



**Oregon**  
Department  
of Agriculture

# Molalla-Pudding-French Prairie-North Santiam Subbasins Agricultural Water Quality Management Area Plan

Spring 2010

## Local Advisory Committee Recommends Establishing an Executive Committee

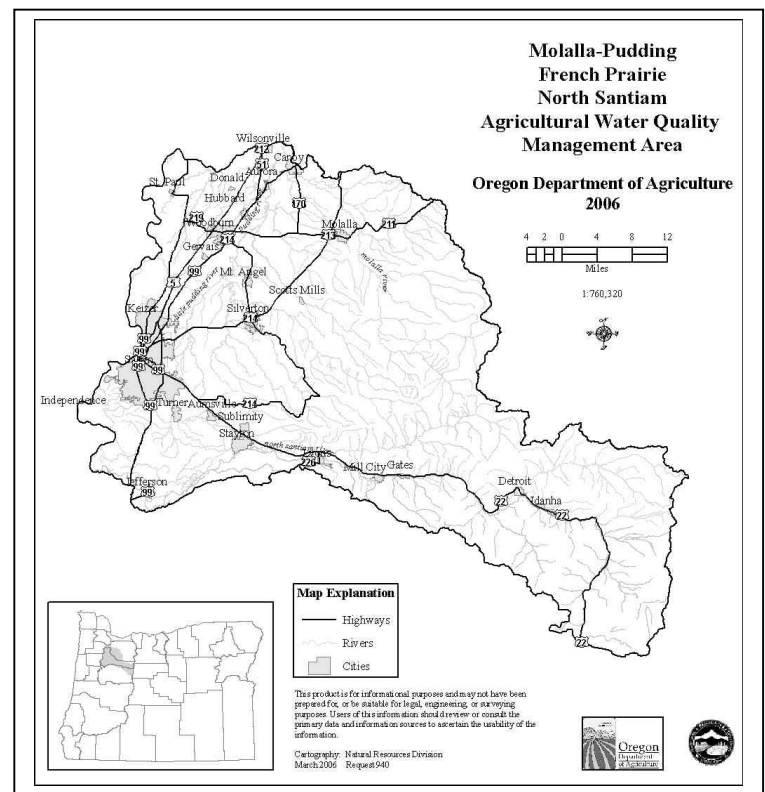
### Executive Summary

Members of the Molalla-Pudding-French Prairie-North Santiam Subbasins Agricultural Water Quality Management Area Local Advisory Committee (LAC) reconvened on May 26, 2010, to evaluate the progress of implementing the Area Plan and Rules and again on June 9, 2010, to discuss the monitoring efforts that are currently occurring in the management area.

The LAC discussion focused on assessing the effectiveness of the Area Plan and Rules. The LAC agreed that although landowner outreach and project implementation remain high priorities, assessment is necessary to determine if present goals and objectives are effective in achieving water quality standards. Given assessing effectiveness can be a complex and timely task, the LAC discussed creating an Executive Committee. In addition to reviewing water quality monitoring results, this committee would meet periodically to discuss ways to efficiently determine if the overall Area Plan mission, goals and objectives are attainable, and present their recommendations to the entire LAC committee at the next biennial review scheduled to occur in 2012.

One of the methods of assessment presented by Oregon Department of Agriculture (ODA) was asking specific questions using the S.M.A.R.T. model. S.M.A.R.T. stands for:

- S = specific**
- M = measureable**
- A = achievable**
- R = relevant**
- T = time-bound**



The Molalla River, Pudding River, Santiam River, North Santiam River, Mill Creek, and French Prairie Area Subbasins are in the Northwest corner of the state of Oregon, 70 miles west of the Pacific Ocean. All of these watersheds are tributaries of the Willamette River. The Willamette River runs from south to north between the Coast Range and the Cascade Range. All of the watersheds drain from the Cascade Range west to the Willamette River.

### LAC MEMBERS for 2010

Dan Goffin, Chair  
Jim Myron, Vice Chair  
John Birnie  
Bob Dettwyler  
Myron Harper  
Alan Kraemer  
Jerome Rosa  
Tina Schweikert

### New Members:

Matt Knudsen  
Liz Redon  
Joan Zuber  
Sarah Jane Harper - Alternate

## Zollner Creek Area Receives Farm Bill Dollars For Conservation

Zollner Creek has been identified by Oregon Department of Environmental Quality (DEQ), the US Geological Survey and ODA as a priority watershed for improving water quality due to high temperatures, bacteria levels and nitrates, as well as legacy pesticides and other water quality concerns. In fact, it has the longest list of parameters on DEQ's 303(d) list of any Marion County water body. There are also water quantity concerns, with many growers facing the prospect of declining groundwater levels for their irrigation wells.

