



State of Oregon
Department of
Environmental
Quality

Oregon Nonpoint Source Pollution Program 2012 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 2012. 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 2012 Annual Report**. This included providing assistance in the development of the 2012 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 2012 funded projects.

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 2012.
- 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 2012 Project Implementation Activities, which Included the Following Programs/Projects:
 - Total Maximum Daily Loads
 - New Water Quality Standards
 - Watershed Plan Development
 - NPS Projects Funding by Basin/Subbasin
 - 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 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 2012 319 Funding, and progress of 2012 – 319-Grant Funded Projects and Categories.
- Calculated Nitrogen, Phosphorus, and Sedimentation-Siltation Pollutant Load Reduction Estimates of 2012 Funded Projects.
- Description of DEQ's Watershed-Based Plans.
- Success Stories/Environmental Improvement (WQ-10) and (SP-12) Projects and Other.

Major Accomplishments

Of the many nonpoint source activities accomplished every year by DEQ, the following is the list of the major accomplishments:

- Oregon's total 2012 319-Grant allocation of \$2,172,000 was distributed as follows: \$905,000 or approximately 41.7% was directed to the twenty-six (26) 319 projects grant and the remainder, \$1,267,000 or approximately 58.3 %, was directed to the PPA grant to fund 9.45 DEQ staff positions for the NPS program.
- The \$905,000 total funds for 319 funded projects in 2012 was divided in four areas of emphasis, as follows: BMP Implementation (22.4%), TMDL Implementation (57.2%), Pesticide Stewardship Program (11.1%), and Information and

Education (9.3%). Note that “BMP Implementation” did not include implementation of BMPs identified in a TMDL Implementation Plan and “TMDL Implementation” primarily focused on effectiveness monitoring.

- DEQ completed pollutant load reductions estimates for three (3) 319 funded projects initiated in 2012 as follows: 6,095 Pounds/Year Nitrogen Reduction, 2,136 Pounds/Year Phosphorous Reduction, and 1,297 Tons/Year Sedimentation-Siltation Reduction.
- In 2012, DEQ made three Clean Water State Revolving Fund (CWSRF) loans totaling more than \$15 million to three (3) nonpoint source projects to irrigation districts serving central Oregon and a loan to finance small projects that improve the water quality of the Clackamas River watershed.
- One success story was written for the Willamette River in its receipt of international recognition for the water quality improvements accomplished by multi-agency and other stakeholders effort. No SP-12 or WQ-10 Project success story were written for 2012..

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 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 2012. 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 2012 were:

- Oregon's total 2012 319-Grant allocation of \$2,172,000 was distributed as follows: \$905,000 or approximately 41.7% was directed to the twenty-six (26) 319 projects grant and the remainder, \$1,267,000 or approximately 58.3 %, was directed to the PPA grant to fund 9.45 DEQ staff positions for the NPS program.
- The \$905,000 total funds for 2012 was divided in four areas of emphasis, as follows: BMP Implementation (22.4%), TMDL Implementation (57.2%), Pesticide Stewardship Program (11.1%), and Information and Education (9.3%). Note that “BMP Implementation” did not include implementation of BMPs identified in a TMDL Implementation Plan and “TMDL Implementation” primarily focused on effectiveness monitoring.
- For three (3) 319 funded projects, the total **2012** load reduction estimates by pollutant are as follows: **6,095 Pounds/Year Nitrogen Reduction, 2,136 Pounds/Year Phosphorous Reduction, and 1,297 Tons/Year Sedimentation-Siltation Reduction.** Load reduction estimates were included in the EPA database GRTS (Grants Reporting and Tracking System).

- 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) Program provided loans of \$15,350,000 towards (3) three 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:

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

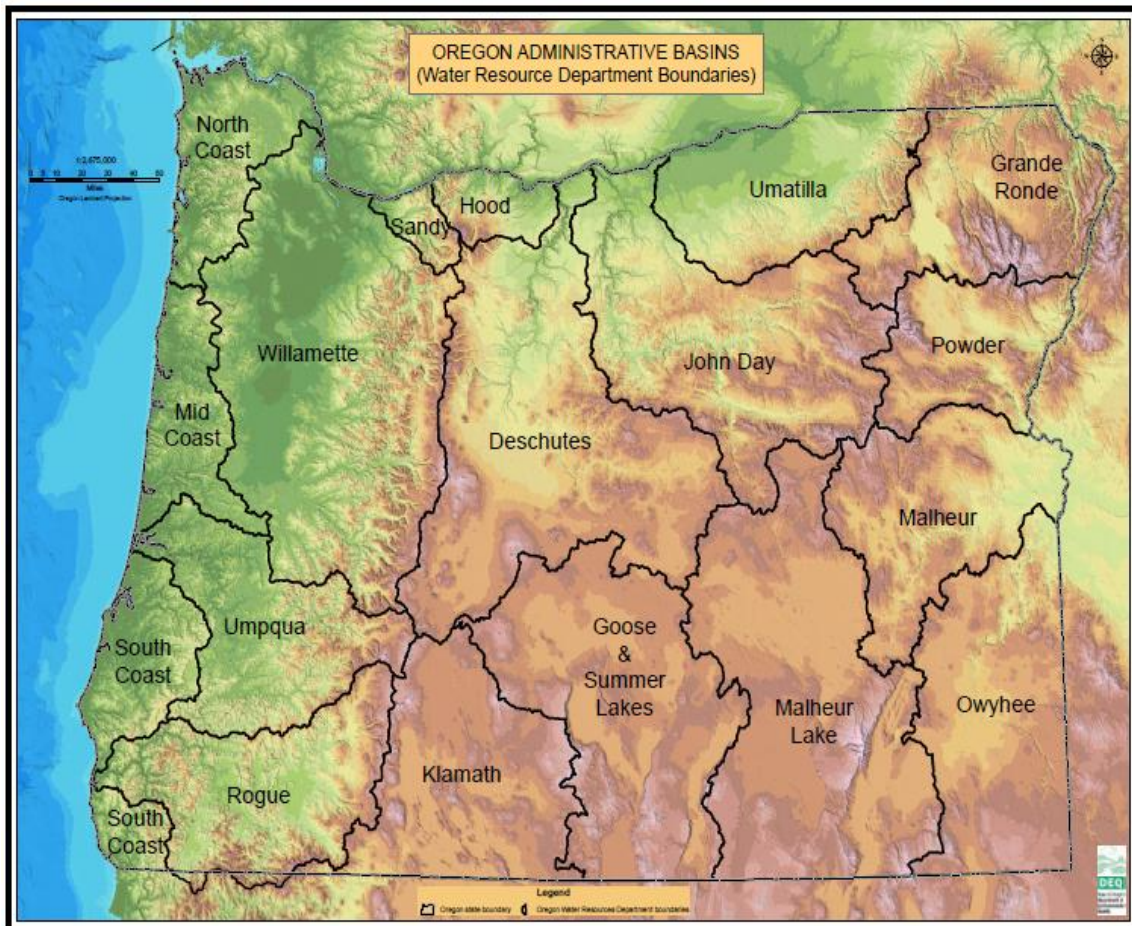
- U.S. Forest Service (USFS) <http://www.fs.fed.us/r6/water/>
- U.S. Bureau of Land Management (BLM) <http://www.blm.gov/or/st/en.html>
- U.S. Fish and Wildlife Service (USFWS) <http://www.fws.gov/oregonfwo/>
- US Army Corps of Engineers (USACE) <http://www.nwd.usace.army.mil/home.asp>

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 National Pollutant Discharge Elimination System (NPDES) permitting, assessment, and TMDL work has been aligned and prioritized according to these sub-basins. There are Ground Water Management Area (GWMA) and basin coordinators assigned to each GWMA and basin/subbasin. They take the lead role as GWMAs and TMDLs are developed and implemented. The types and extent of water quality impairments, as well as available resources and impediments vary geographically. It is therefore critical to consider GWMA/basin specific conditions and develop local priorities and solution for local problems to achieve water quality improvements.

Section 319 of the federal Clean Water Act requires states to have nonpoint source (NPS) management programs based on assessments of the amounts and origins of NPS pollution in the state. The Coastal Zone Act Reauthorization Amendments (CZARA) required development of additional management measures for NPS within the coastal zone. Nonpoint source pollution comes from numerous diffuse sources such as runoff from roads, forestry operations, on-site disposal, farms and construction sites. This type of pollution is understood to be the largest source of water quality impairment in Oregon, as well as the rest of the United States.

Federal grants cover the majority of cost for Oregon's NPS program, which protects and restores both surface water and ground water. During the 2012-2014 biennium, DEQ expects to provide close to \$2 million to local organizations for nonpoint source projects such as public education and watershed restoration. Oregon's total 2012 319-Grant allocation of \$2,172,000 was distributed as follows: \$905,000 or approximately 41.7% was directed to the twenty-six (26) 319 projects grant and the remainder, \$1,267,000 or approximately 58.3 %, was directed to the PPA grant to fund 9.45 DEQ staff positions for the NPS program.

In 2012, DEQ made three Clean Water State Revolving Fund (CWSRF) loans totaling more than \$15 million to three (3) nonpoint source projects. Two of those loans went to irrigation districts serving central Oregon. This includes the Farmer's Irrigation District, located in the Hood River watershed which received a \$15 million loan to install large-diameter pipes to replace open conveyance canals to reduce water loss due to ground seepage and evaporation. The second loan went to the Three Sister's Irrigation District in the Upper Deschutes watershed which received a \$100,000 increase to a existing loan to replace open canals with large diameter pipe. In addition to funding irrigation districts, DEQ also provided a \$250,000 loan to Clackamas County Soil and Water Conservation District in Oregon City. The District will use the funds to establish a local loan program to finance small projects that improve the water quality of the Clackamas River watershed.

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 2012

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 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.

DEQ's current Water Quality Program priorities include the following:

1. Working with state, local and national partners on water quality, water quantity and ecosystem protection. DEQ is committed to developing and leveraging partnerships with other agencies and organizations to achieve desired environmental outcomes in the most cost-effective manner. Examples of this include many of the Nonpoint Source Success Stories that resulted from the coordinated efforts of various agencies, communities, watershed councils and landowners. Water quality trading is another example, such as the City of Medford's wastewater permit, that relies upon the coordinated efforts of The Freshwater Trust and the Willamette Partnership to ensure compliance with permit requirements and costs half as much as a traditional, engineered approach.

These types of partnerships are developing several new or expanded initiatives such as the following: Development of the Implementation Ready Mid-Coast TMDLs requires a significantly higher level of stakeholder engagement to develop enforceable implementation plans that will be incorporated into the TMDLs. Conducting a regional monitoring summit to coordinate and capture data collected by external groups in order to cost-effectively fulfill the data needs of multiple parties. Developing and using Watershed Approach Basin Reports as a platform to engage local stakeholders, such as communities, watershed councils and conservation districts, to find smart solutions to local water quality issues.

2. Working with local communities to protect Oregon's watersheds and provide innovative and efficient wastewater infrastructure. Many small communities throughout Oregon have outdated or failing wastewater collection and treatment system and/or residences with failing onsite systems. In many cases, the cost of repairs and upgrades are well above what the community or homeowner can afford. If not addressed, these failing systems can present human health risks and pollute

surface water and groundwater. The Clean Water State Revolving Fund (CWSRF) loan program hired two regional engineers in 2010 who work directly with small communities to ascertain sustainable wastewater infrastructure needs and incorporate feasible approaches, and to identify available financial options available through financing agencies. The CWSRF program is also in the process of a comprehensive rule review that is acknowledging the need to assist small communities, and is incorporating the principle of integrating traditional “gray” infrastructure with “green” or natural infrastructure projects.

