SEPTEMBER 2011

North Coast Basin Agricultural Water Quality Management Area Plan

Local Advisory Committee Meets for Biennial Review

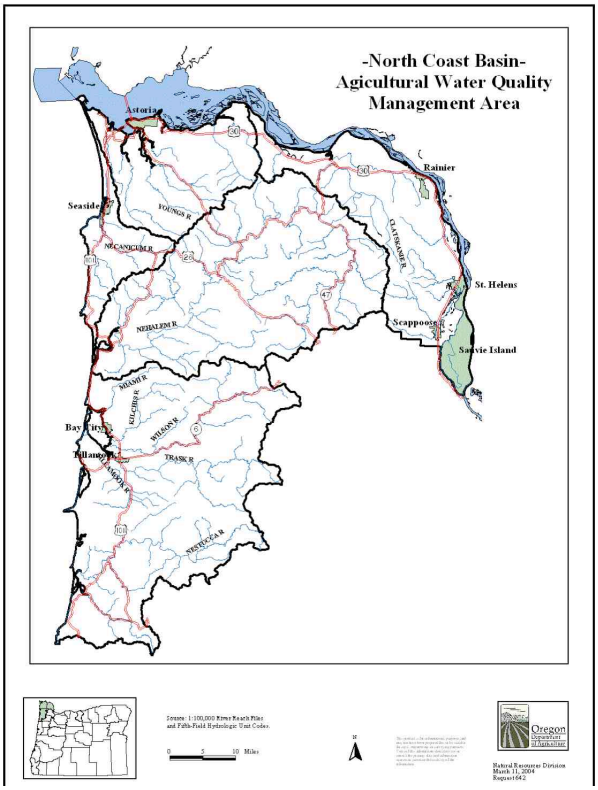
Executive Summary

Members of the North Coast Basin Agricultural Water Quality Management Area Local Advisory Committee (LAC) reconvened on September 7, 2011, to receive an update on activities and provide their recommendations. They suggested focusing implementation resources in smaller geographical areas within the basin to assist in the efforts of measuring progress over time. This would include identifying milestones and timelines to achieve those milestones towards the goal of meeting water quality standards.

The LAC discussed the need for secured funding to support on-going monitoring activities and riparian vegetation restoration efforts. Members of the LAC agreed that monitoring included not only water column data but landscape conditions as well. Additionally, the consensus among the LAC was that with continued monitoring data, the local Soil and Water Conservation Districts (SWCDs) can further target their outreach, technical assistance, project development, and implementation of management practices in identified priority areas throughout the basin.

The LAC members also recognized the challenge to engage commercial agricultural operators, in addition to small acreage landowners, in available cost-share conservation programs, particularly due to the economic downturn.

There were no recommended changes to the Area Plan or Rules at this time.



Map: The North Coast Agricultural Water Quality Management Area is bounded by the Pacific Ocean to the west, the crest of the Coast Range to the east, Neskowin Creek, and Little Nestucca River watersheds to the south, and by the confluence of the Willamette and Columbia rivers to the north, where the Columbia River flows west around the northern tip of the Coast Range.

LAC Members for 2011

Dale Buck, Chair	Dan Avery
Lisa Phipps	Mike Seppa
Dick Rohne*	Shawn Reiersgaard*
Kay C. VanNatta	Randy Bergman
Margaret Magruder	*not present

Monitoring Efforts

Existing water quality for nine streams in the North Coast Basin were evaluated to look at general conditions and trends in E. coli, dissolved oxygen (DO), total phosphorus (TP), nitrate/nitrite (NO^3/NO^2), and turbidity. Data was obtained from the DEQ's LASAR database for time periods between 1985 and 2001. E. coli data were only available starting from 1996. Most of the data obtained were not continuous; data gaps were found from 1988 through 1992.