In 2009, the Marion Soil and Water Conservation District (SWCD) applied for funding to the Natural Resources Conservation Service (NRCS) AWEPP program. AWEPP is the Agricultural Watershed Enhancement Program designed to target statewide Environmental Quality Incentive Program funding to priority watersheds. This is a program funded out of the 2008 Farm Bill. Nationally, there was \$58,000,000 allocated to priority watersheds during 2009, (including multi-year projects). This effort was part of an active partnership by the Marion SWCD with our local partners and NRCS to bring additional funding to areas identified by our local advisory committee as water quality limited and to work harder in these areas to make improvements. The AWEPP area includes 17,000 acres that are either in or near the Zollner Creek watershed or in the Mt. Angel Groundwater Restricted Area, designated by the Oregon Water Resources Department.



*Left: SWCD staff taking water grab samples from Zollner Creek*



*Right: Zollner Creek stakeholder meeting in Mt. Angel*

This funding will allow up to \$1,000,000 to be spent in the area over a three-year period. The producers with another \$1,000,000 then match these dollars when they implement the practices, as well as additional dollars in technical support from the Marion SWCD, OSU Extension, and the NRCS. We hope to show improvements in the water quality of Zollner Creek before and after implementation of Best Management practices such as irrigation efficiency projects, and filter strips, cover crops and other practices designed to reduce the amount of sediment and potentially polluted runoff from agriculture in the basin. Water quality information from surface water both before and after the implementation period will be summarized and shared with our stakeholders.

To participate in the program, producers can sign up anytime during the year at the Salem Service Center (Marion SWCD), and applications are generally batched and ranked twice a year.

For more information about AWEPP or other conservation programs, contact Scott Eden with the Marion SWCD at 503-399-5741 x 118 or at [scott.eden@or.nacdnet.net](mailto:scott.eden@or.nacdnet.net)

LAC Plan Review:



Background

The Area Plan and Rules were developed with advice from the LAC. After review by the State Board of Agriculture, the director of ODA approved the Area Plan and Rules in 2002. Since then, the LAC has met to review the Area Plan and Rules in 2004, 2006, and 2008.

When developing the Area Plan, the LAC developed rules that were designed to prevent pollution as close to the source as possible. The Area Rules are written to assure achievement of water quality standards as identified by DEQ and require land managers in the Management Area to:

1. Prevent soil erosion in excess of five tons per acre per year.
2. Construct and maintain private roadways, staging areas, and heavy use areas to prevent sediment or runoff contaminants from adversely affecting waters of the state.
3. Construct, maintain and use drainage ditches without pollutant delivery to waters of the state from soil erosion induced by excessive channel slope, unstable cross section or placement of disposed soil.
4. Allow for natural or managed development of riparian vegetation and riparian function appropriate to site capability along all streams-to provide shade and bank stability at, or below, flows expected to occur during or following a 25-year, 24-hour storm event.
5. Use the application of chemicals in combination with irrigation water in a manner that does not adversely impact waters of the state.
6. Design and operate irrigation systems to minimize potential pollutants – scheduling shall be appropriate to the site given the water use efficiency, off-target minimization, soil conditions, crop, climate, and topography.
7. Prevent runoff or leaching of contaminated water from feed and manure storage piles into waters of the state.
8. Use and apply crop nutrients in a manner that prevents transport into waters of the state.

Potential issues: erosion, contaminated runoff



Potential solutions: filter strips, field borders, cover crops



Potential issues: manure runoff (bacteria, nutrients)



Potential solutions: covered manure storage/compost facility

The photos above illustrate potential water quality issues and solutions that have been recognized by the LAC. The LAC also identified several objectives that, if achieved, would significantly improve water quality in the Management Area. Attachment A summarizes these goals and objectives and the progress the Marion and Clackamas County SWCDs have made to achieve each goal.

Water-bodies that do not meet one or more water quality standards are included in Oregon’s 303(d) list. Parameters of concern in the Management Area are:

- Temperature
- pH
- Dissolved oxygen
- Bacteria
- Legacy pesticides
- Toxics
- Nitrates
- Metals

The Oregon Department of Environmental Quality is the state agency responsible for developing total maximum daily loads (TMDLs) for the parameters on the 303(d) list. TMDLs are water quality management plans that address the standards not being met.

