\$43,680
Upper Nehalem-riparian restoration and Nehalem Basin WQ monitoring	TMDL	Public Information And Education	NPS	Nehalem	\$61,000
Backyard Program Planting (BYPP) Year 9	TMDL	Riparian Management	Runoff	Tillamook	\$55,000
North Coast Watershed And Riparian Enhancement Project	TMDL	Pesticide Management	Pesticides	Clatsop	\$30,000
Johnson Ck. Effective Monitoring: Temperature, Bacteria, and Hydrology	TMDL	Riparian restoration	Nutrients temperature, bacteria	Willamette	\$44,306
NNWC streamside planting and maintenance year 11	TMDL	Riparian restoration	Nutrients, bacteria	Nestucca / Neskowin	\$55,000
Milk Creek Streambank and Riparian Buffer Restoration Project	TMDL	Riparian restoration	Runoff, nutrients, erosion	Molalla R / Milk Creek	\$35,500
Upper Siletz Assessment and Restoration Project	TMDL	Riparian restoration	Temperature nutrients, DO	Mid coast	\$41,994
Recruiting landowners beyond early adopters to restore riparian function	TMDL	Riparian/ restoration	Nutrients, stream habitat	Santiam	\$34,900
Bear Creek and Rogue Basin TMDL Implementation Coordination	TMDL	Watershed management	Temperature nutrients	Rogue	\$30,000
Sucker Cr. Channel and floodplain restoration - Phase IIA	TMDL	Floodplain restoration	Runoff, nutrients	Sucker Creek	\$19,519
Coos Bay Estuary Watershed Approach to Water Quality Improvement	TMDL	Watershed management	Temperature nutrients	Coos Bay	\$39,988
MidCoast TMDL Facilitation-Mediation	TMDL	Watershed management	All NPS pollution sources	MidCoast	\$4,000

4.5.6 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.

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 2011 annual GRTS training, which focused on helping states to develop estimates of NPS load reductions.

DEQ used the load reduction model, “Spreadsheet Tool for Estimating Pollutant Load” (STEPL), within GRTS to estimate nitrogen (pounds per year), and phosphorus (pounds per year), Sedimentation-Siltation (tons per year) for eleven (11) 319 funded projects.

For 2009 - 319 funded projects, load reductions estimates were completed for a select few projects. Not all projects targeted specific pollutants reductions and for other projects that have not started, there was no information to calculate reductions.

The following **Table 12** identifies the total **2011** load reduction estimates by pollutant are as follows: **2,720 Pounds/Year Nitrogen Reduction, 1,940 Pounds/Year Phosphorous Reduction, and 385 Tons/Year Sedimentation-Siltation Reduction.**

Note: The estimates reported in this table were part of the annual report to EPA for Load Reduction Estimates for the year 2011.

Table 13. Estimates of NPS Load Reductions of Selected 319 Funded Projects.

2011 NPS PROJECTS – ESTIMATED NPS LOAD REDUCTION (USING STEPL)					
Grant Year	Project Name	Basin	Nitrogen Reduction Pounds/Year	Phosphorous Reduction Pounds/Year	Sedimentation-Siltation Reduction Tons/Year
2011	North Coast Watersheds Enhancement Project	North Coast	850	220	40
	Backyard Planting Year 9	Tillamook	1200	1540	300
	Santiam-Calapooia Landowner Recruitment and Restoration	Santiam/Calapooia	670	180	45
ESTIMATED LOAD REDUCTION			2720	1940	385

The following accomplishments occurred in 2011:

1. DEQ’s 319 Grants Coordinator received additional GRTS load reduction training from EPA.
2. DEQ completed load reductions estimates for three initiated (3) 2011 projects.

3. Total load reduction estimates by pollutant are as follows:

- **2,720** Pounds/Year Nitrogen Reduction
- **1,940** Pounds/Year Phosphorous Reduction
- **385** Tons/Year Sedimentation-Siltation Reduction

4.5.7 Watershed Based Plans

The Watershed Approach currently being developed by DEQ is based on many components of approaches recommended by EPA and is used in some other states. The Watershed Approach is a basin-scale resource assessment process with greater opportunities for direct, interactive feedback from local stakeholders and tribal nations. Depending on which basin is the focus of the Watershed Approach, an applicable TMDL may have already been developed, may be under development, or may be scheduled for development.

Unlike TMDLs, the basin assessments conducted using the Watershed Approach are not limited to addressing CWA 303(d) listings using available water quality data. Basin assessments are intended to provide a snapshot of the environmental status and trends of the basin as a whole. They are intended not only to address surface water status for 303(d) listings and to identify other surface water concerns, but also groundwater issues and upland conditions in the basin. While the Watershed Approach is being designed to address some of the limitations of the TMDL process, it will not replace TMDLs. The TMDL process will continue along with the Watershed Approach process in different basins. It is envisioned that the Watershed Approach process will allow local partners to develop and implement strategies to address impairments prior to completion of the formal TMDL.

The Watershed Approach does not have a regulatory basis or purpose; a basin assessment is a guidance, assessment and action planning document. The basin assessments will not identify wasteload allocations for point sources or load allocations for nonpoint sources. They will, however, potentially inform load and wasteload allocations in Basin TMDLs where the level of data available to the assessment process is appropriate and may also help inform other regulatory processes.

The products of the WA process consist of two primary elements: a basin status report and a basin action plan. Stakeholder involvement is also a critical component of the WA. The following Basin status reports and actions plans have been completed and will be posted on DEQ internet site in early 2012:

- Water Quality Status and Action Plan: Deschutes Basin (*DEQ Pub No 11-WQ-043*).
- Water Quality Status and Action Plan: North Coast Basin (*DEQ Pub No 11-WQ-042*).
- Water Quality Status and Action Plan: Rogue Basin (*DEQ Pub No 11-WQ-041*).

In addition to the annual planning process taken by regional and HQ managers, the WA provides an opportunity to identify areas in need of basin scale TMDLs. In basins where WA process occurs prior to or concurrent with TMDL development, the following considerations should be taken to determine if TMDLs are needed.

- Pollutant/ cause of impairment.
- Extent of impairment.
- Potential sources.
- Land use.
- Available resources to support implementation efforts.

The result of the finding during Watershed Approach will be considered when managers develop schedules for TMDLs.

During 2011, DEQ started implementing the Oregon Watershed Approach to assist in managing water quality in the State of Oregon. The Watershed Approach is a coordinating framework for management that focuses public, private, and non-profit sector efforts to address the highest priority problems within watersheds taking into consideration both ground and surface water flow. This approach provides a broad assessment of the status of water quality and other environmental indicators within a basin, greater

opportunities for stakeholder involvement and interagency cooperation, and addresses some of the limitations of the TMDL process.

Unlike a TMDL, the Watershed Approach process is not limited to addressing 303(d) listings using available water quality data. It addresses surface water status for both 303(d) listings and other surface water related concerns, groundwater and upland conditions, and provides an evaluation of the environmental status of the basin as a whole. While the Watershed Approach process is being designed to address some of the limitations of the TMDL process, it will not replace TMDLs.

A key outcome of the Watershed Approach is developing a plan that consists of a Status Report and an Action Plan that summarizes the important water quality problems and the strategies needing to be implemented. Together these sections allow for the adaptive management of the water quality in a geographic area.

DEQ is implementing the watershed approach to help align the DEQ Water Quality program with priorities. The watershed approach is “A coordinating framework for managing water quality that allows DEQ and our partners to build collaborative efforts to address the highest priority problems within a given watershed (modified from EPA).”

The following are the key elements of the Watershed Approach Vision:

- The Watershed Approach will allow DEQ to focus and coordinate its programs to understand, address, and communicate current water quality conditions in watersheds throughout the state. It will also help prevent future water quality problems within each watershed. This focus will address legal, legislative, and program mandates.
- The Watershed Approach will describe to communities in every watershed around the state what DEQ is doing and the priorities for addressing water quality problems in terms of nonpoint sources, point sources, permitting, monitoring, TMDL development and implementation plans, and grant and loan programs.
- The Watershed Approach will provide opportunities where DEQ can engage the local community in a discussion about water quality problems and solutions.
- Implementing the Watershed Approach will be iterative, and there will be lessons learned from each assessment. This will result in better water quality assessments, improved reporting, and the creation of opportunities to integrate DEQ’s knowledge into more of the water quality programs, which will result in smarter solutions.
- The Water Quality Status and Action Plans will have a wealth of information about each basin that will identify the priority water quality concerns and the important actions that DEQ and our partners can take to “restore, maintain and enhance” water quality.

Currently, DEQ tracks 17 major subprograms in the Water Quality Program operating budget. Many of these are further divided into sub-subprograms. For example, we have a monitoring subprogram as one of our 17 operating budget tracking items. However, monitoring is further broken down into numerous efforts ranging from the statewide ambient sampling program looking at rivers around the state to specialized projects such as the pesticide stewardships partnership projects, which examine small watersheds.

Many of the 17 major subprograms have also developed their own problem and work priorities over the years. The result is that we are a little disjointed when trying to describe the direction and priorities of the entire water quality program. Some of the best water quality program efforts in the country reside within these 17 subprograms, but we have difficulty describing how we use these subprograms to address water quality issues within specific basins.

We must make a serious effort to change how we deliver our services whether it be writing water quality standards, assessing water quality, writing permits, developing and implementing TMDLs, implementing non-point source efforts, distributing 319 grant funds, conducting inspections, responding to complaints, enforcing violations, administering the state revolving loan fund, performing 401 certifications, or other programs. We have to find a better approach to implement our program in a more effective and efficient

manner or we will fail in our mission to be a leader in restoring, maintaining and enhancing the quality of Oregon's water.

This approach has to describe to communities in the different watersheds around the state what the Water Quality Program is doing in their watershed, what our priorities are for addressing water quality problems, for nonpoint sources, for point sources, for permitting, for sampling, for TMDL development and for plan implementation. Although the program started to think about the watershed approach many years ago, it is imperative that we take hold of the concept and fully implement it.

Some basins are rich in data and information to address these questions while others are not. My hope is that as we cycle through the state developing watershed plans, we will develop a large assessment and information base in each basin so that someday in the future we will be able to answer these questions for each basin in the state. That will not be the case when we start. We, for example, have a tremendous amount of data and information about the Deschutes Basin that the region has spent this time organizing, reviewing and sharing with stakeholders.

A watershed plan will include:

- Water quality standards and beneficial use designations.
- Status of water quality conditions for surface and ground water throughout the basin.
- Links to databases to get detailed water quality data.
- Beneficial use impacts by pollutants from known or potential sources.
- Water quality data gaps and the priorities for gathering the needed data.
- Whether conditions are getting worse or improving.
- Whether there are water quality standards violations.
- Whether plans are being developed to meet standards and protect beneficial uses.
- Priorities for watershed implementation plan.
- Sources identified in the implementation plan.
- Locations of permitted sources, where they discharge, and whether the permits are up to date and where you could get a copy of the permit.
- Identify nonpoint sources.
- Critical priorities and work that address nonpoint sources.
- Where DEQ is spending Section 319 grant funds to restore riparian areas.
- Municipal wastewater treatment needs any loans or grants to upgrade, receipt of loans, and project status.
- The drinking water source areas for the communities in the basin.
- Compliance or enforcement actions.
- In addition, much more.

We need to answer questions communities members have about the watersheds where they live: Is it safe to swim? Are the fish safe to eat? What is being done about water quality problems in our area? Is the water safe to drink?

We are committed to developing three watershed plans per year that will include a water quality status and action plan. We have specifically described this in the 2011 Agency Request Budget for the 2011 2013 legislative session.

It is intended that the Watershed Approach process will eventually be implemented statewide. DEQ is currently envisioning that each DEQ Region (Eastern, Western, and Northwest Oregon) will complete a Watershed Approach Plan for one basin each year. There are approximately 15 basins within the state. This would allow the findings of the Watershed Approach to be revisited and updated every 5 years.

“Watershed basin plans: Develop watershed basin plans for three basins per year to assess water quality conditions and identify water quality priorities and actions to address problems.

Examples of anticipated actions include:

- Align water quality monitoring to basin needs.
- Align individual permit issuance to the basin plan.
- Align TMDL development and implementation to the basin plan.
- Align nonpoint source implementation work to priorities in the basin.
- Align groundwater protection work with needs outlined in the basin plan.
- Align drinking water protection work with needs outlined in the basin plan.
- Determine Oregon's water quality priorities through the watershed basin plans.

DEQ also settled a lawsuit in July 2010 wherein we committed to develop watershed assessments to use in permit development. The primary interest of the plaintiffs was better use of available data in developing permits and identifying where additional data was needed to make well-reasoned permit decisions. This is a small part of the overall watershed basin planning approach specific to permitting but it is an additional driver for getting this work completed.

Currently, we have completed basin assessments and action plans in the Deschutes, North Coast and Rogue basins and have moved on to the Burnt/Powder, South Coast and Clackamas/Sandy for 2011. In 2012, we will create plans for the Umatilla, Tualatin and Upper Willamette basins. In each region, there is a team of people working on the basin assessments and action plans. Implementing the watershed approach will be iterative, and we will learn lessons from each assessment. This investment on our part will result in better water quality assessments, improved reporting, and the creation of opportunities to integrate our knowledge into more of our programs that will result in smarter solutions.

More information about the watershed approach and links to the Water Quality Status and Action Plans are available on our internal website,

<http://deqshpnt/sites/WQ/waap/StatusAction/Wiki%20Pages/Background.aspx>

Watershed-Based TMDLs.

Watershed-based TMDL plan integrates 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 uses a watershed basis as its primary approach for improving state surface waters. 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 are assigned to each GWMA and basin/subbasin. Each coordinator takes the lead role as GWMA and TMDLs are developed and implemented.

DEQ develops 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) and designed to make sure impaired waters eventually will meet water quality standards.

Implementation Ready TMDLs.

Based on the CZARA Oregon's Coastal Nonpoint Pollution Control Program (CNPCP) settlement agreement, DEQ is developing Implementation Ready TMDLs for all TMDL basins within the CNPCP boundary. The Mid Coast TMDL is the first basin to be prepared as one.

For each TMDL, a TMDL WQMP is developed to describe a strategy for reducing water pollution to the levels set in the TMDL. OAR 340-042-0050(1) requires DEQ to involve stakeholders in the TMDL process at all levels. The WQMP covers all DMAs within a watershed and includes detailed plans for how individual DMAs intend to achieve TMDL compliance, called Implementation Ready TMDLs. DEQ has

authority to develop TMDLs, including Implementation Ready TMDLs, under Oregon's TMDL rule, OAR 340-042-0025 to 0080. OAR 340-042-0040(4) specifies elements that must be included in a TMDL.

For the Coastal Zone Management Area, Implementation Ready TMDLs will be prepared for all new and updated TMDLs. This is being implemented by DEQ due to both NOAA and EPA's requirements for Coastal Zone Management Area program approval (May 12, 2010 letter, **Appendix D**) and EQC directives.

The Implementation Ready TMDLs will:

1. Ensure that surrogate measures are clear and easily applied to meet TMDL load allocations.
2. Provide information that could be used to identify priority areas for implementation.
3. Identify required and recommended Best Management Practices (BMPs), such as set riparian buffer widths, needed to achieve TMDL goals.
4. Identify the most effective BMPs that will be surrogates for the WLA and LA.
5. Set where and when management measures and restoration projects will be implemented to meet water quality restoration milestones.
6. Identify the load reduction.
7. Develop plans for implementation effectiveness monitoring and tracking.
8. Ensure the monitoring of BMP installation and effectiveness and a process for evaluating BMPs and updating them, if necessary.
9. Estimate costs associated with technical assistance and implementation.
10. Determine adequacy of DMA implementation strategies for meeting load allocations.
11. Select implementation strategy that will provide reasonable assurance for achieving water quality goals.
12. Individual load allocations are given to significant air deposition and land sources of pollutants subject to TMDLs.

When identified as necessary during scoping or watershed planning process, DEQ will develop TMDLs at a smaller spatial scale (10 or 12-digit HUCs); with DMAs and local stakeholder input. Implementation Ready TMDLs will provide DMAs and local partners with the direction needed to develop TMDL Implementation Plans with specificity as to where and when management measures and restoration projects will be implemented.

5. Success Stories and Environmental Improvement

5.1 WQ-10 and SP-12 Projects

Tualatin River Basin

The following are excerpts from “Oregon’s Tualatin River: SP12 Option 2a: Supporting Documentation.

Waterbody Improved.

Thanks to a concerted, watershed-wide effort, water quality conditions in the Tualatin River watershed have improved since the adoption of the first TMDLs in 1988. The incidence of algae blooms in the lower river has decreased, as demonstrated by lower chlorophyll *a* concentrations, no pH violations, higher minimum dissolved oxygen levels, and fewer hours when dissolved oxygen is supersaturated. These improvements coincide with lower total phosphorus concentrations that now meet the 2001 TMDL phosphorus targets in the mainstem Tualatin River. This success suggests that the TMDL target for total phosphorus should remain in place to maintain water quality. Efforts to control urban stormwater and agricultural runoff are also helping to reduce bacteria levels in several areas, especially in the lower Tualatin River watershed. These efforts will continue and should generate additional improvements in the near future.

A TMDL for temperature was issued in 2001. No data have been collected that demonstrate lower water temperatures; however, more than 35 miles of streams and creeks have been planted with shade trees—some on creeks sufficiently narrow that the stream is fully shaded after less than 10 years of growth. Additional riparian planting and continued growth of the reaches already planted are expected to improve water temperatures in the future. Flow augmentation from Henry Hagg Lake and Barney Reservoir have also lowered summertime Tualatin River water temperatures and improved water quality. Many of the tributaries of the Tualatin River do not have adequate water. CWS is augmenting stream flows by releasing its stored water in several tributaries of the Tualatin River during the dry season. Data have shown that the flow restoration program has resulted in lower temperatures, higher dissolved oxygen levels and overall improved water quality in the tributaries. CWS plans to expand the tributary augmentation program in the future.

This report shows improvements in water quality for at least one of three parameters across 21 of the 27 small watersheds that make up the Tualatin River Watershed. The report also touches on the many efforts that have caused these widespread improvements. Declining water quality in a few small watersheds, along with the need to maintain the TMDL pollutant targets in order to maintain the improved water quality indicate that the TMDL is working, and should remain in place. The extensive number of projects and stakeholders working to improve water quality in the Tualatin ensure that conditions will continue to improve.

Problem.

Prior to the 1970’s, wastewater treatment plants (WWTPs) discharged high concentrations of ammonia and phosphorus into the main stem of the Tualatin River. The high ammonia concentrations often caused significant in-river nitrification during the summer, resulting in a high oxygen demand and low dissolved oxygen concentrations downstream of the WWTPs. In addition, large populations of phytoplankton thrived in the mainstem of the Tualatin River during the summer; the algal blooms and subsequent population crashes contributed to violations of Oregon’s minimum dissolved oxygen standard of 6.0 milligrams per liter (mg/L) (now 6.5 mg/L) and the maximum pH standard of 8.5 standard units. Several sites on the main stem also exceeded the action level for nuisance algal growth of 15 micrograms per liter ($\mu\text{g/L}$) of chlorophyll *a*.

In 1970, the Unified Sewerage Agency of Washington County was formed to address health and pollution problems in the Tualatin River and its tributaries. The Unified Sewerage Agency consolidated 26 inefficient wastewater treatment plants in the Tualatin River watershed into a coordinated system and constructed new treatment facilities. These facilities provided advanced treatment and were complying with their technology-based permits by the late 1970's. Flow augmentation from Hagg Lake first occurred in June 1975, after the completion of Scoggins Dam. However, in the early 1980's, data showed that the Tualatin River was still experiencing water quality problems. In 1988, the Oregon Department of Environmental Quality (DEQ) developed a total maximum daily load (TMDL) to address the water quality impairments, which triggered additional improvements by both point and nonpoint sources in the Tualatin River watershed. This TMDL pre-dated Oregon's first list of impaired water bodies (Clean Water Act section 303(d) list) issued in 1998. By 2002, many waterbodies within the Tualatin River watershed had been identified as being impaired but having a TMDL in place to address a variety of pollutant sources. The complete list is available in Table A-2 (see page A-16).

Project Highlights.

Evidence of Watershed Approach and Widespread Restoration Efforts

During the 1990's, Oregon adopted or updated several statewide environmental laws and policies to better protect water quality and restore dwindling fish populations. Oregon forest practices were regulated by the Oregon Department of Forestry starting in 1987 with the adoption of the Forest Practices Act. These rules were updated in 1994 to provide additional protection for fish passage, fish habitat, and water quality. TMDLs point to these rules as being the vehicle for TMDL implementation on forested lands, so effectiveness monitoring under these rules has continued to the present time. Recent studies show that these rules may not fully protect water quality and temperature so in keeping an adaptive management approach, the rules are currently under review. The Agricultural Water Quality Management Act (ORS 568.900 – 568.933), which was adopted in 1993 and funded in 1997, required the adoption of area plans and rules regarding management practices and water quality. Implemented by the Oregon Department of Agriculture, the Act requires that local plans be reviewed every two years, and revised as needed to boost water quality protection. During the same time period, the DEQ began adopting TMDLs and maintaining an inventory of impaired waters. These statewide programs helped to shape the efforts taken to address local water quality problems in the Tualatin River watershed.

Concerted efforts to improve water quality in the Tualatin River watershed have been underway since the 1980's. Initially focused on the mainstem Tualatin, watershed stakeholders expanded their restoration and pollution reduction efforts to Tualatin River tributaries beginning in the mid-1990's). Some of these ongoing efforts are highlighted below, but many more projects have already been completed, are underway or are in planning stages.