Clatskanie River at Highway 30: Data obtained from this sampling location did not indicate significant problems with the variables of concern (listed above). This site does have continual seasonally high E. coli and moderately low DO concentrations however. Statistical analyses did not indicate significant trends in the variables measured. Data as of 2009 showed a few high E. coli samples, but no problems with DO. Some elevated TP results were reported in 2009-2010 data, along with some elevated E. coli and one high NO^3 sample.

Kilchis River at Alderbrook: The water quality data from this location indicate a decreasing trend in NO^3/NO^2, though the Sen test did not show this to be statistically significant. Reported NO^3/NO^2 concentrations in this stream have not been elevated. E. coli concentrations have been mostly good with some large peaks. No notable problems were seen for DO, TP, and turbidity. As of 2009, there were still some elevated E. coli counts, but no other changes in water quality. The 2011 review showed that there hadn't been notable changes from 2009.

Klaskanine at Youngs River Loop: No significant problems were seen in the variables of concern, though pre-1999 data suggested problems with TP. There appears to be an overall decreasing trend in TP since early 1999. This trend was not found to be statistically significant. Continued seasonal moderately high E. coli and moderately low DO are apparent throughout the data record. As of 2009, there were a few low DO reported concentrations and one very high TP concentration. The high TP was on January 7, 2009 and corresponded with a large runoff event that affected most of the North Coast. The 2011 review showed some high E. coli results (up to 236), and low DO saturation (down to 62%).

Miami River at Moss Creek Road: Data from this location shows continued high E. coli problems and marginally high NO^3/NO^2 problems throughout the data record. Graphs of the E. coli data do not indicate an upward or downward trend. NO^3/NO^2 data indicates increasing concentrations, but this is not a statistically significant trend. Data reviewed in 2009 were consistent with these observations.

Skipanon River at Hwy 101: Data from this location shows seasonally high TP and low DO. DO values for this location were lower than for the other streams examined. Generally declining E. coli was apparent though the trend was not statistically significant. Data reviewed in 2009 showed continued problems with low DO and some high TP concentrations. Total organic carbon concentrations were reported up to 18 mg/l, and these high values might help explain the low DO.

Tillamook River at Bewley Road: This site showed the highest consistent E. coli concentrations, with no apparent downward trend. Moderately high NO^3/NO^2 concentrations were also apparent through the data record. No other significant problems were apparent for the other variables examined. Data from 2009 showed E. coli concentrations in a downward trend, though most of the concentrations were still above the standards. This downward trend was apparent during the 2011 review, but were still a few high E. coli counts (exceeding 2420).

Trask River at Hwy 101: Data from this location indicate minor E. coli and NO^3/NO^2 concentration problems. Trends for these variables are poorly developed and not statistically significant. The 2009 data review showed no problems with any analytes. The 2011 review showed a few elevated E. coli samples (to 461), high turbidity (to 209), and total phosphorus (to 0.48).

Wilson River at Highway 101: Data from this location indicate minor E. coli and NO^3/NO^2 concentration problems. Trends for these variables are poorly developed and not statistically significant. The 2009 data showed very high turbidity as the result of the January 2009 runoff event, but NO^3/NO^2 were no longer a problem. The 2011 review showed few high TP (to 0.67) and turbidity (to 349) concentrations.

Nestucca River at Cloverdale: This station was reviewed for the first time in 2009. It also showed elevated turbidity during the January 2009 event, but not for other sampling events. Some high NO^3/NO^2 were reported in 2005-2006 along with some high E. coli concentrations pre-2004. The 2011 review was not useful because the date fields in LASAR for this site are no longer chronological.

Background

The SWCD and the landowners involved in writing the North Coast Basin Area Plan identified goals and objectives to reduce undesirable water quality by promoting good land stewardship, identifying incentives with financial and educational support to promote adaptive management, and defining clear enforcement guidelines. The Area Plan does not tell anyone how to farm, ranch, or otherwise utilize his or her natural resources. Rather it is a resource for landowners to address water quality issues.

