State of Oregon Department of Environmental Quality

Discussion Draft Fiscal Impact Statement

Aquatic Life Toxics Criteria Rulemaking 2024

Introduction

DEQ invites public input on proposed permanent rule amendments to chapter 340 of the Oregon Administrative Rules. The Department of Environmental Quality (DEQ) is conducting a rulemaking to update Oregon's Aquatic Life Water Quality Criteria for Toxic Pollutants shown in Table 30 of Oregon Administrative Rule (OAR) 340-041-8033. DEQ is proposing to add new criteria for acrolein, aluminum, carbaryl, and diazinon, and update the criteria for cadmium and tributyltin. DEQ is also proposing to remove Table 31 Aquatic Life Water Quality Guidance Values for Toxic Pollutants from OAR 340-041-8033 from rule.

EPA periodically releases national recommendations for aquatic life criteria that States and Tribes may use to develop water quality standards. These recommendations are based on the latest science and are designed to protect the aquatic community from short and/or long term negative chemical effects. Once EPA publishes criteria recommendations for a chemical, states must either adopt the new criteria or justify not doing so during their Triennial Review.

Oregon's aquatic life criteria were last comprehensively reviewed and updated in 2004. As part of DEQ's 2021 Water Quality Standards Triennial Review, DEQ committed to reviewing several of EPA's new or updated aquatic life criteria recommendations and considering them for adoption. DEQ also decided to compare all of EPA's current aquatic life criteria recommendations with the state's criteria to keep Oregon's criteria up-to-date with EPA's most recent recommendations and the latest science.

As a result of this comprehensive review, DEQ is proposing to adopt EPA's most up-to-date aquatic life criteria recommendations for six chemicals (listed above). Adding or updating these criteria in Oregon's water quality standards will provide increased protection for Oregon fish and aquatic life. These numeric criteria values will be used in DEQ's water quality programs -to determine waterbody impairment, pollution control measures, and permit limits. DEQ expects to present the proposed rule amendments to the Environmental Quality Commission for their adoption in mid-2024.

DEQ is proposing to remove Table 31 Aquatic Life Water Quality Guidance Values for Toxic Pollutants from rule because these values are not regulatory criteria and are outdated. Instead, DEQ is developing clear procedures to implement Oregon’s narrative toxics criterion (i.e. no toxics in toxic amounts) found in OAR 340-041-0033(1). Removing Table

31 from rule will improve water quality standards rule clarity without causing a regulatory impact.

Fee Analysis

This rulemaking does not involve fees.

Statement of fiscal and economic impact

Fiscal and Economic Impact

The following section describes the fiscal and economic impact of adopting aquatic life criteria for six chemicals into Oregon Table 30 water quality standards and removing Table 31 from rule.

- No expected fiscal and economic impacts from adopting freshwater aluminum and cadmium criteria into Oregon rule because those criteria are already effective and being implemented in Oregon for Clean Water Act purposes as a result of federal promulgation.
- A minimal increase in the resources required by DEQ's water quality program to assess and review compliance for regulated bodies under the Clean Water Act.
- A potential increase in capital investment needed for new treatments and/or implementation of new best management practices required to meet general and/or individual NPDES permit requirements for the new proposed criteria. These costs could affect state agencies, local governments, and large and small businesses, but are not quantifiable at this time. However, the limited scope of aquatic life criteria addressed in this rulemaking, along with the limited requirements for dischargers to monitor pesticide concentrations in their wastewater may lessen the potential fiscal burden of compliance for affected entities.
- A potential increase in the monitoring requirements for local government and large and small businesses that hold individual NPDES permits and discharge over one million gallons of water per day. Estimated costs for initial additional monitoring range from: $0 to $8,300 over a five year permitting cycle. Those costs could increase if DEQ finds reasonable potential and applies a limit to permittees, which would require regular monitoring. The cost of that regular monitoring is not quantifiable at this time.
- A potential increase in indirect costs for local governments and large and small businesses that discharge into the municipal sewer system through potential pre-treatment requirements or increased fees for wastewater treatment.
- No fiscal or economic impact from removing Table 31 aquatic life guidance values from Oregon water quality standards because these values are not regulatory criteria.

Statement of Cost of Compliance

State agencies

Oregon Department of Environmental Quality

Adding aquatic life criteria for four chemicals (acrolein, aluminum, carbaryl, and diazinon) and updating aquatic life criteria for two chemicals (cadmium and tributyltin) in Oregon water quality standards will affect water quality programs that implement water quality standards under the Clean Water Act. Effects on DEQ's water quality programs are discussed below.

