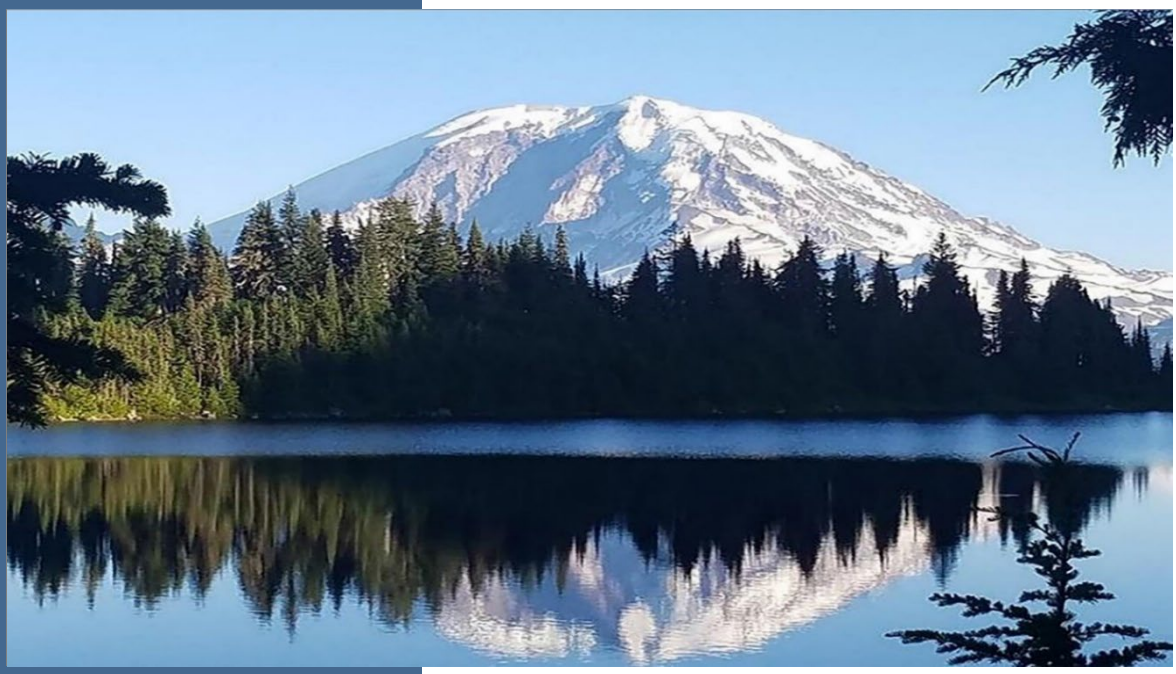

2025 Triennial Review of Surface Water Quality Standards

Final Report and Workplan

Water Quality Program

Washington State Department of Ecology

Olympia, Washington

August 2025, Publication 25-10-050

DEPARTMENT OF ECOLOGY
State of Washington

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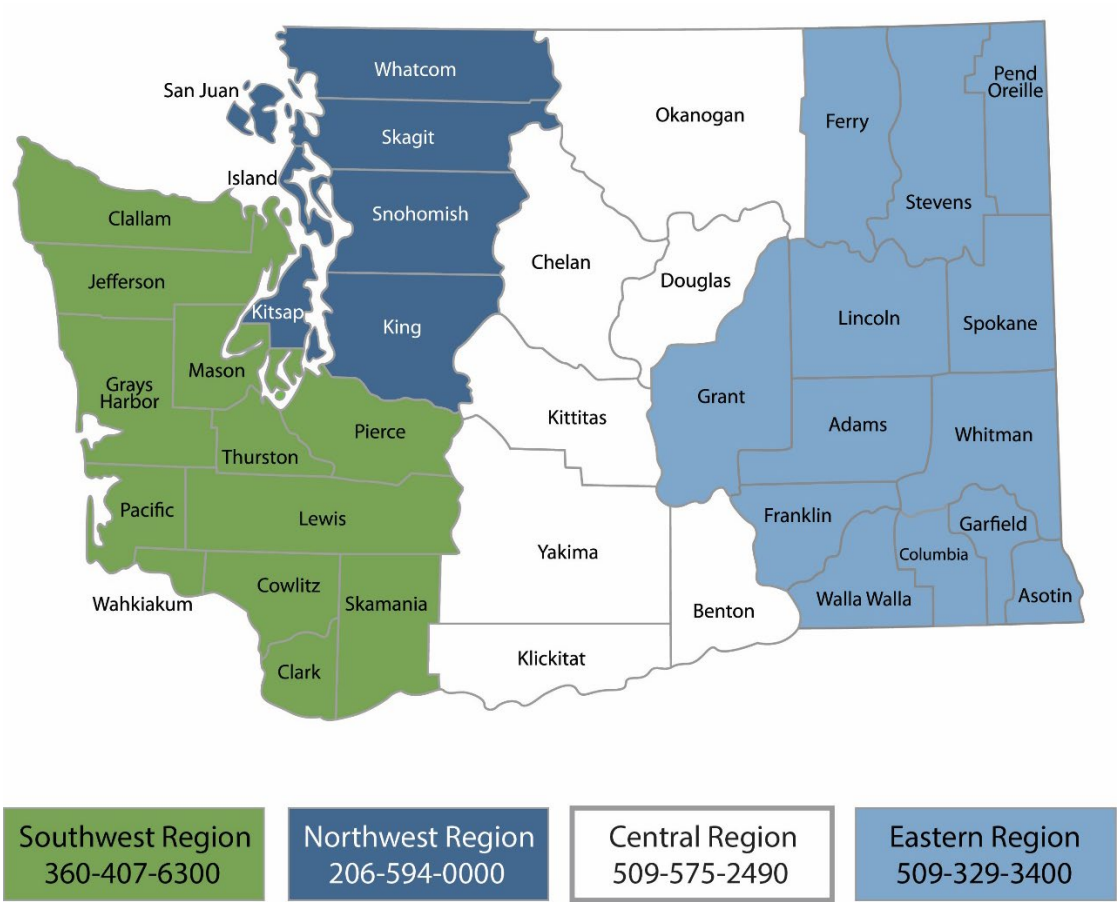
[1] www.ecology.wa.gov/contact

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

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ECOLOGY
State of Washington

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Triennial Review Final Report

Introduction

Washington Department of Ecology (Ecology) completed a triennial review of the surface water quality standards in Chapter 173-201A Washington Administrative Code (WAC). This report presents the final workplan for projects we plan to begin between Summer 2025 and Summer 2028 related to the water quality standards. Projects in the workplan include rulemakings to adopt water quality criteria, developing chapters for a methodology document, and tracking scientific information on the future development of water quality standards. This report also provides a response to public comments received on the draft workplan, and a comparison of state water quality criteria against the Environmental Protection Agency's (EPA) national recommended water quality criteria.