The following is a summary of regulations that apply in the North Coast Management Area. Landowners and operators are required to manage their land to:

1. Allow regeneration and growth of riparian vegetation for shade and bank stability.
2. Prevent sediment delivery to waters of the state through appropriate construction, use and maintenance of drainage and irrigation ditches.
3. Ensure tide gates open and close as designed.
4. Control erosion above the soil loss tolerance factor (T).
5. Eliminate the placement, delivery or sloughing of waste into waters of the state.

Photos courtesy of Columbia SWCD Rural Living Handbook

ODA's Priority Area Concept

The Oregon Department of Agriculture (ODA) believes that its water quality program effectively prevents and controls water pollution from agricultural activities. ODA relies predominantly on improvements in agricultural land conditions to show that agriculture is fulfilling its responsibility to protect water quality. Measuring progress in land conditions will be attempted by identifying priority areas.

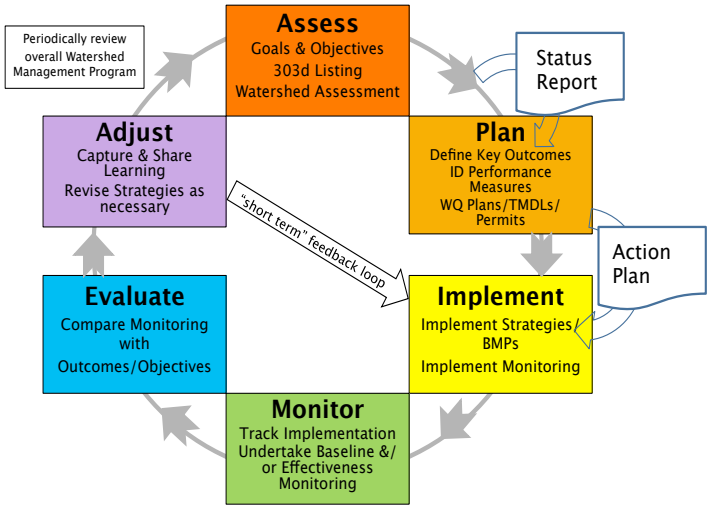
Priority areas are relatively small geographic regions within each agricultural water quality management area that are identified jointly by ODA, SWCDs, and other partners. Outreach, technical assistance, and project development and implementation will be focused in these areas, and every landowner with potential land condition concerns will be contacted with an offer of voluntary assistance. ODA will evaluate the success of these efforts by assessing how much progress it can show in implementing the local area plan by assessing land conditions on a small scale over a relatively short amount of time (currently every 2 years).

Priority areas are an opportunity for agriculture to show success in improving water quality.

Oregon DEQ's Watershed Approach Partnerships, Priorities and Progress

DEQ is undertaking a Watershed Approach (WA) to assist in managing water quality in the state of Oregon. This new approach will provide a broad assessment of the status of water quality and other environmental indicators within a basin, along with greater opportunities for stakeholder involvement and interagency cooperation. DEQ defines the Watershed Approach as stewardship and management activities that occur at watershed scales that lead to the restoration and protection of sustainable human and ecological beneficial uses. The North Coast Water Quality Status and Action Plan was completed in 2011.

DEQ Watershed Approach & Adaptive Management



The WA is intended to provide a basin-scale resource assessment process with more opportunities for direct, interactive feedback from local stakeholders than the TMDL process. Unlike a TMDL, the WA process is not limited to addressing 303(d) listings using available water quality data. It addresses surface water status for both 303(d) listings and other surface water related concerns, groundwater and upland conditions, and provides an evaluation of the environmental status of the basin as a whole. While the WA process is being designed to address some of the limitations of the TMDL process, it will not replace TMDLs. The WA does not have the regulatory authority of a TMDL and should be viewed more as a guidance document than a regulatory requirement.