Restoration Projects Led by CWS

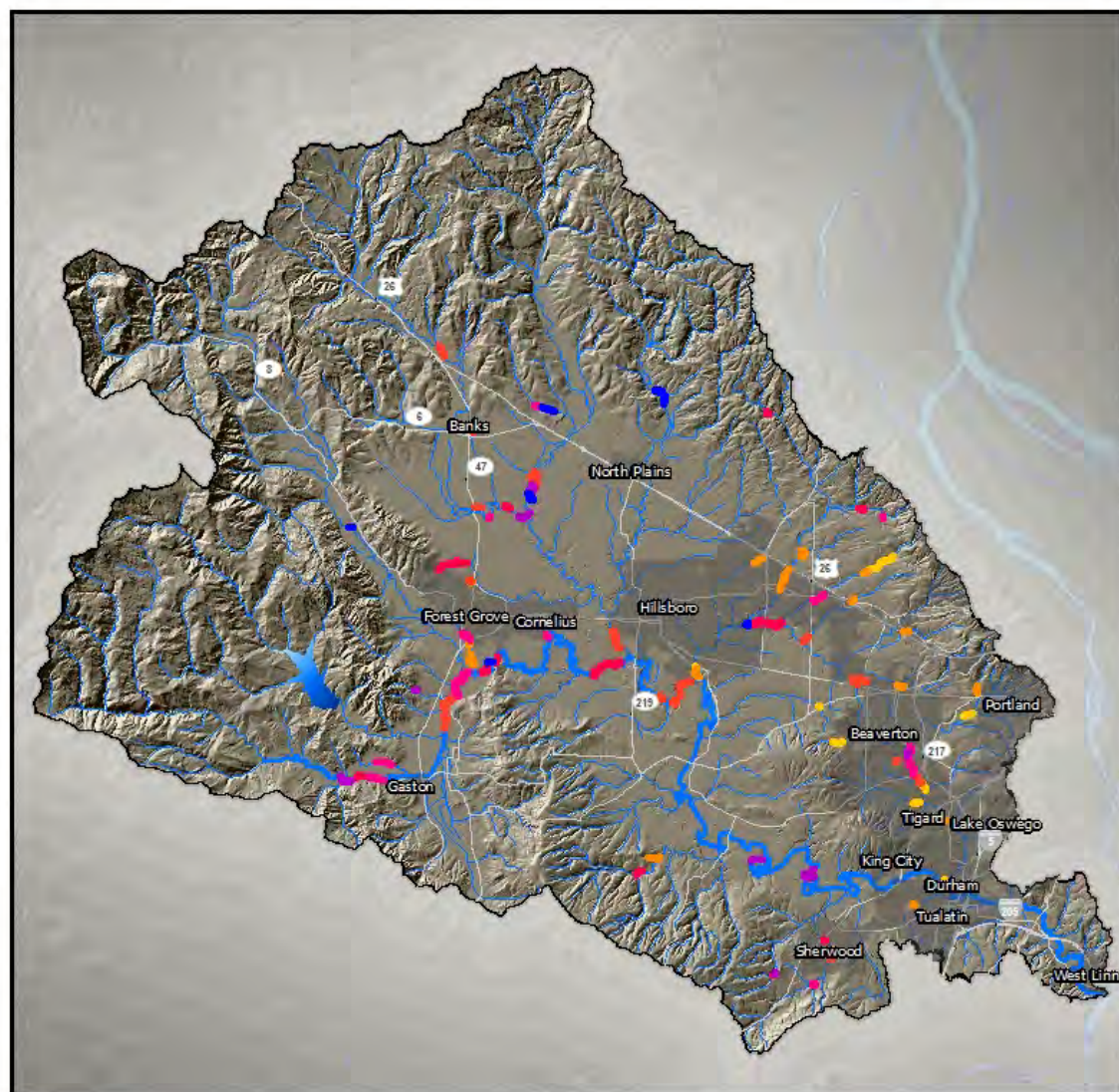
Clean Water Services (CWS) is a special service district that provides wastewater and stormwater services to more than 520,000 customers in the urban portion of Tualatin River watershed. CWS has 12 member cities and owns and operates four wastewater treatment facilities, and implements the municipal stormwater program in urban portion in the Tualatin River watershed. The issuance of a 2004 Watershed-Based National Pollutant Discharge Elimination System (NPDES) permit provided additional opportunities for CWS to improve the water quality in the Tualatin River watershed. The 2004 NPDES permit has a unique feature; it allows the trading of carbonaceous biological oxygen demand and nitrogenous oxygen demand within a WWTP and between the WWTPs. Additionally, the 2004 NPDES permit requires CWS to mitigate for the WWTPs' thermal load impacts on the Tualatin River. The watershed-based permit enables CWS to generate water quality credits by planting riparian areas in the rural and urban portions of the watershed and augmenting stream flow. The credits from the riparian plantings and flow augmentation are used to offset the excess thermal loads from the WWTPs. These riparian planting efforts also help to filter stormwater runoff and reduce erosion, thereby reducing the levels of phosphorus and bacteria reaching the Tualatin River and its tributaries.

CWS conducts or supports riparian plantings in the Tualatin River watershed. From 2004-2010, CWS implemented a total of 77 riparian planting projects in both urban and rural areas of the watershed, which

resulted in 36.4 stream miles being planted and 329 million kilocalorie (kcal) of shade credit being generated (Figure 3).

In the watershed's urban areas, CWS implements a riparian planting program. The projects in the urban areas include riparian planting as well as stream enhancement activities such as channel reconfiguration, large wood placement, floodplain reconnection, and off-channel habitat creation. Stream enhancement activities are conducted based on site-specific needs. From 2004-2010, CWS implemented a total of 44 projects in urban areas of the watershed, which resulted in 17.1 stream miles being planted.

Figure 3. Stream Enhancement Projects Implemented by Clean Water Services, 2004-2010.



Tualatin Basin Stream Enhancement Projects

- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010

Major Urban Areas
Tualatin Basin



0 2.5 5 10 Miles

Not intended as definitive property description. All users of this information should perform a separate investigation of conditions before commencing any plan, design, construction, watershed enhancement activities, or other work. There are no warranties, expressed or implied, including the warranty of merchantability or fitness for a particular purpose, concerning this information.

CleanWater Services
Our commitment is clear.

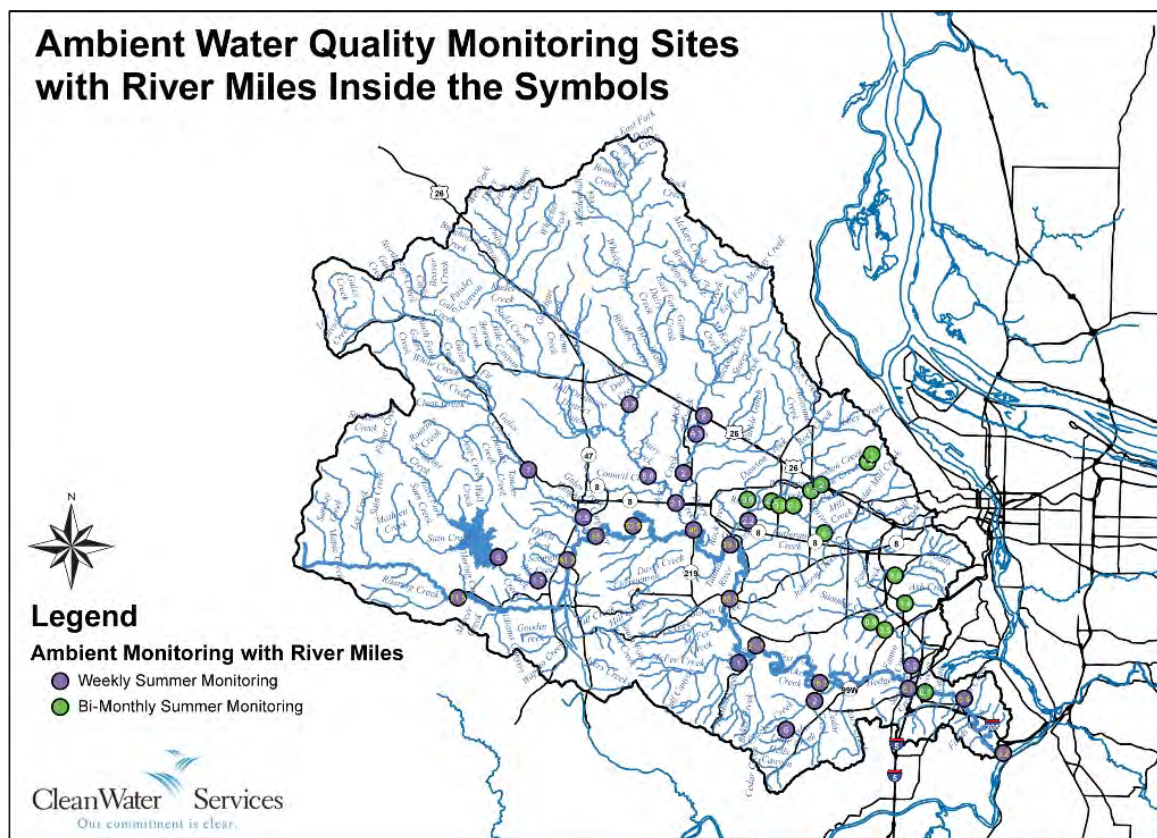
In rural areas, CWS contracts with the Tualatin Soil and Water Conservation District (SWCD) to provide incentives for enrolling landowners in a modified version of the U.S. Department of Agriculture's Conservation Reserve Enhancement Program (ECREP) and Vegetated Buffer Areas for Conservation and Commerce (VEGBACC) programs. The rural ECREP and VEGBACC programs focus on riparian plantings and do not include in-stream work. From 2004-2010, a total of 33 projects were implemented in rural areas of the watershed, which resulted in 19.3 stream miles being planted. See www.cleanwaterservices.org/OurWatershed/Projects for a map of recent CWS riparian restoration and other water quality improvement projects.

In addition to implementing restoration projects, the District also works to improve water quality by augmenting flow in the Tualatin River during the dry season using its stored water in Hagg Lake and Barney Reservoir. From 2004-2010, the District released an average of 34.3 cubic feet per second (cfs) of its stored water during the critical months of July and August to augment flows in the Tualatin River. The augmented flow results in cooler temperatures and higher dissolved oxygen levels in the Tualatin River. Credit for stored water releases are based on the quantity of water released and the percent of the total flow of the Tualatin River the stored water releases constitutes. Between 2004 and 2010, stored water releases provided an average credit of 498 million kcal/day at the Rock Creek Advanced Wastewater Treatment Facility (AWTF) and an average credit of 347 million kcal/day at the Durham AWTF.

Results.

Watershed-wide restoration and pollution reduction efforts have led to widespread and significant water quality improvements. CWS maintains a comprehensive monitoring network throughout the Tualatin River watershed that captures water quality throughout almost all of the HUC-12 watersheds (Figure 4).

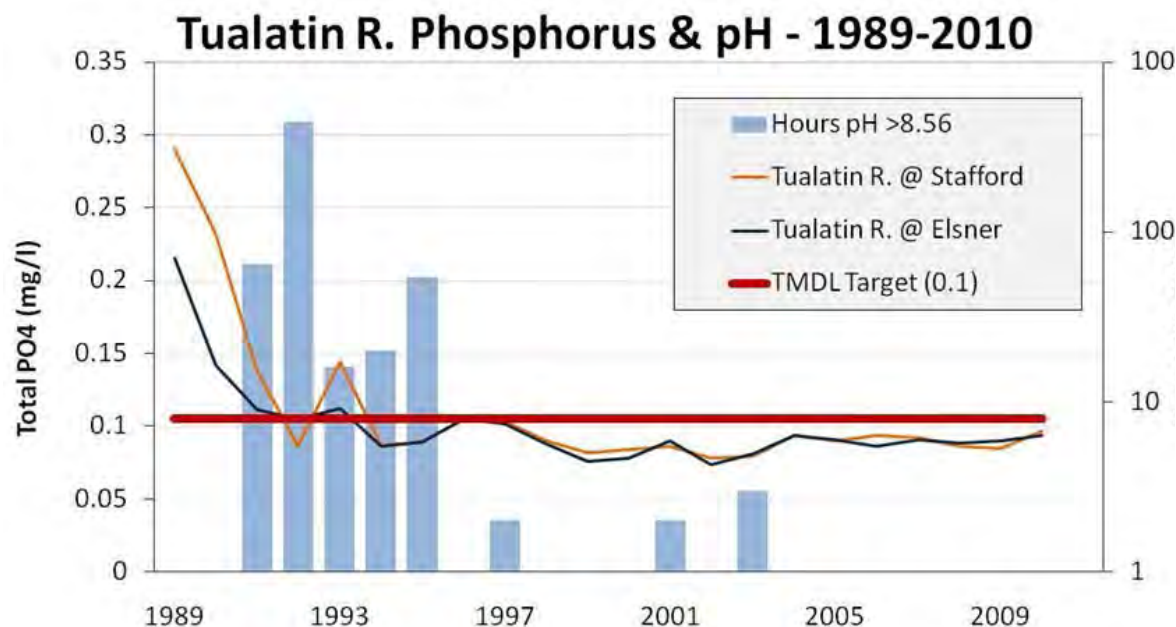
Figure 4. Clean Water Services' Ambient Monitoring Station Network.



Total phosphorus concentrations in Tualatin streams have declined since the adoption of the 1988 TMDL (Figure 5). The occurrence of pH violations has markedly declined in the same time period, and while the trend for chlorophyll *a* has been more variable, it too, has decreased in the Tualatin since 1989. While

several factors influence bloom formation, both water quality models and experience to date indicate that maintaining lower total phosphorus concentrations is helping to control excess algal growth.

Figure 5. Total phosphorus concentrations at two sites in the Lower Tualatin River, juxtaposed with the number of hours of pH violations each summer at the Lake Oswego Diversion Dam.
[Note: The bar graph reflects zero hours of pH violations since 2004 (not missing data). The Elsner and Stafford sites are at river miles 16.5 and 5.4, respectively.]



In 2011 CWS performed trend analyses on total phosphorus, *E. coli* and chlorophyll *a* data collected between 1992 and 2010. A seasonal Kendall trend test shows significantly improving trends (at a 90 percent confidence level or greater) in one or more pollutants contributing to impairments in 20 of 27 HUC-12 watersheds (**Figure 6**), including:

- | | |
|---|--|
| (1) HUC 170900100101 (Upper Gales Cr) | (12) HUC 170900100402 (Upper Rock Cr/Tualatin R) |
| (2) HUC 170900100102 (Middle Gales Cr) | (13) HUC 170900100403 (Lower Rock Cr/Tualatin R) |
| (3) HUC 170900100103 (Lower Gales Cr) | (14) HUC 170900100404 (Davis Cr/Tualatin R) |
| (4) HUC 170900100203 (Scoggins Cr/Sain Cr) | (15) HUC 170900100405 (Mcfee Cr) |
| (5) HUC 170900100204 (Middle Tualatin R) | (16) HUC 170900100406 (Christensen Cr) |
| (6) HUC 170900100205 (Lower Tualatin R) | (17) HUC 170900100501 (Chicken Cr) |
| (7) HUC 170900100206 (Tualatin R) | (18) HUC 170900100502 (Fanno Cr) |
| (8) HUC 170900100304 (Upper E. Fork Dairy) | (19) HUC 170900100503 (Rock Cr/L. Tualatin) |
| (9) HUC 170900100305 (Lower E. Fork Dairy) | (20) HUC 170900100504 (Lower Tualatin/Saum Cr) |
| (10) HUC 170900100306 (Upper McKay Cr) | |
| (11) HUC 170900100401 (Beaverton Cr/Bronson Cr) | |

The seven remaining watersheds (not included as part of this SP-12 submission) either have no data available or the data show no significantly decreasing trends (see Attachment B for Seasonal Kendall results for all sampling stations).

Table A-2 shows details about each sub-basin, the impairments listed as of 2002, and which of these three pollutants are showing significant decreases at representative monitoring stations. All statistically significant decreasing trends are indicated with a “yes” in the trend column. However, only significantly decreasing trends in pollutants that have been identified as sources of impairments within that watershed

are highlighted in green. This distinction has been made on Table A-2 to highlight those trends that fall under the SP-12 criteria. The SP-12 criteria distinguish watersheds that have documented impairments based on the state's list of impaired waterbodies (these are waterbodies that are either on the Clean Water Act section 303(d) list or classified as impaired but with the TMDL in place). Not all Tualatin River watersheds were listed as impaired as of Oregon's 2002 Integrated Report; thus, not all are eligible as SP-12 watersheds. However, the improvements seen across many of the Tualatin River watersheds highlight the extent of the widespread water quality improvements that have taken place throughout the watershed.

Some headwater tributaries do not have monitoring sites in the proximity of the mouth of the HUC-12 watersheds. In two cases, because the HUC-12 watersheds immediately downstream show significantly improving water quality thanks to watershed-wide restoration efforts, we assumed similar improvements in the upstream HUC-12 watersheds. These include (1) HUC 170900100101 (Upper Gales Creek) and (2) HUC 170900100304 (Upper East Fork Dairy Creek).

In two tributary sub-basins that are part of this SP-12 submission, data show an increasing trend in one or two pollutants. These trends are specific to the individual sub-watershed (e.g., they do not extend above or below that individual sub-watersheds) and are considered anomalies caused by a specific source or sources above the monitoring station. These increasing trends include:

- (1) HUC 170900100103 (Lower Gales Creek): Data show that this watershed has significantly increasing levels of *E. coli*. However, the watershed just upstream (HUC 170900100102, Middle Gales Creek) shows significantly decreasing levels of *E. coli*. The watershed immediately downstream (HUC 170900100206, City of Forest Grove/Tualatin River) shows no significant trends in *E. coli*. DEQ will investigate the possible sources of *E. coli* impacting this watershed. This sub-basin shows significantly decreasing levels of phosphorus, as is seen elsewhere in the Tualatin River watershed, so this sub-basin is included in the SP-12 submission for phosphorus.
- (2) HUC 170900100402 (Upper Rock Creek/Tualatin R): Data show increasing trends in both *E. coli* and chlorophyll *a*. However, data also show that chlorophyll *a* is significantly decreasing in the subwatersheds just upstream (HUC 170900100401, Beaverton Cr) AND downstream (HUC 170900100403, Lower Rock Creek/Tualatin R). Data show no trends in *E. coli* either upstream or downstream. DEQ will investigate the possible pollutant sources leading to these anomalous increasing trends within this subwatershed. This sub-basin shows significantly decreasing levels of phosphorus, as is seen elsewhere in the Tualatin River watershed, so this sub-basin is included in the SP-12 submission for phosphorus.

Figure 6. Data show that numerous Tualatin River sub-basins have significantly decreasing levels of phosphorus, chlorophyll a and bacteria.



5.2 Other DEQ Success Stories

2009 319-Funded Project W09709

Project Location:

Powder Cr. Ranch Property on Powder Creek, Nestucca River and watershed, North Coast Basin.

Project Purpose:

Establishment of riparian vegetation and exclusion of livestock from riparian zone.

Photos Credit:

By Alex Sifford, Nestucca-Neskowin Watersheds Council.

Before:



After – Riparian Planting & Livestock Exclusion Fence



2008 319-Funded Project W07710

Project Location:

Applegate watershed

Project Purpose:

Establishment of riparian vegetation in priority areas identified during TMDL and WQMP development.

Improving irrigation systems to enhance in-stream flows will compliment riparian restoration efforts in tributary streams.

Submitted by:

Tim Franklin, Applegate Partnership/ Applegate River Watershed Council

From left to right: 2008, 2009, and 2010.



Site was treated for competing vegetation (mainly Himalayan blackberries), and following repeat treatments, was planted in 2009. Native pine and cedar are visible in the open areas, and mock orange and other deciduous species have been planted in the understory.

2010 319-Funded Project W11627

Project Location:

Sucker Creek watershed

Project Purpose:

Continuation of Sucker Creek channel and floodplain restoration.

Submitted by:

Sucker Creek Channel and Floodplain Restoration Project – Phase 2A

Sucker Creek Restoration Project Site: Pre-project. 7/25/11. The existing channel is straight (in the background behind the alders) and lacks complexity and fish habitat. There is no defined pond outlet or off-channel habitat features, no large wood, and a lack of floodplain connectivity.



Sucker Creek Restoration Project Site: Post-Project. 10/4/11. Newly constructed mainstem meander in the background and newly constructed side channel/pond outlet in the foreground. Both channels have habitat features including riffles, pools, and glides. There are large wood complexes in the channel, large wood pieces on the floodplain, and spawning gravels in the glides. Both channels are also connected to the floodplain.



Fish Salvage:

FS employees, IVWC Staff, and volunteers salvaging fish in the existing mainstem Sucker Creek channel.



Large Wood:

Large wood with root wads attached used as key structure pieces in construction of large wood complexes.



Side Channel/Pond Outlet Construction:

Placement of riffle and glide rock by an excavator for construction of habitat features in the side channel.



Side Channel/Pond Outlet:

Flow from mainstem Sucker Creek was diverted into the constructed side channel as the mainstem meander was being constructed. A temporary bridge across the side channel was used to minimize water quality impacts during project implementation.



Mainstem Channel Construction:

Construction of a meander bends on mainstem Sucker Creek in the background. Constructed side channel/pond outlet in the foreground.