3. DEQ plans to work with our stakeholders to promote development of integrated plans based upon EPA’s integrated planning framework. Guided by DEQ’s basin assessments and local community needs and priorities, implementation will allow communities to address Clean Water and Safe Drinking Water Act program requirements that yield highest environmental and public health benefits with a commitment to meet all regulatory obligations.
4. Supporting and encouraging implementation of clean water action plans (TMDL implementation). In addition to the development of Implementation Ready TMDLs, DEQ is stepping up its efforts in other ways to ensure TMDL implementation measures result in effective implementation of TMDL implementation plans such as:
 - A TMDL Implementation Plan development guidance document for urban and rural residential areas within the Coastal Nonpoint Management Area boundary that will address TMDL responsibilities and new development urban management measures as required by the Coastal Zone Management Act.
 - Working with Oregon Department of Agriculture to develop a comprehensive monitoring and evaluation strategy plan for the Agricultural Water Quality Management Program.
 - During the biennial review of Agriculture Water Quality Management Area plans and rules, working with ODA and the Local Advisory Committee to incorporate meaningful metrics and benchmarks for meeting load allocations into the plans.
5. Monitoring Oregon’s water quality to support water quality program needs, identify emerging issues, understand water quality status and trends, and to inform management activities targeted at restoring Oregon’s water quality and beneficial uses. DEQ continues to implement elements of the 2005 Strategy for Monitoring Oregon’s Waters. Monitor summits with DEQ staff and external partners were held to communicate DEQ’s water quality monitoring activities and to gather input on regional and external monitoring priorities to assist with updating the strategy in 2012.
6. 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 / Bacteria Monitoring – Collects data to determine the need for beach advisories.
 - Toxics Monitoring - Toxics Monitoring Project for surface waters in watersheds across Oregon. This project will give information about current and emerging contaminants that threaten aquatic life and human health. DEQ toxics monitoring program continues its risk-based screen for toxic contaminants in Oregon’s rivers, streams and lakes. Locations are targeted to identify contaminants in water but may include contaminants in stream bed sediment and fish tissue.
 - Pesticide Stewardship Partnership - Collaborative approach to monitoring pesticide in agricultural areas. Data identifying current use pesticides found in surface water is shared with growers to help them target management practices that reduce pesticides in water.
 - Long term ambient water quality monitoring of conventional pollutants at fixed stations around the state will continue to identify important trends in water quality. The results are communicated to legislators and land use managers to provide important insights into water quality changes and the factors that are contributing to those changes.
 - Reduced TMDL monitoring continues to provide data targeted at TMDL development and some effectiveness monitoring.
 - Groundwater monitoring continues in groundwater management areas with nitrate concentrations of concern.
 - Beach bacteria monitoring is currently ongoing along the Oregon coast to provide data for beach advisories to protect contact recreation. However, proposed elimination of federal funding may jeopardize DEQ’s ability to continue this work.

- DEQ continues to participate in the data collection for the National Aquatic Resource surveys for the nation's waters. Sites for the rivers and streams survey will be supplemented to generate a statistically valid sample for an Oregon assessment.
- Facilitate volunteer monitoring activities through trainings, monitoring plan development, quality control checks, and data integration.

3.2.1 Prioritization of NPS Activities in 2012

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 2012:

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 2012 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 2012

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). The current PPA is for activities occurring from **July 1, 2012 to June 30, 2014**. 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 **9.45 FTE** positions within DEQ that were involved in the following programs / projects:

- With Oregon's 319-Grant Incremental Funds **26 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)/SSC¹ as related to NPS activities.
- Public education.

¹ In order to meet the demand for DEQ to remove beneficial uses in some sub-basins or set "site specific" standards (SSC) has increased. The Clean Water Act requires that a Use Attainability Analysis (UAA) be completed before a State may remove a designated use. A similar scientific analysis is needed to develop SSCs.

The following **Table 1** is a compilation and summary of elements 2 and 8 sections from the actual July 1, 2012 to June 30, 2014 PPG Work plan.

Table 1. July 1, 2012 to June 30, 2014 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component.

2012-2014 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component		
Number	DEQ Commitment	Outputs
<i>Element 1: Water Quality Standards and Assessments</i>		
1.1	Complete water quality standards revisions for turbidity.	Final recommendations for revised standards for turbidity presented to the Environmental Quality Commission for adoption by 6/2013.
1.2	Technical support for court decision/litigation for temperature standards package. DEQ will provide supporting information as warranted and any other assistance requested by EPA attorneys. Participate in settlement negotiations if warranted.	Implementation of any consent decrees or court orders that require future action by DEQ. Ongoing
1.3	DEQ will provide information as requested by EPA and participate in discussions and negotiations related to ESA consultation and any proposed State conservation measures on DEQ's toxic pollutants criteria for fish and aquatic life. In taking its action, EPA will consider the Biological Opinions.	Letter of approval or disapproval from EPA to DEQ. Any disapproval will include the reasons for the decision and possible remedies or alternatives by 11/30/2012.
1.4	Prepare a description of how Oregon addresses nutrient-related water quality issues in its CWA programs.	DEQ report describing Oregon's approach to addressing nutrients by 7/31/2012.
1.11	Advancing DEQ's watershed approach efforts by synchronizing up the 2014 Integrated Report with the Watershed Approach Basin Reports.	Oregon Integrated Report and Watershed Approach Basin Reports. Ongoing

Table 1. July 1, 2012 to June 30, 2014 Performance Partnership Agreement (Cont.)

2012-2014 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.	<p><u>Issuance of TMDLs for the:</u></p> <ul style="list-style-type: none"> - Deschutes Basin by 6/12 - Coquille Basin by 3/13 - MidCoast Basins by 6/13 <p><u>Issuance of TMDLs for the following by 6/14:</u></p> <ul style="list-style-type: none"> -Powder/Burnt Basins -Chetco Basin -Sixes Basin <p><u>TMDL Revisions for the following:</u></p> <p>Tualatin Subbasin by 9/12</p> <p>Upper Klamath and Lost River Subbasins by 10/12</p>
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 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. Ongoing
2.4	Implement the Willamette Mercury TMDL (Phase I) using DEQ's Agency Toxics Reduction Strategy, Mercury Reduction Strategy and mercury source characterization work to help identify priorities and strategies. Work with stakeholders to identify sources and implement strategies to reduce mercury in the environment. Work with EPA Region 10 to develop and implement Region 10's Mercury Strategy Framework.	Complete characterization of mercury sources in Willamette basin and data required for final modeling. Ongoing

Table 1. July 1, 2012 to June 30, 2014 Performance Partnership Agreement (Cont.)

2012-2014 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component		
Number	DEQ Commitment	Outputs
<i>Element 2: TMDLS (Cont.)</i>		
2.5	Implement TMDLs for Nonpoint Sources in subbasins where TMDLs/WQMPs have been completed. Work with watershed councils, local governments and other DMAs to develop appropriate management practices and plans for controlling pollutants. Work with USDA agencies to leverage Farm Bill resources to implement priority best management practices in critical areas.	Completed Implementation plans that guide management practices, pollutant controls to meet load allocations in TMDLs. Facilitate projects that result in improvements in water quality. Ongoing
2.6	Develop Implementation Ready TMDLs for the Mid-Coast basins.	Completed TMDLs issued as administrative orders that assign load allocations to pollutant sources in the basins by 6/13.
2.7	Implementation of load allocations or require TMDL implementation plans for all sources assigned load allocations.	Implementation plans that meet load allocations or management measures identified in the TMDL/WQMP that meet load allocations by 2013.

Table 1. July 1, 2012 to June 30, 2014 Performance Partnership Agreement (Cont.)

2012-2014 Performance Partnership Agreement NPS and 319-Funded Related Water Quality Component		
Number	DEQ Commitment	Outputs
<i>Element 7: WQ Data Analysis, Management and Monitoring</i>		
7.3	Ambient Monitoring Network -DEQ will continue to monitor approximately 130 ambient water quality station 6 times annually throughout Oregon. These stations provide status and trends data for understanding water quality. These stations provide status and trends data for understanding water quality.	<ul style="list-style-type: none"> - Continue entering data into the database. - The Oregon Water Quality Index (OWQI) will continue to be updated annually. Annual reports will be prepared on water quality trends and indicators. - Data will be used to support the 303(d) assessment process. - Data will be used for the 305(b)/Watershed Assessments. By 1/13 and 1/14
7.4	Collect water quality data to support TMDL development.	TMDL developed on schedule and supported by adequate data. Ongoing
7.5	Conduct 31 site visits in Oregon as part of the National Lakes Assessment.	<ul style="list-style-type: none"> - Provide data for upload to EPA management system. - Use information in the narrative section of the 305(b) report/Watershed Assessments when available. By 10/30/2012
7.6	Collect water quality, biological data and physical habitat data at 30 sites in an Oregon Basin.	Water quality, biological data and physical habitat available for use in a basin assessment by January 2014
7.8	Revise SOP for evaluating reference sites to incorporate new GIS information.	<ul style="list-style-type: none"> - Document outlining process for evaluating reference sites by 4/14
7.9	Conduct analysis of water quality data for Watershed Approach Basin Reports and Ag Area Plan & Rule biennial reviews.	Watershed Approach Basin Reports for three basins per year: South Coast, Clackamas/Sandy, Powder/Burnt Basins by 6/30/2013

Table 1. July 1, 2012 to June 30, 2014 Performance Partnership Agreement (Cont.)

2012-2014 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 during 05/13 and 05/14.
8.2	Prepare an annual report of NPS program accomplishments.	Place on website. The 2010 Annual Report was submitted by DEQ and approved by EPA. The report is on DEQ's website during 03/13 and 03/14.
8.3	Determine with EPA available NPS Success Stories documenting either water quality progress or full restoration under PAM.	NPS Success Stories during 9/12 and 9/13
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 by 2/13, 2/14 load reduction, other GRTS data (National GRTS reporting deadlines).
8.5	Work with EPA to review TMDLs and other basins plans for meeting EPA's 9 Key Element watershed based planning guidance.	Develop strategies 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 by 6/13.
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 by 06/30/13.
8.8	Prepare an update to the 2000 Oregon NPS Management Plan.	Complete an updated Oregon NPS Management Plan; (Draft) NPS Plan Update 6/13, (Final) NPS Plan update 9/13

4.2 Use of Incremental vs. Base Funds

Oregon's total 2012 319-Grant allocation of \$2,172,000 was distributed as follows: \$905,000 or approximately 41.7% was directed to the twenty-six (26) 319 projects grant and the remainder, \$1,267,000 or approximately 58.3 %, was directed to the PPA grant to fund 9.45 DEQ staff positions for the NPS program.

