



Oregon Department of Environmental Quality
Jan. 23-24, 2020
Oregon Environmental Quality Commission Meeting
Agency Staff Report
Rulemaking, Action Item J

Willamette Basin Multiple Discharger Mercury Variance 2019

Table of Contents

DEQ Recommendation to EQC	2
Overview	3
Statement of Need	8
Rules Affected, Authorities, Supporting Documents	10
Fee Analysis	14
Statement of Fiscal and Economic Impact.....	15
Federal Relationship	19
Land Use	20
Advisory Committee.....	21
Public Hearings.....	24
Summary of Comments and DEQ Responses.....	25
Commenters	70
Implementation	71
Five-year Review	72
Draft Rules – With Edits Highlighted.....	73
Draft Rules – With Edits Included	98

Attachment 1: Draft variance document, issued with Public Notice

Attachment 2: Summary of proposed revisions to Oregon’s water quality variance rule, issued with Public Notice

DEQ Recommendation to EQC

DEQ recommends that the Environmental Quality Commission:

- Adopt the proposed amendments to definition language within OAR 340-041-0002,
- Adopt the proposed amendments to the variance rule at OAR 340-041-0059, and
- Adopt the proposed amendments to OAR 340-041-0340 to adopt a Multiple Discharger Variance for methylmercury for NPDES-permitted dischargers in the Willamette Basin.

Proposed motion language for the commission:

I move that the commission adopt the proposed rule amendments, as seen on pages 73 through 97 of the staff report for this item, as part of Chapter 340 Division 41 of the Oregon Administrative Rules to adopt a Multiple Discharger Variance for methylmercury for NPDES-permitted dischargers in the Willamette Basin.

Overview

This overview summarizes information found in the subsequent sections of this report. Please see the individual sections for additional detail.

Short summary of proposed rule changes

DEQ proposes the following changes to OAR 340, division 41:

- Amend state variance authorization rules (OAR 340-041-0059) to be consistent with federal variance rules and add clarity; and
- Establish a multiple discharger variance for methylmercury that applies to permitted dischargers in the Willamette Basin that would otherwise have unattainable permit limits for mercury. Implementing the multiple discharger variance would, over the duration of the variance, lead to reductions in mercury concentrations in wastewater discharges to waters of the Willamette Basin.

Background of reasons for doing this rulemaking

The federal government adopted variance regulations (40 C.F.R. §131.14) in 2015. DEQ last revised Oregon regulations regarding variances (OAR 340-041-0059) in 2011. DEQ is proposing amendments to the state's general variance rules to make them consistent with the federal regulations and to provide clarity regarding DEQ's and the commission's requirements for granting variances.

DEQ is proposing rule amendments that establish a multiple discharger variance for mercury in the Willamette Basin for individual NPDES permittees that cannot currently meet mercury water quality based effluent limits. This rule is needed because human-caused sources of mercury, primarily due to atmospheric deposition of global mercury as well as erosion of natural levels of mercury in Oregon soils, currently prevent attaining the human health water quality criterion for methylmercury. The purpose of the variance is to create a tool, as authorized under the Clean Water Act, that allows incremental progress in reducing mercury from dischargers in the Willamette Basin that have individual permits under the National Pollutant Discharge Elimination System.

How this rulemaking addresses the reasons for doing the rulemaking

The proposed rule includes language identical or similar to the federal variance rule and removes language that is inconsistent with the federal rule or unnecessary. The rules give DEQ's director the authority to grant individual discharger variances and retain EQC's authority to grant multiple discharger variances and waterbody variances through rulemaking. Finally, some amendments clarify or streamline the rule language.

The Willamette Mercury Multiple Discharger Variance rule addresses the need to reduce loads of mercury from wastewater dischargers in the Willamette Basin while also facilitating DEQ's ability to issue permits in a timely manner. It does so by modifying the water quality standard for methylmercury as it applies to permitted dischargers for 20 years. The rule does not modify the underlying water quality standard as it applies to other Clean Water Act programs. The rule requires dischargers permitted under the variance to develop

and implement a mercury minimization program that will result in mercury reductions. In addition, it requires DEQ to establish effluent limits equal to what the discharger can currently achieve to prevent degradation. Implementing the rule requires DEQ to update these permit limits based on recent facility effluent data during renewal of any permit.

Key policy and technical issues

DEQ identified four key policy and technical issues in the proposed rule amendments.

Consistency with federal regulations, clarity of roles and requirements

DEQ has specified the roles in the rule language, retaining the director's authority to issue individual variances and the commission's authority to grant multiple discharger variances and waterbody variances through rulemaking. The previous rule did not discuss multiple discharger variances or waterbody variances.

Determining the Highest Attainable Condition

The permitted sources covered under the variance contribute approximately one percent of the total load of mercury to the Willamette Basin. DEQ is proposing a Highest Attainable Condition, or goal, that requires each discharger to properly maintain and operate their current treatment system and to implement a mercury minimization program that includes specific elements listed in the variance. This approach is consistent with EPA guidance on implementing the methylmercury criterion. The EPA prefers source control over treatment for mercury so that mercury is not reintroduced to the environment. Moreover, data from Oregon and other states show that source reduction decreases mercury levels in effluent over time.

Defining the level currently achievable

The level currently achievable, or the mercury concentration each discharger can achieve in their effluent with currently installed treatment technology, will serve as the basis for effluent limits when the variance is implemented into permits. Mercury levels can vary in both the influent and the effluent. Therefore, the procedure to derive the level currently achievable for each facility is designed to account for this variability.

Duration of the variance

DEQ proposes that the variance last 20 years. In order to justify this term, DEQ shows that the human health criterion for methylmercury cannot be achieved during the proposed term. Based on information developed during the recent TMDL update, the waters of the Willamette Basin will not achieve levels needed to meet the fish-tissue based criterion in the next 20 years, or likely even longer. In order to ensure that the variance will result in mercury reductions from point sources, DEQ will re-evaluate the requirements of the variance every five years. DEQ must submit the re-evaluation to EPA to ensure that the variance remains the applicable water quality standard for the purpose of NPDES permits.

Affected parties

Parties this rulemaking affects include individual industrial and municipal NPDES permit holders in the Willamette Basin, tribes, environmental groups, and consumers of fish.

Outreach efforts and public and stakeholder involvement

DEQ held informational sessions with current NPDES permit holders, environmental groups and tribes at the beginning of this rulemaking to provide initial information regarding the rulemaking and why DEQ was moving forward with it.

DEQ convened the Willamette Basin Mercury Multiple Discharger Variance advisory committee. The committee included representatives from individual municipal and industrial dischargers, environmental groups, fishing groups, tribes, and nonpoint sources and met six times. The committee's web page is located at:

<https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rmercury2019.aspx>.

DEQ has also fielded questions from interested individuals and groups over the course of the rulemaking by email.

Hearing testimony

DEQ held a public hearing on this rulemaking Oct. 22, 2019, jointly in Portland, Eugene, and by phone. DEQ received one comment during the hearing, which was specific to suction dredge mining.

Summary of significant public comments and responses

Comments on variance authorization rule

DEQ received 46 separate comments from seven different commenters on proposed rule changes. Many of these comments requested clarifications, supported proposed changes, or asked for additional changes to ensure that these rules are consistent with federal rules that were adopted since DEQ last amended this rule. DEQ has incorporated many of these suggestions.

One commenter objected to removing a provision in the current language that prohibits DEQ from granting a variance if it would jeopardize the continued existence of species listed as threatened or endangered under the Endangered Species Act, or if it would result in unreasonable risk to human health. After considering the comment, DEQ still proposes to remove these provisions, for the following reasons:

1. The federal variance rule does not require these provisions.
2. EPA is required to perform an ESA-consultation for any variance to an aquatic life criterion. It makes sense for DEQ to rely on the National Marine Fisheries Service and the U.S. Fish and Wildlife Service, which have the responsibility and expertise to conduct such ESA reviews, rather than attempt to conduct such a review itself.
3. The provision regarding "unreasonable risk" to human health is subjective and undefined. Importantly, a variance is only allowable if it is not feasible to attain the water quality standard, but progress can be made toward attaining the standard. In addition, variance requirements must reflect the "highest attainable condition." In other words, a permittee must do whatever is feasible to reduce pollutant levels. The

variance is a tool to, over time, decrease risks to human health to the extent feasible, even though the underlying standard cannot feasibly be attained during the term of the variance.

DEQ received one comment from a member from the suction dredge mining community in Oregon asking for a variance to cover DEQ's Suction Dredge Mining permit once the commission adopts a revised variance authorization rule. DEQ has responded that variances are only needed for dischargers that have effluent limits for mercury that cannot be attained. DEQ's suction dredge mining permit does not contain a numeric effluent limit for mercury and, therefore, a variance is unnecessary.

Comments on Willamette Basin Mercury Multiple Discharger Variance

DEQ received approximately 35 comments on the proposed Willamette Basin Mercury Multiple Discharger Variance and associated supporting documents.

DEQ received a number of comments from EPA, including a request to provide additional support for the 20-year term of the variance and to document overall state efforts to reduce human caused sources of mercury, including nonpoint source controls. DEQ has addressed these comments in revisions to its supporting documentation and the proposed rules.

DEQ also received one comment suggesting that the proposed variance is a waterbody variance, not a discharger-specific variance, because DEQ included eligibility criteria for dischargers that wish to qualify for this variance. DEQ has clarified in response to this comment that it is proposing a multiple discharger variance to ensure DEQ has a means to issue permits to dischargers that cannot feasibly meet effluent limits based on the human health criterion for methylmercury. In order to address the comment, DEQ has included in the proposed rules the names of individual wastewater dischargers that the variance applies to, as well as additional individual wastewater dischargers that the variance will apply to if, during the duration of the variance, DEQ would otherwise need to include water quality based effluent limits in their permits that are not feasible to achieve.

DEQ received comments requesting that it modify documentation supporting the multiple discharger variance, which previously included a discussion of mercury levels attained by different types of treatment. DEQ has made such modifications, as there is no treatment that can attain effluent limits based on the water quality standard. Moreover, EPA guidance suggests that source control is the preferred method for reducing mercury from point sources, rather than end-of-pipe treatment.

DEQ received some comments regarding how the variance will be implemented in permits, including comments regarding required elements for a pollutant minimization plan. DEQ considered these comments and made some changes in response.

Effects of this rulemaking on any fees

This rulemaking does not involve fees.

Brief summary of fiscal impact

DEQ does not expect that the changes to the variance authorization rule will have any fiscal or economic impact, as these changes are ensuring that DEQ's variance rules are consistent with federal rules. They do not otherwise change any corresponding effort needed for developing a variance, as this effort will be required in any case.

The primary impact of the proposed rule is to make the process of obtaining a variance for wastewater dischargers in the basin efficient. Without the multiple discharger variance in place, each individual discharger that would otherwise have unattainable water quality based effluent limits for mercury in their permit, would have to apply for an individual variance. The MDV creates efficiency because the justification and the highest attainable condition for each variance is similar across all permittees. Individual variances would be resource intensive for the permit holder, DEQ staff, and EPA, which must approve each individual variance. By developing an multiple discharger variance, DEQ may justify the need for the variance and obtain EPA approval one time. Obtaining coverage under the variance will still require some effort from both permit holders and DEQ staff, but it will require less overall effort than applying for individual variances.

Statement of Need

1. Variance Authorization Rule

What need would the proposed rule address?

The proposed rule amendments ensure the state variance authorization rule is consistent with the more recently promulgated federal variance rule (2015). In addition, the amendments clarify the variance rules by retaining the authority to the Oregon Environmental Quality Commission (EQC) to grant multiple discharger and waterbody variances, which are not discussed in the existing rules.

How would the proposed rule address the need?

The proposed rule includes language identical or similar to the federal variance rule and removes language that is inconsistent with the federal rule or unnecessary. The rules would give the EQC the authority to grant multiple discharger and waterbody variances.

How will DEQ know the rule addressed the need?

DEQ will know the rule addressed the need if EPA approves the rule language.

2. Multiple Discharger Variance for Mercury in the Willamette Basin

What need would the proposed rule address?

The proposed rule will address the need to reduce loads of mercury from wastewater dischargers in the Willamette Basin while also facilitating DEQ's ability to issue permits in a timely manner and provide permit requirements that are achievable if the facilities are well-operated.

How would the proposed rule address the need?

The MDV rule addresses this need by modifying the water quality standard for methylmercury as it applies to permitted dischargers for a limited duration. The rule does not modify the underlying water quality standard as it applies to other water quality programs. The rule requires dischargers permitted under the variance to develop and implement a mercury minimization plan that will result in mercury reductions. In addition, it requires DEQ to establish effluent limits equal to what the discharger can currently achieve to prevent degradation. The rule requires DEQ to update these permit limits based on recent facility data during renewal of any permit.

How will DEQ know the rule addressed the need?

DEQ will know the rule addresses the need if the agency is able to issue permits with variance-related requirements in a timely manner and with achievable permit limits. DEQ will also know that the rule addresses the need through a re-evaluation of the highest attainable condition, which must be conducted every five years in accordance with federal requirements and will allow DEQ to measure progress in reducing mercury from wastewater

dischargers in the Willamette Basin. This analysis will include reviewing technology to determine if there are improvements that make mercury removal more feasible. The review also will entail analysis of mercury data from wastewater dischargers covered under the variance to determine if mercury levels have decreased. The public will have an opportunity to review and comment on this analysis before DEQ submits a final version to the U.S. Environmental Protection Agency (EPA).

Rules Affected, Authorities, Supporting Documents

Lead division

Water Quality

Program or activity

Standards and Assessment

Chapter 340 action

Amend - OAR

340-041-0002 340-041-0059 340-041-0345

Statutory authority - ORS

468.020 468B.010 468B.015 468B.020 468B.030
 468B.035 468B.048 468B.110

Statutes implemented – ORS

468B.035 468B.048

Documents relied on for rulemaking

Document title	Document location
EPA Methylmercury Criteria documents.	https://www.epa.gov/wqc/human-health-criteria-methylmercury
Oregon DEQ. Draft Willamette Basin Mercury TMDL. 2019.	https://www.oregon.gov/deq/wq/tmdls/Pages/illhgtmdlac2018.aspx
Tetra Tech, 2019. Mercury TMDL Development for the Willamette River Basin (Oregon) – Technical Support Document (Public Review Draft). Prepared for Oregon Department of Environmental Quality and U.S. EPA Region 10. 162 pp.	https://www.oregon.gov/deq/FilterDocs/wbmtmdl042019mm.pdf
Oregon DEQ. Statewide Aquatic Tissue Toxics Assessment Report. 2017.	http://www.oregon.gov/deq/FilterDocs/wqmtissueaq.pdf

U.S. Environmental Protection Agency. 2010. Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion. Office of Science and Technology. Washington, DC. EPA 823-R-10-001. 221 pp.	https://www.epa.gov/wqc/guidance-implementing-january-2001-methylmercury-water-quality-criterion
U.S. EPA. 2007. Treatment Technologies for Mercury in Soil, Waste, and Water. Office of Superfund Remediation and Technology Innovation.	https://clu-in.org/download/remed/542r07003.pdf
U.S. Environmental Protection Agency. 2008. Municipal Nutrient Removal Technologies Reference Document. Office of Wastewater Management, Municipal Support Division, Municipal Technology Branch. EPA 832-R-08-006. 449 pp.	https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100GE8B.TXT
U.S. Environmental Protection Agency. 2014. <i>Water Quality Standards Handbook, Chapter 5: General Policies</i> . Office of Water. EPA 820-B-14-004.	https://www.epa.gov/sites/production/files/2014-09/documents/handbook-chapter5.pdf
Amos et al, 2013. Legacy impacts of all-time anthropogenic emissions on the global mercury cycle. BIOGEOCHEMICAL CYCLES, VOL. 27, 410–421, doi:10.1002/gbc.20040	DEQ Offices
Eagles-Smith et al. 2018. Modulators of mercury risk to wildlife and humans in the context of rapid global change. <i>Ambio</i> , 47, 170-197.	DEQ Offices
Eagles-Smith et al. 2016. Spatial and temporal patterns of mercury concentrations in freshwater fish across the Western United States and Canada. <i>Science of the Total Environment</i> . 568:1171-1184.	DEQ Offices
Mercury Deposition Network studies	http://nadp.slh.wisc.edu/mdn/
California EPA, Regional Water Quality Control Board, Central Valley Region. 2010. Staff Report: A Review of Methylmercury and Inorganic Mercury Discharges from NPDES Facilities in California’s Central Valley.	https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_project_s/delta_hg/other_technical_reports/npdes_mehg_final_rpt.pdf

Mercury effluent data from pre-treatment wastewater treatment plants in Oregon	DEQ Offices
Ohio Environmental Protection Agency. 1997. Assessing the Economic Impacts of the Proposed Ohio EPA Water Rules on the Economy.	https://dnr.wi.gov/topic/wastewater/documents/OhioEPAsudy.pdf
Treatment Technology Review and Assessment, Association of Washington Businesses, HDR, Dec. 2013.	https://www.awb.org/file_viewer.php?id=2903
Michigan Department of Environmental Quality. 2015. Mercury Multiple Discharge Variance Document.	https://www.michigan.gov/documents/deq/wrd-npdes-rules-MercuryVariance2015_2019_508884_7.pdf
Urgun-Demirtas et al. 2013. Achieving the Great Lakes Initiative Mercury Limits in Oil Refinery Effluent. Water Environment Research 85(1): 77-86.	DEQ Offices
Hollerman, et al. 1999. Results from the low level mercury sorbent test at the Oak Ridge Y-12 Plant in Tennessee. Journal of Hazardous Materials B68:193-203.	DEQ Offices
Wisconsin NPDES discharger mercury analysis	DEQ Offices
Influent data from Major Wastewater Treatment Plans in Minnesota	DEQ Offices
Electric Power Research Institute and Water Research Foundation. 2013. Electricity Use and Management in the Municipal Water Supply and Wastewater Industries.	http://www.allianceforwaterefficiency.org/WorkArea/DownloadAsset.aspx?id=8695
AECOM. 2015. Chloride Compliance Study Nine Springs Wastewater Treatment Plant Final Report	https://www.madsewer.org/Portals/0/ProgramInitiatives/ChlorideReduction/MMSD%20Chloride%20Compliance%20Study%20Report%20-%20Final%206-19-15bookmarks.pdf
Oregon Department of Environmental Quality, 2010. Internal Management Directive: Implementation of Methylmercury Criterion in NPDES Permits.	https://www.oregon.gov/deq/Filtered%20Library/IMDmethylmercuryCriterion.pdf
Chetelat et al. 2015. Mercury in freshwater ecosystems of the Canadian Arctic: Recent	DEQ Offices

advances on its cycling and fate. <i>Science of the Total Environment</i> , 509, 41-66.	
City of Oshkosh, Wisconsin. 2018. Mercury Source Identification and Reduction Efforts	DEQ Offices
Stevens Point Public Utilities. 2018. Mercury Source Identification and Control PMP.	DEQ Offices
Driscoll et al. 2007. Mercury contamination in forest and freshwater ecosystems in the Northeastern United States. <i>Bioscience</i> , 57, 17-28.	DEQ Offices
Fitzgerald et al. 1998. The case for atmospheric mercury contamination in remote areas. <i>Environmental Science and Technology</i> , 32, 1-7.	DEQ Offices
Hall, B et al. 1997. Food as the dominant pathway of methylmercury uptake by fish. <i>Water, Air and Soil Pollution</i> , 100, 13-24.	DEQ Offices
Lindberg et al. 2007. A synthesis of progress and uncertainties in attributing the sources of mercury in deposition. <i>Ambio</i> , 36, 19-32.	DEQ Offices
Munthe et al. 2007. Recovery of mercury-contaminated fisheries. <i>Ambio</i> , 36, 33-44.	DEQ Offices
Schroeder, W., & Munthe, J. 1998. Atmospheric mercury -- An overview. <i>Atmospheric Environment</i> , 30, 809-822.	DEQ Offices
Trip, L., & Allan, R. 2000. Sources, trends, implications and remediation of mercury contamination of lakes in remote areas of Canada. <i>Water Science and Technology</i> , 42, 171-176.	DEQ Offices

Fee Analysis

This rulemaking does not involve fees.

Statement of Fiscal and Economic Impact

Fiscal and Economic Impact

DEQ does not expect that the changes to the variance authorization rule will have any fiscal or economic impact, as these changes are simply ensuring that DEQ's variance rules are consistent with federal rules. They do not otherwise change any corresponding effort needed for developing a variance, as this effort will be required in any case.

The primary impact of the proposed rules is to make the process of obtaining a variance for wastewater dischargers in the basin efficient. Without the MDV, each individual discharger that would otherwise have unattainable water quality based effluent limits for mercury would have to apply for an individual variance, even though the justification for each variance is similar across all permittees. Individual variances would be resource intensive for the permit holder, DEQ staff, and the EPA, which must approve each individual variance. By developing an MDV, DEQ only has to justify the need for the variance and obtain EPA approval one time. Obtaining coverage under the variance will still require some effort from both permit holders and DEQ staff, but it will require less effort than applying for individual variances.

These rules could affect facilities with National Pollutant Discharge Elimination System permits to discharge wastewater into the Willamette Basin. The rules also could affect holders of minor NPDES permits in industries that have the potential to discharge mercury. At this time, DEQ has identified a total of 23 major municipal NPDES dischargers and no more than eight industrial wastewater dischargers that these rules could affect. These numbers could change as communities grow larger and some minor municipal NPDES dischargers expand their flow volumes to become major dischargers.

The proposed rules will affect DEQ staff, particularly permitting staff, who will be responsible for including variance requirements into the permit of any discharger wishing to be covered under the MDV. However, this would also be the case if permittees pursued individual variances in this rule's absence. The proposed rules also will require a re-evaluation of the highest attainable condition every five years, consistent with federal variance regulations. This re-evaluation will require effort from both water quality standards staff and permitting staff. Without the proposed rules, DEQ would have to do a re-evaluation of the Highest Attainable Condition for each individual permittee obtaining a variance, assuming the variance lasted longer than a permit cycle. If the variance only lasted a permit cycle, DEQ staff would have to work with the permittee to reapply for the variance every five years. This would likely be even more burdensome and happen as each permit is renewed. Therefore, the proposed rules will likely save effort from DEQ staff overall.

Statement of Cost of Compliance

DEQ expects the cost of compliance with these rules to be the same as the same as the cost of compliance were these rules not adopted. Without the rules in place, each facility that could not meet water quality based effluent limits for mercury would need to apply for an individual variance. Permit limits for mercury will be the same, whether done through

individual variances or an MDV, as DEQ expects it would use the same methodology to calculate these limits in either instance. Moreover, required sampling would be the same whether under individual variances or an MDV.

State agencies

DEQ

Direct Impacts

The proposed rules will require additional effort for DEQ permitting staff to ensure that permittees have provided all required documentation needed for coverage under the MDV and to incorporate variance-related permit requirements into the permit. DEQ is already developing permitting tools for individual mercury variances. Once DEQ finalizes these tools, such work should require no more than a few hours to calculate the basis for permit limits.

However, without the MDV rules in place, permittees would have to apply for individual variances. Individual variances would also require additional staff time because the justification for the variance would need to be made for each facility. As a result, the proposed rules will result in less time per permit than not having the rules in place.

The proposed rules will require DEQ staff to conduct a review of the highest attainable condition under the variance every five years. However, DEQ would either have to do an HAC re-evaluation for each facility for individual variances, or only issue individual variances for five years. In either case, the HAC would have to be re-evaluated for each facility. Thus, HAC re-evaluation is more efficient under an MDV than using individual variances.

Indirect Impacts

DEQ does not expect indirect impacts from the proposed rules.

Local governments

Direct Impacts

The proposed rules will have a positive impact on local government, as compared to not having the rules in place. The proposed rules will ensure that local governments operating wastewater treatment plants that discharge effluent into waters of the Willamette Basin have a means for complying with effluent limits for mercury. Without the MDV available, local governments would have to apply for individual variances, which can be a lengthy process, and require each government to justify the variance under federal and state rules. The MDV would save the extra effort needed to justify each individual variance and wait for approval for the variance from EPA. DEQ cannot quantify exactly how much effort the MDV will save as compared to an individual variance, as that would likely vary for each facility.

Indirect Impacts

DEQ does not anticipate indirect impacts from the proposed rules.

Public

Direct Impacts

DEQ does not expect direct impacts to the public from the rules.

Indirect Impacts

The public will benefit indirectly from the proposed rules. The proposed rules will likely save local government additional effort needed to apply for individual variances. This will potentially have a small impact on the cost associated with applying for a variance. Such an impact will likely be small.

Large businesses - businesses with more than 50 employees

Direct Impacts

Impacts to large businesses will be similar to that of local governments. The proposed rules will ensure that any large businesses that discharge wastewater into waters of the Willamette Basin have a means for complying with effluent limits for mercury. Without the MDV available, large businesses would have to apply for individual variances, which can be a lengthy process. The MDV would save extra effort needed to justify each individual variance and wait for approval for the variance from EPA. DEQ cannot quantify exactly how much effort the MDV will save as compared to an individual variance, as that will likely vary for each facility.

Indirect Impacts

DEQ does not expect indirect impacts to large businesses.

Small businesses – businesses with 50 or fewer employees

Direct Impacts

To the extent that there are any small businesses that would be covered under the MDV, impacts to small businesses will be similar to that of large governments. The proposed rules will ensure that any large businesses that discharge wastewater into waters of the Willamette Basin have a means for complying with effluent limits for mercury. Without the MDV available, small businesses would have to apply for individual variances, which can be a lengthy process. The MDV would save extra effort needed to justify each individual variance and wait for approval for the variance from EPA. DEQ cannot quantify exactly how much effort the MDV will save as compared to an individual variance, as that will likely vary for each facility.

Indirect Impacts

DEQ does not expect indirect impacts to small businesses.

a. Estimated number of small businesses and types of businesses and industries with small businesses subject to proposed rule.

The rule could impact small businesses from the following industries and which have permits to discharge wastewater to the Willamette River.

- Timber products;
- Paper products;

- Chemical products;
- Glass/clay/cement/concrete/gypsum products;
- Primary metal industries;
- Fabricated metal products; and
- Electronics and instruments.

There are currently no more than 20 businesses the proposed rules could affect. It is likely fewer as many of these likely would not otherwise have water quality based effluent limits for mercury. Four of these are small businesses based on 2015 Oregon Employment Department data.

b. Projected reporting, recordkeeping and other administrative activities, including costs of professional services, required for small businesses to comply with the proposed rule.

No additional resources are required for compliance with the proposed rules. All small businesses that would receive coverage under the MDV would otherwise need to comply with similar rules for individual variances.

c. Projected equipment, supplies, labor and increased administration required for small businesses to comply with the proposed rule.

No additional resources are required for compliance with the proposed rules. All small businesses who would receive coverage under the MDV would otherwise need to comply with similar rules for individual variances.

d. Describe how DEQ involved small businesses in developing this proposed rule.

DEQ included small business representatives on the Willamette Basin Mercury Multiple Discharger Variance Advisory Committee that reviewed the fiscal impact statement. This included representatives of the Oregon Business and Industry and the Oregon Association of Nurseries. DEQ also provided rulemaking notice to any small business signed up for water quality standards rulemaking notices.

Housing Cost

As ORS 183.534 requires, DEQ evaluated whether the proposed rules would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel. DEQ determined the proposed rules would have no effect on the development costs because these rules do not apply to developers or any materials related to housing construction.

Documents relied on for fiscal and economic impact

Document title	Document location
Oregon Department of Employment 2015 data	Employment Department 875 Union Street NE Salem OR 97311

Federal Relationship

Relationship to federal requirements

ORS 183.332, 468A.327 and OAR 340-011-0029 require DEQ to attempt to adopt rules that correspond with existing equivalent federal laws and rules unless there are reasons not to do so.

The proposed rules would adopt federal requirements for variances that are found at 40 C.F.R. §131.14 and requirements related to public hearings at 40 C.F.R. Part 25. The proposed rules adopt procedures for a multiple discharger variance that are consistent with federal requirements.

Land Use

Land-use considerations

In adopting new or amended rules, ORS 197.180 and OAR 340-018-0070 require DEQ to determine whether the proposed rules significantly affect land use. If so, DEQ must explain how the proposed rules comply with state wide land use planning goals and local acknowledged comprehensive plans.

Under OAR 660-030-0005 and OAR 340 Division 18, DEQ considers that rules affect land use if:

- The statewide land use planning goals specifically refer to the rule or program, or
- The rule or program is reasonably expected to have significant effects on:
 - Resources, objectives or areas identified in the statewide planning goals, or
 - Present or future land uses identified in acknowledged comprehensive plans

To determine whether the proposed rules involve programs or actions that affect land use, DEQ reviewed its Statewide Agency Coordination plan, which describes the DEQ programs that have been determined to significantly affect land use. DEQ considers that its programs specifically relate to the following statewide goals:

Goal	Title
5	Open Spaces, Scenic and Historic Areas, and Natural Resources
6	Air, Water and Land Resources Quality
11	Public Facilities and Services
16	Estuarial Resources
19	Ocean Resources

Statewide goals also specifically reference the following DEQ programs:

- Nonpoint source discharge water quality program – Goal 16
- Water quality and sewage disposal systems – Goal 16
- Water quality permits and oil spill regulations – Goal 19

Determination

DEQ determined that these proposed rules do not affect land use under OAR 340-018-0030 or DEQ's State Agency Coordination Program.

Advisory Committee

Advisory committee

DEQ appointed an advisory committee for this rulemaking.

As ORS 183.333 requires, DEQ asked for the committee's recommendations on:

- Whether the proposed rules would have a fiscal impact,
- The extent of the impact, and
- Whether the proposed rules would have a significant adverse impact on small businesses; if so, then how DEQ can comply with ORS 183.540 reduce that impact.

The committee reviewed the draft fiscal and economic impact statement and documented its recommendations in approved meeting summary and supplemental materials for the June 3, 2019 meeting, available at the following website:

<https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rmercury2019.aspx>.

The committee provided minor corrections to the fiscal impact statement but did not find that there would be a significant adverse impact on small business. One advisory committee member expressed concern about increased cost of sampling under the proposed rule. DEQ clarified that these costs would be incurred whether or not the proposed rule was in place.

Background

DEQ convened the Willamette Basin Mercury Multiple Discharger Variance advisory committee. The committee included representatives from individual municipal and industrial dischargers, environmental groups, fishing groups, Tribes, and nonpoint sources and met six times. The committee's web page is located at:

<https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rmercury2019.aspx>.

The committee members were:

Willamette Basin Mercury MDV Rulemaking Advisory Committee	
Name	Representing
Stephanie Eisner	Association of Clean Water Agencies (Meetings 1-2)
Chandra Ferrari	Trout Unlimited
Raj Kapur	Association of Clean Water Agencies (Alternate)
Michael Karnosh	Confederated Tribes of Grand Ronde
Allison Laplante	Earthrise Law Center

Todd Miller	Association of Clean Water Agencies (Meetings 3-6)
Sharla Moffett	Oregon Business and Industry
Donna Schmitz	Benton County Soil and Water Conservation District
Jeff Stone	Oregon Association of Nurseries
Kathryn VanNatta	Northwest Pulp and Paper Association

Meeting notifications

To notify people about the advisory committee's activities, DEQ:

- Sent GovDelivery bulletins, a free e-mail subscription service, to the following lists:
 - Rulemaking
 - Water Quality Standards
- Added advisory committee announcements to DEQ's calendar of public meetings at [DEQ Calendar](#).

Committee discussions

In addition to the recommendations described under the Statement of Fiscal and Economic Impact section above, the committee provided input on: 1.) the justification for the variance; 2.) variance requirements, including the term of the variance, the expression of the highest attainable condition and the HAC re-evaluation process; and 3.) variance application procedures and how DEQ will incorporate permit conditions based on the variance. The advisory committee also provided input on proposed amendments to the variance authorization rule and the rule establishing the multiple discharger variance for mercury in the Willamette Basin. Supporting materials and summaries of committee discussions are documented on the committee's webpage at: <https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rmercury2019.aspx>.

EQC prior involvement

DEQ shared information about this rulemaking with the EQC through informational items on the Nov. 16, 2018, and Jan. 25, 2019, EQC agendas.

Public Notice

DEQ provided notice of the proposed rulemaking and hearing by:

- Filing notice with the Secretary of State for publication in the October, 2019, Oregon Bulletin
- Posting notice on the DEQ rulemaking web page:
- Emailing interested parties through GovDelivery to the following subscriber lists:
 - Rulemaking
 - Water Quality Standards
- Emailing the following key legislators:
 - Senator Michael Dembrow, Chair, Senate Interim Committee on Environment and National Resources
 - Senator Alan Olsen, Vice-Chair, Senate Interim Committee on Environment and National Resources

- Beth Patrino, LPRO Analysis, Senate Interim Committee on Environment and National Resources
- Representative Karin Power, Chair, House Interim Committee on Energy and Environment
- Representative E. Werner Reschke, Vice-Chair, House Interim Committee on Energy and Environment
- Representative Janeen Sollman, Vice-Chair, House Interim Committee on Energy and Environment
- Representative Ken Helm, Chair, House Interim Committee on Water
- Representative Gary Leif, Vice-Chair, House Interim Committee on Water
- Representative Jeff Reardon, Vice-Chair, House Interim Committee on Water
- Misty Freeman, LPRO Analyst, House Interim Committee on Energy and Environment and House Interim Committee on Water

Request for other options

During the public comment period, DEQ requested public comment on whether to consider other options for achieving the rules' substantive goals while reducing the rules' negative economic impact on business. This document includes a summary of comments and DEQ responses.

Public Hearings

Public hearings

DEQ held a public hearing Oct. 22, 2019, in Portland, Eugene, and via phone. DEQ received one comment at the hearing. Later sections of this document include a summary of the comments received during the open public comment period, DEQ's responses, and a list of the commenters. Original comments are on file with DEQ.

Presiding Officer's Record

Hearing 1 – Portland, Eugene, and teleconference

Oct. 22, 2019

700 NE Multnomah Street, Portland, Oregon 97232

165 E. Seventh Avenue, Eugene, Oregon 97401, Willamette Conference Room (Room 100)

Presiding Officer: Michele Martin

The presiding officer convened the hearing, summarized procedures for the hearing, and explained that DEQ was recording the hearing. The presiding officer asked people who wanted to present verbal comments to sign the registration list, or if attending by phone, to indicate their intent to present comments. The presiding officer advised all attending parties interested in receiving future information about the rulemaking to sign up for GovDelivery email notices.

As Oregon Administrative Rule 137-001-0030 requires, the presiding officer summarized the content of the rulemaking notice.

Seven people attended the hearing in person in Portland, three people attended the hearing in person in Eugene, and three people attended by teleconference or webinar. One person commented orally and no one submitted written comments at the hearing.

Public comment period

DEQ accepted public comment on the proposed rulemaking from Sept. 16, 2019, until 4 p.m. on Nov. 4, 2019.

Summary of comments and DEQ responses

For public comments received by the close of the public comment period, the following table organizes comments into seven categories with cross references to the commenter number. DEQ's response follows the summary. Original comments are on file with DEQ.

DEQ changed the proposed rules in response to comments described in the response sections below.