Mainstem large wood complex:

Chris Park working with the contractor to place large wood in a complex at a constructed pool.



Appendices

Appendix 1. Progress of NPS 319 Funded Projects (Grant Performance Report)

Table 14. Progress of NPS 319 Funded Projects (Grant Performance Report).

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W07700	LITTLE NORTH FORK, NEHALEM RIPARIAN ENHANCEMENT	2007	NWR	Lower Nehalem Watershed Council	\$7,840.29	\$7,840.29	\$0.00	CLOSED	Apple, Bruce	31-Dec-08
W07701	POWDER RIVER WQ ENHANCEMENT PROJECT	2007	ER	Baker Valley Soil & Water Conservation District	\$52,500.00	\$52,500.00	\$0.00	CLOSED	Dombrowski, Tonya	31-Dec-08
W07702	WOLFE CREEK ENHANCEMENT PROJECT	2007	NWR	Tillamook County Estuary Partnership	\$18,024.50	\$18,024.50	\$0.00	CLOSED	Apple, Bruce	31-Dec-08
W07703	SCHOLFIELD CREEK RIPARIAN ENHANCEMENT	2007	WR	Umpqua SWCD	\$15,984.00	\$15,984.00	\$0.00	CLOSED	Tugaw, Heather	31-Dec-09
W07704	CIRCLE CREEK ENHANCEMENT PROJECT	2007	NWR	North Coast Land Conservancy	\$27,503.60	\$27,503.60	\$0.00	CLOSED	Apple, Bruce	30-Oct-09
W07705	2008 TILLAMOOK CO. CHILDREN'S WATER FEST	2007	NWR	Tillamook County Estuary Partnership	\$4,617.00	\$4,617.00	\$0.00	CLOSED	Apple, Bruce	31-Aug-08
W07706	BACKYARD PLANTING PROGRAM - YEAR 5	2007	NWR	Tillamook County Estuary Partnership	\$49,449.94	\$49,449.94	\$0.00	CLOSED	Apple, Bruce	31-Dec-08
W07707	CEDAR ISLAND DEMONSTRATION RESTORATION P	2007	NWR	Willamette Riverkeeper	\$4,622.25	\$4,622.25	\$0.00	CLOSED	Newell, Avis	31-Dec-09
W07708	UPPER NEHALEM RIPARIAN RESTORATION AND B	2007	NWR	Upper Nehalem Watershed Council	\$54,360.00	\$54,360.00	\$0.00	CLOSED	Apple, Bruce	31-Dec-08
W07709	MULTNOMAH CO. CENTRAL LIBRARY ECO-ROOF	2007	NWR	Multnomah County	\$102,148.00	\$102,148.00	\$0.00	CLOSED	Apple, Bruce	30-Jun-09
W07710	APPLEGATE WS TMDL IMPLEMENTATION	2007	WR	Applegate River Watershed Council	\$112,514.00	\$112,514.00	\$0.00	CLOSED	Tugaw, Heather	31-Dec-11
W07711	OWYHEE RIVER IMPROVEMENT PROJECT	2007	ER	Malheur SWCD	\$37,196.03	\$37,196.03	\$0.00	CLOSED	Dombrowski, Tonya	30-Jun-10
W07712	CHOIR BOYS CONSTRUCT WETLAND PROJECT	2007	ER	Malheur SWCD	\$52,248.00	\$52,248.00	\$0.00	CLOSED	Dombrowski, Tonya	30-Sep-09
W07713	MIDDLE FORK OF THE JOHN DAY RIVER AQUATI	2007	ER	Nature Conservancy	\$119,214.00	\$119,214.00	\$0.00	CLOSED	Dombrowski, Tonya	31-Mar-11
W07715	TILLAMOOK SWCD 2007 STREAM ENHANCEMENT A	2007	NWR	Tillamook County SWCD	\$42,984.81	\$42,984.81	\$0.00	CLOSED	Apple, Bruce	30-Jun-10
W07716	2007-08 NNWC STREAMSIDE PLANTING AND MAI	2007	NWR	Nestucca Neskowin Watershed Council	\$60,000.00	\$60,000.00	\$0.00	CLOSED	Apple, Bruce	31-Dec-08

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W07717	MEDFORD SPORTS & COMMUNITY PARK URBAN RE	2007	WR	City of Medford	\$23,493.45	\$23,493.45	\$0.00	CLOSED	Tugaw, Heather	31-Dec-09
W07718	RESTORATION EFFECT. MONIT. IN PRIORITY B	2007	ER	Upper Deschutes Watershed	\$80,012.94	\$80,012.94	\$0.00	CLOSED	Lamb, Bonnie	30-Apr-10
W07719	PRIVATE WELL OUTREACH AND MONITORING	2007	WR	Oregon State University	\$53,503.00	\$53,503.00	\$0.00	CLOSED	Eldridge, Audrey	30-Aug-08
W07720	CALAPOOIA & SANTIAM LANDOWNER OUTREACH	2007	WR	South Santiam Watershed Council	\$73,581.06	\$73,581.06	\$0.00	CLOSED	Gramlich, Nancy	31-Aug-09
W07721	MCKENZIE RIVER SEPTIC SYSTEM ASSISTANCE	2007	WR	Eugene Water & Electric Board	\$68,000.00	\$68,000.00	\$0.00	CLOSED	Tugaw Heather	30-Jun-09
W07722	INTEGRATION TMDL AND GW PRIORITIES INTO	2007	WR	Benton Soil & Water Conservation District	\$167,788.88	\$167,788.88	\$0.00	CLOSED	Eldridge, Audrey	30-Nov-10
W07723	WQ INVESTMENT: STREAMSIDE RESTORATION AN	2007	NWR	Metro	\$83,362.95	\$83,362.95	\$0.00	CLOSED	Apple, Bruce	30-Nov-09
W08700	Meachem Ck. Restoration Bioassessment	2008	ER	Oregon State University	\$44,034.00	\$44,034.00	\$0.00	CLOSED	Dombrowski, Tonya	30-Jan-11
W08702	Whychus Creek Restoration at Camp Polk	2008	ER	Upper Deschutes Watershed Council	\$175,150.99	\$175,150.99	\$0.00	CLOSED	Lamb, Bonnie	30-Apr-11
W08703	Ochoco Ck Stream Enh. and Greenway Expansion	2008	ER	Crooked River Watershed Council	\$77,316.00	\$77,316.00	\$0.00	CLOSED	Lamb, Bonnie	30-Jun-10
W08705	Nestucca Neskowin Streamside Plant./Maint	2008	NWR	Nestucca Neskowin Watershed Council	\$60,000.00	\$60,000.00	\$0.00	CLOSED	Apple, Bruce	31-Dec-09
W08706	Agriculture & Rural Residential Planting	2008	NWR	Tillamook County Estuary Partnership	\$48,473.47	\$48,473.47	\$0.00	CLOSED	Apple, Bruce	31-Dec-09
W08707	CCWF 2009	2008	NWR	Tillamook County Estuary Partnership	\$5,000.00	\$5,000.00	\$0.00	CLOSED	Apple, Bruce	31-Aug-09
W08708	Gresham NPS Red. Prog. Stream Outreach/Rest.	2008	NWR	City of Gresham	\$58,315.31	\$58,315.31	\$0.00	CLOSED	Apple, Bruce	30-Jun-10
W08709	Up. Nehalem Rip. Rest & Basin WQ Monitoring	2008	NWR	Upper Nehalem Watershed Council	\$53,785.71	\$53,785.71	\$0.00	CLOSED	Apple, Bruce	31-Dec-09
W08710	Riparian & Wetland Restoration	2008	NWR	Columbia SWCD	\$43,112.68	\$43,112.68	\$0.00	CLOSED	Apple, Bruce	30-Apr-10
W08711	Dry Manure Storage Initiative	2008	NWR	Clatsop Soil & Water Conservation District	\$23,660.00	\$23,660.00	\$0.00	CLOSED	Apple, Bruce	31-Dec-09
W08712	Rinearson Creek Project	2008	NWR	Willamette Riverkeeper	\$21,414.98	\$21,414.98	\$0.00	CLOSED	Apple, Bruce	30-Jun-10
W08713	N. Willamette Chemical Waste Collection	2008	WR	Marion County SWCD	\$19,469.82	\$19,469.82	\$0.00	CLOSED	Apple, Bruce	31-Dec-09
W08714	Siltcoos L. WQ and Macro data acquisition for TMDL	2008	WR	Portland State University	\$84,983.61	\$84,983.61	\$0.00	CLOSED	Waltz, David	31-Oct-09
W08715	Pringle Creek Riparian Pilot	2008	WR	City of Salem	\$3,401.60	\$3,401.60	\$0.00	CLOSED	Gramlich,	30-Sep-10

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
	Project								Nancy	
W08716	Southern Willamette Valley GWMA Action Plan/Imp	2008	WR	Lane Council of Governments	\$99,893.00	\$99,893.00	\$0.00	CLOSED	Eldridge, Audrey	30-Nov-10
W08717	Mid-Coast Sediment Ass. & Source Ctrl Prg.	2008	WR	Siuslaw Watershed Council	\$64,412.37	\$64,412.37	\$0.00	CLOSED	David Waltz	31-Dec-09
W08718	Upper Willamette WQ Monitoring & Outreach Pgm	2008	WR	Middle Fork Willamette Watershed Council	\$107,791.00	\$107,791.00	\$0.00	CLOSED	Wright, Pamela	31-Mar-11
W08719	PUR Water Quality Monitoring	2008	WR	Partnership for Umpqua Rivers	\$32,092.12	\$32,092.12	\$0.00	CLOSED	Tugaw, Heather	31-Dec-10
W08720	Ten mile Lakes WQ Impl. Plan Phase II	2008	WR	City of Lakeside	\$109,725.00	\$109,725.00	\$0.00	CLOSED	Blake, Pamela	30-Jun-11
W08721	Bear Ck WS WQIP Dev. & TMDL Implementation	2008	WR	Rogue Valley Council of Governments	\$49,407.41	\$49,407.41	\$0.00	CLOSED	Tugaw, Heather	31-Dec-09
W08722	Strip Tillage Agreement (#036-10) for OSU Ext	2008	ER	Oregon State University	\$0.00	\$ -----	\$0.00	CLOSED	Dombrowski, Tonya	28-Feb-11
W09700	WQ and effect monitoring in the Crooked R. WS	2009	ER	Crooked River Watershed Council	\$63,488.44	\$63,488.44	\$16,511.56	OPEN	Dombrowski, Tonya	28-Feb-13
W09702	Alkali Creek Water Quality Enhancement	2009	ER	Malheur SWCD	\$31,500.00	\$31,500.00	\$3,500.00	OPEN	Dombrowski, Tonya	31-Dec-12
W09703	Strip Tillage in Malheur & Owyhee Watersheds	2009	ER	Oregon State University	\$79,454.76	\$79,454.76	\$0.00	CLOSED	Dombrowski, Tonya	01-Feb-11
W09704	Owyhee River Improve. Project - Phase 2	2009	ER	Malheur SWCD	\$23,543.70	\$23,543.70	\$11,456.30	OPEN	Dombrowski, Tonya	31-Dec-12
W09705	City of Prineville Stormwater Pollution Reduction	2009	ER	City of Prineville	\$70,000.00	\$70,000.00	\$0.00	CLOSED	Dombrowski, Tonya	31-Jul-11
W09706	LUBGWMA Action Plan Effec Monitormg & Outreach	2009	ER	Umatilla County SWCD	\$38,000.00	\$38,000.00	\$0.00	CLOSED	Richerson, Phil	30-Apr-11
W09707	Apple Sunburn Prevention Using Organic Biofilm	2009	ER	Oregon State University	\$93,435.00	\$93,435.00	\$0.00	CLOSED	Dombrowski, Tonya	31-Jul-11
W09708	Clackamas Planting Outreach Project	2009	NWR	Clackamas River Basin Council	\$59,378.00	\$59,378.00	\$0.00	CLOSED	Newell, Avis	31-Dec-11
W09709	2009-10 NNWC Streamside Planting & Maintenance	2009	NWR	Nestucca Neskowin Watershed Council	\$60,000.00	\$60,000.00	\$0.00	CLOSED	Apple, Bruce	31-Mar-11
W09710	North Coast Watersheds Enhancement Project	2009	NWR	C.R.E.S.T.	\$28,812.22	\$28,812.22	\$0.00	CLOSED	Apple, Bruce	31-Aug-11
W09711	Pilot Scale SW Master Planning w/EcoSys Approach	2009	NWR	City of Damascus	\$38,020.97	\$38,020.97	\$0.00	CLOSED	Apple, Bruce	28-Feb-11
W09712	Up Nehalem Riparian Restoration & Basin WQ Monitor	2009	NWR	Upper Nehalem Watershed Council	\$84,652.00	\$84,652.00	\$0.00	CLOSED	Apple, Bruce	31-Dec-10
W09713	Circle Creek Enhancement Project Phase Three	2009	NWR	North Coast Land Conservancy	\$30,494.03	\$30,494.03	\$0.00	CLOSED	Apple, Bruce	31-Dec-10

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W09714	Scappoose Creek Riparian Restoration	2009	NWR	Scappoose Bay Watershed Council	\$20,416.15	\$20,416.15	\$0.00	CLOSED	Apple, Bruce	30-Apr-11
W09715	2010 Tillamook Co Children Clean Water Festival	2009	NWR	Tillamook County Estuary Partnership	\$5,000.00	\$5,000.00	\$0.00	CLOSED	Apple, Bruce	31-Dec-10
W09716	BYPP Year 7	2009	NWR	Tillamook County Estuary Partnership	\$60,000.00	\$60,000.00	\$0.00	CLOSED	Apple, Bruce	31-Mar-11
W09717	Tillamook SWCD 2007 Stream Enhance & Restoration	2009	NWR	Tillamook County SWCD	\$10,760.69	\$10,760.69	\$29,239.31	OPEN	Apple, Bruce	30-Jun-12
W09718	Devil's lake and D River WQ	2009	WR	Devils Lake Water Improvement District	\$14,480.00	\$14,480.00	\$0.00	CLOSED	Waltz, David	31-Mar-11
W09719	Coquille North Fork Drinking Water Source Protection	2009	WR	Coquille Watershed Association	\$6,327.17	\$6,327.17	\$8,918.83	OPEN	Blake, Pamela	31-Mar-12
W09720	Targeted WQ Outreach to Isthmus & Coalbank Sloughs	2009	WR	Coos Watershed Association	\$20,608.00	\$20,608.00	\$0.00	CLOSED	Blake, Pamela	30-Nov-11
W09721	Low-Impact Dev. Workshops & Tech Assis Year 2	2009	WR	Oregon Environmental Council	\$17,174.68	\$17,174.68	\$0.00	CLOSED	Blake, Pamela	15-Dec-10
W09722	Sucker/Kelly Cks Comm. Ed. Outreach	2009	WR	Forestry Action Committee	\$4,444.16	\$4,444.16	\$0.00	CLOSED	Tugaw, Heather	31-Dec-11
W09723	Coordinated Rogue B WQ Implementation Plan Dev	2009	WR	Rogue Valley Council of Governments	\$41,764.15	\$41,764.15	\$4,004.85	OPEN	Tugaw, Heather	31-Dec-11
W09724	Little Butte Creek WQ Enhancement Project	2009	WR	Jackson County SWCD	\$20,000.00	\$20,000.00	\$0.00	CLOSED	Tugaw, Heather	30-Jun-11
W09725	Santiam-Calapooia Landowner Recruitment & Restorat	2009	WR	South Santiam Watershed Council	\$79,868.00	\$79,868.00	\$0.00	CLOSED	Gramlich, Nancy	30-Sep-11
W09726	School Resto program: restora, design and SW Mgmnt	2009	WR	Camas Education Network	\$18,041.26	\$18,041.26	\$1,958.74	OPEN	Bayham, Chris	30-Mar-12
W09727	Impl. Monit. Of Umpqua Basin, Diamond Lake TMDL	2009	WR	Partnership for Umpqua Rivers	\$35,500.00	\$35,500.00	\$0.00	CLOSED	Tugaw, Heather	31-Dec-11
W09728	PUR Water Quality Monitoring & Thermal Refugia Inv	2009	WR	Partnership for Umpqua Rivers	\$22,663.83	\$22,663.83	\$9,761.17	OPEN	Tugaw, Heather	31-Mar-12
W09729	GW Protection Ed. To promote citizen involvement S	2009	WR	Oregon State University	\$67,442.93	\$67,442.93	\$0.00	CLOSED	Eldridge, Audrey	30-Jun-11
W09730	Mid Coast Basin NPS Implementation Initiative	2009	WR	Lincoln SWCD	\$75,581.00	\$75,581.00	\$0.00	CLOSED	David Waltz	30-Sep-10
W09731	Streambank - Willamette Basin Riparian Restoration	2009	Cross Region	Freshwater Trust	\$51,500.00	\$51,500.00	\$8,500.00	OPEN	Michie, Ryan	30-Sep-12
W09732	Pesticide Stewardship Partnership	2009	Cross Region	Wasco County SWCD	\$36,921.89	\$308,764.52	(\$75,064.52)	OPEN	Kishida, Koto	30-Sep-11
W09733	KOIN WQ Campaign	2009	NWR		\$8,334.00	\$8,334.00	\$0.00	CLOSED	Danab, Marcia	
W10701	Oregon P3 List into Prominent Product Ranking Tool	2010	Cross Region	Association of Clean Water Agencies, Oregon	\$8,506.34	\$8,506.34	\$2,550.66	OPEN	Camacho, Ivan	31-May-11

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W10702	ODF RipStream Vegetation Survey	2010	Cross Region	OR Dept of Forestry	\$43,958.97	\$43,958.97	\$39,041.03	OPEN	Seeds, Joshua	30-Jun-12
W10703	Strip Tillage in Malheur & Owyhee watersheds -2	2010	ER	Oregon State University	\$60,235.24	\$60,235.24	\$25,494.76	OPEN	Dombrowski, Tonya	30-Jun-13
W10704	Central Or. Low Impact Dev Ed project	2010	ER	Oregon Environmental Council	\$11,218.89	\$11,218.89	\$13,781.11	OPEN	Dombroski, Tonya	30-Jun-12
W10705	Warm springs ID Return Flow and Land Use Eval	2010	ER	Malheur SWCD	\$23,786.23	\$23,786.23	\$36,213.77	OPEN	Dombrowski, Tonya	30-Jun-12
W10706	Milton-Freewater Levee Setback Assessment	2010	ER	Walla Walla Basin Watershed Council	\$95,400.00	\$95,400.00	\$10,600.00	OPEN	Dombrowski, Tonya	30-Jun-12
W10707	Apple Sunburn Prevention - Phase 2	2010	ER	Oregon State University	\$53,462.93	\$53,462.93	\$26,537.07	OPEN	Dombrowski, Tonya	31-Mar-13
W10708	Powder River Restoration - Kirkway Reach	2010	ER	Powder Basin Watershed Council	\$0.00	\$ -----	\$23,400.00	OPEN	Dombrowski, Tonya	30-Jun-13
W10709	Streamside Planting & Maintenance	2010	NWR	Nestucca Neskowin Watershed Council	\$28,851.58	\$28,851.58	\$11,148.42	OPEN	Apple, Bruce	31-Mar-12
W10710	Targeted WQ Outreach to Coos Bay 2010	2010	WR	Coos Watershed Association	\$19,278.75	\$19,278.75	\$10,577.25	OPEN	Blake, Pamela	30-Jun-12
W10711	5000 Acres Initiative	2010	NWR	Tualatin Riverkeepers	\$0.00	\$ -----	\$51,914.00	OPEN	Newell, Avis	31-Dec-13
W10712	Riparian Restoration & Monitoring - Upper Nehalem	2010	NWR	Upper Nehalem Watershed Council	\$37,179.87	\$37,179.87	\$5,661.13	OPEN	Apple, Bruce	30-Jun-12
W10713	DEPAVE Summer 2010	2010	NWR	City Repair	\$8,823.10	\$8,823.10	\$0.00	CLOSED	Drake, Doug	31-Aug-11
W10714	Blue Lake Aquatic Macrophytes Reduction	2010	NWR	Blue Lake Improvement Association Inc	\$15,840.00	\$15,840.00	\$1,760.00	OPEN	Williams, Karen	31-Dec-12
W10715	Children Clean Water Festival	2010	NWR	Tillamook County Estuary Partnership	\$6,241.30	\$6,241.30	\$0.00	CLOSED	Apple, Bruce	31-Dec-11
W10716	Riparian Restoration & Maintenance	2010	NWR	Tillamook County Estuary Partnership	\$40,000.00	\$40,000.00	\$0.00	CLOSED	Apple, Bruce	31-Dec-11
W10717	Riparian Restoration	2010	NWR	Tillamook County SWCD	\$0.00	\$ -----	\$44,045.00	OPEN	Apple, Bruce	31-Dec-11
W10718	Sauvie Island Pesticide Collection Event	2010	NWR	West Multnomah Soil & Water Conservation District	\$0.00	\$ -----	\$5,000.00	OPEN	Drake, Doug	31-Jan-12
W10719	Regional BMP Sizing Tool Development	2010	NWR	Clackamas Co	\$22,992.29	\$22,992.29	\$28,392.71	OPEN	Drake, Doug	31-Dec-12
W10720	Ten Mile Lakes TMDL Implementation	2010	WR		\$0.00	\$ -----	\$25,000.00	OPEN	Blake, Pamela	
W10721	Low Impact Development Academy	2010	WR	Oregon State University	\$17,398.30	\$17,398.30	\$42,701.70	OPEN	Wright, Pamela	30-Mar-12
W10722	Sucker Creek Channel and Floodplain Rest -II	2010	WR	Illinois Valley SWCD	\$20,000.00	\$20,000.00	\$0.00	CLOSED	Tugaw, Heather	30-Jun-11