Table 2. Breakdown of Oregon's 2012 Section 319 Allocation from EPA

BREAKDOWN OF OREGON'S 2012 SECTION 319 ALLOCATION FROM EPA			
Area	Fiscal Year 2012 Enacted	Incremental Funds	Base Funds
Region 10	\$9,025,000	\$5,767,000	\$3,258,000
Oregon	\$2,172,000	\$1,388,000	\$784,000

Table 3. 2012 Oregon's 319 Grant Incremental and Base Funds Use: Funded Positions / NPS Program Activities

2012 OREGON'S 319 GRANT INCREMENTAL AND BASE FUNDS USE: FUNDED POSITIONS / NPS PROGRAM ACTIVITIES			
Fund	Dollar Amount	Percent	Use
Base Funds (\$784,000) + Incremental Funds (\$483,000)	\$1,267,000	58.3 %	9.45 DEQ Staff Positions
Incremental Funds	\$905,000	41.7 %	26 Projects
TOTAL	\$2,172,000	100.0 %	--

4.2.1 Base Funds

Oregon's "base funds" supports 9.45 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 4** identifies how the PPG Base Funds dollars and FTE were used in 2012 to support the various NPS program activities:

Table 4. 2012 Oregon's 319 Grant Funded Positions and NPS Program Activities Costs

2012 OREGON'S 319 GRANT FUNDED POSITIONS / NPS PROGRAM ACTIVITIES	FTE	Dollars
NPS TMDL Modeler	1.00	\$122,690
Regional NPS Staff (Incl. 0.50 FTE NPS TMDL Development)	3.00	\$362,641
Volunteer Monitoring Coordinator	1.00	\$141,032
Prorates and Management and Administrative Support (Includes 0.25 FTE in Regions and 0.20 FTE at HQ)	0.45	\$60,967
Grant Administration	1.00	\$136,941
Columbia Basin Coordination	1.00	\$152,764
Nonpoint Source Coordination	2.00	\$281,054
Attorney General	--	\$8,911
TOTALS	9.45	\$1,267,000

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.)

4.2.2 Incremental Funds

In 2012, the \$905,000 319-Grant of "incremental funds" funded 26 projects in four areas of emphasis :

- TMDL Implementation (57.2%)
- BMP Implementation (22.4%)
- Pesticide Stewardship (11.1%)
- Information and Education (9.3%)

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). Note that "BMP Implementation" did not include implementation of BMPs identified in a TMDL Implementation Plan and "TMDL Implementation" primarily focused on effectiveness monitoring.

4.3 Project Implementation (2012 Activities)

4.3.1 Assessing Oregon's Basins

DEQ coordinates its work to protect and improve Oregon's water by following the watershed approach. DEQ uses the term "watershed" to describe an area of land that contains related waterways. These watersheds may be traditional basins, areas that drain into a single waterway or an area that contains similar waterways, such as a group of coastal rivers.

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.

The DEQ water quality program has increased its emphasis on the "watershed approach" as a way to better identify and address high priority water quality issues in a basin or region. The watershed approach combines the expertise of DEQ's 17 water quality sub-programs to produce basin-based assessments that are data-driven and contain quantitative elements that describe water quality conditions and include recommendations for actions that DEQ and others can take to improve water quality.

DEQ uses these assessments to work with local stakeholders, such as communities, watershed councils and conservation districts, as well as local, state and federal agencies, to find smart solutions to local water quality issues. The watershed approach allows opportunities for direct, interactive feedback between DEQ and its many stakeholders.

The watershed approach framework is being used by DEQ to not only improve water quality throughout Oregon, to not only help protect drinking water, fish habitat and the environment in general, but can also boost Oregon's economy. A clean and more dependable water supply is good for industry, promotes healthier commercial and recreational fisheries, and encourages tourism. Clean waterways also help ensure that Oregonians of all ages have safe places to swim and play.

The watershed approach follows the principle of adaptive management, which uses the best information available to take action on immediate problems. It also involves taking any new information to improve practices over time.

This "continuous improvement" process allows DEQ to:

1. Share its findings with affected stakeholders and residents, so all parties learn how to better manage our watersheds.
2. Prioritize immediate and long-term actions that can be taken in a particular basin or watershed, through DEQ's Water Quality Status and Action Plan documents. These actions will emphasize working closer with all affected parties to identify goals and measure success.
3. Encourage all involved to be flexible and open to new ways of solving problems (including voluntary collaboration where possible) and avoiding duplication of efforts.
4. Regularly assess the situation in each basin, to determine in an outcome-based approach what is working and what is not.

DEQ plans to cover the state's major basins in the next few years and then re-visit each to mark progress and reassess how to deal with lingering water quality problems.

- DEQ completed its first three Watershed Basin Status and Action Plans in 2011 (See Section 4.5.7 for more detail).

4.3.2 NPS Projects Funding by Basin/Subbasin

DEQ began collecting information about investments made within Oregon related to watershed restoration, protection, and water quality enhancements. DEQ has information from the following entities and funding sources but there is a need to work with partner agencies further to be able to align reporting categories and time frame.

DEQ intends to work with partner agencies to address those issues and include investment information in the 2013 annual report.

DEQ also intends to post a locked excel workbook that allows visitors to sort investments by the following categories:

- Types of projects
- Pollution addressed
- Subbasin

The following is a summary of data submitted for NPS annual report for this year.

Oregon Watershed Restoration Inventory (OWRI)

<http://www.oregon.gov/OWEB/monitor/Pages/owri.aspx>

Includes completed projects funded by OWEB grants, USFS and BLM, private land owners, and 319 at subbasin scale from 2011. NRCS funds used as match for OWEB grants are also included in this database.

Natural Resource Conservation Service data

(Not available on the web, available at subbasin scale through Cooperative Agreement)

Includes NRCS funded projects that have been implemented within a given year at subbasin scale for 2009 and 2014. NRCS and OWEB categorize practices differently, so there is a need to complete a practice crosswalk between these agencies.

Drinking Water State Revolving Fund and Clean Water State Revolving Fund data

(data was reported using a template provided by DEQ NPS program)

Includes DWSRF and CWSRF funded nonpoint source projects that were awarded in 2012. It is possible to report these projects based on when they were completed.

4.3.3 Total Maximum Daily Loads

Total Maximum Daily Loads (TMDLs) and Water Quality Management Plans

The federal Clean Water Act requires that water pollutant reduction plans, called TMDLs, be developed for waterbodies that do not meet water quality standards. TMDLs describe the maximum amount of pollutants from municipal, industrial, commercial and surface runoff sources, including natural background, which can enter the river or stream without violating water quality standards. These estimates are required for waterbodies that have been identified as not meeting one or more water quality standards and have been included in Category 5 of the Integrated Report for Oregon (303(d) List).

TMDLs describe the amount of pollutant a waterway can receive and meet 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 may include a reserve capacity that allows for future discharges to a river or stream. 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.

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 sources, including natural sources such as wildlife.
2. Use techniques such as water quality or watershed 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 the permitted source is allowed to discharge which will be incorporated into NPDES permits) and load allocations for nonpoint sources, which are, implemented through TMDL Implementation Plans, Agricultural Area Rules and Plans, Forest Practices Act Best Management Practices, Water Quality Restoration Plans, and other planning documents.
4. DEQ develops TMDLs on a basin or subbasin scale (generally on a 3rd field US Geological Survey Hydrologic Unit Code or smaller).
5. Staff in the program conducts all facets of work in collecting, analyzing, and presenting results. Staff will also perform public and stakeholder outreach to ensure input when decisions are being made. The combination of outreach and development provides for the transition from development of loading capacity, allocations, and implementation in permits and planning documents, such as TMDL Implementation Plans.

TMDL Wasteload Allocations are implemented through effluent limits in permits for point source discharges, and Load Allocations are implemented as planning targets for designated management agencies and other sources.

DEQ staff actively implements TMDLs by:

- Revising industrial and municipal wastewater permits to incorporate revised permit limits.
- Working with local communities and the Oregon Department of Agriculture through the Agriculture Water Quality Management Act process to implement the TMDLs effectively on agricultural lands.
- Working with the Oregon Department of Forestry for implementation on state and private forestlands, through the Oregon Forest Practices Act and long range management plans.
- Working with ODA and ODF on quantifying the effectiveness of BMPs to reduce pollutants, such as sediment, temperature, nutrients and bacteria.
- Assisting local governments in developing TMDL Implementation Plans for urban and rural residential areas.
- Working with the U.S. Forest Service, Bureau of Land Management and other federal agencies on developing water quality restoration plans for lands under their jurisdiction.

Under most circumstances, TMDL Implementation plans for improved water quality rely on cooperation among landowners and land managers within a river basin. Local watershed councils, Soil and Water Conservation Districts, or other organizations will serve as community-based coordination points for these united efforts. Agencies and municipalities with jurisdiction over sources of nonpoint source pollution and sources not covered by permit are required to submit TMDL implementation plans to DEQ. These plans describe actions that will be taken to reduce their contribution of the TMDL pollutant.

In 2012, EPA approved the Upper Klamath and Lost River Subbasins TMDL for dissolved oxygen, chlorophyll a, and pH. DEQ is currently reconsidering this TMDL. DEQ issued a TMDL for the Tualatin Subbasin, amending the 2001 TMDL, to provide waste load allocations for total phosphorus and ammonia at two new discharge locations. EPA approved this revised TMDL in December 2012.

4.3.3 Water Quality Standards

Establishing water quality standards for waters of the United States in Oregon is at the core of DEQ's water quality activities. Standards include beneficial uses of water, such as drinking, aquatic life, recreation, etc., and the water quality criteria designed to protect those uses. The Water Quality Program then acts to protect and restore water quality by implementing those standards, including evaluating whether Oregon's water quality standards are being met through the development of the biennial Integrated Report, which includes the section 303(d) list of impaired waters and the section 305(b) report describing the status of Oregon's surface water quality.

The staff who work on these program areas perform the following activities:

- Conduct triennial standards reviews to establish and update scientifically based water quality standards and related policies.
- Develop and maintain internal directives for and provide guidance to regional and headquarters staff on implementation of water quality standards in various water programs.
- Identify waterbodies not meeting water quality standards and develop Integrated Reports that are linked to the Watershed Approach Basin Reports.

In 2012, DEQ piloted an approach to develop its Integrated Report that supports and is linked to its Watershed Basin Status and Action Plans. DEQ has made these efforts a priority in order to guide the agency's efforts to help protect, improve and enhance the quality of Oregon waterways. The objective of linking the Integrated Report efforts with the Watershed Basin Status and Action Plans is to ensure that these efforts, together, provide a comprehensive evaluation of water quality and other environmental information resulting in a basin-based water quality status and action plans. In addition, this approach will result in DEQ being able to make the most efficient use of its staff resources.

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. The associated tables and figures and additional information may be found on DEQ's water quality standards web page at: <http://www.deq.state.or.us/wq/standards/standards.htm>.

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. During 2012, DEQ has been developing guidance and procedures and beginning to implement the new standards.

In April 2012, the EQC adopted revised water quality standards for the West Division Main Canal, a man-made irrigation canal near Hermiston, Oregon. DEQ completed a Use Attainability Analysis, corrected the designated uses of the canal and revised the water quality criteria to protect the new uses.

In addition in 2012, DEQ has been working on responding to litigation on the state's 2003 temperature standard (the judge just issued an order on this last week—talk to Deb if you want to include this info...). On Jan. 31, 2013, EPA took action on Oregon's aquatic life toxics criteria submitted in 2004. EPA approved criteria associated with 14 pollutants and disapproved criteria associated with 16 pollutants. DEQ anticipates conducting several rulemakings to address the disapproved criteria.

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>.

General Permits for Pesticides

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 require an NPDES permit. The need for the permit resulted from federal court decision requiring permits for pesticide applications in, over or near water.

The Pesticide General Permit 2300A includes pesticide application for 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 entities include weed control districts, vector control districts, golf courses, lake and marina managers, public utilities, property owners and federal, state and municipal agencies who apply pesticides in, over or near water.