Permitting

Adopting the proposed aquatic life criteria could require additional resources from the permitting program to apply the criteria and/or evaluate reasonable potential for a discharger to exceed the criteria. Both general and individual NPDES permits require staff resources to review water quality criteria and determine what limits should apply. However, the full fiscal impact of reviewing and implementing additional criteria cannot be fully estimated until permits are renewed and each permittee's application is reviewed with knowledge of process.

The proposed saltwater cadmium criteria are not expected to require additional permitting resources to implement because Oregon's current saltwater criteria for cadmium are only slightly higher than the proposed values.

For the proposed new pesticide criteria (carbaryl, diazinon, and tributyltin), additional permitting resources may be required on a case-by-case basis, although permittees will not typically be required to monitor for those chemicals in discharges because they are not priority pollutants.

Most Oregon waters are designated to support fish and aquatic life use (protected by aquatic life criteria) and fishing and/or drinking water supply uses (protected by human health criteria). While the proposed aquatic life criteria for acrolein are new for aquatic life, Oregon already has human health criteria for acrolein that are over three times more stringent than the proposed aquatic life criteria. Therefore, adopting the less stringent aquatic life criteria for acrolein is not expected to require significant additional permitting resources for DEQ.

Assessment

Adopting the proposed aquatic life criteria are not expected to significantly impact the assessment program. The criteria will be assessed in the same manner as other aquatic life toxics criteria and will therefore not require development of a new assessment methodology to address the changes.

It is unlikely that the proposed saltwater criteria will cause additional impairment listings for saltwater cadmium. The proposed criteria are only slightly lower than the current effective criteria in saltwater. A limited data analysis of 110 saltwater cadmium measurements from Oregon waters revealed that the ambient measurements were always below the proposed criteria (*Water Quality Standards Aquatic Life Toxics Criteria Update 2024: Issue Paper, Discussion Draft*). However, the effect of the proposed cadmium criteria cannot be fully evaluated until they are considered during the assessment process.

Oregon currently has fresh and saltwater criteria for tributyltin. Only the proposed saltwater chronic criterion will become more stringent, which could lead to 303(d) listings Currently, there are no 303(d) listings for tributyltin, and because the existing and proposed saltwater chronic criteria are similar, the proposed criteria are not expected to result in 303(d) listings for tributyltin.

For acrolein, carbaryl, and diazinon, which will be new aquatic life criteria in Oregon, it is possible that the criteria would trigger new listings to the 303(d) list of impaired waters for these parameters. However, a preliminary analysis (*Water Quality Standards Aquatic Life Toxics Criteria Update 2024: Issue Paper, Discussion Draft*) by the Water Quality Standards program found that carbaryl was only definitively measured in ambient waters above the proposed criteria in one sample out of over 6,000 samples. For diazinon, only 36 ambient water quality samples of more than 8,000 across the state were definitively above the proposed freshwater criteria, and none of the fifty-six saltwater samples exceeded the proposed saltwater diazinon criteria. For acrolein, none of the 91 ambient measurements in Oregon freshwaters were definitively higher than criteria. Although a full assessment must be completed to understand the impact of adopting these criteria into Oregon rule, preliminary data show that it is unlikely that adding these criteria will trigger 303(d) listings.

TMDL

In the unlikely event that adopting the proposed aquatic life criteria lead to additional 303(d) listings, the TMDL program may be affected. Several of the proposed criteria are current use pesticides. In the case these pesticides trigger 303(d) listings, it is possible that pollution control measures other than a TMDL would be most appropriate. For example, voluntary action through the Pesticide Stewardship Partnership program may address any future waterbody impairment by carbaryl and diazinon. potentially avoiding the additional state resources needed to develop and implement a TMDL. As with other programs, it is not possible to quantify the effect of adopting these criteria at this time.

Oregon Department of Agriculture

Adopting the proposed aquatic life criteria could affect the Oregon Department of Agriculture (ODA) if ODA regularly uses acrolein, cadmium (in saltwater), carbaryl, diazinon, and/or tributyltin and is regulated by a general and/or individual NPDES permit. Further if DEQ develops a TMDL for these chemicals, ODA could be required to comply with best management practices and/or discharge limits that result from implementing the new criteria values. New limits could require additional treatment methods that require capital investment. The full economic impact of any future need to adjust treatment is not practicably quantifiable at this time. However, a preliminary analysis by DEQ revealed that for most of the chemicals with proposed criteria, concentrations were generally below criteria levels in ambient surface waters and discharges (*Water Quality Standards Aquatic Life Toxics Criteria Update 2024: Issue Paper, Discussion Draft*).