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PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
W10723	Pesticide Roundup events	2010	Cross Region	NO CONTRACT	\$0.00	\$48,759.16	\$8,382.74	OPEN	Harvey, Julie	
W10724	So. Willamette Val GW Mgmt Area Action Plan Implem	2010	WR	Lane Council of Governments	\$16,268.23	\$16,268.23	\$56,211.77	OPEN	Eldridge, Audrey	31-May-12
W10725	Streamside Gardening: Innovative approach	2010	WR	Oregon State University	\$10,245.82	\$10,245.82	\$11,309.18	OPEN	Tugaw, Heather	31-Dec-12
W10726	Medford Bacteria Source Roundup	2010	WR	City of Medford	\$0.00	\$ -----	\$7,320.00	OPEN	Tugaw, Heather	30-Jun-12
W10727	Impl. Monit. Of Umpqua Basin, Diamond Lake TMDL	2010	WR	Partnership for Umpqua Rivers	\$0.00	\$ -----	\$15,000.00	OPEN	Tugaw, Heather	30-Nov-12
W10728	Diamond Lake Modeling Project 2010-11	2010	WR	Partnership for Umpqua Rivers	\$11,353.90	\$11,353.90	\$29,830.10	OPEN	Waltz, David	31-Dec-12
W10730	Mid-Coast Basin NPS Imple. Initiative, Year 2	2010	WR	Lincoln SWCD	\$50,940.59	\$50,940.59	\$21,539.41	OPEN	Tugaw, Heather	30-Apr-12
W10732	Pudding Pesticide Stewardship Program	2010	Cross Region	Marion County SWCD	\$8,448.11	\$107,145.89	\$25,101.11	OPEN	Masterson, Kevin	31-Dec-12
W10733	Facilitation Assessment for Oregon MidCoast Basin	2010	WR	Portland State University	\$4,000.00	\$4,000.00	\$0.00	CLOSED	Waltz, David	29-Jul-11
W10734	Willamette Model Watershed Riparian Revegetation	2010	Cross Region	Bonneville Environmental Foundation	\$0.00	\$ -----	\$41,000.00	OPEN	Michie, Ryan	31-May-12
W11600	Milton-Freewater Levee Design Phase 2	2011	ER	TBD	\$0.00	\$ -----	\$82,702.00	OPEN	Dombrowski, Tonya	
W11601	Urban issues working group NPS education project	2011	ER	TBD	\$0.00	\$ -----	\$23,414.00	OPEN	Dombrowski, Tonya	
W11602	Preserving Umatilla's natural resources	2011	ER	TBD	\$0.00	\$ -----	\$59,300.00	OPEN	Dombrowski, Tonya	
W11603	Powder Basin Monitoring	2011	ER	TBD	\$0.00	\$ -----	\$25,385.00	OPEN	Dombrowski, Tonya	
W11604	NFJDWC Landowner	2011	ER	TBD	\$0.00	\$ -----	\$54,646.00	OPEN	Dombrowski, Tonya	
W11605	Red Boy Mine	2011	ER	TBD	\$0.00	\$ -----	\$40,273.00	OPEN	Dombrowski, Tonya	
W11606	Rock Creek Restoration Design	2011	ER	TBD	\$0.00	\$ -----	\$43,680.00	OPEN	Dombrowski, Tonya	
W11607	Reduce Pesticide Cont of Surf W in Hood River	2011	ER	TBD	\$0.00	\$ -----	\$14,969.00	OPEN	Dombrowski, Tonya	
W11608	Love Your River	2011	NWR	TBD	\$0.00	\$ -----	\$15,000.00	OPEN	William, Karen	
W11609	Upper Nehalem-riparian restoration	2011	NWR	Upper Nehalem Watershed Council	\$0.00	\$ -----	\$61,000.00	OPEN	Apple, Bruce	31-Dec-12
W11610	Children Clean Water Fest.	2011	NWR	Tillamook County Estuary Partnership	\$0.00	\$ -----	\$6,250.00	OPEN	Apple, Bruce	31-Dec-12
W11611	Streamside Planning and	2011	NWR	Nestucca Neskowin	\$0.00	\$ -----	\$55,000.00	OPEN	Apple, Bruce	31-Dec-12

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
	Maintenance			Watershed Council						
W11612	NC W's And riparian Enhancement	2011	NWR	TBD	\$0.00	\$ -----	\$30,000.00	OPEN	Apple, Bruce	
W11613	Johnson Ck effective Monit	2011	NWR	TBD	\$0.00	\$ -----	\$44,306.00	OPEN	Drake, Doug	
W11614	Riparian Restoration & Maintenance	2011	NWR	Tillamook County Estuary Partnership	\$0.00	\$ -----	\$55,000.00	OPEN	Apple, Bruce	31-Dec-12
W11615	Dry Manure Storage	2011	NWR	Clatsop Soil & Water Conservation District	\$2,501.22	\$2,501.22	\$26,138.78	OPEN	Apple, Bruce	31-Dec-12
W11616	Milk Creek Streambank	2011	NWR	TBD	\$0.00	\$ -----	\$35,500.00	OPEN	William, Karen	
W11617	Cannon Beach Stormwater Planning	2011	NWR	TBD	\$0.00	\$ -----	\$30,000.00	OPEN	Apple, Bruce	
W11618	Non structural & Structural Stormwater Tools	2011	WR	University of Oregon	\$0.00	\$ -----	\$32,000.00	OPEN	Bayham, Chris	31-Dec-13
W11619	Groundwater Protection Education -So. Willa Val	2011	WR	Oregon State University	\$0.00	\$ -----	\$48,800.00	OPEN	Eldridge, Audrey	30-Jun-13
W11620	S Umpqua Water Quality	2011	WR	TBD	\$0.00	\$ -----	\$43,474.00	OPEN	Tugaw, Heather	
W11621	Upper Siletz Asses. And Resto. Project	2011	WR	TBD	\$0.00	\$ -----	\$41,994.00	OPEN	David Waltz	
W11622	Calapooia-Santiam Recruiting and Restoring Riparian	2011	WR	Calapooia Watershed Council	\$8,039.00	\$8,039.00	\$26,861.00	OPEN	Gramlich, Nancy	30-Sep-13
W11623	School Restoration Project II	2011	WR	Camas Education Network	\$0.00	\$ -----	\$28,750.00	OPEN	Fern, Jacqueline	30-Sep-13
W11624	LID Acad cohort	2011	WR	TBD	\$0.00	\$ -----	\$35,281.00	OPEN	Wright, Pamela	
W11625	Bear Creek and Rogue Basin TMDL Imp. Coord.	2011	WR	Rogue Valley Council of Governments	\$0.00	\$ -----	\$30,000.00	OPEN	Tugaw, Heather	01-Apr-13
W11626	Siuslaw WS WQ Salmon Habitat	2011	WR	Beyond Toxics	\$0.00	\$ -----	\$3,000.00	OPEN	David Waltz	31-Dec-12
W11627	Sucker Creek Restoration - Phase IIA	2011	WR	Illinois Valley SWCD	\$17,567.00	\$17,567.00	\$1,952.00	OPEN	Tugaw, Heather	30-Jun-12
W11628	Coos Bay Estuary Watershed	2011	WR	TBD	\$0.00	\$ -----	\$39,988.00	OPEN	Blake, Pam	
W11629	MidCoast TMDL	2011	WR	TBD	\$0.00	\$ -----	\$4,000.00	OPEN	Waltz, David	
W11630	Pesticide Stewardship Partnerships	2011	Cross Region	TBD	\$0.00	\$ -----	\$10,136.00	OPEN	Masterson, Kevin	
W11631	ODF RipStream: Stream temp changes	2011	Cross Region	TBD	\$0.00	\$ -----	\$34,925.00	OPEN	Seeds, Joshua	

Appendix 2. DEQ's Geographic and Programmatic Priorities for 319 funded Projects in 2011

Table 15. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011.

Note: 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.

EASTERN REGION PROJECT PRIORITIES: <u>TMDLS/303(d)</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS/ 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
EASTERN REGION Stormwater	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.
Grande Ronde Basin Channel and Riparian Restoration Effectiveness Monitoring	Basin Wide (Upper Grande Ronde, Lower Grande Ronde, Imnaha, and Wallowa)	Upper Grande Ronde TMDL approved by EPA (May 2000) Lower Grande Ronde, Imnaha, and Wallowa TMDLs (in progress)	Temperature, Nutrients, pH, Dissolved Oxygen	Targeted restoration projects include stream restoration activity in the area of on-going multi-year, multi-agency project work. Basin-wide targeted restoration project elements include restoring morphologic function (increased sinuosity, decreased width/depth ratios, and floodplain reconnection), revegetation of riparian area, and 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 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

EASTERN REGION PROJECT PRIORITIES: <u>TMDLS/303(d)</u>				
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, and Sediment	<p>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, and floodplain reconnection), revegetation of riparian area, and increased instream flow.</p> <p>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.</p> <p>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.</p>

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

EASTERN REGION PROJECT PRIORITIES: <u>TMDLS/303(d)</u>				
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, and Miles Creeks Subbasin	Western Hood TMDL approved by EPA (Jan 2002) Miles Creeks TMDL approved by EPA (Feb 2009)	Temperature Sediment Bacteria Pesticides	<p>Targeted projects include activities addressing temperature, sediment, bacteria, and pesticides.</p> <p>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, and floodplain reconnection), revegetation of riparian area, and increased instream flow.</p> <p>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.</p> <p>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.</p>
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	<p>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.</p> <p>Projects correlated with and/or adjacent to other implementation work will be given priority.</p>

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

EASTERN REGION PROJECT PRIORITIES: <u>TMDLS/303(d)</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS/ 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
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, pesticide concentrations, 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.
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 Groundwater Management Area. 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 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

EASTERN REGION PROJECT PRIORITIES: <u>TMDLS/303(d)</u>				
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	<p>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.</p> <p>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.</p>
Walla Walla River, Mid Columbia Basin Milton-Freewater Levee Assessment and Potential Restructure	Walla Walla River	TMDL approved by EPA (Sept 2005)	Temperature	<p>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.</p>

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

EASTERN REGION PROJECT PRIORITIES: <u>TMDLS/303(d)</u>				
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	<p>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.</p> <p>Projects correlated with and/or adjacent to other implementation work will be given priority.</p>
Walla Walla River, Mid Columbia Basin Pesticide Stewardship Activities	Walla Walla River	TMDL approved by EPA (Sept 2005)	Pesticides	<p>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.</p> <p>Projects correlated with and/or adjacent to other implementation work will be given priority.</p>

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

EASTERN REGION PROJECT PRIORITIES: <u>GROUNDWATER MANAGEMENT AREAS (GWMAS)</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: GWMA	WATER QUALITY PROBLEM	PROJECT NEED
Lower Umatilla Basin Groundwater Management Area (LUB-GWMA) Action Plan	Umatilla Subbasin Middle Columbia Basin	Lower Umatilla Basin GWMA Established in 1990	Nitrate-Nitrogen	<p>Targeted projects include those specific to reduction of nitrogen concentrations in groundwater including:</p> <ul style="list-style-type: none"> • Research and development of activities or products that 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. • 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.

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

EASTERN REGION PROJECT PRIORITIES: <u>GROUNDWATER MANAGEMENT AREAS (GWMAS)</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: GWMA	WATER QUALITY PROBLEM	PROJECT NEED
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: <ul style="list-style-type: none"> Research and development of activities or products that 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 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

WESTERN REGION PROJECT PRIORITIES: <u>TMDL DEVELOPMENT AND IMPLEMENTATION</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Coos Subbasin (4th field HUC)	Tenmile Lakes Basin (5th field HUC)	TMDL Implementation	<p>Sediment and Nutrient Delivery from Land Management Activities in the Watershed.</p> <p>Nuisance and Harmful Algae Blooms and Cyanotoxins Exceeding Human Health Guidelines</p>	<p>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, lake and environmental conditions. Determine if data adequately address data needs identified in the TMDL and WQMP, and identify data gaps and data needs.</p> <p>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.</p> <p>Engage in partnerships to implement high priority projects identified in Designated Management Agencies' Implementation Plans.</p>
Coos Subbasin (4th field HUC)	Coos Estuary – Isthmus and Coalbank Sloughs	<p>303(d) Listed Segments</p> <p>TMDLs are Currently Pending Development</p>	Land Development And Management Practices Resulting In Increased Pollutant Delivery and Modified Hydrology	<p>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 best management practices and/or Low Impact Development (LID) Demonstration projects.</p> <p>LID projects will be implemented that reduce pollutant loading and interrupt accelerated pollutant delivery, including those resulting from stream channel modifications.</p> <p>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 conveyance systems (Pony Creek, Blossom Creek, and Coalbank Slough).</p>

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

WESTERN REGION PROJECT PRIORITIES: <u>TMDL DEVELOPMENT AND IMPLEMENTATION</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Coos Subbasin (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.
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.

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

WESTERN REGION PROJECT PRIORITIES: <u>TMDL DEVELOPMENT AND IMPLEMENTATION</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Umpqua Basin Umpqua and South Umpqua Rivers	Streams Providing and Having Potential to Provide Temperature Refugia For Main Stems Only	TMDLs Adopted	Elevated Water Temperature	Improving and protecting riparian condition and riparian planting enhancement and/or restoration. Structures enhancing hyporheic flow. Needs includes identification of such areas of refugia and potential areas.
Umpqua Basin	Streams Lacking System Potential Vegetation	TMDLs Adopted	Elevated Water Temperature	Improving and protecting riparian conditions and 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 and riparian planting enhancement and/or restoration, livestock fencing, and off-channel watering, and “other” source reduction implementation BMPs (Rural Residential, Urban, Cities, etc.)

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

WESTERN REGION PROJECT PRIORITIES: <u>TMDL DEVELOPMENT AND IMPLEMENTATION</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Umpqua Basin	Streams with Elevated Levels Above Background	TMDLs Adopted	Bacteria and Nutrients	Additional monitoring to further identify existing elevated levels of NPS 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 Water Quality Implement Plan.
Umpqua Basin	Areas of Need (such as Sutherlin Stormwater Impacts to Sutherlin and Cook Creeks Reducing Toxics)	303(d) Listed Waters	Accelerated pollutant delivery	Stormwater management planning and implementation assistance for local jurisdictions not required to develop stormwater 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 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

WESTERN REGION PROJECT PRIORITIES: <u>TMDL DEVELOPMENT AND IMPLEMENTATION</u>				
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 Mile 108-187)	Gibson Gulch and Labish Ditch Amazon Creek Long Tom River Lukiamute River Tributaries Beaver, Boulder Pierce, Mackey, and 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, and pesticides (ex., retrofit surveys, and project list; retrofit project; LID urban projects; and conveyance mapping). Specific toxic/parameter reduction projects and/or special partner projects.

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

WESTERN REGION PROJECT PRIORITIES: <u>TMDL DEVELOPMENT AND IMPLEMENTATION</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Willamette River Basin (Outside Portland Metro) Subbasins: Middle Willamette River (River Mile 50-108) South Santiam River	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, and pesticides (ex., retrofit surveys, and project list; retrofit project; LID urban projects; and 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, and pesticides (ex., retrofit surveys, and project list; retrofit project; LID urban projects; and 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 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

WESTERN REGION PROJECT PRIORITIES: <u>TMDL DEVELOPMENT AND IMPLEMENTATION</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Willamette River Basin (Outside Portland Metro) Subbasins Pudding River Yamhill River	Pudding River and Tributaries (e.g., Brush, Mill, Little Pudding, Senecal, Zollner and Silver Creeks; Labish and 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 and/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, and 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, and 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.
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 or Water Quality Management Plans (WQMP). Potentially including: <ul style="list-style-type: none"> • 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, and • Science-based projects to restore floodplain connectivity and natural wood recruitment.

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

WESTERN REGION PROJECT PRIORITIES: <u>TMDL DEVELOPMENT AND IMPLEMENTATION</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Rogue Basin	Applegate HUC 17100309	TMDLs Adopted	Temperature Sedimentation	Implementation of efforts identified in Water Quality Implementation Plans or Water Quality Management Plans (WQMP). Potentially including: <ul style="list-style-type: none"> • Improvement of riparian shade and function, • Control sediment sources, • Control livestock access to stream, and • Science-based projects to restore floodplain connectivity and natural wood recruitment.
Rogue Basin	Lobster Creek HUC 1710031007 Sucker Creek HUC 1710031103	TMDLs Adopted	Temperature	Implementation of efforts identified in Water Quality Implementation Plans or Water Quality Management Plans (WQMP). Potentially including: <ul style="list-style-type: none"> • Improvement of riparian shade and function, • Control sediment sources, • Control livestock access to stream, and • Science-based projects to restore floodplain connectivity and natural wood recruitment.

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

WESTERN REGION PROJECT PRIORITIES: <u>TMDL DEVELOPMENT AND IMPLEMENTATION</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
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 or Water Quality Management Plans (WQMP). Potentially including: <ul style="list-style-type: none"> • 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, and • Science-based projects to restore floodplain connectivity and natural wood recruitment.
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 Listing	bacteria – Shellfish Standard	Investigation of the Rogue River Estuary 303(d) listing for bacteria.

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

Western Region Project Priorities: <u>Drinking Water Source Protection (DWSP)</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Siletz- Yaquina Subbasin	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.
Coquille Subbasin	Drinking Water Source Areas Within Subbasin	Source Water Assessments Complete	Bacteria, Toxics, Sediment, Nutrients	Projects Addressing Higher Risk Non-Point 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 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

Western Region Project Priorities: <u>Drinking Water Source Protection (DWSP)</u>				
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	<p><u>Analysis:</u> 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.</p> <p><u>Marketing:</u> 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.</p> <p><u>Outreach:</u> 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.</p> <p><u>Implementation:</u> 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.</p>

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

Areas identified can be found at: <http://www.deq.state.or.us/wq/dwp/results.htm>.

Northwest Region Project Priorities: <u>Drinking Water Source Protection (DWSP)</u>				
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). This includes household hazardous waste, stormwater, pesticides, agricultural crops, nurseries, forestry, and onsite septic systems. Activities can supplement TMDL implementation activities.

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

Northwest Region Project Priorities: <u>TMDLs/303(d)</u>				
BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
All NWR Basins/TMDL Implementation	Clackamas River	TMDLs Completed	Temperature	Riparian and in-channel restoration (erosion control, large wood placement). Pesticide partnership projects and/or specific toxic reduction projects. Innovative storm water planning/tools, education, and demonstration projects (includes hydromodification modeling, tools, and Low Impact Development approaches practices (LIDA)). Agriculture BMPs (includes fencing and digester projects).
	Lower Willamette River		Bacteria	
			Dissolved Oxygen	
	Molalla River		Nutrients (Phosphorus)	
	North Coast		Sediment	
	Tillamook		Toxics (Mercury)	
All NWR Basins/ TMDL Implementation	Tualatin	TMDLs Completed Implement ation Plans in Place	Temperature	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).
	Clackamas,		Bacteria	
	Lower Willamette,		Nutrients (Phosphorus)	
	North Coast,		Sediment	
	Tillamook, Tualatin,		Toxics (Mercury)	

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

Northwest Region Project Priorities: <u>TMDLs/303(d)</u>				
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, and Scotts Mills. Also for Clackamas County, and Oregon Department of Geology and Mineral Industries. 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.
Molalla River/TMDL Implementation	North Fork		Temperature	Riparian restoration. Monitoring pre/post logging. Land acquisition. Road abandonment.
Molalla River/TMDL Implementation	Milk Creek		Temperature	Riparian restoration. Stream flow monitoring.
Molalla River/TMDL Implementation	Table Rock Fork		Temperature	Riparian restoration/protection activities coordinated with BLM recreation corridor planning and Molalla River Alliance planning. Road abandonment.

Table 14. DEQ Geographic and Programmatic Priorities for 319 Nonpoint Source Implementation Grants in 2011 (Cont.)

Northwest Region Project Priorities: <u>TMDLs/303(d)</u>				
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. 2011-319 Grant Request for Proposals

Table 16. Project Proposals Received in Response to the 2012 RFP.

