DEQ Water Quality Division

2008

Oregon Nonpoint Source Pollution Program 2008 Annual Report

As required by the
Federal Clean Water Act
Submitted to EPA Region 10

State of Oregon
Department of Environmental Quality
February 26, 2009

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Oregon Nonpoint Source Pollution Program 2008 Annual Report

State of Oregon
Department of Environmental Quality
Water Quality Division

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1. Introduction

This program update report is written in response to section 319 (h) (8) and (11) of the Clean Water Act (33 USC 1329). The report documents the activities and accomplishments of the State of Oregon in general and the Oregon Department of Environmental Quality (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 2008. Like many other years in the Oregon program, this period was productive. As described below, Oregon is making significant progress toward meeting the substantial challenges presented by NPS water pollution.

The State program continues to find innovative, cooperative, community-based, methods to improve water quality and enhance watersheds. Some of the activities and accomplishments for 2008 were:

1. Distributed over $1.3 million dollars in nonpoint source grants to projects.
2. DEQ received approval from EPA on the Molalla-Pudding Basins and the Rogue River Basin TMDLs.
3. Developed the DEQ NPS Headquarter (HQ) Priority Workplan for 2008-2009 that identifies the priorities for DEQ HQ NPS staff.
4. DEQ began a Toxics Monitoring Project of surface waters in the Willamette Basin and for drinking water throughout the State that will provide information on toxic chemicals in these watersheds.
5. DEQ is in the process of revising our human health criteria using a fish consumption rate of 175 g/d (or about 23 fishmeals per month) which will result in more stringent human health criteria.
6. DEQ convened an internal Sediment Work Group to discuss strategies to address sedimentation.
7. Facilitated and participated in the Forestland Conversions Workgroup that is composed of seven state agencies to help improve coordination amongst the state agencies on forestlands being converted to other uses.
8. DEQ provided comments on BLM's Western Oregon Plan Revisions (WOPR); worked with BLM and USFS in their preparation of their 5-Year Progress report; and began revisions to DEQ/BLM and DEQ/USFS MOU.

9. The Water Quality Pesticide Management team (WQPMT) was formed and the Oregon Department of Agriculture finalized the Oregon Pesticide Management Plan (PMP) and submitted it to EPA for approval.
10. DEQ and Oregon Department of Forestry worked on the RipStream project that is a coordinated monitoring effort to evaluate the effectiveness of Oregon Forest Practices Act (FPA) rules and strategies for meeting temperature water quality standards.
11. DEQ participated in creating the Healthy Forests Reserve Program in the state of Oregon that will help set aside private forests for clean water and wildlife habitat through 10 year, 30 year, and permanent easements.
12. In the past two years, the SRF Program provided loans of **$6,610,150** towards NPS water quality improvements.

State of Oregon Water Quality Program

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

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

1. Water quality standards that establish beneficial uses for the waterbody as well as maximum levels of pollutants that can be in the waterbody without adversely affecting the designated use.
2. Permits for point sources, including storm water, discharging pollutants to waters of the state.
3. Water quality 401 certifications for hydroelectric projects and dredge and fill activities.
4. Nonpoint source water quality management plans 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 Total Maximum Daily Loads (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. Education and outreach activities to educate the public about the importance of NPS pollution and its impact in water quality.
10. Facility or activity-specific compliance assessment, a pilot NPS effectiveness monitoring effort, technical assistance, and enforcement as warranted ensuring State water quality requirements are met.

Partners

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

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

State Agencies

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

Federal Agencies

- U.S. Forest Service
- U.S. Bureau of Land Management
- U.S. Fish and Wildlife Service
- US Army Corps of Engineers (USACE)

2. Oregon's Water Resources

With it's nearly 97,000 square miles, Oregon ranks as the tenth largest state in the nation. The Oregon landscape is diverse and surface water resources are a major feature of Oregon. The state has over 100,000 miles of rivers, 6,200 lakes, 9 major estuaries, and over 360 miles of coastline.

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.

3. Oregon's Nonpoint Source Program

Description of NPS Program

Oregon's NPS Program is intended to control or prevent non-point 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.

The NPS program relies on the federal Clean Water Act; the state's water quality standards; the TMDL rule and other rules and regulations that control both NPS and stormwater pollution; the CZARA Section 6217 Coastal NPS Control Program; the National Estuary Program; the Forest Practices Act; the Oregon Plan for Salmon and Watersheds; the Agricultural Water Quality Act; the State Land Use Planning Program, specifically Goal 5 (protection of riparian and wetlands) and Goal 6 (protection of air, water and land resources); and drinking water and groundwater protection programs.

The NPS Program Strategy activities are designed to coordinate with or provide direct assistance to other water quality protection or natural resource management programs at DEQ and in other local, state, and federal agencies. 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.

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

to consider GWMA/basin specific conditions and develop local priorities and solution for local problems to achieve water quality improvements.

Program Strategy

Prioritization of NPS Activities

Prioritization of program activities was important to best use our limited resources for reducing NPS pollution and improving water quality. The Oregon 2007 Nonpoint Source Pollution Program Annual Report described our regional reviews of nonpoint source issues and stated that this information would be turned into a work plan. Work plans were developed using information from DEQ NPS headquarters (HQ) and regional staff in nonpoint source, stormwater, 319-Grant, groundwater, and drinking water programs. In addition, recommendations from a Water Quality Program Retreat and a long-term water quality program planning effort were used to help prioritize work. The following criteria were used to prioritize activities for 2008:

a. Actions that are measurable and achievable – clear environmental result.
b. Actions that act as a catalyst break us (program/agency) from stagnation and move the program forward.
c. Actions that can guide other program efforts such as setting policy or developing tools.
d. Actions that enable the program to leverage internal and external resources.
e. Actions that invest in and or develop political will and community support.
f. Actions that develop internal process to increase efficiency and consistency.

This prioritization process will focus DEQ's NPS efforts in 2009 on agricultural, Federal, state, and private forestry land use activities. In addition, some effort will go toward urban land use effects.

4. Update of All NPS Program Efforts

Nonpoint Source Activities and Accomplishments in 2008

Performance Partnership Agreement

A portion of DEQ's nonpoint source program activities are funded through the EPA and DEQ Performance Partnership Agreement (PPG). This funding supports program management, administration, TMDL development and implementation, mainstem Columbia water quality management, and agency coordination in watersheds with impaired waters. These funds support ~eight positions within DEQ that were involved in the following projects:

- TMDL development for the Rogue, Klamath, John Day, NE Oregon, Malheur, Mid-Coast, and Miles Creeks Basins.
- TMDL implementation for the Willamette Basin.
- Statewide coordination between the Nonpoint Source Program and TMDL implementation.
- Review and update Oregon's 319 grant guidelines to include EPA's NPS Guidance nine key points criteria.
- Distribute 319 grants to fund project proposals to Oregon's priority basins based on TMDL development and implementation, and GWMAs.
- 319 Grant administration.
- Enter GRTS 319 project tracking data by national deadlines, including load reductions as available.
- DEQ coordination with DLCD on CZARA.
- DEQ coordination with state and federal natural resource managers on meeting water quality goals and objectives.

Total Maximum Daily Loads (TMDLs)

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

Federal law requires that streams, rivers, lakes, and estuaries that appear on the 303(d) list have a TMDL developed in order to meet state water quality standards. In most cases, rivers and streams receive discharges from both point and nonpoint sources of pollution.

Watershed-Based Plans

EPA encourages Oregon to use TMDL's and TMDL Implementation Plans to extent possible to meet the nine key elements. DEQ's comprehensive watershed approach for protecting water quality includes developing TMDLs for both point and nonpoint sources. These TMDL plans aid DEQ in prioritizing and directing 319-project funding to where implementation work is needed. DEQ is committed to having 1,153 federally approved TMDLs by the end of 2010.

<u>TMDLs are developed using the following general process:</u>

1. Reviews existing data and monitors to determine what pollutant is causing water quality problems and in what amounts it is entering the water. The review and monitoring attempts to determine how much of the pollution comes from point

sources, nonpoint pollution, such as surface runoff, and how much is naturally occurring.

2. Uses techniques such as computer modeling to determine what effect the pollution is having on the stream or river, and how much of the pollutant can be discharged without exceeding water quality standards.

3. Uses this information to establish permit limits on the amount of pollutant each pipe can discharge and limits on nonpoint sources that are controlled through TMDL implementation plans.

TMDL implementation is handled through a variety of mechanisms including AgWQMA plans, Forest Practices Act, Federal/State MOUs, NPDES permits, 401 certification, and TMDL implementation plans developed by Designated Management Agencies (DMAs) or other entities responsible for pollution not addressed by permit or the Oregon Revised Statutes (ORS). These mechanisms are used to implement the TMDL as outlined in the TMDL Water Quality Management Plan to restore streams and rivers to meet water quality standards.

TMDL Implementation Process Timeline

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

Table 1. TMDL Implementation Requirements to DMAs

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

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

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

Approved TMDLs

The following table is the TMDLS approved by EPA from May 2000 through December 2008:

Table 2. TMDLs approved by EPA from May 2000 through December 2008

Oregon TMDLs Approved by EPA - May 2000 through December 2008					
Waterbody (Basin)	**Water Quality Concern Addressed**	**TMDL Parameters**	**USEPA Approval Date**	**Completed TMDL Segments by Basin**	**Completed TMDL Segments (cumulative)**
Upper Grande Ronde Subbasin (Grande Ronde)	Temperature, pH, Algae, DO, Sedimentation	Temperature, Sediment, Nitrogen, Phosphorous	05/03/2000	73	73
Upper South Fork Coquille River (South Coast)	Temperature	Temperature	03/23/2001	4	77
Umatilla Basin (Umatilla)	Temperature, pH, Sedimentation, Turbidity, Aquatic Weeds, Algae	Temperature, pH, Sedimentation, Turbidity, Aquatic Weeds, Algae	05/09/2001	45	122
Tillamook Watershed (North Coast)	Temperature, Bacteria	Temperature, Bacteria	07/31/2001	39	161
Tualatin Subbasin (Willamette)	Temperature, Bacteria, DO, Algae, pH	Temperature, Bacteria, DO, Settleable Volatile Solids, Ammonia, Chlorophyll a, pH, Phosphorus	08/07/2001	102	263
Little River Watershed (North Umpqua)	Temperature, pH, Sedimentation	Temperature, pH, Sediment	01/29/2002	16	279
Western Hood Subbasin (Hood)	Temperature	Temperature	01/30/2002	7	286
Nestucca Bay Watershed (North Coast)	Temperature, Bacteria, Sediment	Temperature, Bacteria, Sediment	05/13/2002	6	292

Oregon TMDLs Approved by EPA - May 2000 through December 2008 (Cont.)					
Waterbody (Basin)	**Water Quality Concern Addressed**	**TMDL Parameters**	**USEPA Approval Date**	**Completed TMDL Segments by Basin**	**Completed TMDL Segments (cumulative)**
Lower Sucker Creek Watershed (Illinois)	Temperature	Temperature	05/30/2002	3	295
Lobster Creek Watershed (Rogue)	Temperature	Temperature	06/13/2002	3	298
Upper Klamath Lake Drainage (Klamath)	Temperature, pH, DO, Chlorophyll a	Temperature, pH, DO, Chlorophyll a	08/07/2002	32	330
Lower Columbia River (Lower Columbia)	Total Dissolved Gas	Total Dissolved Gas	11/18/2002	7	337
North Coast Subbasins (North Coast)	Temperature, Bacteria	Temperature, Bacteria	08/20/2003	42	379
Alvord Lake Subbasin (Malheur Lake)	Temperature, Dissolved Oxygen	Temperature, Dissolved Oxygen	02/11/2004	7	386
Applegate Subbasin (Rogue)	Temperature, Sediment	Temperature, Sediment	02/11/2004	14	400
Snake River-Hells Canyon Reach (Snake River)	Temperature, Total Dissolved Gas, DDT, DDE, DDD, Dieldrin	Temperature, Total Dissolved Gas, DDT, DDE, DDD, Dieldrin	03/01/2004	15	415
Snake River-Hells Canyon Reach (Snake River)	Phosphorus, Sediment, Dissolved Oxygen	Temperature, Sediment, Dissolved Oxygen	09/09/2004	5	420
Sandy Basin (Sandy)	Temperature, Bacteria	Temperature, Bacteria	04/14/2005	8	428
Walla Walla Subbasin (Walla Walla)	Temperature	Temperature	09/29/2005	4	432

Oregon TMDLs Approved by EPA - May 2000 through December 2008 (Cont.)					
Waterbody (Basin)	**Water Quality Concern Addressed**	**TMDL Parameters**	**USEPA Approval Date**	**Completed TMDL Segments by Basin**	**Completed TMDL Segments (cumulative)**
Willamette Basin (Willamette)	Temperature, Bacteria, Mercury, Dissolved Oxygen, Dieldrin, DDT, Turbidity	Temperature, Bacteria, Mercury, Dissolved Oxygen, Dieldrin, DDT, Turbidity	09/29/2006	207	639
Willow Creek Subbasin (Umatilla)	Temperature, pH, bacteria	Temperature, pH (Nutrients), and Bacteria	02/19/2007	4	643
Umpqua Basin (Umpqua)	Temperature, pH, Bacteria, DO, Aquatic Weeds, Chlorophyll a, Biological Criteria	Temperature, Nutrients, and Bacteria	04/12/2007	186	829
Tenmile Watershed (South Coast)	Aquatic Weeds, Algae	Nutrients, Sedimentation, and Invasive Weed Management	05/31/2007	2	831
Bear Creek (Rogue)	Temperature, Bacteria, Sedimentation	Temperature, Bacteria, Sedimentation	10/2/2007	32	863
Rogue Basin (Rogue)	Temperature, Bacteria	Temperature, Bacteria	12/29/2008	109	972
Molalla-Pudding (Willamette)	Temperature, Bacteria, Pesticides, Nitrate, Iron	Temperature, Bacteria, Pesticides, Nitrate, Iron	12/31/2008	26	998

Table 3. TMDL Development Status

TMDL Status -- EPA Approval				
Year	**TMDL's Approved by EPA**	**# TMDL's Submitted to EPA**	**# TMDL's Required Yet To Be Submitted to EPA**	**TMDL's Required to be Approved by EPA, Cumulative Totals**
1991	**8**			
1992	**20**			
1993	**16**			
1994	**13**			
1995	**--**			
1996	**5**			
1997	**--**			
1998	**10**			
1999	**1**	**1**		
2000	**73**	**73**		
2001	**190**	**190**		
2002	**74**	**74**		
2003	**42**	**42**		
2004	**41**	**41**		**310**
2005	**12**	**12**		
2006	**207**	**207**		
2007	**224**	**224**		
2008	**135**	**150**		**982**
2009				
2010			**140**	**1153**

DEQ completed and received EPA approval on TMDLs for the Rogue Basin and the Molalla-Pudding in the Willamette Basin in 2008.

Molalla Pudding TMDL

In 2008, DEQ prepared and submitted to EPA the Molalla Pudding TMDL. EPA approved the TMDL on December 31, 2008. The Molalla-Pudding TMDLs have been developed over a course of several years and have involved review by stakeholders throughout the process.

Pollutants Being Addressed by the Molalla Pudding TMDL

The Molalla-Pudding Subbasin 303(d) parameters addressed by the TMDL were:

- Temperature
- Bacteria
- Arsenic
- Manganese
- Iron
- Dieldrin
- Chlordane
- DDT
- Nitrate

Proposed Management Strategies

The management measures to meet the TMDL load and wasteload allocations differ depending on the source of the pollutant. The following table describes management measures, organized by categories of pollutant sources, which may be used to meet the TMDL load allocations and wasteload allocations.

Table 4. Pollutant Sources and Example Management Strategies to Address TMDL Pollutants

POLLUTANT SOURCES AND EXAMPLE MANAGEMENT STRATEGIES TO ADDRESS TMDL POLLUTANTS.	
Pollutant	**General Strategies**
Temperature	Increase effective shade through riparian restoration; restore natural stream channel hydrology; Increase stream flow.
Bacteria	Reduce sediment delivered to streams by various means including riparian protection, erosion control and stormwater control and treatment; low impact development; various agriculture practices.
Pesticides (DDT, Dieldrin, chlordane)	Reduce sediment delivered to streams by various means including riparian protection, erosion control and stormwater control and treatment, low impact development.
Iron	Reduce sediment delivered to streams by various means including riparian protection, erosion control and stormwater control and treatment; low impact development.
Nitrate	Manage fertilization and irrigation to reduce excessive addition of nitrate to groundwater; maintain septic systems; Increase stream flow.

Rogue River Basin TMDL

In 2008, DEQ prepared and submitted to EPA the Rogue River Basin TMDL. EPA approved the TMDL on December 29, 2008. The Rogue River Basin TMDL has been developed over a course of several years and has involved review by stakeholders throughout the process.

Pollutants Being Addressed by the Rogue River Basin TMDL

The following Rogue River basin 303(d) parameters are addressed in this TMDL:

- Temperature
- Bacteria

Proposed Management Strategies

The management measures to meet the TMDL load and wasteload allocations differ depending on the source of the pollutant. The following table describes management measures, organized by categories of pollutant sources, which may be used to meet the TMDL load allocations and wasteload allocations.

Table 5. Pollutant Sources and Example Management Strategies to Address TMDL Pollutants

POLLUTANT SOURCES AND EXAMPLE MANAGEMENT STRATEGIES TO ADDRESS TMDL POLLUTANTS	
Pollutant	**General Strategies**
Temperature	Increase effective shade through riparian restoration; restore natural stream channel hydrology; Increase stream flow.
Bacteria	Reduce sediment delivered to streams by various means including riparian protection, erosion control and stormwater control and treatment; low impact development; various agriculture practices.