Oregon Department of Transportation

The impact of the proposed rule for the Oregon Department of Transportation is captured in the impact to the Oregon Department of Agriculture.

Oregon Department of Forestry

The impact of the proposed rule for the Oregon Department of Forestry is captured in the impact to the Oregon Department of Agriculture.

Oregon Department of Fish and Wildlife

The impact of the proposed rule for the Oregon Department of Fish and Wildlife is captured in the impact to the Oregon Department of Agriculture.

In addition, adopting the proposed aquatic life criteria will provide an added benefit of increased fish and aquatic life protection and health, which serves ODFW's mission "to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations." However, the economic impact of that benefit is not quantifiable at this time.

Local governments

The fiscal impact of the new Water Quality Standards on point source dischargers will be variable. Local governments that hold general permits and/or individual NPDES permits may be required to improve best management practices or wastewater treatment methods if they discharge the pollutant and have reasonable potential to exceed the new or more stringent aquatic life criteria. Major domestic dischargers may be responsible for additional monitoring costs ranging from $0 to $8,300 every 5 years to provide data to DEQ for reasonable potential analysis. If reasonable potential is determined, then individual dischargers may be required to monitor their discharge more frequently, which will result in increased monitoring costs, although it is not possible to reasonably estimate those costs at this time. If a limit is applied as the result of the proposed rule and exceeded, then major domestic dischargers may be responsible for the costs for additional wastewater treatment to achieve compliance.

Nearly all local governments with an individual major NPDES permit are already required to monitor acrolein in their wastewater. Because Oregon's acrolein human health criteria are more stringent than the proposed aquatic life criteria, there is no expected economic impact of adopting the aquatic life criteria for acrolein for individual NPDES major dischargers. Dischargers are not usually required to monitor carbaryl, diazinon, and tributyltin, and available data in Oregon show carbaryl and diazinon levels are typically below the proposed criteria in ambient waters and discharges. Individual permittees that discharge cadmium into saltwater are rare, but the proposed criteria are only slightly more stringent than existing criteria in Oregon, so the cost of compliance is not expected to significantly increase due to the proposed saltwater cadmium criteria.

Local governments with individual NPDES permits that discharge less than one million gallons per day are not required to monitor for toxics and will therefore not be economically impacted by the proposed rule.

Although the effects of the proposed rule on local governments holding general permits cannot be fully assessed until each general permit is evaluated, the impact of the proposed rule on compliance with several general permits may be estimated. Local governments that hold general permits for stormwater discharge (1200-Z, 1200-A, 1200-C) are not likely to be affected by the proposed criteria because acrolein, carbaryl, diazinon, and tributyltin are not included in those permits, and the small change in saltwater cadmium criteria is unlikely to significantly impact general permit holders. Local governments with municipal separate storm sewer general permits (MS4) or general permits for pesticide application (2000-J, 2300-A) may be required to invest in treatment technologies or alter best management practices to maintain compliance with the proposed criteria. Although it is not possible to estimate the cost of compliance at this time, the proposed aquatic life criteria for acrolein will not drive compliance (as explained in the **Permitting** section above). Also, the available data for the other proposed chemicals in ambient surface water and discharge concentrations are generally below criteria and therefore, unlikely to trigger increased costs associated with compliance.

Public

The public will benefit from the proposed criteria through increased fish and aquatic life beneficial use protection. The criteria will provide a regulatory mechanism to increase the health of fish, shellfish, and other aquatic life in Oregon. This may result in better ecosystem function and may also contribute to healthier fisheries overall. Members of the public who consume fish or rely on healthy fish populations as a source of income may benefit economically from the proposed rules, although it is not possible to practicably estimate the impact at this time.

Large businesses - businesses with more than 50 employees

Large businesses may incur increased costs due to application of the revised criteria if their wastewater discharge permits must be modified to require upgraded wastewater treatment systems and additional monitoring of effluent discharges. Large businesses may also be affected if their business activities are covered under a general permit, and they are required to implement additional monitoring or treatment to comply with the conditions of the permit. The effects of the proposed rule on large businesses are generally the same as those described for local governments.

Small businesses – businesses with 50 or fewer employees

Small businesses may incur increased costs due to application of the revised criteria if their wastewater discharge permits must be modified to require upgraded wastewater treatment systems and additional monitoring of effluent discharges. Small businesses may also be affected if their business activities are covered under a general permit, and they are required to implement additional monitoring or treatment to comply with the conditions of the permit. The effects of the proposed rule on small businesses are generally the same as those described for local governments.

