

2009-2011 Oregon Plan Biennial Report – Agency Reports

Oregon Department of Environmental Quality

ANNUAL REPORT To OWEB from DEQ 2009-2010

Program 1: TMDL Development

Statement of Work: TMDLs are clean water plans that, when implemented, improve water quality that benefit recovery of threatened and endangered salmonids. TMDLs determine pollutant loads and identify sources of those pollutants that are causing water quality impairment and identify pollution reduction targets for all significant sources. This information is used by DEQ, ODA, ODF, local governments, watershed councils, and others to guide water quality improvement activities that will restore and protect salmonid habitat and other beneficial uses of the river.

DEQ currently implements its TMDL Development program consistent with the DEQ/EPA MOA and 2000 Consent Decree. For 2009-2011, DEQ anticipates developing and implementing TMDLs for the following basins or subbasins:

- Molalla-Pudding
- Yamhill
- Rogue
- South Coast (Coos, Coquille, Sixes, Chetco)
- Mid-Coast
- North Coast
- Upper Klamath and Lost
- Deschutes
- John Day
- Middle Columbia – Miles Creek
- Lower Grande Ronde (including Wallowa and Imnaha)
- Malheur
- Owyhee
- Powder
- Umatilla
- Umpqua
- Willamette

Limited TMDL development and implementation work might be conducted in other basins and sub-basins.

Tasks for TMDL Development and Implementation include:

- Gather and review existing water quality data to determine level of impairment in water quality limited stream segments.
- Conduct analyses to determine the extent of water quality problems today.
- Develop assessment tools to predict future conditions and the related impact on water quality.
- Calculate pollutant loadings for the impaired stream segments.

- Determine load and waste load allocations to nonpoint source and point source sectors.
- Provide information to stakeholders and seek their input.
- Develop Water Quality Management Plans which describe how pollutant load reductions will be achieved.
- Prepare draft TMDL documents.
- Conduct public comment periods and hold public meetings.
- Respond to public comments and incorporate into final TMDLs.
- Work with and assist Designated Management Agencies (DMAs) and other TMDL identified sources (current or potential) for development of their TMDL Implementation Plans.
- Work with other agencies and entities to leverage funding to maximize restoration protection projects to meet the goals of the TMDL.

Tasks for managing the TMDL Program include:

- Develop statewide TMDL policy, procedures, and guidelines, and coordinate with other agencies and regional offices.
- Prepare annual workplans and schedule activities to insure coordination among monitoring, lab, modeling, basin coordinators, and stakeholder efforts.
- Communicate and coordinate with other DEQ programs as well as other state and federal agencies to maximize the effectiveness of water quality pollution control efforts.
- Participate in regional and national efforts relevant to implementation of DEQ's TMDL program.

Progress: DEQ has issued TMDLs in 2010 for the John Day Basin, Willowa-Imnaha-Lower Grande Ronde Basins, and Malheur Basin. The Upper Klamath & Lost River Basins TMDL is being finalized for issuance which could occur before the end of 2010. These basins represent a total of ~13,569,280 acres. DEQ is continuing to develop TMDLs for the Deschutes, Coquille, and Mid-Coast Basins.

Program 2: Volunteer Monitoring Coordinator

Statement of Work: DEQ will conduct the outreach and education activities and provide technical assistance to support volunteer monitoring in watersheds throughout Oregon.

- Work with 15 water quality monitoring organizations to develop and refine water quality monitoring strategies and quality assurance project plans (QAPP's) that effectively identify water quality stressors and measure project effectiveness. Review organizations' QAPP's to assure objectives are attainable and that well defined, standard water quality monitoring procedures are used.

Progress: Reviewed and assisted in development of 8 sampling plans from 7 organizations and worked with three additional organizations to refine monitoring strategies or goals outside of the sampling plan process. (Plans: Lincoln SWCD (2), Rogue Riverkeeper, Salmon Drift Creek Watershed Council, Crooked River Watershed

Council, Burns Piauete Tribe, Freshwater Trust and Clackamas Watershed Council. Other: Long Tom Watershed Council and Elk Creek Watershed Council, Wasco SWCD)

- Acquire, maintain and distribute high quality water quality testing equipment and provide technical assistance on equipment and protocols to 30 water quality monitoring organizations.

Progress: Provided equipment or supplies 96 times to 28 different organizations. There are a total of 46 organizations currently with equipment around the state. Provided technical assistance on equipment and protocols to 26 organizations over the phone.

- Conduct 10 trainings with 15 water quality monitoring organizations to encourage citizen participation.

Progress: Conducted 8 trainings in water quality monitoring techniques.

- Conduct split sampling with 10 water quality monitoring organizations to evaluate the quality of data generated by the organizations.