Project Number	Region	Basin	Applicant	Title	Proposed 319 Budget	Match	Total
ER1210	Eastern Region	Klamath	Klamath Basin Rangeland Trust	Improving Tools and Protocols in the Klamath Tracking and Accounting Program	\$59,588	\$60,000	\$119,588
ER1222	Eastern Region	Powder	BLM Vale	BLM Nutrient Monitoring in the Powder Basin	\$72,100	\$110,790	\$182,890
ER1223	Eastern Region	John Day	Columbia Blue Mountain RC&D	John Day / Umatilla AFO/CAFO Nutrient Management Project	\$160,000	\$107,000	\$267,000
ER1224	Eastern Region	Deschutes	City of Madras	Central Corridor Stormwater Collection and WQ Treatment Project	\$45,000	\$30,000	\$75,000
ER1225	Eastern Region	Central Oregon	Central Oregon Intergovernmental Council	Central Oregon LID Demonstration Project	\$98,250	\$210,246	\$308,496
ER1226	Eastern Region	Crooked River	Crooked River Watershed Council (CRWC)	Water Quality and Effectiveness Monitoring in the Crooked River Watershed	\$48,788	\$51,708	\$100,496
ER1227	Eastern Region	Walla Walla	CTUIR	S. Fork Walla Walla River Kentch Levee Removal and Floodplain Reconnection P	\$175,000	\$929,000	\$1,104,000
ER1228	Eastern Region	Grande Ronde	Grande Ronde Model WS Foundation	Stream Simulation Trailer	\$2,500	\$4,051	\$6,551
ER1229	Eastern Region	Deschutes	Jefferson County SWCD	Groundwater Nitrate Source of Mud Springs	\$17,200	\$34,400	\$51,600
ER1230	Eastern Region	Cusick Creek	Keating SWCD	Cusick Creek—Going Back in Time	\$99,050	\$269,235	\$368,285
ER1231	Eastern Region	Owyhee	Malheur County SWCD	Owyhee River Improvement Project - Phase 3	\$39,187	\$34,600	\$73,787
ER1232	Eastern Region	Easter Oregon	OSU	Channel Restoration Bioassessment in Eastern Oregon	\$46,038	\$33,071	\$79,109
ER1233	Eastern Region	Umatilla/ Wasco	OSU	Salmon-Safe Certification of Sweet Cherries in Umatilla County and Wasco County	\$57,248	\$38,544	\$95,792
ER1234	Eastern Region	Owyhee	Owyhee WSC	Filter Strip Water Quality Improvement	\$25,300	\$19,600	\$44,900
ER1235	Eastern Region	Umatilla	Umatilla Basin WSC	Umatilla Basin / Willow Creek Sub-Basin – Watershed Improvement Targets	\$107,880	\$585,191	\$693,071

Project Number	Region	Basin	Applicant	Title	Proposed 319 Budget	Match	Total
ER1236	Eastern Region	John Day	John Day Basin Trust	Upper South Fork John Day River Monitoring Program	\$60,000	\$51,035	\$111,035
ER1237	Eastern Region	Walla Walla	Walla Walla Basin WSC	Milton-Freewater Levee Setback and Habitat Enhancements	\$100,000	\$71,735	\$171,735
NWR1205	North West Region	Scappoose Bay	Scappoose Bay WSC	Milton Dart Creek Enhancement Project	\$26,248	\$62,535	\$88,783
NWR1208	North West Region	Upper Nehalem	Upper Nehalem WSC	Upper Nehalem Riparian Restoration	\$59,315	\$73,475	\$132,790
NWR1209	North West Region	Tualatin	Tualatin SWCD	Tualatin Pesticide Collection Event	\$32,643	\$23,849	\$56,492
NWR1211	North West Region	Tillamook	TEP	Backyard Planting Program Yr 10	\$60,000	\$40,000	\$10,000
HQ-WR1212	North West Region	Willamette	BEF	Willamette Model Watershed Riparian Revegetation	\$10,000	\$20,000	\$30,000
NWR1214	North West Region	Tillamook	TEP	2013 Tillamook County Children Clean Water Festival	\$6,000	\$4,151	\$10,151
NWR1216	North West Region	Lower Columbia	LCREP	Lower Columbia Pesticide Collection Project	\$11,458	\$10,040	\$21,498
NWR1217	North West Region	Tillamook	Tillamook Bay WSC	Northwest Oregon Restoration Partnership	\$30,020	\$20,000	\$50,020
NWR1218	North West Region	Lower Nehalem	Lower Nehalem WSC	South Fork Nehalem Dairy Farm Riparian Enhancement	\$19,694	\$13,142	\$32,836
NWR1219	North West Region	Tillamook	Tillamook Co SWCD	Tillamook SWCD 2012 Stream Enhancement and Restoration	\$40,582	\$42,124	\$82,706
NWR1220	North West Region	Nestucca-Neskowin	Nestucca Neskowin WSC	Nestucca Riparian Restoration	\$60,000	\$40,000	\$100,000
NWR1243	North West Region	Clackamas	Clackamas RIVER WSC	Connecting People to WQ - Little Actions Make a Big Difference	\$35,462	\$26,423	\$61,885

Project Number	Region	Basin	Applicant	Title	Proposed 319 Budget	Match	Total
NWR1242	Western Region	Portland	DEPAVE	DEPAVE 2013	\$17,933	\$38,525	\$56,458
HQ-NWR-WR1215	Cross Region	North-Mid range	ODF	ODF RipStream: Downstream temperature response to harvest	\$40,000	\$26,400	\$66,400
WR1201	Western Region	Garrison Lake	Curry Co SWCD	Garrison Lake Septic Revitalization Project	\$7,186	\$9,796	\$16,982
WR1202	Western Region	Curry	Curry Co SWCD	Nitrogen Sources in a Tidally-Restricted Estuary	\$13,419	\$15,307	\$28,726
WR1203	Western Region	City of Bandon	City of Bandon	12th Street Addition Bio-Swales	\$30,000	\$19,800	\$49,800
WR1204	Western Region	Coquille	Coos WS Assoc	S. Fork Coquille River Action Plan	\$14,850	\$73,551	\$88,401
WR1206	Western Region	SWVGW MA	Lane COG	SWVGWMA Partners and Stakeholders Action Project	\$43,471	\$69,414	\$112,885
WR1207	Western Region	Morgan Creek	Douglas SWCD	Morgan Creek Assessment and Restoration Project	\$45,000	\$46,836	\$91,836
WR1213	Western Region	Mid-Coast	Lincoln SWCD	Mid-Coast BMP Implementation Project	\$45,420	\$95,924	\$141,344
WR1221	Western Region	Santiam-Calapooia	South Santiam WSC	Santiam Calapooia WQ Monitoring Project	\$108,592	\$74,111	\$182,703
WR1238	Western Region	Applegate	Applegate Partnership and WSC	Little Applegate Sig POD Measuring Device Project	\$7,000	\$12,640	\$19,640
WR1239	Western Region	Bear Creek	Bear Creek WSC	Stream Smart: Bear Creek Clean Water Project marketing campaign	\$18,900	\$13,700	\$32,600
WR1240	Western Region	Butte Creek	Jackson SWCD	Little Butte Creek Water Quality – Frey Phase	\$20,000	\$85,300	\$105,300
WR1241	Western Region	Rogue	Rogue Valley COG	Rogue Basin Model Stormwater Program Development	\$25,000	\$21,237	\$46,237
TOTALS					\$2,041,322*	\$3,618,486	\$5,569,808

*The amounts presented here for the proposed 319 budget represent the total request for proposals received as a result of the 2012 RFP. To date DEQ has not finalized the list of proposals and the amounts.

Appendix 4. 2012 Request for Proposals



State of Oregon
Department of
Environmental
Quality

Oregon 319 Nonpoint Source Implementation Grants Application

Request for Proposals
Fiscal Year 2012



This report prepared by:

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Request for Proposals

Oregon 319 Nonpoint Source Implementation Grants Application Fiscal Year 2012

The Oregon Department of Environmental Quality (DEQ) is seeking proposals from government agencies, tribal nations and nonprofit organizations to address non-point sources (NPS) of pollution affecting coastal, river, lake, drinking and ground-water resources of the state. In Oregon, about \$1 million of federal grant dollars will be available under Section 319(h) of the Clean Water Act. Funding and oversight of selected proposals will be administered by the DEQ Water Quality Program, and all approved projects will be contracted with the DEQ.

DEQ has identified specific regional priorities for 319 Nonpoint Source Implementation Grant funds which can be found in Appendix A. Project proposals submitted to DEQ should reflect the listed priorities.

Applicants must contact their DEQ 319 Regional or State Contact with their project idea(s) prior to submitting a grant proposal. Contact information can be found in Table 2.

DEQ encourages proposals that show a strong sense of collaboration and partnership with stakeholders, including other state, local, federal and/or tribal nations to ensure the most effective coordination of funding and matching from a variety of sources and to provide the greatest water quality benefit.

If your project is prioritized to receive funding, you will be asked to provide additional information as a requirement of the EPA grant program.

Oregon 319 NPS Program
October 14th 2011

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Who is eligible to apply?

The following agencies and organizations are eligible to apply for and receive 319 funds:

- Federal, state and local governments
- Public and private nonprofit organizations and institutions
- Tribal nations within Oregon

How to apply and when

A fillable electronic application can be found at: <http://www.deq.state.or.us/wq/nonpoint/grants.htm>

DEQ is accepting proposal applications for the Fiscal Year 2012 grant cycle through Friday, **Dec. 30, 2011**. Complete applications must be submitted in a PC/MAC compatible digital format such as WORD on a CD/DVD as well as a hard copy, by 5 pm, **Dec. 30, 2011**. Facsimiles are not accepted. **Complete scanned application be submitted at any DEQ office.** Please contact Ivan Camacho at (503) 229-5088 or refer to Table 2, DEQ staff contact information, for regional staff contacts. You can also visit: <http://www.deq.state.or.us/about/locations.htm> for a list of the regional offices and their addresses.

A complete application package consists of the electronic application, a hard copy of the full application, and should include:

- I. Project information cover page (Section A)
- II. Project description and supporting information following the guidelines (Sections B through G)
- III. Attachments to include with application (Section H)

Oregon DEQ Regional Offices		
Office	Address	Phone Number
Bend	475 NE Bellevue Dr., Suite 110 Bend, OR 97701	541) 388-6146
Coos Bay	381 N. Second St. Coos Bay, OR 97420	(541) 269-2721
Eugene	165 East 7th Avenue, Suite 100 Eugene, OR 97401	(541) 686-7838
Gresham	1550 NW Eastman Parkway, Suite 290 Gresham, OR 97030	503-667-8414
Hermiston	256 East Hurlburt, Suite 105 Hermiston, OR 97838	(541) 567-8297
Medford	221 Stewart Ave., Suite 201 Medford, OR 97501	(541) 776-6010
North Coast Branch Office	65 N Highway 101, Suite G Warrenton, OR 97146	503-861-3280
Northwest Region	2020 SW 4th Avenue, Suite 400 Portland, OR 97201-4987	503-229-5263
Pendleton	700 SE Emigrant, #330 Pendleton, OR 97801	(541) 276-4063
Salem	750 Front St NE, #120 Salem, OR 97301-1039	(503) 378-8240
The Dalles/Columbia Gorge	400 E Scenic Dr., #307 The Dalles, OR 9705	(541) 298-7255
Tillamook Office	2310 First Street, Suite 4 Tillamook, OR 97141	503-842-3038

Projects not eligible for funding

The following types of projects are low priorities for the NPS Program and will not be considered for funding:

- Projects that install Best Management Practices (BMP) to meet MS4 permit requirements, with the exception of demonstration projects that are directly transferable to other communities;
- On-site wastewater treatment system projects that are for routine maintenance or repair of existing on-site systems;
- Routine replacement of culverts; and
- Projects to specifically protect infrastructure on U.S. Forest Service (USFS) or Bureau of Land Management (BLM) roads or lands.

DEQ anticipates award of up to approximately 8 grant(s) per region under this announcement ranging in value from \$10,000 to \$60,000, subject to the availability of funds and quality of evaluated proposals.

Proposals requesting funding below or above the expected range of award will be considered. Due to limited funds available, submittal of proposals that request more than \$160,000 of 319 funds is discouraged, unless there is substantial benefit to the Agency.

DEQ reserves the right to make additional awards under this announcement if additional funding becomes available after the original selections. DEQ reserves the right to make fewer awards than anticipated.

Type of proposals requested

Applicants are strongly encouraged to discuss proposal idea(s) with the appropriate DEQ contact person (Table 2) early in the development of the 319 proposal. The appropriate DEQ contact person can assist to identify NPS priorities in the applicant's area and provide guidance on the development of an application. Appendix A outlines Oregon's Fiscal Year 2012 NPS priorities for the 319 grant program. Proposals must focus on addressing the priorities listed in Appendix A. In addition, proposals must describe how the project will contribute to achieving measurable environmental results.

DEQ may consider funding proposals for priorities not listed in Appendix A, provided that the applicant engages in a pre-proposal conversation with the appropriate DEQ contact person and makes a clear and well-founded case that the proposal addresses a high priority NPS need. Exceptional project proposals for stream restoration, effectiveness monitoring and pollutant reduction in non-priority basins will be considered.

Partial Funding

In appropriate circumstances, DEQ reserves the right to partially fund proposals by funding discrete portions or phases of proposed projects.

Matching requirements and recommendations

All projects must include non-federal matching funds of at least 40% of the project's total costs. **To calculate the minimum required match**, *multiply the amount of 319 funds you are requesting for your project by two-thirds.*

For example, if the 319 contribution cost to the proposed project is:	The match would be calculated by multiplying by 2/3 (0.66)	Total cost of project would be:
\$100,000	\$66,000	\$166,000
\$45,000	\$29,700	\$74,700

Applicants are encouraged to investigate partnering opportunities with the Oregon Watershed Enhancement Board grant program: <http://www.oregon.gov/OWEB/GRANTS/index.shtml>

Federal tax identification number

Grant recipients are required to provide a valid federal tax identification number. Payments will be issued only to the named Recipient and the federal tax identification number must be owned by the Recipient. If there are cases where a grant recipient is not able to obtain a federal tax identification number before submitting a proposal, the federal tax identification number must be obtained before the agreement signature process begins.

DUNS number

The Federal Funding Accountability and Transparency Act (FFATA), Public Law 109-282 as amended and associated Office of Management and Budget (OMB) directives, now require a current Dun and Bradstreet Data Universal Numbering System (DUNS) number. Compliance with providing the DUNS number as part of the grant application will be verified as part of the administrative review process. The DUNS number will supplement other identifiers required by statute or regulation, such as tax identification numbers. Free registration and DUNS numbers may be requested at: <http://fedgov.dnb.com/webform>. The DUNS Number may be requested via the web and/or the dedicated toll-free DUNS Number request line at (866) 705-5711. Please do not delay requesting a DUNS number; requests for expedited numbers require payment of a fee. Funds cannot be awarded until a DUNS number is submitted.

Ranking factors for project selection

Project proposals will be evaluated and prioritized for funding based on how well the proposal addresses a DEQ priority in Appendix A. For projects with focus on priorities not in Appendix a contact the DEQ 319 Grant Project Officer to determine if your project would be a priority for DEQ.

Water quality monitoring projects

Applicants with projects that include a water quality monitoring component are encouraged to contact DEQ regarding the sampling and analysis procedures, methods and strategy. For information on this subject, please refer to the documents listed on the DEQ web page: <http://www.deq.state.or.us/lab/techrpts/technicaldocs.htm>.

Successful applicants proposing a monitoring strategy will be required to

- Develop a sampling plan prior to data collection.
- Submit electronic data to DEQ at the conclusion of the project.

NPS Grant Implementation Agreement

Successful applicants will be expected to work with DEQ in establishing a NPS Implementation Grant Agreement. For reference, please refer to a sample agreement included in Appendix B. As part of this agreement additional information will be required, including but not limited to:

- Updated work plan
- Indirect cost plan, if reimbursement of indirect costs are part of the 319 budget.
- Enter project implementation information in the Oregon Watershed Restoration Inventory, (OWRI is the single largest database containing information about restoration projects in the western United States. This database originated as the means to track detailed information about the restoration efforts undertaken in the name of the Oregon Plan for Salmon and Watersheds). The 319 funded projects required to enter data into Include the following:
 1. Activities designed to restore aquatic, riparian, estuarine, wetland, upland, or overall watershed conditions or functions
 2. Completed projects or a completed phase of a project
 3. Activities above and beyond normal maintenance and management procedures in cases such as road and culvert improvements, erosion control, etc.

Reporting and documenting project implementation

Successful applicants will be required to document the implementation progress of their project during the life of the project as well as submit quarterly reimbursement invoices.

The Grant Recipient must submit a final performance report at project completion (2 hard copies and in digital format). For multiyear projects the recipient must submit annual performance reports (in duplicate) no later than June 30th of each year during the life of the project.

Specific reporting requirements and report implementation templates will be provided to the applicant when the NPS agreement granting the 319 funds is established. For reference, please refer to Appendix B for a sample of the NPS Implementation Grant Agreement.

Deadline and administration

Complete applications must be received by 5:00 PM on **December 30th, 2011** at any of the DEQ regional offices or headquarters. Facsimiles are not accepted. Following the close of RFP, DEQ will review the proposals and develop recommendations for funding that will be submitted to EPA Regional office. Interim and final dates for release of funds in the §319 grant program are dependent upon a number of factors, including some that are outside of DEQ's control, (e.g., EPA's budget allocations, etc). Refer to Table 1 for projected timeframes. Applicants should develop realistic schedules within their proposals and identify any activities that are dependent upon specific timeframes (month of year, seasonal work or other milestones).

All approved projects will be contracted with the Oregon Department of Environmental Quality.

Table 1. RFP and 319 2012 grant schedule

November 7th 2011	RFP is released
December 30th 2011	RFP period closes, applications due to DEQ Headquarters or DEQ Regional Offices by 5:00 PM.
May 2012	Notification of applicants on funding recommendations.
June 2012	EPA's release of funds to the State. Timing for release of these funds is dependent on passage of approval EPA's budget.
July - August 2012	Begin drafting NPS agreements.
August 2012	Earliest date for starting projects
September 2014	Projects should be completed on or before this date.

Table 2. DEQ staff contact information

REGION	BASIN	STAFF	PHONE #
Eastern	Burnt – Powder River Basin	John Dadoly	(541) 278-4616
	Deschutes Basin	Bonnie Lamb	(541) 633-2027
	Goose and Summer Lakes	Don Butcher	(541) 278-4603
	Grande Ronde, Imnaha, Wallowa Basins	Don Butcher	(541) 278-4603
	Hood Basin	Bonnie Lamb	(541) 633-2027
	John Day Basin	Don Butcher	(541) 278-4603
	Klamath Basin	Steve Kirk	(541) 633-2023
	Malheur Lakes Basin (Steens and Alvord area)	Don Butcher	(541) 278-4603
	Malheur River Basin (including Willow and Bully Creeks)	John Dadoly	(541) 278-4616
	North Malheur County and Lower Umatilla Basin GWMA	Phil Richerson	(541) 278-4604
	Owyhee River Basin	John Dadoly	(541) 278-4616
	Snake River-Hell's Canyon	Tonya Dombrowski	(541) 633-2030
	Umatilla Basin	Don Butcher	(541) 278-4603
	Walla Walla Basin	Don Butcher	(541) 278-4603
	Willow Creek Subbasin	Don Butcher	(541) 278-4603
Northwest	Clackamas & Sandy Basins	Steve Mrazik	(503) 229-5379
	Molalla & Pudding Basins	Karen Williams	(503) 229-6254
	Tillamook & North Coast basins	Bruce Apple York Johnson	(503) 842-3038 (503) 322-2222
	Tualatin Basin	Avis Newell	(503) 229-6018
Statewide	Columbia River - Mainstem	Agnes Lut	(503) 229-5247
	Drinking Water Source Protection	Sheree Stewart Jacqueline Fern	(503) 229-5413 (541) 686-7898
	Monitoring, Quality Assurance	Steve Hanson	(503) 693-5737
	NPS Education	Ivan Camacho	(503) 229-5088
	Riparian Forest Restoration	Ryan Michie	(503) 229-6162
	State Revolving Fund	Larry McAllister	(503) 229-6412
Western	Rogue Basin	Bill Meyers Heather Tugaw	(541) 776-6272 (541) 776-6091
	South Coast Basins	Pam Blake	(541) 269-2721 x227
	Mid-Coast Basin Streams Mid-Coast Basin Lakes	David Waltz	(541) 687-7345
	Umpqua Basin	David Waltz Heather Tugaw	(541) 687-7345 (541) 776-6091
Willamette	Willamette- Lower	Doug Drake	(503) 229-5350
	Willamette – Upper, Middle, including North Santiam, Pudding, Yamhill	Nancy Gramlich	(503) 378-5073
	Willamette – S. Santiam, Middle Fork, McKenzie, Coast Fork	Pamela Wright	(541) 686-7719
	Southern Willamette Valley GWMA	Audrey Eldridge	(541) 776-6029

Application for Oregon 319 Nonpoint Source Implementation Grants FY 2012

To apply for an Oregon 319 Non-point Source Implementation Grant FY 2012 please complete Sections A through I in the order listed and using the headings given. The sections are:

1. Section A: Summary information cover page
2. Section B: Project information
3. Section C: Project Work Plan
4. Section D: Project Assessment and Monitoring Project Requirements
5. Section E: Project Organization Information
6. Section F: Project Partners and Match Funding
7. Section G: Project Budget
8. Section H: Attachments

The application must be submitted using this format. All sections must be answered to be considered for funding.

If using the fillable form provided as a download, Sections B and H require preparation of a separate document providing the requested information. Please attach this as a separate document when submitting the fillable form.

Complete applications must be submitted in a PC/MAC compatible digital format such as WORD on a CD/DVD as well as a hard copy, by 5 pm, Dec. 30, 2011.