Purpose of the Triennial Review

The Federal Clean Water Act requires states to periodically hold a public review of the surface water quality standards (40 Code of Federal Regulations (CFR) § 131.20). This process is called a triennial review. A triennial review is a public involvment opportunity that helps inform our workplan, which identifies changes we plan to make to the water quality standards over the next three years. It is not a rulemaking process. Rather, each project identified in the workplan will have its own process for formal Tribal consultation and for all interested parties to give us feedback and formally comment.

The triennial review process ensures we keep the water quality standards current. We regularly update the water quality standards to:

- Reflect new scientific information on the protection of designated uses.
- Align with national water quality criteria recommended by the EPA.
- Reflect agency or legislative priorities.
- Respond to requests from Tribes or the public.

Triennial review process

Washington's triennial review process involves a program review of the water quality standards, drafting a workplan to update the standards over the next three years, getting public and Tribal feedback on the plan, then submitting a final plan to EPA. We then begin rulemakings and other projects listed in the workplan over the next three years. Figure 1 provides details on Washington's triennial review process.

We will incorporate projects identified in our final workplan into Ecology's Watershed Management Section business plan to schedule projects based on staff capacity and provide coordination with other programs.

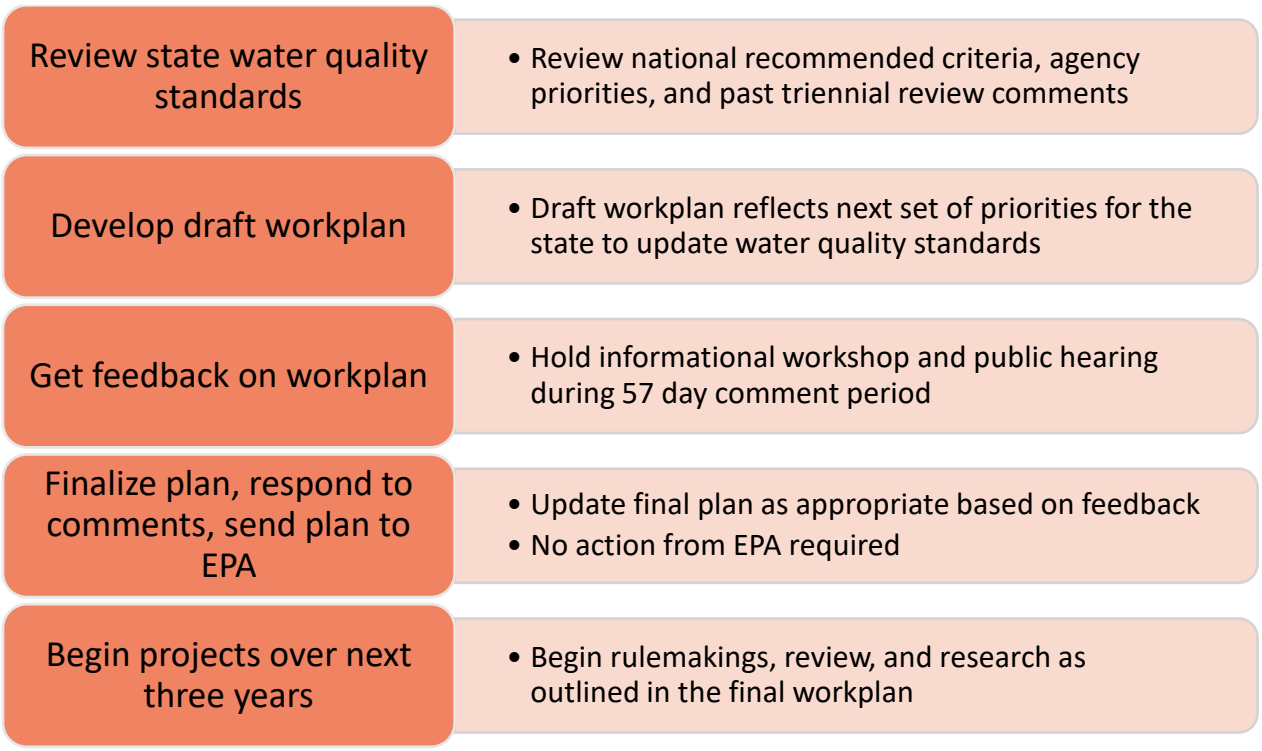

Figure 1 Washington's triennial review process

Summary of Tribal and public engagement

Tribal engagement and Tribal reserved rights

We began early scoping conversations with Tribes in the fall of 2024. During meetings with Tribal water quality staff, we discussed the opportunity to provide new information related to Tribal reserved rights and offered to set up meetings with Tribal staff to discuss how Tribes would like to address Tribal reserved rights in the triennial review or future rulemakings. We then presented our draft workplan to Tribal water quality staff on April 2 and 3, 2025.

During the Triennial review public comment period, we requested new information available about Tribal reserved rights applicable to Washington waters that we should consider when updating our water quality standards, as required under the federal Tribal reserved rights rule[2] (40 CFR 131.9 and 131.20).

We received comments from two Tribes related to the protection of Tribal resources and cultural uses. We plan to hold future discussions with each Tribe to understand these comments and each Tribe's recommendations.

[2] https://www.federalregister.gov/documents/2024/05/02/2024-09427/water-quality-standards-regulatory-revisions-to-protect-tribal-reserved-rights

Public outreach and comment period

We accepted comments on a draft workplan[3] from 12 a.m. on February 25, 2025, until 11:59 p.m. on April 22, 2025. During the comment period, we asked for feedback on our draft workplan and any other actions Ecology should take to update the water quality standards over the next three years.

We held an informational webinar on March 13, 2025, and a workshop and public hearing on April 15, 2025. During each event, we presented information about the triennial review process, the water quality standards, and items on the draft workplan, then answered questions. During the hearing, we provided an opportunity for formal comments. We did not receive any verbal testimony.

We received 14 submissions representing 3 Tribes, 2 associations, 11 non-governmental organizations, 2 agencies, and 3 individuals. See Appendix B for Ecology's responses to comments received.

Changes from the draft workplan to the final plan

Based on feedback we received during the public comment period, we updated the workplan to add to Group 3 (tracking or exploring information for potential future workplan projects):

- **Evaluating PFAS benchmarks.** This includes a review of the eight PFAS aquatic life benchmarks that EPA released in 2025 to evaluate the scientific information and data gaps to determine if it is appropriate to adopt these benchmarks in Washington's water quality standards.

For more details on the comments that prompted this change, see Appendix B: Comments and Responses. We have also adjusted the date range of the workplan to extend to Summer 2028, in order to span a full three years.