The proposed 2000-J general permit regulates the use of pesticides for weed and algae control within irrigation system boundaries. Weed and algae control is the application, by any means, of contact or systemic herbicides to control vegetation and algae in the water and within 3 feet of water. Irrigation systems that may need to register for this permit include: Irrigation districts formed under ORS Chapter 545, Irrigation districts or companies previously covered by an individual NPDES permit for the application of aquatic pesticides in irrigation systems, or entities, such as, individual farmers, cooperatives or private companies that operate irrigation systems when pesticide applications in the irrigation system or at the water's edge exceed an total treatment area of 20 acres of surface area or 20 linear miles in a calendar year.

The proposed 2000-J general permit does not apply to pesticide applications to dry land. NPDES permits do not apply to agricultural stormwater discharges and irrigation return flow from irrigated agriculture because these are excluded from permitting under the Clean Water Act. Extended public comment period for the proposed 2000-J general permit closed on Sept. 28 and will be available prior to the 2013 pesticide application season.

These general permits do 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.

More information on these permits is available at this DEQ web site. <http://www.deq.state.or.us/wq/wqpermit/pesticides.htm>

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 addition, a proposal for more stable, long-term funding has been presented to the 2013 Oregon Legislature for consideration.

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 2012, PSP work continued in Eastern Oregon with partners in Hood River and Walla Walla River Watersheds, as well as watersheds in Wasco County. Outreach efforts continued to be focused on communicating PSP monitoring results and providing technical assistance to orchards. Preliminary 2012 monitoring data shows significant reductions in concentrations of diuron

(herbicide) in the Walla Walla Watershed and malathion (insecticide) in Wasco County watersheds. In addition, levels of almost all pesticides in the Hood River Watershed remain well below relevant criteria or benchmarks.

In 2012, DEQ continued PSP work with partners in four watersheds in the Willamette Valley: Clackamas, Pudding, and Yamhill River, and Amazon watersheds. The monitoring locations in these watersheds are located in a range of agricultural, urban and forested areas.

The diverse array of land uses in the Willamette Valley, creates a major challenge for DEQ and its partners in achieving short-term improvements in water quality related to pesticide use because of the multitude of entities that need to be engaged in the process. However, the partners in the Willamette PSP projects plan to focus future outreach and technical assistance efforts on smaller portions of the watersheds where stream concentrations of pesticides are the highest, thereby allowing for more intensive actions that can produce measurable water quality improvements in the highest priority areas of a watershed. These activities can then be expanded to other parts of the watershed as appropriate.

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 State of Oregon departments and university:

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

The following WQPMT tasks were completed in 2012:

- The WQPMT reviewed pesticide monitoring data in the context of EPA OPP Aquatic Life Benchmarks, which are used as a screening tool to evaluate monitoring data for pesticides of interest and pesticides of concern when numerical Water Quality Standards are unavailable.
- Evaluated 2011 pesticide monitoring data.
- Established 2012 Pesticides of Concern (POCs): azinphosmethyl, carbaryl, chlorpyrifos, diuron, ethoprop. Established 2012 Oregon Pesticides of Interest (POIs) to review: 2,4-D, atrazine, imidacloprid, metolachlor, metribuzin, metsulfuron-methyl, propiconazole, simazine, and sulfometuron-methyl.
- 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.
- 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.
- Held regularly scheduled WQPMT meetings to provide agency updates and for coordination.

- 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.
- Determine ways of prioritizing allocation of limited pesticide monitoring and outreach resources at a smaller scale in watersheds.
- 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 consensus 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 State Revolving Fund

The number of nonpoint source projects funded by DEQ's Clean Water State Revolving Fund (CWSRF) program continues to grow. Since the loan program's inception in 1989, DEQ has provided \$75 million for various nonpoint source projects.

In 2012, DEQ made three loans totaling more than \$15 million to nonpoint source projects. Two of those loans went to irrigation districts serving central Oregon. Farmer's Irrigation District, located in the Hood River watershed received a \$15 million loan to install large-diameter pipes to replace open conveyance canals to reduce water loss due to ground seepage and evaporation. Three Sister's Irrigation District in the Upper Deschutes watershed received a \$100,000 increase to a existing loan to replace open canals with large diameter pipe.

In addition to funding irrigation districts, DEQ also provided a \$250,000 loan to Clackamas County Soil and Water Conservation District in Oregon City. The District will use the funds to establish a local loan program to finance small projects that improve the water quality of the Clackamas River watershed.

2012 Clean Water State Revolving Fund NPS Project

Three Sisters Irrigation District, Sisters OR, Whychus Creek, Upper Deschutes Basin. Project purpose: Replace open ditch irrigation canal with underground pipe to reduce water loss and increase the dedicated flow to the creek.



Whychus Creek restoration work, from just below diversion point.



Table 5. 2012 State Revolving Fund Activity on Nonpoint Source Projects

STATE REVOLVING FUND ACTIVITY ON NONPOINT SOURCE PROJECTS 2012										
SRF Loan #	Watershed	Project Title	Calander Year	SRF Borrower	Loan Amount	Disbursements To Date	Remaining to Disburse	Project Status	Project Officer	Project Completion
R22405	CLACKAMAS RIVER WATERSHED	Agricultural stream protection	2012	Clackamas Soil and Water Conservation District	\$250,000	\$0	\$250,000	Not Started	Tiffany Yelton-Bram	June 2014
R32244	HOOD RIVER WATERSHED	Replace open irrigation ditch with piping	2012	Farmer's Irrigation District	\$15,000,000	\$24,800	\$14,975,200	Under Construction	Shanna Bailey	December 2015
R91412	UPPER DESCHUTES WATERSHED	Replace open irrigation ditch with piping	2012	Three Sisters Irrigation District	\$100,000	\$100,000	\$0	Complete	Shanna Bailey	May 2012
TOTAL					\$15,350,000	\$124,800	\$15,225,200			

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 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.

Association of Drinking Water Administrators 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.

Coordination with TMDL Forestry Issues:

Oregon's drinking water protection program works closely with the TMDL program on nonpoint source issues that affect drinking water sources. This includes research for addressing forestry, landslide, and road-related sediment problems; leading and soliciting feedback from the Mid Coast TMDL Sediment Technical Working Group made up of local stakeholders and experts on the approach for addressing forest, agricultural, and public roads; and meeting with the Mid Coast TMDL Sub-Groups for Forest, Agricultural, and Public Roads to devise road condition metrics and reporting to guide and verify improvements, timelines for road repairs and upgrades, and required performance goals for roads in relation to water quality.

Variance for Portland's Bull Run Watershed.

Oregon Health Authority's Public Health Division granted a variance in May 2012 to the requirement that the City of Portland treat Bull Run source water for *Cryptosporidium*. The final order granting the variance to the federal and state requirement for treatment contains important conditions to provide safeguards to protect the health of Oregonians being served by unfiltered Bull Run water. OHA, the Oregon Department of Justice, and Oregon Department of Environmental Quality performed the review of the variance request, including assessment of the law, the science, the data and the watershed. The weight of the present scientific evidence led to the decision. OHA held a public hearing and accepted comments during two public comment periods after releasing its proposed order in November. DEQ staff assisted in developing the monitoring requirements and watershed protection conditions.

Irrigon Regional Water Sampling and Protection.

The City of Irrigon developed new public water system groundwater wells in 2007 to replace wells lost due to nitrate contamination. The two new wells are shallow and located near the Columbia River. Water quality tests on the new wells immediately showed the presence of nitrate and further monitoring indicated an increasing nitrate concentration. The city requested help from the Governor's Office and state agencies tasked with preventing groundwater contamination. DEQ and OHA collaborated on a new Source Water Assessment document for the city in 2011. This served as a basis for understanding the risks of nitrate and other contaminants affecting the new wells. The city was awarded a Drinking Water Source Protection Fund grant in 2011 (actual funds to be awarded in Sept 2012) to develop strategies and implement protection within the groundwater source area. DEQ convened a local task force with other partners to implement a sampling and analysis plan in early 2012, which includes sampling over 20 domestic and irrigation wells for nitrates, pharmaceuticals and personal care products, and pesticides. In 2012, DEQ and the City of Irrigon initiated an interim outreach project for nitrate reduction.

Pesticide Collection Events.

The Clackamas River Water Providers (representing seven Public Water Systems (PWSs) that serve approximately 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. More than 100 participants brought in over 56,000 pounds of pesticide waste. 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. Legacy pesticides (some banned as early as the 1970's) were collected including DDT, Chlordane and Dioseb. In addition, approximately 1,500 pounds of clean and residue-free, triple-rinsed plastic containers were also accepted for recycling at no charge to producers. See the factsheet at <http://www.deq.state.or.us/wq/pubs/factsheets/drinkingwater/PesticideRoundUp12WQ037.pdf> for more information on these events.

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 using 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. The full report is available at <http://www.deq.state.or.us/wq/dwp/docs/PWSNitrateReport.pdf>.

Watershed Basin Assessments and Action Plans

DEQ continues to develop drinking water-specific sections and data input for the Watershed Assessment Reports, including identifying drinking water sources, drinking water quality issues, potential contaminant sources and recommendations for action. These assessments draw on the expertise of DEQ's 17 water quality sub-programs include recommendations for actions that DEQ and others who are interested in these basins can take to improve water quality. To date, these in-depth assessments have been developed for the North Coast, South Coast, Deschutes, Rogue, Powder/Burnt, and Clackamas/Sandy basins. The Umatilla and Willamette basins assessments are in progress.

DEQ is working directly with multiple public water systems in a basin or subbasin to encourage protection strategies on a watershed scale basis. This includes coordinating with surface water providers in the Rogue River, Umpqua, Siletz, and Clackamas subbasins. For example, DEQ staff are working with the Winston-Dillard Water District, Oregon Department of Agriculture, and Douglas Soil and Water Conservation District to address high *E. coli* bacteria counts in untreated drinking water detected during Safe Drinking Water Act testing. The partners are providing technical assistance to interested landowners, implementing on-the-ground restoration projects, and conducting effectiveness monitoring at project sites identified as high risk for bacteria contribution.

The City of Florence is served by a vulnerable water system that draws from a sole-source aquifer under federal definitions. OHA and DEQ drinking water staff have worked with the City and the Siuslaw Watershed Council to improve and protect drinking water and area water resources for several years. EPA awarded the City of Florence over \$500,000 to work with tribal, federal, state, and local partners in the Siuslaw watershed to help with the water quality efforts, as well as protect fish and wildlife habitat within their sole source aquifer study area. Key outcomes of the three-year [Siuslaw Estuary Partnership](#) project include an aquifer protection plan to be submitted to DEQ for certification, along with comprehensive plan and policy amendments within land use planning work to protect resources within the aquifer boundary. Florence is also collecting valuable groundwater and surface water monitoring data that will enhance efforts to better understand and improve water quality.

Input for DEQ's Internal Draft Harmful Algal Bloom (HAB) Strategy.

DWP staff continues to provide technical assistance to public water systems 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. In addition, DWP reviewed provided input to US Forest Service regarding their role in drinking water protection and HABs.

Tualatin River Watershed GIS Demonstration Project.

DEQ participated in several 2011 and 2012 webinars and conference calls to share results and benefits from the GIS demonstration project in the Tualatin watershed. The GIS products from the Tualatin 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) by identifying healthy lands most important for conservation of water quality and identifying impaired lands that ought to be restored to help protect water quality. Much of the GIS research and the methods used for the project completion will be useful in other watersheds when assessments are undertaken.

Drinking Water Source Monitoring.