State of Oregon Department of Environmental Quality

319 Grant Program

Request for Proposals

A. Summary Information

1. Project Name:

2. Name of Applicant:

3. Address of Applicant:

4. Phone Number:

5. Email Address:

6. DUNS Number

7. Federal Tax ID Number:

8. Type of Organization (e.g. watershed council, county, non-profit, etc.):

9. Project Manager:

10. Proposed Start Date:

11. Proposed End Date:

12. Nonpoint source priority for this grant:

- | | |
|--|---|
| <input type="checkbox"/> TMDL implementation | <input type="checkbox"/> Management area |
| <input type="checkbox"/> 303(d) listed streams | <input type="checkbox"/> Drinking water source area |
| <input type="checkbox"/> Groundwater | <input type="checkbox"/> Other |

13. If Total Maximum Daily Load (TMDL), please provide name:

- | | | |
|--|--|---|
| <input type="checkbox"/> TMDL Approved | <input type="checkbox"/> TMDL Developing | <input type="checkbox"/> Not applicable |
|--|--|---|

14. If this project is in a Groundwater Management Area, please identify which one:

- | | | |
|--|---|---|
| <input type="checkbox"/> Northern Malheur County | <input type="checkbox"/> Lower Umatilla Basin | <input type="checkbox"/> Southern Willamette Valley |
|--|---|---|

15. If this project is in a Drinking Water Source Area, please provide Public Water System (PWS) identification number:

16. Provide 12-digit Hydrological Unit Code (HUC) of the project.
(use the following link to identify the 12-digit HUC of the project:
<http://map24.epa.gov/mwm>)

17. If your project is not a priority listing (see Appendix A of this RFP) please describe your reasons for considering this project a priority:

319 funds requested:	
Match calculated:	
Match local:	
Match other:	
Other federal funds:	
Total budget:	

B. Project Information

Please provide the information requested below. This information will be used by DEQ during the application review process. If the project is funded, will become part of the NPS agreement.

Project Summary	
	Describe in 500 words or less: <ol style="list-style-type: none"> 1. the project location 2. 303(d) listed waterbodies 3. the beneficial uses, water resources, or watershed problem the project will address 4. the proposed solution to the stated problem 5. the proposed work to be accomplished 6. partners 7. how the 319 funds will be used
Watershed or Project Area Priorities	
	Identify the relationship between the proposed project and the 319 Area Priorities shown in Exhibit A. Include references or citations for project implementing a watershed or project area strategy, cite the document that describes the watershed or project area strategy, along with the specific task(s) or recommendations(s) from the watershed or project area strategy/plan that will be implemented through the proposed project.
Project Goals and Objectives	
Goals are general intentions and intangible; objectives are precise and tangible.	Describe: <ol style="list-style-type: none"> 1. the project goals (what you hope to achieve) 2. measurable objectives 3. how you intend to accomplish the goals and objectives 4. the timeframe for achieving project goals and objectives 5. how these goals and objectives complement any other ongoing water quality improvement projects within the project area
Tracking and Measuring Progress	
	Describe: <ol style="list-style-type: none"> 1. list of pollutants that will be targeted 2. estimated nonpoint source pollutant load reduction (where applicable) 3. how the project will result in the estimated load reductions/projected improved water quality conditions 4. the plan for tracking and measuring progress towards achieving the expected project goals and objectives

C. Project Work Plan

The work plan should be presented by task (with sub-tasks, as necessary), including a brief narrative description and an estimate of the time period over which the task will occur. For each task, include an estimated percentage of time and the responsible party. The total estimated percentage of grantee time must equal 100 percent. For each task, identify the resulting product(s).

Project Title

Project Element	Description	Time Frame	% of Grantee Time	Responsible Staff/Agency	Resulting Product(s)

D. Project Assessment and Monitoring Projects Requirements

Successful 319 applicants receiving funding will be expected to evaluate or estimate the benefit of the water quality improvements resulting from the project.

In preparing your project application, please describe your strategy for project evaluation. An evaluation is required for all projects to measure the degree that implementation is achieving the stated goals. The evaluation component of your project should be designed to detect changes that result from the project using metrics appropriate to the project and the stated goals.

We realize that certain types of environmental improvement may require assessment over several years, if not decades. We believe that it is important to consider the scale of change that will result from your project (site specific, stream reach, sub-basin or larger). It is also helpful to consider linkages to other monitoring efforts such as those conducted by the state, federal agencies and local units of government and volunteer groups that will be carried out during the project time frame.

As part of this evaluation, please provide the following information:

Qualitative assessments. Describe how the project implementation will be evaluated, including how success will be defined, estimated or calculated and an evaluation time frame (even if it extends beyond the time frame of the grant).

Qualitative Assessment	How It Will Be Evaluated	Evaluation Time	Result

Quantitative assessments are strongly encouraged, particularly to document pre- and post- project implementation benefits. We encourage the applicant to work with DEQ in this effort to assure that the project is designed to produce meaningful results (e.g., an appropriate sample size to draw statistically valid conclusions, number and types of best management practices (BMPs) implemented and expected NPS pollutant reduction, etc).

Applicants proposing to perform environmental measurements as part of the project or evaluation (water quality, macro-invertebrate populations, stream morphology, etc.) should:

- State the purpose of the monitoring.
- Describe the data management and statistical analysis to be applied to the data.
- Complete the following table as part of this section.

Parameter	Analytical Technique	Number of Sample Locations	Sampling Frequency

All projects that include water quality monitoring activities for evaluation or project guidance will be required to submit a Quality Assurance Project Plan (QAPP) as part of the final NPS Agreement for review and approval by DEQ (not with this application). Grant funds will not be released for monitoring activities and/or match funds addressed by monitoring activities will not be credited until a QAPP has been approved by DEQ. Please contact the appropriate NPS Program Staff listed in **Table 2** for additional information and guidance. Applicants are encouraged to contact DEQ Volunteer Monitoring Coordinator, Steve Hansen (503) 693-5737 to receive advice and assistance in developing the project proposal or project implementation.

E. Project Organization Information

Organization: Briefly state the sponsoring organization's mission, goals, relevant programs, activities, and accomplishments.

Staff: Describe the relevant qualifications of project staff that will ensure the success of the project.

319 Experience: List any previous 319 grants which the organization has received or partnered on.

F. Project Partners and Match Funding

In the table below, show all anticipated funding sources (including your 319 grant fund request) and indicate the status of funding and the nature of the contribution. Be sure to provide a dollar amount or value for each funding source. If participation is in-kind, briefly describe the nature of the contribution in the first column.

Letters of support or commitment are required from all funding partners committing a specific amount of time, money, activities or other specified resource reflected in budget.

Funding Source (if in-kind, briefly describe the nature of the contribution)	Cash (X)	In-Kind (X)	Secured (X)	Pending (X)	Amount/Value
					\$
					\$
Total estimated funds:					\$

G. Project Budget: Oregon NPS Implementation Grant

Complete the project budget page. Budget summary in Section A should correspond to the budget included in this table.

	Unit	Unit Cost	Donated Services/ Supplies	Match Funds	319 Funds	Total Costs
Personnel (Position, title, wages, benefits, etc.)						
Travel (Mileage, per diem, lodging, training, etc.)						
Contracted Services						
Supplies/Materials						
Production Costs						
Educational/ Outreach Costs (Video production, printing, direct mail, kiosks, brochures, training, tours, workshops, etc.)						
Equipment (Items usable beyond end of the project with a value greater than \$100, i.e., rain gage, thermograph, Hach kits, etc.)						
Subtotals			\$	\$	\$	\$
Administration (Costs associated with administering the grant, e.g., fiscal management.)						
Monitoring (component to be monitored cost per year, number of years, and total cost)						
Totals			\$	\$	\$	\$

H. Attachments

Maps of the project and vicinity should be submitted by all applicants. Letters of commitment, contractor's qualifications, statement on hydrology/morphology, site plans, and site photos must be submitted as appropriate.

Map(s)

Maps should not be larger than 8½" x 11". All maps should include a locator map identifying the location of the proposed project site relative to major geographical features.

For Implementation Projects:

A map delineating the project area (watershed/GWMA/source water protection area) in relation to the critical area(s) and identifying the specific location of each site proposed for restoration/water quality improvement activities.

For Planning Projects:

A map delineating the boundaries of the project area. The map should show all affected water/waterbodies.

The following attachments are to be submitted as appropriate:

Letters of commitment

Required for all proposals that include local, non-Federal match from partners. These are letters from partners in the project committing a specific amount of time, money, activities, or other specified resources for the project and reflected on the budget. General letters of support (those not showing time, money, or specific resource commitment) are not required.

Contractors qualification

Required for all proposals with entries in the contractual portion of the budget. The form should include the name and qualifications of all known contractors listed on the budget.

Statement on hydrology/morphology

Required for all projects that propose major stream treatments or streambank stabilization. The statement must include detailed information on the hydrologic condition of the stream including if and how the hydrology has changed over time and the corresponding changes to the morphological stream conditions proposed under the project. An engineering evaluation, NRCS plan, or similar evaluation may be necessary to receive funding.

Site plan(s)

Required for all proposals that propose implementing physical BMPs. A depiction of each project area showing all existing water bodies and structures as well as the proposed treatment.

Site photo(s)

Required for all proposals that propose implementing physical BMPs. A depiction of each project area showing all relevant existing (i.e., pre-project) conditions.



State of Oregon
Department of
Environmental
Quality

Appendix A

DEQ Priorities for 319 NPS

Implementation Grants



Eastern Region Project Priorities: TMDLs/303(d) Development and Implementation and Watershed Approach Implementation

Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d) and Watershed Approach	Water Quality Problem	Project Need
Eastern Region Stormwater	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.
Eastern Region Riparian Restoration (including morphology and flow)	Region Wide		Temperature	Basin-wide targeted riparian restoration project elements include restoring morphologic function (increased sinuosity, decreased width/depth ratios, floodplain reconnection), revegetation of riparian area, increased instream flow. Proposed project(s) are expected to include an extensive portion of the stream channel over time rather than isolated small-length segments. Riparian restoration projects should target activities in the area of on-going project work whenever possible. Projects correlated with and/or adjacent to other restoration work will be given priority.
Grande Ronde Basin Channel and Riparian Restoration Effectiveness Monitoring	Basin-wide (Upper Grande Ronde, Lower Grande Ronde, Imnaha, Wallowa)	TMDLs completed	Temperature Nutrients pH Dissolved oxygen	Stream channel and riparian restoration projects should target activities in the area of on-going multi-year, multi-organization project work whenever possible. 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. 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. Targeted effectiveness monitoring projects include development and implementation of monitoring and assessment systems to characterize the effectiveness of implementation projects and project types/elements specific to improving water quality and habitat in the Basin and to track basin-scale progress.

Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d) and Watershed Approach	Water Quality Problem	Project Need
John Day Basin Channel and Riparian Restoration Effectiveness Monitoring Implementation Capacity	Lower John Day, Middle Fork John Day, North Fork John Day, Upper John Day	TMDLs completed	Temperature Bacteria Biological criteria Dissolved oxygen Sediment	<p>On the Middle Fork John Day River, stream channel and riparian restoration projects should target 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:</p> <ul style="list-style-type: none"> • Temperature, bacteria, sediment and low dissolved oxygen <p>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. 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.</p> <p>Targeted effectiveness monitoring projects include development and implementation of monitoring and assessment systems to characterize the effectiveness of implementation projects and project types/elements specific to improving water quality and habitat in the Basin and to track basin-scale progress.</p> <p>Targeted implementation capacity projects are those that research, evaluate or produce innovative methods of promoting restoration and addressing socioeconomic limitations or perceptions of constraint.</p>
Klamath Basin Coordinated Implementation Planning	Klamath River Basin (Sprague River, Upper Klamath Lake, Upper Klamath and Lost River, Williamson)	TMDLs completed	Temperature Dissolved oxygen pH Ammonia toxicity Chlorophyll a	<p>Targeted implementation planning projects include design/development of a unified implementation plan for irrigation and drainage districts and others that will identify and prioritize implementation activities specific to meeting water quality objectives identified by the TMDLs; and will improve overall coordination of future implementation activities between separate entities in the Basin. Strong consideration will be given to those proposals that include identification of tracking and accounting mechanisms for implementation progress within the Basin and effectiveness monitoring protocols for identifying both water quality benefits realized through implementation of the plan and assessment of project-type effectiveness.</p>

Eastern Region Project Priorities: TMDLs/303(d) Development and Implementation and Watershed Approach Implementation

Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d) and Watershed Approach	Water Quality Problem	Project Need
Deschutes Basin Channel and Riparian Restoration Increased Instream Flow Erosion Control	Basin-wide	Watershed Approach completed	Temperature Flow Sediment / turbidity Habitat Groundwater quality Nutrients/bacteria	<p>Stream channel and riparian restoration projects should target activities 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, riparian fencing. 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.</p> <p>Targeted water conservation projects directed at increasing instream flows, especially summer-time flows. Projects directed at permanent increases in instream flows will be given priority over short-term or temporary increases in instream flow.</p> <p>Targeted erosion control projects to improve streambank stabilization, improve land management and conservation cropping techniques and reduce associated pollutant transport to surface waters. Project elements should include the design and implementation of programs to reduce</p> <ul style="list-style-type: none"> Sediment, nutrient, bacteria and pesticide loading to surface waters <p>Project elements should also include tools for public education and outreach and analysis of outreach success. Projects correlated with and/or adjacent to other implementation work will be given priority.</p>

Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d) and Watershed Approach	Water Quality Problem	Project Need
Water Quality Monitoring and Pollutant Source Characterization				<p>Targeted water quality monitoring and pollutant source characterization projects are those that include development and implementation of monitoring programs specific to the assessment of water quality and characterization of sources of:</p> <ul style="list-style-type: none"> • Bacteria, nutrients, dissolved oxygen and/or pH in surface water • Nitrate and bacteria data in groundwater <p>Proposed project(s) are expected to include an extensive portion of the stream channel over time or an appropriate area for ground water characterization rather than isolated small segments or areas. Projects correlated with other monitoring efforts will be given priority.</p>
Malheur River Basin Pollutant Source Characterization Nutrient Reduction Agricultural Implementation	Malheur River Basin	TMDLs completed	Temperature Dissolved Oxygen Bacteria Pesticides Nutrients	<p>Targeted pollutant source characterization projects are those that include development and implementation of monitoring programs specific to the characterization of sources of:</p> <ul style="list-style-type: none"> • 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 <p>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.</p> <p>Targeted nutrient reduction projects are those that include research, design and implementation activities that will reduce nutrient loading to the 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.</p> <p>Targeted agricultural implementation 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</p>

Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d) and Watershed Approach	Water Quality Problem	Project Need
				watershed response to implementation projects.
Changes in Agricultural Tillage Practices				Targeted agricultural tillage 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.
Channel and Riparian Restoration				Basin-wide targeted riparian restoration project elements include restoring morphologic function (increased sinuosity, decreased width/depth ratios, floodplain reconnection), revegetation of riparian area, increased instream flow. Proposed project(s) are expected to include an extensive portion of the stream channel over time rather than isolated small-length segments. Riparian restoration projects should target activities in the area of on-going project work whenever possible. Projects correlated with and/or adjacent to other restoration work will be given priority.
Walla Walla River - Mid Columbia Basin Milton-Freewater Levee Assessment and Potential Restructure	Walla Walla River	TMDLs completed	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.

Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d) and Watershed Approach	Water Quality Problem	Project Need
Upstream Levee Set back / Removal Assistance Opportunities				<p>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.</p> <p>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.</p>
Pesticide Stewardship Activities				<p>Targeted pesticide stewardship 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.</p>

Eastern Region Project Priorities: Groundwater Management Areas (GWMA)

Basin/ Priority Activity	Specific Location	Status: GWMA	Water Quality Problem	Project Need
Lower Umatilla Basin Ground Water Management Area (LUBGWMA) Action Plan	Umatilla Subbasin Middle Columbia Basin	Lower Umatilla Basin GWMA established in 1990	Nitrate-Nitrogen	<p>Targeted projects include those specific to reduction of nitrogen concentrations in groundwater including:</p> <ul style="list-style-type: none"> • 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. • 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.

Basin/ Priority Activity	Specific Location	Status: GWMA	Water Quality Problem	Project Need
				<ul style="list-style-type: none"> 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 (NMCGWMA) Nitrate Reduction	Lower Malheur River Subbasin	Northern Malheur County GWMA established in 1989	Nitrate-Nitrogen	Targeted projects include: <ul style="list-style-type: none"> 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.

Eastern Region Project Priorities: Drinking Water Source Protection (DWSP)

Basin/ Priority Activity	Specific Location	Status: DWSP	Water Quality Problem	Project Need
All ER Basins	Public water supply wells that have significant nitrate risks.	Source Water Assessment is complete. GIS assistance can also be provided.	Nitrate	Targeted projects for reducing nitrogen loading to groundwater within the 10-year time-of-travel recharge zone for public water supply wells that have significant nitrate risks. (> 50% safe drinking water MCL levels). Activities can supplement GWMA implementation activities.
All ER Basins	Municipally owned DWSAs, especially recently acquired land.	Source Water Assessments complete. GIS assistance can also be provided.	Bacteria, sediment, turbidity	Projects addressing management and restoration of land in drinking water source areas (DWSAs) owned by Public Water Systems or owned by a community that relies on the Public Water System and its DWSA. Restoration of riparian and ecosystem functions, remediation of current or potential pollution sources, and bolstering system resiliency to natural disturbance and climate change to protect beneficial uses including drinking water.

Western Region Project Priorities: TMDLs/303(d) Development and Implementation and Watershed Approach implementation

Western Region Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d)	Water Quality Problem	Project Need
Coos Sub-basin	4th field HUC	<p>Implementation Ready TMDLs are pending development.</p> <p>ODEQ proposes to implement a Watershed Approach in this Sub-basin.</p>	<p>303d listed parameters include; bacteria (Recreational Contact and Shellfish Growing) temperature, dissolved oxygen.</p> <p>Although not a 303d listed parameter reductions in sedimentation closely link to other 303d listed parameters.</p>	<p>Assessment and Demonstration</p> <p>The State of Oregon has committed to implementing a Watershed Approach while preparing an “Implementation ready” TMDL for the Coos Watershed. DEQ is currently developing the first Oregon Implementation ready TMDL in the Mid Coast Basin.</p> <p>“Implementation ready” TMDLs provide clearer expectations for management entities and landowners regarding what actions are required under a TMDL, and implementation actions are based on specific BMPs. We anticipate extensive discussions with stakeholders during the Coos TMDL development process.</p> <p>As part of the development of Implementation Ready TMDLs DEQ welcomes projects that seek to implement alternatives to TMDLs referred to as Category 4B waters. The Clean Water Act recognizes that other pollution control requirements may obviate the need for a TMDL. A TMDL is not needed where Category 4B waters exist because other pollution control requirements are expected to result in the attainment of applicable water quality standards (WQS) in a reasonable period of time.</p> <p>While the 4B option has been used very infrequently in EPA Region 10, the potential benefits of streamlining the TMDL process to focus on remediation instead of the quantification of permissible loads are evident. Placing waters in Category 4B rather than conducting TMDL analysis may prove more cost effective and result in more rapid restoration of water quality. Model 4B demonstration projects are desired.</p>

Western Region Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d)	Water Quality Problem	Project Need
Sixes and Chetco Sub-basins	Sixes, Elk, New River Complex, Hunter, Pistol, and Winchuck estuaries.	4 th field TMDLs in development Water Quality Management Plans completed for most areas.	303d listed parameters include bacteria, temperature, dissolved oxygen, pH, weeds and algae.	<p>Data Management, Assessment, Planning</p> <p>Proposals which seek to better characterize WQ conditions in these small coastal estuaries are desirable. Similar WQ impairments make the development of a common approach to TMDL development and implementation through well defined recovery strategies desirable.</p> <p>This group of estuaries represents a unique assessment challenge. Many of these systems become bar bound in low flow periods and the presence of algal growth, especially periphyton, is remarkable. These small estuaries provide critical habitat for out migrating salmonids.</p> <p>Water quality studies focusing on dissolved oxygen and pH have not identified nutrient loading as a significant WQ driver. Nutrient utilization on a daily basis by periphyton is likely resulting in an under estimate of the role that nutrient cycling plays in diurnal DO and pH regimes.</p>
Coquille Sub-basin	Coquille 4 th HUC	TMDL and WQMP are near completion (2012)	Bacteria, temperature, dissolved oxygen, pH, chlorophyll a, algal toxins.	<p>TMDL Development Outreach</p> <ul style="list-style-type: none"> • Support education and outreach related to the Coquille Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP). • Facilitate joint Designated Management Agency (DMA) Water Quality Implementation Planning processes. • Develop watershed restoration and enhancement strategies for integration into existing Action Plans with strong linkages to load reduction goals identified in the TMDL.
South Coast Basin	Cities of Coos Bay and North Bend.	4 th field TMDLs in development	Urban stormwater management.	<p>Monitoring and Planning</p> <p>Facilitate partnerships with local jurisdictions whose stormwater runoff and/or conveyance systems discharge to sensitive areas (e.g. shellfish growing, recreation). Focus on better defining pollutant loading into urban streams and estuaries and support the</p>

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Western Region Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d)	Water Quality Problem	Project Need
				implementation of Storm Water Management Plans developed by local jurisdictions.
	In conjunction with land development activities		Land development practices modifying hydrology and increasing pollutant delivery.	Demonstration Identify specific sensitive areas and implement demonstration stormwater best management practices and/or Low Impact Development (LID) projects. Utilize sites to conduct outreach.
South Coast Basin	Coastal Lakes	Tenmile TMDK Adopted. Other lakes will be addressed as part of 4 th field TMDLs in development	Source Water Protection, harmful algal blooms, excessive nutrient loading.	Onsite Septic Program (Coastal Zone) Education and outreach regarding new maintenance and inspection requirements in Oregon's coastal zone.
Coos Sub-basin	Tenmile Lake - 5th field HUC	TMDL Adopted	Excess nutrient loading resulting from land management activities. Nuisance and Harmful algae blooms exceeding human health guidelines.	WQIP Implementation Continue to work in partnerships with Designated Management Agencies' to implement high priority projects identified in WQIPs (Water Quality Implementation Plans). Weed Management Demonstrate in lake invasive weed management control measures as identified in the Aquatic Weed Management Plan. Conduct outreach and build partnerships with lakefront landowners
Mid-Coast Basin Assessment and BMP implementation	Siletz-Yaquina, Alsea Subbasins	303(d) listings; TMDL being developed	Beneficial use impairments due to bacteria, temperature, dissolved oxygen, turbidity & sedimentation	Water quality monitoring to better quantify sources of nonpoint source pollutant loading, identify trends and assist with prioritization of sites for BMP implementation; Development and implementation of riparian restoration projects to address temperature impairments and/or reduce sediment delivery on 303(d) listed streams and tributaries (or those listings proposed for 2010); projects within Upper Siletz drinking water source area (Siletz, Newport, Toledo) will