Next steps

Group 1 projects

For projects listed in Group 1 that require rulemaking, Ecology will seek approval from the agency's Executive Leadership Team to begin rulemakings as appropriate over the next three years. See Ecology's rulemaking webpage[4] for information on the state rulemaking process. Non-rulemaking projects in Group 1, such as the freshwater temperature chapter for the Performance-based approach methods document, will begin after EPA action on the Marine DO chapter and as staff capacity allows. See Table 1 for estimated timeframes of each Group 1 project.

[3] https://apps.ecology.wa.gov/publications/summarypages/2510002.html
[4] https://ecology.wa.gov/regulations-permits/laws-rules-rulemaking/rulemaking/rulemaking-faq

Table 1 Estimated timeframe for Group 1 projects in the 2025 Triennial Review workplan.

Triennial Review Group 1 Projects	Summer 2025	2026	2027	2028	Beyond triennial review
Recreational criteria for cyanotoxins	→	→	→	→	
Nutrient criteria for lakes and reservoirs	→	→	→	→	→
Performance-based approach methods document: Marine DO chapter	→				
***Performance-based approach methods document: Freshwater temperature chapter**				→	→

*Pending EPA action on Marine DO chapter

Federal approval process

Once we complete a rulemaking to adopt updates to the water quality standards, we submit the final rule packet to the EPA for review and approval. The EPA has 60 days to approve or 90 days to disapprove submitted water quality standards. However, the Endangered Species Act requires the EPA to review state-submitted water quality standards for potential impacts to endangered species and their habitat. If the EPA determines the adopted revisions are likely to negatively impact endangered species, they must consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service for further assessment of potential impacts and to ensure endangered species and habitats are not harmed from state rule revisions. This Endangered Species Act consultation process can often extend the federal review process by years.

Group 2 and 3 projects

Projects in groups 2 and 3 involve tracking standards development, data review, and responding to public requests for rule-related actions. Staff will conduct worked identified in groups 2 and 3 as indicated in the final workplan.

Evaluation of national recommended criteria

The EPA develops national recommended criteria for the protection of aquatic life and human health based on the most up-to-date scientific information. The Clean Water Act and implementing regulations require states to review their state-adopted water quality criteria against the national recommended criteria published on the EPA's website[5]. Ecology reviews these criteria to determine if:

- The EPA has published recommended criteria that Washington has not adopted
- The EPA has published criteria that is more protective than Washington's criteria

With this evaluation, we determine if we need to update water quality standards to reflect national recommendations. For recommended criteria that we don't intend to adopt, we have provided a justification for our decision. We have provided this evaluation in Appendix A: Evaluation of National Criteria Recommendations.

Summary of evaluation

Ecology made significant updates to the water quality standards since the 2021 triennial review to align with national criteria recommendations. Therefore, we identified few criteria for priority pollutants that are not aligned with the national recommendations. During the 2021 triennial review, we noted that Ecology will consider for future rulemakings the national recommended human health recreational criteria for cyanotoxins, which are toxins released from harmful algal blooms. We plan to begin rulemaking to consider adopting recreational criteria for cyanotoxins in the next three years.

For aquatic life criteria, we plan to begin rulemaking in the next three years to consider adopting nutrient criteria for lakes and reservoirs. We have listed as Group 2 projects in our workplan reviewing criteria for iron, heptachlor epoxide, hydrogen sulfide, and alkalinity, which means we will conduct a technical review of information to consider updating the water quality standards in the future.

Looking back on the 2021 Triennial Review

The last Triennial Review public comment period on our surface water quality standards was held from July 20, 2021 through September 16, 2021, and the final workplan[6] was submitted to the EPA in April 2022. Following the 2021 Triennial Review, Ecology completed the following actions related to the surface water quality standards:

- Updated the freshwater aquatic life criteria for dissolved oxygen and added narrative fine sediment criteria (adopted and submitted to EPA in 2022; waiting on EPA approval).

[5] https://www.epa.gov/wqc
[6] https://apps.ecology.wa.gov/publications/summarypages/2210002.html

Following this rulemaking, we also completed fine sediment implementation guidance for applying the narrative fine sediment criteria (completed in 2023).

- Adopted the state's first outstanding resource waters designations for Soap Lake, and parts of the Cascade, Napeequa, and Green rivers (adopted in 2023; approved by EPA in 2024).
- Updated the aquatic life toxics criteria, including adding criteria for 14 new toxic chemicals and updating existing criteria for 16 toxic chemicals (adopted and submitted to EPA in 2024; waiting on EPA approval).
- Updated natural conditions provisions (adopted in 2024).
- Adopted the federal human health criteria set by the EPA for Washington (adopted and approved by EPA in 2024).

Our surface water quality standards webpage[7] has information on our recent updates to the standards.

[7] https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-quality-standards/Updates-to-the-standards

2025-2028 Water quality standards workplan

The following table describes the projects Ecology plans to begin between 2025 and 2028. Each rulemaking typically takes 1.5 to 3 years to complete, and project timing depends on a variety of factors, including staff workload and agency priorities. Following the table, we have provided additional information on each project.

Project group ranking

Project group ranking is based on agency priorities established through the CWA 304(a) criteria review, previous Tribal and public feedback, and readiness to initiate a rulemaking on the topic. Projects are generally classified as:

- Project group 1: Ecology has the resources and technical information to begin in the next three years, or the project is already underway.
- Project group 2: Ecology will be conducting a technical review of information to consider updating the water quality standards.
- Project group 3: Ecology is exploring whether sufficient information is available to develop water quality standards to be reflected on future Triennial Review workplans.

Table 2 Water Quality Standards priority updates for 2025 to 2028

No.	Project name	Description	Rule section(s) affected in Chapter 173-201A	Project group
1	Performance-Based Approach Methodology Document – marine dissolved oxygen	Publish final methodology for calculating natural conditions criteria for marine dissolved oxygen.	N/A, document referenced in 173-201A-470	1
2	Recreational criteria for cyanotoxins	Establish freshwater numeric recreational criteria for cyanotoxins such as microcystins and cylindrospermopsin.	200, freshwater designated uses and criteria	1

No.	Project name	Description	Rule section(s) affected in Chapter 173-201A	Project group
3	Lake nutrient criteria	Establish criteria for total nitrogen, total phosphorus, and chlorophyll in lakes and reservoirs.	230, Establishing lake nutrient criteria	1
4	Performance-Based Approach Methodology Document – freshwater temperature	Develop new chapter in Performance-Based Approach methodology document for calculating natural conditions criteria for freshwater temperature.	N/A, document referenced in 173-201A-470	1
5	Respond to requests for rule-related actions	Respond to public petitions as needed, such as for outstanding resource waters nominations, use attainability analyses, or variances.	Varies	2
6	Aquatic life toxics – Iron, hydrogen sulfide, heptachlor epoxide, alkalinity	Review new scientific studies since EPA's last criteria update to determine if EPA's minimum data requirements are met to derive aquatic life criteria and consider updates for WA.	240, Toxic substances	2
7	Aquatic life toxics – PFOS and PFOA	Review EPA final 304(a) criteria and consider updates to WA criteria.	240, Toxic substances	2
8	Aquatic life toxics criteria for chemical mixtures	Explore the development of water quality criteria to address chemical mixtures within chemical classes (e.g., PAHs, PCBs, PBDEs, pesticides) known to have toxic effects on aquatic species.	240, Toxic substances	3