However, small businesses are less likely to hold individual NPDES permits, and they are likely to discharge directly into municipal sewer systems. If they do hold individual NPDES permits, they are more likely to be minor dischargers (less than one million gallons per day) which are not required to monitor for toxics.

Small businesses may incur increased indirect costs through the increase of fees if treatment upgrades are required by municipal wastewater treatment facilities. However, upgrades resulting from these criteria are not expected to be common or significant, and the cost is not quantifiable at this time.

ORS 183.336 Cost of Compliance Effect on Small Businesses

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

It is not possible to estimate the number of small businesses that would be subject to new limits in permits until those permits are fully evaluated at the time of renewal. However, only small businesses that hold individual NPDES permits and discharge over one million gallons of wastewater per day would be subject to direct monitoring and treatment costs for wastewater discharges. Small businesses with general permits may be subject to increased implementation of best management practices to remain compliant with the permit.

Small businesses that produce or heavily use the pesticides included in this rulemaking (acrolein, carbaryl, diazinon, tributyltin) would potentially be affected by increased regulatory requirements. Small businesses that rely heavily on combustion processes could be subject to increased regulatory requirements for discharging acrolein. Further, any small business that was involved in mining or battery production and discharged cadmium waste into saltwater could be affected by new regulatory requirements. However, it is not possible to estimate the number of small businesses that would be affected at this time.

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

Small businesses that hold individual NPDES permits and discharge over one million gallons per day may be required to monitor for the proposed chemicals in their discharges and regularly report those data to DEQ which could result in additional administrative costs. However, small businesses meeting those permit and discharge conditions are likely to already be monitoring for acrolein and cadmium because they are priority pollutants with existing criteria. Those small businesses would only be required to monitor and report carbaryl, diazinon, and tributyltin if knowledge of process indicates they are expected to discharge those chemicals. The increase in administrative costs associated with this rule are not quantifiable at this time, but they are anticipated to be low and/or only apply to a limited number of small businesses.

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

If equipment, supplies, labor, or increased administration is required, it would be only for select small businesses likely to have these chemicals in their discharge at levels with the potential to exceed the criteria in their receiving water. This is expected to be rare and the costs for these businesses to comply is not quantifiable at this time.

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

DEQ included representatives from the Pacific Coast Federation of Fishermen's Associations, the Oregon Farm Bureau, the Oregon Forest & Industries Council, Oregon Business & Industry as rulemaking advisory committee members to provide input on the fiscal and economic impacts of the proposed rules.

Documents relied on for fiscal and economic impact

Document title	Document location
Water Quality Standards Aquatic Life Toxics Criteria Update 2024: Issue Paper, Discussion Draft	Oregon DEQ Rulemaking Page: https://www.oregon.gov/deq/rulemaking/Pages/AquaticLife2024.aspx
Email Communication, DEQ's Water Quality Permitting Program employees	Oregon DEQ 700 NE Multnomah Street, Suite 600 Portland, OR 97232-4100
Email and Phone Communication with private laboratories to determine cost of chemical analysis in wastewater. • Apex Laboratorie, LLC in Tigard, OR • Pacific Agricultural Laboratory in Sherwood, OR	Oregon DEQ 700 NE Multnomah Street, Suite 600 Portland, OR 97232-4100

• Eurofins Calscience, LLC in Irvine, CA	
Email Communication, Oregon Department of Transportation	Oregon DEQ 700 NE Multnomah Street, Suite 600 Portland, OR 97232-4100

Advisory committee fiscal review

[Section to be added after RAC review and comment]

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 the aquatic life criteria proposed for adoption are not likely to be used or discharged during housing construction and will not have an expected impact on general permit holders for construction activities (1200-C).

Racial Equity

ORS 183.335(2)(a)(F) requires state agencies to provide a statement identifying how adoption of this rule will affect racial equity in this state.

Applying and implementing the proposed aquatic life criteria statewide will provide additional protection for fish and aquatic life and regulatory pollution control mechanisms in Oregon under the Clean Water Act. Given that racial minority groups have been historically marginalized and relegated to live and work in the most polluted areas, near industrial discharges or areas with heavy use of pesticides, this rulemaking will take a step to improve racial equity in Oregon by providing Clean Water Act protections that reduce pollution in these areas.

By adopting the proposed criteria, fish, shellfish, and other aquatic species will receive increased protection, which is expected to increase the health of fisheries. This may in turn provide benefits to communities that rely on healthy fish populations and ecosystems culturally and for food.

Environmental Justice Considerations

[This section will be included in a future draft]

Alternative formats

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