New sampling was performed as part of Phase III of the Drinking Water Source Monitoring project in early 2012. The locations of the source water sampling were selected based on detections of nitrates and other contaminants of concern in SDWIS monitoring. 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 project is to collect data from multiple contaminant sources to assist in determining priorities for technical assistance and prevention, and to collect screening level data on whether there are potential human health risks beyond those routinely monitored within the SDWA regulations.

A final report was posted on DEQ’s website for Phase I and Phase II of the Drinking Water Source Monitoring project. Phases I and II included testing 17 surface water intakes, 16 wells, and 1 spring to determine characteristics and detections in the source waters identified as high-risk drinking water sources through the Source Water Assessments. Analytical results were interpreted and a short report was sent to each of the public water systems in 2010 and 2011. The summary report is available on DEQ’s drinking water protection website.

Pesticide Sampling at Schools.

The Oregon Health Authority and DEQ teamed up to assist USDA on a nationwide school water testing project in 2012. USDA conducted free water testing for schools that are served by wells. The samples were analyzed by USDA for over 100 pesticides and pesticide degradation compounds. The purpose of the sampling project was to collect data on the prevalence of pesticides and pesticide metabolites in school well water. Participation in this project was voluntary. Schools in Oregon were solicited by letter from OHA and DEQ. DEQ lab staff collected the samples inside the schools and shipping the bottles to USDA’s laboratory. Twenty Oregon schools from 13 counties participated. Of the twenty schools sampled in April 2012, 11 of those had pesticide detections. Two schools in Corvallis show 12 different pesticides detected. All detections were at very low levels. The results were sent to each school with a toxicological consult and interpretation of the data. DEQ’s drinking water protection staff will be available to assist each school with development of drinking water protection plans to reduce pesticides in their drinking water. As we do in other similar drinking water nonpoint source work, we will ask our local agency partners to assist where appropriate.

Coordination with the Oregon Toxics Reduction Strategy.

DEQ continued working towards developing 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. A 2012 strategy report is available on DEQ’s Toxics Reduction website.

Land Use Planning Assistance.

DEQ 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. In addition, DEQ's DWP program actively recommends "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 2012:

1. Developed road condition metrics and reporting criteria to guide and verify improvements of forest agricultural and public roads in the Mid Coast TMDL watershed.
2. Assisted OHA develop cryptosporidium monitoring requirements and watershed protection conditions for a variance granting relief from treatment requirements to the City of Portland for the Bull Run Watershed.
3. Finalized Phase III of drinking water source monitoring to evaluate potential toxics in groundwater and surface water used by high-risk public water systems. Published report on the results of Phase I and II monitoring.
4. Assisted USDA in sampling drinking water for pesticides at 20 schools that are public water systems.
5. Encourage protection strategies on a watershed scale basis in the Rogue, Umpqua, Siletz, Tualatin, and Clackamas Sub-basins.
6. Assisted Clackamas River Water Providers, Clackamas SWCD, and Clackamas County as the initiate a technical assistance program for residential on-site systems in Clackamas Watershed, which includes inspections of septic systems and financial assistance for repairing or replacing failing systems.
7. 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.
8. Completed factsheet summarizing regulations and recommendations for pesticide spraying upstream of drinking water intakes available at <http://www.deq.state.or.us/wq/dwp/docs/pesticideUse.pdf>
9. Prepared data and comments for ODA staff on Agricultural Water Quality Management Plans for several basins in Oregon.
10. Completed two pesticide collection events in Clackamas. Initiated work on pesticide collection events in the Tualatin, Clackamas, Milton-Freewater and LaGrande areas.
11. DWP staff supplied maps, data, and write-ups on drinking water resources and quality for the Umatilla and Willamette basins Watershed Assessments. The Willamette basin assessment covers 10 subbasins.
12. Participated in several webinars and conference calls to share the results and benefits from the GIS demonstration project in the Tualatin watershed.
13. Participate in national nitrate/nutrients advisory committee.

4.3.7 Groundwater Management Areas (GWMA's)

Groundwater Management Areas (GWMA's) 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's 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. Provide EPA samples for stable isotopes analyses.
- Partner with EPA and Benton SWCD on two grants that will focus on the evaluation of the effectiveness of conservation enhancement practices in reducing nitrate pollution to the groundwater in the Southern Willamette Valley GWMA.
- Conduct focus groups from the neighbors of two small schools in the GWMA, which have Public Water Systems with nitrate at or near 10 mg/L nitrate-N, to determine how to best incorporate groundwater protection into the daily life of those GWMA residents.
- Use a social marketing approach to facilitate behavior change regarding groundwater protection.
- Update the Southern Willamette Valley Action Plan, to reflect activities that have been completed, and include additional voluntary strategies that were not part of the original Action Plan.
- 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's.
- 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 2012:

- 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 2012:

- 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 GMWA* 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. In addition, EPA has volunteered to run stable isotopic analyses on surface and groundwater samples collected by the DEQ Lab.

Southern Willamette Valley GWMA

Students from a Lane County High School get hands on experience in collecting groundwater samples and learning about the connection between land use and potential impacts to groundwater. Students take split samples with the DEQ lab and run their own analyses, eventually comparing them to the DEQ Lab results.



The following tasks were completed in 2012:

1. For the fourth 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. Two grants were successfully sought by Benton SWCD and EPA Corvallis to allow these GWMA partners to collaborate on the evaluation of fertilizer management practices. The Willamette Partnership will also be a contributor to this work, and will develop a groundwater protection module for the Nutrient Tracking/Trading project.
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 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. Students from a Lane County High school participated with DEQ Laboratory in the collection of ‘split samples’ to allow the students to build their own understanding of groundwater contamination. The students would take their samples to the school lab and run nitrate tests. The results of those tests are compared with the DEQ Lab results, to get a check on their analytical QA/QC.

Southern Willamette Valley GWMA

Often, over-irrigation helps to push nutrients below the root zone. A recently funded EPA grant for the SWV GWMA will help to evaluate what fertilizer and irrigation management strategies are more protective of groundwater quality.



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.

NOAA and EPA in a December 21, 2012 letter to Oregon provided an assessment of Oregon's progress in meeting the last three management measures to receive full CZARA program approval. Under the settlement agreement between NWEA, EPA, and NOAA, the EPA and NOAA provided a written initial assessment of the adequacy of the programs and timeline in meeting the settlement agreement..

1. This includes whether implementation of the Implementation Ready (IR) TMDL approach being applied in the Mid-Coast Basin TMDL, including safe-harbor BMPs, is likely to result in actions that will achieve and maintain water quality standards.
2. Developing and updating IR TMDL for the sub-basin within the CZARA area could satisfy the outstanding condition on additional management measures for forestry identified in the May 12, 2010 EPA and NOAA letter to Oregon.
3. Progress on developing and implementing a time of sale inspection program for onsite systems in the CZARA area.
4. Completion of the 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.

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 / Bacteria Monitoring – Collects data to determine the need for beach advisories.
- Toxics Monitoring - Toxics Monitoring Project for surface waters in watersheds across Oregon. This project will give information about current and emerging contaminants that threaten aquatic life and human health.
- Pesticide Stewardship Partnership - Collaborative approach to monitoring pesticide in agricultural areas. Data identifying current use pesticides found in surface water is shared with growers to help them target management practices that reduce pesticides in water.

Statewide Watershed-based Toxics Monitoring Program.

The Toxics Monitoring Program collects data that supports the Agency's mission of protecting the environment and human health from the effects of toxics pollutants. This information may identify new problem areas or validate earlier findings. In 2012, as a continuation of a rotating basin approach to monitoring, the DEQ laboratory staff collected and analyzed surface water samples from 47 locations across the John Day, Deschutes, Sandy and Hood basins. In conjunction with ODFW, fish

were collected at 3 locations. Collection of surface water samples occurred during three hydrologic periods in order to assess the impacts of differing flow regimes on contaminant concentrations as well as investigate seasonal use patterns. Collections occurred in the spring (May-June), summer (August-September) and fall (November). Analysis of the surface water samples 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 is currently underway at the laboratory.

Staff from the Toxics Monitoring Program supported implementation of the Agency's integrated watershed assessments in the Middle and Upper Willamette sub-basins as well as the Umatilla basin by summarizing and interpreting available toxic pollutant data for inclusion in the basin report. 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 basins in 2013. 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 in the coastal basins in 2013.

Lower Mid-Columbia River Ecological Assessment

DEQ recently completed its "snapshot" ecological assessment of the Lower Mid-Columbia River, which covers 150 miles between Bonneville Dam on the west and McNary Dam on the east. This study — *the first of its kind on this section of the Columbia* -- showed that while the river's fish and bank habitat is degraded, its water quality is generally good, with low levels of metals and organic compounds known as polycyclic aromatic hydrocarbons. Unfortunately, bass and large scale sucker fish fillets sampled from the river as part of this study show accumulation of potentially harmful levels of mercury, chlorinated pesticides and other toxic or cancer-causing chemicals, including dioxins, furans, and PCBs.

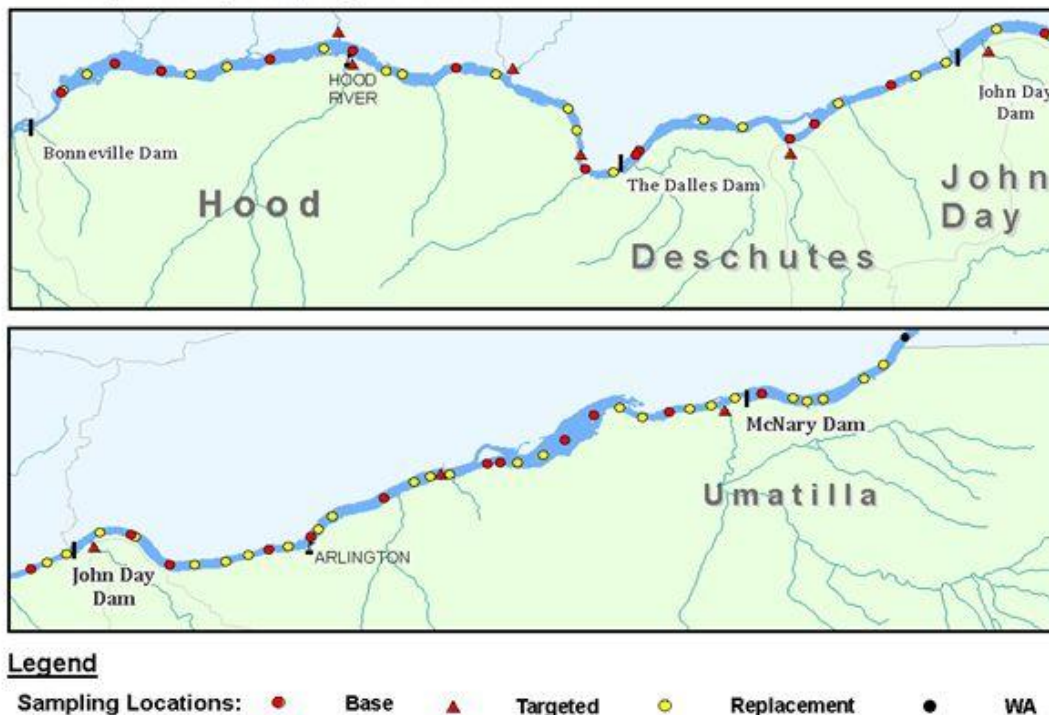
[Lower mid-Columbia River Ecological Assessment Final Report](#) PDF (10 MB)

[Lower mid-Columbia River Ecological Assessment Final Report Without Appendix](#) PDF (2MB)

[Lower mid-Columbia River Ecological Assessment Final Report Appendix Only](#) PDF (8 MB)

This assessment fills information gaps and compliments studies conducted by states, tribes, federal agencies and non-governmental organizations to gauge conditions, identify problems and find solutions to pollution issues affecting the Columbia River. The EPA listed the Columbia Basin as one of seven Great Water Bodies deserving of special attention and protection from environmental harm.