Standards

Introduction

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

Toxic Chemicals

In May of 2004, the Oregon Environmental Quality Commission adopted new water quality criteria for over 150 toxic pollutants and submitted these criteria to the US

Environmental Protection Agency (EPA) for approval. Many of these criteria are not yet effective, as they have not yet been approved by EPA. In February of 2005, Oregon Department of Environmental Quality began using those new criteria that are more stringent than the previous criteria for NPDES permitting.

EPA is under a consent order to approve the 2004 criteria by June 2009. However, we do not know whether EPA will take action on the water quality criteria adopted in May 2004.

Fish Consumption Rates In Human Health Criteria

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

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

DEQ is in the process of revising our human health criteria based on a fish consumption rate of 175 g/d (or about 23 fishmeals per month). Studies show that the Northwest Tribes eat substantially more fish than the national average. An increase in the fish consumption rate will result in more stringent human health criteria.

DEQ has begun a rulemaking process and expect to be ready for EQC adoption of revised criteria in mid-2010.

Temperature Criteria

DEQ issued a Temperature Water Quality Standard Implementation Internal Management Directive (IMD) in April 2008. This IMD is a description on how to implement the 2007 revised temperature standard.

Sedimentation

DEQ convened an internal Sediment Work Group to discuss sedimentation issues. The group includes DEQ staff from Headquarters and Regional offices. The group is discussing strategies on how to implement Oregon's narrative sediment standard.

Implementation

Water Quality Issues on Agricultural Lands

Agricultural Water Quality Management Program

Although there is not adequate information available to determine whether water quality on agricultural lands is improving overall, there are documented individual local successes such as establishing partnerships and improving water quality. Based on the water quality analyses DEQ has done for the integrated report, GWMA, and TMDLs, as well as visual inspections of agricultural landscape suggest that water quality is impaired in many areas on agricultural lands.

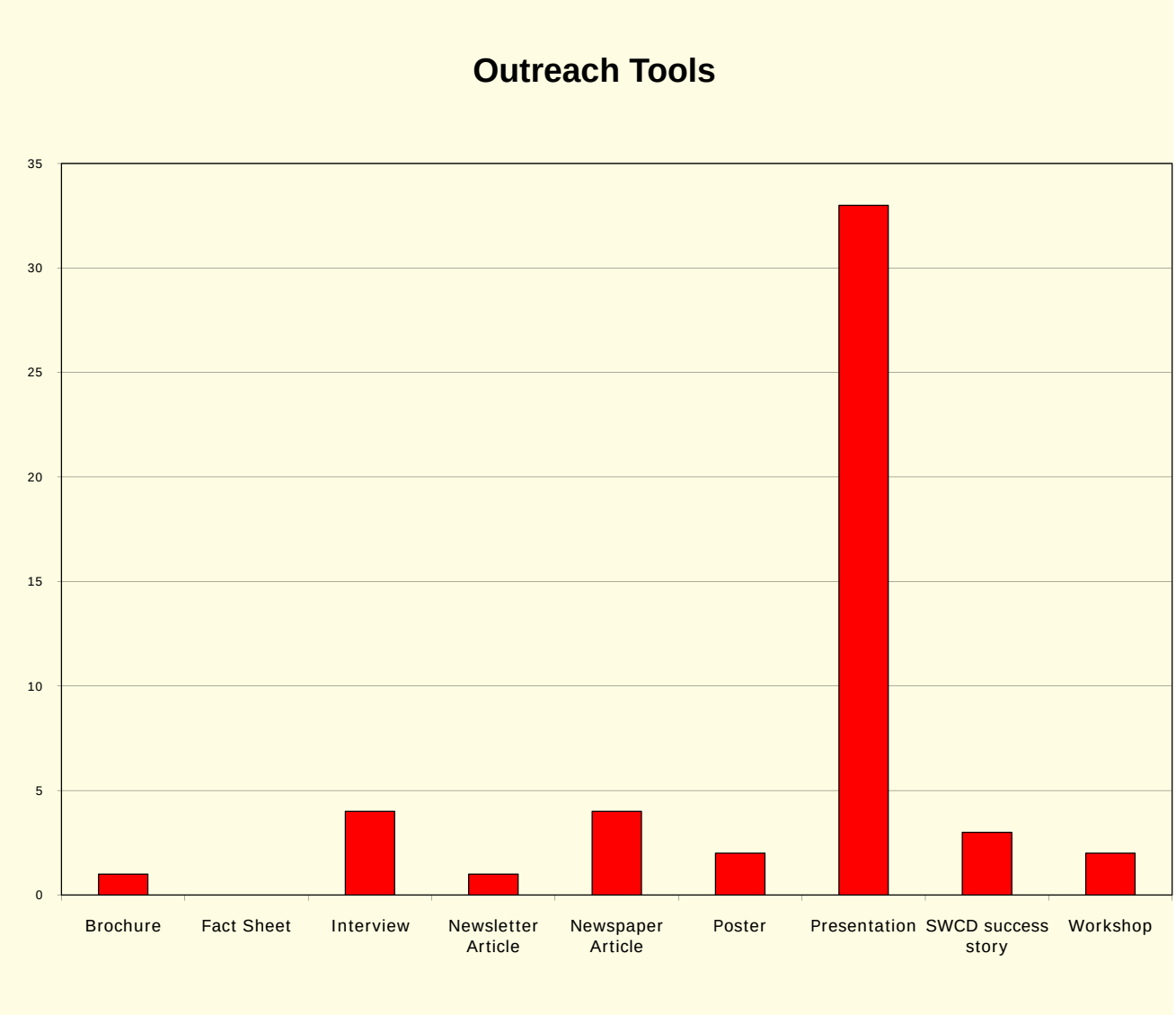
The process developed in the Agricultural Water Quality Management Program (AgWQMP) is the main regulatory mechanism to prevent or reduce nonpoint source pollution and meet WQ Standards, TMDL load allocations, and to implement GWMA action plans affected by agricultural lands. In addition to working with ODA to ensure adequacy of the AgWQMP, DEQ works with agencies such as ODA, NRCS, and FSA as well as with SWCD, Watershed Councils, Irrigation and Drainage districts, and nonprofit organizations to protect and restore water quality affected by agricultural lands.

ODA and SWCDs are DMA's and are responsible for meeting the water quality standards and TMDL load allocations on agricultural and rural lands. ODA's AgWQMP is the vehicle for developing and implementing agricultural pollution prevention and control programs to protect the quality of Oregon's waters. The AgWQMP has evolved in response to water quality programs and requirements under various state and federal laws, such as the Clean Water Act and Senate Bill 1010, passed in 1993 by the Oregon legislature.

In addition, ODA's Soil and Water Conservation District (SWCD) Program provides support, technical assistance, and administrative oversight to Oregon's 45 local SWCDs. Most of them have contractual relationships with ODA to act as a local management agency (LMA) to meet water quality goals on agricultural lands.

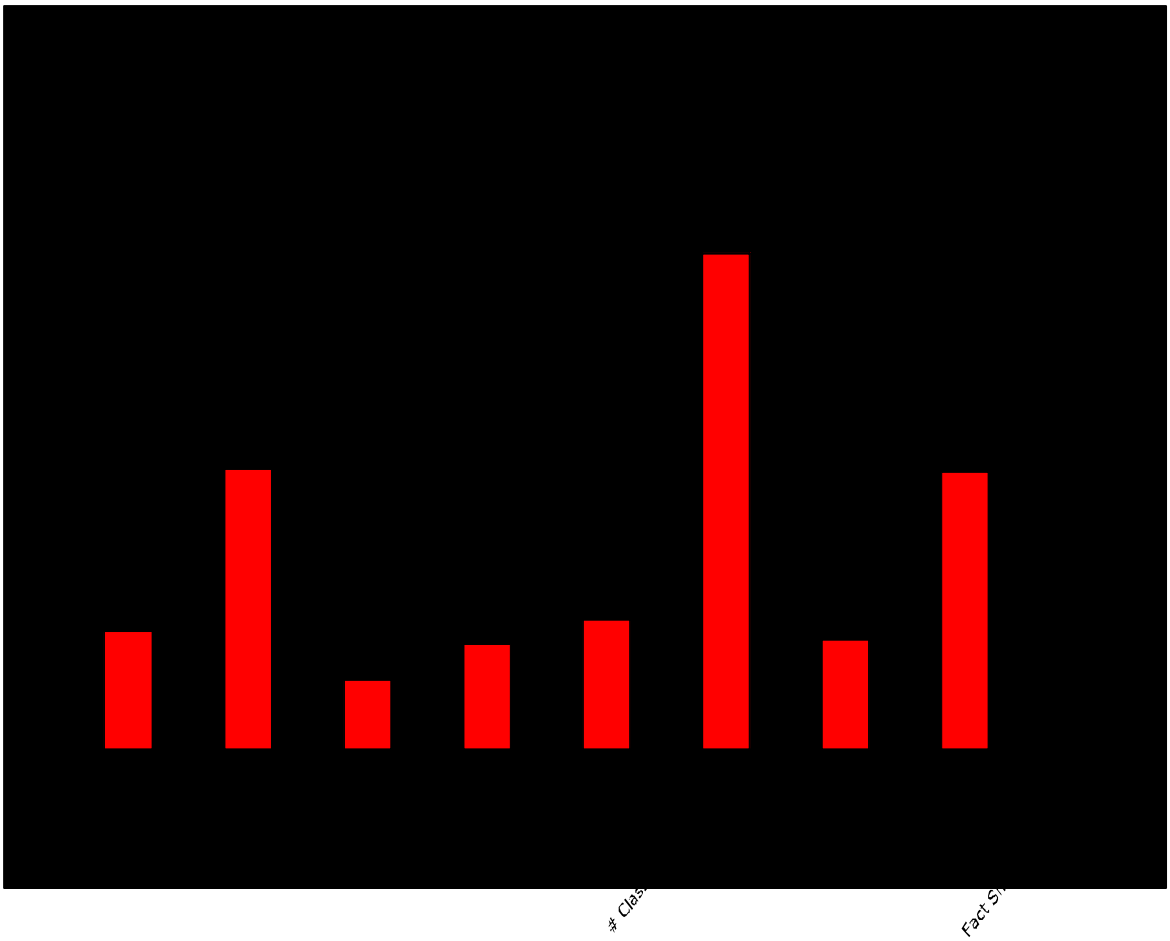
In 2008, ODA and SWCDs used various venues to reach agricultural producers and rural land residents to promote conservation practices. The types of activities and topics are shown below.

Figure 1. Outreach Tools



Forty-five Soil and Water Conservation Districts that are ODA's local management agencies used various methods to reach landowners and operators.

Figure 2. Soil and Water Conservation District – Number of Activities



DEQ's Total Maximum Daily Loads (TMDL) and Nonpoint Source Program managers agreed that it was important to identify and document interagency coordination issues as well as water quality issues on agricultural lands so that DEQ could better communicate water quality issues to ODA. Surveys and meetings were conducted by HQ with DEQ regional and program staff to identify agricultural water quality concerns. Survey results were that communication and exchange of information were not done consistently across the state and there was a lack of clear policy on TMDL implementation that impeded work with DEQ's partners.

The 2006 Draft NPS Program Plan identified tracking and improving water quality on agricultural land use as one of the highest priorities for the program, and the draft HQ NPS Program Work Plan for 2008-9 was developed to reflect that. The survey results are similar to the issues that were identified during the 2006 planning effort. DEQ will be sharing the results of the survey with ODA in 2009, and planning local meetings with ODA for each Agriculture Water Quality Management Area.

DEQ staff gave a series of presentations at Oregon Association of Conservation Districts' Annual Meeting and Convention in November 2008. The presentation included an overview, available partnership opportunities for DEQ and SWCDs, monitoring projects and data analysis, DEQ's technical and funding assistance that are available for SWCDs, and SWCDs' role in drinking water protection.

Oregon Technical Advisory Committee (OTAC)

OTAC advises the Natural Resources Conservation Service's (NRCS) Oregon branch. Oregon is structured on a basin basis to better focus on watershed health issues. DEQ has worked to increase the visibility of nonpoint source pollution issues including drinking water concerns to the conservation programs administered by the NRCS. The most recent Farm Bill (the Food, Conservation, and Energy Act of 2008) includes more money for organic agriculture, energy, forestry, and conservation programs than previous bills. If fully funded in future sessions of Congress, this could mean reduced pollution from agricultural lands and improved water quality.

Pesticides Stewardship Partnership (PSP)

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

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

Two initial pilot projects using the PSP approach in Hood River and The Dalles (Mill Creek) showed improvements in water quality associated with changes in pesticide management practices. The Hood River PSP project is continuing with the support of funds provided by the Confederated Tribes of the Warm Springs Reservation. Although pesticide levels in streams fluctuate from year-to-year, monitoring in the Hood watershed still shows that concentrations of toxic organophosphate insecticides generally remain below state water quality standards. Most recently, significant pesticide reductions were observed between 2006 and 2007 in Walla Walla River tributaries near Milton-Freewater after OSU Extension and tree fruit growers worked together on training programs and implementation of a range of best management practices. Results for 2008 appear to show even further reductions in the concentrations of organophosphate insecticides in the Walla Walla tributaries.

In addition to continuing PSP projects in the Hood and Walla Walla watersheds, DEQ is also working with partners in three other watersheds in the north Willamette Valley on Pesticide Stewardship Partnerships: the Clackamas, Pudding, and Yamhill Basins. The multitude of different agricultural commodity groups in the Willamette Valley, as well as forestry and urban land uses, creates a major challenge for DEQ and its partners in achieving short-term improvements in water quality related to pesticide use. However, new and expanded partnership efforts are underway that could be important for reducing in-stream pesticide concentrations and improving water quality.

The Yamhill PSP project monitoring began in spring 2007 and is focused on streams in agricultural areas and the City of McMinnville. Since late 2007 DEQ, the Oregon Departments of Forestry and Agriculture, the Confederated Tribes of the Grand Ronde, and the Confederated Tribes of Siletz have been developing a plan to augment the existing PSP in the Yamhill Basin. This expanded project would encompass forested and agriculture land uses from the foothills of the Coast Range west of Grand Ronde to the agricultural land and small cities near the South Yamhill River and its tributaries.

In 2008, the Tribes and ODF identified potential streams to monitor in forested areas of the South Yamhill watershed and made contacts with some private managed forest associations and landowners about joining the partnership. In addition to ambient stream monitoring, this project may also include runoff monitoring. DEQ has tentatively secured adequate funds (EPA 319 grant funds) to support the continuation of existing PSP projects, as well as the proposed expansion of the Yamhill project, through 2009 and part of 2010. Based on strong local interest, DEQ is also hoping to secure additional grant funds to re-start the Mill Creek PSP project near The Dalles.

Lastly, the development of the inter-agency Oregon Water Quality Pesticide Management Plan has also provided an opportunity to integrate the Pesticide Stewardship Partnership into other on-going water quality improvement efforts and tools. The Oregon Departments of Agriculture, Environmental Quality, Forestry and Human Services worked closely together in 2008 to develop this plan, which identifies “pesticides of concern” for the state, and outlines actions the agencies can take together or separately in response to elevated levels of pesticides in Oregon surface or groundwaters. The inter-agency team that developed the Plan is now working with local groups in Clackamas County to implement a comprehensive pilot project in the Clackamas watershed. This project will use the PSP approach as well as other existing tools (e.g., Agricultural Watershed Management Plans) to address pesticide water quality issues.

Water Quality Pesticide Management Team

The Water Quality Pesticide Management team (WQPMT) is an inter-agency team composed of representatives from the Oregon Department of Environmental Quality (DEQ), Oregon Department of Agriculture (ODA), Oregon Department of Human Services (DHS), and Oregon Department of Forestry (ODF). These four agencies have various degrees of individual responsibility for preventing/reducing pesticide impacts on

surface and ground water in Oregon. The major goals of the WQPMT are to:

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

The United States Environmental Protection Agency (EPA) supports this team approach and the implementation of the PMP in Oregon.

Accomplishments and Highlights during 2008

1. Finalized the OR Pesticide Management Plan (PMP) and submitted it to EPA in September for approval.
   - Identified six key elements of the Pesticide Management Process.
2. Developed key decision-making tools:
   - A "Response Matrix".
   - A "Pesticide of Concern" selection process flowchart.
3. Selected seven Pesticides of Concern for Oregon during 2008-09.
   - Identified seven additional "higher interest" Pesticides of Interest (POIs).
4. Initiated and completed an intern project to assess various methodologies for setting aquatic-life benchmark/reference concentrations. Results will be used to further assess and select a viable methodology.
5. Initiated a "pilot-study" in the Clackamas River sub-basin assess the implementation of the PMP.
   - Outreach efforts of team members have resulted in a high level of interest for the Clackamas pilot by local partners such as the Clackamas River Water Providers, Clackamas River Basin Council, Clackamas County Soil and Water Conservation District (SWCD), Oregon State University Extension Service and key grower groups.
6. WQPMT PMP and Team Presentations:
   - Oregon Association of Nurseries (OAN)
   - Christmas Tree growers
   - Golf course superintendents
   - Private pesticide applicators and various growers
   - DEQ, ODF, DHS and ODA Administrators
   - Governor's Natural Resources Cabinet
   - Clackamas River Water Providers
   - Clackamas River Basin Council
   - Clackamas County Water Environment Services
   - ODA Agricultural Water Quality Advisory Committee

- Soil and Water Conservation Commission
- EPA Region 10 Pesticide Water Quality Team (reps from Alaska, Idaho, Oregon and Washington).
- EPA Water Quality PREP course (Davis, CA, Sept. 2008)
- ODA Agricultural Water Quality Advisory Committee
- Soil and Water Conservation Commission

7. In addition to groups we have presented to, other partners for monitoring and outreach include OSU Extension, USGS, SWCDs, AgWQMAP Local Advisory Committees, etc.