No.	Project name	Description	Rule section(s) affected in Chapter 173-201A	Project group
9	Water quality standard developments	We will evaluate EPA's recently released draft human health criteria for PFOA, PFOS, and PFBS and will consider finalized criteria for inclusion into WA standards once completed. We will evaluate any new work released from EPA's Cooperative Research and Development Agreement (CRADA) project that aims to develop new bioavailability models for metals criteria. We will continue to track EPA's recently proposed rule to use EPA's Office of Pesticide Programs aquatic life benchmarks as CWA 304(a)(1) criteria or 304(a)(2) benchmarks. We will track EPA's criteria development efforts for ions, mercury, cyanide, arsenic, and selenium aquatic-dependent wildlife.	Various	3
10	Evaluating PFAS benchmarks	Review the eight PFAS aquatic life benchmarks that EPA released in 2025. EPA developed benchmarks for PFBA, PFHxA, PFNA, PFDA, PFBS, PFHxS, 8:2 FTUCA, and 7:3 FTCA. We will evaluate the level of uncertainty associated with each benchmark and determine if they are appropriate for state adoption.	240, Toxic substances	3

Workplan Project Descriptions

Project group 1

1. Performance-based approach methodology document – marine dissolved oxygen

Description

The performance-based approach methodology document, titled, *A Performance-Based Approach for Developing Site-Specific Natural Conditions Criteria for Aquatic Life in Washington,* details the methods Ecology will use to establish natural conditions criteria. At this time, we are finalizing detailed methods for deriving natural conditions criteria for marine dissolved oxygen only. Following the completion of the marine dissolved oxygen chapter, we will draft methods for deriving freshwater temperature criteria (see description below for "4. Performance-Based Approach Methodology Document – freshwater temperature"). In the future, we will also consider developing methods for temperature in marine water, and dissolved oxygen and pH in freshwater, which would be incorporated in future Triennial Review workplans.

We provided a final draft document for public review from March 25, 2025, until May 22, 2025. After considering comments received, we will finalize the document and plan to submit to the EPA for review and approval in September 2025.

Reason for priority

In 2024, we provided a draft methodology document for calculating natural conditions as part of our Natural Conditions rule proposal packet for public review. This document is referenced in a newly adopted section of the water quality standards, WAC 173-201A-470, Performance-based approach[8] (adopted Nov. 2024). Based on feedback from the public and Tribes, we revised this document and provided another opportunity for comment from March 25, 2025, until May 22, 2025.

For more information, visit the natural conditions rulemaking webpage.[9]

[8] https://app.leg.wa.gov/WAC/default.aspx?cite=173-201A-470
[9] https://ecology.wa.gov/regulations-permits/laws-rules-rulemaking/closed-rulemaking/wac-173-201a-natural-conditions

2. Recreational criteria for cyanotoxins

Description

Harmful algal blooms occur when groups of algae grow in excess and produce toxins that can harm people and animals. Cyanobacteria, also called Blue-Green Algae, are a group of microorganisms that can produce toxins such as microcystins and cylindrospermopsin that are particularly harmful to humans. Other harmful toxins produced by cyanobacteria include anatoxin-a and saxitoxin.

Reason for priority

In 2019, the EPA published final recommended human health recreational water quality criteria for two toxins produced by cyanobacteria: microcystins and cylindrospermopsin. In our 2021 Triennial Review, we noted that Ecology will consider these recommended criteria in future rulemakings. We may also consider developing criteria for other toxins produced by cyanobacteria that the EPA has not published final recommended criteria for, including anatoxin-a and saxitoxin.

3. Lake nutrient criteria

Description

Healthy lakes provide habitat for fish and wildlife, sustain food webs, support tourism and recreation, and supply drinking water. Excess nutrients into lakes and reservoirs can contribute to algal blooms, including ones harmful to humans and aquatic life, which can deplete oxygen levels, have negative impacts on recreation, and reduce overall ecological and public health.

As part of this project, we'll review the EPA's final recommended criteria associated with nitrogen pollution in lakes and reservoirs, and any other up-to-date information to derive protective criteria for Washington's lakes.

Reason for priority

In 2021, the EPA published final recommended ambient water quality criteria to address nutrient pollution in lakes and reservoirs. These recommended criteria are for Total Nitrogen, Total Phosphorus, and Chlorophyll *a*, and protect aquatic life, recreation, and drinking water sources. In our 2021 Triennial Review, we noted that Ecology will consider these recommended criteria in future rulemakings. Further, it is the EPA Office of Water's goal to accelerate progress of state adoption of numeric nutrient water quality standards (EPA National Nutrient Strategy[10]). These lake nutrient criteria would complement Washington's existing DO criteria for lakes to identify and address nutrient issues in these systems.

[10] https://www.epa.gov/nutrientpollution/national-nutrient-strategy

4. Performance-Based Approach Methodology Document – freshwater temperature

Description

The performance-based approach methodology document, titled, *A Performance-Based Approach for Developing Site-Specific Natural Conditions Criteria for Aquatic Life in Washington,* details the methods Ecology will use to establish natural conditions criteria. Currently, our focus is finalizing the methods to determine natural conditions criteria for marine dissolved oxygen only. However, we are also exploring additional possible methods for other criteria that would be added to this document. One such future methodology would be a repeatable, scientific approach for calculating temperature criteria based on natural conditions in freshwater systems.

Reason for priority

In 2024, we provided a draft methodology document for calculating natural conditions as part of our Natural Conditions rule proposal packet for public review. This document is referenced in a newly adopted section of the water quality standards, WAC 173-201A-470, Performance-based approach[11] (adopted Nov. 2024). Based on feedback from the public and Tribes, we are revising this document and focusing first on the natural condition methodology for marine dissolved oxygen criteria. Once EPA approves the marine dissolved oxygen chapter, we plan to develop the next chapter focused on freshwater temperature criteria.