Progress: Conducted 4 spit sampling events. (Columbia Riverkeeper, Crooked River Watershed Council, Partnership for Umpqua Rivers and Ecola Creek Watershed Council)

- Coordinate with state and federal agencies to develop monitoring designs which can be executed by local monitoring groups but generate data applicable to larger scale questions on the effectiveness of TMDL's and other fish recovery efforts.

Progress: Initiated early conversations with organizations about incorporating volunteer organizations into stratified basin wide probabilistic sampling of biological water quality indicators to assess TMDL and local program effectiveness. The goal of these discussions is to develop study designs that provide needed information for organizations implementing restoration projects as well as the information needed by DEQ to make basin wide assessments. Developed and co-facilitated session at biennial OWEB conference with ODEQ TMDL staff designed to help organizations select effectiveness monitoring indicators.

- Improve data submittal process for improved reporting and tracking of volunteer generated data submitted to DEQ and facilitate the sharing of data between organizations.

Progress: Continued to pursue opportunities to secure resources to complete web based data submission application: presented project capabilities and needs to agency planners responsible for preparing integrated report on Oregon water quality, and submitted proposal to EPA for funding to implement the web application. The web based data submission application is designed to improve the DEQ's access to third party data.

- Review water quality data submitted to DEQ, assign data quality classification for data and assure data is stored in the DEQ LASAR database.

Progress: Loaded 9 volunteer water quality monitoring sampling events (2006 samples).

- Coordinate volunteer monitoring data management with other state and federal agencies to improve data visibility and availability.

Progress: Provided volunteer generated water temperature data on the Salmon River to NOAA for data request concerning a hatchery.

- Promote the incorporation and consideration of volunteer monitoring data in DEQ's 303 (d) list, TMDL development and general reporting.

Progress: Prioritized 7 of the 9 volunteer water quality data sampling events so they could be incorporated in the integrated report on Oregon water quality and entered an additional 11 sampling events from municipalities (not operating within the volunteer program) to be included in the assessment. Worked with basin coordinators in the Hood, Mid Coast, Malheur, Rogue and Yamhill basins to make volunteer data available for their use.

Program 3: Toxics Monitoring

Statement of Work: DEQ's Toxics Monitoring Program was established in 2007 by the Oregon Legislature to address concerns regarding the distribution, sources, and potential environmental and human health effects of toxic pollutants entering Oregon's surface waters. Following the initial development phase (staffing, synthesis of existing information, plan development, review and finalization), the Toxics Monitoring Program was initiated in the Willamette River Basin in 2008. Water at 20 mainstem and tributary sites were sampled twice and resident fish were collected at 11 mainstem and tributary sites throughout the basin. Water and fish were analyzed for over 250 pollutants including solvents, current use and legacy pesticides, industrial and emerging contaminants of concern.

During the 2009-2011 biennium, follow-up sampling will be conducted in selected subbasins where elevated levels of toxic pollutants in water or fish were documented in 2008. This follow-up sampling will enhance DEQ's understanding of the distribution, concentration and local sources of toxic pollutants posing the greatest threat to human health and the environment. To maximize the relevance of the Toxics Monitoring Program, the list of pollutants monitored in 2009-2011 will be adjusted to include more priority persistent and bioaccumulative chemicals prioritized by the Senate Bill 737 workgroup and those monitored through the Pesticide Stewardship Partnership. DEQ will summarize its findings in the Willamette River Basin in reports and fact sheets as well as continue the development of Web-based portals to facilitate public access to data collected through the toxics monitoring Program.

In the 2009-2011 biennium DEQ will accomplish the following tasks:

- Assess findings from 2008 basin-wide survey of toxic pollutants in water and fish relative to previous findings, established human health and environmental regulatory criteria and available source information.

Progress: A review of existing information regarding the uses and application of toxic pollutants was performed and included in TMP support documents and summarized in the 2008 progress report finalized in March 2010.

A review of historical information on toxic contaminants was compiled titled, “A Summary of Studies and Information Relevant to ODEQ’s Watershed-based Toxics Monitoring Program.” The document formed the basis for “Appendix A” of the draft sampling and analysis plan that was made available to the public for review. Much of this information was included in the 2008 progress report finalized in 2010.

An in-depth review of toxic pollutant data discharged from municipal and industrial sources was beyond the information needs to design and implement toxics monitoring in the Willamette River Basin. However, a “reasonable potential analysis” review of toxic pollutants present in wastewater contributing to water quality standards violations was conducted by DEQ staff (Marilyn Fonseca) and shared with TMP program staff. Historic information regarding recognized sources of significant municipal and industrial discharges of toxic pollutants was taken into account in the sampling site selection process. In a related project (Senate Bill 737) DEQ worked closely with major municipal wastewater sources and other stakeholders and developed a list of toxic pollutants based on their toxicity, persistence and tendency to bioaccumulate . The TMP intended to develop monitoring strategies to monitor these sources in future sampling cycles.