## Current Monitoring Efforts Presented to the LAC

### DEQ

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 at the local level. The PSP approach uses local expertise in combination with water quality sampling and toxicology expertise of DEQ to encourage and support voluntary changes that cause measurable environmental improvements.

The key actions of the PSP approach are to: 1) identify local, pesticide-related water quality issues; 2) share results early and often with local stakeholders; 3) explain data in relation to effects and water quality criteria; 4) engage the agricultural community for identifying and implementing solutions; and 5) use ongoing effectiveness monitoring to measure success and provide feedback to support water quality management.

Currently, there are five locations in the Pudding watershed that are monitored for a variety of pesticides within the PSP program.

### ODA

A large part of ODA's efforts to improve surface water quality have focused on maintaining and improving riparian vegetation, because the single largest pollutant affecting Oregon streams is heat. As reported by many researchers, improving shade and increasing vegetation density along streams are the primary methods for reducing stream temperatures. In order to assess the current state of riparian conditions and to monitor expected improvements, ODA developed a method to quantify the extent of different land cover types within riparian areas.

Each agricultural water quality management area is sampled, given available resources, on a five-year rotation. Approximately 10% of named streams in agricultural land are photographed. A limited amount of ground truthing is also done to verify the accuracy of the aerial photography interpretations. In addition, using GIS-compatible imagery allows for direct comparison of the same locations to identify long-term trends.

### SWCD

In 2002, the SWCD engaged in an effort to assess water quality in the basin. Grab samples were monitored several times yearly for temperature, dissolved oxygen (DO), pH, electrical conductivity, turbidity, and bacteria. Additionally, locations were chosen to collect information on water temperature over the warm season. The current TMDL shows that reductions in stream temperature and improvements in water quality are needed in several subbasins.

The SWCD has continued this water monitoring program to help assess water quality conditions in the district. Outreach and education, technical assistance, and on-the-ground conservation project implementation are all results of this assessment. Baseline data and trends can help determine if the Area Plan is effective in achieving water quality standards.

In addition, the SWCD is conducting a streamflow monitoring project where continuous and accurate measurements for both temperature and gage height are recorded.



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*We're on the Web!*

[http://egov.oregon.gov/ODA/  
NRD/water\\_quality\\_front.shtml](http://egov.oregon.gov/ODA/NRD/water_quality_front.shtml)

**Attachment A. Summary of Area Plan goals and progress of Area Plan implementation.**

Goal	Progress
<p>1. Reduce, minimize, and control water pollution from agricultural activities and soil erosion to achieve applicable water quality standards.</p>	<p><b>The following management plans have been developed since July 2008*:</b></p> <ul style="list-style-type: none"> <li>○ 51 Conservation plans have been developed since 2008. Plans are developed according to NRCS Field Office Technical Guide and conservation planning guidelines.</li> <li>○ 2 Animal waste management plans</li> <li>○ 15 (Farm Bill: EQIP, AWEPP, CSStP or WHIP) conservation plans</li> <li>○ 6 CREP plans</li> <li>○ 4 Comprehensive Nutrient Management Plans</li> </ul> <p><b>The following practices were completed by the Molalla-Pudding/French Prairie/North Santiam Subbasin Soil and Water Conservation Districts:</b></p> <ul style="list-style-type: none"> <li>○ 387 site visits for assistance</li> <li>○ 20 ac converted to micro-irrigation (from sprinkler &amp; big gun)</li> <li>○ 9,100 ft fencing installed</li> <li>○ 3,500 ft grassed waterway installed</li> <li>○ 750 ft gutter projects</li> <li>○ 1.3 ac heavy use area protection</li> <li>○ 650 ft<sup>2</sup> manure storage facilities</li> <li>○ 40 ac noxious weed removal</li> <li>○ 1 off-stream watering facilities</li> <li>○ 12 ac Pasture management (prescribed grazing, replanting, etc)</li> <li>○ 2 ac Riparian buffer</li> <li>○ 1 ac Stream habitat improvement</li> <li>○ 5.8 ac Tree/shrub establishment</li> <li>○ 300 ft Field border</li> <li>○ 4 ac Filter strip</li> <li>○ 6 ac Access control</li> <li>○ 22 ac Pest management</li> <li>○ 10 ac Forest site preparation</li> <li>○ 1 ac Native habitat restoration</li> <li>○ 81 ac Pasture and hayland planting</li> <li>○ 150 ft Animal trails and walkway</li> <li>○ 300 ft Streambank protection</li> <li>○ 1 Structure for water control</li> <li>○ 9 ac Tree/Shrub establishment</li> <li>○ 800 ft Underground outlet</li> <li>○ 1 Water harvesting catchment</li> <li>○ 1,500 ft Pollinator hedgerow</li> <li>○ 33 ac Upland wildlife habitat management</li> <li>○ 600 ft Recreation trail</li> <li>○ 200 ft Diversion</li> </ul> <p>This is an accounting of Marion SWCD activities in the Plan Area. Many other projects intended to improve water quality were completed by private landowners and conservation partners such as the local watershed councils and are not recorded in this report. NRCS plans showed are not a full tally of NRCS Salem Service Center activities, only those projects resulting from SWCD partnership efforts. Many demonstration projects such as rain gardens, bioswales, grassed waterways, riparian plantings and field borders have been developed and are available for tours.</p>