List of Comments		
Comment #	Comment Summary	Commenter Numbers
General Comments		
1.	NWPPA requests that ODEQ provide written confirmation that the multi-discharger variance is proposed under 40 CFR 131.14(b)(ii)(A) for discharger specific variances and not as a variance applicable to a waterbody or waterbody segment under 40 CFR 131.14(b)(ii)(B) so it's not necessary for the variance to include identification and documentation of nonpoint source controls. The variance appropriately includes nonpoint source controls as elements that could be considered in mercury minimization plans under OAR-041-0345(6)(f) and (g).	#7
2.	DEQ refers to the variance as a multiple discharge or variance when EPA regulations clearly refer to this type of variance as a water body or water body segment variance. As a result, DEQ needs to identify and document "any cost-effective and reasonable best management practices for nonpoint source controls that could be implemented to make progress toward attaining the underlying designated use and criterion."	#3
3.	NWPPA supports the basis of the variance to achieve the highest attainable condition determined by the level currently achievable and implementation of a mercury minimization plan through the term of the variance.	#7

List of Comments

Comment #	Comment Summary	Commenter Numbers
4.	NWPPA requests that ODEQ provide written confirmation that during the term of the variance for a discharger, the terms of the variance – achieving the highest attainable condition and implementation of a mercury minimization plan – are controlling in terms of NPDES permit conditions over underlying water quality standards and TMDL waste load allocations.	#7
5.	When DEQ amends state variance authorization rules to be consistent with federal variance rules and EPA approves it for NPDES permit holders; I am requesting an individual variance or MDV from DEQ to operate my suction dredge as a minor 700 NPDES permit discharger for the Willamette Basin Mercury TMDL.	#2
6.	NWPPA supports attainable state-developed human health water quality standards that improve water quality, protect human health and provide for vibrant economies. NWPPA does not support unattainable or unachievable water quality standards that lead to regulatory uncertainty, water permitting delays, potential job loss and degraded local communities.	#7
7.	NWPPA has consistently advocated for and supported “implementation tools” for facilities holding National Pollution Discharge Elimination System water permits – issued under the federal Clean Water Act for compliance with the federally delegated water quality permitting program – if water quality standards are unattainable or unachievable.	#7
8.	NWPPA supports the intent of ODEQ’s variance authorization rule and the Willamette Basin mercury multi-discharger variance rule as “implementation tools” to provide a compliance pathway for point source dischargers; however, NWPPA strongly believes that a variance is not a <i>one-size-fits-all</i> solution removing all regulatory uncertainty from the NPDES permitting program during DEQ’s proposed 20-year timeframe for the Willamette Basin mercury MDV.	#7
9.	NWPPA supports the scientific foundation of the Willamette Basin mercury multi-discharger variance in ODEQ’s Willamette Mercury TMDL supporting documents, that in-stream mercury pollution comes from a variety of sources with a majority of the mercury load contributions from air deposition sources outside the Willamette Basin and that the science of mercury methylation is still evolving.	#7

List of Comments

Comment #	Comment Summary	Commenter Numbers
10.	NWPPA would prefer attainable water quality standards that remove the uncertainty of not being able to comply with ultra-low water quality standards and the risk of the unintended consequence of threatening current facility operations and jobs -- including water permit delays, unknown compliance paths, potential litigation and extreme high costs for water treatment using unproven technologies.	#7
11.	NWPPA supports the July 2019 draft Willamette River Mercury TMDL pollution prevention and minimization approach, similar to other mercury TMDLs across the nation, to comply with Oregon's exceptionally stringent methylmercury fish tissue water quality criterion of 0.040 mg/kg (wet weight).	#7
12.	NWPPA believes that the draft Mercury TMDL's conservative policy decisions and modeling assumptions, combined with an aggressive approach to pollutant prevention and minimization result in a TMDL that is very highly protective of the most sensitive beneficial use of fish consumption in addition to being highly protective of all other designated beneficial uses of waters in the Willamette Basin.	#7
13.	20 year justification Support documents should provide clear and detailed rationale for 20-year term for all dischargers.	#5
14.	NWPPA believes the 10 percent aggregate reduction of total mercury for all point source water permit holders is appropriate given that: 1) industrial point sources in the Willamette Basin provide 0.3 percent of the total load for mercury to the Willamette; 2) all permitted point source dischargers (NPDES and stormwater) comprise approximately 4 percent of the total mercury load; 3) the applicable water quality criterion is a methylmercury fish tissue criterion and thus the contribution of point source total mercury loads to methylmercury concentrations in fish is uncertain; and, 4) scientific knowledge of the Willamette Basin methylation processes are still evolving	#7
15.	NWPPA notes that a well-documented and highly-conservative approach led to the instream water column target of 0.14 ng/L total mercury but that the target is exceptionally stringent and will take 20 or more years to achieve given the current levels of total instream mercury in the Willamette Basin	#7
16.	NWPPA believes the TMDL Mercury load reduction efforts should be common sense minimization efforts similar to other TMDLs	#7

List of Comments		
Comment #	Comment Summary	Commenter Numbers
	across the nation to the extent practicable given that the majority of mercury loading comes from air deposition and -- if required -- NWPPA believes that a multi-discharger variance rule for the Willamette Basin is an appropriate alternative compliance path.	
17.	NWPPA believes that Oregon Revised Statute 468B.037 to 468B.038, regarding ODEQ's issuance of variances requiring that applicants be consulted and that negative economic impacts be minimized should be the basic tenant of ODEQ's work to develop, issue, implement and review all variances.	#7
18.	NWEA recommends that DEQ establish the close of business or midnight for the close of comment periods.	#3
Draft Amendments to Definitions Rule		
19.	The definition for a variance omits the fact that the underlying designated use and criterion addressed by the variance remain in effect.	#3
Draft Amendments to Variance Rule		
20.	I understand the change to essentially make Oregon's mercury variance process more lenient, in order to make Oregon's process consistent with federal regulations. I strongly disagree with loosening environmental regulations that limit human and environmental exposure to neurotoxins such as mercury.	#1
21.	340-041-0059 NWPPA supports the concept of the variance water quality standard "implementation tool" in OAR 340-041-0059 and believes the proposal is correctly based on the requirements of 40 CFR §131.14 and EPA guidance	#7
22.	340-041-0059 DEQ has removed the clear federal requirement to name the dischargers in a discharger-specific variance while omitting the requirement to identify nonpoint source controls.	#3
23.	340-041-0059(1) It would be helpful if the variance rule were to specify where multiple discharger and waterbody variances should be memorialized. It would make sense to add waterbody variances to the basin-specific water quality standards; perhaps individual and multiple discharger variances should be assigned their own section within Division 41. This may also avoid confusion between multiple discharger and waterbody variances.	#8

List of Comments		
Comment #	Comment Summary	Commenter Numbers
24.	340-041-0059(1) Delete “all qualified facilities that discharge to” from Applicability A waterbody variance applies to the waterbody or waterbody segment where all point and non-point source dischargers are evaluated	#5
25.	340-041-0059(1)(b) The removal of language that prohibits DEQ or the commission from issuing a variance if it would likely jeopardize the continued existence of any threatened or endangered species listed under section 4 of the endangered species act or result in the destruction or adverse modification of such species’ critical habitat is an error in policy and law.	#3
26.	340-041-0059(1)(b) It is factually incorrect that removal of this language as well as removal of language pertaining to unreasonable risks to human health is justified because “any discharger still has to comply with technology based limits irrespective of whether there is a variance.” DEQ’s rationale for removing the language pertaining to unreasonable risks to human health is disingenuous. The justification states that, “variances are intended to reduce pollutant loads over time, decreasing any potential risk to human health. The variance DEQ is proposing is not intended to reduce pollutant loads over time in any meaningful way.	#3
27.	340-041-0059(2) In the section on conditions to grant a variance, DEQ omits the requirements of 40 CFR section 131.10(g) which refers to unchanged requirements in 131.10(h)(1) regarding existing uses. Including this language would make clear to readers of the rule that existing uses must be factored into the determination of what the highest attainable interim use is when a variance is adopted.	#3
28.	340-041-0059(2) DEQ has not put in its rules any method of ensuring that data are available to make the determination that a variance will not result in a lowering of the currently attained ambient water quality.	#3
29.	340-041-0059(3) Propose language “DEQ will identify the specific re-evaluation frequency and how it will obtain public input on the reevaluation in each variance”	#5

List of Comments

Comment #	Comment Summary	Commenter Numbers
30.	40-041-0059(3) NWPPA supports the proposed changes to the “Duration and Re-evaluation” of a variance in OAR 340-041-0059(3) that incorporate NWPPA’s specific comments on the Willamette Basin mercury MDV.	#7
31.	340-041-0059(3)(a) The provisions regarding the variance duration and the process for re-evaluation should be placed in separate sections for clarity. Moreover, DEQ should adopt the federal language regarding HACs and the term of variances, and change the term “achieve” to “apply.”	#8
32.	340-041-0059(3)(a) The time frames in this section of the rule should be clearer. Suggest clarifying: “For variance durations exceeding 5 years, DEQ will re-evaluate highest attainable condition on a frequency of less than 5 years, as specified by DEQ. Re-evaluation shall be based on all existing and readily available information. The re-evaluation frequency shall be set to allow for DEQ’s timely submittal of the re-evaluation to EPA/or EPA approval within 30 days of submittal.” ACWA is concerned with this part of the proposed rule: "If DEQ does not submit the re-evaluation to EPA within the specified timeline, the variance will no longer be the applicable water quality standard until DEQ completes the re-evaluation and submits it to EPA." How are permittees protected against having an unforeseen and unattainable water quality standard in lieu of the variance? Does the variance apply in an NPDES permit until time of permit renewal? ACW A recommends clarification in the rule on this issue.	#4
33.	DEQ has put no provision requiring permit is to gather information that is needed to reevaluate the highest attainable condition at least every five years.	#3
34.	340-041-0059(3)(b) Suggest DEQ clarify when they would suggest a facility use a variance rather than a compliance schedule	#8
35.	340-041-0059 (3)(b)	#4

List of Comments

Comment #	Comment Summary	Commenter Numbers
	ACWA suggests revising the language to read: "For variances issued prior to renewal of a NPDES permit, either the permittee must comply with the specified effluent limitation sufficient to meet the underlying water quality standard when the variance expires, or a compliance schedule shall be adopted in the permit at renewal to specify when the permittee will comply with the effluent limitation."	
36.	340-041-0059 (3)(b) We support the clarity of DEQ's having permits include the date to the interim absolute limit will expire corresponding to the variance expiration date.	#3
37.	340-041-0059 (3)(c) The proposed language will result in variances that are less than clear because it will only specify the duration of the variance not its effective date or its expiration date.	#3
38.	340-041-0059 (3)(c) We support the removal of the language which allowed variances to be set out in NPDES permits.	#3
39.	340-041-0059(4) NWPPA supports the proposed changes to the "Variance Submittal Requirements" in OAR 340-041-0059(4) that incorporate NWPPA's specific comments on the Willamette Basin mercury MDV.	#7
40.	340-041-0059 (4)(a) It is unclear how an individual variance in a place to a "permittee" in (4)(a) can apply to "dischargers" plural in, in nearly all cases, "water bodies" plural in (a)(A).	#3
41.	340-041-0059 (4)(a) DEQ should include in this rule, or commit to establishing guidance, on what constitutes sufficiency for purposes of rule (4)(a)(D).	#3
42.	340-041-0059 (4)(a) DEQ provides no guidance in its proposed rules on the content of a pollutant minimization plan. DEQ should require municipal sewage treatment programs to improve their pre-treatment programs that regulate indirect discharges to their collection systems or to establish a pre-treatment program where none exists.	#3
43.	340-041-0059 (4)(b) The language in (4)(b) is inconsistent with federal regulations.	#3

List of Comments

Comment #	Comment Summary	Commenter Numbers
44.	The language in (4)(c) is incorrect in that it requires dischargers to submit information to DEQ regarding nonpoint source controls that DEQ should submit to EPA.	#3
45.	340-041-0059 (4)(c) ACWA recommends the rule define that the scope is nonpoint sources “within the permittee’s control” to clarify action permittees required to take	#4
46.	OAR 340-041-0059(5) NWPPA supports the proposed changes to the “Highest Attainable Condition” in OAR 340-041-0059(5) that incorporate NWPPA’s specific comments on the Willamette Basin mercury MDV	#7
47.	OAR 340-041-0059(5) The language in (5) should note that the highest attainable condition include “the highest attainable condition later identified during any reevaluation, whichever is most stringent.”	#3
48.	OAR 340-041-0059(5) This section also should state that the highest attainable condition is required to be a quantifiable expression.	#3
49.	OAR 340-041-0059(5)(b)(B) The language in (5)(b)(B) should note that DEQ is responsible for adopting its own pollutant minimization plan as required for water body variances.	#3
50.	OAR 340-041-0059(6) NWPPA supports the proposed changes to the “Variance Permit Conditions” in OAR 340-041-0059(6) that incorporate NWPPA’s specific comments on the Willamette Basin mercury MDV	#7
51.	340-041-0059(6) Item (b) requires the permit to include a requirement to implement any pollutant reduction actions approved as part of a pollutant minimization plan "adopted in the applicable variance." A PMP is not adopted in a variance so it would be better to express this permit element as requiring incorporation of the PMP into the permit by reference, or requiring compliance with the PMP developed in compliance with the variance.	#8
52.	340-041-0059(6) The language in section 6 should make clear that the responsibility for identifying and documenting BMPs for non-point sources is DEQ’s.	#3

List of Comments

Comment #	Comment Summary	Commenter Numbers
53.	340-041-0059(6) The rule should also make clear that where a permittee does have control over nonpoint sources, the pollutant minimization plan must demonstrate conformity with the BMPs identified by DEQ that are a part of a water body variance.	#3
54.	340-041-0059(6) DEQ should include a guidance on how it will determine which of provisions for the Highest Attainable Condition will apply. The proposed rule does not describe what DEQ will do with regard to permits if DEQ determines that additional feasible pollutant control technologies are available.	#3
55.	340-041-0059(6) The proposed rule in section (6)(a) links section (5)(a)(B) which is an effluent condition, to a permit condition but does not link any highest attainable interim criterion identified in (5)(a)(A) to any permit condition. The rule also fails to address the necessary variance permit conditions associated with the adoption of any water body variance.	#3
56.	340-041-0059(6) The proposed rule in section (6)(c) should read “any monitoring and public reporting necessary to ensure compliance with the conditions of the variance.”	#3
57.	340-041-0059(6) The annual report required in section (6)(d) should identify any activities in a dischargers plan that were permit conditions that were not completed.	#3
58.	340-041-0059(6) DEQ should commit in this rule to publishing on its website all annual reports submitted by permittees covered under variances.	#3
59.	340-041-0059(7) DEQ has left out of it public notification section, its obligation to provide for public notice and comment on any documentation of cost-effective and reasonable BMPs for non-point sources that are required supporting documentation for a water body variance.	#3
60.	340-041-0059(7) The title of section 7 should refer to public input as well as public notification.	#3
61.	340-041-0059(7)	#5, #3

List of Comments

Comment #	Comment Summary	Commenter Numbers
	DEQ should Add language to this section to address requirement for how DEQ intends to obtain public input on re-evaluations or reference language if added to OAR 340-041-0059(3)	
62.	340-041-0059(7) The items to be included in the published list in (b) includes "discharger," but not "facility." Since a discharger may own or operate multiple facilities, the items to be included should include facility names.	#8
63.	340-041-0059(7) Recommends stating where the published list of all approved variances can be found	#5
64.	340-041-0059(8) "Willamette Basin" should be spelled out.	#8
65.	DEQ should include a provision that states, "any subsequent water quality standards variance for a water body or water body segment must include documentation of whether and to what extent best management practices for nonpoint source controls were implemented."	#3
Draft Rule Establishing Willamette Basin Multiple Discharger Variance		
66.	340-041-0345(6) Since different requirements apply, the rule should clearly state whether the Multiple Discharger Variance for Mercury is a multiple discharger variance or a water body variance. The lead paragraph to this section should refer to the "fish tissue-based human health criterion for methylmercury."	#8, #4
67.	340-041-0345(6)(a) The language in section 6A should note that the commission is issuing the findings rather than DEQ.	#3
68.	340-041-0345(6)(a) DEQ's finding that "the fishing use and associated human health criterion for mercury cannot be obtained in the waters of the women basin in the next 20 years" is flawed. Without nonpoint source controls, the underline uses and criteria will never be met.	#3
69.	DEQ's finding that mercury sources cannot be remedied is flawed because DEQ has not evaluated whether it can use the state's non-point source authority to remedy the erosion of native soils such that the use and criterion can be met.	#3
70.	340-041-0345(6)(a)	#8

List of Comments

Comment #	Comment Summary	Commenter Numbers
	DEQ should include the required finding in 340-041-0345(6)(a) to be consistent with 340-041-0059(2)(a) .	
71.	340-041-0345(6)(a) comparison between potential interim measures (treatment vs. source control) does not belong in findings supporting a variance	#8
72.	340-041-0345(6)(a) Recommend clarifying that “erosion of native soils” in many cases, can be controlled by the state and is included in the draft TMDL	#5
73.	340-041-0345(6)(a)(A) Remove “and erosion of native soils are deposited or transported to Willamette Basin waters” end with “in the next 20 years because of local deposition of atmospheric mercury derived from global sources”	#6
74.	340-041-0345(6)(a)(A) NWPPA supports the concept of a multi-discharger variance and supports the basis of the Willamette Basin mercury multi-discharger variance (MDV) based on 40 CFR §131.14(b)(vi)(2)(i)(A)(1) and 40 CFR §131.10(g)(3) that “human caused conditions or sources of pollution prevent the use and cannot be remedied or would cause more environmental damage to correct than to leave in place.” The proposed variance rule provides the appropriate basis for the variance in OAR 340-041-0345(6)(a)(A) through (C).	#7
75.	340-041-0345(6)(a)(C) "It would cause more environmental harm to install and operate additional treatment technology to remove additional mercury than to reduce mercury through implementing mercury minimization plans. This finding does not affect any requirement that would result in installing additional technology to address pollutants other than mercury." ACWA recommends clarifying the second sentence by adding "including technology that may have the additional benefit of reducing effluent mercury concentrations."	#4
76.	340-041-0345(6)(a)(C) DEQ has not analyzed the use of additional treatment technology for the removal of nutrient pollution that would also have the benefit of reducing mercury pollution.	#3
77.	340-041-0345(6)(c) and (d) revised as follows:	#8

List of Comments

Comment #	Comment Summary	Commenter Numbers
	<p><i>(c) Eligibility requirements. To qualify for coverage under the variance, a permittee must meet the following requirements:</i></p> <p>(A) Own or operate a permitted municipal or industrial point source employing a minimum of secondary treatment;</p> <p>(B) Hold an individual NPDES permit to discharge wastewater to waters of the Willamette Basin;</p> <p>(C) Have effluent levels greater than the water concentration value needed to meet the human health criterion for fish tissue methylmercury;</p> <p>(D) Have the potential to reduce mercury from the facility's effluent or in the receiving waterbody; and</p> <p>(E) Provide DEQ at least two years of quarterly effluent data.</p> <p><i>(d) Application requirements. To apply for coverage under the variance, a permittee must provide to DEQ the following information:</i></p> <p>(A) A letter applying for the mercury variance under this rule;</p> <p>(B) All mercury effluent data from the previous five years, including at least two years of quarterly effluent data; and</p> <p>(C) A mercury minimization plan, as described in 340-041-0345(6)(f).</p>	
78.	<p>340-041-0345(6)(c)</p> <p>Only a water body or water body segment variance can qualify for this type of variance in which discharges are allowed to apply for coverage after EPA's approval.</p>	#3
79.	<p>340-041-0345(6)(e)</p> <p>The last sentence provides that, "The LCA is the 95th percentile value of recent data, the highest value of recent data, or a previously applicable LCA, whichever is lower." The District suggests redrafting this section to be consistent with the description of LCA calculation included at section 3.2.1 of the supporting document.</p> <p>Regarding enforcement of the LCA, the supporting document at 4.2.1 (page 31), states that DEQ will include permit limits based on quarterly average concentrations and proposes to define a violation of the maximum quarterly average permit limit as two consecutive quarters in which the quarterly average is above the 95th percentile of the distribution. There should be a reference to the supporting document, such as, "implemented as described in section 4.2.1 of the variance supporting document."</p>	#8
80.	<p>340-41-0345(6)(e), (f), and (g)</p>	#5

List of Comments

Comment #	Comment Summary	Commenter Numbers
	Add language to (6)(e) to clarify the HAC includes this requirement as applicable to all sources as well as (6)(f) for municipalities and (6)(g) for industrial sources	
81.	340-41-0345(6)(f) For other than dental offices, DEQ has called for the identification of other possible indirect mercury dischargers, <i>id.</i> at (C) and (D), and outreach to such dischargers, <i>id.</i> at (E) and (F), but it has stopped short of actually requiring the dischargers to regulate the indirect dischargers. This level of effort—identification and outreach—is less than what is required to make these truly “minimization” plans. The addition of “regulation” would achieve that end.	#3
82.	340-41-0345(6)(f)(A) and (6)(g)(A) Monitoring plans for dischargers that take advantage of this opportunity to contribute to violations of mercury criteria in the Willamette should be required to assist in the collection of data in the receiving water—including ambient, tissue, and sediment data or other means of assessing mercury levels (e.g., semipermeable membrane devices)—the data being needed by DEQ to conduct the reevaluation required in (6)(i) and by federal regulations.	#3
83.	340-041-0345(6)(f)(B) and (D) Oregon Revised Statutes 679.520 requires dentists to install and maintain amalgam separators, so they are required throughout the state, with inspection to be provided by the Oregon Board of Dentistry. Recommend that outreach be required instead of inspection for dental offices and commercial laboratories.	#8, #4
84.	Object to the naming of specific industry as a target of MMP in the OARs. Remove section 6(f)(B)	#6
85.	340-041-0345(6)(f)(G) Suggests that this requirement "cleanup of legacy mercury from collection systems" be deleted from the mercury minimization plans.	#8/#4
86.	340-041-0345(6)(f)(I) and (g)(E) The District requests that this section be structured to allow trading.	#8
87.	340-041-345(6)(h)	#8

List of Comments		
Comment #	Comment Summary	Commenter Numbers
	The description of the permittee's request should be described as a request for coverage under the variance, not an authorization.	
88.	340-041-0345(6)(i) “Separate provisions for variance duration and process for re-evaluation” (comment #2 from 340-041-0059(3)(a), Variance Duration and Re-evaluation)	#8
89.	340-041-0345(6)(i) This provision on the reevaluation of the variance fails to include the fact that in the absence of the timely reevaluation, the variance lapses.	#3
90.	340-041-0345(6)(i)(B) DEQ should commit to posting the reevaluation and all previous reevaluations on its website. Particularly given that DEQ intends to offer a minimum of a 30-day comment period, potential commenters should not have to request copies of previous reevaluations from DEQ. In addition, the reevaluation may be of use to citizens seeking to comment on draft NPDES permits for the dischargers in the future.	#3
91.	40-041-0345(6)(i)(C)(ii) Revisions to Mercury Minimization Plans should only be requested if necessary. The District suggests that this provision read, "DEQ will review updates to the facility's site-specific mercury minimization plan and, if necessary, request revisions to ensure that it is consistent with variance requirements."	#8
Notice of Proposed Rulemaking - Attachment 1 – Supporting Documentation		
92.	Section 1 .4, page 4 Major Municipal Facilities without Advanced Wastewater Treatment table. The list of permittees does not include the District's Hillsboro WWTF.	#8
93.	Section 2.2.1 EQ should review the characterization of these facilities and present effluent characterization data that reflect this categorization (eight facilities in advanced treatment category, whereas the table on page 4 and later sections include only three facilities in this category). Need to use criteria to define advanced treatment facilities. Be consistent throughout document.	#8
94.	Section 3.1.2	#8

List of Comments

Comment #	Comment Summary	Commenter Numbers
	Recommends stating that upgrading facilities just for mercury removal is not warranted due to negligible improvement in performance, high costs, additional energy usage, and no corresponding water quality benefit. As facilities upgrade for other reasons (nutrient removal, mass load restrictions, or other water quality considerations), improvements in mercury removal will be realized.	
95.	Section 3 .1.2.1 The analysis leading to this conclusion is not particularly rigorous and is unnecessary. Since it has already been made clear in section 3.1.2 that source reduction is preferred over advanced treatment for other reasons, comparing the two further is not needed to support that approach. The studies cited in comment 18 are counter to the conclusion reached.	#8
96.	Section 3.2.2 Provide clarifying edits to ensure it is clear the activities specified within implementation of MMP. Refer to facility-specific information that will be provided once a facility qualifies for the variance.	#5
97.	Section 3.2.3 Include a discussion of what can be remedied by the state and the dischargers covered by the variance. Describe reasons why the reductions achievable through the MMP are those that can be remedied within the 20-year term of the variance. The variance must identify how other sources, beyond point sources, of mercury can be remedied and include those activities. (For example, this could include non-point source reductions; commitments under existing programs, etc.). Cite to existing information sources.	#5
98.	Section 3.2.3 Suggest removal of section: unnecessary for this document.	#6
99.	Since the measured data may not necessarily match a log-normal distribution, ODEQ should modify the approach to allow for the use of alternative distributions if deemed appropriate by standard statistical tests (e.g., Shapiro-Wilk) by a variance. If data do not match any specific distribution (again, by using standard statistical tests), then non-parametric methods should be allowed by the variance. These methods are easily implementable in ProUCL, as discussed in EPA's Technical Support Document (which is referenced on p. 24 of Attachment #1).	#7

List of Comments

Comment #	Comment Summary	Commenter Numbers
100.	<p>We ask that ODEQ be more responsive to legitimate data requests so that stakeholders are able to adequately assess the methods used by the department and offer alternatives in a quantitative manner. NWPPA reiterates that given the paucity of information on industrial discharges for calculating LCA's that the alternative LCA calculation methods in NWPPA comment 22 be added the variance rules or be allowed for variance implementation.</p>	#7
101.	<p>NWPPA comments that while implementation of MMPs will help to identify mercury loads that contribute to effluent loads, ODEQ should be cautious in delineating expectations for achievable reductions prior to an improved understanding of Oregon-specific source loads and opportunities for reducing those loads for manufacturing facilities</p> <p>DEQ appears to have only used Wisconsin industrial dischargers as examples for MMP implementation (last paragraph on p. 22, Attachment #1). While these findings are valid for point sources in Wisconsin, ODEQ should not necessarily anticipate that the magnitudes of reductions or the residual effluent concentrations following MMP implementation at Oregon point sources should be similar to point sources in Wisconsin.</p> <p>As noted throughout TetraTech's Mercury TMDL technical support document, contributions to mercury loadings in the Willamette are regionally specific. Local factors such as current and historic land use practices, local and long-range air transport and deposition, regional weather patterns and terrain features, and others, can influence mercury concentrations in effluents. Further, NWPPA emphasizes that the availability and cost effectiveness of raw material and process additive substitution alternatives are site-specific to each manufacturing facility.</p>	#7
Fiscal Impact Statement		
102.	<p>NWPPA supports the ODEQ Fiscal Statement and conclusions that the Willamette Basin mercury MDV rule proposal will: decrease variance application costs for applicants; increase government efficiency to review, issue and administer variances; and, allow ODEQ build on scientific research from the draft Willamette Basin Mercury TMDL.</p>	#7

List of Comments		
Comment #	Comment Summary	Commenter Numbers
103.	The fiscal and economic impact is flawed because it says absolutely nothing about non-point source controls, as is required by federal rules for waterbody variances.	#3
Land Use Impact Statement		
104.	DEQ's conclusion that the proposed rules do not affect land-use is incorrect because it has an impact on non-point sources of pollution.	#3

General Comments

Comment #1

NWPPA requests that ODEQ provide written confirmation that the multi-discharger variance is proposed under 40 CFR 131.14(b)(ii)(A) for discharger specific variances and not as a variance applicable to a waterbody or waterbody segment under 40 CFR 131.14(b)(ii)(B) so not necessary for the variance to include identification and documentation of nonpoint source controls. The variance appropriately includes nonpoint source controls as elements that could be considered in mercury minimization plans under OAR-041-0345(6)(f) and (g).

Response

DEQ confirms that the proposed multiple discharger variance of the human health criterion for methylmercury is a discharger-specific variance as allowed by 40 C.F.R. §131.14(b)(ii)(A), not a waterbody variance. At EPA's request, DEQ has listed in the rule and supporting documentation existing programs that will, over time, lead to reductions in mercury loads in order to 1) justify the need for the variance using factor 3, because even with these actions it is not feasible to attain the standard within the term of the variance, and 2) the 20-year term of the variance, because it will take at least 20 years and is expected to take much longer, to attain the water quality standard.

DEQ did not make any changes to the rule language in response to this comment. DEQ did make changes to the MDV Support Document to clarify this point.

Comment #2

DEQ refers to the variance as a multiple discharger variance when EPA regulations clearly refer to this type of variance as a water body or water body segment variance. As a result, DEQ needs to identify and document "any cost-effective and reasonable

best management practices for nonpoint source controls that could be implemented to make progress toward attaining the underlying designated use and criterion.”

Response

DEQ is proposing a multiple discharger variance, not a waterbody variance. The purpose of this MDV is to issue NPDES permits for dischargers that cannot feasibly meet effluent limits for mercury based on the human health criterion for methyl-mercury, while ensuring that mercury levels from these dischargers decrease. An MDV is an appropriate CWA tool for this purpose and has been used by several other states for many years. DEQ continues to address nonpoint sources of mercury through implementation of any effective TMDL and associated water quality management plan. These are appropriate tools to remedy sources of mercury other than point sources to make progress toward the water quality standard.

DEQ did not make any changes to the rule language in response to this comment. DEQ did make changes to the MDV Support Document to clarify this point.

Comment #3

NWPPA supports the basis of the variance to achieve the highest attainable condition determined by the level currently achievable and implementation of a mercury minimization plan through the term of the variance.

Response

DEQ acknowledges NWPPA’s comment supporting the basis of the variance. DEQ did not make any changes in response to this comment.

Comment #4

NWPPA requests that ODEQ provide written confirmation that during the term of the variance for a discharger, the terms of the variance – achieving the highest attainable condition and implementation of a mercury minimization plan – are controlling in terms of NPDES permit conditions over underlying water quality standards and TMDL waste load allocations.

Response

A variance is a temporary change to the water quality standard for purpose of developing permit limits and requirements. A variance does not change the underlying water quality standard for purposes of assessment and development of TMDLs. However, the commenter is correct; if a discharger has a variance, the permit conditions are based on the variance, not the underlying standard or TMDL waste load allocations. DEQ did not make any changes in response to this comment.

Comment #5. When DEQ amends state variance authorization rules (OAR 340-041-0059) to be consistent with federal variance rules and EPA approves it for NPDES permit holders; I am requesting an individual variance or MDV from DEQ to operate

my suction dredge as a minor 700 NPDES permit discharger for the Willamette Basin Mercury TMDL.

Response

This rulemaking grants a multiple discharger variance to individual wastewater dischargers covered under the NPDES program. Variances are only necessary for such dischargers, which would otherwise have numeric water quality based effluent limits for mercury that are not attainable for the reason justified under the variance. Any request for a variance, if one is necessary and justified, must be made to DEQ's permit program. DEQ did not make any changes in response to this comment.

Comment #6

NWPPA supports attainable state-developed human health water quality standards that improve water quality, protect human health and provide for vibrant economies. NWPPA does not support unattainable or unachievable water quality standards that lead to regulatory uncertainty, water permitting delays, potential job loss and degraded local communities.

Response

DEQ acknowledges NWPPA's comment and did not make any changes in response.

Comment #7

NWPPA has consistently advocated for and supported "implementation tools" for facilities holding National Pollution Discharge Elimination System water permits – issued under the federal Clean Water Act for compliance with the federally delegated water quality permitting program – if water quality standards are unattainable or unachievable.

Response

DEQ acknowledges NWPPA's comment and did not make any changes in response.

Comment #8

NWPPA supports the intent of ODEQ's variance authorization rule and the Willamette Basin mercury multi-discharger variance rule as "implementation tools" to provide a compliance pathway for point source dischargers; however, NWPPA strongly believes that a variance is not a *one-size-fits-all* solution removing all regulatory uncertainty from the NPDES permitting program during DEQ's proposed 20-year timeframe for the Willamette Basin mercury MDV.

Response

DEQ acknowledges NWPPA's comment and did not make any changes in response.

Comment #9

NWPPA supports the scientific foundation of the Willamette Basin mercury multi-discharger variance in ODEQ's Willamette Mercury TMDL supporting documents, that in-stream mercury pollution comes from a variety of sources with a majority of the mercury load contributions from air deposition sources outside the Willamette Basin and that the science of mercury methylation is still evolving.

Response

DEQ acknowledges NWPPA's comment and did not make any changes in response.

Comment #10

NWPPA would prefer attainable water quality standards that remove the uncertainty of not being able to comply with ultra-low water quality standards and the risk of the unintended consequence of threatening current facility operations and jobs -- including water permit delays, unknown compliance paths, potential litigation and extreme high costs for water treatment using unproven technologies.

Response

DEQ acknowledges NWPPA's comment and did not make any changes in response.

Comment #11

NWPPA supports the July 2019 draft Willamette River Mercury TMDL pollution prevention and minimization approach, similar to other mercury TMDLs across the nation, to comply with Oregon's exceptionally stringent methylmercury fish tissue water quality criterion of 0.040 mg/kg (wet weight).

Response

DEQ acknowledges NWPPA's comment related to the draft mercury TMDL, which is a separate process. DEQ did not make any changes in response to this comment.

Comment #12

NWPPA believes that the draft Mercury TMDL's conservative policy decisions and modeling assumptions, combined with an aggressive approach to pollutant prevention and minimization result in a TMDL that is very highly protective of the most sensitive beneficial use of fish consumption in addition to being highly protective of all other designated beneficial uses of waters in the Willamette Basin.

Response

DEQ acknowledges NWPPA's comment related to the draft mercury TMDL, which is a separate process. DEQ did not make any changes in response to this comment.

Comment #13

Support documentation should provide a clear and detailed rationale for 20-year term for all dischargers.

Response

DEQ has revised the rationale for the 20-year term in its support documentation in response to this comment.

Comment #14

NWPPA believes the 10 percent aggregate reduction of total mercury for all point source water permit holders is appropriate given that: 1) industrial point sources in the Willamette Basin provide 0.3 percent of the total load for mercury to the Willamette; 2) all permitted point source dischargers (NPDES and stormwater) comprise approximately 4 percent of the total mercury load; 3) the applicable water quality criterion is a methylmercury fish tissue criterion and thus the contribution of point source total mercury loads to methylmercury concentrations in fish is uncertain; and, 4) scientific knowledge of the Willamette Basin methylation processes are still evolving

Response

DEQ acknowledges NWPPA's comment and did not make any changes in response.

Comment #15

NWPPA notes that a well-documented and highly-conservative approach led to the instream water column target of 0.14 ng/L total mercury but that the target is exceptionally stringent and will take 20 or more years to achieve given the current levels of total instream mercury in the Willamette Basin.

Response

DEQ acknowledges NWPPA's comment and did not make any changes in response.

Comment #16

NWPPA believes the TMDL Mercury load reduction efforts should be common sense minimization efforts similar to other TMDLs across the nation to the extent practicable given that the majority of mercury loading comes from air deposition and -- if required -- NWPPA believes that a multi-discharger variance rule for the Willamette Basin is an appropriate alternative compliance path.

Response

DEQ acknowledges NWPPA's comment and did not make any changes in response.

Comment #17

NWPPA believes that Oregon Revised Statute 468B.037 to 468B.038, regarding ODEQ's issuance of variances requiring that applicants be consulted and that

negative economic impacts be minimized should be the basic tenant of ODEQ's work to develop, issue, implement and review all variances.

Response

DEQ acknowledges NWPPA's comment and did not make any changes in response.

Comment #18

DEQ should establish the close of business or midnight for the close of comment periods.

Response

DEQ closes the comment period at 4 p.m. because DEQ staff members must manually close the comment system. Closing the comment period at 4 p.m. ensures that DEQ can always close the comment period without staffing issues. DEQ made no changes in response to this comment.

Comments on Definitions Rule (OAR 340-041-0002)

Comment #19

The definition for a variance omits the fact that the underlying designated use and criterion addressed by the variance remain in effect.

Response

DEQ's definition of a variance is consistent with the federal definition of a variance at 40CFR 131.3 (o). In addition, per 40 CFR 131.14 (a)(3), DEQ will clarify in the variance authorization rule at OAR 340-041-0059(1)(a) that the variance applies only for the purpose of developing NPDES permit limits and requirements under CWA section 301(b)(1)(C), or for issuing certifications under CWA section 401. For all other CWA purposes, the underlying designated use and criterion remain in effect.

Comments on Variance Authorization Rule (OAR 340-041-0059)

Comment #20

The change to the variance rules make Oregon's mercury variance process more lenient, in order to make Oregon's process consistent with federal regulations. I disagree with loosening environmental regulations that limit human and environmental exposure to neurotoxins such as mercury.

Response

DEQ is revising Oregon's variance rules to ensure they are consistent with new federal regulations adopted in 2015, and to make the use of this CWA tool efficient where it is appropriate. Commenter does not specify what in DEQ's proposed rules make the variance process more lenient. DEQ did not make any changes in response to this comment.

Comment #21

NWPPA supports the concept of the variance water quality standard “implementation tool” in OAR 340-041-0059 and believes the proposal is correctly based on the requirements of 40 CFR §131.14 and EPA guidance.

Response

DEQ acknowledges NWPPA’s comment and did not make any changes in response to this comment.

Comment #22

DEQ has removed the clear federal requirement to name the dischargers in a discharger-specific variance while omitting the requirement to identify nonpoint source controls.

Response

The federal variance rule (40 CFR 131.14(b)(1)(i)) states that discharger(s)-specific variances identify the permittee(s) subject to the variance. The preamble to the rule also states, “As an alternative to identifying the specific dischargers at the time of adoption of a WQS variance for multiple dischargers, states and authorized tribes may adopt specific eligibility requirements in the WQS variance.” (80 Fed. Reg. 162, p. 51036). EPA’s variance builder tool available on the agency’s website also indicates that states have the option to include eligibility requirements.

DEQ did not make changes to OAR 340-041-0059 in response to this comment. See response to Comment #78 related to the Willamette Basin Mercury MDV.

Comment #23

It would be helpful if the variance rule were to specify where multiple discharger and waterbody variances should be memorialized. It would make sense to add waterbody variances to the basin-specific water quality standards; perhaps individual and multiple discharger variances should be assigned their own section within Division 41. This may also avoid confusion between multiple discharger and waterbody variances.

Response

Multiple discharger and waterbody variances are rulemakings that amend Oregon Administrative Rules. The type of variance and the requirements of the variance will be clearly stated in the adopted rule language. In addition, DEQ will publish a list of all variances, including individual discharger variances, on the department’s website. DEQ did not make any changes in response to this comment.

Comment #24

DEQ should delete “all qualified facilities that discharge to” from Applicability. A waterbody variance applies to the waterbody or waterbody segment where all point and non-point source dischargers are evaluated.

Response

DEQ has amended this provision to state that a waterbody variance applies to all facilities that discharge to the waterbody. DEQ made changes in response to this comment.

Comment #25

Removing language that prohibits DEQ or the commission from issuing a variance if it would likely jeopardize the continued existence of any threatened or endangered species listed under section 4 of the endangered species act or result in the destruction or adverse modification of such species' critical habitat is an error in policy and law, by ignoring the state's own responsibility for protecting water quality as habitat for ESA-listed species. In addition, commenter notes that removing the language is inconsistent with antidegradation policy by removing an existing use on a temporary basis.

Response

As described in supporting documentation, it is the role of EPA to consult with the National Marine Fisheries Service and U.S. Fish and Wildlife Service under the Endangered Species Act. The rule as currently written asks DEQ to make an analysis on jeopardy to ESA-listed species, when that role is more appropriately situated with experts in the federal fisheries services.

DEQ disagrees that a variance removes an existing use on a temporary basis. EPA guidance clarifies that an existing use means, "... the use and water quality necessary to support the use that have been achieved in the waterbody on or after November 28, 1975."¹ A variance sets a floor on water quality, because pollutant levels in the dischargers cannot increase as a result of the variance. Those levels are expected to decrease during the variance based on the requirements in the variance. DEQ did not make any changes in response to this comment.

Comment #26

It is factually incorrect that removing the language in 340-041-0059(1) as well as removing language pertaining to unreasonable risks to human health is justified because "any discharger still has to comply with technology based limits irrespective of whether there is a variance."