8. Established an ODA-based website detailing the concept and efforts of the WQPMT.

Conservation (Farm) Plans and Oregon's Stewardship Plans

NRCS and FSA have funding available but they do not have adequate number of technical staff who could assist landowners to develop conservation (farm) plans. In the new farm bill, EQIP has new direction that requires a certain percentage of the funds to go toward forestland use. In order to facilitate the process of getting the funds to land owners, ODF is working on an agreement whereby stewardship plans will meet the requirements for conservation plans. According to ODF, there are only minor differences between these plans now.

Water Quality Issues on State and Private Forest Land

High Level Indicator and Land Use Monitoring

ODF and DEQ are working on a report of the status of water quality and biological integrity of forested lands in Oregon. The report will assess conditions of forestlands at the state and basin scales. There will be an attempt to analyze water and biological quality among differing forest uses (federal, state, private industrial and private non-industrial forests) but the analysis associated with this report will not be able to evaluate the effectiveness of BMPs to meet water quality standards and TMDL load allocations.

RipStream **(**Riparian Function and Stream Temperature)

The Oregon Department of Forestry'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.

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 and how do they along with channel and valley characteristics relate to stream temperature and shade?

DEQ is participating in the RipStream project by providing analyses of data and study results in cooperation with ODF staff. ODF is completing their analysis of whether the current FPA riparian rules are adequate to avoid violations of the temperature standard. A preliminary report will be presented to the Board of Forestry in spring of 2009.

Forestland Conversions

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

The following tasks where completed or planned in 2008:

1. Developed the Forestland Conversions Workgroup composed of the seven state agencies that were signatures to the Forestlands Conversion Memorandum of Agreement (MOA). Held meetings throughout 2008 to organize training sessions for all state agency staff.

2. The workgroup also developed and approved forestland conversions process memo that will guide the training.

3. Planned training sessions to be held in 2009.

Dynamic Ecosystem Policy Project

ODF's Dynamic Ecosystem Policy Project purpose is to integrate the dynamic nature of ecosystem into policy frameworks. A group of scientists from the Institute for Natural Resources at Oregon State University are funded by ODF to complete the project. DEQ has participated in project meetings to discuss meeting water quality objectives in the context of changing ecosystems and has provided information about the federal CWA and the Oregon TMDL process in addition to making comments on proposed changes to the study/literature review. The final draft has been completed in 2009 DEQ will participate in seminars based around the report.

Healthy Forests Reserve Program (Federal Funded Program)

In 2008, DEQ participated in creating the Healthy Forests Reserve Program in the state of Oregon. Implementation of the program will start in 2009. This program will help set aside private forests for clean water and wildlife habitat through 10 year, 30 year, and permanent easements. Currently, only Maine, Mississippi, and Arkansas are using the funds available for this federal program. Oregon's program will be focused on facilitating conservation efforts by landowners that will create foraging and nesting habitat for the Northern Spotted Owl, especially where habitat on private land would complement efforts on U.S. Forest Service and BLM lands. In future years, salmon and other wildlife will be added to Oregon's program.

Water Quality Issues on Federal Forest Lands

Federal Forestlands Advisory Committee (FFAC)

In October 2004, the Governor directed the Oregon Board of Forestry to "create a unified vision of how federal lands should contribute" to sustainability, and to "make that vision action-oriented and comprehensive – following through to the last step, including implementation". In 2005, the Oregon Legislature passed Senate Bill 1072 into law that encourages the Board, in consultation with the Governor, to create a forum for interagency cooperation and collaborative public involvement regarding federal forest management issues. The Board created the Federal Forestlands Advisory Committee (FFAC). Comprised of a diverse group of stakeholders, the FFAC was directed to create a document that articulates the state's vision for how federal forestlands should be managed to contribute to the sustainability of Oregon's overall forestland base.

Starting in November 2006 the FFAC held numerous meetings to engage the public, government officials, and scientific community, collect information, review pertinent documents, discuss concerns, ideas, and formulate solutions. Subcommittees were also created to address key issues identified by the full committee. DEQ cooperated with the Committee to ensure that water quality is a high-ranking concern and provided information to clarify how water quality standards and regulation apply to forestry activities.

In August 2008, the FFAC drafted "Oregon's Vision for Federal Forestland" (http://www.oregon.gov/ODF/BOARD/docs/FFAC_Guidance_Document_Review_Draft.pdf).

The final guidance document will be finalized in early 2009 and submitted to the Governor.

BLM and USFS Activities

In 2008, the following was accomplished:

1) Surveyed DEQ, BLM, and USFS staff on the work-accomplished to-date, recommendations for improvement, and needed changes to agreements

2) Began preparation of the MOU required 5-Year Progress report that will be used to update MOUs

3) Began revisions and update to DEQ/USFS and DEQ/BLM MOU.

Western Oregon Plan Revisions (WOPR)

DEQ provided comments on BLM's Western Oregon Plan Revisions (WOPR). In 2005, the Bureau of Land Management (BLM) began the process for revising the Resource Management Plans for the Salem, Eugene, Roseburg, Coos Bay, and Medford Districts, and the Klamath Falls Resource Area of the Lakeview District, covering approximately 2.6 million acres of BLM administered lands. The planning area contains 303(d) listed streams and watersheds with approved TMDLs, and is mostly revested California

Railroad and Coos Bay Wagon Road Grant Lands Act lands (i.e., the O&C lands), within the approximately 22 million acre western Oregon planning area.

DEQ along with other state agencies participated as cooperating agencies under an MOU with BLM to collaboratively maintain and improve water quality on BLM administered lands. DEQ evaluated the Draft EIS alternatives for meeting water quality standards and TMDL load allocations through literature search and with a temperature model used for TMDLs. One of DEQ's aquatic biologists also participated on the Science Advisory Team (Team) for this process to help complete the task of enhancing the quality of the plan analyses. The BLM issued the six Records of Decision (ROD) for the Resource Management Plans (RMP) at the end of 2008.

Clean Water State Revolving Fund

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

The number of NPS projects funded by the loan program continues to grow slowly. In 2008, one large loan was made for a NPS project. A $3 million loan to the Farmer's Irrigation District in Hood River will shift irrigation water from canals to pipes resulting in less water pollution and evaporation. This is this irrigation district's second SRF loan.

Although the loan has not been finalized at this time, the Clackamas County Soil and Water Conservation District (District) applied for an SRF "local community loan". This is a unique type of loan that allows a public agency (the District) to borrow SRF funds from DEQ and then be able to make "local loans" to the District's constituents. In this case, the District intends to make small loans to primarily address agriculture impacts to the Clackamas River and its tributaries.
The "sponsorship option" loan, which allows a water restoration project to be funded in conjunction with a traditional wastewater project - at a reduced interest rate -, is available for public agencies. This loan is an excellent avenue to fund NPS projects when the project can be paired with the needs of a municipality.

From January 1, 2004 through February 11, 2009, the SRF Program has provided **$22,679,419** towards NPS water quality improvements. The SRF program continues to promote its low interest loans as a tool to address NPS needs. Over the next three years, it is anticipated that six million in NPS loans will be made annually through the SRF program's traditional loan, its local community loan or sponsorship option loan.

Table 6. State Revolving Fund Activity on Nonpoint Source Projects

STATE REVOLVING FUND ACTIVITY ON NONPOINT SOURCE PROJECTS JANUARY 1, 2004 THROUGH FEBRUARY 11, 2009										
SRF Loan #	**Watershed**	**Project Title**	**FY**	**SRF Borrower**	**Loan Amount**	**Disburse-ments To Date**	**Remaining to Disburse**	**Project Status**	**Project Officer**	**Project Completion**
R 27610	CROSSES SUBBASINS / DESCHUTES	Weed Control	2004	Deschutes Co. SWCD	$228,499	$228,499	$0	Complete	Shanna Olson	Dec. 2003
R 30140	MIDDLE COLUMBIA-HOOD	Irrigation Pipeline	2004	East Fork Irrigation Dist.	$2,000,000	$2,000,000	$0	Complete	Shanna Olson	Dec. 2004
R 32240	MIDDLE COLUMBIA-HOOD	Irrigation Pipeline	2004	Farmers Irrigation Dist.	$3,000,000	$3,000,000	$0	Complete	Shanna Olson	Jul. 2006
R 74163	LOWER WILLAMETTE	Vegetation Restoration	2004	City of Portland	$2,326,248	$2,326,248	$0	Complete	Richard Santner	Sep. 2008
R 74166	LOWER WILLAMETTE	Johnson Ck./Kelly Ck. Channelization	2004	City of Portland	$400,000	$400,000	$0	Complete	Richard Santner	May 2005
R 74169	LOWER WILLAMETTE	Land purchase	2005	City of Portland	$1,149,012	$1,149,012	$0	Complete	Richard Santner	Jun. 2006
R-30141	MIDDLE COLUMBIA-HOOD	Irrigation Pipeline	2005	East Fork Irrigation Dist.	$914,970	$914,970	$0	Complete	Shanna Olson	Dec. 2008
R-32241	MIDDLE COLUMBIA-HOOD	Irrigation Pipeline	2005	Farmers Irrigation Dist.	$3,800,000	$3,800,000	$0	Complete	Shanna Olson	Sep. 2006

STATE REVOLVING FUND ACTIVITY ON NONPOINT SOURCE PROJECTS JANUARY 1, 2005 THROUGH FEBRUARY 11, 2009										
SRF Loan #	**Watershed**	**Project Title**	**FY**	**SRF Borrower**	**Loan Amount**	**Disbursements To Date**	**Remaining to Disburse**	**Project Status**	**Project Officer**	**Project Completion**
R-32241	MIDDLE COLUMBIA-HOOD	Irrigation Pipeline	2005	Farmers Irrigation Dist.	$3,800,000	$3,800,000	$0	Complete	Shanna Olson	Sep. 2006
R-74171	LOWER WILLAMETTE	Vegetation Restoration	2007	City of Portland	$1,057,365	$0	$1,057,365	Not Started	Richard Santner	Jun. 2013
R-74172	LOWER WILLAMETTE	Re-channel-ization of Johnson Ck.	2007	City of Portland	$100,000	$100,000	$0	Complete	Richard Santner	Feb. 2008
R-98414	MOLALLA-PUDDING	Riparian restoration	2008	City of Woodburn	$4,093,175	$156,442	$3,936,733	Active	Jaime Isaza	May 2010
R-65580	LOWER WILLAMETTE / KELLOGG CREEK	New Sewers to replace onsite systems	2009	City of Milwaukie	$3,610,150	$0	$3,610,150	Not Started	Richard Santner	Sep. 2009
1/2005-2/2009 TOTAL					**$22,679,419**	**$14,075,171**	**$8,604,248**			

Drinking Water Protection in Oregon

The data generated from the source water assessments 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, Oregon Department of Forestry, Oregon Department of Agriculture, Department of Land Conservation and Development, US Forest Service, and the Bureau of Land Management to facilitate incorporation of protection strategies into their respective programs.

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

The point and nonpoint contaminant source inventories in the drinking water protection areas provide useful information as the community or agencies evaluate the risks and prioritize protection strategies. Typical contaminant sources identified in groundwater source areas include high-density housing, septic systems, auto repair shops, gas stations, irrigated crops, managed forestland, grazing animals, and transportation corridors. DEQ developed a best management practices database for the 88 most common potential contaminant sources in Oregon (available under "technical assistance" in DEQ's DWP website). The database provides activities that range from educational outreach to regulatory approaches that public water systems or communities can take to reduce their risk. The database can be used to pull the best management practices for a public water system or geographic area from our GIS layers into a format that communities can use to choose their drinking water protection strategies for groundwater or surface water.

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

Examples of Nonpoint Source Coordination

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

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

DEQ and DHS has recently provided input to ten cities and counties that are reviewing their land use plans under Oregon's comprehensive land use planning process ("Periodic Review"). The letters to communities included detailed information regarding their water sources, maps of the source areas, and specific recommendations and guidance for drinking water protection. As part of DEQ and DHS' ongoing participation in periodic reviews, we anticipate continuing to review and comment on an average of 5-6 per year. Many of these comp plans directly address nonpoint source issues in their drinking water source areas.

DEQ continues to work with other state and federal agencies to raise the profile of the need for drinking water protection in Oregon, including the Department of Agriculture, Department of Forestry, the Environmental Protection Agency, USDA Natural Resource Conservation Service, US Forest Service, and the Bureau of Land Management. SWA data has also been provided to several other state agencies to facilitate incorporation of protection strategies into their respective programs.

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

In 2008, DEQ initiated a "Drinking Water Source Monitoring" project that included collecting groundwater and surface water samples from 12 high-risk sources as identified through the Source Water Assessments. DEQ Laboratory staff collected the samples above the surface water intakes and at wells for analysis of a list of Oregon-specific herbicides, insecticides, pharmaceuticals, VOCs (including cleaners), fire retardants, PAHs, and plasticizers. The purpose of the Source Monitoring was to collect data from multiple contaminant sources to assist in determining priorities for technical assistance and prevention, and to collect screening level data on whether there are potential human health risks beyond those routinely monitored within the Safe Drinking Water Act regulations.

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 which were conditionally approved.

DEQ has identified additional efforts over the next few years to obtain final approval for the last three (3) remaining management measures:

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

Monitoring and Data

DEQ conducts various types of monitoring as required by the state statute and federal Clean Water Act.

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.
- Oregon Plan (streams and rivers) – Collect data to provide statistically valid status assessment of streams and rivers at third HUC scale.
- Volunteer Monitoring – Improve data quality collected by third party and increases the data accessibility for local and state assessments.
- Coastal Environmental Monitoring – Collects data to determine the need for beach closures.
- Toxics Monitoring -- Toxics Monitoring Project for surface waters in the Willamette Valley and for drinking water throughout the State. This project will give information about current and emerging contaminants that threaten aquatic life and human health.

Two summary reports and one report of Oregon's water quality conditions were completed in 2008:

1. **Coastal Coho Stream Assessment: Summary Report by DEQ**
   08-LAB-010 PDF 1.0 mb

   This 8-page report summarizes DEQ's assessment of water quality conditions affecting Coho fish populations within the Coastal Coho Evolutionarily Significant Unit (ESU).

2. **Lower Columbia Wadeable Streams Assessment Summary Report**
   08-LAB-002 PDF 1.0 mb

DEQ began a two-year study of the wadeable streams in the Oregon portion of the Lower Columbia basin. The purpose of this monitoring was to describe the chemical, biological and physical habitat conditions of streams important to the spawning and rearing of salmonid fish.

3. **Lower Columbia Wadeable Streams Assessment Full Report**
   08-LAB-003 PDF 2.0 mb

   This report describes the chemical, physical, and biological habitat conditions of Lower Columbia region, in regards to the spawning and rearing of salmonids.

Groundwater Management Areas (GWMAs)

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, The Department of Environmental Quality (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.

In July 2008 there was a tour designed to bring the Southern Willamette Valley Groundwater Management Area (or GWMA) Committee and some of the projects' numerous partners into areas that may not be easily observable, and tie in some of the groundwater data to the areas land uses. Those who were able to participate in this tour observed the field conditions and questions that the GWMA staff has been addressing. This tour helped demonstrate some of the many potential nitrate sources in the area, and reinforces the understanding that change must happen at many different levels in order to improve the areas groundwater quality. To see a video of this tour, go to http://gwma.oregonstate.edu/july-2008-gwma-tour

A GWMA Committee member provided information regarding new technologies for improving fertilization application efficiency. The improvements are being driven by fertilizer cost increases. The technology includes electronic conductivity testing and remote sensing technology. The results of a test site in the GWMA was presented at the October 2008 GWMA Committee meeting and maps and data that showed specifically how the fieldsman have been applying the technology to increase crop yield and use fertilizers more efficiently. The efficient use of nitrogen will be a major step in the loss of excess fertilizer to the groundwater, and should help reduce the nitrate loading to the aquifer.

There has been significant increase in the utilization of the technology. Most farmers have been hesitant, but there has been increased confidence in the effectiveness of the technology. While the capability to gather data has increased, the costs have gone down making it more accessible and attractive at the same time. There is increasing confidence in the technology such that there is more comfort among the technicians to suggest fertilizer applications that widely deviate from traditional levels.

The City of Coburg has succeeded in obtaining the funding they need to build a wastewater treatment plant for their town. Discussion began in 1973 and ground was broken in the summer of 2008. Costs keep rising and that has been a challenge, but the dedication of the elected officials, committee members, and staff preserved. This ultimately move all residents and businesses off their individual septic systems, which will drastically reduce the amount the nitrates that currently discharge to the

groundwater. A wastewater treatment system will also create jobs and growth opportunities.

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

Summary of 2008 - 319 Grant Funded Projects

Description of Types of 319 Nonpoint Source Projects

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

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

The criterion for evaluation of 319 proposals has evolved over time. This is due in part to the progress of the TMDL development/implementation work needs and other priority water quality work, such as groundwater management areas. In the recent past and for the 2008 RFP we have received an increasing number of proposals linking restoration work over time and with each other, while also addressing important water quality impairments from nonpoint sources of pollution.

EPA's "Nine NPS Elements of Watershed Plans"

In addition, Oregon is integrating the EPA's "Nine NPS Elements of Watershed Plans" approach to watershed planning model by EPA. The emphasis of Oregon's approach has been on identifying the key elements that might be absent or not thoroughly addressed in existing watershed restoration plans, and utilizing 319 funds to "fill in the hole". This approach is a work in progress. We expect that project proposal work plans will improve in their focus to reflect this approach with time.

Progress of NPS 319 Funded Projects (Grant Performance Report)

The following table identifies the progress of 319 funded projects, both active and closed-out. In addition, for open grants, the table identifies which grant each of the cited projects are being funded from, their progress, and when completed.