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See us at:
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

1. Create a high level of awareness of water quality issues and problems among agricultural operators and the rural public in the North Coast Basin.	Since September 2009:
	
	Clatsop SWCD has conducted the following outreach and education activities:
	- Presentations/workshops to over 220 landowners—topics included: Agricultural Water Quality Management Area Plan and Rules, stormwater management, invasive species management, mud and manure management, and general water quality/quantity issues.
	- One newspaper article,
	- Three radio interviews on conservation issues,
	- Dissemination of over 150 high quality fact sheets and informational brochures on best management practices at county fairs, community events, and at brochure racks at local farm supply stores,
	- Production and dissemination of a Rural Living Guidebook to over 200 recipients. The Guidebook presented water quality and erosion issues as well as information on rules and regulations governing development,
	- Taught a community college class in water quality monitoring and testing with extensive field and lab work to a class of 11 students,
	- Provided technical assistance to 75 landowners through on-site farm visits,
	- Displays at four agriculture and garden shows reaching approximately 400 visitors.
	
	Columbia SWCD conducted the following outreach and education activities:
	- 159 landowners attended various workshops, presentations, and Creek School classes including topics such as:
	  - Agricultural water quality,
	  - Conservation planning and available programs,
	  - Forest health,
	  - Invasive species management,
	  - Rain collection and rain gardens,
	  - Mud and manure management,
	  - Water quality/quantity issues,
	  - 240 students in local K-12 public schools were presented information on topics of water quality, forestry, soils, and watershed health,
	  - Local civic groups (multiple Kiwanis and garden clubs) in the county were presented information about what the district offers the community,
	  - 3,000+ landowners contacted through targeted outreach mailings and site visits,
	- 4,000+ brochures and information packets were passed out to local residents at local events such as the Pumpkin Festival, Sauerkraut Festival, Salmon Festival, or mailed as part of target outreach,
	- Seven tours were conducted highlighting the districts projects and local issues,
	- Three news articles,
	- 1,490 Newsletters were distributed to district cooperators, interested residents, and various partners highlighting the work of the District.
	
	The Columbia County Rural Living Handbook 1,035 Handbooks were distributed to Columbia County residents through local real estate agents to new landowners, through the Columbia County Planning Department for new construction or land use changes, and during District outreach events.
	
	Tillamook SWCD has conducted the following outreach and education activities:
	- 102 landowners contacted with 93 that were provided with technical/financial assistance,
	- Three workshops with 57 attendees—topics included: agricultural water quality management area plan and rules, riparian function and plantings, pasture and manure management, rain gardens and storm water management, general water quality/quantity issues and conservation planning,
	- Two fair displays with over 800 visitors,
	- 10 agriculture water quality presentations with 214 attendees focused on riparian function and the water quality management area plan,
	- 1,123 fact sheets handed out pertaining to: water quality area plan, nutrient management and systems, weed management and riparian plants, conservation planning, technical and financial assistance,

Goal (continued)	Progress (continued)
	- 11 newspaper articles with a target audience of 192,000 rural residential landowners, livestock managers and hobby farmers, - 75 on-site evaluations addressing water quality due to run-off, erosion and manure application, - 34 EQIP contract status reviews completed, - One scotch broom removal work day with 55 volunteers from 8 to 80. Participants included; Watershed council members, High School students and teachers, local CPAC group, Pacific City Water and Sewer, local businesses, Tillamook County Weed Department, several agriculture producers and our own Dale Buck. West Multnomah SWCD has conducted the following outreach and education activities: - Distributed a quarterly newsletter to ~1,000 individuals each, - Presentations/workshops to over 2,977 landowners—topics included: Agricultural Water Quality Management Area Plan and Rules, riparian vegetation, septic and wells, invasive species management, mud and manure management, water quality, soil fertility, forest management conservation planning, - Four press releases sent out, - Six articles that appeared in local newspapers and neighborhood newsletters.
2. Promote land management that limits the movement of nutrients and bacteria from agricultural and rural lands to state waters.	Practices completed by Clatsop SWCD: - .5 acres of wetland restoration, - One waste storage facilities constructed and put in service, - 700 feet of livestock exclusion fencing installed, - .1 acres of heavy use protection installed, - One roof runoff and stormwater management project.
3. Promote land management that stabilizes streambanks.	
4. Promote land management that reduces sedimentation of streams due to soil erosion.	**Clatsop SWCD**: - Completed eight conservation plans for livestock operations, - Completed three animal waste management plans including one to obtain a CAFO permit.
5. Seek to control water pollution as close to its source as possible.	Practices completed by Columbia SWCD: By working with various local partners (NRCS, Watershed Councils), the Columbia SWCD implemented the following conservation projects and practices: - One waste storage facility installed, - Three acres of heavy use protection installed, - 525 feet of steambank stabilization, - 5,500 feet of instream habitat improvements, - 14 acres of channel re-vegetation, - 34 acres of wetland/habitat management and restoration, - 131 acres of upland wildlife habitat management, - 59 acres of exclusion, - 421 acres prescribed grazing, - Five forest management plans and 145 acres of forest stand improvement, - 500+ acres of weed management, - Two bioswales to filter and agricultural runoff, - Three roof runoff structures to manage runoff and reduce impacts, - Three rain gardens to infiltrate roof runoff and recharge groundwater.