DEQ's rationale for removing the language pertaining to unreasonable risks to human health is disingenuous. The justification states that, "variances are intended to reduce pollutant loads over time, decreasing any potential risk to human health. The variance DEQ is proposing is not intended to reduce pollutant loads over time in any meaningful way.

¹ See U.S. EPA corresp. w/ Derek Smithee, State of Oklahoma Water Resources Board. September 5, 2008. Available at: <https://www.epa.gov/sites/production/files/2014-10/documents/existinguse-smithee-letter.pdf>.

Response

The current rule language suggests that DEQ not grant a variance if it results in unreasonable risk to human health. A variance is only necessary if permit limits based on the underlying water quality standard are not feasibly achievable. At a minimum, any discharger must meet technology-based effluent limits. Moreover, any variance cannot result in a lowering of the currently attained water quality. Finally, conditions in the variance must result in the highest attainable condition by the end of the variance. This limitation is not required by federal variance regulations, it is unnecessary and it adds ambiguity to the rule because it is unclear. DEQ did not make any changes in response to this comment.

Comment #27

In the section on conditions to grant a variance, DEQ omits the requirements of 40 C.F.R. section 131.10(g) which refers to unchanged requirements in 131.10(h)(1) regarding existing uses. Including this language would make clear to readers of the rule that existing uses must be factored into the determination of what the highest attainable interim use is when a variance is adopted.

Response

Federal requirements at 40 C.F.R. §131.10 pertain to use attainability analysis, which is a process under which a state changes the underlying designated use and criterion for a waterbody. Variances are regulated by 40 C.F.R. §131.14 and do not change or remove the underlying designated use. Existing uses are considered in the variance because the existing water quality/existing use must be maintained, with an exception for restoration work. In addition, under a variance, permit requirements must make progress toward the underlying standard by achieving the highest attainable conditions during the term of the variance. DEQ did not make any changes in response to this comment.

Comment #28

DEQ has not put in its rules any method of ensuring that data are available to make the determination that a variance will not result in a lowering of the currently attained ambient water quality.

Response

Any discharger under a variance will be required to conduct monitoring of the pollutant for which the WQS variance is granted as part of compliance monitoring. Such data also will be utilized to determine whether a variance is resulting in a lowering of water quality. DEQ did not make any changes in response to this comment.

Comment #29

DEQ should revise section 3(a) to state, “DEQ will identify the specific re-evaluation frequency and how it will obtain public input on the reevaluation in each variance”

Response

DEQ agrees with this comment and has revised rule language in 340-041-0059(3)(a) accordingly.

Comment #30

NWPPA supports the proposed changes to the “Duration and Re-evaluation” of a variance in OAR 340-041-0059(3) that incorporate NWPPA’s specific comments on the Willamette Basin mercury MDV.

Response

DEQ acknowledges NWPPA’s comment in support of the proposed variance authorization rule. DEQ did not make any changes in response to this comment.

Comment #31

The provisions regarding the variance duration and the process for re-evaluation should be placed in separate sections for clarity. Moreover, DEQ should adopt the federal language regarding HACs and the term of variances, and change the term “achieve” to “apply.”

Response

DEQ agrees that it is confusing to include provisions regarding variance duration and re-evaluation in the same provision. DEQ will separate these provisions.

Commenter suggests that DEQ’s language regarding the duration of the variance is inconsistent with the federal rule. The federal variance rule states, “The term of the WQS variance must only be as long as necessary to achieve the highest attainable condition...” (40 C.F.R. §131.14(b)(iv)), which is nearly identical to the proposed state rule. As a result, the commenter’s request is unclear. DEQ has changed the term “meet” to “achieve” to ensure consistency with the federal rule.

DEQ has made changes to proposed rules at OAR 340-041-0059(3) in response to this comment.

Comment #32

The timeframes in this section of the rule should be clearer.

DEQ should clarify the provision regarding re-evaluation to state, “For variance durations exceeding 5 years, DEQ will re-evaluate highest attainable condition on a frequency of less than 5 years, as specified by DEQ. Re-evaluation shall be based on all existing and readily available information. The re-evaluation frequency shall be set to allow for DEQ’s timely submittal of the re-evaluation to EPA/or EPA approval within 30 days of submittal.”

ACWA is concerned with the following language: "If DEQ does not submit the re-evaluation to EPA within the specified timeline, the variance will no longer be the applicable water quality standard until DEQ completes the re-evaluation and submits it to EPA." How are permittees protected against having an unforeseen and unattainable water quality standard in lieu of the variance? Does the variance apply in an NPDES permit until time of permit renewal? ACWA recommends clarification in the rule on this issue.

Response

DEQ has clarified language in section (3) regarding variance re-evaluation to clarify the timeframes. DEQ has retained the provision stating, "If DEQ does not submit the re-evaluation to EPA within the specified timeline, the variance will no longer be the applicable water quality standard until DEQ completes the re-evaluation and submits it to EPA." This provision is consistent with federal language. DEQ intends to complete the re-evaluation and submit it to EPA on time. In case this does not happen and a permit has conditions related to the variance, those conditions will remain until the permit expires or DEQ completes the re-evaluation and submits it to EPA. If the variance is no longer the applicable water quality standard and the permit expires, the discharger has the option to apply for a new variance, if it is necessary and justified.

Comment #33

DEQ has put no provision requiring permittees to gather information needed to reevaluate the highest attainable condition at least every five years.

Response

Any discharger under a variance will be required to conduct monitoring of the pollutant for which the variance is adopted, which, at a minimum, will include compliance monitoring of effluent (See the proposed variance rule section 6). DEQ will utilize such data to reevaluate the highest attainable condition at least every five years. For waterbody variances, DEQ will use all available data including the data collected by the discharger, and any other available data collected by the state and others, to determine the impact of a waterbody variance. DEQ did not make any changes in response to this comment.

Comment #34

The language in 340-041-0059(3)(b) is confusing, as it suggests that, if a variance duration is less than the term of the permit, that the permittee must comply with an effluent limit sufficient to meet the underlying standard when the variance expires. This is a situation in which a compliance schedule seems like the more appropriate tool. DEQ should clarify when they would suggest a facility use a variance rather than a compliance schedule.

Response

DEQ agrees that compliance schedules are one tool to use in the case that a permittee cannot meet effluent limits during part of a permit term, but will at some point in the future of the term. However, there may be instances in which a variance is the appropriate tool at the permit writer's discretion. DEQ is proposing to keep this language, if there is any case where a variance is a more appropriate tool. DEQ has not made any changes in response to this comment.

Comment #35

ACWA suggests revising the language in section (3)(b) to read: "For variances issued prior to renewal of a NPDES permit, either the permittee must comply with the specified effluent limitation sufficient to meet the underlying water quality standard when the variance expires, or a compliance schedule shall be adopted in the permit at renewal to specify when the permittee will comply with the effluent limitation."

Response

DEQ acknowledges this suggestion. The variance rule language does not preclude the use of compliance schedule. If a compliance schedule is necessary at the date the variance expires, DEQ will impose a compliance schedule that is consistent with OAR 340-041-0061(14) and applicable federal requirements. DEQ has not made any changes in response to this comment.

Comment #36

We support the proposed addition in section (3)(a) requiring permits to include the date to the interim absolute limit will expire corresponding to the variance expiration date.

Response

DEQ acknowledges this comment supporting DEQ's proposed amendment of this provision. DEQ did not make any changes in response to this comment.

Comment #37

The proposed language will result in variances that are less than clear because it will only specify the duration of the variance not its effective date or its expiration date.

Response

DEQ cannot specify the effective date of the variance within the variance document, because the effective date is conditional on EPA's approval date. DEQ will provide the effective date and expiration date on the list of all approved variances that is required by 340-041-0059(7)(b). DEQ revised proposed language at OAR 340-041-0059(7)(b) in response to this comment.

Comment #38

We support the removal of the language which allowed variances to be set out in NPDES permits.

Response

DEQ acknowledges this comment and did not make any changes in response to this comment.

Comment #39

NWPPA supports the proposed changes to the "Variance Submittal Requirements" in OAR 340-041-0059(4) that incorporate NWPPA's specific comments on the Willamette Basin mercury MDV.

Response

DEQ acknowledges this comment and did not make any changes in response to this comment.

Comment #40

It is unclear how an individual variance in a place to a “permittee” in (4)(a) can apply to “dischargers” plural in, in nearly all cases, “water bodies” plural in (a)(A).

Response

DEQ has clarified the rule language accordingly at OAR 340-041-0059(4)(a)(A) in response to this comment.

Comment #41

DEQ should include in this rule, or commit to establishing guidance, on what constitutes sufficiency for purposes of rule (4)(a)(D).

Response

DEQ plans to update its Variance Internal Management Directive subsequent to approval of the revised variance authorization rule to ensure it is consistent with the updated rule and the 2015 federal variance rule. DEQ will include information in this guidance regarding data sufficiency under this requirement. DEQ did not make any changes in response to this comment.

Comment #42

DEQ provides no guidance in its proposed rules on the content of a pollutant minimization plan. DEQ should require municipal sewage treatment programs to improve their pre-treatment programs that regulate indirect discharges to their collection systems or to establish a pre-treatment program where none exists.

Response

The required content of a pollutant minimization plan will differ depending on the pollutant, circumstances of the discharger and other factors. If a PMP is a requirement of the variance, DEQ will submit a PMP targeted to the unique circumstances of the pollutant and discharger(s) or water body/water body segment(s) to EPA for approval. In some cases, pre-treatment programs may relate to a variance and DEQ will incorporate pre-treatment measures into PMP requirements. In other cases, a pre-treatment program may have less relevance.

Comment #43

The language in (4)(b) is inconsistent with federal regulations, because it anticipates EPA approving a variance and DEQ accepting applicants for coverage.

Response

DEQ acknowledges this comment, but notes that it did not include a discussion of how this requirement is inconsistent with federal regulations. The preamble to the

federal variance rule states, “As an alternative to identifying the specific dischargers at the time of adoption of a WQS variance for multiple dischargers, states and authorized tribes may adopt specific eligibility requirements in the WQS variance.” (80 Fed. Reg. 162, p. 51036). EPA’s variance guidance also indicates that this is a possibility. However, Provision (4)(b) simply stated that a permittee subject to a multiple discharger variance, must submit all information required in the rule for the specific variance. It does not presume whether the multiple discharger variance lists each permittee subject to the variance or whether the multiple discharger variance includes eligibility requirements. DEQ has not made changes in response to this comment.

Comment #44

The language in (4)(c) is incorrect in that it requires dischargers to submit information to DEQ regarding nonpoint source controls that DEQ should submit to EPA.

Response

DEQ agrees with this comment and has removed the rule language in (4)(c) accordingly and clarified in section (5) that DEQ is required to submit this information to EPA.

Comment #45

ACWA recommends the rule in section (4)(c) define that the scope is nonpoint sources “within the permittee’s control” to clarify action permittees required to take

Response

In response to comment #44, DEQ is removing section (4)(c), identification and documentation of best management practices is based on a federal requirement regarding what DEQ is required to submit to EPA for approval of a waterbody variance, not what a discharger must submit to DEQ. DEQ did not make any changes in response to this comment.

Comment #46

NWPPA supports the proposed changes to the “Highest Attainable Condition” in OAR 340-041-0059(5) that incorporate NWPPA’s specific comments on the Willamette Basin mercury MDV.

Response

DEQ acknowledges this comment and has not made changes in response to this comment.

Comment #47

The language in section (5) should note that the highest attainable condition include “the highest attainable condition later identified during any reevaluation, whichever is most stringent.”

Response

The proposed language in Section (6) of the rule already states that permit conditions will be based on the highest attainable condition identified at the time DEQ adopts the variance or the highest attainable condition later identified during any re-evaluation. DEQ has not made changes in response to this comment.

Comment #48

Section (5) should state that the highest attainable condition is required to be a quantifiable expression.

Response

The proposed language in Section (5) already states that the Highest Attainable Condition must be a quantifiable expression. DEQ has not made changes in response to this comment.

Comment #49

The language in (5)(b)(B) should note that DEQ is responsible for adopting its own pollutant minimization plan as required for water body variances.

Response

DEQ has clarified the language in this provision and in provision (5)(a)(C) so they are consistent with federal rule language. DEQ made changes in response to this comment.

Comment #50

NWPPA supports the proposed changes to the "Variance Permit Conditions" in OAR 340-041-0059(6) that incorporate NWPPA's specific comments on the Willamette Basin mercury MDV

Response

DEQ acknowledges this comment in support of proposed amendments to OAR 340-041-0059(6). DEQ has not made changes in response to this comment.

Comment #51

Section (6)(b) requires the permit to include a requirement to implement any pollutant reduction actions approved as part of a pollutant minimization plan "adopted in the applicable variance." A PMP is not adopted in a variance so it would be better to express this permit element as requiring incorporation of the PMP into the permit by reference, or requiring compliance with the PMP developed in compliance with the variance.

Response

The federal variance regulation in 40 CFR 131.14(b)(1)(ii)(A)(3) and (b)(1)(ii)(B)(2) require that a variance include adoption and implementation of a Pollutant Minimization Plan if no additional feasible pollutant control technology can be identified. EPA has clarified that this PMP is to be included in the variance. DEQ is revising section (6)(b) to clarify this requirement. DEQ has made changes in response to this comment.

Comment #52

The language in section 6 should make clear that the responsibility for identifying and documenting BMPs for non-point sources is DEQ's.

Response

DEQ agrees that federal language requires DEQ to identify cost-effective and reasonable non-point source BMPs in the supporting documentation for a waterbody variance and has changed language in section 5 accordingly. DEQ has made changes to the rule language in response to this comment.

Comment #53

The rule should make clear that where a permittee does have control over nonpoint sources, the pollutant minimization plan must demonstrate conformity with the BMPs identified by DEQ that are a part of a water body variance.

Response

The federal variance rule does not require that PMPs developed under a waterbody variance conform to BMPs that are identified in supporting documentation for that variance. As such conformity is not required by the federal rule, DEQ has concluded that the decision as to whether to require such conformity should be based on the specific situation of each waterbody variance. DEQ has not made changes to the rule language in response to this comment.

Comment #54

DEQ should include a guidance on how it will determine which provision for the Highest Attainable Condition will apply. The proposed rule does not describe what DEQ will do with regard to permits if DEQ determines that additional feasible pollutant control technologies are available.

Response

DEQ will revise its Internal Management Directive for variances following adoption of any revised variance authorization rule. The revised IMD will discuss how DEQ will determine which HAC applies and what the process will be if DEQ determines that additional feasible pollutant technologies are available. DEQ has not made changes in response to this comment.

Comment #55

The proposed rule in section (6)(a) links section (5)(a)(B) which is an effluent condition, to a permit condition but does not link any highest attainable interim criterion identified in (5)(a)(A) to any permit condition. The rule also fails to address the necessary variance permit conditions associated with the adoption of any water body variance.

Response

DEQ has revised rule language in section 6 accordingly.

Comment #56

The proposed rule in section (6)(c) should read “any monitoring and public reporting necessary to ensure compliance with the conditions of the variance.”

Response

All monitoring done under the proposed rule must be included in the annual report as required in (6)(d). These reports are available to the public. Therefore, it is not necessary to add “public reporting” to the language in (6)(c). DEQ has not made changes in response to this comment.

Comment #57

The annual report required in section (6)(d) should identify any activities in a dischargers plan that were permit conditions that were not completed.

Response

The proposed rule language in section (6)(d) already includes the language “Any impediments to reaching any specific milestones.” This language requires dischargers to state why they were not able to complete any permit conditions and therefore addresses the recommendation in this comment. DEQ has not made changes in response to this comment.

Comment #58

DEQ should commit in this rule to publishing on its website all annual reports submitted by permittees covered under variances.

Response

All permitting documents submitted by permittees are available on DEQ’s permit document database, which is available to the public. DEQ has not made changes in response to this comment.

Comment #59

DEQ has left out of its public notification section, its obligation to provide for public notice and comment on any documentation of cost-effective and reasonable BMPs for non-point sources that are required supporting documentation for a water body variance.

Response

DEQ agrees that this is a federal variance requirement and has included such a provision in Section 5 of the rule. DEQ has made changes in response to this comment.

Comment #60

The title of section 7 should refer to public input as well as public notification.

Response

DEQ agrees and has revised the title of section 7 accordingly.

Comment #61

DEQ should add language to this section to address requirement for how DEQ intends to obtain public input on re-evaluations or reference language if added to OAR 340-041-0059(3)

Response

DEQ has added a new section under OAR 340-041-0059(7)(b) in response to this comment.

Comment #62

The items to be included in the published list in (7)(b) includes "discharger," but not "facility." Since a discharger may own or operate multiple facilities, the items to be included should include facility names.

Response

DEQ agrees and has clarified the requirements in section (7)(c) (renumbered) accordingly. DEQ has made changes in response to this comment.

Comment #63

DEQ should state where the published list of all approved variances can be found.

Response

DEQ has made changes to proposed language at OAR 340-041-0059(7)(c) (renumbered) in response to this comment to specify where and what information is published in DEQ website. DEQ also has deleted proposed language in section 8 in response to this comment.

Comment #64

"Willamette Basin" in section (8) should be spelled out.

Response

DEQ is proposing to delete proposed language at OAR 340-041-0059(8). See the response to Comment #63. DEQ has not made changes in response to this comment.

Comment #65

DEQ should include a provision that states, "any subsequent water quality standards variance for a water body or water body segment must include documentation of whether and to what extent best management practices for nonpoint source controls were implemented."

Response

DEQ agrees that this comment is consistent with the federal regulations and has made changes to proposed rule language at OAR 340-041-0059(5)(C)) in response to this comment.

Comments on Multiple Discharger Variance Rule (OAR 340-041-0345(6))

Comment #66

Since different requirements apply, the rule should clearly state whether the Multiple Discharger Variance for Mercury is a multiple discharger variance or a water body variance. The lead paragraph to this section should refer to the "fish tissue-based human health criterion for methylmercury."

Response

The title of this rule states clearly that this is a multiple discharger variance. DEQ also revised the language in the lead paragraph in OAR 340-041-0345(6) to state clearly that it is a multiple discharger variance in response to this comment.

Comment #67

The language in section 6A should note that the commission is issuing the findings rather than DEQ.

Response

DEQ is proposing to change 340-041-0345(6)(a) in response to this comment.

Comment #68

DEQ's finding that "the fishing use and associated human health criterion for mercury cannot be attained in the waters of the Willamette Basin in the next 20 years" is flawed. Without nonpoint source controls, the underlying uses and criteria will never be met.

Response

DEQ has provided justification in the supporting documentation that the human health criterion for methyl-mercury cannot be remedied within the next 20 years, which is the term of the variance. Based on findings in the updated TMDL and additional information cited in the variance support document, it will take a very long time to meet the underlying criterion. The Willamette Basin mercury TMDL submitted to EPA indicates that it will take decades to implement needed activities (including nonpoint source controls) and see reduced levels of mercury in fish tissue sufficient to meet load allocations under the TMDL. Nonpoint source controls are addressed in the TMDL.

In addition, the runoff of precipitation and snowmelt into streams and some level of erosion and sediment transport into and by streams are also natural process upon which flowing streams and stable channels depend. Therefore, it may not be possible to achieve the underlying criterion until dry and wet deposition of mercury from the atmosphere is also significantly reduced. This is expected to be a very long term process. DEQ has not made changes in response to this comment.

Comment #69

DEQ's finding that mercury sources cannot be remedied is flawed because DEQ has not evaluated whether it can use the state's non-point source authority to remedy the erosion of native soils such that the use and criterion can be met.

Response

Please see response to comment #68.

Comment #70

DEQ should include in the required findings in 340-041-0345(6)(a) language consistent with 340-041-0059(2)(a) that the requirements that apply throughout the term of the water quality standards variance will not result in lowering the currently attained ambient water quality.

Response

DEQ has added a statement to OAR 340-041-0345(6)(a)(C) that is consistent with CFR 131.14(b)(1)(ii) in response to this comment.

Comment #71

The comparison between potential interim measures (treatment vs. source control) does not belong in findings supporting a variance.

Response

DEQ has removed the provision in 340-041-0345(6)(a)(C).

Comment #72

DEQ should clarify that "erosion of native soils" in many cases, can be controlled by the state and is included in the draft TMDL

Response

DEQ has clarified the language in the findings at OAR 340-041-0345(a) accordingly.

Comment #73

DEQ should remove "and erosion of native soils are deposited or transported to Willamette Basin waters" end with "in the next 20 years because of local deposition of atmospheric mercury derived from global sources" because there are multiple sources of mercury.

Response

DEQ has changed language in the findings at OAR 340-041-0345(6)(a)(A) that mercury comes from multiple sources including direct runoff and direct deposition.

Comment #74

NWPPA supports the concept of a multi-discharger variance and supports the basis of the Willamette Basin mercury multi-discharger variance (MDV) based on 40 CFR

§131.14(b)(vi)(2)(i)(A)(1) and 40 CFR §131.10(g)(3) that “human caused conditions or sources of pollution prevent the use and cannot be remedied or would cause more environmental damage to correct than to leave in place.” The proposed variance rule provides the appropriate basis for the variance in OAR 340-041-0345(6)(a)(A) through (C).

Response

DEQ acknowledges support of the concept of the MDV and the basis for the MDV. DEQ has not made changes in response to this comment.

Comment #75

ACWA recommends clarifying the second sentence in the finding at OAR 340-041-0345(6)(a)(C) by adding "including technology that may have the additional benefit of reducing effluent mercury concentrations."

Response

DEQ has removed this provision in response to Comment #71.

Comment #76

DEQ has not analyzed the use of additional treatment technology for the removal of nutrient pollution that would also have the benefit of reducing mercury pollution.

Response

DEQ notes in documentation supporting this variance that EPA 2010 guidance conducted a thorough analysis and recommends source reduction over end of pipe treatment as the preferred method for controlling methyl-mercury. DEQ has not made changes in response to this comment.

Comment #77

340-041-0345(6)(c) and (d) revised as follows:

(c) Eligibility requirements. To qualify for coverage under the variance, a permittee must meet the following requirements:

- (A) Own or operate a permitted municipal or industrial point source employing a minimum of secondary treatment;
- (B) Hold an individual NPDES permit to discharge wastewater to waters of the Willamette Basin;
- (C) Have effluent levels greater than the water concentration value needed to meet the human health criterion for fish tissue methylmercury;
- (D) Have the potential to reduce mercury from the facility's effluent or in the receiving waterbody; and
- (E) Provide DEQ at least two years of quarterly effluent data.

(d) Application requirements. To apply for coverage under the variance, a permittee must provide to DEQ the following information:

- (A) A letter applying for the mercury variance under this rule;

- (B) All mercury effluent data from the previous five years, including at least two years of quarterly effluent data; and
(C) A mercury minimization plan, as described in 340-041-0345(6)(f).

Response

Please see response to Comment #78. DEQ has removed section (c), "Eligibility requirements, as DEQ has listed all possible permittees to which the variance may apply. In addition, DEQ has revised the section on "Application requirements" to clarify that this information is required in order for DEQ to incorporate variance-related requirements into permits.

Comment #78

Only a water body or water body segment variance can qualify for this type of variance in which discharges are allowed to apply for coverage after EPA's approval.

Response

The federal variance rule (40 CFR 131.14(b)(1)(i)) requires that discharger(s)-specific variances identify the permittee(s) subject to the variance. The preamble to the rule also states, "As an alternative to identifying the specific dischargers at the time of adoption of a WQS variance for multiple dischargers, states and authorized tribes may adopt specific eligibility requirements in the WQS variance." (80 Fed. Reg. 162, p. 51036). EPA's variance-builder tool also guides states that don't know which dischargers qualify for the variance to include eligibility requirements. However, for clarity, DEQ has incorporated in the variance rule language a list of dischargers that qualify for a variance under this rule. DEQ has changed OAR 340-041-0345(6) in response to this comment.

Comment #79

The last sentence provides that, "The LCA is the 95th percentile value of recent data, the highest value of recent data, or a previously applicable LCA, whichever is lower." The District suggests redrafting this section to be consistent with the description of LCA calculation included at section 3.2.1 of the supporting document.

Regarding enforcement of the LCA, the supporting document at 4.2.1 (page 31), states that DEQ will include permit limits based on quarterly average concentrations and proposes to define a violation of the maximum quarterly average permit limit as two consecutive quarters in which the quarterly average is above the 95th percentile of the distribution. There should be a reference to the supporting document, such as, "implemented as described in section 4.2.1 of the variance supporting document."

Response

DEQ has clarified the provision on level currently achievable to ensure it is consistent with section 4.2.1 of the supporting document. DEQ made changes to OAR 340-041-0345(6)(f) (renumbered) in response to this comment.

Comment #80

DEQ should add language to (6)(e) to clarify the HAC includes this requirement as applicable to all sources as well as (6)(f) for municipalities and (6)(g) for industrial sources.

Response

DEQ has made clarifications to the HAC sections of the rule to clarify that the level currently achievable applies to all facilities covered by the variance.

Comment #81

For other than dental offices, DEQ has called for the identification of other possible indirect mercury dischargers, *id.* at (C) and (D), and outreach to such dischargers, *id.* at (E) and (F), but it has stopped short of actually requiring the dischargers to regulate the indirect dischargers. This level of effort—identification and outreach—is less than what is required to make these truly “minimization” plans. The addition of “regulation” would achieve that end.

Response

Outreach, education, research and other volunteer activities are allowed and typically included in PMPs. DEQ also incorporated additional language in provision (g)(B) and (g)(F) to be consistent with pre-treatment requirements.

Comment #82

Monitoring plans for dischargers that take advantage of the variance should be required to assist in the collection of data in the receiving water—including ambient, tissue, and sediment data or other means of assessing mercury levels (e.g., semipermeable membrane devices)—the data being needed by DEQ to conduct the reevaluation required in (6)(i) and by federal regulations.

Response

DEQ will utilize the re-evaluation to ensure that effluent mercury concentrations for facilities covered by this variance decrease over time. Evaluation of overall progress toward achieving the water quality standard in waters of the basin is done through water quality assessment and TMDL processes. To the extent that dischargers are required to collect ambient mercury data, DEQ will utilize that data in documenting progress toward achieving the criteria. DEQ did not make changes in response to this comment.

Comment #83

Oregon Revised Statutes 679.520 requires dentists to install and maintain amalgam separators, so they are required throughout the state, with inspection to be provided by the Oregon Board of Dentistry. DEQ should revise language in the mercury minimization plan to require outreach instead of inspection for dental offices and commercial laboratories.

Response

DEQ agrees to include outreach as a component of this requirement. DEQ also proposes to maintain the requirement for inspection of dental offices to ensure

installation of amalgam separators. DEQ will consider this requirement to be satisfied if inspection is done in accordance with ORS 679.520. DEQ made revisions to OAR 340-041-0345(g) (renumbered) in response to this comment.

Comment #84

We object to the naming of specific industries as a target of MMP in the OARs are request removing section 6(f)(B).

Response

Industries named in the mercury minimization plan were identified during the 2019 update to the Willamette Basin Mercury TMDL as those with likelihood of adding mercury into the basin. DEQ has specified these industries in the MMP in this variance to be consistent with the updated TMDL and to focus MMP efforts to those industries. DEQ has not made any changes in response to this comment.

Comment #85

DEQ should delete the requirement "cleanup of legacy mercury from collection systems" from the mercury minimization plan for municipal dischargers. Municipalities already clean their collection systems to maintain capacity and prevent sanitary sewer overflows. It is doubtful that any "legacy mercury" remains in these systems.

Response

DEQ has determined that it makes sense to keep this requirement in the mercury minimization plan. DEQ has clarified this requirement by removing the term "legacy mercury," and requiring periodic collection system cleaning. To the extent municipalities are already doing so, they would meet this requirement under the variance.

Comment #86

The elements of the mercury minimization plans for municipal and industrial dischargers allow facilities that have accomplished all activities within their control to implement mercury reduction activities outside their control. This section should be structured to allow trading.

Response

The Multiple Discharger Variance rulemaking is complex. Adding trading will complicate the rule further. Thus, DEQ has opted to not include trading in this variance rulemaking. However, trading may be a topic to be explored in the future. DEQ did not make changes in response to this comment.

Comment #87

The description of the permittee's request should be described as a request for coverage under the variance, not an authorization.

Response

DEQ agrees and has made changes to proposed language at OAR 340-041-0345(6)(j) (renumbered) in response to this comment.

Comment #88

DEQ should separate provisions for variance duration and process for re-evaluation. (comment #32 above)

Response

DEQ is unclear how this comment relates to the rule language for the multiple discharger variance. DEQ made revisions to the variance authorization rule in response to Comment #32. DEQ did not make changes in response to this comment.

Comment #89

This provision on the reevaluation of the variance fails to include the fact that in the absence of the timely reevaluation, the variance lapses.

Response

DEQ has revised rule language accordingly. DEQ has made changes to proposed language at OAR 340-041-0345(6)(k) (renumbered) in response to this comment.

Comment #90

DEQ should commit to posting the reevaluation and all previous reevaluations on its website. Particularly given that DEQ intends to offer a minimum of a 30-day comment period, potential commenters should not have to request copies of previous reevaluations from DEQ. In addition, the reevaluation may be of use to citizens seeking to comment on draft NPDES permits for the dischargers in the future.

Response

DEQ expects to make re-evaluations of this variance and other future variances requiring re-evaluation available to the public.

Comment #91

Revisions to Mercury Minimization Plans should only be requested if necessary. Rule language at (6)(i)(C)(ii) should read, "DEQ will review updates to the facility's site-specific mercury minimization plan and, if necessary, request revisions to ensure that it is consistent with variance requirements."

Response

DEQ has revised the rule language accordingly. DEQ has made changes to proposed language at OAR 340-041-0345(6)(k)(C)(ii) (renumbered) in response to this comment.

Comments on Supporting Documentation (Notice of Proposed Rulemaking, Attachment 1)

Comment #92

The list of permittees in Section 1.4 does not include Clean Water Services' Hillsboro WWTF.

Response

DEQ has revised supporting documentation accordingly. DEQ also has included a list of facilities covered in this variance in the rule language at OAR 340-041-0345(6).

Comment #93

Section 2.2.1. DEQ should review the characterization of these facilities and present effluent characterization data that reflect this categorization (eight facilities in advanced treatment category, whereas the table on page 4 and later sections include only three facilities in this category). Need to use criteria to define advanced treatment facilities. Be consistent throughout document.

Response

DEQ has made substantial revisions to this section and has deleted the referenced text and sections, as DEQ concluded they are not relevant to this variance.

Comment #94

Section 3.1.2. DEQ should state that upgrading facilities just for mercury removal is not warranted due to negligible improvement in performance, high costs, additional energy usage, and no corresponding water quality benefit. As facilities upgrade for other reasons, improvements in mercury removal will be realized.

Response

DEQ has made substantial revisions to this section and has deleted the referenced text and sections.

Comment #95

Section 3.1.2.1. The analysis leading to this conclusion is not particularly rigorous and is unnecessary. Since it has already been made clear in section 3.1.2 that source reduction is preferred over advanced treatment, comparing the two further is not needed to support that approach.

Response

Please see response to Comment #94.

Comment #96

Section 3.2.2. Please provide clarifying edits to ensure it is clear that the activities specified in section 3.2.2 constitute the MMP for this variance. To reduce confusion, please refer to

facility-specific information that will be provided once a facility qualifies for the variance as implementation of the MMP.

Response

DEQ has made clarifications to the supporting documentation accordingly.

Comment #97

Section 3.2.3. Include a discussion of what can be remedied by the state and the dischargers covered by the variance. Describe reasons why the reductions achievable through the MMP are those that can be remedied within the 20-year term of the variance.

The variance must identify how other sources, beyond point sources, of mercury can be remedied and include those activities. (For example, this could include non-point source reductions; commitments under existing programs, etc.). Cite to existing information sources.

Response

DEQ has revised its justification for the term of the variance. In addition, DEQ has included additional discussion in Section 3.2.3 of the supporting documentation (Notice of Proposed Rulemaking Attachment 1) regarding regulatory and non-regulatory state programs that, over time, will reduce mercury loads. As discussed in the supporting documentation, DEQ's November 2019 Willamette Mercury TMDL and Water Quality Management Plan indicates that it will take at least 20 years, for activities conducted through these programs to result in attainment of the fish-tissue based methylmercury criterion. At EPA's request, DEQ also has included in subsection (6)(h) of the rule an acknowledgement of state programs and activities that will result in mercury reductions over time.

Comment #98

We object to the inclusion of this list of activities, especially without a complete discussion of the causes of exceedances and the complex mechanics of removing mercury loading from nonpoint sources. Please remove Section 3.2.3 from Notice of Proposed Rulemaking Attachment 1.

Response

DEQ has included a description of what the State can do to address the fact that the fish-tissue based human health criterion for methyl-mercury is not attainable during the term of the variance. The activities specified within this list is consistent with the updated TMDL that DEQ has developed simultaneously to this variance. EPA has indicated that such a description is necessary to justify the variance and the proposed 20-year term.

Comment #99

Since the measured data may not necessarily match a log-normal distribution, ODEQ should modify the approach to allow for the use of alternative distributions if deemed appropriate by standard statistical tests (e.g., Shapiro-Wilk) by a variance. If data do not match any

specific distribution (again, by using standard statistical tests), then non-parametric methods should be allowed by the variance. These methods are easily implementable in ProUCL, as discussed in EPA's Technical Support Document (which is referenced on p. 24 of Notice of Proposed Rulemaking Attachment #1).

Response

DEQ has revised Section 4.2.1 of the supporting documentation to allow for alternate methods to develop permit limits if a discharger provides data to DEQ showing that the measured effluent data do not match a log-normal distribution. Any alternate method for developing effluent limits should be consistent with EPA's guidance.

Comment #100

We ask that ODEQ be more responsive to legitimate data requests so that stakeholders are able to adequately assess the methods used by the department and offer alternatives in a quantitative manner. NWPPA reiterates that given the paucity of information on industrial discharges for calculating LCA's that the alternative LCA calculation methods in NWPPA comment 22 (Comment #100 in this document) be added to the variance rules or be allowed for variance implementation.

Response

Please see response to Comment #99. DEQ tries to be responsive to data requests and apologizes for not responding in a timely manner in this case. We strive to do better in the future.

Comment #101

NWPPA comments that while implementation of MMPs will help to identify mercury loads that contribute to effluent loads, ODEQ should be cautious in delineating expectations for achievable reductions prior to an improved understanding of Oregon-specific source loads and opportunities for reducing those loads for manufacturing facilities

DEQ appears to have only used Wisconsin industrial dischargers as examples for MMP implementation (last paragraph on p. 22, Notice of Proposed Rulemaking Attachment #1). While these findings are valid for point sources in Wisconsin, ODEQ should not necessarily anticipate that the magnitudes of reductions or the residual effluent concentrations following MMP implementation at Oregon point sources should be similar to point sources in Wisconsin.

As noted throughout TetraTech's Mercury TMDL technical support document, contributions to mercury loadings in the Willamette are regionally specific. Local factors such as current and historic land use practices, local and long-range air transport and deposition, regional weather patterns and terrain features, and others, can influence mercury concentrations in effluents.

Further, NWPPA emphasizes that the availability and cost effectiveness of raw material and process additive substitution alternatives are site-specific to each manufacturing facility.

Response

DEQ acknowledges NWPPA's comment. DEQ understands that mercury loading contributions are site-specific and that results of MMP implementation will vary. Based on data provided by Wisconsin, Minnesota and Oregon dischargers, DEQ expects MMP implementation will lower mercury contributions from point sources in aggregate. In addition, as any approved TMDL is implemented, overall mercury loads should decrease, which should simultaneously decrease mercury intake concentrations.

Comment #102

NWPPA supports the ODEQ Fiscal Statement and conclusions that the Willamette Basin mercury MDV rule proposal will: decrease variance application costs for applicants; increase government efficiency to review, issue and administer variances; and, allow ODEQ build on scientific research from the draft Willamette Basin Mercury TMDL.

Response

DEQ acknowledges NWPPA's support of the fiscal impact statement.

Comment #103

The fiscal and economic impact is flawed because it says absolutely nothing about non-point source controls, as is required by federal rules for waterbody variances.

Response

DEQ is adopting a multiple discharger variance that applies to point sources, not a waterbody variance and supporting documentation is not required to identify and document cost-effective and reasonable best management practices for nonpoint source controls.

Comment #104

DEQ's conclusion that the proposed rules do not affect land use is incorrect because it has an impact on non-point sources of pollution.

Response

DEQ is adopting a multiple discharger variance that applies to point sources, not a waterbody variance and supporting documentation is not required to identify and document cost-effective and reasonable best management practices for nonpoint source controls.

Commenters

Comments received by close of public comment period

The table below lists people and organizations that submitted public comments about the proposed rules by the deadline. Original comments are on file with DEQ.

List of Commenters				
#	Name	Organization	Comment Number	Hearing #
1	Diana Tesh		20	
2	Tom Quintal	Willamette Valley Mining Association	5	1
3	Nina Bell	Northwest Environmental Advocates	2, 18, 19, 22, 25, 26, 27, 28, 29, 33, 36, 37, 38, 40, 41, 42, 43, 44, 47, 48, 49, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 65, 67, 68, 69, 76, 78, 81, 83, 90, 91, 103, 104	
4	Amy Pepper	Oregon Association of Clean Water Agencies (ACWA)	32, 35, 45, 66, 83, 85, 89	
5	Lindsay Guzzo	EPA	13, 24, 29, 61, 63, 72, 80, 96, 97	
6	Mary Anne Cooper	Oregon Farm Bureau (OFB, OFIC, OAN)	73, 84, 98	
7	Kathryn VanNatta	Northwest Pulp & Paper Association (NWPPA)	1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 21, 30, 39, 46, 50, 74, 75, 99, 100, 101, 102	
8	Kirsten Losli	Clean Water Services	23, 31, 34, 51, 62, 64, 66, 71, 72, 77, 79, 83, 85, 86, 87, 88, 92, 93, 94, 95	

Implementation

Notification

The proposed rules would become effective after filing on approximately Jan. 24, 2020, and then after DEQ submits and EPA approves the rules under the Clean Water Act. Once DEQ sends the rules to EPA for approval, EPA has 60 days to approve or 90 days to disapprove the rule.