A methodology for freshwater temperature is a priority for Ecology as natural conditions were a key part of our updated temperature criteria adopted in 2003. Natural conditions criteria were a tool suggested by EPA to address areas with naturally warmer temperatures that would

[11] https://app.leg.wa.gov/WAC/default.aspx?cite=173-201A-470

exceed the biologically-based numeric criteria, but still supported aquatic life designated uses (e.g., streams in eastern Washington). If we do not develop this methodology, Ecology would need to undergo site-specific rulemaking for determining protective natural conditions criteria for these naturally warmer systems, and each rulemaking would require separate EPA review and approval, including applicable consultation with the ESA-listing agencies.

For more information, visit the natural conditions rulemaking webpage.[12]

[12] https://ecology.wa.gov/regulations-permits/laws-rules-rulemaking/closed-rulemaking/wac-173-201a-natural-conditions

Project group 2

5. Respond to requests for rule-related actions

Description

We may initiate rulemakings in response to public requests to update the water quality standards as provided by these rules.

Examples of these kinds of projects include:

- **Proposing designations for outstanding resource waters that meet eligibility requirements under WAC 173-201A-330.** Outstanding resource waters (ORWs) are waterbodies with exceptional water quality, ecological and recreational value, or regionally unique characteristics that have a special designation by the state. This designation protects waters from actions that would lower water quality. Proposed activities that would result in permanent new or expanded sources of pollution in an ORW are prohibited, except in limited cases.

  Any person can nominate a waterbody as an outstanding resource water. A nomination must include sufficient information to show that the waterbody meets the eligibility criteria listed in WAC 173-201A-330. Ecology then has 60 days after receiving a nomination to determine if the information submitted meets the eligibility criteria. During this time, Ecology notifies Tribes, local jurisdictions, and other stakeholders of the nomination. If Ecology determines that the waterbody is eligible, we schedule a rulemaking to review the nominated waterbody for designation as an outstanding resource water. The review includes a formal public comment period and consultation with Tribes.

Ecology has designated four waterbodies as outstanding resource waters. Ecology will continue to prioritize the protection of high-quality waters such as those that provide critical habitat, unique value or cold water thermal refuge for the protection of aquatic life.

- **Reviewing the appropriateness of a designated use assigned to a waterbody, called a Use Attainability Analyses (UAA).** A UAA can be considered for specific waterbodies where the assigned water quality standards use designation is not existing nor attainable for a specific waterbody.

  An example of a UAA rulemaking is the Chelan River UAA, which was adopted and submitted to EPA in 2021, and is currently under review. See the rulemaking webpage[13] for more information.

- **Considering requests for a temporary change to the water quality standards, called a variance.** A variance is a time-limited water quality standard that maintains the ultimate goal of meeting water quality criteria in a step-by-step process. Federal and state water quality regulations allow the use of variances under specific circumstances.

Reason for priority

Washington's water quality standards include provisions that allow an entity to request an action where specified in the standards. Upon request, the agency will consider the request, and in some cases, a response to the request is required within a specified time. For example, Ecology must respond to a request for an outstanding resource water designation, or a Use Attainability Analysis, within 60 days of receipt.

[13] https://ecology.wa.gov/regulations-permits/laws-rules-rulemaking/closed-rulemaking/wac173-201a-chelan-uaa

6. Develop aquatic life toxics criteria for iron, hydrogen sulfide, heptachlor epoxide, and alkalinity

Description

The EPA has recommended aquatic life criteria for iron, hydrogen sulfide, heptachlor epoxide, and alkalinity. EPA has not updated the recommended criteria for these pollutants since the 1980's and the criteria recommendations are based on limited scientific studies. The criteria recommended for these four pollutants do not follow EPA 1985 guidelines for the derivation of aquatic life criteria.

Reason for priority

Tribes and the public expressed interest in the state considering aquatic life criteria for iron, hydrogen sulfide, heptachlor epoxide, and alkalinity. We intend to evaluate new scientific studies since EPA last updated their recommendations for aquatic life criteria. We will evaluate the scientific studies to determine if minimum data requirements are met to derive aquatic life criteria for these pollutants. Based on this evaluation, we will decide on whether to proceed with rulemaking to adopt aquatic life criteria for these pollutants.

7. Update aquatic life toxics criteria for PFOA and PFOS

Description

Washington adopted[14] perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) aquatic life toxics criteria in August 2024. PFOA and PFOS criteria adopted by Washington were based on the EPA's 2022 draft recommendations. The EPA finalized their recommended criteria[15] for PFOA and PFOS in September 2024 after we completed our rulemaking update to aquatic life toxics criteria. The EPA's final criteria values differ from the draft criteria proposed for PFOA and PFOS.

Reason for priority

The EPA's final freshwater acute and chronic criteria for PFOS and freshwater acute for PFOA are significantly lower than their draft recommendations. Washington adopted EPA's draft recommendations for PFOS and PFOA. We will evaluate whether Washington's PFOA and PFOS criteria are protective of aquatic life, including endangered species, and if we should adopt EPA's final recommended criteria.

[14] https://ecology.wa.gov/regulations-permits/laws-rules-rulemaking/closed-rulemaking/wac-173-201a-aquatic-life-toxics-criteria
[15] https://www.epa.gov/system/files/documents/2024-09/pfoa-pfos-pfas-final-factsheet-2024.pdf

Project group 3

8. Aquatic life toxics criteria for chemical mixtures

Description

The environment consists of complex mixtures of different chemicals, some of which are toxic. The EPA and the state of Washington currently regulate chemicals on an individual basis. In most cases, water quality criteria exist for the most toxic or prevalent chemicals within a chemical class, although several other chemicals are present in smaller amounts and their toxicity is unknown. Washington does not currently have a method to develop water quality criteria for chemical mixtures and EPA does not have national recommendations.

Chemicals that are detected less frequently or are less toxic are often less studied and thus, there are data gaps in toxicity information. Chemicals within the same class are often similar in their physiochemical characteristics but have minor deviations in structure that result in different toxicity and movement in the environment. Evaluating the toxicity of mixtures requires that we determine each individual chemical's contribution to the overall toxicity of a mixture. There are potential approaches to characterize mixtures of chemicals within the same class when toxicity data does not exist, such as relative potency factors, predictive models, and using physiochemical characteristics. These approaches need to be explored to determine their feasibility in developing water quality criteria for chemical mixtures.

Reason for priority

Interested public have expressed interest in addressing mixtures of chemicals within chemical classes (e.g., polycyclic aromatic hydrocarbons, polybrominated diphenyl ethers, polychlorinated biphenyls, pesticides) known to be detrimental to aquatic life. We aim to review the current toxicity data for individual chemicals within chemical classes known to be prevalent in the environment and determine if there are approaches to develop water quality criteria that can address mixture toxicity. This work will be useful in identifying toxicity data gaps for chemicals and will outline potential approaches to water quality criteria for chemical mixtures. We have prioritized this as a Group 3 project because we intend to begin informational gathering and there is uncertainty regarding a pathway forward that would result in a future rulemaking.