Table 7. Progress of NPS 319 Funded Projects (Grant Performance Report)

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	**WATERSHED**	**PROJECT TITLE**	**FY**	**BUDGET**	**CONTRACT WITH**	**EXPENDITURES**	**BALANCE**	**STATUS**	**PROJECT MANAGER**	**END DATE**
W 07700	UMPQUA	Diamond Lake Post-Treatment Monitoring	FY 2005	$30,000		$ -	$30,000	OPEN	Heberling, Paul	12/31/09
W 07701	CROSSES SUBBASINS / ROGUE	Rogue LID Workshops / Technical Assistance	FY 2005	$75,000	Rogue Council of Governments	$ -	$75,000	OPEN	Burr, Rachel	15-Dec-09
W 07702	NA	319 RECYCLED PROJECT DOLLARS	FY 2005	$241		$ -	$241	OPEN	Camacho, Ivan	31-Dec-08
W 07703	WILSON-TRASK-NESTUCCA	Nestucca, Neskowin and Sand Lake 2005 MAINTENANCE OF NESTUCCA - NESKOWIN WS	FY 2005	$ 26,740	Nestucca Neskowin Watershed Council	$26,740	$ -	CLOSED	Apple, Bruce	31-Dec-07
W 07704	WILSON-TRASK-NESTUCCA	Nestucca, Neskowin and Sand Lake 2005-06 NESTUCCA NESKOWIN WSC STREAMSIDE	FY 2005	$47,020	Nestucca Neskowin Watershed Council	$47,020	$ -	CLOSED	Apple, Bruce	31-Dec-06
W 07705	CLACKAMAS	Clackamas Agriculture WQ LANDOWNER IMPLEMENTATION PROJECT	FY 2005	$88,973	Clackamas Co Soil & Water Conservation District	$88,973	$ -	CLOSED	Simpson, Manette	31-Dec-07
W 07706	CROSSES SUBBASINS / KLAMATH RIVER / AGENCY LAKE	Klamath AGENCY LAKE FRINGE WETLAND RESTORATION	FY 2005	$38,600		$38,600	$ -	Cancelled	Kirk, Steve	31-Dec-07
W 07707	MCKENZIE / BLUE LAKE	BLUE LAKE BOTTOM BARRIER INSTALLATION	FY 2005	$ -		$ -		Cancelled	Camacho, Ivan	31-Dec-07
W 07708	WALLOWA	Lostine and Wallowa Rivers CEDAR HILL FARM WETLAND ENHANCEMENT	FY 2005	$ -		$ -		CLOSED	Dombrowski, Tonya	31-Dec-07

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	**WATERSHED**	**PROJECT TITLE**	**FY**	**BUDGET**	**CONTRACT WITH**	**EXPENDITURES**	**BALANCE**	**STATUS**	**PROJECT MANAGER**	**END DATE**
W 07709	MIDDLE COLUMBIA-HOOD	Neal Creek, East Fork Hood River CENTRAL CANAL PIPELINE MIDDLE PHASE	FY 2005	$200,000	East Fork Irrigation District	$200,000	$ -	CLOSED	Lamb, Bonnie	30-Jun-06
W 07710	COQUILLE	COQUILLE MAINSTEM RIPARIAN ASSESSMENT	FY 2005	$17,239	Coquille Watershed Association	$17,239	$ -	CLOSED	Blake, Pam	30-Mar-06
W 07711	UPPER WILLAMETTE	DIXON CREEK RIPARIAN RESTORATION	FY 2005	$20,097	Douglas SWCD	$ 20,097	$ -	CLOSED	Lindberg, Bobbi	31-Dec-07
W 07712	ALSEA	ELK CRK WS BACTERIA SOURCE TRACKING PROJECT	FY 2005	$ -		$ -		cancelled	Lindberg, Bobbi	31-Dec-07
W 07713	UMPQUA	IMPLEMENTATION MONITORING OF DIAMOND LAKE	FY 2005	$30,098	USDA Umpqua National Forest	$30,098	$ -	CLOSED	Kirk, Steve	31-Dec-06
W 07714	MIDDLE ROGUE	MIDDLE ROGUE & BEAR CREEK COMPREHENSIVE WQP	FY 2005	$47,000	Rogue Valley Council of Governments	$47,000	$ -	CLOSED	Tugaw, Heather	30-Jun-07
W 07715	UMPQUA	MILL CREEK RIPARIAN RESTORATION	FY 2005	$11,523	Douglas SWCD	$11,523	$ -	CLOSED	Lindberg, Bobbi	31-Dec-07
W 07716	SILVIES	MYRTLE CRK WATERSHED RESTORATION & OUTREACH	FY 2005	$22,145	Partnership for Umpqua Rivers	$22,145	$ -	CLOSED	Lindberg, Bobbi	31-Dec-07
W 07717	CLACKAMAS	Lower Willamette & Clackamas NEW WATER QUALITY PROGRMS IN THE METRO AREA	FY 2005	$74,997	Metro	$74,997	$ -	CLOSED	Simpson, Manette	31-Dec-07

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	**WATERSHED**	**PROJECT TITLE**	**FY**	**BUDGET**	**CONTRACT WITH**	**EXPENDITURES**	**BALANCE**	**STATUS**	**PROJECT MANAGER**	**END DATE**
W 07718	NEHALEM	NORTH FORK NEHALEM RIVER ENHANCEMENT	FY 2005	$43,500	Tillamook County Estuary Partnership	$43,500	$ -	CLOSED	Apple, Bruce	30-May-07
W 07719	WILSON-TRASK-NESTUCCA	Tillamook, Netarts, & Nestucca Bay Watersheds ORGANIZING 2006 CHILDREN'S CLEAN WATER FEST	FY 2005	$5,000	Tillamook County Estuary Partnership	$5,000	$ -	CLOSED	Apple, Bruce	31-Aug-06
W 07720	CHETCO	PARTNERSHIP FOR NPS MONITORING & ASSESSMENT	FY 2005	$95,045	Curry County SWCD	$93,238	$1,807	CLOSED	Blake, Pam	28-Feb-08
W 07721	MOLALLA-PUDDING	PUDDING R. PESTICIDE REDUCTION PARTNERSHIP	FY 2005	$14,474	Marion County SWCD	$14,474	$ -	CLOSED	Masterson, Kevin	30-Mar-07
W 07722	SIXES	New River, Floras Lake & Garrison Lake SIXES SUB-BASIN WEED WS RESTORATION PLAN	FY 2005	$56,675	Curry County SWCD	$47,115	$9,560	OPEN	Blake, Pam	30-Jun-07
W 07723	ILLINOIS	SUCKER CREEK TMDL IMPLEMENTATION, OUTREACH	FY 2005	$21,206	Forestry Action Committee	$21,206	$ -	CLOSED	Wright, Pamela	30-Jun-07
W 07724	COOS	TENMILE LAKES WQ IMPLEMENTATION	FY 2005	$192,436	City of Lakeside	$168,923	$23,513	OPEN	Blake, Pam	30-Nov-07
W 07725	WILSON-TRASK-NESTUCCA	Tillamook Bay Watershed, Nestucca Bay Watershed, & Nehalem TILLAMOOK SWCD STREAM ENHANCEMENT	FY 2005	$ -		$ -		Cancelled	Camacho, Ivan	31-Dec-07

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)

PROJ #	WATERSHED	PROJECT TITLE	FY	BUDGET	CONTRACT WITH	EXPENDITURES	BALANCE	STATUS	PROJECT MANAGER	END DATE
W 07726	CROSSES SUBBASINS / UPPER DESCHUTES	Upper Deschutes River & tributaries DESCHUTES WQ RESTORATION MONITITORINGPROJECT	FY 2005	$79,862	Upper Deschutes Watershed	$79,862	$ -	CLOSED	Lamb, Bonnie	31-Dec-07
W RC#17	NEHALEM	UPPER NEHALEM RIPARIAN ENHANCEMENT & MONIT	FY 2005	$86,060	Upper Nehalem Watershed Council	$86,060	$ -	CLOSED	Apple, Bruce	31-Dec-06
W 08700	UPPER ROGUE	WILLOW CRK RIPARIAN RESTORATION & DEMO	FY 2005	$7,099	Klamath County	$6,869	$230	CLOSED	Dombrowski Tonya	30-Sep-08
W 08701	UPPER GRANDE RONDE	WQ MONITORING FOR UPPERGRANDE RONDE R. BASIN	FY 2005	$30,000		$30,000	$ -	CLOSED	Dombrowski Tonya	31-Dec-07
W 08702	UMATILLA	Umatilla TMDL & Wildhorse Nitrate/BMP Monitoring	FY 2005	$101,521	Umatilla County SWCD	$ -	$101,521	OPEN	Dombrowski Tonya	31-Dec-09
W 08703	UMATILLA	Legacy Pesticide Collection Umatilla Basin	FY 2006	$4,975	Umatilla County SWCD	$ -	$4,975	OPEN	Masterson, Kevin	31-Dec-08
W 08704	LOWER JOHN DAY	Bridge Creek WS BMP Implement Outreach & Education	FY 2006	$61,794	Wheeler Soil & Water Conservation District	$22,040	$39,754	OPEN	Dombrowski Tonya	31-Dec-09
W 08705	UMATILLA	Umatilla TMDL & Wildhorse Nitrate/BMP Monitoring	FY 2006	$69,743	Umatilla Basin Watershed Foundation	$29,669	$40,074	OPEN	Dombrowski Tonya	31-Mar-09
W 08706	NEHALEM	Upper Nehalem Riparian Restoration & Monitoring	FY 2006	$54,770	Upper Nehalem Watershed Council	$54,770	$ -	CLOSED	Apple, Bruce	31-Dec-07

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)

PROJ #	WATERSHED	PROJECT TITLE	FY	BUDGET	CONTRACT WITH	EXPENDITURES	BALANCE	STATUS	PROJECT MANAGER	END DATE
W 08707	WILSON-TRASK-NESTUCCA	Nestucca Neskowin Rivers 2006-07 NNWC Streamside Planting and Maintenance	FY 2006	$59,997	Nestucca Neskowin Watershed Council	$59,997	$ -	CLOSED	Apple, Bruce	30-Jun-07
W 08708	WILSON-TRASK-NESTUCCA	Tillamook Agriculture& Backyard Planting Program YR 4	FY 2006	$50,250	Tillamook County Estuary Partnership	$50,250	$ -	CLOSED	Apple, Bruce	30-Jun-07
W 08709	COQUILLE	Coquille Watershed Effectiveness Monitoring	FY 2006	$42,260	Coquille Watershed Association	$29,083	$13,177	OPEN	Waltz, David	31-Mar-09
W 08710	COQUILLE	Upper Middle Fork Coquille River Coquille Watershed Riparian Enhancement	FY 2006	$81,600	Coquille Watershed Association	$81,600	$ -	CLOSED	Waltz, David	30-Apr-08
W 08711	CROSSES SUBBASINS / CROOKED RIVER	Crooked River TMDL Implement &WQ Monitoring	FY 2006	$49,525	Crooked River Watershed Council	$21,348	$28,177	OPEN	Lamb, Bonnie	30-Jun-09
W 08712	SOUTH UMPQUA	S. Umpqua River Dawson Ranch Riparian Restoration Project	FY 2006	$20,542	Douglas SWCD	$20,542	$ -	CLOSED	Heberling, Paul	30-Sep-07
W 08713	UMPQUA	Implementation Monitoring of Diamond Lake R	FY 2006	$67,240	Partnership for Umpqua Rivers	$56,096	$11,144	OPEN	Heberling, Paul	30-Nov-08
W 08714	COOS	Lower South Fork Coos River Assessments, Outreach & Ed	FY 2006	$106,317	Coos Watershed Association	$96,389	$9,928	OPEN	Waltz, David	30-Sep-08
W 08715	UPPER ROGUE	Little Butte & Bear Creek Water Enhancement	FY 2006	$18,419	Jackson County	$18,419	$ -	CLOSED	Tugaw, Heather	30-Jun-08
W 08716	LOWER UMATILLA BASIN GWMA	Lower Umatilla Basin GWMA Outreach and Sur	FY 2006	$20,550	Umatilla County SWCD	$20,550	$ -	CLOSED	Dombrowski Tonya	28-Feb-09

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	**WATERSHED**	**PROJECT TITLE**	**FY**	**BUDGET**	**CONTRACT WITH**	**EXPENDITURES**	**BALANCE**	**STATUS**	**PROJECT MANAGER**	**END DATE**
W 08717	METRO	Marketing Green Certified Landscaping	FY 2006	$31,000	Oregon Environmental Council	$10,813	$20,187	OPEN	Simpson, Manette	30-Nov-09
W 08718	SILETZ-YAQUINA	Salmon / Tahkenitch Midcoast Basin Monitoring & Data Mgt (TMDL Dev)	FY 2006	$188,100	Lincoln SWCD	$154,885	$33,215	OPEN	Lindberg, Bobbi	30-Jun-09
W 08719	SIXES	Sixes, L. Rogue, Chetco Outreach & Assessment of S Coast WQ Limited	FY 2006	$48,004	Curry County SWCD	$46,812	$1,192	CLOSED	Waltz, David	15-Jan-08
W 08720	LUB GWMA	Precision Agriculture In the Umatilla Basin	FY 2006	$27,540	Umatilla County SWCD	$27,540	$ -	CLOSED	Dombrowski, Tonya	31-Mar-09
W 08721	UPPER GRANDE RONDE	Roadside Filter Strip Demo for U. G R Basin	FY 2006	$22,700	Union SWCD	$ -	$22,700	OPEN	Dombrowski, Tonya	31-Dec-09
W RC#18	CROSSES SUBBASINS	Rogue / South Coast Rogue MAP	FY 2006	$28,645	Rogue Basin Coordinating Council	$4,254	$24,391	OPEN	Tugaw, Heather	31-Dec-08
W 05550	SOUTHERN WILLAMETTE VALLEY GWMA	S Willamette Val GWMA Planning & Implementation	FY 2006	$116,530	Lane Council of Governments	$116,530	$ -	CLOSED	Eldridge, Audrey	31-Jan-08
W 05551	SIUSLAW	Siuslaw Basin TMDL Development	FY 2006	$46,160	Siuslaw Watershed Council	$37,087	$9,073	OPEN	Lindberg, Bobbi	31-Dec-08
W 05552	VARIOUS	Spring 2009 Pesticide Stewardship Partnership Monitoring	FY 2006	$64,722		$ -	$64,722	OPEN	Masterson, Kevin	31-Dec-09
W 05553	WILSON-TRASK-NESTUCCA	Tillamook County Children CW Festival TMDL Ed.	FY 2006	$2,382	Tillamook County Estuary Partnership	$2,382	$ -	CLOSED	Apple, Bruce	31-Jul-07

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	WATERSHED	PROJECT TITLE	FY	BUDGET	CONTRACT WITH	EXPENDITURES	BALANCE	STATUS	PROJECT MANAGER	END DATE
W 05554	WALLA WALLA	Walla Walla Basin Pesticide Stewardship Par	FY 2006	$89,538	Walla Walla Basin Watershed Council	$75,779	$13,759	OPEN	Masterson, Kevin	30-Sep-08
W 05555	APPLEGATE	West Fork Williams Ck. Salmon Habitat Rest	FY 2006	$21,000	Williams Creek Watershed	$21,000	$ -	CLOSED	Tugaw, Heather	30-Jun-08
W 05556	WILLAMETTE	Willamette TMDL: Creating Dialog & Tools	FY 2006	$74,972	Lower Nehalem Watershed Council	$40,352	$34,620	OPEN	Wright, Pamela	30-Jun-09
W 05557	WILSON-TRASK-NESTUCCA	Nestucca/Neskowin/Sand Lake 2007-08 NNWC STREAMSIDE PLANTING AND MAI	2007	$60,000	Nestucca Neskowin Watershed Council	$60,000	$ -	OPEN	Apple, Bruce	31-Dec-08
W 05558	WILSON-TRASK-NESTUCCA	2008 TILLAMOOK CO. CHILDREN'S WATER FEST	2007	$4,617	Tillamook County Estuary Partnership	$4,617	$ -	CLOSED	Apple, Bruce	31-Aug-08
W 05559	APPLEGATE	Applegate River APPLEGATE WS TMDL IMPLEMENTATION	2007	$112,514	Applegate River Watershed Council	$9,940	$102,574	OPEN	Meyers, Bill	30-Jun-10
W 05560	WILSON-TRASK-NESTUCCA	BACKYARD PLANTING PROGRAM - YEAR 5	2007	$49,450	Tillamook County Estuary Partnership	$49,450	$ -	CLOSED	Apple, Bruce	31-Dec-08
W 05561	UPPER WILLAMETTE	CALAPOOIA & SANTIAM LANDOWNER OUTREAH AND	2007	$73,766	South Santiam Watershed Council	$29,981	$43,785	OPEN	Gramlich, Nancy	30-Jun-09
W 05562	LOWER WILLAMETTE	CEDAR ISLAND DEMONSTRA-TION RESTORATION PROJECT	2007	$11,730	Willamette River keeper	$3,126	$8,604	OPEN	Simpson, Manette	31-Mar-09
W 05563	CROSSES SUBBASINS / MALHEUR RIVER	CHOIR BOYS CONSTRUCT WETLAND PROJECT	2007	$52,248	Malheur SWCD	$52,248	$ -	OPEN	Dombrowski Tonya	30-Sep-09

