



# Oregon

Kate Brown, Governor

**Department of Environmental Quality**  
**Northwest Region Portland Office/Water Quality**  
700 NE Multnomah Street, Suite 600  
Portland, OR 97232  
(503) 229-5263  
FAX (503) 229-6957  
TTY 711

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Rick Cowlshaw, Regional Water Quality Specialist  
Oregon Department of Agriculture – Water Quality Program  
635 Capitol Way NE  
Salem, OR 97301-2532

**RE: DEQ Biennial Review Letter – 2024 Lower Willamette Agricultural Water Quality Management Area Plan**

Dear Rick,

Thank you for the opportunity to participate in the 2024 Local Advisory Committee for the Lower Willamette Agricultural Water Quality Management Area Plan light review that was held on Nov. 14, 2024. My presentation to the LAC included information about TMDLs applicable to this management area, water quality status and trends, and 303(d) waterbody impairments.

ODA is a designated management agency in four Willamette Basin TMDLs that apply to the Lower Willamette portion of the management area: (1) Willamette Subbasins Revised Temperature TMDL (2024); (2) Willamette Basin Mercury TMDL (2019); (3) Willamette Basin TMDL (2006); and (4) Columbia Slough TMDL (1998). Taking into consideration available water quality information, impairments and TMDLs, the following recommendations for water quality are considered top priorities for the Lower Willamette Area Plan:

**I. Priority Water Quality Parameters and Recommendations**

**a. Temperature**

Temperature load allocations in the Willamette Subbasins Revised Temperature TMDL (2024) allocated ODA a mean effective percent shade target of 85% and a mean shade gap of 20% in the Lower Willamette subbasin. Note that DEQ did not assess shade targets for all agricultural lands in the basin. ODA is required to implement strategies to meet effective percent shade targets. Continuous temperature monitoring in the management area shows numerous stream temperature exceedances throughout the basin (DEQ, 2022 [Water Quality Status and Trends](#)). Temperature monitoring locations in the Upper Johnson Creek watershed, which represents the highest density of agricultural activities in the management area show both exceedances of the temperature water quality criteria, as well as degrading trends in temperature.

Recommended Action 1:

Develop measurable objectives to document how implementation actions are or will achieve temperature standards. These metrics may include specific miles of streamside vegetation planted, livestock exclusion fencing installed, and the progress on meeting shade targets of maturing, restored riparian areas. Implementation priorities should continue to include protecting, maintaining, and establishing

streamside vegetation to provide water quality functions and achieve shade targets established in the Willamette Subbasins Temperature TMDL (2024), and once adopted and approved by EPA, the Willamette Basin Mainstem Temperature TMDL.

Recommended Action 2:

As part of the next biennial review, establish baseline temperature monitoring stations, or use relevant existing long term monitoring stations in agricultural areas, such as specific tributaries to the Multnomah Channel and in the upper Johnson Creek watershed. Measurable objectives with milestones should be developed that can be quantitatively tracked and evaluated over time.

**b. Sediment and Erosion**

EPA assigned 88-97% reductions in total mercury to nonpoint sources in the Lower Willamette subbasin ([Mercury TMDL, 2021](#)). ODA is required to implement sediment and erosion controls to reduce mercury loading to waterbodies in the management area to attain the load allocation for nonpoint sources. In addition, a 94% reduction (or surrogate measure of 15 mg/L total suspended sediment) of dieldrin and DDT is needed in the Johnson Creek watershed to meet the Willamette Basin TMDL (2006). Several monitoring sites downstream of agricultural areas in the Upper Johnson Creek watershed show that the 15 mg/L total suspended sediment surrogate for dieldrin and DDT is not being met (DEQ, 2022 [Water Quality Status and Trends](#)).

Recommended Action 1:

Develop measurable objectives to document how implementation actions are or will achieve the load allocations for mercury, dieldrin and DDT. Those metrics may include actions to reduce the amount of bare ground related to agricultural activities, and protecting waterbodies by enhancing sediment-filtering riparian buffers to decrease erosion and runoff to nearby waterbodies. DEQ encourages ODA to include information and updates in the next biennial review about ODA's DEQ-approved TMDL implementation plan for mercury and inform LAC members about implementation strategies, measurable objectives and progress, and sharing annual TMDL implementation reports.

Recommended Action 2:

As part of the next biennial review, establish baseline total suspended solids monitoring stations, or use relevant existing long term monitoring stations in agricultural areas, such as specific tributaries to the Multnomah Channel and in the upper Johnson Creek watershed. Toxic pollutants, such as mercury, dieldrin and DDT can attach to sediment and be transported to waterbodies. Therefore, total suspended solids can serve as a surrogate measurement for these pollutants and is a more cost-effective analytical method to measuring toxins. Measurable objectives with milestones should be developed that can be quantitatively tracked and evaluated over time.