9. Tracking water quality standard developments

Description

EPA intermittently takes action to update national recommendations and guidance for water quality standards. We plan to actively participate in opportunities to evaluate and comment on EPA's work. We will evaluate whether Washington should update water quality standards based on this new information. Items that may be of interest and that will need to be evaluated in the next three years may include but are not limited to:

- Human health criteria for perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), and perfluorobutane sulfonic acid (PFBS).
- New bioavailability models for metals criteria
- Inclusion of EPA's Office of Pesticide Programs aquatic life benchmarks as CWA 304(a)(1) criteria or 304(a)(2) benchmarks, and
- Criteria development efforts for ions, mercury, cyanide, arsenic, and selenium aquatic-dependent wildlife.

Reason for priority

We continually evaluate new water quality standard developments that can improve protection of Washington's waters and evaluate how we can integrate new tools to address water quality issues.

10. Evaluating Polyfluoroalkyl substances (PFAS) benchmarks

Description

EPA published eight freshwater acute aquatic life benchmarks for PFAS in 2024. Aquatic life benchmarks were developed for PFBA, PFHxA, PFNA, PFDA, PFBS, PFHxS, 8:2 FTUCA, and 7:3 FTCA. Benchmarks are associated with more uncertainty than 304(a)(1) criteria. States may adopt benchmarks as water quality criteria if there is regulatory support.

Reason for priority

There is high interest in regulating PFAS chemicals in Washington. We have heard comments on the need to regulate PFAS in the environment in Washington. PFAS have been found in Washington waters throughout the state. EPA released eight PFAS aquatic life benchmarks available for states to consider adopting. We will evaluate the scientific information and data gaps to determine if it is appropriate to adopt these benchmarks in Washington's water quality standards.

Appendix A: Evaluation of National Criteria Recommendations

Overview

As required by the Clean Water Act (CWA) and 40 Code of Federal Regulations (CFR) 131.20(a), Ecology compared the current Washington Water Quality Standards (WAC 173-201A; "standards") to the latest CWA section 304(a) national criteria recommendations. The EPA recommends water quality criteria that are categorized as aquatic life criteria, human health criteria (including protection for recreation), or organoleptic effects (such as taste and odor). EPA's current national criteria recommendations for water quality are available on their Water Quality Criteria page.[16]

State Evaluation of CWA 304(a) Criteria Recommendations

The tables below list Ecology's evaluation of nationally recommended CWA section 304(a) criteria. For each parameter, we provide the source of the recommended criteria and Ecology's determination. Our determinations are described as follows:

- **Future Action**: Ecology will consider adoption of these recommended criteria in upcoming rulemaking efforts or EPA may promulgate these criteria for the State.
- **Optional action: non-priority:** Ecology may consider adoption of these non-priority pollutant criteria, but we are not required to develop criteria for these parameters.
- **Already Addressed**: The current water quality standards in Washington (WAC 173-201A) have approved criteria for these parameters. The approved criteria either meet or exceed CWA section 304(a) criteria, or listed criteria have been approved by EPA (e.g., site-specific cyanide criteria).
- **Not Scheduled for Adoption**: Ecology does not intend to adopt these recommended criteria. Justification for these determinations follow the table.

Human health criteria

We currently have no actions related to updating the human health criteria for toxic substances planned for this Triennial Review. In November 2024, Ecology updated the human health criteria in Washington Administrative Code (WAC) 173-201A-240, Toxic substances, to:

- Remove 143 human health criteria that had been disapproved by the EPA; and
- Adopt 146 human health criteria that the EPA put in place for Washington under 40 CFR 131. 45, Revision of certain Federal water quality criteria applicable to Washington.

[16] https://www.epa.gov/wqc

The EPA also publishes recommended human health recreational criteria, such as for certain cyanotoxins associated with harmful algal blooms. As indicated in this 2025 draft workplan, Ecology is considering addressing certain cyanotoxin criteria in the next three years.

Table A-1 Evaluation of human health CWA section 304(a) criteria recommendations

*Priority pollutants are identified using "(P)" following the parameter name.

Parameter*	304(a) Criteria Document	Ecology Determination
Antimony (P)	EPA 2002	Already Addressed
Arsenic (P)	EPA 2002	Already Addressed
Asbestos (P)	EPA 2002	Already Addressed
Copper (P)	EPA 2002	Already Addressed
Methylmercury (P)	EPA 2001	Already Addressed
Nickel (P)	EPA 2002	Already Addressed
Selenium (P)	EPA 2002	Already Addressed
Thallium (P)	EPA 2003	Already Addressed
Zinc (P)	EPA 2002	Already Addressed
1,1,1-Trichloroethane (P)	EPA 2015	Already Addressed
1,1,2,2-Tetrachloroethane (P)	EPA 2015	Already Addressed
1,1,2-Trichloroethane (P)	EPA 2015	Already Addressed
1,1-Dichloroethylene (P)	EPA 2015	Already Addressed
1,2,4,5-Tetrachlorobenzene	EPA 2015	Optional action: Non-priority
1,2,4-Trichlorobenzene (P)	EPA 2015	Already Addressed
1,2-Dichlorobenzene (P)	EPA 2015	Already Addressed
1,2-Dichloroethane (P)	EPA 2015	Already Addressed
1,2-Dichloropropane (P)	EPA 2015	Already Addressed
1,2-Diphenylhydrazine (P)	EPA 2015	Already Addressed
1,2-Trans-Dichloroethylene (Trans-1,2-Dichloroethylene) (P)	EPA 2015	Already Addressed
1,3-Dichlorobenzene (P)	EPA 2015	Already Addressed
1,3-Dichloropropene (P)	EPA 2015	Already Addressed
1,4-Dichlorobenzene (P)	EPA 2015	Already Addressed