DEQ will notify affected parties by:

- Submitting a GovDelivery notice to the Water Quality Standards and DEQ Rulemaking lists.
- Emailing DEQ staff and members of the Rulemaking Advisory Committee and other interested parties

Five-year Review

ORS 183.405

Requirement

Oregon law requires DEQ to review new rules within five years after EQC adopts them. The law also exempts some rules from review. DEQ determined whether the rules described in this report are subject to the five-year review. DEQ based its analysis on the law in effect when EQC adopted these rules.

Exemption from five-year rule review

The Administrative Procedures Act exempts all of the proposed rules from the five-year review because the proposed rules would:

- Amend or repeal an existing rule. ORS 183.405(4).
- Correct errors or omissions in the existing rules. ORS 183.405(d).

Draft Rules – With Edits Highlighted

Key to Identifying Changed Text:

~~Strikeout: Deleted Text~~

Underline: New/inserted text

~~Double-strikethrough~~ with underline: Text deleted from one location - and moved to another location

340-041-0002

Definitions

Definitions in this rule apply to all basins unless context requires otherwise.

(1) "401 Water Quality Certification" means a determination made by DEQ that a dredge and fill activity, private hydropower facility, or other federally licensed or permitted activity that may result in a discharge to waters of the state has adequate terms and conditions to prevent an exceedance of water quality criteria. The federal permit in question may not be issued without this state determination in accordance with the Federal Clean Water Act, section 401 (33 USC 1341).

(2) "Ambient Stream Temperature" means the stream temperature measured at a specific time and place. The selected location for measuring stream temperature must be representative of the stream in the vicinity of the point being measured.

(3) "Anthropogenic," when used to describe "sources" or "warming," means that which results from human activity.

(4) "Applicable Criteria" means the biologically based temperature criteria in OAR 340-041-0028(4), the superseding cold water protection criteria in 340-041-0028(11) or the superseding natural condition criteria in 340-041-0028(8). The applicable criteria may also be site-specific criteria approved by U.S. EPA. A subbasin may have a combination of applicable temperature criteria derived from some or all of these numeric and narrative criteria.

(5) "Appropriate Reference Site or Region" means a site on the same water body or within the same basin or ecoregion that has similar habitat conditions and represents the water quality and biological community attainable within the areas of concern.

(6) "Aquatic Species" means plants or animals that live at least part of their life cycle in waters of the state.

(7) "Basin" means a third-field hydrologic unit as identified by the U.S. Geological Survey.

(8) "BOD" means 5-day, 20°C Biochemical Oxygen Demand.

(9) "Cold-Water Aquatic Life" means aquatic organisms that are physiologically restricted to cold water including, but not limited to, native salmon, steelhead, mountain whitefish, char including bull trout, and trout.

(10) "Cold Water Refugia" means those portions of a water body where or times during the diel temperature cycle when the water temperature is at least 2 degrees Celsius colder than the daily maximum temperature of the adjacent well-mixed flow of the water body.

(11) "Commission" or "EQC" means the Oregon Environmental Quality Commission.

(12) "Cool Water Aquatic Life" means aquatic organisms that are physiologically restricted to cool waters including, but not limited to, native sturgeon, Pacific lamprey, suckers, chub, sculpins and certain species of cyprinids (minnows).

(13) "Core Cold Water Habitat Use" means waters expected to maintain temperatures within the range generally considered optimal for salmon and steelhead rearing, or that are suitable for bull trout migration, foraging and sub-adult rearing that occurs during the summer. These uses are designated on the following subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 180A, 201A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A.

(14) "Critical Habitat" means those areas that support rare, threatened, or endangered species or serve as sensitive spawning and rearing areas for aquatic life as designated by the U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration-Fisheries according to the Endangered Species Act (16 U.S. Code § 1531).

(15) "Daily Mean" for dissolved oxygen means the numeric average of an adequate number of data to describe the variation in dissolved oxygen concentration throughout a day, including daily maximums and minimums. For calculating the mean, concentrations in excess of 100 percent of saturation are valued at the saturation concentration.

(16) "Department" or "DEQ" means the Oregon State Department of Environmental Quality.

(17) "Designated Beneficial Use" means the purpose or benefit to be derived from a water body as designated by the Water Resources Department or the Water Resources Commission.

(18) "DO" means dissolved oxygen.

(19) "Ecological Integrity" means the summation of chemical, physical, and biological integrity capable of supporting and maintaining a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

(20) "Epilimnion" means the seasonally stratified layer of a lake or reservoir above the metalimnion; the surface layer.

(21) "Erosion Control Plan" means a plan containing a list of best management practices to be applied during construction to control and limit soil erosion.

(22) "Estuarine Waters" means all mixed fresh and oceanic waters in estuaries or bays from the point of oceanic water intrusion inland to a line connecting the outermost points of the headlands or protective jetties.

(23) "High Quality Waters" means those waters that meet or exceed levels necessary to support the propagation of fish, shellfish and wildlife, recreation in and on the water, and other designated beneficial uses.

(24) "Hypolimnion" means the seasonally stratified layer of a lake or reservoir below the metalimnion; the bottom layer.

(25) "Industrial Waste" means any liquid, gaseous, radioactive, or solid waste substance or a combination of them, thereof resulting from any process of industry, manufacturing, trade, or business, or from the development or recovery of any natural resources.

(26) "In Lieu Fee" means a fee a jurisdiction collected by a jurisdiction in lieu of requiring construction of onsite stormwater quality control facilities.

(27) "Intergravel Dissolved Oxygen" (IGDO) means the concentration of oxygen measured in the water within the stream bed gravels. Measurements should be taken within a limited time period before fry emerges from fry.

(28) "Jurisdiction" means any city or county agency in the Tualatin River and Oswego Lake subbasin that regulates land development activities within its boundaries by approving plats or site plans or issuing permits for land development.

(29) "Land Development" means any human-induced change to improved or unimproved real estate including, but not limited to, construction, installation, or expansion of a building or other structure, land division, drilling, or site alteration, such as land surface mining, dredging, grading, construction of earthen berms, paving, improvements for use as parking, or storage, excavation, or clearing.

(30) "Load Allocation" or "LA" means the portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading that may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting loading. Whenever possible, natural and nonpoint source loads should be distinguished.

(31) "Loading Capacity" or "LC" means the greatest amount of loading that a water body can receive without violating water quality standards.

(32) "Low Flow Period" means the flows in a stream resulting primarily from groundwater discharge or base flows augmented from lakes and storage projects during the driest period of the year. The dry weather period varies across the state according to climate and topography. Wherever the low flow period is indicated in Water Quality Management Plans, this period has been approximated by the inclusive months. Where applicable in a waste discharge permit, the low flow period may be further defined.

(33) "Managed Lakes" refers to lakes in which hydrology is managed by controlling the rate or timing of inflow or outflow.

(34) "Marine Waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of the State of Oregon.

(35) "mg/l" or "mg/L" means milligrams per liter.

(36) "Metalimnion" means the seasonal, thermally stratified layer of a lake or reservoir that is characterized by a rapid change in temperature with depth and that effectively isolates the waters of the epilimnion from those of the hypolimnion during the period of stratification; the middle layer.

(37) "Migration Corridors" mean those waters that are predominantly used for salmon and steelhead migration during the summer and have little or no anadromous salmonid rearing in the months of July and August. Migration corridors are designated in Tables 101B and 121B and Figures 151A, 170A, 300A and 340A under OAR 340-041-0101 to 340-041-0340.

(38) "Minimum" for dissolved oxygen means the minimum recorded concentration including seasonal and diurnal minimums.

(39) "Monthly (30-day) Mean Minimum" for dissolved oxygen means the minimum of the 30 consecutive-day floating averages of the calculated daily mean dissolved oxygen concentration.

(40) "Natural Conditions" means conditions or circumstances affecting the physical, chemical, or biological integrity of a water of the state that are not influenced by past or present anthropogenic activities. Disturbances from wildfire, floods, earthquakes, volcanic or geothermal activity, wind, insect infestation and diseased vegetation are considered natural conditions.

(41) "Natural Thermal Potential" means the determination of the thermal profile of a water body using best available methods of analysis and the best available information on the site-potential riparian vegetation, stream geomorphology, stream flows and other measures to reflect natural conditions.

(42) "Nonpoint Sources" means any source of water pollution other than a point source. Generally, a nonpoint source is a diffuse or unconfined source of pollution where wastes can either enter into waters of the state or be conveyed by the movement of water into waters of the state.

(43) "Ocean Waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of Oregon.

(44) "Outstanding Resource Waters" means waters designated by the EQC where existing high quality waters constitute an outstanding state or national resource based on their extraordinary water quality or ecological values or where special water quality protection is needed to maintain critical habitat areas.

(45) "Pollutant Minimization Plan" or "PMP" means a structured set of activities to improve processes and pollutant controls that will prevent and reduce pollutant loadings.

~~(4546)~~ "Pollution" means such contamination or other alteration of the physical, chemical, or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any water of the state that either by itself, or in connection with any other substance present, can reasonably be expected to create a public nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare; to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wildlife, fish, other aquatic life or the habitat thereof.

~~(4647)~~ "Point Source" means a discernible, confined, and discrete conveyance including, but not limited to, a pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or leachate collection system from which pollutants are or may be discharged. Point source does not include agricultural storm water discharges and return flows from irrigated agriculture.

~~(4748)~~ "Public Water" means the same as "waters of the state."

~~(4849)~~ "Public Works Project" means any land development conducted or financed by a local, state, or federal governmental body.

~~(4950)~~ "Reserve Capacity" means that portion of a receiving stream's loading capacity that has not been allocated to point sources or to nonpoint sources and natural background as waste load allocations or load allocations, respectively. The reserve capacity includes that loading capacity that has been set aside for a safety margin and is otherwise unallocated.

~~(5051)~~ "Resident Biological Community" means aquatic life expected to exist in a particular habitat when water quality standards for a specific ecoregion, basin or water body are met. This must be established by accepted biomonitoring techniques.

~~(5152)~~ "Salmon" means chinook, chum, coho, sockeye and pink salmon.

(~~5253~~) "Salmon and Steelhead Spawning Use" means waters that are or could be used for salmon and steelhead spawning, egg incubation, and fry emergence. These uses are designated on the following subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 130B, 151B, 160B, 170B, 220B, 230B, 271B, 286B, 300B, 310B, 320B, and 340B.

(~~5354~~) "Salmon and Trout Rearing and Migration Use" means thermally suitable rearing habitat for salmon, steelhead, rainbow trout, and cutthroat trout as designated on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A.

(~~5455~~) "Salmonid or Salmonids" means native salmon, trout, mountain whitefish and char including bull trout. For purposes of Oregon water quality standards, salmonid does not include brook or brown trout because they are introduced species.

(~~5556~~) "Secondary Treatment" means the following depending on the context:

(a) For sewage wastes, secondary treatment means the minimum level of treatment mandated by U.S. Environmental Protection Agency regulations ~~underpursuant to~~ Public Law 92-500.

(b) For industrial and other waste sources, secondary treatment means control equivalent to best practicable treatment.

(~~5657~~) "Seven-Day Average Maximum Temperature" means a calculation of the average of the daily maximum temperatures from seven consecutive days made on a rolling basis.

(~~5758~~) "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments, or other places, together with such groundwater infiltration and surface water as may be present. The admixture with sewage of industrial wastes or wastes, as defined in this rule, may also be considered "sewage" within the meaning of this division.

(~~5859~~) "Short-Term Disturbance" means a temporary disturbance of six months or less when water quality standards may be violated briefly but not of sufficient duration to cause acute or chronic effects on beneficial uses.

(~~5960~~) "Spatial Median" means the value that falls in the middle of a data set of multiple intergravel dissolved oxygen (IGDO) measurements taken within a spawning area. Half the samples should be greater than and half the samples should be less than the spatial median.

(~~6061~~) "SS" means suspended solids.

(~~6162~~) "Stormwater Quality Control Facility" means any structure or drainage way designed, constructed and maintained to collect and filter, retain, or detain surface water runoff, during and after a storm event, for the purpose of water quality improvement. It may also include, but is not be limited to, existing features such as wetlands, water quality swales and ponds maintained as stormwater quality control facilities.

(6263) "Subbasin" means a fourth-field hydrologic unit as identified by the U.S. Geological Survey.

(6364) "Summer" means June 1 through September 30 of each calendar year.

(6465) "Threatened or Endangered Species" means aquatic species listed as either threatened or endangered under the federal Endangered Species Act (16 U.S. Code § 1531 et seq., and Title 50 of the Code of Federal Regulations).

(6566) "Total Maximum Daily Load (TMDL)" means the sum of the individual waste load allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

(6667) "Toxic Substance" means those pollutants or combinations of pollutants, including disease-causing agents, that, after introduction to waters of the state and upon exposure, ingestion, inhalation or assimilation either directly from the environment or indirectly by ingestion through food chains, will cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations in any organism or its offspring.

(6768) "Wasteload Allocation" or "WLA" means the portion of a receiving water's loading capacity allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.

(6869) "Warm-Water Aquatic Life" means the aquatic communities that are adapted to warm-water conditions and do not contain either cold- or cool-water species.

(6970) "Wastes" means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances that may cause or tend to cause pollution of any water of the state.

(7071) "Water Quality Limited" means one of the following:

(a) A receiving stream that does not meet narrative or numeric water quality criteria during the entire year or defined season even after standard technology is implemented~~the implementation of standard technology~~;

(b) A receiving stream that achieves and is expected to continue to achieve narrative or numeric water quality criteria but uses higher than standard technology to protect beneficial uses;

(c) A receiving stream for which there is insufficient information to determine whether water quality criteria are being met with higher-than-standard treatment technology or a receiving stream that would not be expected to meet water quality criteria during the entire year or defined season without higher than standard technology.

(72) "Water Quality Standards Variance," or "WQS variance" means a time-limited designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflects the highest attainable condition during the term of the WQS variance.

~~(7173)~~ "Water Quality Swale" means a natural depression or wide, shallow ditch used to temporarily store, route, or filter runoff for the purpose of improving water quality.

~~(7274)~~ "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private, except those private waters that do not combine or effect a junction with natural surface or underground waters, that are located wholly or partially within or bordering the state or within its jurisdiction.

~~(7375)~~ "Weekly (seven-day) Mean Minimum" for dissolved oxygen means the minimum of the seven consecutive-day floating average of the calculated daily mean dissolved oxygen concentration.

~~(7476)~~ "Weekly (seven-day) Minimum Mean" for dissolved oxygen means the minimum of the seven consecutive-day floating average of the daily minimum concentration. For application of the criteria, this value is the reference for diurnal minimums.

~~(7577)~~ "Without Detrimental Changes in the Resident Biological Community" means no loss of ecological integrity when compared to natural conditions at an appropriate reference site or region.

Statutory/Other Authority: ORS 468.020, 468B.010, 468B.015, 468B.035 & 468B.048

Statutes/Other Implemented: ORS 468B.035 & 468B.048

History:

DEQ 1-2015, f. & cert. ef. 1-7-15

DEQ 3-2012, f. & cert. ef. 5-21-12

DEQ 2-2007, f. & cert. ef. 3-15-07

DEQ 3-2004, f. & cert. ef. 5-28-04

DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0059

Variations

~~This rule (OAR 340-041-0059) does not become applicable for purposes of ORS chapter 468B or the federal Clean Water Act unless and until EPA approves the provisions it identifies as water quality standards pursuant to 40 CFR 131.21 (4/27/2000).~~

(1) Applicability. Subject to the requirements and limitations set out in sections (2) through (7) below, ~~a point source~~ DEQ or the EQC ~~commission~~ may request grant a water quality standards variance where the discharger or DEQ demonstrates that it is not feasible to attain where it is demonstrated that the designated use and criterion during the term of the variance because of one of the factors listed in subsection (2)(b) of this rule, source cannot feasibly meet effluent limits sufficient to meet water quality standards. The director may grant an individual discharger variance and the commission may grant a multiple discharger variance or a water body variance. All water quality standards variances are subject to EPA approval. The director of the department will determine whether to issue a variance for a source covered by an existing NPDES permit. The commission will determine whether to issue a variance for a discharger that does not have a currently effective NPDES permit. (a) ~~The variance applies~~ may be used only for the purpose of establishing NPDES permit limits and requirements under CWA Section 301(b)(1)(C) or for issuing certifications under CWA Section 401, only to the specified point source permit and pollutant(s); ~~†The underlying water quality standard(s)~~ designated use and criterion otherwise remains in effect.

~~(b) The department or commission may not grant a variance if: (A) The effluent limit sufficient to meet the underlying water quality standard can be attained by implementing technology based effluent limits required under sections 301(b) and 306 of the federal Clean Water Act, and by implementing cost effective and reasonable best management practices for nonpoint sources under the control of the discharger; or~~

~~(B) The variance would likely jeopardize the continued existence of any threatened or endangered species listed under section 4 of the Endangered Species Act or result in the destruction or adverse modification of such species' critical habitat; or~~

~~(C) The conditions allowed by the variance would result in an unreasonable risk to human health; or;~~

~~(D) A point source does not have a currently effective NPDES permit, unless the variance is necessary to:~~

~~(i) Prevent or mitigate a threat to public health or welfare;~~

~~(ii) Allow a water quality or habitat restoration project that may cause short term water quality standards exceedances, but will result in long term water quality or habitat improvement that enhances the support of aquatic life uses;~~

~~(iii) Provide benefits that outweigh the environmental costs of lowering water quality. This analysis is comparable to that required under the antidegradation regulation contained in OAR-041-0004(6)(b); or~~

~~(E) The information and demonstration submitted in accordance with section (4) below does not allow the department or commission to conclude that a condition in section (2) has been met.~~

(2) Conditions to Grant a Variance. Before the ~~EQC~~commission or ~~department~~DEQ may grant a variance, it must determine that:

~~(a) No existing use will be impaired or removed as a result of granting the variance and~~

~~(b)~~ Attaining the ~~water quality standards~~designated use and criterion during the term of the variance is not feasible for one or more of the following reasons:

(A) Naturally occurring pollutant concentrations prevent the attainment of the use;

(B) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges to enable uses to be met without violating state water conservation requirements;

(C) Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;

(D) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way which would result in the attainment of the use;

(E) Physical conditions related to the natural features of the waterbody, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality preclude attainment of aquatic life protection uses; ~~or~~

(F) Controls more stringent than those required by sections 301(b) and 306 of the federal Clean Water Act would result in substantial and widespread economic and social impact; ~~or~~

(G) Actions necessary to facilitate lake, wetland, or stream restoration through dam removal or other significant reconfiguration activities preclude attainment of the designated use and criterion while the actions are being implemented;

(b) The effluent limit sufficient to meet the underlying designated use and criterion cannot be attained by implementing technology-based effluent limits required under sections 301(b) and 306 of the federal Clean Water Act.

(c) The requirements that apply throughout the term of the water quality standards variance will not result in lowering the currently attained ambient water quality, unless the variance is needed for restoration activities as specified in paragraph (2)(a)(G) of this rule.

(3) Variance Duration and Re-evaluation.

(a) The duration of a variance must only be as long as necessary not exceed the term of the NPDES permit to meet achieve the highest attainable condition as described in section (5) of this rule. If the permit is administratively extended, the permit effluent limits and any other requirements based on the variance and associated pollutant reduction plan will continue to

~~be in effect during the period of the administrative extension. The department will give priority to NPDES permit renewals for permits containing variances and where a renewal application has been submitted to the director at least one hundred eighty days prior to the NPDES permit expiration date.~~

(b) The DEQ order or EQCcommission rule will specify the duration of the variance.

~~(bc) When If the duration of the variance is less than the term of thea NPDES permit, the permittee must be in compliancecomply with the specified effluent limitation sufficient to meet the underlying water quality standard when the variance expiresupon the expiration of the variance. The permit will include the date the variance and corresponding interim effluent limit will expire. (e) A variance is effective only after EPA approval. The effective date and duration of the variance will be specified in a NPDES permit or order of the commission or department.~~

(d) If the term of the variance exceeds five years, DEQ will re-evaluate the highest attainable condition using all existing and readily available information at least every five years. DEQ will specify the re-evaluation frequency in the variance. Following public input, DEQ will submit its re-evaluation to EPA within 30 days of completion. If DEQ does not submit the re-evaluation to EPA within the specified timeline, the variance will no longer be the applicable water quality standard until DEQ completes the re-evaluation and submits it to EPA.

(4) Variance Submittal Requirements.

(a) To request an individual variance, a permittee must submit the following information to the departmentDEQ:

(aA) The specific pollutant, discharger, and receiving waterbody to which the variance will apply;

(B) A demonstration that attaining the water quality standard designated use and criterion for athe specific pollutant is not feasible for the requested duration of the variance based on one or more of the conditions-factors found in subsection (2)(ba) of this rule;

(bC) A description of treatment or alternative options considered to meet permit limits based on the applicable underlying water quality standardcriterion, and a description of why these options are not technologically, economically, or otherwise feasible;

(eD) Sufficient water quality data and analyses to characterize ambient and discharge water pollutant concentrations and determine the Highest Attainable Condition, as required in section (5) of this rule;

~~(d) Any cost effective and reasonable best management practices for nonpoint sources under the control of the discharger that addresses the pollutant the variance is based upon;~~

~~(e) If the highest attainable condition for the variance is consistent with paragraph (5)(a)(C) of this rule, Aa proposed pollutant ~~reduction minimization~~ plan covering the term of the variance that includes ~~any actions the permittee(s) will take to be taken by the permittee that would will~~ result in ~~reasonable~~ progress toward meeting the underlying water quality standard. Such actions may include ~~proposed pollutant offsets or trading or other proposed pollutant reduction activities, and associated milestones for implementing these measures. Pollutant reduction plans will be tailored to address the specific circumstances of each facility and to the extent pollutant reduction can be achieved;~~ and~~

(E) If the discharger is a publicly owned treatment works, a demonstration of the jurisdiction's legal authority, (such as a sewer use ordinance,) to regulate the pollutant for which the variance is sought. The jurisdiction's legal authority must be sufficient to control potential sources of that pollutant that discharge into the jurisdiction's sewer collection system.

(b) To be eligible for any multiple discharger variance or waterbody variance, a permittee must submit all the information required in the specific multiple discharger or waterbody variance rule.

(5) Highest Attainable Condition. The highest attainable condition is a quantifiable expression of one of the following:

(a) For individual or multiple discharger WQS variances:

(A) The highest attainable interim criterion; or

(B) The interim effluent condition that reflects the greatest pollutant reduction achievable; or

(C) If no additional feasible pollutant control technology can be identified, the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State grants the WQS variance, and adoption and implementation of a pollutant minimization plan.

(b) For WQS variances applicable to a waterbody or waterbody segment:

(A) The highest attainable interim use and interim criterion; or

(B) If no additional feasible pollutant control technology can be identified, the interim use and interim criterion that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a pollutant minimization plan.

(c) For any WQS variance that applies to a waterbody or waterbody segment, supporting documentation will identify and document any cost-effective and reasonable best management practices for nonpoint source controls related to the pollutant(s) or water quality parameter(s) and waterbody or waterbody segment(s) specified in the WQS variance that could be implemented to make progress towards attaining the underlying designated use and criterion. DEQ will provide public notice and comment for any such documentation.

(d) In any subsequent WQS variance for a waterbody or waterbody segment, DEQ will document whether and to what extent best management practices for nonpoint source

controls were implemented to address the pollutant(s) or water quality parameter(s) subject to the WQS variance and the water quality progress achieved.

~~(5)(6) Variance Permit Conditions. Effluent limits in the discharger's permit will be based on the variance and not the underlying water quality standard, so long as the variance remains effective. The department DEQ must establish and incorporate into the discharger's NPDES permit all conditions necessary to implement and enforce an approved variance in lieu of the underlying water quality standard, so long as the variance remains effective. and associated pollutant reduction plan.~~ The permit must include, at a minimum, the following requirements:

(a) ~~An interim concentration based permit limit or requirement representing deriving from the best achievable effluent quality highest attainable effluent condition or highest attainable use and criterion specified in the variance, including any updated highest attainable effluent condition based on a five year re-evaluation; based on discharge monitoring data and that is no less stringent than that achieved under the previous permit. For a new discharger, the permit limit will be calculated based on best achievable technology;~~

(b) ~~For variances expressing the highest attainable condition per section 5(a)(C) or 5(b)(B) of this rule, Aa requirement to implement the any pollutant reduction actions approved as part of a pPollutant Minimization reduction planProgram included in the applicable variance submitted in accordance with section (4)(e) above and to make reasonable progress toward attaining the underlying water quality standard(s);~~

(c) Any studies, effluent monitoring, or other monitoring necessary to ensure compliance with the conditions of the variance; and

(d) An annual progress report to ~~the department~~DEQ describing the results of any required studies or monitoring during the reporting year, and identifying the pollutant reduction activities completed and any impediments to reaching any specific milestones stated in the variance.

~~(67) Public~~ Input and Notification Requirements.

(a) If ~~the department~~DEQ proposes to grant a variance, it must provide public notice of the ~~proposal-proposed variance and hold a public hearing~~accept public comment. The public notice may be coordinated with ~~included in~~ the public notification of a draft NPDES permit or ~~other draft regulatory decision~~draft 401 certification that would rely on the variance;

(b) If DEQ is required to re-evaluate the highest attainable condition consistent with (3)(d) of this rule, DEQ will obtain public input on the re-evaluation prior to submitting the re-evaluation to EPA. The specific method of obtaining public input will be documented in the variance.

~~(bc)~~ The department DEQ will publish a list of all variances approved underpursuant to this rule on its website. DEQ will add N newly approved variances ~~will be added~~ to this list within 30 days of their effective date. The list will identify:

~~(A) †~~The effective date and duration of the variance;

~~(B) †~~The ~~discharger~~ facility or facilities;

~~(C) †~~The pollutant(s) or water quality parameter(s);

~~(D) and †~~The waters to which the variance applies;

~~(E) †~~The underlying ~~water quality standard~~ designated use and criterion for the waterbody;

~~(F) the effective date and duration of the variance; †~~The allowable pollutant effluent limit granted under highest attainable condition specified in the variance;

~~(G) and †~~How to obtain additional information about the variance.

~~(7) Variance Renewals.~~

~~(a) A variance may be renewed if:~~

~~(A) The permittee makes a renewed demonstration pursuant to section (2) of this rule that attaining the water quality standard continues to be infeasible;~~

~~(B) The permittee submits any new or updated information pertaining to any of the requirements of section 4;~~

~~(C) The department determines that all conditions and requirements of the previous variance and actions contained in the pollutant reduction plan pursuant to section (5) have been met, unless reasons outside the control of the discharger prevented meeting any condition or requirement, and~~

~~(D) All other requirements of this rule have been met.~~

~~(b) A variance renewal must be approved by the department director and by EPA.~~

Statutory/Other Authority: ORS 468.020, 468B.010, 468B.020, 468B.035 & 468B.110

Statutes/Other Implemented: ORS 468B.048

History:

DEQ 10-2011, f. & cert. ef. 7-13-11

340-041-0345

Basin-Specific Criteria (Willamette): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) All basin waters, ~~(except main stem Columbia River and Cascade lakes)~~: 6.5 to 8.5;

(b) Cascade lakes above 3,000 feet altitude: 6.0 to 8.5.

(2) Total Dissolved Solids. Guide concentrations listed may not be exceeded unless ~~otherwise-DEQ~~ specifically authorizes ~~otherwis~~ed by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0340: Willamette River and Tributaries — 100.0 mg/l.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) Willamette River and tributaries except Tualatin River Subbasin:

(A) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and, unless DEQ otherwise specifically authorizes ~~sd by the Department~~, ~~operating on~~ of all waste treatment and control facilities at maximum practical efficiency and effectiveness so as to minimize waste discharges to public waters.

(b) Main stem Tualatin River from mouth to Gaston (river mile 0 to 65):

(A) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to April 30): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control.

(c) Main stem Tualatin River above Gaston (river mile 65) and all tributaries to the Tualatin River: Treatment resulting in monthly average effluent concentrations not to exceed 5 mg/l of BOD and 5 mg/l of SS or equivalent control;

(d) Tualatin River Subbasin: The dissolved oxygen level in the discharged effluents may not be less than 6 mg/l;

(4) Nonpoint source pollution control in the Tualatin River subbasin and lands draining to Oswego Lake:

(a) Subsection (5)(b) of this rule applies to any new land development within the Tualatin River and Oswego Lake subbasins, except those developments with application dates ~~before~~prior to January 1, 1990. The application date is the date on which the local jurisdiction receives a complete application for development approval as the local jurisdiction's regulations require~~is received by the local jurisdiction in accordance with the regulations of the local jurisdiction;~~

(b) For land development, no jurisdiction in these subbasins may approve any ~~no~~ preliminary plat, site plan, permit, or public works project may be approved by any jurisdiction in these subbasins unless the conditions of the plat permit or plan approval include an erosion control plan containing methods or and/or interim facilities, or both, to be constructed or used concurrently with land development and to be operated during construction to control the discharge of sediment in the stormwater runoff. The erosion control plan must include the following elements:

(A) Protection techniques to control soil erosion and sediment transport to less than one ton per acre per year, as calculated using the Natural Resources Conservation Service's Universal Soil Loss Equation or other equivalent methods (see Figures 1 to 6 in Appendix 1 for examples). The erosion control plan must include temporary sedimentation basins or other sediment control devices when, because of steep slopes or other site specific considerations, other on-site sediment control methods will not likely keep the sediment transport to less than one ton per acre per year. The local jurisdictions may establish additional requirements for meeting an equivalent degree of control. Any sediment basin constructed must be sized using 1.5 feet minimum sediment storage depth plus 2.0 feet storage depth above for a settlement zone. The storage capacity of the basin must be sized to store all of the sediment that is likely to be transported and collected during construction while the erosion potential exists. When the erosion potential has been removed, the sediment basin, or other sediment control facilities, can be removed and the site restored as per the final site plan. All sediment basins must be constructed with an emergency overflow to prevent erosion or failure of the containment dike; or

(B) A soil erosion control matrix derived from and consistent with the universal soil equation approved by the jurisdiction or DEQ approves~~the Department~~.

(c) The Director may modify Appendix 1 as necessary without approval from the Environmental Quality Commission. The Director may modify Appendix 1 to simplify it and to make it easier for people to apply;

(d) Subsection (5)(e) of this rule applies to any new land development within the Tualatin River and Oswego Lake subbasins, except:

(A) Those developments with application dates ~~before~~prior to June 1, 1990. The application date is the date on which the local jurisdiction receives a complete application for development approval is received by the local jurisdiction as that jurisdiction's regulations require~~in accordance with the regulations of the local jurisdiction;~~

(B) One and two family dwellings on existing lots of record;

(C) Sewer lines, water lines, utilities, or other land development that will not directly increase nonpoint source pollution once construction has been completed and the site is either restored to, or not altered from, its approximate original condition;

(D) If the Environmental Quality Commission determines that a jurisdiction does not need to require stormwater quality control facilities for new development;

(E) When a jurisdiction adopts ordinances that provide for a stormwater quality program equivalent to subsection (e) of this section. Ordinances adopted to implement equivalent programs must:

(i) Encourage on-site retention of stormwater, require phosphorus removal equivalent to the removal efficiency required by subsection (e) of this section, provide for adequate operation and maintenance of stormwater quality control facilities, and require financial assurance, or equivalent security, that assures construction of the stormwater quality control facilities the ordinance requires~~sd by the ordinance~~;

(ii) If the ordinances provide for exemptions other than those allowed for by paragraphs (B) and (C) of this subsection, the ordinances must provide for collect~~ing~~ion of in-lieu fees, or other equivalent mechanisms, that assure financing for, and construction of, associated, off-site stormwater quality control facilities. No exemption may be allowed if the jurisdiction is not meeting an approved schedule for identifying location of the off-site stormwater quality control facility to serve the development requesting an exemption.

(e) For new development, no jurisdiction may approve any ~~no~~ plat, site plan, building permit or public works project may be approved by any jurisdiction ~~in~~ these subbasins unless the conditions of the plat, permit, or plan approval require permanent stormwater quality control facilities to control phosphorus loadings associated with stormwater runoff from the development site. Jurisdictions must encourage and provide preference to techniques and methods that prevent and minimize pollutants from entering the storm and surface water systems. Permanent stormwater quality control facilities for phosphorus must meet the following requirements:

(A) The stormwater quality control facilities must be designed to achieve a phosphorus removal efficiency as calculated from the following equation:

$$R_p = 100 - 24.5/R_v$$

Where:

R_p = Required phosphorus removal efficiency

R_v = Average site runoff coefficient

The average site runoff coefficient can be calculated from the following equation:

$$R_v = (0.7 \times A_1) + (0.3 \times A_2) + (0.7 \times A_3) + (0.05 \times A_4) + (A_5 \times 0.0)$$

Where:

A1 = fraction of total area that is paved streets with curbs and that drain to storm sewers or open ditches.

A2 = fraction of total area that is paved streets that drain to water quality swales located on site.

A3 = fraction of total area that is building roof and paved parking that drains to storm sewers.

A4 = fraction of total area that is grass, trees and marsh areas.

A5 = fraction of total area for which runoff will be collected and retained on site with no direct discharge to surface waters.

(B) A jurisdiction may modify the equation for R_v to allow ~~the applying of~~ additional runoff coefficients associated with land surfaces not identified in this subsection. ~~The Department DEQ~~ must be notified in writing whenever an additional runoff coefficient is used. The use of additional runoff coefficients must be based on scientific data. The jurisdiction must ~~discontinue using e of~~ an additional runoff coefficient if ~~the Department DEQ~~ objects to its use in writing within ten days of receiving notification;

(C) The stormwater quality control facilities must be designed to meet the removal efficiency specified in paragraph (A) of this subsection for a mean summertime storm event totaling 0.36 inches of precipitation with an average return period of 96 hours;

(D) The removal efficiency specified in paragraph (A) of this subsection specify only design requirements and are not intended to be used as a basis for performance evaluation or compliance determination of the stormwater quality control facility installed or constructed pursuant to this subsection;

(E) ~~A jurisdiction may approve S~~ stormwater quality control facilities this subsection ~~required by this subsection may be approved by a jurisdiction~~ only if the following are met:

(i) For developments larger than one acre, the plat or site plan must include plans and a certification prepared by an Oregon registered, professional engineer, that the proposed stormwater control facilities have been designed in accordance with criteria expected to achieve removal efficiencies for total phosphorus required by paragraph (A) of this subsection;

(ii) The plat or site plan must be consistent with the area and associated runoff coefficients used to determine the removal efficiency required in paragraph (A) of this subsection;

(iii) ~~The developer must provide Aa~~ financial assurance, or equivalent security acceptable to the jurisdiction, ~~must be provided by the developer~~ with the jurisdiction that assures that the stormwater control facilities are constructed according to the plans established in the plat or site plan approval. Where practicable, the jurisdiction must combine the financial assurance ~~this rule requires~~ ~~d by this rule~~ with other financial assurance requirements imposed by the jurisdiction;

(iv) Each jurisdiction that constructs or authorizes construction of permanent stormwater quality control facilities must file with ~~the Department~~ DEQ; an operation and maintenance plan for the stormwater quality control facilities within its jurisdiction. The operation and maintenance plan must allow for public or private ownership, operation, and maintenance of individual permanent stormwater quality control facilities. The jurisdiction or private operator must operate and maintain the permanent stormwater control facilities ~~as in accordance with~~ the operation and maintenance plan specifies.

(f) Except as ~~required by~~ paragraph (D) of this subsection requires, the jurisdiction may grant an exception to subsection (e) of this section if the jurisdiction chooses to adopt and, on a case-by-case basis, impose a one time in-lieu fee. The fee will be an option where, because of the size of the development, topography, or other factors, the jurisdiction determines that the construction of on-site permanent stormwater treatment systems is impracticable or undesirable:

(A) The in-lieu fee will be based upon a reasonable estimate of the current, prorated cost for the jurisdiction to provide stormwater quality control facilities for the land development being assessed the fee. Estimated costs include costs associated with off-site land and rights-of-way acquisition, design, construction, and construction inspection;

(B) The jurisdiction must deposit any in-lieu fees collected ~~underpursuant to~~ this paragraph in an account dedicated only to reimbursing the jurisdiction for expenses related to off-site land and rights-of-way acquisition, design, construction, and construction inspection of stormwater quality control facilities;

(C) The ordinance establishing the in-lieu fee must include provisions that reduce the fee in proportion to the ratio of the site's average runoff coefficient (R_v), as established according to the equation in paragraph (6)(e)(A) of this rule;

(D) No new development may be granted an exemption if the jurisdiction is not meeting an approved time schedule for identifying the location for the off-site stormwater quality control facilities that would serve that development.

(g) ~~The Department~~ DEQ may approve other mechanisms that allow jurisdictions to grant exemptions to new development. ~~The Department~~ DEQ may only approve those mechanisms

that assure financing for off-site stormwater quality control facilities and that encourage or require on-site retention where feasible;

(h) Subsection (b) of this section ~~applies~~ until a jurisdiction adopts ordinances that provide for a program equivalent to subsection (b) of this section, or the Environmental Quality Commission determines such a program is not necessary when it approves the jurisdiction's program plan required by OAR 340-041-0470(2)(g).