Oregon DEQ Sampling Locations



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. Johnson Cr Watershed Council
2. Lower Nehalem Watershed Council
3. Powder River Watershed Council
4. Rogue Riverkeeper
5. Santiam-Calapooia Watershed Councils
6. Tryon Creek Watershed Council
7. Wallowa SWCD.

Staff provided high quality water quality testing equipment or supplies to 25 different organizations. There are approximately 50 organizations currently with equipment around the state. Provided technical assistance on equipment and protocols to approximately 25 organizations over the phone and conducted nine 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 203 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 Willamette 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. The Lower Umatilla Basin, Northern Malheur County, and Southern Willamette Valley GWMAs are sampled four times per year.

4.4 Land Uses

4.4.1 Agricultural Lands

Oregon Department of Agriculture

DEQ's Nonpoint Source program works with ODA's Natural Resource Division to prevent pollution and improve water quality on agricultural lands. DEQ and ODA's program staff and management work collaboratively on various water quality related projects to address agricultural nonpoint sources.

Coordination highlights

- DEQ and ODA negotiated and signed a Memorandum of Agreement in May 2012. The MOA is intended to guide the agencies to fulfill respective legal responsibilities and obligations in an efficient and effective manner.
- DEQ's basin coordinators and ODA staff have ongoing working relationships with the review and implementation of Agricultural Water Quality Management Area Plans, as well as local water quality issues related to drinking water as resources allows.
- ODA is a designated management agency for TMDL implementation. ODA has been a partner for TMDL development, including the implementation ready TMDL in the Mid Coast.
- ODA went through a strategic planning process in 2012 which resulted in Resolution 331 by the Board of Agriculture in March 2013. The resolution supports ODA to establish a strategic program implementation process that identifies key geographic areas (strategic implementation areas) and targets resources to achieve compliance with local water quality regulations. The Board of Agriculture resolution noted that the effort should be founded on the basic conservation principles of erosion control, nutrient management, stream bank stabilization, and moderation of solar heating of streams, promoted by aligning resources with local, state and federal natural resource partners.
- Within strategic implementation areas, ODA will work with local, state, and federal partners to outreach to agricultural landowners. Following the outreach period, ODA will identify locations likely not meeting water quality regulations and schedule site visits to seek compliance.

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 agencies (LMAs) to meet water quality goals on agricultural lands.

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.

ODA's Water Quality Program Compliance Summary

The Agricultural Water Quality Management Act (ORS 568.900 to 568.933) authorizes ODA to develop Agricultural Water Quality Management Area Plans (area plans) throughout the state. 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. ORS 561.191 says that ODA shall develop and implement any program or rules that directly regulate farming practices to protect water quality.

The following figures are based on calendar year 2012, and the data was provided by ODA.

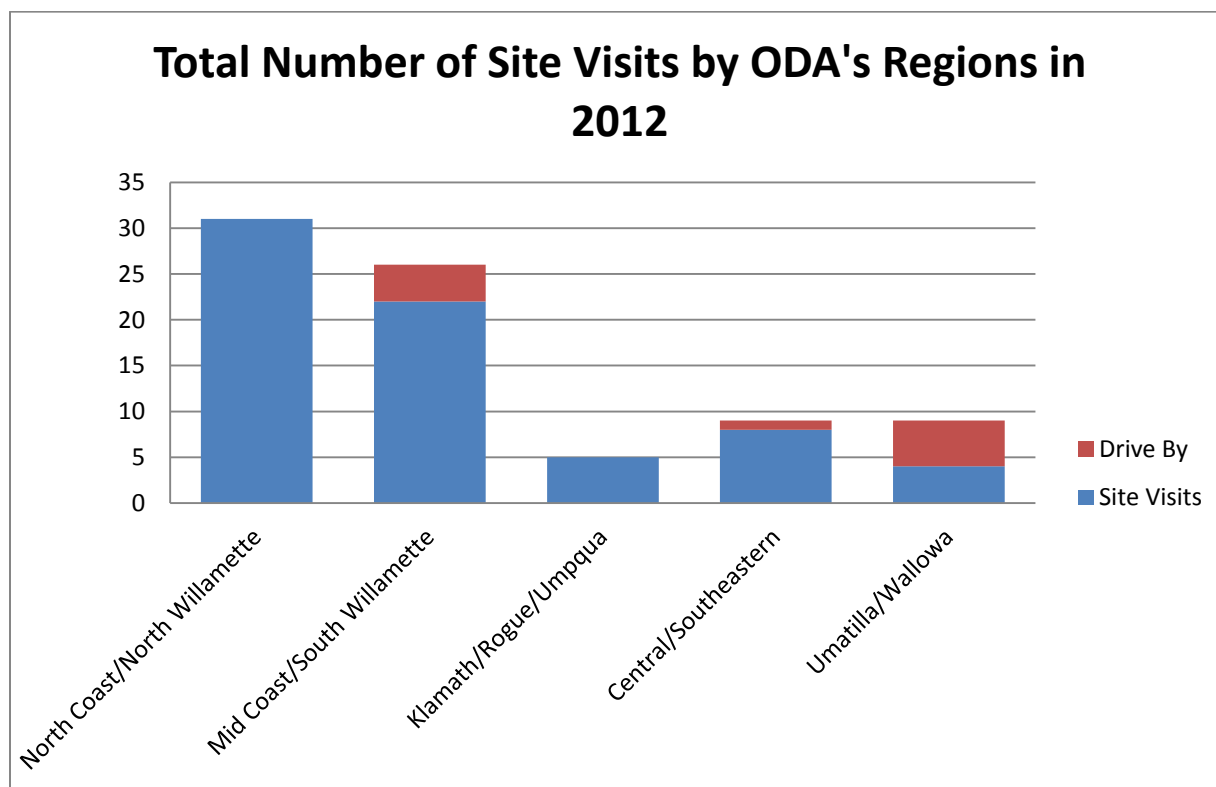


Figure 1: In 2012, sixty six new cases were filed by the public, ODA, and other agencies. ODA followed up by conducting site visits or driving by the sites. The majority of compliance cases were in the Willamette Valley.

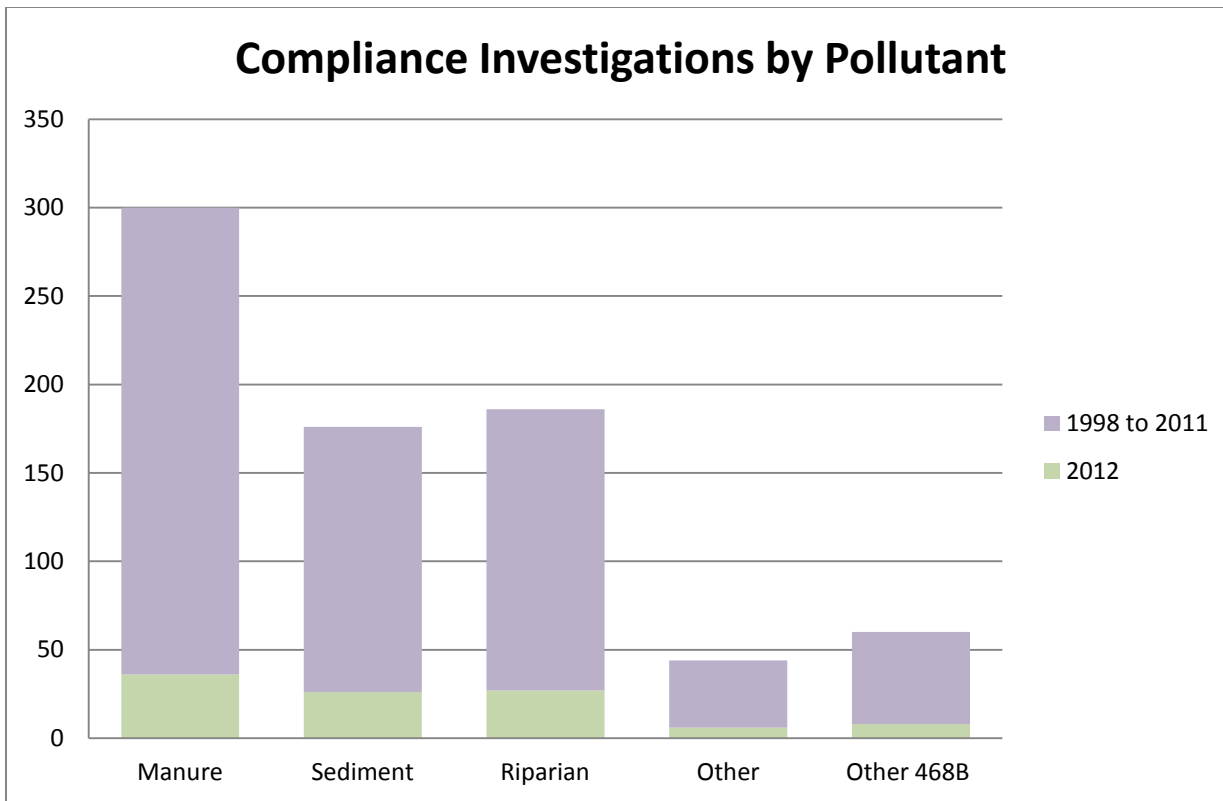


Figure 2: In 2012, more compliance investigations were initiated due to issues related to manure management than other water quality issues.

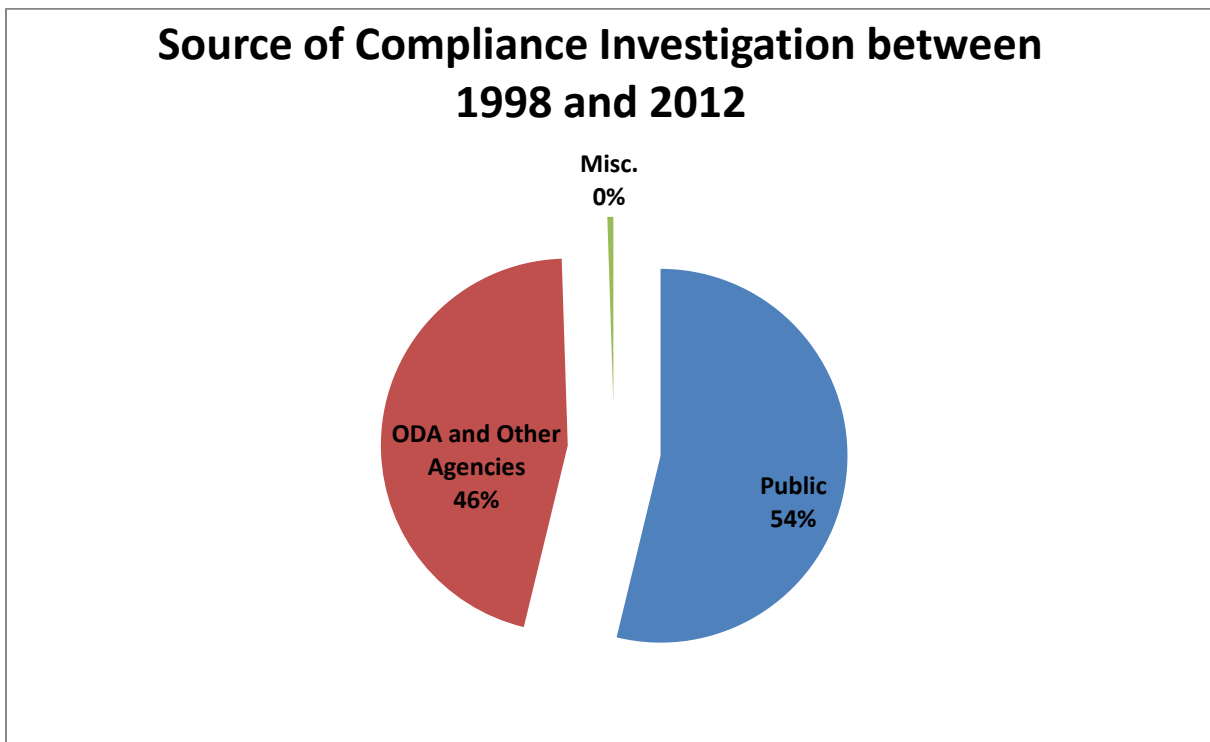


Figure 3: In the past fourteen years, there have been 582 compliance investigations. Over half of the complaints were submitted by the public. In 2012, DEQ referred 23 cases to ODA.