Parameter*	304(a) Criteria Document	Ecology Determination
2,3,7,8-TCDD (Dioxin) (P)	EPA 2002	Future Action
2,4,5-Trichlorophenol	EPA 2015	Optional action: Non-priority
2,4,6-Trichlorophenol (P)	EPA 2015	Already Addressed
2,4-Dichlorophenol (P)	EPA 2015	Already Addressed
2,4-Dimethylphenol (P)	EPA 2015	Already Addressed
2,4-Dinitrophenol (P)	EPA 2015	Already Addressed
2,4-Dinitrotoluene (P)	EPA 2015	Already Addressed
2-Chloronaphthalene (P)	EPA 2015	Already Addressed
2-Chlorophenol (P)	EPA 2015	Already Addressed
2-Methyl-4,6-Dinitrophenol (4,6-dinitro-o-cresol) (P)	EPA 2015	Already Addressed
3,3'-Dichlorobenzidine (P)	EPA 2015	Already Addressed
3-Methyl-4-Chlorophenol (parachlorometa cresol) (P)	EPA 2015	Already Addressed
4,4'-DDD (p,p'-Dichlorodiphenyldichloroethane) (P)	EPA 2015	Already Addressed
4,4'-DDE (p,p'-Dichlorodiphenyldichloroethylene) (P)	EPA 2015	Already Addressed
4,4'-DDT (p,p'-Dichlorodiphenyltrichloroethane) (P)	EPA 2015	Already Addressed
Acenaphthene (P)	EPA 2015	Already Addressed
Acrolein (P)	EPA 2015	Already Addressed
Acrylonitrile (P)	EPA 2015	Already Addressed
Aldrin (P)	EPA 2015	Already Addressed
Alpha-BHC (alpha-Hexachlorocyclohexane; HCH) (P)	EPA 2015	Already Addressed
Alpha-Endosulfan (P)	EPA 2015	Already Addressed
Anthracene (P)	EPA 2015	Already Addressed
Barium	EPA 1986 Gold Book	Optional action: Non-priority
Benzene (P)	EPA 2015	Already Addressed

Parameter*	304(a) Criteria Document	Ecology Determination
Benzidine (P)	EPA 2015	Already Addressed
Benzo(a) Anthracene (P)	EPA 2015	Already Addressed
Benzo(a) Pyrene (P)	EPA 2015	Already Addressed
Benzo(b) Fluoranthene (P)	EPA 2015	Already Addressed
Benzo(k) Fluroanthene (P)	EPA 2015	Already Addressed
Beta-BHC (beta-hexachlorocyclohexane; HCH) (P)	EPA 2015	Already Addressed
Beta-Endosulfan (P)	EPA 2015	Already Addressed
Bis(2-Chloroethyl) Ether	EPA 2015	Already Addressed
Bis(2-Chloro-1-Methylethyl) Ether	EPA 2015	Already Addressed
Bis(2-Ethylhexyl) Phthalate	EPA 2015	Already Addressed
Bis(Chloromethyl) Ether	EPA 2015	Optional action: Non-priority
Bromoform (P)	EPA 2015	Already Addressed
Butylbenzyl Phthalate (P)	EPA 2015	Already Addressed
Carbon Tetrachloride (P)	EPA 2015	Already Addressed
Chlordane (P)	EPA 2015	Already Addressed
Chlorobenzene (P)	EPA 2015	Already Addressed
Chlorodibromomethane (P)	EPA 2015	Already Addressed
Chloroform (P)	EPA 2015	Already Addressed
Chlorophenoxy Herbicide (2,4,5-TP) (Silvex)	EPA 2015	Optional action: Non-priority
Chlorophenoxy Herbicide (2,4-D)	EPA 2015	Optional action: Non-priority
Chrysene (P)	EPA 2015	Already Addressed
Cyanide (P)	EPA 2015	Already Addressed
Dibenzo(a,h) Anthracene (P)	EPA 2015	Already Addressed
Dichlorobromomethane (P)	EPA 2015	Already Addressed
Dieldrin (P)	EPA 2015	Already Addressed
Diethyl Phthalate (P)	EPA 2015	Already Addressed

Parameter*	304(a) Criteria Document	Ecology Determination
Dimethyl Phthalate (P)	EPA 2015	Already Addressed
Di-n-Butyl Phthalate (P)	EPA 2015	Already Addressed
Dinitrophenols	EPA 2015	Optional action: Non-priority
Endosulfan Sulfate (P)	EPA 2015	Already Addressed
Endrin (P)	EPA 2015	Already Addressed
Endrin Aldehyde (P)	EPA 2015	Already Addressed
Ethylbenzene (P)	EPA 2015	Already Addressed
Fluoranthene (P)	EPA 2015	Already Addressed
Fluorene (P)	EPA 2015	Already Addressed
Hexachlorocyclohexane (gamma-BHC; Lindane) (P)	EPA 2015	Already Addressed
Heptachlor (P)	EPA 2015	Already Addressed
Heptachlor Epoxide (P)	EPA 2015	Already Addressed
Hexachlorobenzene (P)	EPA 2015	Already Addressed
Hexachlorobutadiene (P)	EPA 2015	Already Addressed
Hexachlorocyclohexane (HC) – Technical	EPA 2015	Optional action: Non-priority
Hexachlorocyclopentadiene (P)	EPA 2015	Already Addressed
Hexachloroethane (P)	EPA 2015	Already Addressed
Indeno(1,2,3-cd) Pyrene (P)	EPA 2015	Already Addressed
Isophorone (P)	EPA 2015	Already Addressed
Methoxychlor	EPA 2015	Optional action: Non-priority
Methyl Bromide (P)	EPA 2015	Already Addressed
Methylene Chloride (P)	EPA 2015	Already Addressed
Nitrates	EPA 1986 Gold Book	Optional action: Non-priority
Nitrobenzene (P)	EPA 2015	Already Addressed
Nitrosamines	EPA 1980c	Optional action: Non-priority

Parameter*	304(a) Criteria Document	Ecology Determination
Nitrosodibutylamine	EPA 2002	Optional action: Non-priority
Nitrosodiethylamine	EPA 2002	Optional action: Non-priority
Nitrosopyrrolidine	EPA 2002	Optional action: Non-priority
N-Nitrosodimethylamine (P)	EPA 2002	Already Addressed
N-Nitrosodi-n-Propylamine (P)	EPA 2002	Already Addressed
N-Nitrosodiphenylamine (P)	EPA 2002	Already Addressed
Nutrients Lakes and Reservoirs	EPA 2021	Future Action
Pentachlorobenzene	EPA 2015	Optional action: Non-priority
Pentachlorophenol (PCP) (P)	EPA 2015	Already Addressed
Phenol (P)	EPA 2015	Already Addressed
Polychlorinated Biphenyls (PCBs) (P)	EPA 2002	Already Addressed
Pyrene (P)	EPA 2015	Already Addressed
Tetrachloroethylene (P)	EPA 2015	Already Addressed
Toluene (P)	EPA 2015	Already Addressed
Toxaphene (P)	EPA 2015	Already Addressed
Trichloroethylene (P)	EPA 2015	Already Addressed
Vinyl Chloride (P)	EPA 2015	Already Addressed

Table References

EPA. 1980a. Ambient Water Quality Criteria for Beryllium. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-80-024.

EPA. 1980b. Ambient Water Quality Criteria for Chromium. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-80-035.

EPA. 1980c. Ambient Water Quality for Nitrosamines. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-80-064.

EPA. 1986. Quality Criteria for Water 1986. "Gold Book". Office of Water, Regulations and Standards. Washington, D.C. EPA 440/5-86-001.

EPA. 2001. Water Quality Criterion for the Protection of Human Health: Methylmercury Final. Office of Water, Office of Science and Technology. Washington, D.C. EPA-823-R-01-001.