(5) In order to improve water quality within the Yamhill River subbasin to meet the existing water quality standard for pH, the following special rules for total maximum daily loads, waste load allocations, load allocations and program plans are established:

(a) After ~~completion of~~ wastewater control facilities and program plans the EQC approved by the Commission under this rule are completed, and no later than June 30, 1994, no activities may be allowed, and no wastewater may be discharged to the Yamhill River or its tributaries, without the EQC's authorization, of the Commission that cause the monthly median concentration of total phosphorus to exceed 70 ug/l as measured during the low flow period between approximately May 1 and October 31~~***~~ of each year;

[NOTE: DEQ may condition precise dates for complying with this rule on the receiving water's physical conditions (i.e., flow temperature). DEQ may specify the compliance dates in individual permits or memorandums of understanding. DEQ may consider design flows, river travel times, and other relevant information, when establishing the specific conditions it inserts in the permits or memorandums of understanding.]

(b) Within 90 days of adoption of these rules, the Cities of McMinnville and Lafayette must submit a program plan and time schedule to ~~the Department~~DEQ describing how and when they will modify their sewerage facility to comply with this rule;

(c) ~~The commission will review and approve~~ Ffinal program plans ~~will be reviewed and approved by the Commission~~. The ~~C~~ommission may define alternative compliance dates as program plans are approved. All proposed final program plans must be subject to public hearing before the commission considers them prior to consideration for approval ~~by the Commission~~;

(d) ~~The Department~~DEQ will, within 60 days of adoption of these rules, distribute initial waste load allocations and load allocations to the point and nonpoint sources in the basin. These allocations are considered interim and may be redistributed based upon the conclusions of the approved program plans. ~~***Precise dates for complying with this rule may be conditioned on physical conditions (i.e., flow, temperature) of the receiving water and may be specified in individual permits or memorandums of understanding issued by the Department. The Department may consider system design flows, river travel times, and other relevant information when establishing the specific conditions to be inserted in the permits or memorandums of understanding.~~

(6) Multiple Discharger Variance for Mercury. The following rule is a multiple discharger variance to the fish-tissue based human health criterion for methylmercury. The variance applies to the following facilities:

Albany-Millersburg WRF (Willamette River); Canby STP (Willamette River); Cascade Pacific – Halsey Mill (Willamette River); City of Molalla (Molalla River); City of Portland Tryon Creek WWTP (Willamette River); City of Sandy (Tickle Creek); Clean Water Services Durham STP (Tualatin River); Clean Water Services Forest Grove STP (Tualatin River), Clean Water Services Hillsboro STP (Tualatin River), Clean Water Services Rock Creek STP (Tualatin River); Corvallis STP (Willamette River), Cottage Grove STP (Coast Fork Willamette River); Dallas STP (Rickreall Creek); Georgia-Pacific Halsey Mill (Willamette River); Gervais STP (Pudding River); International Paper Springfield Paper Mill (McKenzie River); Kellogg Creek WWTP (Willamette River); Lebanon WWTP (South Santiam River); McMinnville WRF (South Yamhill River); Metropolitan Wastewater Management Commission Eugene/Springfield STP (Willamette River); Newberg STP (Willamette River); Oak Lodge Services WRF (Willamette River); Saint Helens/Boise Cascade STP (Multnomah Channel); Salem Willow Lake STP (Willamette River); Siltronic Corporation (Willamette River); Silverton STP (Silver Creek); Stayton STP (North Santiam River); Sweet Home STP (South Santiam River); Teledyne Wah Chang (Willamette River); Tri-City Service District – Blue Heron (Willamette River); Tri-City Water Pollution Control Plant (Willamette River); West Linn Paper Company (Willamette River); Westrock, Newberg Mill (Willamette River); Wilsonville STP (Willamette River); Woodburn WWTP (Pudding River);

The variance will also apply to any of the following facilities for which DEQ would otherwise be required to establish mercury effluent limits during the term of the variance:

Amity STP (Salt Creek); Aumsville STP (Beaver Creek); Brooks STP (Willamette River); Brownsville STP (Calapooia River); Carlton STP (North Yamhill River); City of Estacada (Clackamas River); City of Scappoose (Multnomah Channel); Coburg WWTP (Unnamed tributary to Muddy Creek); Creswell STP (Unnamed tributary to Camas Swale Creek); Dayton STP (Yamhill River); Dundee STP (Willamette River); Halsey STP (Muddy Creek); Harrisburg Lagoon Treatment Plant (Willamette River); Hubbard STP (Mill Creek); Independence STP (Middle Willamette River); Jefferson STP (Santiam River); Junction City STP (Flat Creek); Lafayette STP (Yamhill River); Lane Community College (Russel Creek); Lowell STP (Middle Fork Willamette River); Monmouth STP (Willamette River); Mt. Angel STP (Pudding River); Oakridge STP (Middle Fork Willamette River); Philomath STP (Mary's River); Tangent STP (Calapooia River); Sheridan STP (South Yamhill River); USDA Forest Service (Clackamas River); Veneta STP (Long Tom River); Willamina STP (South Yamhill River); Yamhill STP (North Yamhill River).

(a) Findings. The EQC finds the following:

(A) The fishing use and fish-tissue based human health criterion for methyl-mercury cannot be attained within the next 20 years due to mercury from atmospheric deposition and naturally occurring mercury in native soils. Neither the sources of mercury nor the processes

by which the mercury is transported to waterbodies can be remedied to meet the underlying designated use and criterion within the next 20 years.

(B) There is no currently feasible mercury treatment technology that would result in achieving water quality--based effluent limits based on the human health criterion for mercury.

(C) The requirements of the variance will not result in degrading the currently attained ambient water quality for methyl-mercury in the Willamette Basin.

(b) Term of the variance. The term of this variance is 20 years from the date of EPA approval.

(c) Application requirements. To implement the variance, a facility must provide to DEQ the following information:

(A) All mercury effluent data from the previous five years, including a minimum of two years of quarterly effluent data.

(B) A facility-specific mercury minimization program with minimum elements described in subsection (6)(f) of this rule for municipal facilities or subsection (6)(g) of this rule for industrial facilities.

(d) Highest attainable condition. Permit requirements will reflect the highest attainable condition specified in this variance. The highest attainable condition for this variance is the level currently achievable, as described in section (f) below, for all dischargers, and a requirement to develop and implement a mercury minimization program with elements described in subsection (6)(f) of this rule for municipal dischargers and subsection (6)(g) of this rule for industrial dischargers.

(e) Highest attainable condition – level currently achievable (LCA). The highest attainable condition for all facilities covered under this variance will include the level currently achievable, which is a quantifiable expression of the effluent condition achievable with the pollutant control technologies in place at the time this variance is granted when those technologies are well maintained and operated. The LCA for this variance is the 95th percentile value of recent (e.g., two to five years) total mercury effluent data or a previously applicable LCA, whichever is lower.

(f) Highest attainable condition – mercury minimization program for municipal dischargers. The highest attainable condition for municipal dischargers will include implementing a mercury minimization program covering the term of the variance, which must contain the following minimum elements:

(A) A monitoring plan to include influent, effluent and biosolids monitoring;

(B) Regulation of dental offices to ensure installation and maintenance of amalgam separators, including inspection of dental facilities for proper management and disposal of dental waste;

(C) Identification of mercury-containing materials at facilities and offices each municipal wastewater treatment facility operates and implementation of any recommendations for removing mercury-containing materials;

(D) Identification and inspection of commercial laboratories, schools and healthcare facilities that may have mercury and providing recommendations and outreach materials to these facilities;

(E) Distribution of outreach materials to commercial and residential sectors;

(F) Evaluation of new facilities as potential sources of mercury, regulatory oversight of such sources of mercury under the municipality's pre-treatment program where such sources are significant industrial users, and outreach to provide recommendations on activities that would reduce mercury in the facilities' discharges. Priority facilities should include those in the timber, paper, glass, clay, cement, concrete, gypsum, primary and fabricated metal, and electronic instrument sectors;

(G) Cleanup of legacy mercury from collection systems;

(H) Facility-specific activities to reduce mercury loading into the waterbody. Ensure the existing treatment system is well maintained and operated in order to maximize the reduction of mercury. Facility activities may also include cost-effective and reasonable best management practices for nonpoint source controls under the control of the discharger that would make progress towards attaining the underlying designated use and criterion; and

(I) If a facility has accomplished all activities within its control, the facility may implement or fund mercury reduction activities outside the discharger's control that will make progress toward attaining the underlying designated use and criterion.

(g) Highest attainable condition – mercury minimization program for industrial dischargers. The highest attainable condition for industrial dischargers will include implementing a mercury minimization program covering the term of the variance, with the following minimum elements:

(A) A monitoring plan to include influent, effluent and biosolids monitoring;

(B) Identification of mercury-containing materials used in the facility, offices and testing laboratories the discharger operates, and developing and implementing recommendations for using substitute materials with less or no mercury;

(C) Identification of other potential sources of mercury within the facility and developing and implementing recommendations for reducing these sources;

(D) Identification of other activities within discharger's control discharger to reduce mercury loading into the waterbody. Ensure the existing treatment system is well maintained and operated in order to maximize the reduction of mercury. Facility activities may also include cost-effective and reasonable best management practices for nonpoint source controls under the control of the discharger that would make progress towards attaining the underlying designated use and criterion; and

(E) If a facility has accomplished all activities within its control, the facility may implement or fund mercury reduction activities outside the discharger's control that will make progress toward attaining the underlying designated use and criterion.

(h) State mercury reduction activities in Oregon. The state implements numerous programs that will, over time, including over the 20-year term of this variance, reduce mercury loads to Willamette Basin waterbodies, including such programs as:

(A) Oregon's Dental Amalgam Law and associated practices as required under ORS 679.520 and ORS 679.525, and subsequent federal regulations.

(B) Airborne toxic contaminant reduction from existing or newly permitted industrial sources through the Cleaner Air Oregon program and other DEQ Air Quality permitting requirements.

(C) DEQ coordination with the Oregon Department of Forestry on implementing the Forest Practices Act.

(D) DEQ coordination with the Oregon Department of Agriculture on implementing the Oregon Agriculture Water Quality Management Act.

(E) DEQ issuance of general discharge permits, such as Phase I and Phase II municipal separate storm sewer system permits, industrial stormwater permits, and suction dredge mining permits, in addition to individual wastewater discharge permits.

(F) DEQ in-water and upland remediation under state laws and rules, and coordination with US EPA on Portland Harbor, Gould, and Black Butte Mine Superfund site cleanups.

(G) Regulatory and voluntary programs to reduce or recycle products containing mercury, such as automotive light switches, thermostats, and LCD screens and monitors.

(i) Re-evaluatiion of the Highest Attainable Condition. DEQ will re-evaluate the highest attainable condition for this multiple discharger variance every five years from the date that EPA approves this variance. DEQ will provide a written summary of this re-evaluation to EPA within 30 days of completing the re-evaluation. If DEQ fails to submit the re-evaluation

to EPA within the specified timeframe, the variance will no longer be the applicable water quality standard until DEQ completes the re-evaluation and submits it to EPA.

(A) The re-evaluation will include the following elements:

(i) A summary of the mercury reduction activities completed and an analysis of mercury reductions facilities covered under this variance have achieved, using the data and information provided in their annual reports; and

(ii) A determination of the feasibility of wastewater treatment technology to attain the water quality standard.

(B) DEQ will provide public notice on the availability of its draft re-evaluation and provide at least 30 days opportunity for the public to comment on the draft re-evaluation.

(C) Upon permit renewal for each facility covered under the variance, DEQ will update conditions in the permit based on the re-evaluation of the Highest Attainable Condition, as follows:

(i) DEQ will re-calculate each facility's level currently achievable, as described in OAR 340-041-0345(6)(e), utilizing the previous five years of data provided by each facility, at the time of their permit renewal. DEQ will adjust permit limits if the data shows that the level currently achievable is lower than the LCA in the previous permit.

(ii) DEQ will review updates to the facility's site-specific mercury minimization plan and, if necessary, request revisions to ensure that it is consistent with variance requirements.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048

Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048

History:

[DEQ 38-2018, minor correction filed 04/02/2018, effective 04/02/2018](#)

DEQ 2-2007, f. & cert. ef. 3-15-07

DEQ 17-2003, f. & cert. ef. 12-9-03

Draft Rules – With Edits Included

340-041-0002

Definitions

Definitions in this rule apply to all basins unless context requires otherwise.

(1) "401 Water Quality Certification" means a determination made by DEQ that a dredge and fill activity, private hydropower facility, or other federally licensed or permitted activity that may result in a discharge to waters of the state has adequate terms and conditions to prevent an exceedance of water quality criteria. The federal permit in question may not be issued without this state determination in accordance with the Federal Clean Water Act, section 401 (33 USC 1341).

(2) "Ambient Stream Temperature" means the stream temperature measured at a specific time and place. The selected location for measuring stream temperature must be representative of the stream in the vicinity of the point being measured.

(3) "Anthropogenic," when used to describe "sources" or "warming," means that which results from human activity.

(4) "Applicable Criteria" means the biologically based temperature criteria in OAR 340-041-0028(4), the superseding cold water protection criteria in 340-041-0028(11) or the superseding natural condition criteria in 340-041-0028(8). The applicable criteria may also be site-specific criteria approved by U.S. EPA. A subbasin may have a combination of applicable temperature criteria derived from some or all of these numeric and narrative criteria.

(5) "Appropriate Reference Site or Region" means a site on the same water body or within the same basin or ecoregion that has similar habitat conditions and represents the water quality and biological community attainable within the areas of concern.

(6) "Aquatic Species" means plants or animals that live at least part of their life cycle in waters of the state.

(7) "Basin" means a third-field hydrologic unit as identified by the U.S. Geological Survey.

(8) "BOD" means 5-day, 20°C Biochemical Oxygen Demand.

(9) "Cold-Water Aquatic Life" means aquatic organisms that are physiologically restricted to cold water including, but not limited to, native salmon, steelhead, mountain whitefish, char including bull trout, and trout.

(10) "Cold Water Refugia" means those portions of a water body where or times during the diel temperature cycle when the water temperature is at least 2 degrees Celsius colder than the daily maximum temperature of the adjacent well-mixed flow of the water body.

(11) "Commission" or "EQC" means the Oregon Environmental Quality Commission.

(12) "Cool Water Aquatic Life" means aquatic organisms that are physiologically restricted to cool waters including, but not limited to, native sturgeon, Pacific lamprey, suckers, chub, sculpins and certain species of cyprinids (minnows).

(13) "Core Cold Water Habitat Use" means waters expected to maintain temperatures within the range generally considered optimal for salmon and steelhead rearing, or that are suitable for bull trout migration, foraging and sub-adult rearing that occurs during the summer. These uses are designated on the following subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 180A, 201A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A.

(14) "Critical Habitat" means those areas that support rare, threatened, or endangered species or serve as sensitive spawning and rearing areas for aquatic life as designated by the U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration-Fisheries according to the Endangered Species Act (16 U.S. Code § 1531).

(15) "Daily Mean" for dissolved oxygen means the numeric average of an adequate number of data to describe the variation in dissolved oxygen concentration throughout a day, including daily maximums and minimums. For calculating the mean, concentrations in excess of 100 percent of saturation are valued at the saturation concentration.

(16) "Department" or "DEQ" means the Oregon State Department of Environmental Quality.

(17) "Designated Beneficial Use" means the purpose or benefit to be derived from a water body as designated by the Water Resources Department or the Water Resources Commission.

(18) "DO" means dissolved oxygen.

(19) "Ecological Integrity" means the summation of chemical, physical, and biological integrity capable of supporting and maintaining a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

(20) "Epilimnion" means the seasonally stratified layer of a lake or reservoir above the metalimnion; the surface layer.

(21) "Erosion Control Plan" means a plan containing a list of best management practices to be applied during construction to control and limit soil erosion.

(22) "Estuarine Waters" means all mixed fresh and oceanic waters in estuaries or bays from the point of oceanic water intrusion inland to a line connecting the outermost points of the headlands or protective jetties.

(23) "High Quality Waters" means those waters that meet or exceed levels necessary to support the propagation of fish, shellfish and wildlife, recreation in and on the water, and other designated beneficial uses.

(24) "Hypolimnion" means the seasonally stratified layer of a lake or reservoir below the metalimnion; the bottom layer.

(25) "Industrial Waste" means any liquid, gaseous, radioactive, or solid waste substance or a combination of them, resulting from any process of industry, manufacturing, trade, or business, or from developing or recovering any natural resources.

(26) "In Lieu Fee" means a fee a jurisdiction collects in lieu of requiring construction of onsite stormwater quality control facilities.

(27) "Intergravel Dissolved Oxygen" (IGDO) means the concentration of oxygen measured in the water within the stream bed gravels. Measurements should be taken within a limited time period before fry emerges.

(28) "Jurisdiction" means any city or county agency in the Tualatin River and Oswego Lake subbasin that regulates land development activities within its boundaries by approving plats or site plans or issuing permits for land development.

(29) "Land Development" means any human-induced change to improved or unimproved real estate including, but not limited to, construction, installation, or expansion of a building or other structure, land division, drilling, or site alteration, such as land surface mining, dredging, grading, construction of earthen berms, paving, improvements for use as parking, or storage, excavation, or clearing.

(30) "Load Allocation" or "LA" means the portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading that may range from reasonably accurate estimates to gross allotments depending on the availability of data and appropriate techniques for predicting loading. Whenever possible, natural and nonpoint source loads should be distinguished.

(31) "Loading Capacity" or "LC" means the greatest amount of loading that a water body can receive without violating water quality standards.

(32) "Low Flow Period" means the flows in a stream resulting primarily from groundwater discharge or base flows augmented from lakes and storage projects during the driest period of the year. The dry weather period varies across the state according to climate and topography. Wherever the low flow period is indicated in Water Quality Management Plans, this period

has been approximated by the inclusive months. Where applicable in a waste discharge permit, the low flow period may be further defined.

(33) "Managed Lakes" refers to lakes in which hydrology is managed by controlling the rate or timing of inflow or outflow.

(34) "Marine Waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of the State of Oregon.

(35) "mg/l" or "mg/L" means milligrams per liter.

(36) "Metalimnion" means the seasonal, thermally stratified layer of a lake or reservoir that is characterized by a rapid change in temperature with depth and that effectively isolates the waters of the epilimnion from those of the hypolimnion during the period of stratification; the middle layer.

(37) "Migration Corridors" mean those waters that are predominantly used for salmon and steelhead migration during the summer and have little or no anadromous salmonid rearing in the months of July and August. Migration corridors are designated in Tables 101B and 121B and Figures 151A, 170A, 300A and 340A under OAR 340-041-0101 to 340-041-0340.

(38) "Minimum" for dissolved oxygen means the minimum recorded concentration including seasonal and diurnal minimums.

(39) "Monthly (30-day) Mean Minimum" for dissolved oxygen means the minimum of the 30 consecutive-day floating averages of the calculated daily mean dissolved oxygen concentration.

(40) "Natural Conditions" means conditions or circumstances affecting the physical, chemical, or biological integrity of a water of the state that are not influenced by past or present anthropogenic activities. Disturbances from wildfire, floods, earthquakes, volcanic or geothermal activity, wind, insect infestation and diseased vegetation are considered natural conditions.

(41) "Natural Thermal Potential" means the determination of the thermal profile of a water body using best available methods of analysis and the best available information on the site-potential riparian vegetation, stream geomorphology, stream flows and other measures to reflect natural conditions.

(42) "Nonpoint Sources" means any source of water pollution other than a point source. Generally, a nonpoint source is a diffuse or unconfined source of pollution where wastes can either enter into waters of the state or be conveyed by the movement of water into waters of the state.

(43) "Ocean Waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of Oregon.

(44) "Outstanding Resource Waters" means waters designated by the EQC where existing high quality waters constitute an outstanding state or national resource based on their extraordinary water quality or ecological values or where special water quality protection is needed to maintain critical habitat areas.

(45) "Pollutant Minimization Plan" or "PMP" means a structured set of activities to improve processes and pollutant controls that will prevent and reduce pollutant loadings.

(46) "Pollution" means such contamination or other alteration of the physical, chemical, or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any water of the state that either by itself, or in connection with any other substance present, can reasonably be expected to create a public nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare, to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wildlife, fish, other aquatic life or the habitat thereof.

(47) "Point Source" means a discernible, confined, and discrete conveyance including, but not limited to, a pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or leachate collection system from which pollutants are or may be discharged. Point source does not include agricultural storm water discharges and return flows from irrigated agriculture.

(48) "Public Water" means the same as "waters of the state."

(49) "Public Works Project" means any land development conducted or financed by a local, state, or federal governmental body.

(50) "Reserve Capacity" means that portion of a receiving stream's loading capacity that has not been allocated to point sources or to nonpoint sources and natural background as waste load allocations or load allocations, respectively. The reserve capacity includes that loading capacity that has been set aside for a safety margin and is otherwise unallocated.

(51) "Resident Biological Community" means aquatic life expected to exist in a particular habitat when water quality standards for a specific ecoregion, basin or water body are met. This must be established by accepted biomonitoring techniques.

(52) "Salmon" means chinook, chum, coho, sockeye and pink salmon.

(53) "Salmon and Steelhead Spawning Use" means waters that are or could be used for salmon and steelhead spawning, egg incubation, and fry emergence. These uses are designated on the following subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 130B, 151B, 160B, 170B, 220B, 230B, 271B, 286B, 300B, 310B, 320B, and 340B.

(54) "Salmon and Trout Rearing and Migration Use" means thermally suitable rearing habitat for salmon, steelhead, rainbow trout, and cutthroat trout as designated on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A.

(55) "Salmonid or Salmonids" means native salmon, trout, mountain whitefish and char including bull trout. For purposes of Oregon water quality standards, salmonid does not include brook or brown trout because they are introduced species.

(56) "Secondary Treatment" means the following depending on the context:

(a) For sewage wastes, secondary treatment means the minimum level of treatment mandated by U.S. Environmental Protection Agency regulations under Public Law 92-500.

(b) For industrial and other waste sources, secondary treatment means control equivalent to best practicable treatment.

(57) "Seven-Day Average Maximum Temperature" means a calculation of the average of the daily maximum temperatures from seven consecutive days made on a rolling basis.

(58) "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments, or other places, together with such groundwater infiltration and surface water as may be present. The admixture with sewage of industrial wastes or wastes, as defined in this rule, may also be considered "sewage" within the meaning of this division.

(59) "Short-Term Disturbance" means a temporary disturbance of six months or less when water quality standards may be violated briefly but not of sufficient duration to cause acute or chronic effects on beneficial uses.

(60) "Spatial Median" means the value that falls in the middle of a data set of multiple intergravel dissolved oxygen (IGDO) measurements taken within a spawning area. Half the samples should be greater than and half the samples should be less than the spatial median.

(61) "SS" means suspended solids.

(62) "Stormwater Quality Control Facility" means any structure or drainage way designed, constructed and maintained to collect and filter, retain, or detain surface water runoff, during and after a storm event, for the purpose of water quality improvement. It may also include, but is not be limited to, existing features such as wetlands, water quality swales and ponds maintained as stormwater quality control facilities.

(63) "Subbasin" means a fourth-field hydrologic unit as identified by the U.S. Geological Survey.

(64) "Summer" means June 1 through September 30 of each calendar year.

(65) "Threatened or Endangered Species" means aquatic species listed as either threatened or endangered under the federal Endangered Species Act (16 U.S. Code § 1531 et seq., and Title 50 of the Code of Federal Regulations).

(66) "Total Maximum Daily Load (TMDL)" means the sum of the individual waste load allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

(67) "Toxic Substance" means those pollutants or combinations of pollutants, including disease-causing agents, that, after introduction to waters of the state and upon exposure, ingestion, inhalation or assimilation either directly from the environment or indirectly by ingestion through food chains, will cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations in any organism or its offspring.

(68) "Wasteload Allocation" or "WLA" means the portion of a receiving water's loading capacity allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.

(69) "Warm-Water Aquatic Life" means the aquatic communities that are adapted to warm-water conditions and do not contain either cold- or cool-water species.

(70) "Wastes" means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances that may cause or tend to cause pollution of any water of the state.

(71) "Water Quality Limited" means one of the following:

(a) A receiving stream that does not meet narrative or numeric water quality criteria during the entire year or defined season even after standard technology is implemented;

(b) A receiving stream that achieves and is expected to continue to achieve narrative or numeric water quality criteria but uses higher than standard technology to protect beneficial uses;

(c) A receiving stream for which there is insufficient information to determine whether water quality criteria are being met with higher-than-standard treatment technology or a receiving stream that would not be expected to meet water quality criteria during the entire year or defined season without higher than standard technology.

(72) "Water Quality Standards Variance," or "WQS variance" means a time-limited designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflects the highest attainable condition during the term of the WQS variance.

(73) "Water Quality Swale" means a natural depression or wide, shallow ditch used to temporarily store, route, or filter runoff for the purpose of improving water quality.

(74) "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private, except those private waters that do not combine or effect a junction with natural surface or underground waters, that are located wholly or partially within or bordering the state or within its jurisdiction.

(75) "Weekly (seven-day) Mean Minimum" for dissolved oxygen means the minimum of the seven consecutive-day floating average of the calculated daily mean dissolved oxygen concentration.

(76) "Weekly (seven-day) Minimum Mean" for dissolved oxygen means the minimum of the seven consecutive-day floating average of the daily minimum concentration. For application of the criteria, this value is the reference for diurnal minimums.

(77) "Without Detrimental Changes in the Resident Biological Community" means no loss of ecological integrity when compared to natural conditions at an appropriate reference site or region.

Statutory/Other Authority: ORS 468.020, 468B.010, 468B.015, 468B.035 & 468B.048

Statutes/Other Implemented: ORS 468B.035 & 468B.048

History:

DEQ 1-2015, f. & cert. ef. 1-7-15

DEQ 3-2012, f. & cert. ef. 5-21-12

DEQ 2-2007, f. & cert. ef. 3-15-07

DEQ 3-2004, f. & cert. ef. 5-28-04

DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0059

Variances

(1) Applicability. Subject to the requirements and limitations set out in sections (2) through (7) below, DEQ or the EQC may grant a water quality standards variance where the discharger or DEQ demonstrates that it is not feasible to attain the designated use and criterion during the term of the variance because of one of the factors listed in subsection (2)(b) of this rule. The director may grant an individual discharger variance and the commission may grant a multiple discharger variance or a water body variance. All water

quality standards variances are subject to EPA approval. The variance may be used only for the purpose of establishing NPDES permit limits and requirements under CWA Section 301(b)(1)(C) or for issuing certifications under CWA Section 401. The underlying designated use and criterion otherwise remains in effect.

(2) Conditions to Grant a Variance. Before the EQC or DEQ may grant a variance, it must determine that:

(a) Attaining the designated use and criterion during the term of the variance is not feasible for one or more of the following reasons:

(A) Naturally occurring pollutant concentrations prevent the attainment of the use;

(B) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges to enable uses to be met without violating state water conservation requirements;

(C) Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;

(D) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way which would result in the attainment of the use;

(E) Physical conditions related to the natural features of the waterbody, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality preclude attainment of aquatic life protection uses;

(F) Controls more stringent than those required by sections 301(b) and 306 of the federal Clean Water Act would result in substantial and widespread economic and social impact; or

(G) Actions necessary to facilitate lake, wetland, or stream restoration through dam removal or other significant reconfiguration activities preclude attainment of the designated use and criterion while the actions are being implemented;

(b) The effluent limit sufficient to meet the underlying designated use and criterion cannot be attained by implementing technology-based effluent limits required under sections 301(b) and 306 of the federal Clean Water Act.

(c) The requirements that apply throughout the term of the water quality standards variance will not result in lowering the currently attained ambient water quality, unless the variance is needed for restoration activities as specified in paragraph (2)(a)(G) of this rule.

(3) Variance Duration and Re-evaluation.

(a) The duration of a variance must only be as long as necessary to achieve the highest attainable condition as described in section (5) of this rule.

(b) The DEQ order or EQC rule will specify the duration of the variance.

(c) If the duration of the variance is less than the term of the NPDES permit, the permittee must comply with the specified effluent limitation sufficient to meet the underlying water quality standard when the variance expires. The permit will include the date the variance and corresponding interim effluent limit will expire.

(d) If the term of the variance exceeds five years, DEQ will re-evaluate the highest attainable condition using all existing and readily available information at least every five years. DEQ will specify the re-evaluation frequency in the variance. Following public input, DEQ will submit its re-evaluation to EPA within 30 days of completion. If DEQ does not submit the re-evaluation to EPA within the specified timeline, the variance will no longer be the applicable water quality standard until DEQ completes the re-evaluation and submits it to EPA.

(4) Variance Submittal Requirements.

(a) To request an individual variance, a permittee must submit the following information to DEQ:

(A) The specific pollutant, discharger, and receiving waterbody to which the variance will apply;

(B) A demonstration that attaining the designated use and criterion for the specific pollutant is not feasible for the requested duration of the variance based on one of the factors found in subsection (2)(a) of this rule;

(C) A description of treatment or alternative options considered to meet permit limits based on the applicable underlying water quality criterion, and a description of why these options are not technologically, economically, or otherwise feasible;

(D) Sufficient water quality data and analyses to characterize ambient and discharge water pollutant concentrations and determine the Highest Attainable Condition, as required in section (5) of this rule;

(E) If the highest attainable condition for the variance is consistent with paragraph (5)(a)(C) of this rule, a proposed pollutant minimization plan covering the term of the variance that includes actions the permittee(s) will take that will result in progress toward meeting the underlying water quality standard; and

(F) If the discharger is a publicly owned treatment works, a demonstration of the jurisdiction's legal authority, such as a sewer use ordinance, to regulate the pollutant for which the variance is sought. The jurisdiction's legal authority must be sufficient to control

potential sources of that pollutant that discharge into the jurisdiction's sewer collection system.

(b) To be eligible for any multiple discharger variance or waterbody variance, a permittee must submit all the information required in the specific multiple discharger or waterbody variance rule.

(5) Highest Attainable Condition. The highest attainable condition is a quantifiable expression of one of the following:

(a) For individual or multiple discharger WQS variances:

(A) The highest attainable interim criterion; or

(B) The interim effluent condition that reflects the greatest pollutant reduction achievable; or

(C) If no additional feasible pollutant control technology can be identified, the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State grants the WQS variance, and adoption and implementation of a pollutant minimization plan.

(b) For WQS variances applicable to a waterbody or waterbody segment:

(A) The highest attainable interim use and interim criterion; or

(B) If no additional feasible pollutant control technology can be identified, the interim use and interim criterion that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a pollutant minimization plan.

(c) For any WQS variance that applies to a waterbody or waterbody segment, supporting documentation will identify and document any cost-effective and reasonable best management practices for nonpoint source controls related to the pollutant(s) or water quality parameter(s) and waterbody or waterbody segment(s) specified in the WQS variance that could be implemented to make progress towards attaining the underlying designated use and criterion. DEQ will provide public notice and comment for any such documentation.

(d) In any subsequent WQS variance for a waterbody or waterbody segment, DEQ will document whether and to what extent best management practices for nonpoint source controls were implemented to address the pollutant(s) or water quality parameter(s) subject to the WQS variance and the water quality progress achieved.

(6) Variance Permit Conditions. DEQ must establish and incorporate into the discharger's NPDES permit all conditions necessary to implement an approved variance in lieu of the underlying water quality standard, so long as the variance remains effective. The permit must include, at a minimum, the following requirements:

(a) A permit limit or requirement deriving from the highest attainable effluent condition or highest attainable use and criterion specified in the variance, including any updated highest attainable effluent condition based on a five year re-evaluation;

(b) For variances expressing the highest attainable condition per section 5(a)(C) or 5(b)(B) of this rule, a requirement to implement the Pollutant Minimization Program included in the applicable variance ;

(c) Any studies, effluent monitoring, or other monitoring necessary to ensure compliance with the conditions of the variance; and

(d) An annual progress report to DEQ describing the results of any required studies or monitoring during the reporting year, and identifying the pollutant reduction activities completed and any impediments to reaching any specific milestones stated in the variance.

(7) Public Input and Notification Requirements.

(a) If DEQ proposes to grant a variance, it must provide public notice of the proposed variance and accept public comment. The public notice may be coordinated with the public notification of a draft NPDES permit or draft 401 certification that would rely on the variance;

(b) If DEQ is required to re-evaluate the highest attainable condition consistent with (3)(d) of this rule, DEQ will obtain public input on the re-evaluation prior to submitting the re-evaluation to EPA. The specific method of obtaining public input will be documented in the variance.

(c) DEQ will publish a list of all variances approved under this rule on its website. DEQ will add newly approved variances to this list within 30 days of their effective date. The list will identify:

(A) The effective date and duration of the variance;

(B) The facility or facilities;

(C) The pollutant(s) or water quality parameter(s);

(D) The waters to which the variance applies;

(E) The underlying designated use and criterion for the waterbody;

(F) The highest attainable condition specified in the variance;

(G) How to obtain additional information about the variance.

Statutory/Other Authority: ORS 468.020, 468B.010, 468B.020, 468B.035 & 468B.110

Statutes/Other Implemented: ORS 468B.048

History:

DEQ 10-2011, f. & cert. ef. 7-13-11

340-041-0345

Basin-Specific Criteria (Willamette): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) All basin waters, except main stem Columbia River and Cascade lakes: 6.5 to 8.5;

(b) Cascade lakes above 3,000 feet altitude: 6.0 to 8.5.

(2) Total Dissolved Solids. Guide concentrations listed may not be exceeded unless DEQ specifically authorizes otherwise upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0340: Willamette River and Tributaries — 100.0 mg/l.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) Willamette River and tributaries except Tualatin River Subbasin:

(A) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and, unless DEQ otherwise specifically authorizes, operating all waste treatment and control facilities at maximum practical efficiency and effectiveness so as to minimize waste discharges to public waters.

(b) Main stem Tualatin River from mouth to Gaston (river mile 0 to 65):

(A) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to April 30): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control.

(c) Main stem Tualatin River above Gaston (river mile 65) and all tributaries to the Tualatin River: Treatment resulting in monthly average effluent concentrations not to exceed 5 mg/l of BOD and 5 mg/l of SS or equivalent control;

(d) Tualatin River Subbasin: The dissolved oxygen level in the discharged effluents may not be less than 6 mg/l;

(4) Nonpoint source pollution control in the Tualatin River subbasin and lands draining to Oswego Lake:

(a) Subsection (5)(b) of this rule applies to any new land development within the Tualatin River and Oswego Lake subbasins except those developments with application dates before January 1, 1990. The application date is the date on which the local jurisdiction receives a complete application for development approval as the local jurisdiction's regulations require;

(b) For land development, no jurisdiction in these subbasins may approve any preliminary plat, site plan, permit, or public works project unless the conditions of the plat permit or plan approval include an erosion control plan containing methods or interim facilities, or both, to be constructed or used concurrently with land development and to be operated during construction to control the discharge of sediment in the stormwater runoff. The erosion control plan must include the following elements:

(A) Protection techniques to control soil erosion and sediment transport to less than one ton per acre per year, as calculated using the Natural Resources Conservation Service's Universal Soil Loss Equation or other equivalent methods (see Figures 1 to 6 in Appendix 1 for examples). The erosion control plan must include temporary sedimentation basins or other sediment control devices when, because of steep slopes or other site specific considerations, other on-site sediment control methods will not likely keep the sediment transport to less than one ton per acre per year. The local jurisdictions may establish additional requirements for meeting an equivalent degree of control. Any sediment basin constructed must be sized using 1.5 feet minimum sediment storage depth plus 2.0 feet storage depth above for a settlement zone. The storage capacity of the basin must be sized to store all of the sediment that is likely to be transported and collected during construction while the erosion potential exists. When the erosion potential has been removed, the sediment basin, or other sediment control facilities, can be removed and the site restored as per the final site plan. All sediment basins must be constructed with an emergency overflow to prevent erosion or failure of the containment dike; or

(B) A soil erosion control matrix derived from and consistent with the universal soil equation the jurisdiction or DEQ approves.

(c) The Director may modify Appendix 1 as necessary without approval from the Environmental Quality Commission. The Director may modify Appendix 1 to simplify it and to make it easier for people to apply;

(d) Subsection (5)(e) of this rule applies to any new land development within the Tualatin River and Oswego Lake subbasins, except:

(A) Those developments with application dates before June 1, 1990. The application date is the date on which the local jurisdiction receives a complete application for development approval as that jurisdiction's regulations require;

(B) One and two family dwellings on existing lots of record;

(C) Sewer lines, water lines, utilities, or other land development that will not directly increase nonpoint source pollution once construction has been completed and the site is either restored to, or not altered from, its approximate original condition;

(D) If the Environmental Quality Commission determines that a jurisdiction does not need to require stormwater quality control facilities for new development;

(E) When a jurisdiction adopts ordinances that provide for a stormwater quality program equivalent to subsection (e) of this section. Ordinances adopted to implement equivalent programs must:

(i) Encourage on-site retention of stormwater, require phosphorus removal equivalent to the removal efficiency required by subsection (e) of this section, provide for adequate operation and maintenance of stormwater quality control facilities, and require financial assurance, or equivalent security, that assures construction of the stormwater quality control facilities the ordinance requires;

(ii) If the ordinances provide for exemptions other than those allowed for by paragraphs (B) and (C) of this subsection, the ordinances must provide for collecting in-lieu fees, or other equivalent mechanisms, that assure financing for, and construction of, associated, off-site stormwater quality control facilities. No exemption may be allowed if the jurisdiction is not meeting an approved schedule for identifying location of the off-site stormwater quality control facility to serve the development requesting an exemption.

(e) For new development, no jurisdiction may approve any plat, site plan, building permit or public works project in these subbasins unless the conditions of the plat, permit, or plan approval require permanent stormwater quality control facilities to control phosphorus loadings associated with stormwater runoff from the development site. Jurisdictions must encourage and provide preference to techniques and methods that prevent and minimize pollutants from entering the storm and surface water systems. Permanent stormwater quality control facilities for phosphorus must meet the following requirements:

(A) The stormwater quality control facilities must be designed to achieve a phosphorus removal efficiency as calculated from the following equation:

$$R_p = 100 - 24.5/R_v$$

Where:

R_p = Required phosphorus removal efficiency

R_v = Average site runoff coefficient

The average site runoff coefficient can be calculated from the following equation:

$$R_v = (0.7 \times A1) + (0.3 \times A2) + (0.7 \times A3) + (0.05 \times A4) + (A5 \times 0.0)$$

Where:

A1 = fraction of total area that is paved streets with curbs and that drain to storm sewers or open ditches.