While an in-depth review of information related to urban rural, agricultural and forest landscape was not performed, numerous citations describing non-point source pollution were reviewed in the course of preparing the information summary for the WRB. Additionally, in 2010 land-use patterns (among other considerations) in the Rogue and Umatilla River Basins are being assembled and reviewed to help prioritize the selection of well to be sampled to quantify the presence of toxic pollutants in groundwater resources.

- Integrate priority persistent pollutants recommended by SB 737 workgroup into operational list of compounds analyzed in 2009 and beyond

Progress: The TMP currently monitors for about 30 percent of the priority persistent pollutants identified by the SB 737 workgroup. DEQ’s organic chemistry section has only recently developed methods for analyzing many of the SB 737 targets. The TMP plans to capitalize on DEQ’s expanded analytical capability by modifying its analytical targets to include those SB 737 pollutants likely most to be present in surface water and fish tissue in upcoming rounds of water and fish tissue sampling.

- Present 2008 water and fish tissue findings to stakeholders through meetings, workshops, conferences and other methods of public outreach.

Progress: In addition to coordination meetings already held with numerous internal and external stakeholders, presentations of preliminary findings have made to various internal

DEQ programs and administrators, Department of Human Service Environmental Health Program staff, Oregon Department of Agriculture staff. Preliminary results have been shared with other groups and development of communication tools (updated fact sheets, Web page) continues. In 2009-2010 TMP findings were presented to the following DEQ audiences:

- WQ Division Meeting (06/22/09)
- Eastern Region Permit Writers Workshop (07/07/09)
- Western Region Permit Writers Workshop (07/14/09)
- Land Quality Division (08/26/09)
- Northwest Region First Wednesday Meeting, NWR (11/4/2009)
- DEQ Executive Management Team Meeting (including the Director) (03/06/09) as well as to Operations Division Administrators (06/09/09)
- Water Quality Program Managers Meeting (07/28/09)
- Willamette Basin Coordinators Meeting (10/21/09)
- Water Quality Program Management Team (9/16/2009)
- Oregon Environmental Quality Commission (10/22/10)

TMP findings were also shared with the following external groups

- American Fisheries Society Northwest Chapter (2/25/2010)
 - Department of Human Services (04/23/09 and 7/16/09)
 - Oregon Department of Agriculture (04/21/09)
 - Provided overview presentation to ACWA (12/03/09)
 - Rogue Basin public and orchardist outreach meetings (2/17/10 and 4/8/10)
 - Umatilla public outreach meeting (5/18/10)
- Based on 2008 findings and stakeholder input, identify priority subbasins and river reaches within the Willamette Basin for follow-up assessment of toxic pollutants in 2009.

Progress: The initial scope of DEQ's Toxics Monitoring Program (TMP) has been established and implementation is underway. While the ultimate spatial scope of the TMP includes all Oregon waters, the initial spatial scope of the TMP from 2008 until 2010 was the Willamette River Basin (WRB). Water sampling conducted at selected mainstem and tributary reaches in 2008 and 2009 (Figure 1) was sampled for a final time in Spring of 2010. Water samples were collected one at 20 locations in May 2010 to provide a snap-shot of the concentrations of water-borne organic contaminants. Smallmouth bass, northern pikeminnow and suckers were collected in September 2009, at 6 locations in and around Eugene, OR to confirm and investigate 2008 findings of elevated PCB concentrations in resident freshwater fish. Analysis of fillets prepared from the fish provides estimates of the concentrations of mercury and hydrophobic organic pollutants in fish tissue.

- Partner with local stakeholders to identify effective pollution prevention strategies.

Progress: Partnership development and dialog with local stakeholders is in early phases as we begin to share initial results. Recent information concerning the presence of toxic pollutants in surface water and fish developed through the TMP will provide valuable

information to DEQ and its partners as the Agency develops and implements its Toxics Reduction Strategy. Program data have been used in the renewal of NPDES wastewater discharge permits. Data will also provide insights to help understand findings generated through the analysis of treated municipal wastewater effluent being performed pursuant to Senate Bill 737. Furthermore, methodologies developed to implement the toxics monitoring program, such as the use of polar organic chemical integrative samplers or expanded analytical capabilities, have been used to support pesticide stewardship activities in six Oregon watersheds. This information is provided to local agricultural and watershed stakeholders through the PSP program.

- Make data available to the Oregon public through the DEQ Website.

Progress: Because of budget constraints work to develop of a map based webpage for accessing toxics monitoring, discharge and permitting information was suspended. That work has recently been restarted. DEQ continues to post Web-accessible fact sheets, preliminary and final reports to ensure public access to TMP findings. In addition, all DEQ generated TMP data are accessible via the DEQ online environmental database, LASAR. The final 2008 TMP Willamette Basin Progress report was posted to the web in March 2010.