Goal (continued)

Progress (continued)

Practices completed by Tillamook SWCD - Assistance was provided to NRCS to develop 30 Conservation Nutrient Management Plans with 2,450 acres.

70 water quality projects implemented including several practices:

- 44,572 feet of livestock exclusionary fence,
- 7,450 feet of pipeline,
- 20 watering facilities,
- 12.55 acres of tree shrub establishment,
- 20.73 acres of use exclusion,
- Two pumping plants,
- 175 acres of filter strips,
- 2,198 acres of nutrient management,
- 2,772 acres of prescribed grazing,
- One roof runoff structures,
- 413 feet of underground outlet,
- Seven waste storage facilities,
- One waste treatment,
- 1,446 acres of waste utilization,
- 3,690 feet of irrigation water conveyance,
- 784 acres of forest harvest management,
- 2,083 animal units of amendments for treatment of ag waste,
- 49 acres Integrated Pest Management,
- One waste transfer,
- One underground outlet.

Practices were completed by West Multnomah SWCD:
Developed three conservation plans in the North Coast Basin (~106.5 total acres).

- 2.85 acres of riparian planting,
- 0.1 acres of heavy use protection installed,
- Three acres of wetland/habitat management and restoration,
- One hydrologic survey completed for the Sauvie Island Drainage Improvement Co. (~11,000 acres),
- Intensive soil nitrate monitoring on with 11 landowners on 40+ fields (in partnership w/OSU Ext.).

6. Seek funding sources to implement the North Coast Basin Area Plan.

Clatsop SWCD Secured:

- $49,400 in grant funding from OWEB and DEQ for water quality related projects,
- assisted NRCS with EQIP projects valued at over $180,000 to support implementation of the North Coast Basin Area Plan through conservation plan development, best management practice technical assistance, project design, and implementation.

Columbia SWCD Secured:

- $18,000 in small grants for manure storage and heavy use construction,
- Over $475,000 in grant funding from OWEB, LCREP, ODFW, USFWS, and NRCS for water quality related projects throughout the county,
- $68,500 for invasive weed control through OSWB and BLM RAC.

Tillamook SWCD Secured:

- Over $100,000 for water quality related projects. (Including $80,000 from DEQ 319 and $55,000 from Tillamook County),
- $40,000 from the Tillamook County Creamery Association's Environmental Stewardship program to help fund water quality projects for member producers,
- The District also advertises for a "fee for services" to do water quality projects.

West Multnomah SWCD Secured:

- $20,000 in grant funding from DEQ and NFWF for pesticide collection events in the North Coast basin,
- $7,000 in OWEB funds were used in wetland restoration,
- Approximately $50,000 in WM grant or direct funding has been used on Sauvie Island for pollinator hedgerows, riparian plants, and wildlife habitat improvements,