A2 = fraction of total area that is paved streets that drain to water quality swales located on site.

A3 = fraction of total area that is building roof and paved parking that drains to storm sewers.

A4 = fraction of total area that is grass, trees and marsh areas.

A5 = fraction of total area for which runoff will be collected and retained on site with no direct discharge to surface waters.

(B) A jurisdiction may modify the equation for R_v to allow applying additional runoff coefficients associated with land surfaces not identified in this subsection. DEQ must be notified in writing whenever an additional runoff coefficient is used. The use of additional runoff coefficients must be based on scientific data. The jurisdiction must discontinue using an additional runoff coefficient if DEQ objects to its use in writing within ten days of receiving notification;

(C) The stormwater quality control facilities must be designed to meet the removal efficiency specified in paragraph (A) of this subsection for a mean summertime storm event totaling 0.36 inches of precipitation with an average return period of 96 hours;

(D) The removal efficiency specified in paragraph (A) of this subsection specify only design requirements and are not intended to be used as a basis for performance evaluation or compliance determination of the stormwater quality control facility installed or constructed pursuant to this subsection;

(E) A jurisdiction may approve stormwater quality control facilities this subsection requires only if the following are met:

(i) For developments larger than one acre, the plat or site plan must include plans and a certification prepared by an Oregon registered, professional engineer, that the proposed stormwater control facilities have been designed in accordance with criteria expected to achieve removal efficiencies for total phosphorus required by paragraph (A) of this subsection;

(ii) The plat or site plan must be consistent with the area and associated runoff coefficients used to determine the removal efficiency required in paragraph (A) of this subsection;

(iii) The developer must provide a financial assurance, or equivalent security acceptable to the jurisdiction, with the jurisdiction that assures that the stormwater control facilities are constructed according to the plans established in the plat or site plan approval. Where practicable, the jurisdiction must combine the financial assurance this rule requires with other financial assurance requirements imposed by the jurisdiction;

(iv) Each jurisdiction that constructs or authorizes construction of permanent stormwater quality control facilities must file with DEQ an operation and maintenance plan for the stormwater quality control facilities within its jurisdiction. The operation and maintenance plan must allow for public or private ownership, operation, and maintenance of individual permanent stormwater quality control facilities. The jurisdiction or private operator must operate and maintain the permanent stormwater control facilities as the operation and maintenance plan specifies.

(f) Except as paragraph (D) of this subsection requires, the jurisdiction may grant an exception to subsection (e) of this section if the jurisdiction chooses to adopt and, on a case-by-case basis, impose a one time in-lieu fee. The fee will be an option where, because of the size of the development, topography, or other factors, the jurisdiction determines that the construction of on-site permanent stormwater treatment systems is impracticable or undesirable:

(A) The in-lieu fee will be based upon a reasonable estimate of the current, prorated cost for the jurisdiction to provide stormwater quality control facilities for the land development being assessed the fee. Estimated costs include costs associated with off-site land and rights-of-way acquisition, design, construction, and construction inspection;

(B) The jurisdiction must deposit any in-lieu fees collected under this paragraph in an account dedicated only to reimbursing the jurisdiction for expenses related to off-site land and rights-of-way acquisition, design, construction, and construction inspection of stormwater quality control facilities;

(C) The ordinance establishing the in-lieu fee must include provisions that reduce the fee in proportion to the ratio of the site's average runoff coefficient (R_v), as established according to the equation in paragraph (6)(e)(A) of this rule;

(D) No new development may be granted an exemption if the jurisdiction is not meeting an approved time schedule for identifying the location for the off-site stormwater quality control facilities that would serve that development.

(g) DEQ may approve other mechanisms that allow jurisdictions to grant exemptions to new development. DEQ may only approve those mechanisms that assure financing for off-site stormwater quality control facilities and that encourage or require on-site retention where feasible;

(h) Subsection (b) of this section applies until a jurisdiction adopts ordinances that provide for a program equivalent to subsection (b) of this section, or the Environmental Quality

Commission determines such a program is not necessary when it approves the jurisdiction's program plan required by OAR 340-041-0470(2)(g).

(5) In order to improve water quality within the Yamhill River subbasin to meet the existing water quality standard for pH, the following special rules for total maximum daily loads, waste load allocations, load allocations and program plans are established:

(a) After wastewater control facilities and program plans the EQC approved under this rule are completed, and no later than June 30, 1994, no activities may be allowed, and no wastewater may be discharged to the Yamhill River or its tributaries, without the EQC's authorization, that cause the monthly median concentration of total phosphorus to exceed 70 ug/l as measured during the low flow period between approximately May 1 and October 31 of each year;

[NOTE: DEQ may condition precise dates for complying with this rule on the receiving water's physical conditions (i.e., flow temperature). DEQ may specify the compliance dates in individual permits or memorandums of understanding. DEQ may consider design flows, river travel times, and other relevant information, when establishing the specific conditions it inserts in the permits or memorandums of understanding.]

(b) Within 90 days of adoption of these rules, the Cities of McMinnville and Lafayette must submit a program plan and time schedule to DEQ describing how and when they will modify their sewerage facility to comply with this rule;

(c) The commission will review and approve final program plans. The commission may define alternative compliance dates as program plans are approved. All proposed final program plans must be subject to public hearing before the commission considers them for approval;

(d) DEQ will, within 60 days of adoption of these rules, distribute initial waste load allocations and load allocations to the point and nonpoint sources in the basin. These allocations are considered interim and may be redistributed based upon the conclusions of the approved program plans.

(6) Multiple Discharger Variance for Mercury. The following rule is a multiple discharger variance to the fish-tissue based human health criterion for methylmercury. The variance applies to the following facilities:

Albany-Millersburg WRF (Willamette River); Canby STP (Willamette River); Cascade Pacific – Halsey Mill (Willamette River); City of Molalla (Molalla River); City of Portland Tryon Creek WWTP (Willamette River); City of Sandy (Tickle Creek); Clean Water Services Durham STP (Tualatin River); Clean Water Services Forest Grove STP (Tualatin River), Clean Water Services Hillsboro STP (Tualatin River), Clean Water Services Rock Creek STP (Tualatin River); Corvallis STP (Willamette River), Cottage Grove STP (Coast Fork Willamette River); Dallas STP (Rickreall Creek); Georgia-Pacific Halsey Mill (Willamette River); Gervais STP (Pudding River); International Paper Springfield Paper Mill

(McKenzie River); Kellogg Creek WWTP (Willamette River); Lebanon WWTP (South Santiam River); McMinnville WRF (South Yamhill River); Metropolitan Wastewater Management Commission Eugene/Springfield STP (Willamette River); Newberg STP (Willamette River); Oak Lodge Services WRF (Willamette River); Saint Helens/Boise Cascade STP (Multnomah Channel); Salem Willow Lake STP (Willamette River); Siltronic Corporation (Willamette River); Silvertown STP (Silver Creek); Stayton STP (North Santiam River); Sweet Home STP (South Santiam River); Teledyne Wah Chang (Willamette River); Tri-City Service District – Blue Heron (Willamette River); Tri-City Water Pollution Control Plant (Willamette River); West Linn Paper Company (Willamette River); Westrock, Newberg Mill (Willamette River); Wilsonville STP (Willamette River); Woodburn WWTP (Pudding River);

The variance will also apply to any of the following facilities for which DEQ would otherwise be required to establish mercury effluent limits during the term of the variance:

Amity STP (Salt Creek); Aumsville STP (Beaver Creek); Brooks STP (Willamette River); Brownsville STP (Calapooia River); Carlton STP (North Yamhill River); City of Estacada (Clackamas River); City of Scappoose (Multnomah Channel); Coburg WWTP (Unnamed tributary to Muddy Creek); Creswell STP (Unnamed tributary to Camas Swale Creek); Dayton STP (Yamhill River); Dundee STP (Willamette River); Halsey STP (Muddy Creek); Harrisburg Lagoon Treatment Plant (Willamette River); Hubbard STP (Mill Creek); Independence STP (Middle Willamette River); Jefferson STP (Santiam River); Junction City STP (Flat Creek); Lafayette STP (Yamhill River); Lane Community College (Russel Creek); Lowell STP (Middle Fork Willamette River); Monmouth STP (Willamette River); Mt. Angel STP (Pudding River); Oakridge STP (Middle Fork Willamette River); Philomath STP (Mary's River); Tangent STP (Calapooia River); Sheridan STP (South Yamhill River); USDA Forest Service (Clackamas River); Veneta STP (Long Tom River); Willamina STP (South Yamhill River); Yamhill STP (North Yamhill River).

(a) Findings. The EQC finds the following:

(A) The fishing use and fish-tissue based human health criterion for methyl-mercury cannot be attained within the next 20 years due to mercury from atmospheric deposition and naturally occurring mercury in native soils. Neither the sources of mercury nor the processes by which the mercury is transported to waterbodies can be remedied to meet the underlying designated use and criterion within the next 20 years.

(B) There is no currently feasible mercury treatment technology that would result in achieving water quality-based effluent limits based on the human health criterion for mercury.

(C) The requirements of the variance will not result in degrading the currently attained ambient water quality for methyl-mercury in the Willamette Basin.

(b) Term of the variance. The term of this variance is 20 years from the date of EPA approval.

(c) Application requirements. To implement the variance, a facility must provide to DEQ the following information:

(A) All mercury effluent data from the previous five years, including a minimum of two years of quarterly effluent data.

(B) A facility-specific mercury minimization program with minimum elements described in subsection (6)(f) of this rule for municipal facilities or subsection (6)(g) of this rule for industrial facilities.

(d) Highest attainable condition. Permit requirements will reflect the highest attainable condition specified in this variance. The highest attainable condition for this variance is the level currently achievable, as described in section (f) below, for all dischargers, and a requirement to develop and implement a mercury minimization program with elements described in subsection (6)(f) of this rule for municipal dischargers and subsection (6)(g) of this rule for industrial dischargers.

(e) Highest attainable condition – level currently achievable (LCA). The highest attainable condition for all facilities covered under this variance will include the level currently achievable, which is a quantifiable expression of the effluent condition achievable with the pollutant control technologies in place at the time this variance is granted when those technologies are well maintained and operated. The LCA for this variance is the 95th percentile value of recent (e.g., two to five years) total mercury effluent data or a previously applicable LCA, whichever is lower.

(f) Highest attainable condition – mercury minimization program for municipal dischargers. The highest attainable condition for municipal dischargers will include implementing a mercury minimization program covering the term of the variance, which must contain the following minimum elements:

(A) A monitoring plan to include influent, effluent and biosolids monitoring;

(B) Regulation of dental offices to ensure installation and maintenance of amalgam separators, including inspection of dental facilities for proper management and disposal of dental waste;

(C) Identification of mercury-containing materials at facilities and offices each municipal wastewater treatment facility operates and implementation of any recommendations for removing mercury-containing materials;

(D) Identification and inspection of commercial laboratories, schools and healthcare facilities that may have mercury and providing recommendations and outreach materials to these facilities;

(E) Distribution of outreach materials to commercial and residential sectors;

(F) Evaluation of new facilities as potential sources of mercury, regulatory oversight of such sources of mercury under the municipality's pre-treatment program where such sources are significant industrial users, and outreach to provide recommendations on activities that would reduce mercury in the facilities' discharges. Priority facilities should include those in the timber, paper, glass, clay, cement, concrete, gypsum, primary and fabricated metal, and electronic instrument sectors;

(G) Cleanup of legacy mercury from collection systems;

(H) Facility-specific activities to reduce mercury loading into the waterbody. Ensure the existing treatment system is well maintained and operated in order to maximize the reduction of mercury. Facility activities may also include cost-effective and reasonable best management practices for nonpoint source controls under the control of the discharger that would make progress towards attaining the underlying designated use and criterion; and

(I) If a facility has accomplished all activities within its control, the facility may implement or fund mercury reduction activities outside the discharger's control that will make progress toward attaining the underlying designated use and criterion.

(g) Highest attainable condition – mercury minimization program for industrial dischargers. The highest attainable condition for industrial dischargers will include implementing a mercury minimization program covering the term of the variance, with the following minimum elements:

(A) A monitoring plan to include influent, effluent and biosolids monitoring;

(B) Identification of mercury-containing materials used in the facility, offices and testing laboratories the discharger operates, and developing and implementing recommendations for using substitute materials with less or no mercury;

(C) Identification of other potential sources of mercury within the facility and developing and implementing recommendations for reducing these sources;

(D) Identification of other activities within discharger's control discharger to reduce mercury loading into the waterbody. Ensure the existing treatment system is well maintained and operated in order to maximize the reduction of mercury. Facility activities may also include cost-effective and reasonable best management practices for nonpoint source controls under the control of the discharger that would make progress towards attaining the underlying designated use and criterion; and

(E) If a facility has accomplished all activities within its control, the facility may implement or fund mercury reduction activities outside the discharger's control that will make progress toward attaining the underlying designated use and criterion.

(h) State mercury reduction activities in Oregon. The state implements numerous programs that will, over time, including over the 20-year term of this variance, reduce mercury loads to Willamette Basin waterbodies, including such programs as:

(A) Oregon's Dental Amalgam Law and associated practices as required under ORS 679.520 and ORS 679.525, and subsequent federal regulations.

(B) Airborne toxic contaminant reduction from existing or newly permitted industrial sources through the Cleaner Air Oregon program and other DEQ Air Quality permitting requirements.

(C) DEQ coordination with the Oregon Department of Forestry on implementing the Forest Practices Act.

(D) DEQ coordination with the Oregon Department of Agriculture on implementing the Oregon Agriculture Water Quality Management Act.

(E) DEQ issuance of general discharge permits, such as Phase I and Phase II municipal separate storm sewer system permits, industrial stormwater permits, and suction dredge mining permits, in addition to individual wastewater discharge permits.

(F) DEQ in-water and upland remediation under state laws and rules, and coordination with US EPA on Portland Harbor, Gould, and Black Butte Mine Superfund site cleanups.

(G) Regulatory and voluntary programs to reduce or recycle products containing mercury, such as automotive light switches, thermostats, and LCD screens and monitors.

(i) Re-evaluation of the Highest Attainable Condition. DEQ will re-evaluate the highest attainable condition for this multiple discharger variance every five years from the date that EPA approves this variance. DEQ will provide a written summary of this re-evaluation to EPA within 30 days of completing the re-evaluation. If DEQ fails to submit the re-evaluation to EPA within the specified timeframe, the variance will no longer be the applicable water quality standard until DEQ completes the re-evaluation and submits it to EPA.

(A) The re-evaluation will include the following elements:

(i) A summary of the mercury reduction activities completed and an analysis of mercury reductions facilities covered under this variance have achieved, using the data and information provided in their annual reports; and

(ii) A determination of the feasibility of wastewater treatment technology to attain the water quality standard.

(B) DEQ will provide public notice on the availability of its draft re-evaluation and provide at least 30 days opportunity for the public to comment on the draft re-evaluation.

(C) Upon permit renewal for each facility covered under the variance, DEQ will update conditions in the permit based on the re-evaluation of the Highest Attainable Condition, as follows:

(i) DEQ will re-calculate each facility's level currently achievable, as described in OAR 340-041-0345(6)(e), utilizing the previous five years of data provided by each facility, at the time of their permit renewal. DEQ will adjust permit limits if the data shows that the level currently achievable is lower than the LCA in the previous permit.

(ii) DEQ will review updates to the facility's site-specific mercury minimization plan and, if necessary, request revisions to ensure that it is consistent with variance requirements.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048

Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048

History:

[DEQ 38-2018, minor correction filed 04/02/2018, effective 04/02/2018](#)

DEQ 2-2007, f. & cert. ef. 3-15-07

DEQ 17-2003, f. & cert. ef. 12-9-03

DRAFT Multiple Discharger Variance for Mercury in the Willamette Basin

January 2020

Water Quality Standards

700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5050
800-452-4011
Fax: 503-229-6762
Contact: Aron Borok

www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



State of Oregon
Department of
Environmental
Quality

This report prepared by:
Debra Sturdevant and Aron Borok, Water Quality Standards and Assessment
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232
1-800-452-4011
www.oregon.gov/deq

Contact:
Aron Borok
503-229-5050
or
Debra Sturdevant
503-229-6691

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us

Table of Contents

1.	Introduction and Background.....	4
1.1	Mercury in Fish and the Environment.....	4
1.2	Oregon’s Mercury Water Quality Standard and its Application in the Willamette Basin.....	5
1.3	Overview of variance regulations.....	5
1.4	Overview of the Proposed Variance.....	6
2.	The Need for the Variance.....	8
2.1	The methylmercury criterion for fish consumption is not currently attainable.....	9
2.2	Water Quality Based Effluent Limits for mercury are not technologically achievable.....	13
2.2.1	Mercury Levels Currently Achieved by Current Wastewater Treatment.....	13
2.2.2	Mercury Levels Achieved by Other Treatment Technologies.....	14
3.	Variance Requirements.....	17
3.1	Highest Attainable Condition.....	17
3.2	Requirements that apply throughout the term of the variance.....	21
3.2.1	Interim Effluent Condition that Reflects the Level Currently Achievable.....	21
3.2.2	Implementation of a Mercury Minimization Program.....	24
3.2.3	State Activities to Reduce Mercury Loads.....	25
3.3	Proposed term of the variance.....	28
3.4	Re-evaluation of the Highest Attainable Condition.....	28
4.	Implementation of the variance into permits.....	30
4.1	Required Information for Variance-related Permit Implementation.....	30
4.2	Variance-related permit requirements.....	30
4.2.1	Effluent limit based on the Level Currently Achievable.....	30
4.2.2	Monitoring requirements.....	31
4.2.3	Implementation of a Mercury Minimization Program.....	31
4.2.4	Annual progress reports.....	31
4.2.5	Requirements for facilities with increasing mercury effluent concentrations.....	31
4.2.6	Re-evaluation of requirements during permit renewal.....	31
5.	Bibliography.....	32

List of Tables

Table 2-1. Potential treatment technologies considered for mercury treatment..... 15
Table 2-2. Treatment capability of mercury technologies..... 16

List of Figures

Figure 2-1. Tissue sampling sites (2008-2015)..... 10
Figure 2-2. Mercury concentration (mg/kg wet weight) in skinless finfish fillets compared to total length (mm). The orange line indicates the DEQ human health criterion for methylmercury (0.04 mg/kg fish tissue). (ODEQ, 2017, p. 13, Figure 10.)..... 10
Figure 2-3. Distribution of THg Source Loads to the Stream Network (Tetra Tech, 2019)..... 11
Figure 2-4. Geometric mean of fish tissue concentrations by site. Only locations with turquoise dots would have geometric means close to the 0.04 mg/kg standard. From Eagles-Smith et al., 2016b. 12
Figure 2-5. Total Mercury Wet Deposition in 2014 (Mercury Deposition Network, 2017)..... 12
Figure 3-1. Number of Wisconsin municipal wastewater treatment systems with increasing and decreasing trends in average (left) and 4-day P99 (right) concentrations. (Wisconsin DNR)..... 18
Figure 3-2. Number of Wisconsin municipal WWTPs by 4-day P99 mercury concentrations from initial five-year period (left) to most recent five-year period (right)..... 19
Figure 3-3. Number of Wisconsin industrial wastewater treatment systems with increasing and decreasing trends in average (left) and 4-day P99 (right) concentrations..... 19
Figure 3-4. Number of Wisconsin industrial NPDES facilities by 4-day P99 mercury concentrations from initial five-year period (left) to most recent five-year period (right). 20
Figure 3-5. Influent Data from Major Wastewater Treatment Plants in Minnesota. Source: Minnesota Pollution Control Agency 20
Figure 3-6. Mercury Concentrations in Biosolids, Rock Creek Wastewater Treatment Plan. Source: Clean Water Services. 21
Figure 3-7. LCA (95th percentile) of hypothetical facility under the MDV..... 22
Figure 3-8. LCA (95th percentile) of hypothetical facility under the MDV..... 23
Figure 3-9. LCA (95th percentile) of hypothetical facility under the MDV..... 23
Figure 3-10. LCA (95th percentile) of hypothetical facility under the MDV..... 24

1. Introduction and Background

A variance is a regulatory tool under the Clean Water Act to address circumstances in which a water quality standard is not currently attainable, but it is possible to make incremental progress toward meeting the standard. A variance is a temporary designated use and criterion for a specific pollutant that applies to a specific discharger or dischargers or waterbody. Federal rules allow variances based on one of seven factors. A variance is a transparent tool to ensure dischargers make incremental progress towards achieving the water quality standard.

In cases where multiple dischargers cannot attain water quality-based effluent limits for the same pollutant and due to the same or similar reasons, DEQ may develop a multiple discharger variance. An MDV is a time-limited water quality standard that provides a streamlined process for qualified dischargers to apply for and obtain a variance. Once the U.S. Environmental Protection Agency approves the MDV, DEQ can issue permits for eligible facilities under the MDV with no additional water quality standards action.

DEQ is developing an MDV for mercury in the Willamette Basin for individual NPDES wastewater dischargers. These dischargers cannot currently meet mercury water quality based effluent limits because human-caused sources of mercury prevent attainment of the human health water quality criterion for methylmercury and removing the mercury through treatment would cause more environmental damage than removing it through source control. This document describes DEQ's justification for the MDV, variance requirements and procedures for issuing permits with variance-related conditions.

This document serves multiple purposes:

1. It supports DEQ's proposed rule amendments to the Environmental Quality Commission for adoption of the MDV and amendments to the state variance rule.
2. It serves as an explanation of the MDV and variance rule amendments to the public to support DEQ's public comment process.
3. It will serve as the supporting documentation for the MDV and rule amendments for EPA approval under the Clean Water Act.
4. It will provide information to the public and the regulated community regarding how DEQ plans to implement the MDV.

1.1 Mercury in Fish and the Environment

The following information is an excerpt from DEQ's 2019 Mercury Total Maximum Daily Load for the Willamette Basin (ODEQ 2019). Additional information on mercury and the methylation process is found in the TMDL document as well as EPA's 2001 methylmercury criteria documents¹.

Mercury in higher trophic level fish is present largely as methylmercury, which is a potent neurotoxin in humans and other vertebrates. Mercury is a pollutant of global concern due to its widespread distribution in the environment and accumulation in aquatic biota. Most releases of mercury into the environment enter the atmosphere in an inorganic form; however, almost all human exposure to mercury is to an

¹ <https://www.epa.gov/wqc/human-health-criteria-methylmercury>

organic form, methylmercury, through the consumption of contaminated fish (Eagles-Smith, et al., 2018; Munthe, et al., 2007). Mercury released into the atmosphere has a long atmospheric lifetime (~6-12 months) which allows for its widespread distribution prior to deposition (Lindberg, et al., 2007; Schroeder & Munthe, 1998). As a result, elevated levels of methylmercury in fish tissue occur even in remote ecosystems (Chetelat, et al., 2015; Fitzgerald, et al., 1998; Trip & Allan, 2000). Most of the mercury in fish originates from dietary exposure, with minimal direct uptake by fish from the water (Hall, Bodaly, Fudge, Rudd, & Rosenberg, 1997). Therefore, differences in trophic position, foraging behavior, and diet can have a large impact on how much mercury is present in a given fish species (Driscoll, et al., 2007; Eagles-Smith, et al., 2016).

1.2 Oregon's Mercury Water Quality Standard and its Application in the Willamette Basin

In 2011, Oregon adopted a fish tissue criterion for methylmercury based on a fish consumption rate of 175 grams/day to protect the health of high consumers of marine and freshwater fish and other seafood. The current human health criterion is 0.04 mg/kg methylmercury in the fish tissue. DEQ revised all the state's human health criteria based on the new fish consumption rate at that time. The EQC and interested stakeholders understood that meeting the methylmercury criterion based on this consumption rate might not be immediately attainable in some waters and that a variance might be an appropriate tool for permitted facilities.

The 2006 TMDL development generated a bio-accumulation factor (BAF) for the Willamette River Basin for several species of fish. The BAF is a value that represents the relationship between concentrations of pollutants in water and the pollutant concentration in a species of concern, and thus was used to convert fish tissue criteria value to a water column value. In addition, the TMDL developed a translator to convert the dissolved methylmercury to a total mercury in water, which is the mercury parameter typically monitored and used in permit analyses. Using these procedures, the TMDL derived water column targets for total mercury based on the BAF for the most sensitive species modeled, the Northern pikeminnow (*Ptychocheilus oregonensis*).

In 2019, during the process to revise the mercury TMDL, an EPA contractor conducted the modeling to update the water concentration value based on the methylmercury criterion of 0.04 mg/kg adopted in 2011. DEQ is updating the TMDL based on the updated target water column concentration of 0.14 ng/L total mercury. DEQ also is utilizing that concentration for determining whether a discharge could cause or contribute to an exceedance of the fish tissue criterion, in which case, a numerically based effluent limit must be included in the permit. Effluent limits calculated using this water concentration value are not currently achievable due to the limitations of current technologies.

1.3 Overview of variance regulations

A variance is a regulatory tool (40 CFR 131.14) to address circumstances where a designated use and associated criterion are not currently attainable, but it is possible to make progress toward meeting the criterion and the underlying designated use in the receiving water body. The federal regulations regarding variances, promulgated in 2015, are at 40 CFR 131.14. The Oregon regulations regarding variances are

located at OAR 340-041-0059². In addition, DEQ has published implementation procedures for variances³. DEQ is updating the state's rules to ensure they are consistent with federal regulations promulgated in 2015.

The need for a variance must be justified based on one of seven factors provided in state and federal regulations. Section 2 of this document provides the rationale for the need for the MDV for mercury.

For the MDV to be effective under the Clean Water Act, the Environmental Quality Commission must grant the variance and DEQ must submit it to EPA for approval, as it does for any change to a water quality standard. The variance must list the pollutant(s) and waterbody to which the variance applies, as well as the permittees subject to the variance. This information is included in Section 1.4.

The variance also must include the requirements that apply throughout the term of the variance. These requirements must represent the highest attainable condition of the waterbody throughout the term of the variance. These requirements are included in the rule and summarized in Section 3 of this document. DEQ's rationale for the proposed 20-year term of the variance is also included in Section 3. If the term of the proposed variance is greater than five years, federal variance regulations require states to re-evaluate the highest attainable condition at least every five years. Section 3 includes a description of the HAC re-evaluation process.

Federal rules require that any limitations and requirements necessary to implement the variance be included as enforceable conditions of the NPDES permit for permittees subject to the variance. DEQ's process for permittees to apply for coverage under this variance and how the agency will incorporate enforceable conditions necessary to implement the variance in permits, is described in Section 4.

1.4 Overview of the Proposed Variance

The proposed MDV allows DEQ to issue permits based on a time-limited standard for methylmercury in the Willamette Basin. The variance applies only to qualifying NPDES dischargers in the Willamette Basin and only for methylmercury. The underlying methylmercury criterion continues to apply for other CWA programs, such as water quality assessment and TMDLs. The variance applies to any NPDES discharger identified in the variance who submits a qualifying application to DEQ.

Designated Use

The current designated use in the Willamette Basin that cannot be attained as demonstrated in Section 2 is fishing (fish consumption).

Pollutant

The pollutant associated with this variance is methylmercury. The human health criterion that cannot be attained is 0.04 mg/kg, as measured in the fish tissue in the Willamette River Basin. The water column concentration needed to attain the fish tissue criterion is 0.14 µg/L total mercury.

Term of the variance

The term of the MDV is 20 years. See Chapter 3 for additional information.

² Oregon variance regulations are available at <https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=1458>

³ Oregon implementation procedures for variances are available at <http://www.oregon.gov/deq/Filtered%20Library/IMDVariance.pdf>

Permittees and associated receiving waters potentially subject to the variance

Permittees subject to the variance include those listed in Table 1. Once EPA approves the MDV, any discharger must submit information required by the MDV rule so that DEQ can incorporate permit conditions based on the variance.

Permittee	Receiving Waterbody
Clean Water Services – Rock Creek STP	Tualatin River
Clean Water Services – Durham STP	Tualatin River
McMinnville Water Reclamation Facility	South Yamhill River
Metropolitan Wastewater Management Commission – Eugene/Springfield STP	Willamette River
Salem Willow Lake STP	Willamette River
Kellogg Creek WWTP	Willamette River
Tri-City Water Pollution Control Plant	Willamette River
Clean Water Services – Forest Grove STP	Tualatin River
Clean Water Services – Hillsboro STP	Tualatin River
City of Portland – Tryon Creek WWTP	Willamette River
Albany-Millersburg Water Reclamation Facility	Willamette River
Corvallis STP	Willamette River
St. Helens STP/Boise Cascade	Multnomah Channel
Canby STP	Willamette River
Oak Lodge Services Water Reclamation Facility	Willamette River
Wilsonville STP	Willamette River
Dallas STP	Rickreall Creek
Lebanon WWTP	South Santiam River
Newberg STP	Willamette River
Silverton STP	Silver Creek
Woodburn WWTP	Pudding River
Cottage Grove STP	Coast Fork Willamette River
Stayton STP	North Santiam River
Sweet Home STP	South Santiam River
City of Molalla	Molalla River
City of Sandy	Salt Creek
Tri-City Service District – Blue Heron	Willamette River
West Linn Paper Company	Willamette River
Cascade Pacific – Halsey	Willamette River
Georgia-Pacific – Halsey	Willamette River
IP Springfield Paper Mill	McKenzie River
Westrock, Newberg Mill	Willamette River
Teledyne Wah Chang	Willamette River
Siltronic Corporation	Willamette River

The following permittees are also subject to the variance, at such time that DEQ requires such facilities to have effluent limits for mercury.

Permittee	Receiving Waterbody
Amity STP	Salt Creek
Aumsville STP	Beaver Creek
Brooks STP	Willamette River
Brownsville STP	Calapooia River
Carlton STP	North Yamhill River

City of Estacada	Clackamas River
City of Scappoose	Multnomah Channel
Coburg WWTP	Unnamed tributary to Muddy Creek
Creswell STP	Unnamed tributary to Camas Swale Creek
Dayton STP	Yamhill River
Dundee STP	Willamette River
Halsey STP	Muddy Creek
Harrisburg Lagoon Treatment Plant	Willamette River
Hubbard STP	Mill Creek
Independence STP	Middle Willamette River
Jefferson STP	Santiam River
Junction City STP	Flat Creek
Lafayette STP	Yamhill River
Lane Community College	Russel Creek
Lowell STP	Middle Fork Willamette River
Monmouth STP	Willamette River
Mt. Angel STP	Pudding River
Oakridge STP	Middle Fork Willamette River
Philomath STP	Mary's River
Tangent STP	Calapooia River
Sheridan STP	South Yamhill River
USDA Forest Service	Clackamas River
Veneta STP	Long Tom River
Willamina STP	South Yamhill River
Yamhill STP	North Yamhill River

Requirements of the variance

The requirements of the variance, which are the basis for permit conditions, include:

1. An interim effluent condition based on the level currently achievable (see Section 3).
2. A Mercury Minimization Program (see Section 3).
3. Re-evaluation of the HAC every five years.

2. The Need for the Variance

In order to grant a variance to a discharger, DEQ must find that it is not feasible to attain the designated use during the term of the variance because the criterion established to support the designated use is not currently attainable. Federal regulations at 40 CFR 131.14(b)(2)(i)(A) specify the factors that can be used to justify the need for a variance. DEQ is justifying the mercury MDV using Factor 3, “human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than leave in place.” This section of the report summarizes the information that supports the need for the MDV for mercury in the Willamette Basin. Section 2.1 details why human-caused conditions or sources of pollution prevent current attainment of the use and cannot be remedied during the variance term, highlighting the ongoing deposition of global airborne mercury in Oregon. Section 2.2 details why NPDES permittees cannot feasibly achieve WQBELs that would attain the methylmercury criterion during the term of the variance.

2.1 The methylmercury criterion for fish consumption is not currently attainable

The human health criterion for methylmercury is not currently attainable throughout the Willamette Basin due to atmospheric deposition of mercury in the watershed. The atmospheric deposition of mercury is a human-caused condition that cannot be remedied by NPDES dischargers or the State during the proposed 20-year term of the requested variance (Factor 3). The ubiquitous nature of the mercury levels in fish tissue and in the atmosphere in Oregon and across western North America, support this conclusion. In addition, there are geologic sources of mercury that occur in Oregon soils and water that are partially the result of historical atmospheric deposition and partially native in origin. These sources enter Oregon waters through surface runoff and groundwater resurfacing and cycle their way into fish. Neither these sources nor the processes by which they find their way into the waters of the Willamette Basin can be controlled by NPDES dischargers or the state during the proposed 20-year term of the variance at levels to meet Oregon's methylmercury criterion (ODEQ, 2019).

The information provided below demonstrates the need for the variance based on 40 CFR 131.10(g)(3), human-caused pollution that cannot be remedied or would cause more environmental damage to correct than to leave in place. Although the designated use and associated criterion are not attainable during the term of the variance, NPDES dischargers will continue to implement mercury minimization programs that will reduce mercury to achieve pollutant reductions. Therefore, a variance is an appropriate Clean Water Act tool for these facilities.

The following data and information support the need for the Willamette Basin mercury variance by demonstrating that the mercury criterion is not attainable during the term of the variance. Individual point source contributions of mercury will be reduced to the extent feasible through the implementation of MMPs, as described in this document.

1. Data from Oregon show that fish tissue levels of methylmercury from locations across the state exceed the criterion of 0.04 mg/kg in a large majority of samples (Figures 2-1 and 2-2). The exceedances occur in remote as well as developed areas, indicating that elevated mercury in fish tissue is a ubiquitous problem across Oregon and is not solely associated with active point source discharges or urbanization.
2. The 2019 update to the Willamette Mercury TMDL has found that all individual NPDES discharges in the Willamette basin together contribute less than 1% of the total mercury load to the Willamette Basin, about 1.6 kg/year out of a total mass load of 132.0 kg/year (Figure 2-3).
3. The 2019 TMDL update identified direct runoff of atmospherically deposited mercury (33%) and erosion of mercury containing sediment (43%) as the dominant contributors of mercury to the river. The 2019 TMDL technical support document estimates that 88% of the total mercury load comes from these two sources plus other nonpoint sources.

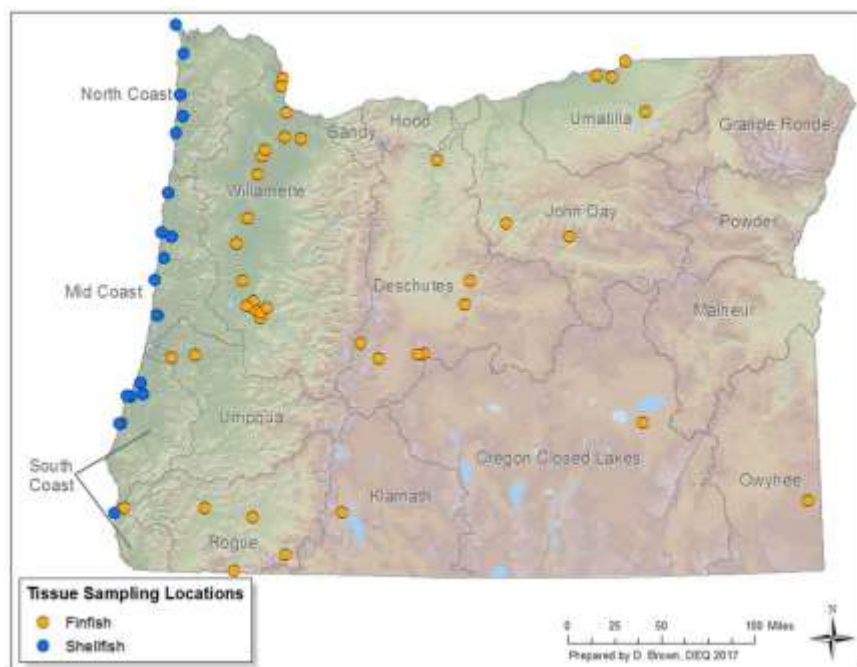


Figure 2-1. Tissue sampling sites (2008-2015).

From DEQ's Statewide Aquatic Tissue Toxics Assessment Report (ODEQ, 2017, p. 2).

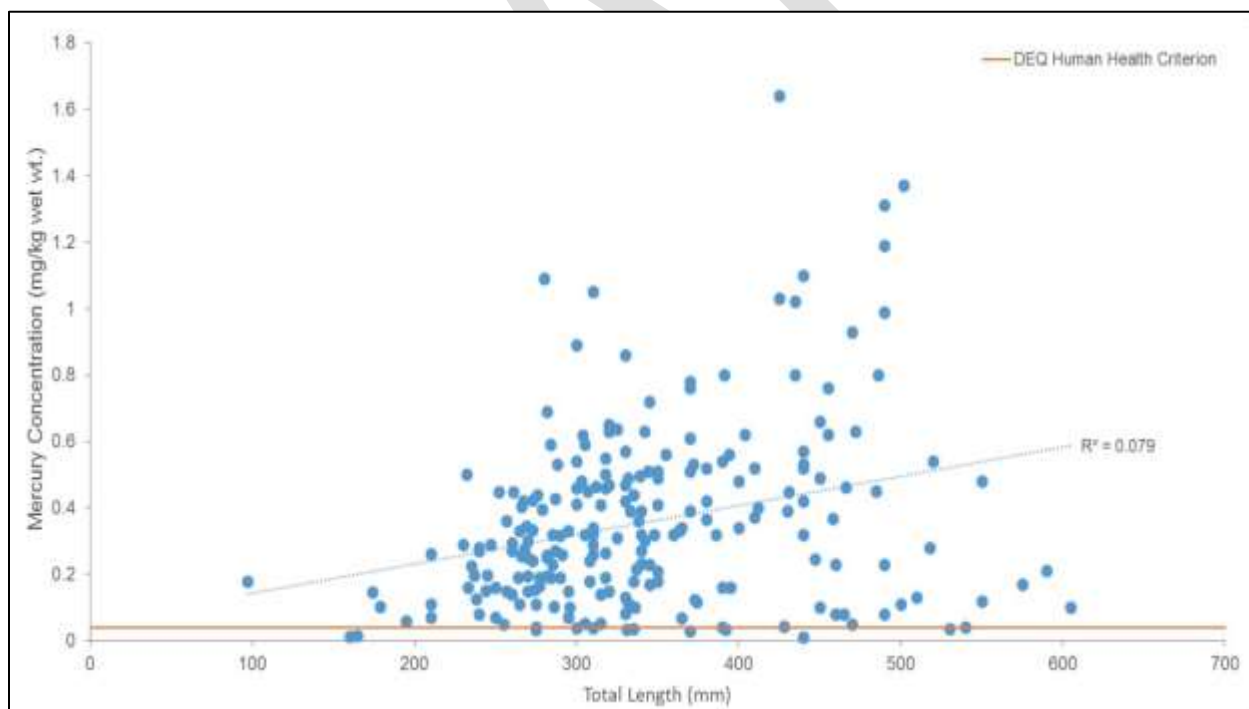


Figure 2-2. Mercury concentration (mg/kg wet weight) in skinless finfish fillets compared to total length (mm). The orange line indicates the DEQ human health criterion for methylmercury (0.04 mg/kg fish tissue). (ODEQ, 2017, p. 13, Figure 10.)