**c. Bacteria**

Bacteria load reductions needed from nonpoint sources range between 66-80% in the Lower Willamette basin (Willamette Basin TMDL (2006)). Several monitoring sites downstream of agricultural areas in the Upper Johnson Creek watershed show that the bacteria water quality standard is not being met (DEQ, 2022 [Water Quality Status and](#)

[Trends](#)). ODA is required to implement strategies to reduce bacterial inputs to waterbodies from agricultural activities in the Lower Willamette subbasin.

Recommended Action 1:

Support continued use of bacteria measurable objectives that were developed by the LAC as part of the 2020 full biennial review. These measurable objectives cannot be tracked for purposes of the biennial reviews in absence of bacteria data (see Recommended Action 2 below). Implementation of BMPs for livestock and horse manure management should continue, including assessment of heavy use areas, livestock exclusion, and riparian planting to prevent and filter runoff in the management area to prevent degradation of land condition and water quality.

Recommended Action 2:

In preparation for the next full biennial review, discuss re-establishment of baseline bacteria monitoring stations in Upper Johnson Creek. Discussions at the Nov. 14, 2024, LAC meeting indicated that East Multnomah SWCD bacteria monitoring had been discontinued for several reasons. Within the next few months, DEQ would like to discuss reasons around this discontinuation, funding, and potential remedies.

## **II. Additional Recommendations**

DEQ requests that the following recommendations be incorporated into the area plan.

### **a) 303(d) Impairments**

At the state level, prevention and protection are as important to DEQ as restoration. Area Plans should include BMPs that protect waters of the State from all forms of pollution and should not be limited to TMDL parameters, but also include references to section 303(d) water quality impairments in this basin, such as: dissolved oxygen (spawning), biocriteria, endosulfan, endrin aldehyde, lead, PCBs, PAH, pH, DDD 4,4', and DDE 4,4'. In many cases, strategies to protect and re-establish riparian vegetation will also reduce impacts from these listed impairments when a TMDL is not yet in place.

### **b) Measurable Objectives**

DEQ suggests that measurable objective development and water quality baseline monitoring discussions occur earlier in the next full biennial review process scheduled for 2028 to allow sufficient time for discussion and incorporation into the Area Plan. There are few monitoring sites within the Lower Willamette Area Plan that are representative of agricultural uses. Therefore, the status and trends information contained in DEQ's reports are less useful for determining water quality improvements over time from implementing strategies and BMPs in agricultural areas. DEQ encourages the SWCDs active in this area to submit data they have been collecting to DEQ's AWQMS database, which is used to produce the *Oregon Statewide Status and Trends Report*. The resulting status and trends analyses at agriculturally influenced sites will fill a much-needed gap in assessing potential impacts and successes from management strategies implemented in the Area Plan.

**c) Timelines**

DEQ suggests that ODA identifies timelines for fully implementing BMPs recommended for the management area to meet TMDL load allocations. A timeline for BMP implementation will support adaptive management as well as communicate implementation expectations to agricultural growers and land managers. Timelines and interim milestones are important components of resource planning and assessing incremental progress. Timelines are also needed for adaptive management, which requires developing methods to evaluate whether implementation actions are performing as expected over time.

**d) Drinking Water Sources**

DEQ recommends that ODA develop agricultural measurable objectives throughout the management area for strategies that protect drinking water source areas. Agricultural activities that do not follow established BMPs have the potential to negatively impact drinking water source areas for public water systems and private domestic wells. DEQ provides a Drinking Water Resource Update for each management area to inform the LAC of drinking water resources in relation to agricultural land use and practices.

**e) Local Advisory Committee Engagement**

ODA identified LAC engagement as an essential component for plan success. DEQ encourages ODA to continue to support membership and member succession over time. Succession planning provides an excellent opportunity to evaluate and increase diversity in all aspects of membership, including LAC participation from small, medium, large, and underrepresented producers. In addition, examine any barriers to participation and identify additional opportunities between formal biennial review periods for LAC members to engage with each other through workshops, field trips, and other types of interactions.

To facilitate community engagement on water quality within the agricultural water quality management area, this letter will be posted on DEQ's Nonpoint Source Implementation webpage under the Nonpoint Source Pollution section's [Area Plan Reviews and Comments](#) page.

If you have any question or concerns about the enclosed comments, please contact me at (503) 348-6858 or at [andrea.matzke@deq.oregon.gov](mailto:andrea.matzke@deq.oregon.gov)

Sincerely,



Andrea Matzke  
Lower Willamette Basin Coordinator

ec: Theresa Burcsu, Watersheds Manager, DEQ NW Region