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Western Region Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d)	Water Quality Problem	Project Need
				receive higher priority; BMP implementation to improve riparian conditions and/or reduce nonpoint source pollution
Rogue Basin	Upper Rogue Middle Rogue Lower Rogue Applegate Illinois	TMDLs Adopted	Temperature Bacteria Nutrients and/or Sedimentation	Implementation of efforts identified in Water Quality Implementation Plans (WQIP) or Water Quality Management Plans (WQMP). Potentially including: <ul style="list-style-type: none"> • Development or revision of riparian ordinance. • Stormwater management projects and planning for non-phase II communities. • Improvement of riparian shade and function, proposals must include long term maintenance plan. • Control sediment sources. • Irrigation improvement projects. • Science-based projects to restore floodplain connectivity and natural wood recruitment. • Development and/or implementation of outreach campaign utilizing social marketing strategies.
Rogue Basin	Bear Creek	303(d) listing	Mercury	Investigation of Emigrant Lake 303(d) listing for mercury.
Rogue Basin	Upper Rogue	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	Category 3B	Bacteria – shellfish standard	Investigation of the Rogue estuary 303(d) listing for bacteria.
Umpqua Basin-South Umpqua BMP implementation & monitoring	Priority watersheds with specific load reduction and BMP needs identified in the TMDL/WQMP	TMDL Issued	Beneficial use impairments due to elevated bacteria, nutrients, & harmful algae blooms (HABs)	Development and implementation of riparian condition protection and improvement activities identified in DEQ's TMDL/Water Quality Management Plan (WQMP): http://www.deq.state.or.us/WQ/TMDLs/docs/umpquabasin/umpqua/chpt7wqmp.pdf including: <ul style="list-style-type: none"> • Riparian enhancement; restoration of riparian shade & function • Control of livestock access to streams and off-channel watering • Stream bank and channel stability improvements • Source reduction BMPs for rural residential areas and "hobby" farms

Oregon 319 Non-point Source Implementation Grants Application

Western Region Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d)	Water Quality Problem	Project Need
				<p>Monitoring of conditions and BMPs to assess effectiveness and/or trends.</p> <p>Projects involving multiple partners and located within public drinking water source areas will receive higher priority.</p>
<p>Umpqua Basin- Basin Wide</p> <p>Water Quality Implementation Plan (WQIP) Development</p>	Land use under local government jurisdiction	TMDL Issued	All Impairments addressed in TMDL (relevant to DMAs' jurisdiction)	Technical and organizational assistance to DMAs (small municipalities and Douglas County) for WQIP development and implementation. Projects involving multiple DMAs will receive higher priority.
<p>Willamette River Subbasins:</p> <ul style="list-style-type: none"> • North Santiam • South Santiam • Upper Willamette (River Mile 108-187) • Coast Fork Willamette 	Cities and agricultural areas in the North Santiam, South Santiam, and Upper Willamette Subbasins	TMDLs adopted and 303 (d) listings	<ul style="list-style-type: none"> • Bacteria • Dissolved Oxygen • Legacy and Current Use Pesticides • Mercury • Temperature 	<ul style="list-style-type: none"> • Provide water quality monitoring data in and around small cities and lowland agricultural areas to assist designated management agencies with implementing TMDLs. • Target cities that are facing rapid growth and surface/ground water quality problems related to stormwater management. Address needs specific to their problems, especially around stormwater and stream temperature. • Partnerships involving small cities (population less than 10,000) counties and other entities within the same subbasin that collaborate to conserve/leverage limited resources to focus on water quality improvement specific to stormwater and temperature. Priority will be given to projects that address impaired surface waters and drinking water.
<p>Willamette River Subbasins:</p> <ul style="list-style-type: none"> • Pudding • Yamhill 	Yamhill River tributaries (e.g., Mill Creek, Deer Creek, Willamina, Lower North Yamhill, Lower Panther Creek) Pudding River	TMDLs adopted, TMDLs in-progress and 303 (d) listings	<ul style="list-style-type: none"> • Bacteria • Dissolved Oxygen • Legacy and Current Use Pesticides • Mercury • Temperature • Turbidity 	<ul style="list-style-type: none"> • Partnerships involving small cities (population less than 10,000) counties and other entities within the same subbasin that collaborate to conserve/leverage limited resources to focus on water quality improvement specific to stormwater and temperature. Priority will be given to projects that address impaired surface waters and drinking water. • Active riparian restoration projects to address temperature, sediment, bacteria, and pesticides. Priority will be given to projects adjacent to other implementation work and within sixth

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Western Region Basin/ Priority Activity	Specific Location	Status: TMDLs/ 303(d)	Water Quality Problem	Project Need
	tributaries (e.g., Lower Silver Creek, Butte Creek, Rock Creek, Little Pudding, Zollner)			field hydrologic unit areas. • Implementation of agricultural BMPs focused on reducing bank erosion (e.g., riparian restoration to reduce erosion of sediment from tile drainage).

Western Region Project Priorities: Groundwater Management Areas (GWAMs)

Western Region Basin/ Priority Activity	Specific Location	Status: GWMA	Water Quality Problem	Project Need
Western Region	Southern Willamette Valley Groundwater Management Area	GWMA	Nitrate in drinking water (groundwater)	<p><u>Outreach:</u> Using a “train the trainer” approach, conduct outreach to and between staff, Committee members, and public officials of agencies, organizations, and other entities involved with the GWMA. Use the results of the Social Marketing process (2011-2012) to determine how to talk to the public and various interest groups about groundwater. Prepare a consistent approach for use by all partners. Provide training and tools in an information kit to the GWMA partners, who will then be positioned to raise awareness by spreading the GWMA words/messages through presentations to various groups, meetings. Include PowerPoint presentation “GWMA 101, GWMA Basics fact sheet, a generic newsletter article in a journalistic style including a graphic and quotes, ready to insert. Organize, advertise, prepare, and present a training session for partners you will use this material.</p> <p><u>GWMA Committee:</u> Provide ongoing coordination support for the GWMA Committee. Coordinate and facilitate quarterly GWMA Committee meetings. Prepare GWMA Committee meeting materials, record and distribute meeting minutes.</p> <p>Update maps as needed for GWMA Committee and partner agency understanding of project.</p> <p>Update Action Plan to reflect the subcommittees and the GWMA Committee recommendations.</p> <p>Prepare updated report for DEQ review and approval.</p> <p>As the GWMA representative, attend Benton, Lane, Linn Water Resource Study Group meetings, construct and review materials, and provide technical assistance as requested.</p> <p><u>Volunteers:</u> Evaluate the appropriate set of volunteers (i.e., Neighborhood Well Monitors., Master Gardeners, etc.) who may be able to participate in a “Train the Trainer” event. The overall goal of this project would be to help develop grass roots educators, who can assist their neighbors and friends in understanding the source of their drinking water and protecting groundwater quality.</p> <p><u>Implementation:</u> Implement a priority strategy from the SWV GWMA Action Plan, or as identified by the focus group work to be completed in 2011. Continue to attend the SWV GWMA Committee meetings and provide updates on the outreach and education happenings.</p>

Acronyms:

BMP – Best Management Practice
DHS – Department of Human Services
DMA – Designated Management Agency
DWSA – Drinking Water Source Areas

DEQ – Department of Environmental Quality
GWMA – Ground Water Management Area
HABs – Harmful Algae Blooms
LID – Low Impact Development
TMDL – Total Maximum Daily Loads

SWV GWMA – South Willamette Valley Ground
Groundwater Management Area
WQIP – Water Quality Implementation Plan
WQMP – Water Quality Management Plan
WQS – Water Quality Standards

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: DWSP	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 complete. GIS assistance can also be provided.	Bacteria, blue green algae, toxics), sediment, nutrients	Projects addressing higher risk non-point source potential contamination within sensitive areas based on data and recommendations from the DEQ/OHA 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. Projects that address drinking water threats, as well as impairment of other beneficial uses, are strongly encouraged.
All NWR Basins	Municipally owned DWSAs, especially recently acquired land.	Source Water Assessments complete. GIS assistance can also be provided.	Bacteria, sediment, turbidity	Projects addressing management and restoration of land in drinking water source areas (DWSAs) owned by Public Water Systems or owned by a community that relies on the Public Water System and its DWSA. Restoration of riparian and ecosystem functions, remediation of current or potential pollution sources, and bolstering system resiliency to natural disturbance and climate change to protect beneficial uses including drinking water.

Northwest Region Project Priorities: TMDLs/303(d) Development and Implementation

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). Pesticide partnership projects and/or specific toxic reduction projects. Innovative storm water 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, Molalla, 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).
Molalla R./TMDL Implementation	Mainstem	Completed December 2008	temperature	Restoration/protection activities in upper mainstem coordinated among BLM and other watershed groups; TMDL implementation monitoring for cities of Canby and Molalla, Clackamas County, and DOGAMI. 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. Water conservation projects.
	North Fork		temperature	Riparian restoration; Monitoring pre/post logging; Road abandonment.
	Milk Creek, Gribble Creek		temperature	Riparian restoration; Stream flow monitoring.

Northwest Region Project Priorities: TMDLs/303(d) Development and Implementation

Basin/Priority Activity	Specific Location	Status: TMDLs/ 303(d)	Water Quality Problem	Project Need
	Table Rock Fork		temperature	Riparian restoration/protection activities coordinated among BLM and other watershed groups; Road abandonment.
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.

Basin/Priority Activity	Specific Location	Status: DWSP	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 complete. GIS assistance can also be provided.	Bacteria, blue green algae, toxics), sediment, nutrients	Projects addressing higher risk non-point source potential contamination within sensitive areas based on data and recommendations from the DEQ/OHA 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. Projects that address drinking water threats, as well as impairment of other beneficial uses, are strongly encouraged.
All NWR Basins	Municipally owned DWSAs, especially recently acquired land.	Source Water Assessments complete. GIS assistance can also be provided.	Bacteria, sediment, turbidity	Projects addressing management and restoration of land in drinking water source areas (DWSAs) owned by Public Water Systems or owned by a community that relies on the Public Water System and its DWSA. Restoration of riparian and ecosystem functions, remediation of current or potential pollution sources, and bolstering system resiliency to natural disturbance and climate change to protect beneficial uses including drinking water.

**Appendix 5. 2012 Oregon DEQ Nonpoint Source
Implementation Grant Agreement**

**STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
NONPOINT SOURCE IMPLEMENTATION GRANT AGREEMENT**

Project name: [REDACTED]

DEQ Agreement # [REDACTED]

This Agreement is between the State of Oregon, acting by and through its Department of Environmental Quality (DEQ) and [REDACTED] (Recipient).

Recipient Data	DEQ Data
Grant Administrator: [REDACTED] <Organization Name> [REDACTED] <Address> [REDACTED] <Address> <Phone> [REDACTED] <Email> Recipient's Taxpayer ID# : [REDACTED]	Grant Administrator: [REDACTED] Dept. of Environmental Quality [REDACTED] <Address> [REDACTED] <Address> <Phone/Email> [REDACTED]

- Effective Date and Duration** This Agreement is effective on the date at which every party has signed this Agreement. Unless earlier terminated or extended, this Agreement expires [REDACTED].
- Project** The Project is described in Attached Exhibit A. Recipient agrees to perform the Project in accordance with the terms and conditions of this Agreement.
- Agreement Documents** This Agreement consists of this document and the attached Exhibits A (Project Requirements), B (Expenditures/Match Report), C (MBE/WBE Utilization – Federal Grants), D (Lobbying and Litigation Certificate) and E (Annual / Final Performance Report), which are listed in descending order of precedence.
- Grant Funds** DEQ funding for this Agreement is a Nonpoint Source Implementation Program grant (CFDA 66.460) issued to DEQ under Section 319(h) of the Clean Water Act by the U.S. Environmental Protection Agency (EPA). The maximum, not-to-exceed, grant amount that the DEQ will pay to Recipient is \$ [REDACTED]. This is a cost reimbursement grant and disbursements will be made only in accordance with the schedule and requirements contained in Exhibit A. Recipients are entitled to reimbursement of indirect costs *only* if they have a current indirect cost rate approved by their cognizant agency. Recipients not having a current approved indirect cost rate must submit a cost allocation plan to their cognizant agency for review and approval within three months of the Agreement Effective Date in order to be eligible for reimbursement of indirect costs. Reimbursement of indirect costs will only occur if the Recipient receives approval of their current indirect cost rate (part of their cost allocation plan) from their cognizant agency.
- Contracts** Recipient will not enter into any contracts for any of the work scheduled under this Agreement without obtaining prior written consent from the DEQ Grant Administrator.
- Amendments** The terms of this Agreement will not be waived, altered, modified, supplemented, or amended, in any manner whatsoever, except by written instrument signed by both parties. **The Recipient must submit a written request including a justification for any amendment to the DEQ Grant Administrator in writing at least forty five (45) calendar days before this Agreement expires.** No payment will be made for any services performed before the effective date or after the expiration date of this Agreement. If the maximum compensation amount is increased by amendment, the amendment must be fully effective before Recipient performs work subject to the amendment.
- Termination** This Agreement may be terminated by mutual consent of both parties or by DEQ upon written notice to the Recipient. This notice may be transmitted in person, by mail, facsimile, or by Email. If this Agreement is terminated under this Section 7, DEQ will pay Recipient for unpaid approved invoices and for authorized and approved expenses incurred under this Agreement through the date of the termination of the Agreement but not yet billed.
- Funds Available and Authorized** The DEQ certifies that it has sufficient funds currently authorized for expenditure to finance the costs of this Agreement within the DEQ current biennial appropriation or limitation. The Recipient understands and agrees that DEQ payment of amounts under this Agreement is contingent on DEQ receiving appropriations, limitations, allotments or other expenditure authority sufficient to allow DEQ, in the exercise of its reasonable administrative discretion, to continue to make payments under this Agreement.
- Match** Matching funds are required for all Nonpoint Source Projects. The EPA requires a minimum 40% match of the total cost or portion of the Project for which Nonpoint Source Program grants funds are used. The match requirement for this Agreement is \$ [REDACTED]. Additional match is welcome. Matching funds must come from local, county, or state sources. **Funds from a Federal source are not eligible as match.** Current match expenditures must be reported with all invoices using Nonpoint Source Grant Agreement Expenditures/Match Report form (Exhibit B).
- Performance Reporting** The Recipient must submit Annual Performance Reports no later than **June 30th** of each year during the term of the Agreement as described in Exhibit A – Reporting. The Recipient must submit a Final Performance Report at Project completion and no later than the expiration date of this Agreement as described in Exhibit A – Reporting.

- 11. Project Identification** Reports, documents, and signage developed as part of Projects funded by this Agreement will contain the following statement: *"This Project has been funded wholly or in part by the United States Environmental Protection Agency under a federal grant issued under Section 319(h) of the Clean Water Act. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use."*
- 12. General Administrative Requirements**
- (a) The Recipient, pursuant to this Agreement assumes sole liability for Recipient's breach of the conditions of the grant, and shall, upon Recipient's breach of grant conditions that requires the State of Oregon to return funds to the EPA, hold harmless and indemnify the state for an amount equal to the funds which the State of Oregon is required to pay to EPA.
 - (b) Any Grant funds disbursed to Recipient under this Grant Agreement and expended in violation or contravention of any provisions of this Agreement must be returned to the DEQ. The Recipient will return all funds found by DEQ to have been expended in violation of this Agreement no later than 15 days after DEQ's written demand.
 - (c) All equipment and materials purchased with funds made available by this Agreement must be used only for purposes of the same general nature outlined in this Agreement. The Recipient will immediately notify DEQ of any equipment purchased with funds made available under this Agreement that is removed from services. Disposal of such equipment must be in accordance with 40 CFR 31.32.
 - (d) The Recipient, if a State agency or agency of a political subdivision of the State, agrees to comply with the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6962). Regulations under RCRA Section 6002 apply to acquisitions of certain products where the purchase price of such products exceeds \$10,000 or where the quantity of such items acquired in the course of the preceding fiscal year was \$10,000 or more. RCRA Section 6002 requires that preference be given in procurement programs to the purchase of specific products containing recycled materials identified in guidelines developed by the EPA. These guidelines are listed in 40 CFR 247.
 - (e) The cost principles of 2 CFR Part 220 (Educational Institutions), 2 CFR Part 225 (State, Local or Indian Tribal Government), or to 2 CFR Part 230 (Non-Profit Organizations), are applicable, as appropriate to this award.
 - (f) **The Recipient must submit a final request for payment, including all required documentation no later than **forty-five (45) days** after the end date of this Agreement.**
 - (g) The Recipient agrees to ensure that all conference, meeting, convention, or training space funded in whole or in part by this Agreement comply with the protection and control guidelines of the Hotel and Motel Fire Safety Act (PI 101-391 as amended).
 - (h) The Recipient agrees to comply with the audit requirements prescribed in the Single Audit Act Amendments and revised OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations".
 - (i) The Recipient agrees to comply with the requirements of 40 CFR Part 30 or 40 CFR Part 31, and 2 CFR Part 215 as applicable.
 - (j) The Recipient will include the following term and condition in each procurement contract funded by this Agreement: *"The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 40 CFR Part 33 in the award and administration of contracts awarded under DEQ Grant Agreements. Failure by the contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies."*
 - (k) Recipient agrees that no portion of the federal grant funds will be used to engage in lobbying of the Federal Government or in litigation against the United States unless authorized under existing law. **The Recipient agrees to provide certification to DEQ on FORM DEQ5700-53 at Project completion. FORM DEQ5700-53 is attached as Exhibit D.** Recipient shall abide by its respective OMB Circular (A-21, A-87, or A-122), which prohibits the use of federal grant funds for litigation against the United States.
 - (l) Pursuant to Section 18 of the Lobbying Disclosure Act, the Recipient affirms that it is not a nonprofit organization described in Section 501(c) (4) of the Internal Revenue Code of 1986; or that it is a nonprofit organization described in Section 501(c) (4) of the Code but does not and will not engage in lobbying activities as defined in Section 3 of the Lobbying Disclosure Act.
 - (m) The Recipient agrees to comply with Title 40 CFR Part 34, *New Restrictions on Lobbying*. If Grant Agreement exceeds \$100,000, Recipient agrees to comply with Title 40 CFR Part 34, *New Restrictions on Lobbying* and to submit certification and disclosure forms accordingly. Any Recipient who makes a prohibited expenditure under Title 40 CFR Part 34 or fails to file the required certification or lobbying forms shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure. All contracts awarded by the Recipient shall contain, when applicable, the anti-lobbying provision as stipulated in the Appendix of 40 CFR Part 30.
- 13. Management Fees** Management fees or similar charges in excess of the direct costs and approved indirect rates are not allowable. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses, unforeseen liabilities, or for other similar costs which are not allowable under this Grant Agreement. Management fees or similar charges may not be used to improve or expand the Project funded under this Agreement, except to the extent authorized as a direct cost of carrying out the scope of work.
- 14. Intangible Property** The recipient may copyright any work that is subject to copyright and was developed, or for which ownership was purchased, under this Grant Agreement. For any such work, Recipient grants to DEQ and EPA a nonexclusive, irrevocable, perpetual royalty-free, license to reproduce, publish, or otherwise use the work and to authorize others to do so.