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	WATERSHED	PROJECT TITLE	FY	BUDGET	CONTRACT WITH	EXPENDITURES	BALANCE	STATUS	PROJ MGR	END DATE
W 05564	NECANICUM	CIRCLE CREEK ENHANCEMENT PROJECT	2007	$27,535	North Coast Land Conservancy	$10,553	$16,982	OPEN	Apple, Bruce	31-Dec-08
W 05565	CLACKAMAS	Clackamas Basin Pesticide Stewardship	2007	$22,849	Clackamas Co SWCD	$25,002	$(2,153)	OPEN	Masterson, Kevin	28-Feb-09
W 05566	UPPER WILLAMETTE	Long Tom / Muddy River INTEGRATION TMDL AND GW PRIORITIES INTO	2007	$171,000	Benton Co SWCD	$10,958	$160,042	OPEN	Eldridge, Audrey	30-Nov-09
W 05567	NEHALEM	LITTLE NORTH FORK, NEHALEM RIPARIAN ENHA	2007	$8,540	Lower Nehalem Watershed Council	$ -	$8,540	OPEN	Apple, Bruce	31-Dec-08
W 05568	MCKENZIE	MCKENZIE RIVER SEPTIC SYSTEM ASSISTANCE	2007	$68,000	Eugene Water & Electric Board	$6,717	$61,283	OPEN	Lindberg, Bobbi	30-Jun-09
W 05569	MIDDLE ROGUE	Bear Creek-MEDFORD SPORTS & COMMUNITY PARK URBAN RE	2007	$49,000	City of Medford	$5,569	$43,431	OPEN	Kauzlarich, Wayne	31-Dec-09
W 05570	MIDDLE FORK JOHN DAY	MIDDLE FORK OF THE JOHN DAY RIVER AQUATIC	2007	$174,850	Nature Conservancy	$79,288	$95,562	OPEN	Lamb, Bonnie	31-Dec-09
W 05571	LOWER WILLAMETTE	MULTNOMAH CO. CENTRAL LIBRARY ECO-ROOF	2007	$102,148	Multnomah County	$ -	$102,148	OPEN	Simpson, Manette	30-Jun-09
W 05572	NA	NPS #17 319 RECYCLED PROJECT DOLLARS	2007	$(17,505)		$ -		OPEN		31-Dec-11
W 05573	CROSSES SUBBASINS / OWYHEE RIVER	OWYHEE RIVER IMPROVEMENT PROJECT	2007	$37,652	Malheur Co. SWCD	$9,736	$27,916	OPEN	Dombrowski, Tonya	31-Dec-09

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	WATERSHED	PROJECT TITLE	FY	BUDGET	CONTRACT WITH	EXPENDITURES	BALANCE	STATUS	PROJECT MANAGER	END DATE
W 05574	POWDER	POWDER RIVER WQ ENHANCEMENT PROJECT	2007	$52,500	Baker Valley Soil & Water Conservation District	$27,378	$25,122	OPEN	Dombrowski, Tonya	31-Dec-08
W 05575	WILLAMETTE	PRIVATE WELL OUTREACH AND MONITORING	2007	$58,892	Oregon State University	$53,503	$5,389	OPEN	Eldridge, Audrey	30-Aug-08
W 05576	MOLALLA-PUDDING	Pudding Basin Pesticide Stewardship Partnership	2007	$23,089	Pudding R. WSC	$27,352	$(4,263)	OPEN	Masterson, Kevin	28-Feb-09
W 05577	CROSSES SUBBASINS / UPPER DESCHUTES	Deschutes River / Crane Prairie Reservoir area RESTORATION EFFECTIVENESS MONITORING IN PRIORITY B	2007	$80,823	Upper Deschutes Watershed	$26,664	$54,159	OPEN	Lamb, Bonnie	31-Dec-09
W 05578	UMPQUA	SCHOLFIELD CREEK RIPARIAN ENHANCEMENT	2007	$21,030	Umpqua SWCD	$ -	$21,030	OPEN	Heberling, Paul	31-Dec-09
W 05579	WILSON-TRASK-NESTUCCA	TILLAMOOK RIVER SWCD 2007 STREAM ENHANCEMENT A	2007	$47,872	Tillamook County SWCD	$10,857	$37,015	OPEN	Apple, Apple	30-Jun-09
W RC#15	NEHALEM	UPPER NEHALEM RIPARIAN RESTORATION AND B	2007	$54,360	Upper Nehalem Watershed Council	$48,086	$ 6,274	OPEN	Apple, Bruce	31-Dec-08
W 06700	CROSSES SUBBASINS / MALHEUR RIVER	Malheur River Basin WASH RACK SOLUTION	2007	$10,334	Malheur Co. SWCD	$ -	$10,334	OPEN	Dombrowski, Tonya	31-Dec-11
W 06701	WILSON-TRASK-NESTUCCA	WOLFE CREEK ENHANCEMENT PROJECT	2007	$27,958	Tillamook County Estuary Partnership	$18,025	$9,934	OPEN	Apple, Bruce	31-Dec-08
W 06702	LOWER WILLAMETTE	WQ INVESTMENT: STREAMSIDE RESTORATION	2007	$90,000	Metro	$14,298	$75,702	OPEN	Simpson, Manette	30-Nov-09

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	**WATERSHED**	**PROJECT TITLE**	**FY**	**BUDGET**	**CONTRACT WITH**	**EXPENDITURES**	**BALANCE**	**STATUS**	**PROJECT MANAGER**	**END DATE**
W 06703	YAMHILL	Yamhill Basin Pesticide Stewardship Partnership	2007	$19,464	Yamhill WSC	$20,254	$(790)	OPEN	Masterson, Kevin	28-Feb-09
W 06704	WILSON-TRASK-NESTUCCA	Agriculture & Rural Residential Planting	2008	$48,500	Tillamook County Estuary Partnership	$ -	$48,500	OPEN	Apple, Bruce	31-Dec-09
W 06705	MIDDLE ROGUE	Bear Creek WS WQIP Dev. & TMDL Implementation	2008	$49,807	Rogue Valley Council of Governments	$4,584	$45,223	OPEN	Tugaw, Heather	
W 06706	WILSON-TRASK-NESTUCCA	CCWF 2009	2008	$5,000	Tillamook Estuary Partnership (TEP)	$ -	$5,000	OPEN	Apple, Bruce	
W 06707	NORTH COAST / LOWER COLUMBIA	Dry Manure Storage Initiative	2008	$23,660	Clatsop Soil & Water Conservation District	$1,258	$22,403	OPEN	Apple, Bruce	31-Dec-09
W 06708	LOWER COLUMBIA-SANDY	Gresham NPS Program. Stream Outreach/Rest.	2008	$58,350	City of Gresham	$ -	$58,350	OPEN	Simpson, Manette	
W 06709	MIDDLE COLUMBIA-HOOD	Herbicides in Fifteen mile Watershed Investigation	2008	$34,267	Wasco Co SWCD	$ -	$34,267	OPEN	Dombrowski Tonya	
W 06710	UMATILLA	Lampson Levee Setback & Channel Stability Project	2008	$155,000	Umatilla Basin WSC	$ -	$155,000	OPEN	Dombrowski, Tonya	30-Jan-11
W 06711	UMATILLA	Meacham Ck. Restoration Bioassessment	2008	$44,034	OSU-HARES	$ -	$ 44,034	OPEN	Dombrowski, Tonya	30-Jan-11
W 06712	SIUSLAW	Big Elk and Indian Creek Mid-Coast Sediment Assessment& Source Ctrl Program	2008	$69,608	Siuslaw Watershed Council	$27,410	$42,198	OPEN	Lindberg, Bobbie	30-Sep-09

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	**WATERSHED**	**PROJECT TITLE**	**FY**	**BUDGET**	**CONTRACT WITH**	**EXPENDITURES**	**BALANCE**	**STATUS**	**PROJECT MANAGER**	**END DATE**
W 06713	NORTH WILLAMETTE	N. Willamette Chemical Waste Collection	2008	$22,389	Marion Co. SWCD	$ -	$22,389	OPEN	Simpson, Manette	31-Dec-09
W 06714	WILSON-TRASK-NESTUCCA	Nestucca Neskowin Streamside Plant. /Maint.	2008	$60,000	Nestucca Neskowin Watershed Council	$10,597	$49,403	OPEN	Apple, Bruce	31-Dec-09
W 06715	NA	NPS #18 319 RECYCLED PROJECT DOLLARS	2008	$ -		$ -		OPEN	Camacho, Ivan	
W 06716	LOWER CROOKED	Ochoco Ck Stream Enhancement, and Greenway Expansion	2008	$77,316	Crooked River Watershed Council	$ -	$77,316	OPEN	Lamb, Bonnie	30-Jun-10
W06717	MIDDLE WILLAMETTE	Pringle Creek Riparian Pilot Project	2008	$6,415	City of Salem	$ -	$ 6,415	OPEN	Gramlich, Nancy	30-Sep-10
W 06718	UMPQUA	Upper / Middle Umpqua PUR Water Quality Monitoring	2008	$33,220	Partnership for Umpqua Rivers	$6,668	$26,552	OPEN	Heberling, Paul	31-Dec-10
W 06719	LOWER COLUMBIA-CLATSKANIE	Rinearson Slough Rinearson Creek Project	2008	$22,101	Willamette River keeper	$ -	$22,101	OPEN	Simpson, Manette	30-Jun-10
W 06720	LOWER WILLAMETTE	Scappoose Creek Riparian & Wetland Restoration	2008	$44,285	Columbia SWCD	$ -	$44,285	OPEN	Apple, Bruce	31-Dec-09
W 06721	SILTCOOS	Siltcoos Lake WQ and Macro data acquisition for TMDL	2008	$85,953	Portland State University	$1,256	$84,697	OPEN	Waltz, David	31-Oct-09
W 06722	SOUTHERN WILLAMETTE VALLEY GWMA	Southern Willamette Valley GWMA Action Plan/Imp	2008	$99,893	Lane Council of Governments	$5,638	$94,255	OPEN	Eldridge, Audrey	30-May-10
W 06723	COOS	Ten mile Lakes WQ Implementation Plan Phase II	2008	$109,725	City of Lakeside	$ -	$109,725	OPEN	Blake, Pam	31-Jan-11

PROGRESS OF NPS 319 FUNDED PROJECTS (GRANT PERFORMANCE REPORT)										
PROJ #	**WATERSHED**	**PROJECT TITLE**	**FY**	**BUDGET**	**CONTRACT WITH**	**EXPENDITURES**	**BALANCE**	**STATUS**	**PROJ MGR**	**END DATE**
W 06724	NEHALEM	Upper Nehalem Riparian Rest & Basin WQ Monitoring	2008	$53,786	Upper Nehalem Watershed Council	$25,365	$28,421	OPEN	Apple, Bruce	31-Dec-09
W 06725	UPPER WILLAMETTE	Upper Willamette WQ Monitoring & Outreach Pgm	2008	$107,791	Middle Fork Willamette Watershed Council	$10,001	$97,790	OPEN	Rubin, Jared	30-Dec-10
W 06726	UPPER DESCHUTES	Whychus Creek Restoration at Camp Polk	2008	$176,300	Upper Deschutes Watershed	$ -	$176,300	OPEN	Lamb, Bonnie	30-Apr-11

Geographic and Programmatic Priorities for 319 Funding

The following tables identify DEQ's geographic and programmatic priorities for 319 funded projects in 2008 as identified in the 2008 319 RFP. These priorities were used to select the 2008 319 Funded Projects.

Table 8. Identifying DEQ's Geographic and Programmatic Priorities for 319 Funded Projects in 2008

319 RFP IDENTIFIED 2008 OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
REGION	**Northwest Region**
Background	Many river and stream segments as well as several lakes in Northwest and Western Regions have been identified as water quality limited under Section 303(d)(1) of the Clean Water Act. The water quality issues in the coastal portion of the region have received additional attention due to declining fish runs and the Governor's Salmon Restoration Initiative, an effort to restore viable Coho populations to coastal streams. Temperature, dissolved oxygen, and sediment are the principal parameters of concern for salmonid reproduction and survival. Bacteria are a concern for commercial and recreational shellfish harvest as well as human recreation. In urban areas, toxics and bacteria carried in stormwater are a concern, as is temperature.
Geographic Priorities	All non-Willamette watersheds in the Northwest Region have approved TMDLs and need efforts in TMDL implementation. DEQ rates all non-Willamette watersheds (North Coast and Columbia River tributaries) of equal priority. The Willamette subbasins within the Northwest Region (Lower Willamette, Tualatin, and Clackamas) are also high priority. DEQ is interested in projects where we can establish new partnerships, particularly in the Lower Columbia basins. DEQ is particularly interested in funding projects that implement restoration, best management practices, and associated monitoring on agricultural land.
Programmatic Priorities	The NW programmatic priorities also apply to the Willamette subbasins in the Northwest Region. DEQ encourages projects that implement strategies contained in existing watershed restoration plans such as: Tillamook County Comprehensive Conservation and Management Plan (CCMP), Nestucca-Neskowin Watershed Council Action Plan; Nehalem Watershed Council Assessment and Action Plan; Lower Columbia River Estuary Partnership Comprehensive Conservation Management Plan; Sandy River Basin Watershed Council Action Plan; Willamette subbasin action plans (e.g. Columbia Slough, Johnson Creek, Clackamas River); and Basin TMDLs. Agriculture: DEQ encourages projects on agricultural land that would improve riparian shading and function; control livestock access to streams, control sediment sources, and improve manure management. DEQ is also interested in projects, including highly visible demonstration projects that reduce pesticide loading to waterways. Urban: DEQ's Northwest Region priorities for urban areas are projects that: promote and implement LID, use innovative BMPs to reduce urban storm water impacts, Develop stormwater plans or TMDL implementation plans in smaller communities, or increase riparian shading and improve riparian function.) discourages applications to fund infrastructure projects that are required by law or likely to take place without 319 funding. Lakes: DEQ is interested in projects that control sediment and nutrient sources to lakes.

319 RFP IDENTIFIED OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
REGION	**Willamette Basin**
Background	Many river and stream segments in Northwest Region (NWR) and the Western Region (WR) as well as several lakes have been identified as water quality limited under Section 303(d)(1) of the Clean Water Act. The water quality issues in the coastal portion of the region have received additional attention due to declining fish runs and the Governor's Salmon Restoration Initiative, an effort to restore viable Coho populations to coastal streams. Temperature, dissolved oxygen, and sediment are the principal parameters of concern for salmonid reproduction and survival. Bacteria are a concern for commercial and recreational shellfish harvest as well as human recreation. In urban areas, toxics and bacteria carried in stormwater are a concern, as is temperature.
Geographic Priorities	Total Maximum Daily Loads have been established throughout the Willamette Basin for bacteria, mercury, and temperature. Additionally, selected subbasins and watersheds have TMDLs for other parameters such as nutrients, suspended solids and toxics (see list of approved TMDLs - http://www.deq.state.or.us/WQ/TMDLs/TMDLs.htm). Additionally, the Willamette Basin is a Governor's priority under the Willamette River Legacy Program (**http://governor.oregon.gov/Gov/Willamette_River_Legacy/vision_background.shtml**). The Department also declared a portion of the Southern Willamette Valley as a Groundwater Management Area in 2004 due to high levels of nitrates. The most likely sources of nitrate in the Southern Willamette Valley groundwater are dense groupings of septic systems, lawn and crop fertilizers, and animal wastes. In 2004, the Department also declared a portion of the Southern Willamette Valley a ***Groundwater Management Area*** (GWMA) due to high levels of nitrate. In 2006, an Action Plan for the GWMA was drafted and public comment on this plan taken. The Action Plan identifies voluntary strategies that, when implemented, could reduce the amount of nitrate that discharges to the groundwater. The most likely sources of nitrate in the Southern Willamette Valley groundwater are dense groupings of septic systems, lawn and crop fertilizers, and animal wastes. Implementation of this plan began in 2007. Therefore, the entire Willamette basin is a geographic priority.
Programmatic Priorities	1. Implementation: DEQ will give priority to on-the-ground projects that address nonpoint sources of heating (temperature), bacteria, and sediment (carries mercury, bacteria) on a large geographic scale. DEQ will also consider smaller scale projects if they address specific practices that can be implemented on a larger scale. Site-specific projects should be identified as part of a watershed scale management plan. Within the Willamette sub-basins, DEQ encourages proposals that implement strategies in watershed council action plans, in particular those intended to mitigate sources of bacteria, heat, and mercury. DEQ encourages projects that would improve riparian shading and function; control livestock access to streams, impact to groundwater, control sediment sources, and improve manure management. DEQ is also interested in projects, including highly visible demonstration projects that reduce temperature, bacteria, mercury, pesticide, and nutrient loading to the Willamette River and its tributaries. 3. Planning: Identified cities and counties will need to develop TMDL Implementation plans within 18 months of the completion of the Willamette TMDL. Generally speaking, 319 funds are for implementation rather than for planning. However, a small 319 grant may be possible, particularly for smaller jurisdictions, or for proposals that address planning on a large geographic scale. 4. Groundwater. DEQ will give priority to projects that assist in the development and implementation of an action plan for the Southern Willamette Valley Groundwater Management Area (GWMA), provide outreach and assistance to the communities of the area, help to recognize barriers and strategies for sustainable actions, or provide

319 RFP IDENTIFIED OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
	assessment monitoring of the groundwater or effectiveness monitoring of best management practices (BMP). 5. Monitoring: Some areas of uncertainty were identified in the TMDL development work, particularly for toxics (mercury, pesticides). BMP assessment monitoring is needed for both GWMA and TMDL strategic work. DEQ will give priority to projects that address these areas of uncertainty related to nonpoint source contribution (e.g. contributions from certain sectors or types of activity).
REGION	**Western Region – South Coast Basins**
Background	Many South Coast Basin rivers, streams, estuaries, and lakes have been identified as water quality limited under Section 303(d) (1) of the Clean Water Act. DEQ's Strategic Plan seeks to protect and improve water quality to support human health as well as fishery habitat in partnership with Oregonians (DEQ Strategic Plan Priorities). The Oregon Plan for Watersheds also focuses on these same water quality goals. Temperature, dissolved oxygen, and sediment are the principal parameters of concern for salmonid reproduction and survival. Bacteria are a concern for commercial and recreational shellfish harvest as well as human recreation. Nuisance weed and algae problems are prevalent in the areas coastal lakes. The following information identifies geographic and programmatic priorities for using 319 funds to boost the effectiveness of local NPS efforts to strategically improve water quality in the South Coast Basin. These targets for 319 projects are defined to help guide applicants to focus proposals on priority actions needed to address areas where water quality is limiting to beneficial uses. DEQ requires that all project proposals implement strategies contained in existing watershed restoration plans supported by watershed assessments.