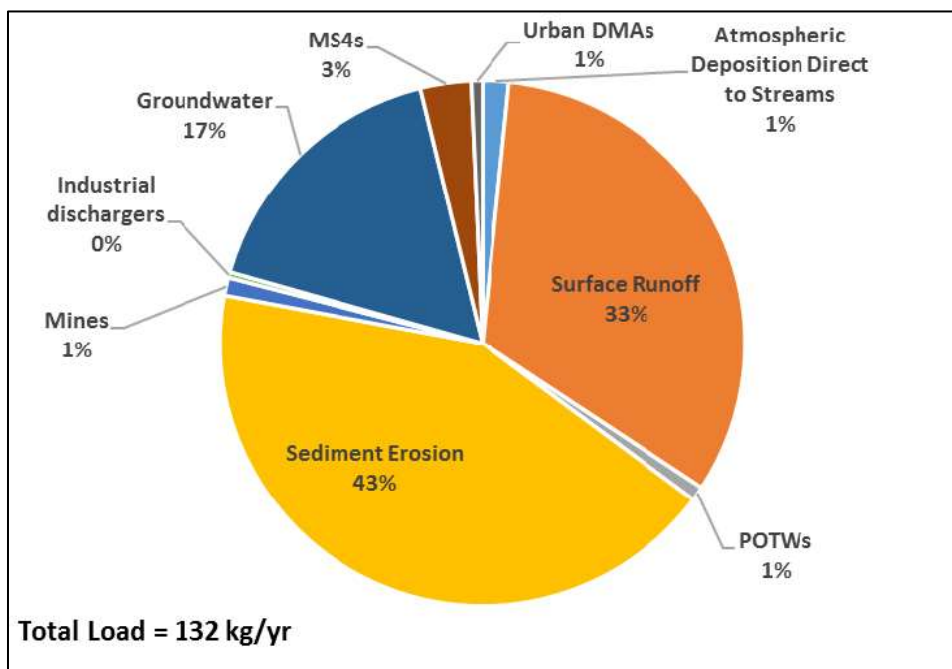


Figure 2-3. Distribution of THg Source Loads to the Stream Network (Tetra Tech, 2019)

The following information also supports the conclusion that atmospheric deposition is currently the major factor preventing the attainment of the use and that these dominant mercury sources cannot be remedied by the discharger or the state during the term of the variance.

1. Data from the Mercury Deposition Network and the scientific literature demonstrate that mercury is present in precipitation and that mercury is deposited onto Oregon waters and within watersheds (commonly referred to as “atmospheric deposition”) (Figures 2-4 and 2-5).
2. Atmospheric sources of mercury deposited into waterways or onto the landscape in the Willamette Basin are primarily from sources outside of the state. On average, the amount of mercury in the atmosphere that is of purely natural origin is 13% of the total. In the terrestrial environment, this value increases to 17%. As such, greater than 80% of the mercury cycling in the environment is thought to be due to anthropogenic activities outside of the state and less than 20% from natural geologic sources (Amos, et al. 2013).
3. An 88% reduction in the total mercury load to the Willamette Basin is needed to meet the water concentration target of 0.14 ng/L total mercury. While the state’s storm water and nonpoint source control programs will decrease levels of mercury associated with those activities, DEQ estimates it will take decades to implement programs to reach the necessary reduction in mercury loads to the Willamette Basin that will result in attaining the water quality standard (ODEQ 2019). As a result, attaining the standard is not feasible within the proposed 20-year term of the variance, even under an aggressive program to prevent runoff and erosion of mercury from the landscape to waters of the basin.

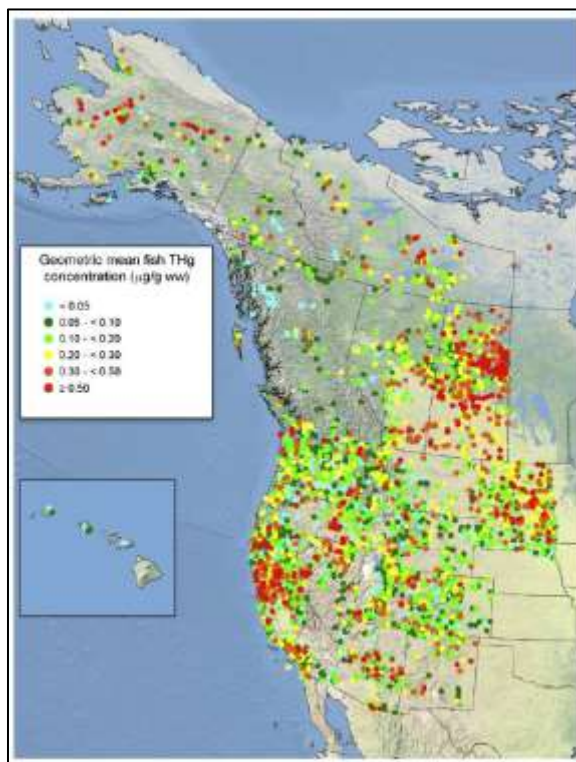


Figure 2-4. Geometric mean of fish tissue concentrations by site. Only locations with turquoise dots would have geometric means close to the 0.04 mg/kg standard. From Eagles-Smith et al., 2016b.

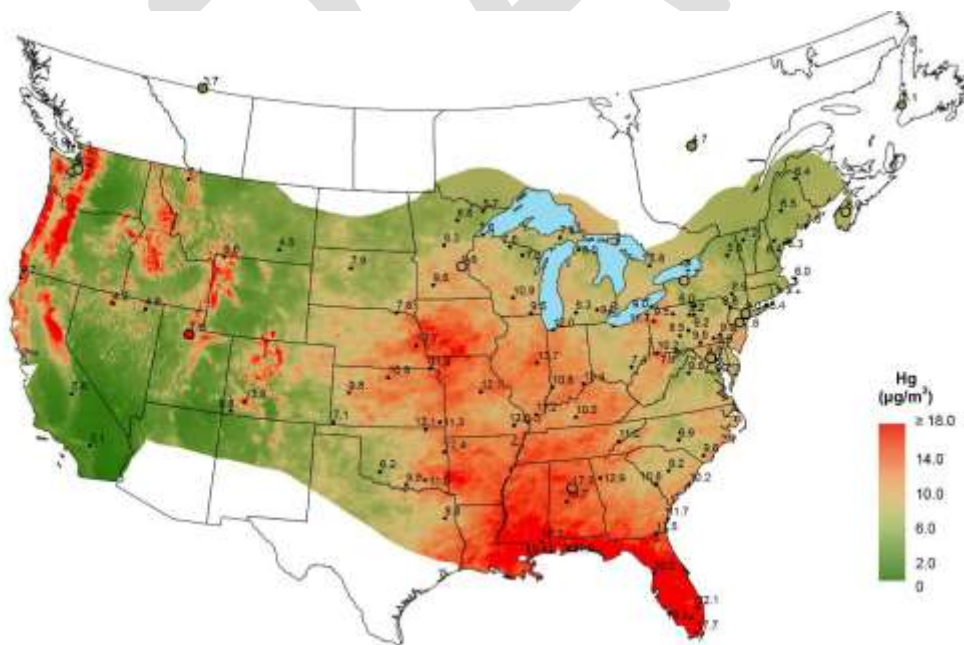


Figure 2-5. Total Mercury Wet Deposition in 2014 (Mercury Deposition Network, 2017)

DEQ expects that management practices to control erosion and rainwater runoff will reduce the movement of mercury from the land into the water. These practices are discussed in the 2019 TMDL and Water Quality Management Plan (ODEQ, 2019) and summarized in this document.

In summary, based on the information summarized above, DEQ concludes that Oregon's fish tissue criterion for methylmercury, and thus the fish consumption use to protect human health, is not attainable in the Willamette Basin during the term of the variance. There is sufficient data and information to demonstrate that mercury is primarily a human-caused condition that cannot be remedied during the term of the variance to the extent needed to meet the underlying designated use and criterion in the Willamette Basin through the implementation of Clean Water Act requirements by NPDES permitted dischargers or the State. Based on the data and literature, mercury levels in the Willamette Basin result primarily from sources other than point source discharges. DEQ and other agencies are addressing the broad spectrum of sources through various programs, many of which are described in Section 3.2.3 of this document. While the state is implementing management practices to reduce the movement of mercury to the water, as discussed in Section 3.2.3, such practices would not result in attaining the designated use and criteria within the 20-year variance. These findings justify the need for a variance for the Willamette Basin, which is consistent with 40 CFR 131.10(g)(3).

2.2 Water Quality Based Effluent Limits for mercury are not technologically achievable

There are no technology-based effluent limits or effluent limitations guidelines for mercury. Therefore, NPDES permit limits for mercury are based on the water quality criterion. Because total mercury levels in the Willamette River Basin exceed the water concentration needed to meet the fish tissue-based methylmercury criterion, dischargers would be required to achieve an effluent concentration equal to the water concentration target of 0.14 ng/L before the effluent is discharged to the receiving water. Current treatment technology can reliably attain concentrations less than 20 ng/L. Treatment achieving these levels is typically through the removal of solids that have mercury adsorbed to them. Mercury removal is an ancillary benefit of wastewater treatment and effluent concentrations vary significantly, even when influent concentrations are similar. Moreover, any removed mercury from treatment is likely to end up in biosolids, which are then disposed of through land application or to landfills, where the mercury can re-enter the environment. DEQ also examined other treatment technologies and determined there are currently no feasible treatment technologies that could feasibly reduce mercury levels enough to achieve an effluent concentration of 0.14 ng/L.

2.2.1 Mercury Levels Currently Achieved by Current Wastewater Treatment

The information in this section demonstrates that, in general, current wastewater treatment technology, while removing 90% or more of mercury from influent, consistently achieves *average* mercury concentrations ranging from 1-20 ng/L. Mercury removal is an ancillary benefit of treatment, effluent concentrations are small, and mercury can enter into a collection system in unexpected ways. As a result, effluent concentrations vary significantly, even under similar conditions.

In 2005, California performed a study looking at methylmercury removal from NPDES permitted dischargers in the Sacramento River Delta (California EPA, 2010). California required dischargers to

collect and report on methylmercury influent and effluent data over twelve months in 2004 and 2005. Of these facilities, 49 also reported total mercury effluent data. The median of the average annual total mercury effluent concentrations from these facilities was 6.6 ng/L and ranged from 0.8-21.5 ng/L.

DEQ also compiled and analyzed mercury levels from 2016 data provided by 19 municipal dischargers in Oregon that have pre-treatment programs. The median average annual total mercury effluent concentration was 2.1 ng/L and ranged from 1.1 to 8.3 ng/L.

This information, along with Wisconsin data presented in Section 3, indicate that current treatment achieves a mercury concentrations as low as 1 ng/L and sometimes much higher. However, no treatment plants using current treatment technology are able to achieve mercury levels as low as 0.14 ng/L, which would be required without a variance.

2.2.2 Mercury Levels Achieved by Other Treatment Technologies

In reviewing the ability of other available wastewater treatment technologies to remove mercury, DEQ could not find any pilot or full-scale treatment systems that would be able to achieve the water concentration target of 0.14 ng/L.

Because there is a lack of full-scale installations consistently producing effluent mercury concentrations less than those found in current treatment, it is difficult to predict whether it is possible to consistently achieve these concentrations on a long-term, large-scale basis. A 1997 study in Ohio concluded that *the ability of the added controls to meet the standard was not known* (Ohio EPA, 1997). The Ohio mercury criterion for aquatic life is 1.3 ng/L. In Oregon, the WQBEL needed to meet the human health criterion for methylmercury is 0.14 ng/L, an order of magnitude lower than the Ohio and Michigan standards. If the ability of the controls to meet 1.3 ng/L is not known, it is reasonable to conclude that there is no feasible technology that can meet 0.14 ng/L.

This conclusion is consistent with a review conducted by HDR in 2013 for the Association of Washington Businesses (HDR, 2013). The HDR study examined the potential performance of adding reverse osmosis or granular activated carbon to a tertiary microfiltration process and hypothesized that such a treatment system *might* be able to remove mercury to a concentration of 0.12 to 1.2 ng/L. However, the study provided no data from any test or operational system. Such treatment systems have not been employed on a bench or pilot scale, or at a wastewater treatment plant scale to DEQ's knowledge.

Membrane filtration technology, such as reverse osmosis, uses a significant amount of electricity, creating a substantial carbon footprint, and requires disposal of waste brine. According to a life cycle assessment performed for the Berlin-Ruhleben secondary wastewater treatment plant (63 MGD), the operational energy use of polymer ultrafiltration or ceramic microfiltration membranes would be 0.33 watt×hour/gal. This would represent approximately a 9 percent increase in that plant's existing global warming potential without taking into account the additional global warming potential that would be contributed by the infrastructure, chemicals for maintenance and any necessary coagulant, and the transport of waste sludge for disposal. Of the different types of membrane filtration, reverse osmosis also has the large disadvantage of necessitating disposal of the concentrate stream, which can amount to approximately 5 to 20 percent of the influent.

A 2007 EPA report regarding mercury treatment notes that there are technologies, such as precipitation, filtration or other physical/chemical treatments (see Table 2-1) that remove more mercury than secondary or advanced wastewater treatment plants. However, these have been employed in industrial settings where influent concentrations were an order of magnitude higher than influent concentrations at municipal wastewater treatment facilities (US EPA, 2007). The effluent concentrations at many of these industrial applications were similar to the influent concentrations at municipal treatment facilities. Moreover, the information provided in the EPA report did not indicate flow volumes, so it is difficult to translate these studies to typically larger municipal wastewater treatment plant volumes.

In another study, an oil refinery evaluated various treatment technologies for wastewater with low (10 ng/L) mercury levels to determine the extent to which mercury concentrations could be further reduced using conventional treatment. Bench scale tests of various adsorbent techniques showed that they could remove mercury to as low as less than 0.08 ng/L of total mercury (Urgun-Demirtas, et al., 2013). Ultra- and micro-filtration bench tests also reduced mercury to less than 1 ng/L, although not as much as adsorption. However, such techniques have not been shown to work at the higher volume in municipal treatment (HDR, 2013).

Table 2-1 shows the results from treatment technologies that have been tested for water supply treatment or industrial wastewater treatment. Table 2-2 summarizes mercury concentrations achieved from various technologies. As shown in these tables, no technology has consistently reached mercury concentrations less than that achieved by activated sludge (secondary treatment) or activated sludge with nutrient removal or tertiary filtration (advanced treatment) at flow volumes typically seen at large municipal and industrial WWTPs (>1 MGD).

Table 2-1. Potential treatment technologies considered for mercury treatment

Study	Type of treatment technology	Influent total mercury concentration (ng/L)	Average effluent total mercury concentration (ng/L)	Percent removal	
US EPA (2007)	Precipitation (Chelator)	400-9,600,000	25-21,400	42-99.9%	Full scale for groundwater and wastewater treatment; not tested for municipal wastewater or industrial processes in Willamette Basin
EPA (2007)	Adsorption/ Granular Activated Carbon	3,300-2,500,000	300-1,000	99-99.8%%	Full scale
HDR Study (2013)	Tertiary Microfiltration/ Reverse Osmosis or Granular Activated Carbon		0.12-1.2 hypothetically	>99%	Not demonstrated at WWTP scale
Urgun-Demirtas, et al. (2013)	Precipitation	10 ng/L	3.1 ng/L (before filtration) 0.17 ng/L (after filtration)	56.5% before filtration	Bench scale testing

Study	Type of treatment technology	Influent total mercury concentration (ng/L)	Average effluent total mercury concentration (ng/L)	Percent removal	
Urgun-Demirtas, et al. (2013)	Adsorption	10 ng/L	<0.08 ng/L – 0.72 ng/L (lowest achieved)	92.8% - 99.2%	Bench scale testing
Urgun-Demirtas, et al. (2013)	Filtration	10 ng/L	0.26 – 0.34 ng/L (lowest achieved)	65 – 97% depending on pressure	Bench scale testing
Hollerman, et al. (1999)	Adsorption	739-1447 ng/L	~25-340 ng/L	n/a	Low volume

Table 2-2. Treatment capability of mercury technologies

Treatment Technology	Volume Range of Known Uses	Treatment Ability
Current Treatment (Secondary, Advanced Secondary, Tertiary)	Up to 25 MGD	1-20 ng/L
Membrane Filtration	Low volume	Bench scale to 0.26 ng/L
Ion Exchange	0.015 MGD (5-50 GPM)	1 ng/L
Precipitation and filtration	Low volume	Bench scale to 0.17 ng/L; full scale to 25 ng/L
Adsorption	Low volume	Bench scale to 0.08 ng/L; full scale to 25 ng/L

3. Variance Requirements

To comply with federal regulations, a variance must include a statement of the highest attainable condition during the term of the variance, the term of the variance, and the requirement to re-evaluate the highest attainable condition at least every 5 years. These requirements are discussed below.

3.1 Highest Attainable Condition

The federal variance rule states, “The requirements (of the variance) shall represent the highest attainable condition of the waterbody or waterbody segment applicable throughout the term of the WQS variance.”⁴ For a discharger specific variance, the HAC may be expressed in one of three ways:

1. HAC #1 is “the highest attainable interim criterion,” and establishes an alternate instream criterion for the term of the variance.
2. HAC #2 is “the interim effluent condition that reflects the greatest pollutant reduction achievable.”
3. HAC #3 is “the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the state adopts the WQS variance and the adoption and implementation of a pollutant minimization program.”⁵

DEQ concluded that HAC #3 is appropriate under this MDV. HAC #3 is consistent with EPA guidance on implementation of the methylmercury criterion. Specifically, EPA guidance recommends that states adopting mercury variances require dischargers to implement MMPs. The guidance states, “By reducing mercury sources up front, as opposed to traditional reliance on treatment at the end of a pipe, diligent implementation of MMPs might mitigate any adverse effects of a variance by improving the water quality.” (US EPA, 2010)

Moreover, EPA guidance further notes that source reduction programs are preferable over treatment because they “reduce the transfer from wastewater to other media through disposal of mercury-containing sludge from which mercury may subsequently reenter the environment. For example, mercury removed at a POTW through treatment is likely to reenter the environment through POTW sludges that are then incinerated or applied to land (although some is captured by air emission controls on incineration). EPA believes that a better approach for reducing mercury releases to the environment is to prevent mercury from entering the wastewater collection system at the source through product substitution, waste minimization or process modification, or removing and recycling mercury at the source (source controls) using state-of-the-art technology. These measures aimed at reducing influent loads to POTWs also reduce the use of mercury in the community, which could reduce the amount of mercury entering the environment through other media or sources. (For example, products that contain low levels of mercury may be disposed of as a nonhazardous solid waste and incinerated, releasing mercury to the air.) Where pollution prevention approaches have been implemented, substantial reductions in mercury concentrations in POTW influents, sludges, and effluents have been achieved.” (US EPA, 2010)

⁴ [40 CFR Part 131.14\(b\)\(1\)\(ii\)](#)

⁵ 40 CFR 131.14(b)(ii)(A)

Data from Oregon and other states indicates that MMP implementation over time can lead to reductions in mercury levels in discharger influent and effluent. HAC #3 also is advantageous in that dischargers under this variance can immediately implement activities that can lead to mercury reductions.

For example, the Wisconsin Department of Natural Resources has tracked mercury effluent data from NPDES permittees over the past 15 years, as permitted facilities have been implementing MMPs under the Great Lakes Initiative. The data, as indicated in the following discussion, show that MMP implementation has resulted in similar effluent mercury concentrations as advanced wastewater treatment.

WDNR tracks mercury concentrations using various metrics. Among 52 municipal dischargers, the average 4-day 99th percentile concentration (4-day P99) decreased from 11.2 ng/L in the initial 5-year period to 3.2 ng/L in the most recent 5-year period (2014-2018). The median 4-day P99 concentration also decreased from 5.2 to 2.8 ng/L. All but three municipal systems experienced decreasing trends in average effluent concentrations and all but eight experienced decreasing 4-day P99 concentrations (Figure 3-1). Moreover, whereas 13 facilities had 4-day P99 concentrations greater than 8 ng/L in their initial permit term, only one facility had concentrations greater than 8 ng/L based on the most recent data (Figure 3-2), highlighting how effluent levels have decreased over time. According to WDNR staff, these facilities have achieved mercury reductions primarily, if not exclusively, through MMP implementation rather than treatment upgrades.⁶

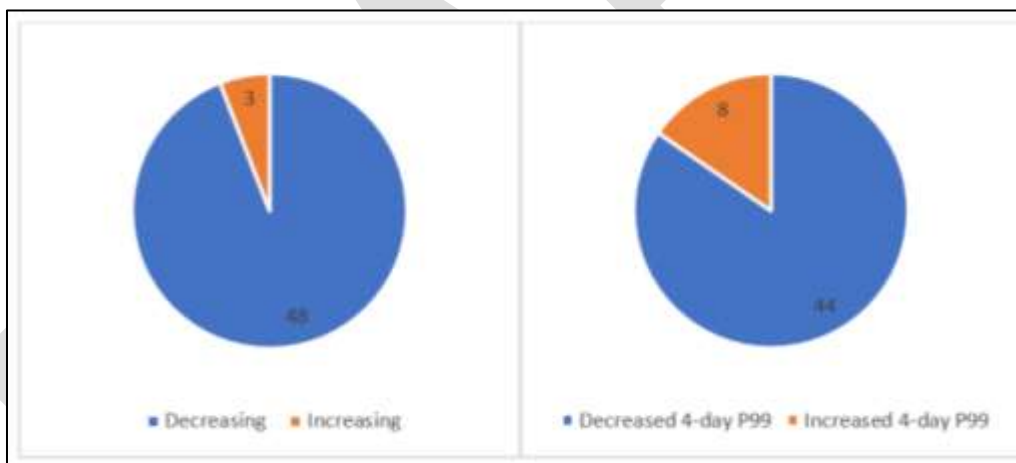


Figure 3-1. Number of Wisconsin municipal wastewater treatment systems with increasing and decreasing trends in average (left) and 4-day P99 (right) concentrations. (Wisconsin DNR).

Source: Wisconsin Department of Natural Resources.

⁶ *Personal communication*, Laura Dietrich, Wisconsin Department of Natural Resources, 2/28/19.

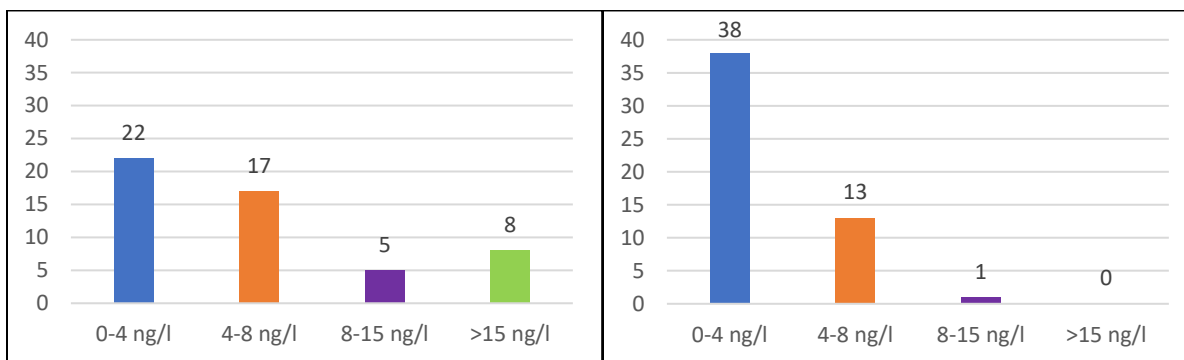


Figure 3-2. Number of Wisconsin municipal WWTPs by 4-day P99 mercury concentrations from initial five-year period (left) to most recent five-year period (right).

Source: Wisconsin Department of Natural Resources.

Data from Wisconsin industrial dischargers also indicates that MMP implementation has resulted in an overall decreasing trend in mercury concentrations at industrial facilities. Among 24 industrial NPDES permit holders, the mean 4-day P99 concentration decreased from 25.4 to 13.7 ng/L and the median 4-day P99 concentration decreased from 14.1 to 7.2 ng/L between 2004 and 2018. Eighteen of the 24 facilities had 4-day P99 concentrations in the most recent five-year period as compared to the initial period, and sixteen had decreasing average mercury concentrations (Figure 3-3). Finally, while only one additional facility had a 4-day P99 concentration less than 8 ng/L from the initial five-year period to the most recent, five fewer facilities had concentrations greater than 15 ng/L (Figure 3-4). The success of these dischargers in continuing to reduce mercury indicates that industrial dischargers in the Willamette Basin can achieve similar continued success, even for those that have been implementing MMPs for several years.

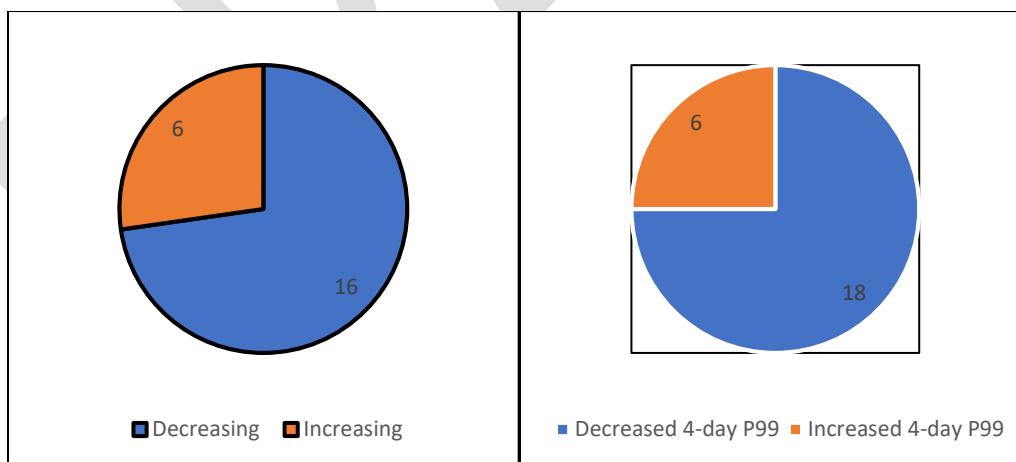


Figure 3-3. Number of Wisconsin industrial wastewater treatment systems with increasing and decreasing trends in average (left) and 4-day P99 (right) concentrations.

Source: Wisconsin Department of Natural Resources.

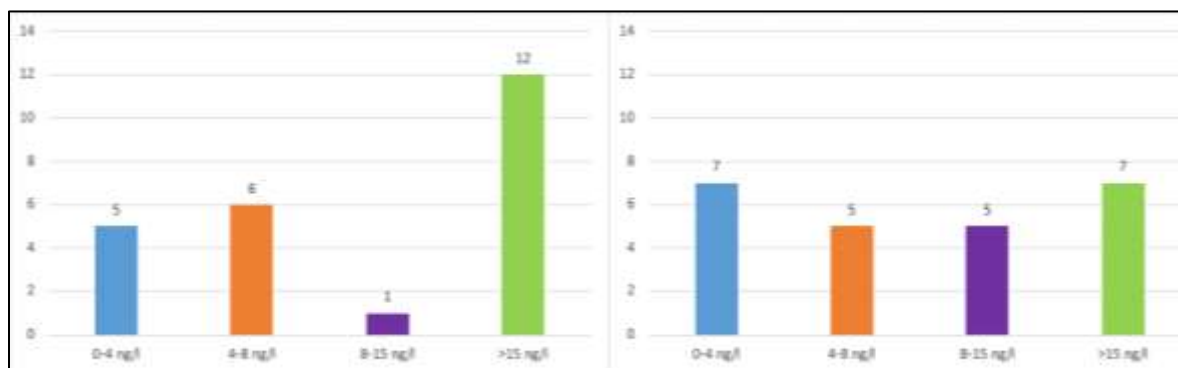


Figure 3-4. Number of Wisconsin industrial NPDES facilities by 4-day P99 mercury concentrations from initial five-year period (left) to most recent five-year period (right).

Source: Wisconsin Department of Natural Resources.

Evidence from influent and biosolids data also indicates the effectiveness of MMPs in reducing mercury. A decade of mercury influent data from 72 major NPDES wastewater treatment plants in Minnesota indicate that MMPs resulted in significant and continued reductions in mercury concentrations entering treatment systems. Between 2008 and 2017, influent total mercury concentrations decreased from an average of 180 ng/L to 70 ng/L (Figure 3-5). Data from Oregon's Rock Creek Advanced Wastewater Treatment Plant operated by Clean Water Services indicates decreasing mercury levels in biosolids, showing the effectiveness of their mercury reduction efforts over the last 20 years (Figure 3-6).

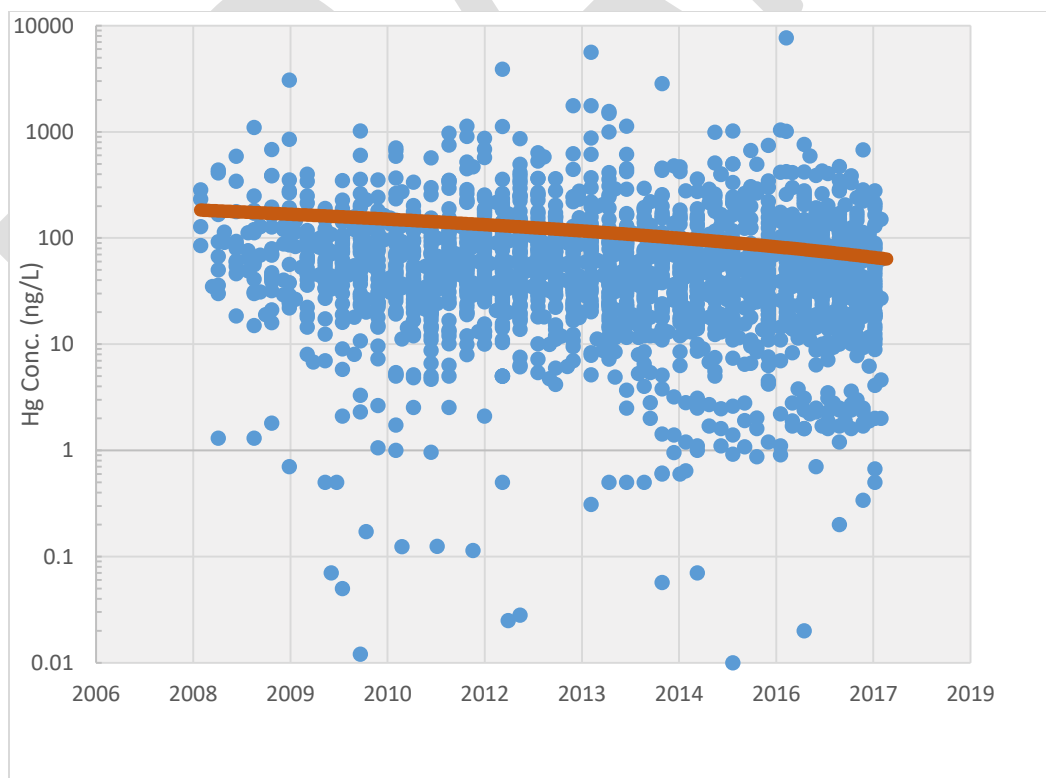


Figure 3-5. Influent Data from Major Wastewater Treatment Plants in Minnesota. Source: Minnesota Pollution Control Agency

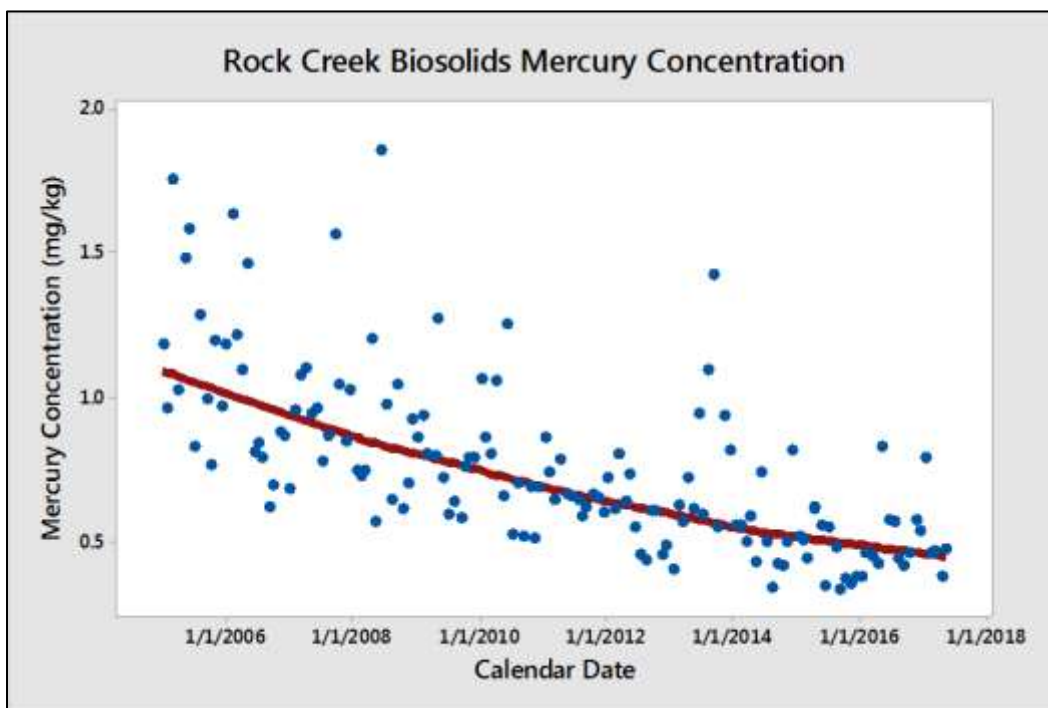


Figure 3-6. Mercury Concentrations in Biosolids, Rock Creek Wastewater Treatment Plan. Source: Clean Water Services.

3.2 Requirements that apply throughout the term of the variance

This section describes the requirements of the variance, which reflect the Highest Attainable Condition expression described in 40 CFR 131.14(b)(1)(ii)(a)(3). First, the discharger will receive a permit limit based on an interim effluent condition reflecting the level currently achievable with existing technology. Second, the discharger will be required to implement an MMP with required elements noted in section 3.2.2. DEQ describes how it will incorporate variance requirements into permit requirements in Section 4.

3.2.1 Interim Effluent Condition that Reflects the Level Currently Achievable

The HAC for the MDV is expressed in the federal variance rule as “the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program.” DEQ uses the term “Level Currently Achievable” to describe the interim effluent condition reflecting the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance. DEQ has expressed the HAC in the rule consistent with this language.

In order to calculate the LCA for mercury for each facility, DEQ will use the most recent five years of mercury effluent data at the time of each permit issuance, with a minimum of eight quarterly samples that

span at least two years. Each sample is a single data point, even when the facility collects samples on three consecutive days, as required by the pretreatment program. The [TSD methodology](#) (Table E-1), with lognormal transformation and no auto-correlation, is used to calculate the 95th percentile of the effluent data distribution to describe the LCA. DEQ used data from four facilities to demonstrate how DEQ would calculate these levels (Figures 3-7 – 3-10). The LCA value is equal to the 95th percentile of the distribution shown in each chart. The figures also include the 99th percentile value for information only.