- 15. Consultant Payments** The Recipient will limit payments of federal funds for salaries (excluding overhead) paid to individual consultants retained by Recipients or Recipient's contractors to the maximum daily rate a Level IV of the U.S. Government's Executive Schedule. (As of January 1, 2009 the limit is \$587.20 per day and \$73.40 per hour.) This limit applies to consultation services of individuals with specialized skills who are paid at a daily or hourly rate. This limitation does not apply to contracts with firms for services which are awarded using the procurement requirements in 40 CFR unless the terms of the contract provide the Recipient with responsibility for the selection, direction and control of the individuals who will be providing services under the contract at an hourly or daily rate of compensation.
- 16. Suspension and Debarment** Recipient shall fully comply with Subpart C of 2 CFR Part 180 and 2 CFR Part 1532, entitled "Responsibilities of Participants Regarding Transactions". Recipient is responsible for ensuring that any lower tier covered transaction, as described in Subpart B of 2 CFR Part 180 and 2 CFR Part 1532, entitled "Covered Transactions", includes a term or condition requiring compliance with Subpart C. Recipient is responsible for further requiring the inclusion of a similar term or condition in any subsequent lower tier covered transactions. Recipient may access the Excluded Parties List System at <http://www.epls.gov>.
- 17. Trafficking Victim Protection Act of 2000** Prohibition statement for Recipients who are **private entities**: You as the Recipient, your employees, sub-recipients and sub-recipients' employees may not engage in severe forms of trafficking in persons during the period that this Agreement is in effect; procure a commercial sex act during the period of time that this Agreement is in effect; or use forced labor in the performance of the Grant or sub-grants.
- 18. Quality Assurance (QA) Requirements** For those projects identified by the DEQ Grant Administrator as involving environmentally related measurements or data generation, the Recipient will develop and submit the appropriate quality assurance / quality control documentation. Required documentation may include one or more of the following: an organization specific Quality Management Plan (QMP), a Project specific Quality Assurance Project Plan (QAPP), a Sampling and Analysis Plan (SAP), Standard Operating Procedures (SOPs), or other Quality-related documentation. Which of the quality-related documents will be required is determined by the DEQ Grant Administrator and the DEQ Quality Assurance Officer. No work involving direct measurements or data generation, environmental modeling, compilation of data from literature or electronic media, and data supporting the design, construction, and operation of environmental technology shall be initiated under this Project until the DEQ Grant Administrator and DEQ Quality Assurance Officer have approved the quality assurance document.
- For information on the policies, objectives, principles, authorities, and responsibilities for implementation of the DEQ Quality Management System (QMS) described in DEQ's Quality Management Plan (QMP), contact a Quality Assurance Officer at the DEQ Laboratory and Environmental Assessment Division (LEAD) at (503) 693-5700.
- 19. Drug Free Workplace** The Recipient must make an ongoing, good faith effort to maintain a drug-free workplace pursuant to the specific requirements set forth in Title 40 CFR 36.200-36.230.
- 20. Small and Disadvantaged Business Utilization Requirements** The Recipient agrees to comply with the requirements of the EPA Program for Utilization of Small, Minority and Women's Business Enterprises in procurement under assistance agreements:
- (a) The Recipient accepts the applicable FY2010 Minority Business Enterprise (MBE)/ Women's' Business Enterprise (WBE) "fair share" goals/objectives negotiated with EPA by the DEQ as follows:

Supplies:	.31% MBE	.63% WBE
Services:	1.69% MBE	4.48% WBE
Equipment:	1.71% MBE	2.56% WBE
 - (b) The Recipient agrees to make the good faith efforts described in 40 CFR 33.301 whenever procuring construction, equipment, services and supplies under this Grant Agreement and to retain records documenting compliance with the six good faith efforts.
 - (c) The Recipient agrees to comply with the contract administration provisions of 40 CFR, Section 33.302.
 - (d) The Recipient agrees to ensure, to the fullest extent possible, that at least the applicable "fair share" objectives of Federal funds for prime contracts or subcontracts for supplies, construction, equipment or services are made available to organizations owned or controlled by socially and economically disadvantaged individuals, women and Historically Black Colleges and Universities.
 - (e) The Recipient agrees to include in its bid documents the applicable "fair share" objectives and require all of its prime contractors to include in their bid documents for subcontracts the negotiated "fair share" percentages.
 - (f) **The Recipient agrees to submit FORM DEQ5700-52A "MBE/WBE Utilization- Federal Grant no later than September 30th of each year within the Agreement term. FORM DEQ5700-52A is attached as Exhibit C.**
 - (g) If race and/or gender neutral efforts prove inadequate to achieve a "fair share" objective, the Recipient agrees to notify the DEQ in advance of any race and/or gender conscious action it plans to take to more closely achieve the "fair share" objective.

- 21. Small Business in Rural Areas (SBRA)** If a contract is awarded under this Agreement, the Recipient is also required to utilize the affirmative steps listed below.
- (a) Place SBRAs on solicitation lists.
 - (b) Make sure that SBRAs are solicited whenever there are potential sources.
 - (c) Divide total requirements, when economically feasible, into small tasks or quantities to permit participation by SBRAs.
 - (d) Establish delivery schedules, where the requirements of work permit, that would encourage SBRA participation.
 - (e) Use the services of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce, as appropriate.
 - (f) Require the contractor to comply with the affirmative steps outlined above.
- 22. Captions** The captions or headings in this Agreement are for convenience only and in no way define, limit or describe the scope or intent of any provisions of this Agreement.
- 23. Access to Records** The Recipient will maintain all financial records relating to this Agreement in accordance with generally accepted accounting principles. In addition, the Recipient will maintain any other records pertinent to this Agreement in such a manner as to clearly document Recipient's performance. DEQ, the Oregon Secretary of State's Office and the federal government and their duly authorized representatives will have access to such financial records and other books, documents, papers, plans, records of shipments and payments and writings of Recipient that are pertinent to this Agreement, whether in paper, electronic or other form, to perform examinations and audits and make excerpts and transcripts. Recipient will retain and keep accessible all such financial records, books, documents, papers, plans, records of shipments and payments and writings for a minimum of six (6) years, or such longer period as may be required by applicable law, following final payment and termination of this Agreement, or until the conclusion of any audit, controversy or litigation arising out of or related to this Agreement, whichever date is later.
- 24. Compliance with Applicable Law** Recipient will comply with all federal, state and local laws, regulations, executive orders and ordinances applicable to the work performed under this Agreement. Without limiting the generality of the foregoing, Recipient expressly agrees to comply with the following laws, regulations and executive orders to the extent they are applicable to the Agreement: (i) Titles VI and VII of the Civil Rights Act of 1964, as amended; (ii) Sections 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Americans with Disabilities Act of 1990, as amended; (iv) Executive Order 11246, as amended; (v) the Health Insurance Portability and Accountability Act of 1996; (vi) the Age Discrimination in Employment Act of 1967, as amended, and the Age Discrimination Act of 1975, as amended; (vii) the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended; (viii) ORS Chapter 659, as amended; (ix) all regulations and administrative rules established pursuant to the foregoing laws; and (x) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations; and (xi) ORS 279A, ORS 279B, ORS 279C and 40 CFR Part 30 or 40 CFR Part 31 or 2 CFR Part 215 as applicable to Recipient. These laws, regulations and executive orders are incorporated by reference herein to the extent that they are applicable to the Agreement and required by law to be so incorporated.
- 25. Recycled Products** The Recipient agrees to use recycled paper and double sided printing for all reports what are prepared as a part of this Agreement. The Recipient will, to the maximum extent economically feasible in the performance of this Agreement (as defined in ORS 279A.010 (1)(ee)), recycled PETE products (as defined in ORS 279A.010(1)(ff)), and other recycled products (as "recycled product" is defined in ORS 279A.010(1)(gg)). The Recipient agrees to comply with the requirements of 40 CFR 30.16, as applicable, in giving preference in its procurement programs to the purchase of recycled products.
- 26. Contribution** If any third party makes any claim or brings any action, suit or proceeding alleging a tort as now or hereafter defined in ORS 30.260 ("Third Party Claim") against a party (the "Notified Party") with respect to which the other party ("Other Party") may have liability, the Notified Party must promptly notify the Other Party in writing of the Third Party Claim and deliver to the Other Party a copy of the claim, process, and all legal pleadings with respect to the Third Party Claim. Either party is entitled to participate in the defense of a Third Party Claim, and to defend a Third Party Claim with counsel of its own choosing. Receipt by the Other Party of the notice and copies required in this paragraph and meaningful opportunity for the Other Party to participate in the investigation, defense and settlement of the Third Party Claim with counsel of its own choosing are conditions precedent to the Other Party's liability with respect to the Third Party Claim.

With respect to a Third Party Claim for which the State is jointly liable with the Recipient or would be if joined in the Third Party Claim), the State shall contribute to the amount of expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by the Recipient in such proportion as is appropriate to reflect the relative fault of the State on the one hand and of the Recipient on the other hand in connection with the events which resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of the State on the one hand and of the Recipient on the other hand shall be determined by reference to, among other things, the parties' relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. The State's contribution amount in any instance is capped to the same extent it would have been capped under Oregon law if the State had sole liability in the proceeding.

With respect to a Third Party Claim for which the Recipient is jointly liable with the State (or would be if joined in the Third Party Claim), the Recipient shall contribute to the amount of expenses (including attorneys' fees), judgments, fines and amounts paid in

settlement actually and reasonably incurred and paid or payable by the State in such proportion as is appropriate to reflect the relative fault of the Recipient on the one hand and of the State on the other hand in connection with the events which resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of the Recipient on the one hand and of the State on the other hand shall be determined by reference to, among other things, the parties' relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. The Recipient's contribution amount in any instance is capped to the same extent it would have been capped under Oregon law if it had sole liability in the proceeding.

- 27. Indemnification by Subcontractors** The Recipient is shall take all reasonable steps to cause its contractor(s) that are not units of local government as defined in ORS 190.003, if any, to indemnify, defend, save and hold harmless the State of Oregon and its officers, employees and agents ("Indemnatee") from and against any and all claims, actions, liabilities, damages, losses, or expenses (including attorneys' fees) arising from a tort (as now or hereafter defined in ORS 30.260) caused, or alleged to be caused, in whole or in part, by the negligent or willful acts or omissions of the Recipient's contractor or any of the officers, agents, employees or subcontractors of the contractor("Claims"). It is the specific intention of the parties that the Indemnatee shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of the Indemnatee, be indemnified by the contractor from and against any and all Claims.
- 28. Governing Law** The laws of the State of Oregon (without giving effect to its conflicts of law principles) govern all matters arising out of or relating to this Agreement, including, without limitation, its validity, interpretation, construction, performance, and enforcement. Any party bringing a legal action or proceeding against any other party arising out of or relating to this Agreement shall bring the legal action or proceeding in the Circuit Court of the State of Oregon for Marion County. Each party hereby consents to the exclusive jurisdiction of such court, waives any objection to venue, and waives any claim that such forum is an inconvenient forum.
- 29. Merger Clause** THIS AGREEMENT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES. NO WAIVER, CONSENT, MODIFICATION OR CHANGE OF TERMS OF THIS AGREEMENT WILL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, WILL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS AGREEMENT. THE RECIPIENT, BY THE SIGNATURE BELOW OF ITS AUTHORIZED REPRESENTATIVE, HEREBY ACKNOWLEDGES THAT IT HAS READ THIS AGREEMENT, UNDERSTANDS IT AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.
- 30. THE PERSONS SIGNING THIS AGREEMENT REPRESENT AND WARRANT THAT THEY HAVE THE POWER AND AUTHORITY TO ENTER INTO THIS AGREEMENT.**

Note: DOJ approval will be required for any Grant Agreement that will (ever) exceed \$150,000. Please delete this note .. and the approval line if not required.

Approved for legal sufficiency by State of Oregon Assistant Attorney General _____ by email dated _____

APPROVED BY THE RECIPIENT:

<add printed name/title> _____ Date

Note: Add the name/title of signer under signature line (above) before printing for signatures **OR require that name and title of signer be printed @ time of signing (in space below). Also, add additional lines as needed for Recipient signature requirements. Please delete this note.**

Printed Name/ Title: _____

APPROVED BY THE DEQ:

Gregory K. Aldrich, WQ Interim Division Administrator _____ Date

PCA - Index – Project Jim Roys, Financial Services Manager _____ Date

Oregon Dept. of Environmental Quality Nonpoint Source Implementation Grant Agreement

EXHIBIT A
Project Requirements

Project name:	DEQ Agreement #
Recipient:	

BACKGROUND *Include a general description of Project, Project goals/objectives, Project partners, including the source of matching funds.*

PROJECT *Include list of tasks to be accomplished and Project implementation schedule*

1.

BUDGET *Include a project budget that includes both federal and match expenses. In most cases the budget categories will match those in the Expenditure/Match form. It is possible to allow shifts (without amendment) between budget categories with DEQ Grant Administrator approval but only if the budget section specifically allows.*

REPORTING

1. The Recipient must submit an Annual Performance Report no later than [REDACTED]. *Describe any requirement for project specific information to be included in the reports.*
2. The Recipient must submit an Annual Performance Report no later than [REDACTED]. *Each Annual Performance Report required should be listed.*
3. The Recipient must submit a Final Performance Report no later than [REDACTED].

All reports must be submitted in a format similar to Exhibit E (Annual/Final Performance Report) to the DEQ Grant Administrator. The reports may be provided electronically. Reports must contain a discussion on each of the following:

- A comparison of actual accomplishments to the outputs / outcomes established in the Project description above for the period. The Final Performance Report should address should cover the entire project period.
- The reasons for slippages if established outputs/outcomes were not met;
- Other pertinent information on the progress of the Project.

In addition to the Annual Performance Reports, the Recipient must notify the DEQ Grant Administrator of developments that have a significant impact on the Grant support activities. The Recipient must inform the DEQ Grant Administrator as soon as problems, delays or adverse conditions become known which will materially impair the ability to meet the outputs/outcomes specified above. This notification shall include a statement of the action taken or contemplated and any assistance needed to resolve the situation.

INVOICING

1. Recipient may submit multiple requests for cost reimbursement but reimbursement requests must be submitted no less frequently than quarterly. The invoices must describe all work performed with particularity, including by whom it was performed, and must itemize and explain all expenses for which reimbursement is claimed. Invoices must be submitted with the Nonpoint Source Grant Agreement Expenditures/Match Report (Exhibit B).
2. **Invoices for reimbursement of expenses occurring in a State fiscal year (July 1 - June 30) must be received no later than the following July 15th.**
3. Payments will be based on reimbursement of actual costs authorized by this Agreement. Supporting documentation must be provided for expenses for which reimbursement is claimed and for all match expenses reported. Documentation required includes personal service cost detail, services and supplies cost detail, copies of paid contract and equipment invoices and receipts for lodging, airfare, car rental and conference registration. Supporting documentation for volunteer activities or donated materials, including the basis for valuation, must also be provided.
4. Invoices must be sent to **Department of Environmental Quality, Attn: [REDACTED]**. *Note: add name/address of DEQ Grant Administrator and please delete this note.* Invoices are subject to the review and approval of the DEQ Grant Administrator. Payment is contingent on compliance with all terms and conditions of this Agreement, including reporting requirements. **Invoice payments will be sent to [REDACTED].**
5. **The DEQ will withhold a minimum of 10% of total grant funds for the Project until the Recipient has submitted, and the DEQ has accepted, a Final Performance Report detailing the Project status as described in the Reporting section**

above, a final Expenditures/Match Report (Exhibit B), final MBE/WBE Utilization Report (Exhibit C) and a Lobbying and Litigation Certificate (Exhibit D).

TRAVEL AND OTHER EXPENSES

(OPTION 1) Travel and other expenses of the Recipient will not be reimbursed by DEQ.

(OPTION 2) All travel must be conducted in the most efficient and cost-effective manner resulting in the best value to the State. The travel must comply with all the requirements set forth in this section and must be for official State business authorized by this Agreement. Personal expenses will not be authorized at any time. **All travel expenses are included in the total maximum Agreement amount.**

Recipient understands and agrees that travel expenses will be reimbursed at rates not to exceed those rates approved by the Department of Administrative Services (DAS) for State government employees at the time the expense was incurred. Recipient understands and agrees that the rates are subject to change and any changed rates will immediately become part of this Agreement and govern reimbursement of any travel expenses incurred after the date of the change.

1. **Mileage.** Mileage for travel in a private automobile while Recipient is acting within the course and scope of his/her duties under this Agreement and driving over the most direct and usually traveled route will be reimbursed at the rate approved by the DAS and in effect at the time of travel. To qualify for mileage reimbursement, Recipient must hold a valid, current driver's license for the class of vehicle to be driven and carry personal automobile liability insurance in amounts not less than those required by Oregon laws.
2. **Meals & Lodging.** Per Diem rates for meals vary between cities. Recipient understands and agrees that expenses for meals will be reimbursed at rates not to exceed the US General Services Administration (GSA) per diem rates. DEQ will reimburse Recipient for Recipient's actual cost of lodging up to the specified federal per diem lodging rates for the locality. Receipts are required for reimbursement of lodging expenses. US General Services Administration approved rates can be found at www.gsa.gov.
3. **Other Travel Expenses.** Out-of-state travel expenses, airfare and rental car expenses will be reimbursed only if specifically authorized by this Agreement or by written authorization from the DEQ Grant Administrator and only if the Recipient is acting within the course and scope of his/her responsibilities under this Agreement. All Recipient representatives will be limited to economy or compact size rental vehicles unless Recipient personally pays the difference. In no case will the state reimburse a Recipient for air travel at a rate greater than coach fare.

EXHIBIT B
Oregon Dept. of Environmental Quality Nonpoint Source Implementation Grant Agreement
Expenditures/Match Report

Project Name:	Agreement Period
DEQ Agreement Number:	From: To:
Recipient Name:	Current Expenditure Period
Recipient Address:	From: To:
	Total Match Requirement:
	\$
Phone/Fax:	Total Grant Amount:
	\$

EXPENDITURE SUMMARY	NPS Grant Expenditures			Non-Federal Match Expenditures *			Total Expenditures
	a	b	a + b = c	D	e	d + e = f	c + f
	Previously Reported	Current Period	Cumulative to Date	Previously Reported	Current Period	Cumulative To Date	To Date
Personal Services							
Equipment							
Services/Supplies							
Travel							
Subcontracts							
Indirect							
Total							

DEQ, the Oregon Secretary of State's Office and the federal government retain the right to inspect all financial records and other books, documents, papers, plans, records of shipments and payments and writings of Recipient that are pertinent to this Agreement.

CERTIFICATION I certify that this report is true and correct to the best of my knowledge and that all expenditures reported have been made in accordance with the budget and other provisions contained in the Agreement.		
_____ Signature	_____ Title	_____ Date

*Other federal funds are not eligible for use as match.

STATE OF OREGON – DEPARTMENT OF ENVIRONMENTAL QUALITY
MBE/WBE UTILIZATION – FEDERAL GRANTS
ANNUAL REPORT

1A. FEDERAL FISCAL YEAR 200____ (Federal Fiscal Year Oct. 1 – Sept. 30)		1B. REPORTING PERIOD: Start: _____ End: _____ <input type="checkbox"/> Check if this is the last report for the Project (Project completed).	
1C. REVISION: Year: ____ Quarter: ____		BRIEFLY DESCRIBE THE REVISIONS YOU ARE MAKING:	
2A. FEDERAL FINANCIAL ASSISTANCE AGENCY US Environmental Protection Agency		3A. REPORTING RECIPIENT (Name and Address)	
2B. DEQ REPORTING CONTACT	2C. PHONE	3B. REPORTING CONTACT	3C. PHONE
4A. FEDERAL GRANT # _____ PCA- _____ PROJECT - AGREEMENT _____ _____		4B. FEDERAL FINANCIAL ASSISTANCE PROGRAM (CFDA) _____ 66.460	
5A. GRANT AMOUNT Federal Funds : _____ Match Funds : _____ TOTAL : _____		5B. <input type="checkbox"/> Check if NO procurement and NO accomplishments were made this reporting period. Procurements are all expenditures through contract, order, purchase, lease or barter of supplies, equipment, construction, or services needed to complete work authorized by the Agreement. Accomplishments, in this context, are procurements made with MBEs and/or WBEs.	

	<u>Construction</u>	<u>Equipment</u>	<u>Services</u>	<u>Supplies</u>	<u>Total</u>
\$MBE:	_____	_____	_____	_____	_____
\$WBE:	_____	_____	_____	_____	_____

7. NAME OF AUTHORIZED REPRESENTATIVE	TITLE
8. SIGNATURE OF AUTHORIZED REPRESENTATIVE	DATE

9

EXHIBIT C (Part 2)
STATE OF OREGON – DEPARTMENT OF ENVIRONMENTAL QUALITY
MBE/WBE PROCUREMENTS MADE DURING REPORTING PERIOD

PART 2

Procurement Made (check one)		Business Enterprise (check one)		\$ Value of Procurement	Date of Procurement	Type of Product or Service (Enter Code)	Name/Address of MBE/WBE Contractor or Vendor
Recipient	Other	Minority	Women				

Product / Service Codes

1	Construction
2	Supplies
3	Services
4	Equipment

EXHIBIT D
STATE OF OREGON – DEPARTMENT OF ENVIRONMENTAL QUALITY
LOBBYING AND LITIGATION CERTIFICATE
(DEQ5700-53)

DEQ Grant Agreement #:

Federal Grant: Nonpoint Source Implementation Grant

Recipient Name:

Recipient Address:

Project Name:

I hereby certify that none of these funds have been used to engage in the lobbying of the Federal Government or in litigation against the United States unless authorized under existing law.

Authorized Signer:

Signature

Date

Printed Name / Title:

At Project completion, complete this form and submit to:

DEQ Accounting Office
811 SW Sixth Avenue
Portland OR 97204

EXHIBIT E
STATE OF OREGON – DEPARTMENT OF ENVIRONMENTAL QUALITY

Nonpoint Source Implementation Grant Agreement	
ANNUAL / FINAL PERFORMANCE REPORT	
Project name: 	DEQ Agreement #
Recipient:	

Please include a discussion that includes an overall summary of the Project and the partners involved. Include the following elements:

1. What were the goals for this Project? Were those goals met? If goals were not met, explain why not. Please enumerate specific quantifiable environmental changes and results that are a result of the Project. **THIS IS THE MOST IMPORTANT PORTION OF THE FINAL REPORT AND NEEDS TO BE CLEAR AND EMPHASIZED.** Include:
 - a. Behavioral results such as the amount of BMPs installed;
 - b. Estimates of the amount of pollutants prevented from reaching surface or ground water; and
 - c. Documented changes in water quality based on monitoring.

2. Provide a written description of what worked and what did not work. Provide a written description of lessons learned in carrying out the Project.

3. Describe how the Project's funding worked out. Include the projected cost and actual cost of the Project, how much of the grant funds were spent, and how much funding (cash and in-kind) was provided as match from other sources.

4. What follow up is required? Include photos, graphics and 2 copies of all products produced in the effort.