319 RFP IDENTIFIED OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
Geographic Priorities, South Coast Basins	The South Coast Basin is comprised of coastal frontal watersheds of streams and lakes within Coos and Curry Counties and the Lower Rogue, a 5th field watershed located in Curry County. Tenmile Watershed Total Maximum Daily Loading (TMDL) Assessments and Water Quality Management Plans (WQMP) have been developed for the Tenmile Watershed. DEQ is particularly interested in funding projects that; • Target the reduction of nutrient loading from lakefront areas and from upland sources (sediment abatement, onsite septic, lakefront development, riparian health, etc.) • Promote and implement Low Impact Development techniques and provide demonstration opportunity • Promote development of Water Quality Implementation Plans as required in the WQMP • Further develop weed management planning; implementation of pilot projects to demonstrate weed management techniques • Implementation projects that develop and/or apply alternative management techniques in areas where managed channelized streams are known to deliver pollutants in an accelerated manner Western Region Geographic Initiative Sixes and Chetco 4th Field HUC's The Sixes and Chetco 4th field Basins have been identified as areas where DEQ will implement the 2007 Western Region Geographic Initiative (GI) or watershed approach. During the 2007 GI, DEQ will seek to focus multi program efforts, working as a team, to identify partnerships to improve environmental quality. The Department seeks to partner with local entities involved in land development with a focus on the following activities: • Promote and implement Low Impact Development (LID) techniques especially those that provide demonstration opportunity • Use innovative BMPs to reduce urban storm water impacts, • Increase the awareness of water quality issues related to land development • Serve to help support the implementation of development related ordinances • Work with the gravel industry to better evaluate gravel recruitment, gravel bar and channel stability, and fishery habitat enhancement opportunities DEQ discourages applications to fund infrastructure projects that are required by law or likely to take place without 319 funding. The Sixes 4th field temperature TMDL and WQMP is planned for completion in late 2006 and the Chetco 4th field should be finished in early 2007. DEQ is particularly interested in funding projects that; • Focus on improving and maintaining riparian health • Abatement sedimentation (support channel stability and reduced nutrient loading to coastal lakes) • Further development of weed management planning; implementation of pilot Projects to demonstrate weed management techniques • Supports on-site system education and condition assessment • Develop or augment watershed based water quality management planning • Partner with area intensive agriculture to assess and minimize water quality impacts

319 RFP IDENTIFIED OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
	Lower Rogue The Lobster Creek temperature TMDL and WQMP has been completed. DEQ is particularly interested in funding projects that implement the Lobster Creek TMDL and WQMP that; focus on improving and maintaining riparian health abate sedimentation (support channel stability and reduced nutrient loading to coastal lakes) In addition DEQ is interested in funding projects that focus on; assess Lower Rogue tributary riparian conditions on private lands implement projects improving cold water fishery habitat on L. Rogue tributaries work with the gravel industry to better evaluate gravel recruitment, gravel bar and channel stability, and fishery habitat enhancement opportunities Coos and Coquille 4th field HUC's DEQ is continuing data collection efforts to characterize dissolved oxygen and bacterial loading in the Coos and Coquille sub basins in support of TMDL and WQMP development scheduled for 2007-2008. DEQ is particularly interested in funding projects; • That assists with data collection, pollutant modeling, and TMDL development. • implementation projects that incorporate measurable bacterial reduction targets and have demonstration potential • implementation projects that develop and/or apply alternative management techniques in areas where managed channelized streams are known to deliver pollutants in an accelerated manner • Work with the gravel industry to better evaluate gravel recruitment, gravel bar and channel stability, and fishery habitat enhancement opportunities.
Programmatic Priorities, South Coast Basins	DEQ encourages applicants to focus on the following programmatic priorities and develop project proposals that will address these high priority water quality issues in the South Coast Basin. Lakes: DEQ seeks projects that control sediment and nutrient sources into coastal lakes. In addition, projects that address invasive aquatic weed control will be considered priority. Stream Temperature: DEQ seeks to implement projects that promote the establishment of healthy riparian areas and may include off-channel livestock watering, fencing, riparian planting, and nutrient buffer zone management components. Projects designed to provide measurable improvements through time will be given preference. Bacterial Loading: DEQ seeks projects that will reduce bacterial loading from agricultural and urban settings. Nutrient and Sediment Control: DEQ seeks projects that will reduce sediment loading through sediment source management. Channelized Stream Alternative Management Strategies: DEQ seeks projects that will reduce pollutant loading and interrupt accelerated pollutant delivery resulting from stream channel modifications. Low Impact Development: DEQ seeks projects that will reduce runoff and erosion from construction sites. Projects that promote and implement low impact, sustainable land development techniques and incorporate innovative BMPs to reduce urban storm water pollution will be considered as high priority. Education and Outreach: Projects, which incorporate education, outreach, and technical assistance to landowners and/or developers, are desired. Effectiveness Monitoring: DEQ seeks to support monitoring of projects designed to improve water quality (WQ) in order to measure and quantify the projects effectiveness. Monitoring projects focusing on 303d listed WQ limited waterbodies are preferred. On the ground projects should be at a scale that the measurement of WQ improvement is feasible. Monitoring may include the collection of baseline data for comparison to future conditions

319 RFP IDENTIFIED OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
	and proposals should identify when or at what threshold condition post project effectiveness monitoring will occur. Proposals to monitor mature projects should provide background on available baseline data. Monitoring projects will require the development of a DEQ approved Sampling and Analytical Plan (SAP).
REGION	**Western Region – Umpqua Basin**
Background	Many river and stream segments as well as several lakes in the Umpqua Basin have been identified as water quality limited under Section 303(d)(1) of the Clean Water Act, and TMDLs to address most of these issues are close to completion. Streams exceeding the bacteria standard affect water contact recreation, and in the estuary, commercial and recreational shellfish harvest is affected. Stream temperature, important for salmonids, is too high in much of the basin. Dissolved oxygen, pH, and other nutrient-related issues affect salmonids and other aquatic life. Additional water quality problems related to toxics including mercury and arsenic have been identified, but more data is needed to develop TMDLs for these substances.
Geographic Priorities	Areas with 303(d) listed streams are considered geographic priorities for projects addressing the listings. In addition, due to concerns about the impact of water quality on Coho in the South Umpqua subbasin, restoration projects targeting smaller tributaries of the lower South Umpqua are also geographic priorities.
Programmatic Priorities	DEQ encourages projects that will implement the upcoming TMDLs for temperature, bacteria, and nutrients, and which include a monitoring component designed to identify and, if possible, quantify nonpoint source pollutant load reductions. Many opportunities for such projects are contained in the various assessment and action plan documents that watershed councils and local governments have developed, and projects identified in those plans will also receive priority. DEQ encourages a monitoring project that will focus on TMDL implementation and effectiveness. DEQ encourages projects on agricultural land that would improve riparian shading and function; control livestock access to streams, control sediment sources, and improve manure management. DEQ encourages monitoring projects that will provide data necessary for TMDLs for toxic substances including mercury and arsenic. Development of TMDL implementation plans will be considered, especially for smaller communities. Lakes: DEQ encourages monitoring projects related to the drawdown of Diamond Lake.

319 RFP IDENTIFIED 2008 OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
REGION	**Western Region – Mid Coast Basin**
Background	Many river and stream segments as well as several lakes in the Mid Coast Basin have been identified as water quality limited under Section 303(d)(1) of the Clean Water Act. The water quality problems impact cold-water fisheries, in particular salmonids. Temperature, dissolved oxygen, and sediment are the principal parameters of concern for salmonid reproduction and survival. Bacteria are a concern for commercial and recreational shellfish harvest as well as human recreation.
Geographic Priorities	Streams and lakes listed on the 303(d) list as water quality limited are priorities for development of data needed for TMDLs, and for projects focusing on riparian restoration. The Salmon, Alsea, Yaquina, and Siuslaw Rivers have multiple listings for temperature, dissolved oxygen, and bacteria, and are thus geographic priorities.
Programmatic Priorities, Mid Coast basins	DEQ encourages Mid Coast Basin water quality studies, developed in cooperation with regional DEQ staff, to provide data for TMDL development addressing the following water quality concerns: Dissolved oxygen deficiencies in the Salmon and Alsea Rivers affecting salmonid spawning and rearing; Excess bacteria in the Salmon, Alsea, Yaquina, and Siuslaw Rivers affecting shellfish harvesting. DEQ encourages Mid Coast Basin restoration projects as follows: Agriculture: DEQ encourages projects on agricultural land that would improve riparian shading and function; control livestock access to streams, control sediment sources, and improve manure management. Lakes: DEQ is interested in projects that identify and control sediment and nutrient sources.
REGION	**Western Region – Rogue Basin**
Background	Many river and stream segments as well as several lakes in Rogue Basin have been identified as water quality limited under Section 303(d)(1) of the Clean Water Act. The water quality issues in the region have received additional attention due to declining fish runs and the Governor's Salmon Restoration Initiative, an effort to restore viable Coho populations to coastal streams. Temperature, dissolved oxygen, and sediment are the principal parameters of concern for salmonid reproduction and survival. Bacteria are a concern for human recreational activities. In urban areas, sediments, toxics, and bacteria carried in stormwater are a concern, as is temperature. The following list identifies geographic and programmatic priorities for using 319 funds to boost the effectiveness of local NPS mitigation efforts in the Rogue Basin.:

319 RFP IDENTIFIED 2008 OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
Geographic Priorities	DEQ is currently developing TMDLs in the Bear Creek, Upper/Middle/Lower Rogue, and the Illinois Sub-basins. DEQ currently has adequate data to characterize these areas and develop TMDLs. Data to support TMDL development is not a high priority in the Rogue Basin. Sub-basins and watersheds in the Rogue Basin that have approved TMDLs include Sucker Creek and the Applegate. Bear Creek will be completed this year. In these areas DEQ rates TMDL implementation as a high priority. Projects benefiting temperature, bacteria, sedimentation/erosion control, dissolved oxygen, or flow in the Rogue Basin are rated as high priority. DEQ is interested in projects where we can establish new partnerships. DEQ is also interested in funding projects that implement restoration, best management practices, and associated monitoring on agricultural land.
Programmatic Priorities	DEQ encourages projects that implement strategies contained in existing watershed restoration plans. Agriculture: DEQ encourages projects on agricultural land that would improve riparian shading and function, control livestock access to streams and impact to groundwater, control sediment sources, and improve manure management. DEQ is also interested including highly visible demonstration projects that reduce pesticide and nutrient loading to waters of the state. Urban: DEQ's Rogue Basin priorities for urban areas include projects that: promote and implement low impact, sustainable development, use innovative BMPs to reduce urban storm water pollution, increase riparian shading and improve riparian function, or Develop stormwater plans or TMDL implementation plans in local communities. DEQ discourages applications to fund infrastructure projects that are required by law or likely to take place without 319 funding. Lakes: DEQ is interested in projects that control sediment and nutrient sources to lakes. Groundwater DEQ is interested in projects that address area wide contamination related to nonpoint source contribution (e.g. contributions from certain sectors or types of activity).
REGION	**Eastern Region**
Background	Numerous river and stream segments in Eastern Region are identified as water quality limited under Section 303(d) (1) of the Clean Water Act. Many of the waterbodies are home to diminished runs of salmonids or suckers identified as threatened under the Federal Endangered Species Act. The principal water quality threats to these species, as well as to resident species are high temperature, low dissolved oxygen, high-suspended solids, and streambed sedimentation. In the Hood subbasins, pesticides have also been documented as a water quality threat. Pesticides are being studied in the Walla Walla subbasin. Bacteria are identified as a water quality problem in several streams in Eastern Oregon, which can impact human health. Low summer stream flows can contribute to all of these water quality problems. The major land uses in the region are agricultural and forestry, with the loss of riparian vegetation, reduced stream flow, and disturbed channel form being the major cause of elevated temperature, sedimentation, and excess nutrients. In urban areas, sediment, nutrients, and bacteria carried in stormwater are a concern, as is temperature. Regional implementation projects of most interest include projects addressing on-the-ground problems or provide monitoring *necessary* for TMDL development and implementation. Projects that contain strong, well-planned monitoring (i.e. effectiveness monitoring) and educational/outreach components are encouraged. Successful applications will address the programmatic issues below, within the specified geographic areas. Addressing both the programmatic and geographic priority is critical.

319 RFP IDENTIFIED 2008 OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
Geographic Priorities, Eastern Region Basins	Eastern Region geographic priorities are watersheds where DEQ has declared a Groundwater Management Area, has an approved TMDL, or is actively developing a TMDL. Groundwater Management Areas (GWMAs) Lower Umatilla Basin GWMA Northern Malheur County GWMA Watershed with approved TMDLs Alvord Lakes Subbasin Mid Columbia – Western Hood Subbasins (Hood River and Columbia River tributaries west to Cascade Locks) Snake River-Hells Canyon Subbasin (RM 409-RM188) Umatilla Basin Upper Grande Ronde Subbasin Walla Walla Basin Upper Klamath Lake Drainage (Sprague. Upper Klamath Lake and Williamson Subbasins Willow Creek (Morrow County) Basin DEQ is interested in projects that implement TMDLs and GWMA Action plans. Applicants should review the TMDLs and the GWMA reports to become familiar with problems in the watersheds listed above. The Water Quality Management Plan (WQMP) section of the TMDLs and the GWMA Action Plans contain Best Management Practices and recommended actions to improve water quality within the priority watersheds. Projects that directly address GWWMA objectives and TMDL load allocations will receive higher scoring from the review panel. Completed TMDLs and their WQMPs can be found at **www.deq.state.or.us/wq/TMDLs/TMDLs.htm**. Action Plans for the GWMAs can be found at http://www.deq.state.or.us/wq/groundwater/groundwater.htm#gwmas Watersheds where TMDL development activities are in process Deschutes River Basin (including Crooked River Subbasins) John Day River Basin Lower Grande Ronde Subbasin, Wallowa Subbasin, and Imnaha Subbasin Lost River Subbasin Malheur River Basin Upper Klamath Subbasins (downstream of Upper Klamath Lake to California State line) Mid Columbia-Hood Subbasin In watersheds were TMDLs are currently being developed, DEQ is interested in projects that will support *necessary* WQ monitoring for TMDL development or improve WQ on stream segments that do not meet water quality standards. Applicants should review the 303(d) list to identify those stream segments and their associated problems. The 303(d) List is at http://www.deq.state.or.us/WQ/assessment/assessment.htm

319 RFP IDENTIFIED 2008 OREGON GEOGRAPHIC AND PROGRAMMATIC PRIORITIES FOR WATER QUALITY NPS CONCERNS AND 319 PROJECT IMPLEMENTATION	
Programmatic Priorities	Eastern Region is interested in on-the-ground projects that address the following issues: Temperature – elevated surface water temperature is one of the most widespread problems in Eastern Region watersheds. Projects that promote riparian vegetation restore channel form, restore instream flows, or projects that would protect or enhance cold-water refugia for fish are encouraged. Nutrients – Low dissolved oxygen (DO), high pH, and excessive algae growth have been identified in Eastern Region as water quality problems in both streams and lakes (reservoirs). These conditions are associated with excess nutrient contributions from both point and nonpoint sources, increased temperatures, and/or decreased natural flows. Where nutrients have been identified as limiting factors in TMDLs, projects that identify sources of nutrients, prevent nutrients from entering surface water or reduce the use of nutrients adjacent to surface water are encouraged. Sediment Control – Nutrients in surface water are often associated with sediment or particulates. In some cases the sediment itself can create serious problems. As a result Eastern Region is interested in erosion control projects adjacent to surface water or in upland projects designed to reduce the delivery of sediments to streams. Pesticides – Studies have been done in the Hood Basin that have documented that pesticides used in the fruit industry are found in streams in concentrations that exceed water quality standards. Projects that reduce pesticides from reaching surface water are encouraged, as are projects that help to better establish the mechanism for pesticide transport and development of BMPs. Bacteria – Elevated levels of E. coli bacteria are often associated with failing wastewater treatment systems (point or nonpoint source) and/or with animal wastes. Projects that prevent bacteria from entering surface water are encouraged. Some of these projects, such as fencing livestock from riparian corridors will likely address temperature and nutrient issues as well. Fish Habitat – Declining habitat for threatened or endangered fish is a widespread concern in the region, especially in northeast Oregon and the Klamath Basin. Projects that include the enhancement or protection of fish habitat, while addressing the above pollution issues are encouraged. Groundwater - There are two established Groundwater Water Management Areas in the Eastern Region: Lower Umatilla Basin and Northern Malheur County. Elevated nitrates and in some cases, pesticides, are concerns. Projects that demonstrate method to prevent or reduce groundwater contamination are sought in these areas. High priority projects would include those specifically addressing December 2005 goals in the Lower Umatilla Basin Groundwater Management Area Action Plan. DEQ seeks sound, high visibility projects that address programmatic issues described above. In the Klamath and Malheur subbasins, the possibility of constructed wetlands should be considered as a method of reducing bacteria, nutrients, and sediment from agricultural operations. Riparian planting projects should use vegetation obtained from local native stock to assure success. Fencing projects should provide adequate setback to allow the stream to approach or attain natural riparian functions such as lateral migration and a natural floodplain.