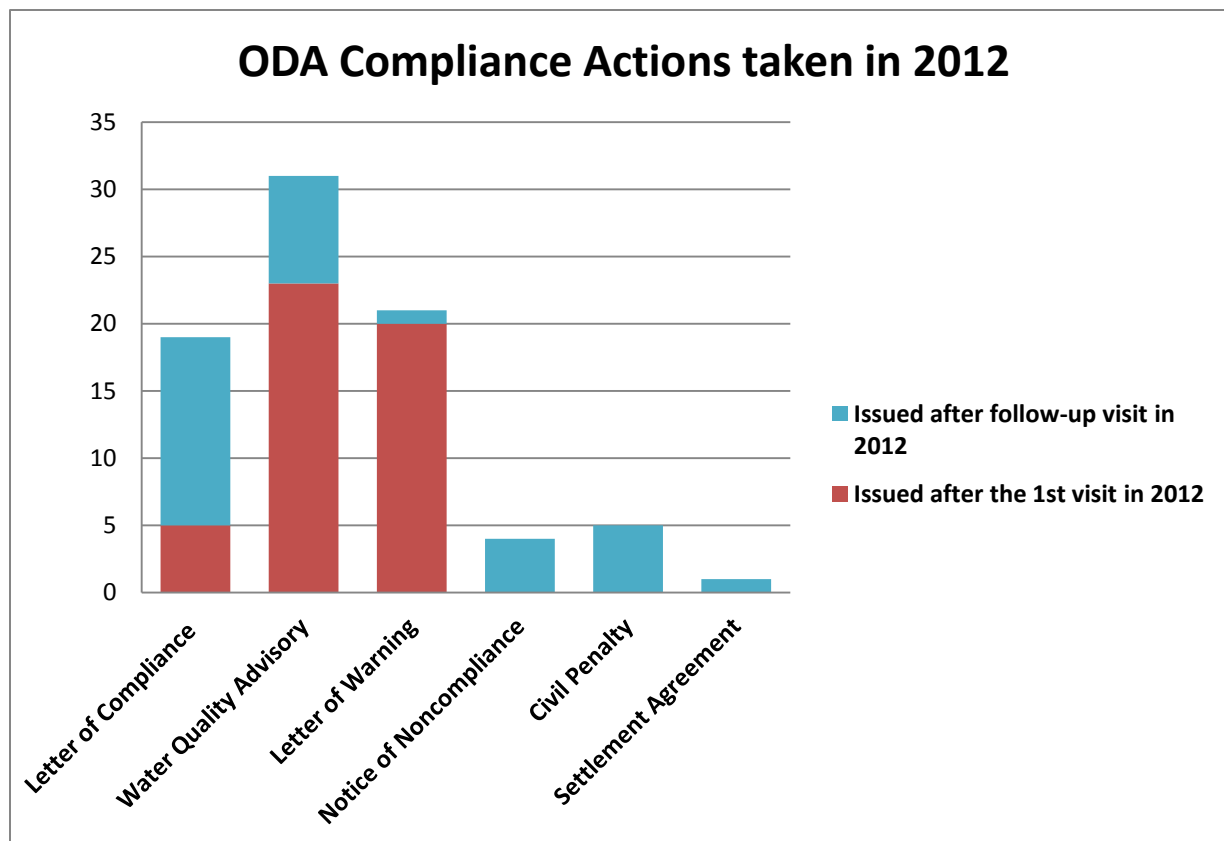


Figure 4: Total of 81 actions were taken in 2012. Four notices of noncompliance (an enforcement order), five civil penalties, and one settlement agreement were reached in 2012. In addition, 18 cases were either dropped due to lack of authority or referred to other agencies with jurisdiction, and 11 "fix it" letters (issued prior to advisory and warning letters) were issued.

Outreach and Education Summary

ODA provides funding to 45 Soil and Water Conservation Districts for implementation of water quality programs. One of the core components of the water quality program at ODA is its relationships with the SWCDs. ODA and the SWCDs negotiate scope of work agreements to clarify conservation projects to be completed. In Fiscal year 2011, the SWCDs used various venues to reach agricultural producers and rural land residents to promote conservation practices. Additional information on conservation practices is captured under funding partner section.

Table 1: SWCDs Outreach and Education Summary (2011-2012)

	# Events	Attendance or distribution
Presentations	213	7002
Demonstrations	24	598
Tours	73	1507
Displays	127	38457
Student Events	201	16171
Fact Sheets	62	20265
Newsletter articles	579	54641

Table 2: Other SWCD Activities

Number of Site Visits	2689
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Management area specific information on the SWCD activities is available upon request. Contact Koto Kishida at Oregon DEQ (503-229-6381)

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.

In 2012, the following was accomplished:

The Oregon Board of Forestry issued a finding of degradation of resources (water quality) and initiated rulemaking. Rule alternatives are currently being designed and analyzed.

4.4.3 Federal Forest Lands

DEQ/USFS MOU.

A final draft of the Memorandum of Understanding between U.S. Department of Agriculture-Forest Service's Pacific Northwest Region 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"*.

DEQ and the U.S. Forest Service are updating an existing memorandum of understanding regarding joint water quality roles and responsibilities between the two agencies. The new memorandum seeks to strengthen working relations and establish closer coordination, particularly regarding Total Maximum Daily Load water quality planning development and

implementation. This memorandum will also help minimize duplication of efforts. The current agreement expired on May 3, 2006, with the two agencies currently following terms of the old agreement.

The memorandum focuses on protection, restoration and maintenance of the physical, chemical and biological conditions of water that support beneficial uses (such as fishing, swimming, drinking water and other uses defined in Oregon Administrative Rules, Division 41) and outlines how DEQ and the USFS will work together.

This final draft memorandum seeks to:

- Help DEQ and the USFS collaborate on priorities and strategies using a watershed approach to protect and restore water quality on national forest lands.
- Foster and enhance communication, coordination and working relations between DEQ and USFS.
- Identify USFS and State of Oregon policies, programs and practices that ensure attainment of federal and state water quality laws and water quality standards that collectively support the USFS's assignment as a designated management agency for meeting federal Clean Water Act requirements on federal lands.
- Recognize, clarify and support DEQ and USFS roles and responsibilities specific to water quality.

This memorandum affects federal forest and rangelands managed by USFS in Oregon as well as people interested in water quality and fisheries. USFS will identify and implement appropriate limits, best management practices, measures and approaches to meet federal and state water quality laws and regulations.

Next year in 2013, as was done for the recent updating of the BLM and DEQ MOU <http://www.deq.state.or.us/wq/nonpoint/docs/USFSDEQMOU.pdf>, DEQ will be providing a 15-day public review and comment period. DEQ is not holding a public hearing about this memorandum and will not be issuing a response to comments. DEQ will be taking written comments on this final draft memorandum and will review and consider all comments received during the public comment period. Following this review, DEQ will modify the memorandum if necessary, approve and sign.

DEQ/BLM MOU.

DEQ and BLM water quality staff throughout 2012, reviewed the MOU and communicated to keep abreast of any major DEQ or BLM water quality issues, such as:

BLM Planning Update For Western Oregon Forests

In March 2012, the Bureau of Land Management (BLM) began the process of revising the Resource Management Plans (RMP) for 2.5 million acres of forested lands across six BLM Districts in western Oregon. BLM intends to revise six RMPs with an associated EIS for the Western Oregon Planning Area. BLM has begun the scoping process, to determine the scope of issues to be addressed by the environmental analysis, including alternatives, and the significant issues related to the planning process.

The Federal Land Policy and Management Act of 1976 (FLPMA) requires the development, maintenance, and revision of land use plans. Preparation of the RMPs and EIS will conform to federal and state management laws including, but not limited to the Endangered Species Act (ESA), the Clean Water Act, and the National Environmental Policy Act.

In 2012, the State of Oregon signed an MOU defining the process and scope of the state's involvement in developing an RMP that involves and receives better understating of how the state and federal clean water act and state rules and regulations are included in the RMP. DEQ, ODF, ODFW, and DSL directors signed the MOU. The key federal and state natural resources agencies are members of the Cooperating Agencies Advisory Group and technical workgroups such as riparian/aquatic resources.

BLM is on a schedule to have a final RMP and EIS completed by 2015.

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 annual 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 prioritized basins for specific NPS pollutants 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 twenty six (26) 319 funded projects in 2012 as identified in the 2012 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, 2012. Forty (40) 319-funded projects are open; including the twenty six (26) 2012 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 2012 as outlined in the 2012 319 RFP (**Appendix 3**). These priorities were used to prioritize the 2012 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 2012 319 Grant Funded Projects in Response to the RFP.

4.5.4 2012 319 Grant Funding Categories

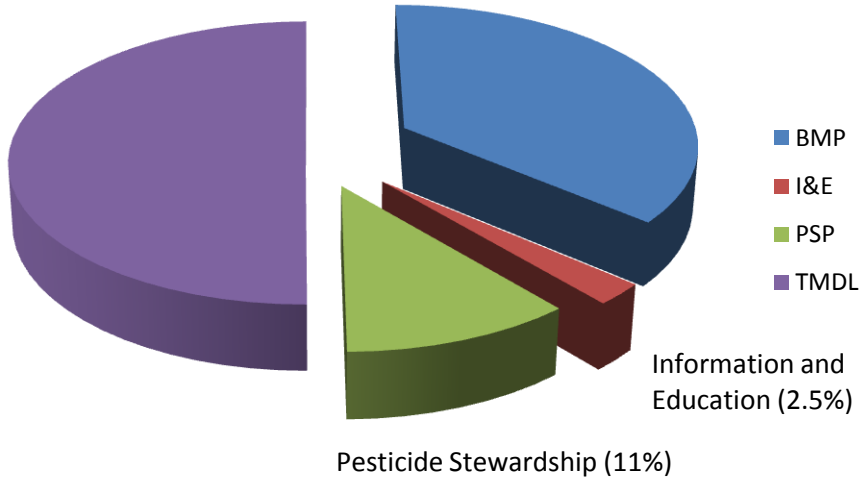
The following **Figure 2** identifies the 2012 – 319 funding categories and funded amounts. The **\$1,111,832** total funds for 2012 was divided in four areas of emphasis, as follows: BMP Implementation (20%), TMDL Implementation, (53%) Pesticide Stewardship Program, (3%) and Information and Education (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. 2012 Funding Categories

2012 FUNDING CATEGORIES, BUDGET: \$905,000

TMDL implementation (50%)