<p>Goal 2: Create a high level of awareness and understanding of conservation issues among the agricultural community and rural residents through education and technical assistance</p>	<p><b>Workshops/ presentations for landowners</b></p> <ul style="list-style-type: none"> <li>o 4 Water Quality/IPM forums targeting Zollner Basin</li> <li>o 2 Local Conservation Programs forums</li> <li>o 1 Healthy Horses - equine workshop</li> <li>o 8 Native Plant Workshops</li> <li>o 600 Salmon Watch water quality education to students</li> <li>o 1 Co-hosted Composting workshop</li> <li>o 1,800 Attendees/workshops and presentations</li> <li>o 300 Envirothon students</li> </ul> <p><b>Other Outreach</b></p> <ul style="list-style-type: none"> <li>o 8 Articles, ads, press releases</li> <li>o 8 Newsletters</li> <li>o 2 Native plant and tree sale</li> <li>o 5 New brochures developed</li> <li>o 800 Fact sheets/ brochures distributed</li> <li>o 10 Sub-watershed maps produced</li> <li>o 4 Outreach at grower meetings</li> <li>o 12 Display events</li> </ul>
<p>3. Monitor and evaluate the plan to assist in periodic review of effectiveness.</p>	<p>ODA evaluates DEQ and local partner water quality monitoring data to establish long-term trends in water quality.</p> <p>ODA also plans to evaluate landscape conditions, as funding allows, for long-term trends in riparian vegetation.</p> <p><b>SWCD/Watershed Council Water Quality Monitoring</b></p> <ul style="list-style-type: none"> <li>o 10 water quality sites, six continuous data</li> <li>o 170 water quality data points collected; 2008-09 data turned into LASAR database, working on 2009-10 submittal</li> <li>o 5 flow monitoring sites, hydrograph curves created for 2008-2010</li> <li>o Hundreds of inspections/80 measurements to create rating curves</li> <li>o 15 water quality demonstrations to students</li> <li>o 40 volunteer hours for water monitoring</li> <li>o Steps to beginning passive pesticide sampling project with OSU Extension</li> <li>o Attended DEQ TMDL meetings with other stakeholders</li> <li>o Grade and submit data to DEQ LASAR database</li> </ul> <p>6 formal complaints were received through the ODA Water Quality Program since 2008.</p> <ul style="list-style-type: none"> <li>7 No observations noted</li> <li>6 Letter of Compliance</li> <li>5 Water Quality Advisory</li> <li>4 Letter of Warning</li> <li>2 No jurisdiction/ referred to other agency</li> </ul>

<p>4. Secure adequate funding for administration and implementation of the plan.</p>	<p>The Molalla-Pudding/French Prairie/North Santiam Subbasin SWCDs and conservation partners continually seek grant funding for outreach/education, technical assistance and implementation of Best Management Practices.</p> <p>The following is a list of their successes <b>since July 2008</b>:</p> <ul style="list-style-type: none"> <li>○ Continued permanent tax base funding for Marion SWCD</li> <li>○ Section 319 Grant (DEQ/EPA) 2 grants</li> <li>○ Small Grant (OWEB) 7 grants</li> <li>○ USDA Cost-share (EQIP, WHIP, WRP, CStP) 15 funded contracts</li> <li>○ FSA CREP 4 funded contracts</li> <li>○ OWEB Restoration Projects 1 grant</li> </ul> <p>DEQ=Department of Environmental Quality  EPA=Environmental Protection Agency  EQIP = Environmental Quality Incentives Program  OWEB = Oregon Watershed Enhancement Board  WHIP = Wildlife Habitat Incentives Program</p>
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