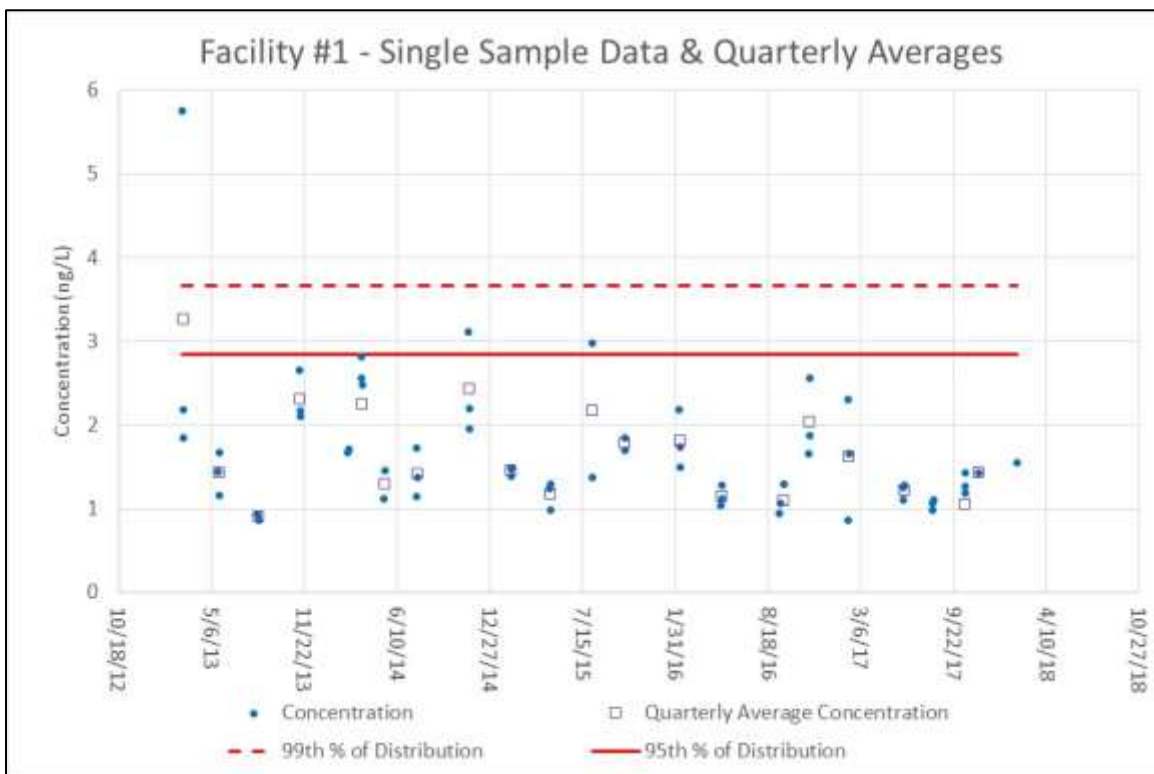


Figure 3-7. LCA (95th percentile) of hypothetical facility under the MDV.

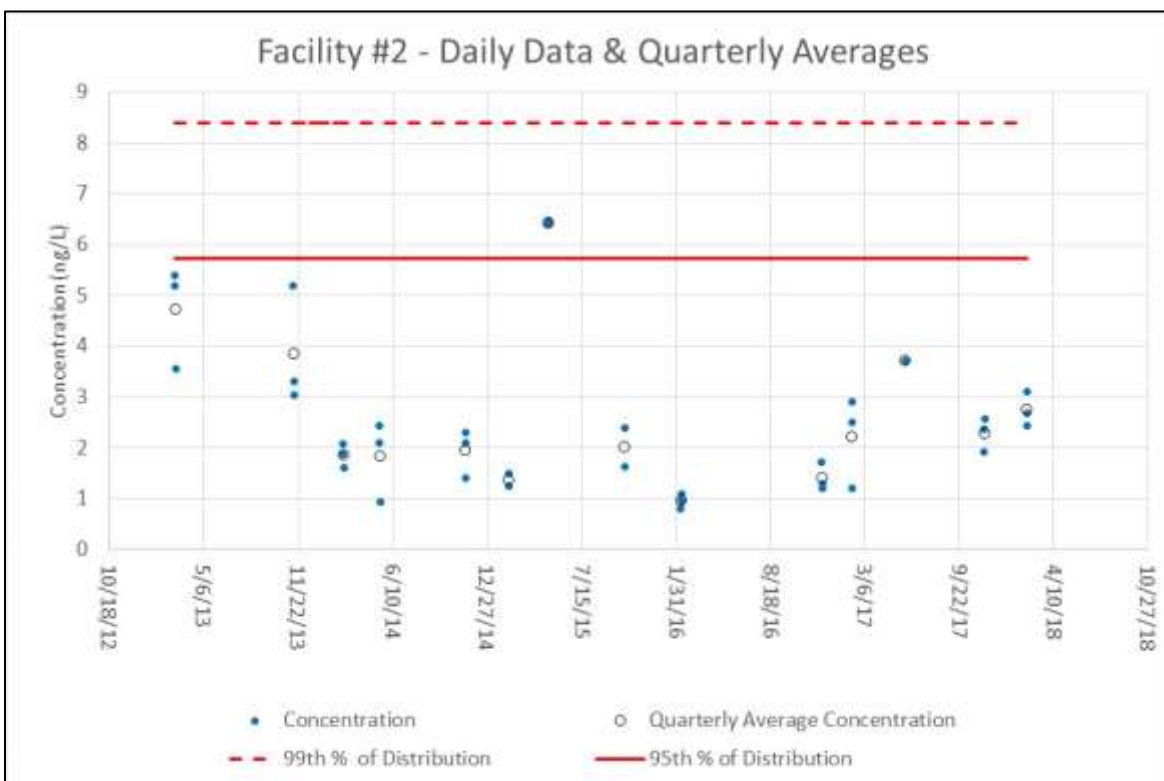


Figure 3-8. LCA (95th percentile) of hypothetical facility under the MDV.

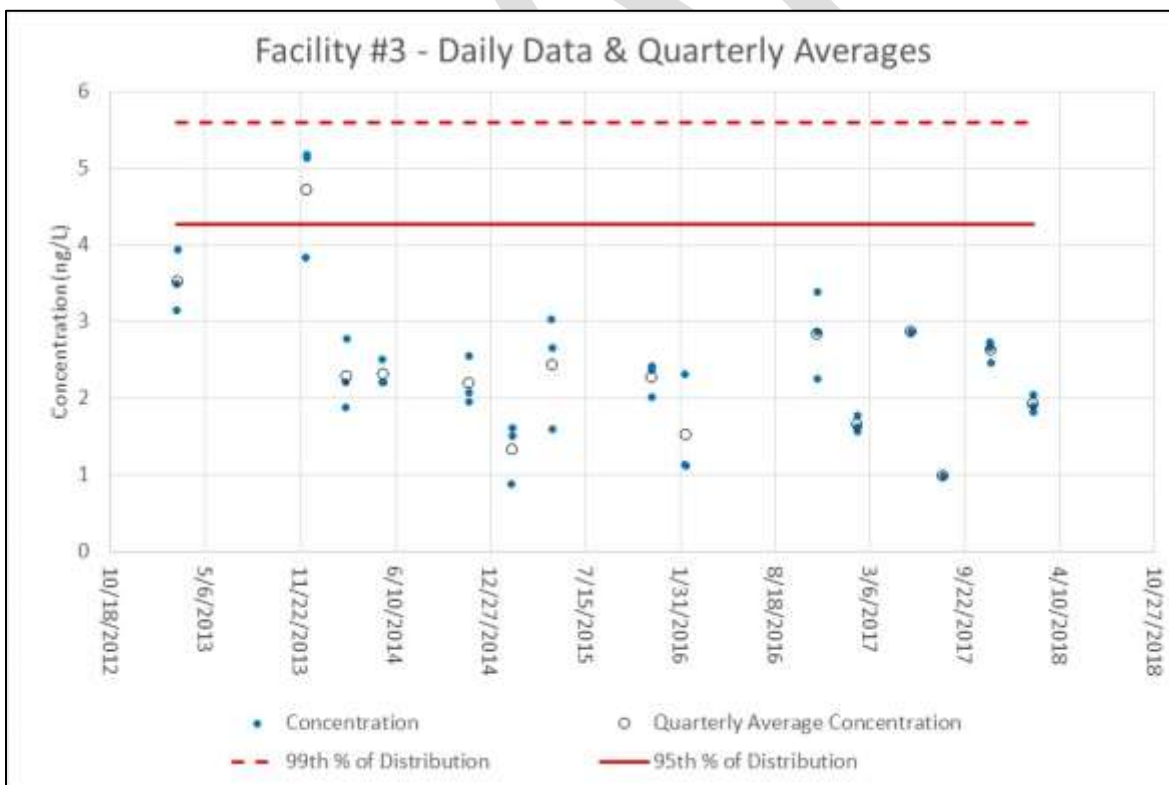


Figure 3-9. LCA (95th percentile) of hypothetical facility under the MDV.

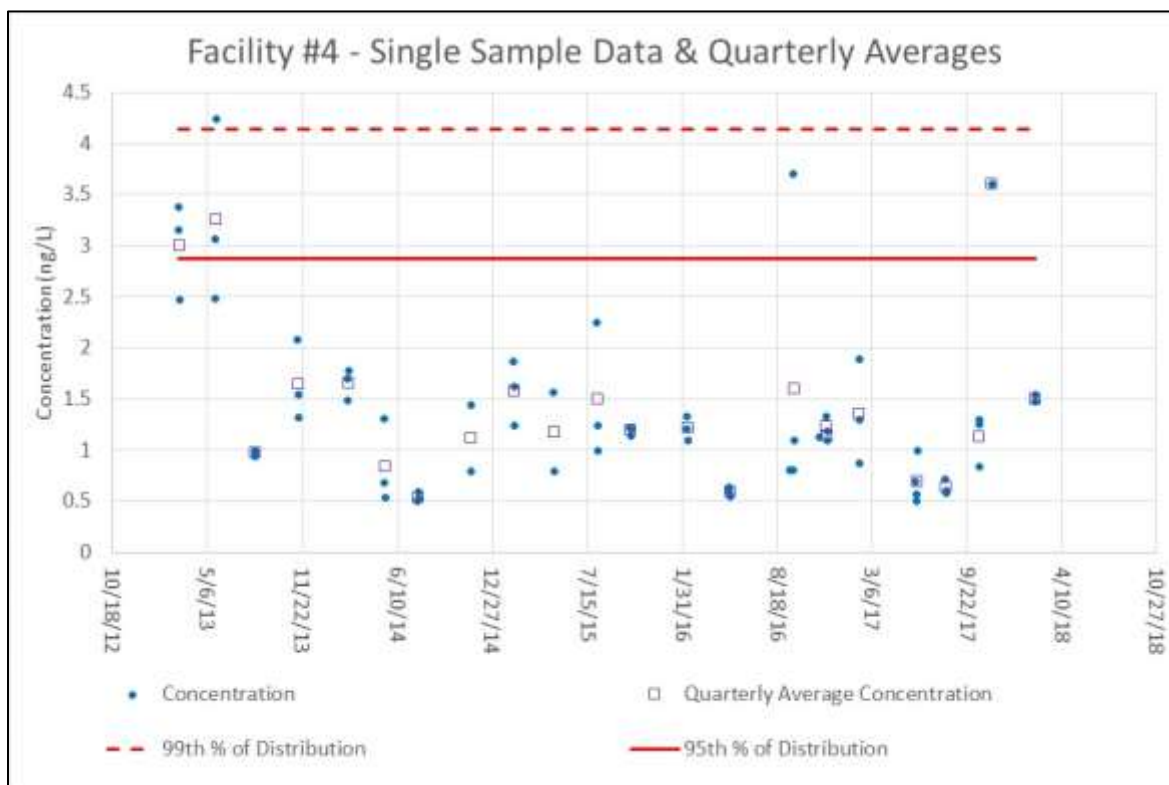


Figure 3-10. LCA (95th percentile) of hypothetical facility under the MDV.

3.2.2 Implementation of a Mercury Minimization Program

In addition to meeting interim effluent condition, the variance requires all permittees that obtain coverage under the variance to implement a MMP. The MMP must include mercury reduction activities specified by the MMP adopted in the variance during the term of the variance. DEQ has proposed different MMPs for municipal and industrial dischargers.

As many municipalities nationwide have implemented MMPs over two or more decades, there is a body of knowledge upon which to draw to focus efforts on those activities that will result in mercury reductions. DEQ has included language in the rule specifying the activities minimally expected from municipal and industrial facilities. To implement the water quality standards variance, dischargers must undertake the following required activities. Municipal facilities must undertake the following activities:

1. Influent, effluent, and biosolids monitoring and other monitoring
2. Regulation of dental offices to ensure installation and maintenance of amalgam separators, including inspection of dental facilities for proper management and disposal of dental waste;
3. Identification of mercury-containing materials at facilities and offices operated by each municipal wastewater treatment facility and implementation of any recommendations for removing mercury-containing materials;
4. Identification and inspection of commercial laboratories, schools and healthcare facilities that may have mercury and providing recommendations and outreach materials to these facilities;
5. Providing general outreach materials for commercial and residential sectors.

6. Evaluation of new facilities as potential sources of mercury, regulatory oversight of such sources of mercury under the municipality's pre-treatment program where such sources are significant industrial users; and outreach to provide recommendations on activities that would reduce mercury in the facilities' discharge. Priority facilities are those in the timber, paper, glass, clay, cement, concrete, gypsum, primary and fabricated metal, and electronic instrument sectors;
7. Facility-specific activities to reduce mercury loading within the Basin, which may include addressing legacy mercury in collection systems, as well as cost-effective and reasonable best management practices for nonpoint source controls that the permittee could implement during the term of the variance to make progress towards attaining the underlying designated use and criterion.
8. If a facility has accomplished all activities within its system, the facility may achieve additional reductions by implementing or funding offsite mercury reduction activities, such as erosion control, which will make progress toward attaining the underlying designated use and criterion.

Industrial facilities must undertake the following activities:

1. Effluent and biosolids monitoring, if relevant and other monitoring, if needed.
2. Identification of mercury-containing materials used in the facility, offices and testing laboratories
3. Developing and implementing recommendations for using substitute materials with less or no mercury;
4. Identification of other potential sources of mercury within control of the facility;
5. Facility-specific activities to reduce mercury loading within the Basin, which may include cost-effective and reasonable best management practices for nonpoint source controls that the permittee could implement during the term of the variance to make progress towards attaining the underlying designated use and criterion.

3.2.3 State Activities to Reduce Mercury Loads

Agencies in Oregon implement many programs designed to reduce loads of many pollutants, including mercury. The following section briefly describes these programs. A more comprehensive list and description is included in Chapter 13 of the Willamette Basin Mercury TMDL (Oregon DEQ, 2019).

Air Emissions Mercury Reductions

DEQ achieves mercury reductions from air emissions through implementation of federal Title V permits, state Air Contaminant Discharge permits and the newly adopted state Cleaner Air Oregon program.

State Legislation on Mercury in Products and Oregon Dental Amalgam Rule

With regard to preventing mercury pollution, the Oregon Legislature adopted several bans, restrictions or management requirements for mercury in products since the 1990s. Those products include:

- Lighting fixtures
- Novelty items
- Thermostats, and
- Vehicle switches

In addition, the 2007 Legislature required dental offices to install dental amalgam separators and related maintenance best management practices to ensure mercury-containing amalgam waste does not end up in wastewater systems.

Oregon Department of Environmental Quality Nonpoint Source Program

The goal of DEQ's Nonpoint Source Management Program is to reduce water pollution from nonpoint sources, in order to meet water quality standards. The nonpoint source program is implemented by coordinating with many local, state and federal agencies and organizations throughout Oregon. The program uses a combination of federal and state programs for implementing statewide, programmatic, and geographic priorities, objectives, and strategies to achieve short- and long-term goals. Program requirements include tracking and reporting on implementation actions and water quality outcomes from these activities in Oregon's Nonpoint Source Annual Report submitted to EPA, which can be accessed on DEQ's website <https://www.oregon.gov/deq/wq/programs/Pages/Nonpoint.aspx>.

Oregon's Nonpoint Source Management Program is an important part of the state's water pollution control programs because for many pollutants, nonpoint sources of pollution are the major sources of pollution to a waterbody.

DEQ Cleanup Program—Abandoned Mine Lands Sites

The Site Assessment subprogram within DEQ's Cleanup program is responsible for screening abandoned mine lands sites to determine which sites may be having significant impacts to the environment. Within the Willamette Basin there are 12 abandoned mine lands sites that were identified as significant sources of mercury. These sites represent legacy mines that are sources of "uncontrolled hazardous substances." These sites are subject to statutes and rules administered by the Cleanup program (ORS 465; OAR 340.122). Between 2000 and 2004, the Cleanup program collaborated with EPA, the federal Bureau of Land Management and the US Forest Service to perform preliminary assessments of all abandoned mine lands sites in Oregon. Since that time, agency partners have completed site investigations, evaluations of potential cleanup levels and actions (feasibility studies), and the removal or treatment of contaminated materials. For up to date information visit DEQ's Environmental Cleanup Site Information database at <https://www.deq.state.or.us/lq/ECSI/ecsiquery.asp>.

DEQ General Permits

DEQ administers a number of general NPDES permits that may result in mercury reductions during the term of the variance. This includes municipal stormwater (MS4) permits; industrial stormwater permits, such as the 1200Z permit and the suction dredge mining (700 PM) permits. Measures required under these measures reduce overall loads of pollutants, including mercury.

Oregon Department of Agriculture Programs

The Agricultural Water Quality Management Act (ORS 568.900 to 933), and ORS 561.191, gives ODA the responsibility to adopt and enforce rules that protect water quality on agricultural lands. The Agricultural Water Quality Management Act directs ODA to develop Agricultural Water Quality Management Area Plans and rules. DEQ works with ODA under a [2012 Memorandum of Agreement](#). ODA's area plans identify local watershed conditions, water quality concerns associated with agriculture, and resources and strategies to address these concerns. Area plans are developed in consultation with Local Advisory Committees, which are made up of local farmers, and other watershed stakeholders.

ODA must also adopt rules that protecting water quality in areas designated as exclusive farm use and other agricultural lands.

In addition to the efforts described above, ODA also registers, administers and enforces water quality permits for Confined Animal Feeding Operations. ODA and DEQ jointly issue Water Pollution Control Facility state permits and NPDES federal permits for Confined Animal Feeding Operations. These permits do not allow discharges to waters of the state.

Oregon Department of Forestry Programs

The Oregon Department of Forestry is responsible for water quality protection from nonpoint source discharges or pollutants resulting from forest operations on non-federal forestlands within the state. The [Forest Practices Act](#) sets expectations for water quality outcomes and prescribes required best management practices. The Forest Practices Act has provisions for both criminal and civil penalties if forest operators do not comply with water protection regulations. ODF rules relevant to protection of water quality and erosion control are found in state administrative rules.

In addition to assuring compliance with the Forest Practices Act, ODF employs other efforts and funding, such as landowner voluntary measures conducted as part of the Oregon Plan for Salmon and Watersheds, to help support ODF's role in implementing the TMDL. ODF delivers technical assistance and cost share funding to family forest landowners that support goals for water quality protection.

DEQ and ODF maintain a [Memorandum of Understanding](#), which describes a process to evaluate the sufficiency of current Forest Practices Act best management practices in meeting water quality standards and TMDLs on state and privately owned forestlands. Forest operators conducting operations in accordance with the Forest Practices Act are generally considered to be in compliance with water quality standards. Where existing Forest Practice Act rules and voluntary measures are not sufficient to meet water quality standards, DEQ requests that ODF implement additional voluntary programs, revise statewide Forest Practices Act rules and/or adopt sub-basin specific rules as necessary.

Voluntary Programs

DEQ's Solid and Hazardous Waste programs have initiated and implemented multiple specialized collection and exchange projects for mercury-containing products, including collecting mercury wastes at numerous one-day household hazardous waste collection events throughout Oregon addressing the following mercury-containing materials:

- Thermometers
- Thermostats
- Dairy Manometers
- Dental Mercury Wastes
- Mercury Auto Switches
- Suction Dredge Mining Waste Mercury
- Fluorescent Lamps

DEQ's Solid and Hazardous Waste programs also continue to partner with various organizations, local governments and non-profits to educate households and businesses about proper management of mercury-containing products and alternatives.

3.3 Proposed term of the variance

Federal variance rules specify that variance terms shall be only as long as necessary to meet the HAC.⁷ As described in Section 3.2, the HAC is the effluent condition reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time Oregon adopts this variance, and the adoption and implementation of an MMP. DEQ is proposing a 20-year term for this variance. As noted elsewhere in this document, DEQ anticipates that it will take decades to conduct all activities needed to achieve the water column value needed to meet the water quality standard for methylmercury in the Willamette Basin. It will take even more time for mercury reductions in the water column to result in decreases in sediment and, eventually, fish tissue concentrations, which is the basis for the human health methylmercury criterion. As a result, DEQ could justify a variance for longer than 20 years. However, a 20-year term will provide DEQ sufficient time to collect and evaluate data to determine the extent to which the variance has resulted in decreased influent and effluent mercury concentrations. DEQ has concluded that it will take 20 years for dischargers covered under this variance to implement MMP activities described in Section 3.2.2, particularly those who have yet to develop MMPs. The required MMP elements also include activities that facilities that have mature MMPs can continue to implement during this time. As noted in the Section 3.2, MMP implementation in Wisconsin continues to make progress toward the state's mercury standard more than 15 years since the state began tracking mercury data.

3.4 Re-evaluation of the Highest Attainable Condition

Federal rules require that DEQ re-evaluate the HAC at least every five years. The HAC re-evaluation process provides the permittee the opportunity to document the success of mercury minimization efforts and update its MMP. Re-evaluation also provides DEQ and the public the opportunity to determine if source reduction efforts have resulted in progress toward meeting the water quality standard.

DEQ will re-evaluate the HAC five years after EPA's approval of the MDV and each five years after that. DEQ's review will include the following elements:

- An assessment of treatment technology to determine if there have been any changes that would change DEQ's evaluation of the appropriate HAC.
- A summary of mercury minimization efforts conducted by all facilities covered under the MDV.
- An examination of data provided by these facilities to assess whether source reduction activities have resulted in mercury reductions at each facility and calculating a new LCA when appropriate. DEQ will look at overall trends in influent, effluent, biosolids and other data.

As required under federal rules, DEQ will prepare a public notice and provide a 30-day public comment period. This public comment period may include an information session or hearing to be held in the Willamette Basin. Finalizing public comment, DEQ will make any necessary changes before submitting a final document to EPA within 30 days of completing the evaluation and making the final document available on the agency website. In addition, if DEQ does not re-evaluate the HAC at least every five

⁷ 40 CFR 131.14(b)(1)(iv)

years or submit the results of the re-evaluation to EPA, the variances will no longer be the applicable water quality standard for purposes of the Clean Water Act until such time that the re-evaluation is completed and submitted to EPA.

DRAFT

4. Implementation of the variance into permits

4.1 Required Information for Variance-related Permit Implementation

Once EPA approves the MDV, eligible NPDES dischargers must submit the following information for DEQ to incorporate variance requirements into the variance:

- The most recent mercury effluent data (as much as available for the last five years, but not less than two years).
- A draft facility-specific MMP that will cover the term of the variance and include the elements listed in Section 3.2 and the rule. The MMP will undergo public comment along with the permit. DEQ permit staff will work with the permittee to ensure that the MMP meets DEQ requirements before the final permit and variance authorization are issued.

4.2 Variance-related permit requirements

Once DEQ has received all necessary information from the permittee, staff will incorporate variance-related permit requirements into the draft permit, as described below. DEQ will, as part of the standard public comment period for each permit, take comment on variance-related permit requirements, including comments on facility specific MMPs submitted by the permittee. Following the public comment period, DEQ will incorporate any needed changes to the permit before finalizing the permit.

4.2.1 Effluent limit based on the Level Currently Achievable

DEQ will include an interim effluent limit in each permit based on the procedure described in Section 3.2.1. These permit limits will apply as a quarterly average concentration, not to be exceeded in two consecutive quarters.

If a permittee has sufficient data to indicate that to demonstrate that mercury levels do not match a log-normal distribution, DEQ may utilize non-parametric methods to develop permit limits based on the variance that are consistent with EPA's guidance (EPA 1991).

Because many facilities sample mercury just once per quarter, a spike in mercury concentrations could cause an exceedance of the quarterly average, while not being indicative of a problem in treatment operations. Therefore, it is not appropriate to set a permit limit based upon the sampling results for a single quarter. Instead, DEQ proposes to define a violation of the maximum quarterly average permit limit as **two consecutive quarters in which the quarterly average is above** the 95th percentile of the distribution. Thus, one quarterly average above the 95th percentile is not a permit violation. However, if the quarterly average is above the 95th percentile again in the following sampling period, then the limit has been exceeded.

Most facilities that sample for mercury do so as part of their pretreatment programs. This sampling is typically conducted on three consecutive days, once per quarter. DEQ does not propose additional sampling. However, DEQ allows additional samples. If additional samples are collected, the results must be included when calculating the quarterly average.

4.2.2 Monitoring requirements

DEQ will incorporate effluent monitoring requirements into the permit to ensure compliance with the LCA-based interim effluent limit. DEQ will require a minimum of quarterly mercury effluent monitoring for each facility. Many facilities already collect at least this amount of mercury effluent data under pre-treatment programs or current permit requirements.

4.2.3 Implementation of a Mercury Minimization Program

DEQ will include a requirement in the permit to implement the MMP as described in Section 3.2.2. The MMP must include mercury reductions activities throughout the 20-year term of the variance. During re-evaluation of the variance for the next permit cycle, the facility can add mercury reduction activities to the existing MMP.

4.2.4 Annual progress reports

The permit will require an annual progress report. The progress report should include, at a minimum, the following information:

- All effluent, influent, biosolids and other mercury data collected over the course of each year of the permit cycle;
- A summary of activities conducted under the MMP; and
- Any nonpoint source best management practices implemented under the authority of the permittee to address mercury loads.

4.2.5 Requirements for facilities with increasing mercury effluent concentrations

As demonstrated in Section 2.2, MMP implementation typically results in reductions in mercury effluent concentrations over time. However, effluent mercury concentrations may trend upwards in some facilities from one permit term to the next. During the HAC re-evaluation process, DEQ will not increase the LCA and LCA-based effluent limits when average effluent concentrations have increased from one permit term to the next. This is consistent with federal and state variance requirements. DEQ may require the facility to include additional facility specific commitments in its MMP, potentially to include additional facility audits, or collection system monitoring to identify and address legacy sources of mercury.

4.2.6 Re-evaluation of requirements during permit renewal

When each permit is renewed, DEQ will establish an updated interim effluent limit based on the more recent data, as described in Section 4.2.1. In addition, DEQ will require each facility to update their MMP to provide more specificity to activities that will be conducted for subsequent duration of the permit, as well as in future permit terms. The public will have the opportunity to provide comment on the updated MMP and permit requirements during the permit renewal process.

5. Bibliography

- Amos, H. M., Jacob, D. J., Streets, D. G., & Sunderland, E. M. (2013). Legacy impacts of all-time anthropogenic emissions on the global mercury cycle. *Global Biogeochemical Cycles*, 27, 410-421. doi:10.1002/gbc.20040
- California EPA, Regional Water Quality Control Board, Central Valley Region. 2010. Staff Report: A Review of Methylmercury and Inorganic Mercury Discharges from NPDES Facilities in California's Central Valley.
- Chetelat, J., Amyot, M., Arp, P., Blais, J., Depew, D., Emmerton, C., . . . van der Velden, S. (2015). Mercury in freshwater ecosystems of the Canadian Arctic: Recent advances on its cycling and fate. *Science of the Total Environment*, 509, 41-66.
- City of Oshkosh (2018). Mercury Source Identification and Reduction Efforts.
- Driscoll, C., Han, Y., Chen, C., Evers, D., Lambert, K., & Holsen, T. (2007). Mercury contamination in forest and freshwater ecosystems in the Northeastern United States. *Bioscience*, 57, 17-28.
- Eagles-Smith, C., Silbergeld, E., Basu, N., Bustamante, P., Diaz-Barriga, F., & Hopkins, W. (2018). Modulators of mercury risk to wildlife and humans in the context of rapid global change. *Ambio*, 47, 170-197.
- Eagles-Smith, C., Ackerman, J., Willacker, J., Tate, M., Lutz, M., & Fleck, J. (2016). Spatial and temporal patterns of mercury concentrations in freshwater fish across Western United States and Canada. *Science of the Total Environment*, 568, 1171-1184.
- Electric Power Research Institute and Water Research Foundation. 2013. Electricity Use and Management in the Municipal Water Supply and Wastewater Industries. 194 pp.
- Fitzgerald, W., Engstrom, D., Mason, R., & Nater, E. (1998). The case for atmospheric mercury contamination in remote areas. *Environmental Science and Technology*, 32, 1-7.
- Hall, B., Bodaly, R., Fudge, R., Rudd, J., & Rosenberg, D. (1997). Food as the dominant pathway of methylmercury uptake by fish. *Water, Air and Soil Pollution*, 100, 13-24.
- HDR. 2013. Treatment Technology Review and Assessment. Prepared for the Association of Washington Businesses.
- Hollerman, W., L. Holland, D. Ila, J. Hensley, G. Southworth, T. Klasson, P. Taylor, J. Johnston, and R. Turner. 1999. Results from the low level mercury sorbent test at the Oak Ridge Y-12 Plant in Tennessee. *Journal of Hazardous Materials B68*:193-203.
- Lindberg, S., Bullock, R., Ebinghaus, R., Engstrom, D., Feng, X., & Fitzgerald, W. (2007). A synthesis of progress and uncertainties in attributing the sources of mercury in deposition. *Ambio*, 36, 19-32.
- Munthe, J., Bodaly, R., Branfireun, B., Driscoll, C., Gilmour, C., & Harris, R. (2007). Recovery of mercury-contaminated fisheries. *Ambio*, 36, 33-44.
- Ohio Environmental Protection Agency. 1997. Assessing the Economic Impacts of the Proposed Ohio EPA Water Rules on the Economy. Prepared for the Division of Surface Water by Foster Wheeler Environmental Corporation and DRI/McGraw Hill.
- Oregon Department of Environmental Quality. 2019. Draft Willamette Basin Mercury Total Maximum Daily Load. Portland, OR.
- Oregon Department of Environmental Quality. 2017. Statewide Aquatic Tissue Toxics Assessment Report. Laboratory and Environmental Assessment Program. Hillsboro, OR.
- Schroeder, W., & Munthe, J. (1998). Atmospheric mercury -- An overview. *Atmospheric Environment*, 30, 809-822.
- Stevens Point Public Utilities (2018). Mercury Source Identification and Control PMP.
- Tetra Tech, 2019. Mercury TMDL Development for the Willamette River Basin (Oregon) – Technical Support Document (Public Review Draft). Prepared for Oregon Department of Environmental Quality and U.S. EPA Region 10. 162 pp.

- Trip, L., & Allan, R. (2000). Sources, trends, implications and remediation of mercury contamination of lakes in remote areas of Canada. *Water Science and Technology*, 42, 171-176.
- Urgun-Demirtas, M, P. Gillenwater, M. C. Negri, Y. Lin, S. Snyder, R. Doctor, L. Pierce and J. Alvarado. 2013. Achieving the Great Lakes Initiative Mercury Limits in Oil Refinery Effluent. *Water Environment Research* 85(1): 77-86.
- U.S. Environmental Protection Agency. 2014. [Water Quality Standards Handbook, Chapter 5: General Policies](#). Office of Water. EPA 820-B-14-004. Accessed January 9, 2018.
- U.S. Environmental Protection Agency. 2010. Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion. Office of Science and Technology. Washington, DC. EPA 823-R-10-001. 221 pp.
- U.S. Environmental Protection Agency. 2008. Municipal Nutrient Removal Technologies Reference Document. Office of Wastewater Management, Municipal Support Division, Municipal Technology Branch. EPA 832-R-08-006. 449 pp.
- U.S. Environmental Protection Agency. 2007. Treatment Technologies for Mercury in Soil, Waste, and Water. Office of Superfund Remediation and Technology Innovation. Washington, DC. 133 pp.
- U.S. Environmental Protection Agency. 1991. Technical Support Document for Water Quality-based Toxics Control. Office of Water. EPA/505/2-90-001. 335 pp.

DRAFT



Proposed Revisions to Oregon's Water Quality Variance Rule

The Oregon Department of Environmental Quality is proposing revisions to the state water quality standards variance rule, [OAR 340-041-0059](#). A variance establishes alternative limits when a discharger cannot feasibly attain permit limits based on a water quality standards due to certain conditions. The U.S. Environmental Protection Agency in 2015, promulgated federal variance rules. So, DEQ is proposing revisions to Oregon's rule to ensure consistency with federal requirements and to clarify roles and responsibilities for issuing variances. The state last revised the variance rule in 2011.

- 1. Types of variances and authority to issue variances.** Current state rule allows DEQ to grant individual variances. The proposed rule revisions authorize individual, multiple discharger and waterbody variances, all of which are allowed under the federal rules. The language also clarifies that DEQ's director is authorized to grant individual variances, but the Environmental Quality Commission must grant multiple discharger variances and waterbody variances through rulemaking. Variances are considered amendments to water quality standards, making them also subject to EPA approval prior to becoming effective.
- 2. Definitions.** DEQ is proposing to add definitions for "pollutant minimization plan" and "water quality standards variances" under 340-041-0002. These definitions are identical to federal definitions. The state water quality variance rule references these terms.
- 3. Limitations to granting variances.** The current state rule includes several scenarios under which DEQ cannot grant a variance. DEQ is proposing to remove several of these limitations, as follows:
 - The state cannot grant a variance if permit limits are attainable by wastewater treatment technology used by each facility. However, the proposed rule removes language that requires DEQ to consider the impact of cost-effective and reasonable best management practices for nonpoint sources in determining whether a waterbody meets standards. Such language is not included in the federal rule, except when granting waterbody variances.
 - The proposed rule removes language prohibiting variances if they jeopardize continued existence of any threatened or endangered species or result in unreasonable risk to human health. This language is not included in the federal rule. Any variance for an aquatic life criterion would require EPA to conduct consultation under the Endangered Species Act prior to approval and thus, would not be approved by EPA if it would jeopardize threatened or endangered species. Variances are required to include provisions that will ensure reduction of pollutant loads over time, decreasing any potential risk to human health.

- The proposed rule removes language that prohibits variances if the point source does not have a currently effective National Pollutant Discharge Elimination System permit. The proposed state rule revision allows DEQ or the commission to issue a variance to a new discharger if conditions required by the variance rule are met. A variance might be needed, for example, if a facility changes the location of an outfall to a different waterbody that provides additional dilution and overall benefits to water quality. DEQ may consider this a new facility. The facility may not be able to meet water quality based effluent limits for certain pollutants (assuming that antidegradation requirements are met). In this case, a variance might be an appropriate tool to use to ensure the discharger makes progress toward meeting the standard.
- The proposed rule removes language prohibiting variances if information provided by a discharger does not allow DEQ or the commission to conclude that an appropriate condition for a variance has been met. This language is not in federal rule. Federal rule requires DEQ to provide sufficient justification for the variance based on one of the seven factors.

4. Conditions to grant a variance.

- The proposed rule amends the statement that “No existing use will be impaired or removed as a result of granting the variance,” with the statement that “the requirements that apply throughout the term of the variance will not result in the lowering of currently attained ambient water quality.” This language is consistent with federal requirements. DEQ’s antidegradation policy also requires that permit requirements, including those associated with variances, protect existing uses.
- The proposed rule allows a variance for restoration activities. This factor was newly adopted in the 2015 Federal rule. DEQ is incorporating it into its own rules for consistency.

5. Variance duration.

- The proposed rule changes requirements regarding the variance duration to be consistent with federal requirements. Specifically, the proposed rule notes that the duration of the variance may only be as long as necessary to meet the Highest Attainable Condition, or HAC (see variance submittal requirements below). In addition, DEQ must re-evaluate the Highest Attainable Condition at least every five years for variances longer than five years in duration and DEQ submit this reevaluation to EPA. Finally, the proposed rule states that if this re-evaluation is not completed, the variance will no longer be the applicable water quality standard.
- The proposed rule removes language regarding administrative extension of permits with variance-related requirements.
- The proposed rule removes language about prioritizing permit renewals for permits containing variances. The new rule would allow variances for longer than a permit cycle if there is a pollutant minimization plan. So, this provision has limited impact related to DEQ’s efforts for timely permit renewal.

6. Variance submittal requirements. The proposed rule clarifies variance submittal requirements to differentiate requirements for individual, multiple discharger and waterbody variances, as follows:

- The current rule includes requirements for individual variances only. The proposed rule no longer requires applicants for individual variances to submit information about cost-effective and reasonable best management practices for nonpoint sources under the control of the discharger that addresses the pollutant the variance is based upon. This language is not required under the federal rule for discharger-specific variances. The proposed rule also only requires a pollutant minimization plan if it is required by the expression of the HAC under the variance. This is consistent with federal rules.
- The proposed rule notes that submittal requirements for multiple discharger and waterbody variances will be noted in the rule for these variances.

7. Highest attainable condition (HAC). The proposed rules adopt, verbatim, federal variance rule language describing the Highest Attainable Condition, or HAC. The HAC provides the best condition that is achievable in the waterbody or by the discharger or dischargers covered by the variance. According to federal rules, the HAC may be expressed in one of three ways for discharger-specific variances:

- The first HAC expression is called the “highest attainable interim criterion,” which is a quantified pollutant level that can be achieved in the waterbody or waterbodies. This HAC expression is useful if there is a high level of certainty of the pollutant level that the waterbody can achieve at the end of the variance.
- The second HAC expression is called the “interim effluent condition reflecting the greatest pollutant reduction achievable.” This expression is useful if a discharger will undergo treatment upgrades under the variance and there is enough information to determine and quantify what pollutant levels a discharger can achieve once the upgrade is operating.
- The third HAC expression is allowed if there is no additional feasible pollutant control. In this instance, the HAC is “the interim criterion or interim effluent condition reflecting greatest pollutant reduction with optimization of installed treatment and adoption and implementation of a pollutant minimization plan.” In short, this means that a discharger is required to maintain current, optimized treatment and implement a pollutant minimization plan in order to make incremental progress toward the water quality standard.

8. Permit conditions.

- The proposed rule amendments state that permit conditions shall be based on the HAC specified by the variance, in accordance with federal rules.
- The proposed rules remove the requirement that permit limits be concentration-based. This amendment will allow mass-based permit limits.
- The proposed rules remove a requirement that the interim permit limit be based on discharge monitoring data. In some cases, the highest attainable condition may be based on a treatment upgrade and, therefore, may reflect a desired future condition, rather than a condition based on past performance data.

9. Public notification requirements. The proposed rule clarifies public notification requirements to ensure that public notice for a variance is separate from public notice for a permit, although this notification may be coordinated and concurrent for administrative efficiency.

- 10. Variance renewals.** Federal rule requires DEQ grant a new variance if an existing variance expires, so the proposed state rules remove a section about variance renewals.