2008 – 319 Funded Projects

The following table identifies the projects funded in response to the 2008 RFP:

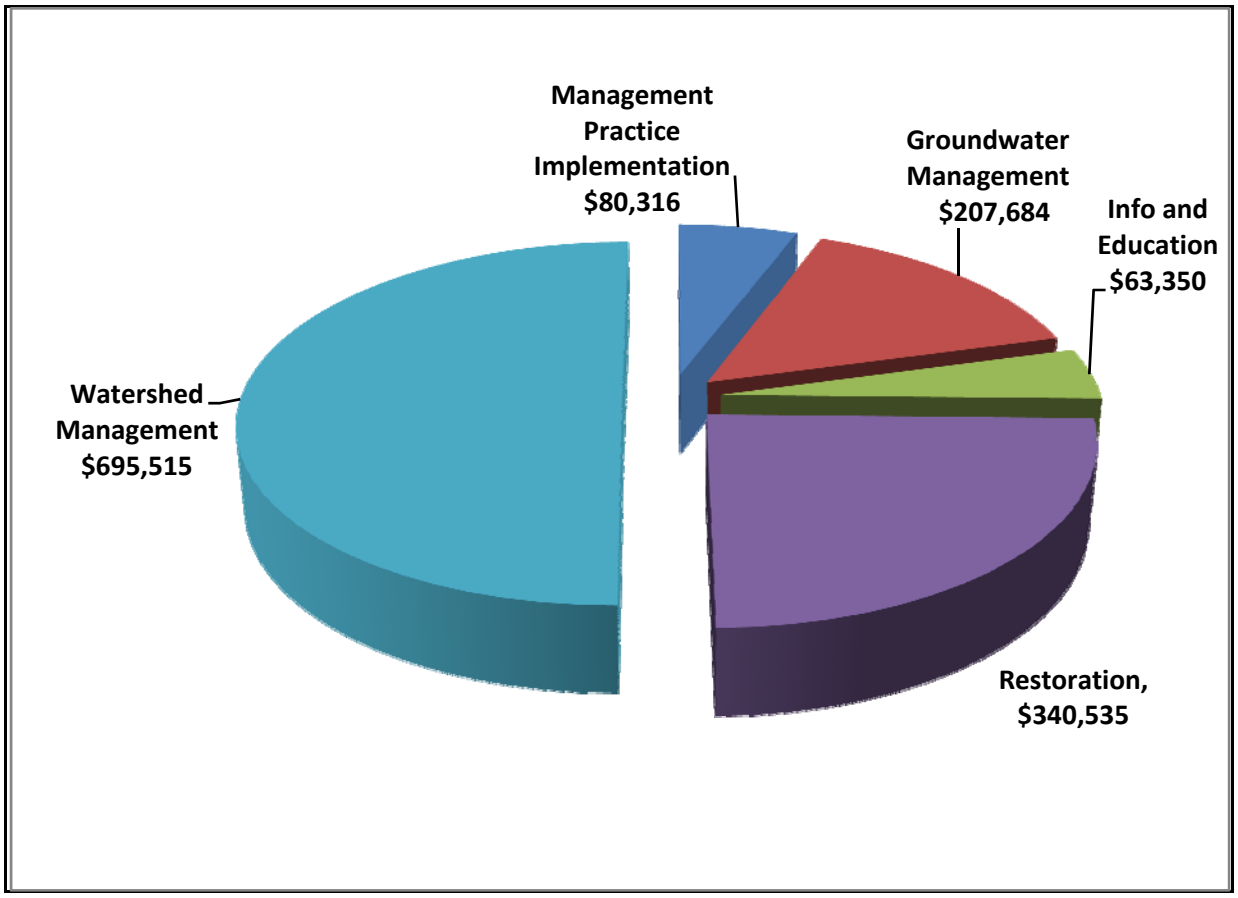
Table 9. 319 Projects Funded in Response to the 2008 RFP

Project Name	Region	Submitted by	Location	Budget
Meacham Ck. Restoration Bioassessment	ER	OSU-HARES	Meacham Ck, Umatilla WS	$44,034.00
Herbicides in Fifteenmile Watershed Investigation	ER	Wasco Co SWCD	Fifteenmile Creek	$34,267.00
Whychus Creek Restoration at Camp Polk	ER	Upper Deschutes WSC	Whychus Creek	$176,300
Ochoco Ck Stream Enh. and Greenway Expansion	ER	Crooked River WSC	Crooked River Watershed	$77,316
Lampson Levee Setback and Channel Stability Project	ER	Umatilla Basin WSC	Umatilla River	$155,000.00
Nestucca Neskowin Streamside Plant./ Maint	NWR	NNWC	Nestucca-Neskowin WS	$60,000.00
B.Y.P.P. Year	NWR	TEP	Tillamook/Nehalem WS	$48,500.00
CCWF 2009	NWR	TEP	Tillamook WS	$5,000.00
Gresham NPS Reduction Prog. Stream Outreach/Rest.	NWR	City of Gresham	Sandy, L Willamette Basins	$58,350.00
Up. Nehalem Rip. Restoration and Basin WQ Monitoring	NWR	Up. Nehalem WSC	Nehalem River	$53,786.00
S. Columbia Co WQ Projects	NWR	Columbia SWCD	Scapoose Bay	$44,285.00
Dry Manure Storage Initiative	NWR	Clatsop Co SWCD	N. Coast/L. Colum. B	$23,660.00
Rinearson Creek Project	NWR	Willamette Riverkeeper	L. Willamette River	$22,101.00
N. Willamette Chemical Waste Collection	WR	Marion Co. SWCD	L. Pudding River	$22,389.00
ltcoos L. WQ and macro data acquisition for TMDL development, weed manag, WS assessmnt, and DV	WR	PSU	Siltcoos Lake and River	$85,953.00
Pringle Creek Riparian Enhancement Pilot Project	WR	City of Salem	Pringle Creek	$6,414.50
Southern Willamette Valley GWMA Action Plan/Implem.	WR	LCOG	SOWV GWMA	$99,893
Mid-coast Sediment Assessmentand Source Control Program	WR	Siuslaw WSC	Big Elk and Indian Creek WS	$69,608.00
Upper Willamette Water Quality Monitoring & Outreach Proj	WR	Mid. Fork Will. WSC	M. Fork, Long Tom, Coast Will	$107,791.00
PUR Water Quality Monitoring	WR	Partnerships 4 Umpqua	Upp/Middle Umpqua	$33,220.00
Tenmile Lakes Water Quality Implementation Plan Phase II	WR	10mile Lk B. Partnershp	Tenmile Lakes Watershed	$109,725
Bear Ck WS WQIP Development and TMDL Implementation	WR	RVCOG	Mid Rogue/Bear Ck	$49,807
			EPA Request:	**$1,387,400**

2008 – 319 Funding Categories

In Figure 3, the 2008 – 319 funding categories and funded amount is identified. The total grant of pass-through funds was $1,387,400.

Figure 3. 2008 Funding Categories



Summary of 2009 – 319 Grant Project Proposals

Evaluation Criteria for 2009 - 319 Project Proposals

Project's Emphasis

The 2009 RFP (http://www.deq.state.or.us/wq/nonpoint/docs/2009319GrantRFP1021.pdf) encourages projects that we think will benefit water quality in the focus areas, especially impaired waters. It emphasizes the concept of on-the-ground implementation activities or measurement of pollution reduction programs in the following areas:

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

Eligibility

Those eligible to apply include nonprofit organizations and institutions, including watershed councils and soil and water conservation districts. Also, eligible are state, local, tribal, and federal governments.

Selection Process For This Year

We are planning to continue to implement a similar strategy as 2008's, which is to rely on regional staff's recommendation for funding. Regions should select and prioritize the proposals they received for their Region. HQ will review the prioritized proposals. EPA Region X will be involved early in the process of ranking. EPA comments will be addressed as needed. Finally, the HSPIG group would make the final recommendation to the DEQ Water Quality Division Administrator.

The process will be:

- Regional review and prioritization of proposals received for that Region or by HQ staff where appropriate
- Review of Regional recommendations by HQ and EPA Region X
- Feedback to Regions on proposals to be recommended for funding
- Recommendation to HSPIG and WQ DA for funding
- Submittal to EPA Region X

Only projects that are ranked "High" according to the ranking criteria will be funded.

Ranking Criteria

The amount of funding per Region is $475,000. The amount of funding for HQ is $175,000. If not all funds are used by a region or HQ, then a group will be convened to

recommend how the remaining funds should be spent. The group will be one person from each region and one person from HQ.

Table 10. Ranking Criteria for 2009 319 Project Proposals

Ranking Criteria For 2009 319 Project Proposals (Please use one per project proposal)			
Ranking Factor	Met (2 points)	Partially Met (1 point)	Not met (0 points)
Clear objective (s) and statement of work, as evidenced in cover page			
Sections B through I presenting a clear proposal:			
Work plan (Section J of the application) demonstrates a clear understanding of the problem			
Focusing on a NPS priority as identified in Appendix A or on a NPS priority linked to a restoration plan/strategy.			
Implementing a watershed-based or Implementation Plan, or a Groundwater Management Area Action Plan.			
Describing project benefits quantitatively (with an emphasis on measurable results).			
Outreach and education as part of a watershed restoration effort			
Documenting local support, participation, and coordination with other agencies.			
Comments:			
Recommendation:	High Priority		Low Priority

Project Proposals Received

Table 11. Identification of Project Proposals Received in Response to the 2009 RFP

RECEIVED PROJECT PROPOSALS (As a Result of the 2009 RFP)									
Project #	**Title**	**Region**	**Submitted By**	**Representing**	**Basin/ Subbasin**	**Type**	**319 $$**	**Match**	**Total**
OR-319-09-01	Clackamas Planting and Outreach Project	NWR	Cheryl McGinnis	Clackamas River Council	L. Clackamas River	TMDL Implementation	$79,728	$52,620	$132,348
OR-319-09-02	Devil's lake and D River WQ	WR	Paul Robertson	Devil's lake water Improve.	Devil's Lake	303(d) listed	$24,699	$16,466	$41,165
OR-319-09-03	Coquille North Fork Drinking Water Source Protection	WR	Den Wise	Coquille WS Assoc	Coquille Ws, N/E Fork	listed streams, DWS	$15,246	$10,062	$25,308
OR-319-09-04	2009-10 NNWC Streamside Planting and Maintenance	NWR	Alex Sifford	Nestucca-Neskowin WSC	Nestucca, Neskowin & Sand Lake	TMDL Implementation	$60,000	$40,000	$100,000
OR-319-09-05	Mid Coast Basin NPS Implementation Initiative	WR	Stacy Polkowske	Lincoln SWCD	Alsea, Siletz-Yaquina, Siuslaw and Siltcoos	TMDL Implementation, DWS	$159,564	$106,376	$265,940
OR-319-09-06	North Coast Watersheds Enhancement Project	NWR	Lori Lilly	Special District Government	L. Columbia & N. Coast	TMDL Implementation	$40,000	$26,667	$66,667
OR-319-09-08	GW Protection Ed. to Promote Citizen Involvement in S. Willamette Valley	WR	Melissa Fery	OSU ES, Benton County	Southern Willamette Valley GWMA	GWMA	$70,485	$46,990	$117,475

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OR-319-09-09	Implementation Monitoring Of Umpqua Basin, Diamond Lake TMDL	WR	Bob Kinyon	Partnership Umpqua R.	Diamond Lake/Up N Umpqua	TMDL Implementation	$35,500	$24,200	$59,700
OR-319-09-10	Sucker/Kelly Creeks Comm. Ed. Outreach Project	WR	Susan Chapp	Forestry Action Committee	E. Fork Illinois river	TMDL Implementation	$5,000	$3,300	$8,300
OR-319-09-11	Targeted WQ Outreach to Isthmus & Coalbank Sloughs of Coos Bay	WR	Jon Souder	Coos WS Association	Isthmus, Davis, Coalbank Sloughs	Stormwater Education	$31,702	$12,681	$44,383
OR-319-09-12	WQ and effectiveness monitoring in the Crooked R. WS	ER	Nicholas Georgiadis	Crooked river WSC	Crooked River	TMDL Implementation	$122,485	$81,661	$204,146
OR-319-09-13	Groundwater Protection through Reduced Irrigation of Potato	ER	Clinton C. Shock	OSU-AES	NMC GWMA	GWMA	$139,213	$92,809	$232,022
OR-319-09-14	Coordinated Rogue B. WQ Implementation Plan Development	WR	Greg Stabach	RVCOG	Rogue	TMDL Implementation	$60,934	$40,623	$101,557

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Project #	**Title**	**Region**	**Submitted By**	**Representing**	**Basin/ Subbasin**	**Type**	**319 $$**	**Match**	**Total**
OR-319-09-15	Little Butte Creek WQ Enhancement Project	WR	Angela Boudro	Special SWCD (Jackson)	N. Fork Little Butte Creek	303(d) listed	$44,160	$17,664	$61,824
OR-319-09-16	Pilot Scale SW Master Planning w/Ecosystem Services Approach	NWR	Anita Yap	City of Damascus	Clackamas River	TMDL Implementation	$40,000	$26,800	$66,800
OR-319-09-19	Upper Camp Creek Restoration Project	ER	Theresa Koloszar	TNC	Camp Creek	303(d) listed	$150,000	$100,000	$250,000
OR-319-09-20	Low-Impact Development Workshops and Technical Assistance, Year 2	WR	Teresa Huntsinger	OEC	Coos Estuary, Chetco, Mid-Up Willamette	TMDL implementation	$66,676	$44,451	$111,127
OR-319-09-21	Upper Nehalem Riparian Restoration and Basin WQ Monitoring	NWR	Maggie Peyton	UNWC	Upper Nehalem	TMDL Implementation	$84,652	$56,378	$141,030
OR-319-09-22	Innovative Pollutant Capture within Drain Systems	ER	Clinton C. Shock	OSU-AES	Lower Malheur River, Willow Creek, Bully Creek	BMP Research	$148,766	$99,673	$248,439
OR-319-09-23	Circle Creek Enhancement Project Phase Three	NWR	Katie Voelke	North Coast Land Conservancy	Necanicum WS, Circle Ck Sub-WS	303(d) listed	$30,495	$20,330	$50,825

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Project #	**Title**	**Region**	**Submitted By**	**Representing**	**Basin/ Subbasin**	**Type**	**319 $$**	**Match**	**Total**
OR-319-09-24	Santiam-Calapooia Landowner Recruitment & Restoration	WR	Erika Lang	S. Santiam WSC	N/S. Santiam, Calapooia	TMDL Implementation	$81,323	$54,215	$135,538
OR-319-09-25	Scapoose Creek Riparian Restoration	NWR	Janelle St. Pierre	Scappoose Creek WSC	North Coast	TMDL Implementation	$30,000	$20,000	$50,000
OR-319-09-26	Willow Creek Effectiveness Monitoring	ER	Kelly Weideman	Malheur Watershed Council	L Malheur, Willow Ck, NMCGMA	303(d) listed	$56,001	$37,521	$93,522
OR-319-09-27	2010 Tillamook Co Children's Clean Water Festival	NWR	Claudine Rehn	Tillamook Estuaries Partnership	North Coast	I&E	$5,000	$3,500	$8,500
OR-319-09-28	BYPP Year 7	NWR	Claudine Rehn	Tillamook Estuaries Partnership	North Coast	TMDL Implementation	$60,000	$40,000	$100,000
OR-319-09-29	Alkali Creek Water Quality Enhancement	ER	Keith Kato	Malheur SWCD	Owyhee WS, Alkali Creek	303(d) listed	$35,000	$23,333	$58,333
OR-319-09-30	Strip Tillage in Malheur and Owyhee Watersheds	ER	Steve Norberg	OSU ES, Malheur County	L. Malheur and Owyhee	SB1010 & GWMA Implement.	$147,130	$98,087	$245,217
OR-319-09-31	Owyhee River Improvement Project- Phase 2	ER		Malheur County SWCD	Owyhee		$38,409	$33,000	$71,409

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Project #	**Title**	**Region**	**Submitted by**	**Representing**	**Basin/ Subbasin**	**Type**	**319 $$**	**Match**	**Total**
OR-319-09-32	Lower Owyhee River Restoration Project-Phase I	ER	Adena L Green	Owyhee WSC	Owyhee Watershed; Lower Owyhee River	303(d) listed	$16,511	$11,007	$27,518
OR-319-09-33	City of Prineville Stormwater Pollution Reduction Plan	ER	Eric Klann	City of Prineville	Lower Crooked River and Ochoco Creek	303(d) listed	$75,000	$50,000	$125,000
OR-319-09-34	LUBGWMA Action Plan Effectiveness Monitoring & Outreach	ER	Teresa Walchli	Umatilla Co. SWCD	LUB GWMA & Critical Groundwater Area.	GWMA	$41,660	$27,495	$69,155
OR-319-09-35	Apple sunburn prevention using organic biofilms	ER	Clive Keiser	OSU AES	Walla Walla	Pesticide Stewardship	$196,48	$156,700	$353,181
OR-319-09-36	School restoration program: restoration, design and SW management	WR	Jason Blazar	Camas Educational Net	Upper Willamette	TMDL Implementation	$30,750	$11,175	$41,925
OR-319-09-37	Water Quality Implementation and Education: A Regional Approach	WR	Denise Kalakay	LCOG	Willamette (Lane Co.)	TMDL Implementation	$89,497	$59,664	$149,161

RECEIVED PROJECT PROPOSALS (As a Result of the 2009 RFP)									
Project #	**Title**	**Region**	**Submitted by**	**Representing**	**Basin/ Subbasin**	**Type**	**319 $$**	**Match**	**Total**
OR-319-09-38	Manure Storage and Management for Water Quality	WR	Walt Barton	Douglas Co. SWCD	Umpqua	BMP I&E	$125,690	$85,216	$210,906
OR-319-09-39	PUR Water Quality Monitoring and Thermal Refugia Investigation	WR	Sandy Lyon	Partnership Umpqua R.	Umpqua	TMDL Implementation	$32,425	$21,617	$54,042
OR-319-09-17	Pesticide Stewardship Partnership	SW	Kevin Masterson	Various basins	various	Pesticide Stewardship	$241,500	$150,000	$391,500
OR-319-09-18	KOIN WQ Campaign	SW	Joanie	DEQ-KOIN TV Ch 6	Metro	I&E	$8,334	$100,000	$108,334
OR-319-09-07	StreamBank—Willamette Basin Riparian Restoration Focus	SW/ WR	Brett Brownscombe	Or Trout	Marys River, Long Tom River, Scappoose	TMDL Implementation	$60,000	$40,000	$100,000

2009 - 319 Funding Categories

In Figure 4, the 2009 – 319 funding categories and funded amount is identified. The total grant of pass-through funds in 2009 was $1,387,400.