BMP (non-TMDL) (36%)



4.5.5 2012 -- 319 Grant Funded Projects

The following **Tables 6** identifies the projects funded in response to the 2012 RFP:

Table 6. 319 Projects Funded in Response to the 2012 RFP by Region and Basin/Subbasin

REGION	PROJECT NAME	BMPS	PARAMETERS OF CONCERN	WATERSHED	319 BUDGET
EASTERN	Salmon-Safe Certification of Sweet Cherries in Umatilla County and Wasco County	Watershed Education	Horticulture pollutants	Umatilla / Wasco	\$55,000
EASTERN	Milton-Freewater Levee Setback and Habitat Enhancements	Hydromodification	Habitat	Walla Walla	\$96,000
EASTERN	Stream Simulation Trailer	Information And Education	All NPS	Grande Ronde	\$2,500
EASTERN	Filter Strip Water Quality Improvement	Implementation	Nutrients	Owyhee	\$25,300
EASTERN	Owyhee River Improvement Project - Phase 3	Planning	Nutrients	Owyhee	\$38,000
EASTERN	Channel Restoration Bioassessment in Eastern Oregon	Bio-Assessment	Temperature And Fish Habitat	Eastern Oregon	\$44,200
BUDGET					\$261,000
NORTHWEST	Upper Nehalem Riparian Restoration	TMDL Implementation	Temperature	Upper Nehalem	\$52,509
NORTHWEST	Tualatin Pesticide Collection Event	Pesticide Stewardship	Organics	Tualatin	\$28,897
NORTHWEST	Backyard Planting Program Yr 10	TMDL Implementation	Temperature/Bacteria /Sediment	Tillamook	\$53,115
NORTHWEST	South Fork Nehalem Dairy Farm Riparian Enhancement	Riparian Restoration	Invasive Species	Lower Nehalem	\$17,434
NORTHWEST	Tillamook SWCD 2012 Stream Enhancement and Restoration	TMDL Implementation	Temperature/Bacteria/ Sediment	Tillamook	\$35,925
NORTHWEST	Nestucca Riparian Restoration	TMDL Implementation	Invasive Species	Nestucca-Neskowin	\$53,115
NORTHWEST	Connecting People to Water Quality - Little Actions Make a Big Difference	Watershed Education	Temperature /Bacteria/Sediment	Clackamas	\$20,000
BUDGET					\$260,995

Table 6. 319 Projects Funded in Response to the 2012 RFP by Region and Basin/Subbasin (Cont.)

REGION	PROJECT NAME	BMPS	PARAMETERS OF CONCERN	WATERSHED	319 BUDGET
WESTERN	Morgan Creek Assessment and Restoration Project	TMDL Implementation	Temperature/Habitat	Morgan Creek	\$45,000
WESTERN	SWVGWMA Partners and Stakeholders Action Project	GWMA plan implementation	Nutrients	S. Willamette Valley Ground-water management area	\$43,471
WESTERN	Mid-Coast BMP Implementation Project	Developing And Implementation	Nutrients	Mid-Coast	\$45,420
WESTERN	Stream Smart: Bear Creek Clean Water Project Marketing Campaign	TMDL Implementation	All NPS	Bear Creek	\$18,900
WESTERN	Little Butte Creek Water Quality – Frey Phase	TMDL Implementation	Bacteria/Nutrients /Temperature	Butte Creek	\$20,000
WESTERN	Little Applegate Sig POD Measuring Device Project	In Stream Monitoring	Temperature/Habitat	Applegate	\$7,000
WESTERN	Nitrogen Sources in a Tidally-Restricted Estuary	Planning	Nutrients/Algal Growth	Curry	\$13,419
WESTERN	Garrison Lake Septic Revitalization Project	TMDL Implementation	Bacteria/Nutrients	Garrison Lake	\$7,186
WESTERN	S. Fork Coquille River Action Plan	planning	Temperature/Nutrients	Coquille	\$14,850
WESTERN	Santiam Calapooia WQ Monitoring Project	TMDL Implementation	Temperature/Bacteria Sediment	Santiam-Calapooia	\$45,754
BUDGET					\$261,000
STATEWIDE	ODF RipStream: Downstream temperature response to harvest	TMDL Implementation	Temperature	North-Mid range	\$30,000
STATEWIDE	Willamette Model Watershed Riparian Revegetation	TMDL Implementation	Temperature	Willamette	\$20,000
STATEWIDE	PSP (Pesticide Stewardship Partnership)	Pesticide Stewardship	Organics	Willamette	\$72,005
BUDGET					\$122,005
TOTAL BUDGET					\$905,000

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 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 three (3) 319 funded projects.

The following **Table 8** identifies the total **2012** load reduction estimates by pollutant for three (3) 319 funded projects are as follows: **6,095 Pounds/Year Nitrogen Reduction, 2,136 Pounds/Year Phosphorous Reduction, and 1,295 Tons/Year Sedimentation-Siltation Reduction**. Load reduction estimates were included in the EPA database GRTS (Grants Reporting and Tracking System).

Note: The estimates reported in this table were part of the annual report to EPA for Load Reduction Estimates for the year 2012.

Table 7. Estimates of NPS Load Reductions of Selected 2012 -- 319 Funded Projects.

.2012 NPS PROJECTS – ESTIMATED NPS LOAD REDUCTION (USING STEPL)				
PROJECT NAME	BASIN	NITROGEN REDUCTION POUNDS/YEAR	PHOSPHOROUS REDUCTION POUNDS/YEAR	SEDIMENTATION- SILTATION REDUCTION TONS/YEAR
Milton-Freewater Levee Setback and Habitat Enhancements	WALLA WALLA	137	47	35
Upper Nehalem Riparian Restoration	TILLAMOOK	2166	713	198
Nestucca Riparian Restoration	TILLAMOOK	3791	1377	1064
ESTIMATED LOAD REDUCTION		6,095	2,136	1,297

The following accomplishments occurred in 2012:

- DEQ’s 319 Grants Coordinator received additional GRTS load reduction training from EPA.
- DEQ completed load reductions estimates for three initiated (3) 2012 projects.
- Total load reduction estimates by pollutant are as follows:
 - **6,095** Pounds/Year Nitrogen Reduction
 - **2,136** Pounds/Year Phosphorous Reduction
 - **1,297** 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. The Watershed Approach will not replace the development and implementation of TMDLs. But, it is envisioned that the Watershed Approach process will help local partners when they 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 Watershed Approach process consist of two primary elements: a basin status report and a basin action plan. Stakeholder involvement is also a critical component of the Watershed Approach.

DEQ completed its first three basin status/action plans (links below) as part of this project's pilot year. 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 existing water quality problems.

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

[Deschutes Water Quality Status/Action Plan - Summary](#)
[Deschutes Water Quality Status/Action Plan - Full Report](#)

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

DEQ has been working on developing additional basin status/action plans. The following Water Quality Status/Action Plans are nearly completed::

- Clackamas and Sandy River Basin
- South Coast Basin
- Powder/Burnt

DEQ has begun working on Water Quality Status/Action Plans for the following:

- Umatilla Basin
- Tualatin SubBasin
- Upper Willamette Area

In addition to the annual planning process taken by DEQ regional and Headquarter managers, the watershed approach provides an opportunity to identify areas in need of basin scale TMDLs. In basins where Watershed Approach 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 findings during Watershed Approach will be considered when managers develop schedules for 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. This information could be used to adaptively manage 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
- 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.

This approach will 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.

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.

Appendices

Appendix 1. 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 Project	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 Aquatic	2007	ER	Nature Conservancy	\$119,214.00	\$119,214.00	\$0.00	CLOSED	Dombrowski, Tonya	31-Mar-11
W07715	Tillamook SWCD 2007 Stream Enhancement	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 Maint.	2007	NWR	Nestucca Neskowin Watershed Council	\$60,000.00	\$60,000.00	\$0.00	CLOSED	Apple, Bruce	31-Dec-08
W07717	Medford Sports & Community Park Urban Renewal	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

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
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	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 Project	2008	WR	City of Salem	\$3,401.60	\$3,401.60	\$0.00	CLOSED	Gramlich, Nancy	30-Sep-10
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

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
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 Effect Monitorng & 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
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

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
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 Creeks 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 & Restoration	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	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
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

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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
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

PROJECT NO.	PROJECT TITLE	YEAR	REGION	CONTRACT WITH	PROJECT BUDGET	EXPEND-ITURES	BALANCE	STATUS	PROJECT MGR	END DATE
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 Maintenance	2011	NWR	Nestucca Neskowin Watershed Council	\$0.00	\$ -----	\$55,000.00	OPEN	Apple, Bruce	31-Dec-12
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	

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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 2012

Note: The identification of priority basins (as listed below) did 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 were 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.

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)

BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS/ 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
<p>John Day Basin</p> <p>Channel and Riparian Restoration</p> <p>Effectiveness Monitoring</p>	<p>Lower John Day, Middle Fork John Day, North Fork John Day, Upper John Day</p>	<p>TMDL in progress</p>	<p>Temperature, Bacteria, Biological Criteria, Dissolved Oxygen, and Sediment</p>	<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>

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)

BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS/ 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Mid-Columbia – Hood Subbasin Channel and Riparian Restoration Effectiveness Monitoring	Western Hood Subbasin, 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>

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)

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.

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)

BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS/ 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Malheur River Basin Changes in Agricultural Tillage Practices	Lower Malheur Subbasin	TMDL in progress	Pesticides Nutrients	<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>

EASTERN REGION PROJECT PRIORITIES: TMDLS/303(d)

BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS/ 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
Walla Walla River, Mid Columbia Basin Upstream Levee Set back / Removal Assistance Opportunities	Walla Walla River	TMDL approved by EPA (Sept 2005)	Temperature	<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>

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.

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.

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION

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>

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.

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.)

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.

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.

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.

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.

WESTERN REGION PROJECT PRIORITIES: TMDL DEVELOPMENT AND IMPLEMENTATION

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.

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.

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.

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>

NORTHWEST REGION PROJECT PRIORITIES: DRINKING WATER SOURCE PROTECTION (DWSP)

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.

NORTHWEST REGION PROJECT PRIORITIES: TMDLS/303(D)

BASIN / PRIORITY ACTIVITY	SPECIFIC LOCATION	STATUS: TMDLS / 303(d)	WATER QUALITY PROBLEM	PROJECT NEED
All NWR Basins/TMDL Implementation	Clackamas River Lower Willamette River Molalla River North Coast Tillamook Tualatin	TMDLs Completed	Temperature Bacteria Dissolved Oxygen Nutrients (Phosphorus) Sediment Toxics (Mercury)	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).
All NWR Basins/ TMDL Implementation	Clackamas, Lower Willamette, North Coast, Tillamook, Tualatin,	TMDLs Completed Implement ation 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).

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.

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. 2013-319 Grant Request for Proposals

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
ER1236	Eastern Region	John Day	John Day Basin Trust	Upper South Fork John Day River Monitoring Program	\$60,000	\$51,035	\$111,035

PROJECT NUMBER	REGION	BASIN	APPLICANT	TITLE	PROPOSED 319 BUDGET	MATCH	TOTAL
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
NWR1242	Western Region	Portland	DEPAVE	DEPAVE 2013	\$17,933	\$38,525	\$56,458

PROJECT NUMBER	REGION	BASIN	APPLICANT	TITLE	PROPOSED 319 BUDGET	MATCH	TOTAL
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 2013 RFP. To date DEQ has not finalized the list of proposals and the amounts.