Figure 4. 2009 Funding Categories

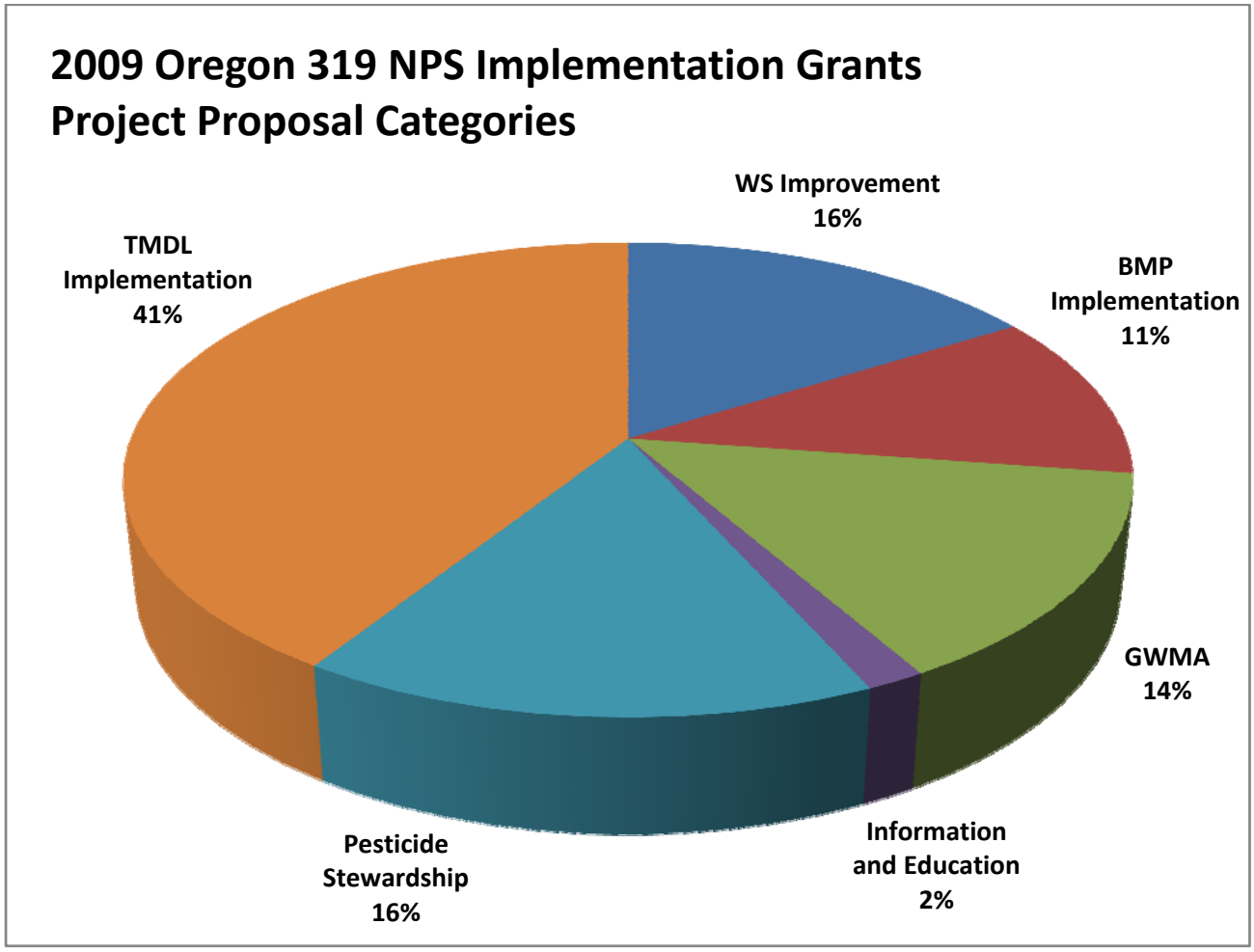


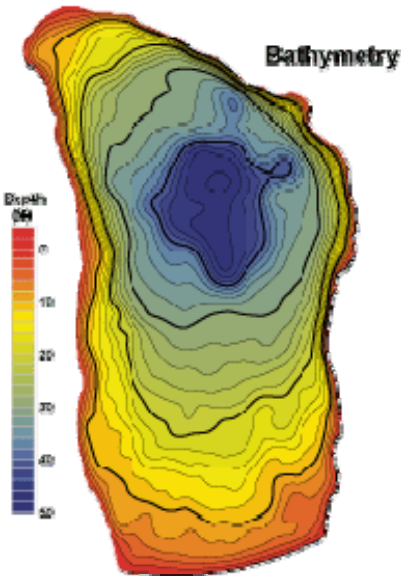
Table 12. 2009 Oregon 319 NPS Implementation Grants

2009 Oregon 319 NPS Implementation Grants (Project Proposals Received, by category)	
WS Improvement	$447,112
BMP Implementation	$312,865
GWMA	$398,488
Information and Education	$45,036
Pesticide Stewardship	$437,981
TMDL Implementation	$1,138,534
Total request for 2009	**$2,780,016**

Example Project Success Stories in TMDL Implementation Basins

Diamond Lake: Eradication of Invasive Species Restores Lake Water Quality

The danger of toxins from blooms of blue-green algae led officials to occasionally close Diamond Lake for contact use recreation. As a result, Oregon Department of Environmental Quality (DEQ) included Diamond Lake on the 1998 303(d) list of impaired waters for pH and algae. Excess algae resulted from a shift in the trophic levels after the introduction of tui chub, a nonnative fish species. After careful planning, project partners successfully eradicated the fish in the fall of 2006, and water quality conditions improved dramatically. Currently, all water quality standards are being met and DEQ expects to remove Diamond Lake from the list in the next assessment cycle in 2010.



Contact:

Paul Heberling
(heberling.paul@deq.state.or.us)
Umpqua Basin Team Coordinator
541-440-3338, ext. 224

Figure 5. Depth contours of Diamond Lake in the Umpqua National Forest.

Problem

Diamond Lake is situated between two volcanic peaks in the southern Oregon Cascade Mountains in the Umpqua National Forest (Figure 1). Perched at 1,580 meters, or about 1 mile elevation, Diamond Lake developed into a world-renowned trout fishery after Oregon Fish and Game officials began stocking it with rainbow trout in 1910.

Oregon first added Diamond Lake to its 303(d) list of impaired waters in 1998 due to high pH and chlorophyll *a* values found during the summer when the lake experienced excessive algal blooms. In 2004, it was also listed for low dissolved oxygen and high pH values during the fall, winter, and spring. Algae blooms resulted from a shift in trophic levels due to the introduction of tui chub, a nonnative species of fish used as live bait by recreational anglers. The tui chub overtook the lake's ecosystem and consumed many of the small aquatic organisms that normally control algae growth. Toxic blue-green algae proliferated, which caused the lake to fail to support its designated uses of aesthetics, fishing, and water contact recreation.

DEQ developed the Umpqua Basin Total Maximum Daily Load (TMDL) in 2006. The TMDL determined that biomass limitation through the eradication of the tui chub would improve water quality and restore the lake's beneficial uses.

Project Highlights

Thorough planning efforts led to a well-coordinated drawdown of the lake in September 2006 and subsequent treatment with rotenone to remove the tui chub. Rotenone is a naturally occurring chemical derived from the roots of several tropical and subtropical plant species. Routinely used to control unwanted fish species, rotenone is rapidly broken down in soil and water and usually loses toxicity within six days. The lake drawdown reduced the quantity of water to be treated and maximized the mechanical removal of tui chub biomass before rotenone application. Pretreatment netting removed 68,000 pounds of tui chub. Mechanical and hand removal of the dead chub after rotenone treatment recovered an additional 35,000 pounds of tui chub carcasses. All chub were composted and later used as a nutrient supplement for farming operations.

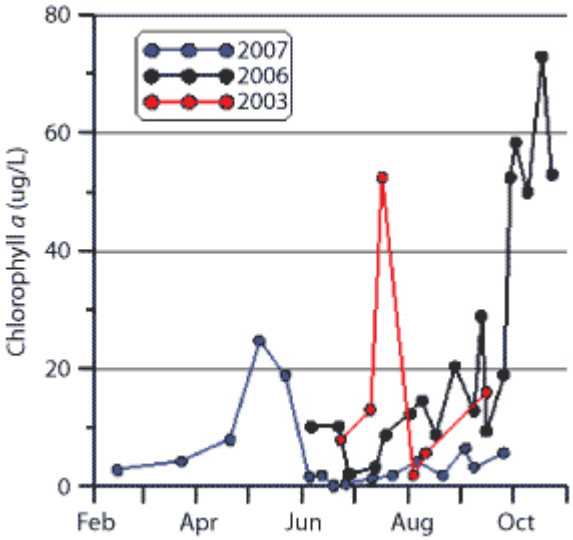


Figure 6. Reduction in algal blooms, as represented by chlorophyll *a*, before and after chub removal.

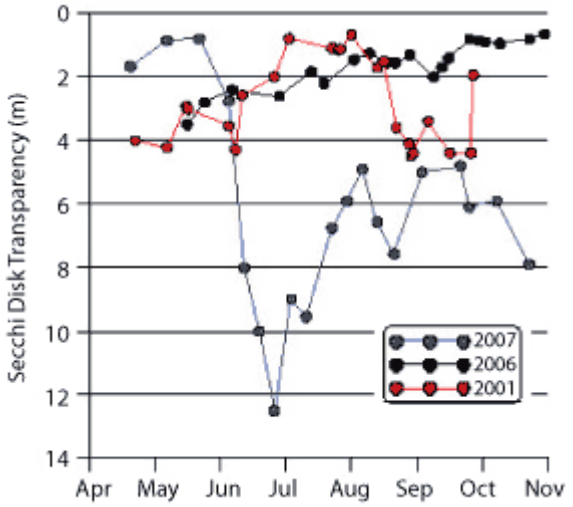


Figure 7. Transparency depths with and without tui chub shows the Secchi disk readings at the height of the tui chub population in 2006 and extreme clarity in the summer of 2007.

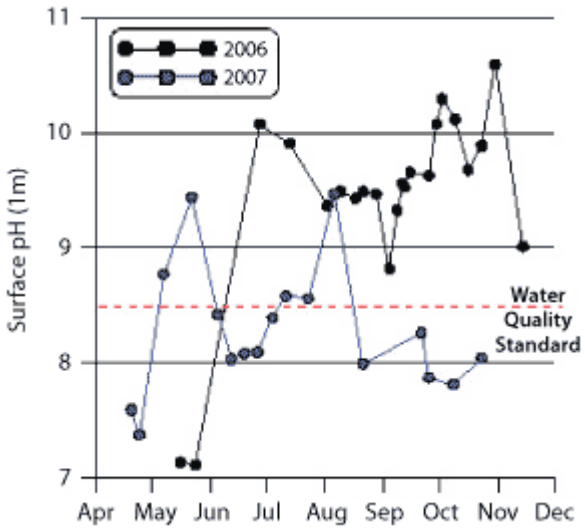


Figure 8. Observed overall decrease in pH after eradication of tui chub. Excursions over the pH criteria in 2007 are natural and can occur during extended periods of above-average air temperature and below-average wind velocities.

Results

Diamond Lake met all water quality standards not long after chub removal. In late 2007, chlorophyll *a* values decreased from a high of 50 µg/L before rotenone treatment to less than 10 µg/L (the water quality criterion) after treatment (Figure 2). Algal production is being held in check by the reestablished zooplankton populations. Midsummer water clarity increased from an average of 10 feet to nearly 50 feet, the lake's depth at its deepest point (Figure 3), and blue-green algae declined from the dominant type of algae to a very small percentage of the algal community. The lake remained cooler in 2007, which can be attributed to reduced algal populations in the upper layers that absorb solar energy. After the spring of 2007, scientists observed that pH values recovered to below or near the 8.5 criteria value (Figure 4). Zooplankton populations have rebounded and trout restocking led to increased angler catches in 2007.
Water quality improvements have restored the aquatic life designated use. Based on the data, DEQ expects this waterbody to continue to meet standards in the future, warranting the delisting from the 2010 303(d) list of impaired waterbodies.

Partners and Funding

The project co-leaders included Umpqua National Forest and Oregon Department of Fish and Wildlife. DEQ led water quality efforts, while many private and public entities played supporting roles. State Representative Susan Morgan brought together a wide range of responsible and interested parties focused on solving the deteriorating Diamond Lake water quality conditions. Additional partners include Partners for Umpqua Watersheds, Oregon Wildlife Heritage Foundation, Oregon Division of State Lands, Oregon Department of Agriculture, Douglas County, PacifiCorp, and several other state and federal agencies.

Clean Water Act section 319 funds helped support several phases of the project, including database development, baseline monitoring for the TMDL assessment and analyses of water quality following lake drawdown and rotenone application. In total, this project used $166,338 of section 319 funds, including the state match. Diamond Lake's restored waters generate $3.5 million annually for the state and local economies.

To keep Diamond Lake sparkling, Oregon Department of Fish and Wildlife, Oregon State Marine Board, Umpqua National Forest, and DEQ have launched an intensive invasive species prevention campaign. The partners are communicating the following message: "Spread the word...not the unwanted species".

Ecoroof: Multnomah County's Central Library Ecoroof

When Multnomah County added soil and plants atop its historic downtown Central Library last year, it was a sure sign that the time in the sun for "ecoroofs" has arrived.

Mark Carpenter, center, Tualatin roofing contractor, talks about the benefits of an ecoroof with Alan Proffitt, Multnomah County Facilities Property Manager, on top of the main library branch.

Problem

For years, roofing associations were so concerned about leaks they hesitated to endorse green roofs, which use vegetation to save energy, reduce stormwater runoff, and improve air quality. However, in July 2007, the National Roofing Contractors Association put out its first Green Roof Systems Manual. Multnomah County's Central Library, 801 SW 10th Avenue, is one of Portland's prized architectural treasures. The 1913 structure designed by A.E. Doyle is listed on the National Register of Historic Places. Now it appears to be the first library in Oregon, and the first historic building in the state, to boast an ecoroof, says Alan Proffitt, county facilities property manager.

Project Highlights

The roof is expected to reduce library energy costs in the summer, and double or triple the life of the roof by protecting its structural elements from temperature extremes. The rooftop vegetation also will reduce the volume of runoff from the building. The ecoroof employs a new-patented technology from a Tualatin company that aims to make roof maintenance easier – and eliminate some of property owners' concerns about installing ecoroofs.

Standing on the roof of the library one cloudy day in November, Mark Carpenter digs his finger into a tray filled mostly with plants in the "sedum" family – often-traditional garden plants – with some splashes of color from lavender and grasses. Carpenter is the president of Columbia Roofing and Sheet Metal of Tualatin, and its sister company, Columbia Green Technologies. He's been in the ecoroof business for the last three years, since patenting the Advanced Vegetative Roof Systems. His system uses interlocking trays that can protect the roof from winds, while enabling easier access for roof maintenance.

"With an old ecoroof system, you have to dig up 8 inches to 10 inches of growing medium, cut the mat to get to the potential leak," Carpenter says. "Then when you're done, you have to cover with more mat, and it must be sealed to the old mat to keep that barrier." Columbia Green's trays update the ecoroof idea, Carpenter says. Trays

can be simply removed to get to problem areas instead of cutting and replacing mat. Other companies offer similar modular or tray systems, but Carpenter says his company's technology is set apart, because the trays are connected by pins that enable the system to withstand wind uplifts.

The tray technology is being used in ecoroofs in Seattle, Chicago, New York, and Indianapolis. Carpenter says his company has a second round of patents pending for green products. Traditional roofing contractors are intent on preventing and repairing roof leaks, so the idea of installing something that soaks up the rain goes against their instincts.

"It's been a long belief by builders that there should be no vegetation on a roof," Carpenter says. However, as more roofers and building owners see the upside to going green, Carpenter says the National Roofing Contractors Association came around and issued its installation manual. The library roof is Multnomah County's second ecoroof project. The first was on the Multnomah Building, 501 S.E. Hawthorne Blvd.

Partners and Funding

Crews spent 90 days last summer improving the library's leaking roof, and then topping it off with $180,000 worth of ecoroof improvements. The project costs were offset by a $102,000 grant from the Oregon Department of Environmental Quality and a $60,000 grant from the city of Portland. Next fiscal year, Portland's Bureau of Environmental Services plans to have $1 million to dedicate to ecoroof grant funding or incentive programs, says Alice Meyers, the city's ecoroof grant manager. The city of Portland's "Grey to Green" goal is to add 43 acres of new ecoroofs in five years. Today, the city has about 9 acres of ecoroofs scattered among more than 90 buildings.