EPA. 2002. National Recommended Water Quality Criteria: 2002. Office of Water, Office of Science and Technology. Washington, D.C. EPA-822-R-02-047.

EPA. 2003. National Recommended Water Quality Criteria for the Protection of Human Health. OW-FRL-7605-2. Published document: 03-32211 (68 FR 75507).

EPA. 2015. Final Updated Ambient Water Quality Criteria for the Protection of Human Health. EPA-HQ-OW-2014-0135; FRL-9929-85-OW. Published document: 2015-15912 (80 FR 36986).

EPA. 2021. Ambient Water Quality Criteria to Address Nutrient Pollution in Lakes and Reservoirs. Office of Water. Washington, D.C. EPA-822-R-21-005.

EPA. 2025. National Recommended Water Quality Criteria – Human Health Criteria Table. Available at: https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table.

Table A-2. Evaluation of recreational CWA section 304(a) criteria recommendations.

Parameter	304(a) Criteria Document	Ecology Determination
Cylindrospermopsin	EPA 2019	Future Action
Microcystins	EPA 2019	Future Action
Nutrients Lakes and Reservoirs	EPA 2021	Future Action
Pathogen and Pathogen Indicators (*Enterococci spp.* and *E. coli*)	EPA 2012	Already Addressed
Pathogen and Pathogen Indicators (Shellfish only)	EPA 1986	Already Addressed

Table References

EPA. 1986. Quality Criteria for Water 1986. “Gold Book”. Office of Water, Regulations and Standards. Washington, D.C. EPA 440/5-86-001.

EPA. 2012. Recreational Water Quality Criteria. Office of Water. Washington, D.C. EPA 820-F-12-058.

EPA. 2019. Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin. Office of Water. Washington, D.C. EPA 822-R-19-001.

EPA. 2021. Ambient Water Quality Criteria to Address Nutrient Pollution in Lakes and Reservoirs. Office of Water. Washington, D.C. EPA-822-R-21-005.

EPA. 2025. National Recommended Water Quality Criteria – Human Health Criteria Table. Available at: https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table.

Organoleptic Criteria

Ecology will not adopt the 304(a) recommended criteria for organoleptic criteria. These recommended criteria are based on effects on taste and odor, rather than human health exposure (e.g., recreation) or consumption. In addition, Washington's water quality standards already contain narrative criteria for aesthetics at WAC 173-201A-260(2)(b), Natural conditions and other water quality criteria and applications:

> "Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste..."

These narrative criteria apply to all existing and designated uses for fresh and marine waters. Further, WAC 173-201A-230, Establishing lake nutrient criteria, provides guidance for establishing lake nutrient standards to protect aesthetics.

Aquatic life criteria

In August 2024, Ecology adopted updates to Washington's aquatic life toxics criteria under WAC 173-201A-240 and submitted our rule package to EPA for federal approval. Washington's rule did the following:

- Add aquatic life toxics criteria for 14 new toxic substances
- Update aquatic life toxic criteria for 16 toxic substances that Washington had existing criteria for

As part of the 2024 aquatic life toxics rulemaking, we reviewed 45 pollutants for consideration, including 16 chemicals recommended by the EPA for which we did not previously have criteria. Due to limited data available for deriving criteria, we decided not to add three chemicals to our water quality standards that were recommended by the EPA: iron, heptachlor epoxide, and sulfide-hydrogen sulfide. We also adopted criteria for one pollutant (6-PPDQ) for which the EPA does not have 304(a) recommended criteria.

Ecology also adopted criteria for PFOA and PFOS as part of the 2024 rulemaking. These criteria reflect the EPA's draft 304(a) recommended criteria, which were finalized by the EPA shortly after Washington's criteria were adopted. As stated in this draft workplan, we will review the EPA's final 304(a) recommended criteria for these two pollutants.

As indicated in this draft work plan for 2025-2027, we will consider adopting aquatic life toxics criteria for iron, heptachlor epoxide, and sulfide-hydrogen sulfide following an evaluation of new scientific studies since EPA last updated their recommendations for these pollutants. We will also review new scientific information to consider adopting aquatic life criteria for alkalinity. Finally, we will consider adopting nutrient criteria for lakes and reservoirs.

We have not identified any other 304(a) recommended aquatic life criteria that are not currently in Washington's water quality standards.

Table A 3. Evaluation of aquatic life CWA section 304(a) criteria recommendations.

*Priority pollutants are identified using "(P)" following the parameter name.
**Justification for this determination follows the table and references.

Parameter*	304(a) Criteria Document	Ecology Determination
Acrolein (P)	EPA 2009	Already Addressed
Aesthetic Qualities	EPA 1986 Gold Book	Already Addressed
Aldrin (P)	EPA 1980a	Already Addressed
Alkalinity	EPA 1986 Gold Book	Optional action: Non-priority
alpha-Endosulfan (P)	EPA 1980b	Already Addressed
Aluminum	EPA 2018	Already Addressed
Ammonia, Fresh Waters	EPA 2013	Already Addressed
Ammonia, Salt Waters	EPA 1989	Already Addressed
Arsenic	EPA 1995	Already Addressed
Atrazine	EPA Criteria Table	Already Addressed
beta-Endosulfan (P)	EPA 1980b	Already Addressed
Boron	EPA 1986 Gold Book	Already Addressed
Cadmium (P)	EPA 2016	Already Addressed
Carbaryl	EPA 2012	Already Addressed
Chlordane (P)	EPA 1980c	Already Addressed
Chloride	EPA 1988	Already Addressed
Chlorine	EPA 1986 Gold Book	Already Addressed
Chlorpyrifos	EPA 1986 Gold Book	Already Addressed
Chromium (III) (P)	EPA 1995	Already Addressed
Chromium (VI) (P)	EPA 1995	Already Addressed
Color	EPA 1986 Gold Book	Not Scheduled For Adoption**
Copper (P)	EPA 2007	Already Addressed
Cyanide (P)	EPA 1984a	Already Addressed
Demeton	EPA 1986 Gold Book	Already Addressed

Parameter*	304(a) Criteria Document	Ecology Determination
Diazinon	EPA 2005a	Already Addressed
Dieldrin (P)	EPA 1995	Already Addressed
Endrin (P)	EPA 1995	Already Addressed
gamma-BHC (Lindane) (P)	EPA 1995	Already Addressed
Gases, Total Dissolved	EPA 1986 Gold Book	Already Addressed
Guthion	EPA 1986 Gold Book	Already Addressed
Hardness	EPA 1986 Gold Book	Already Addressed
Heptachlor (P)	EPA 1980d	Already Addressed
Heptachlor Epoxide (P)	EPA 1986 Gold Book	Future Action
Iron	EPA 1986 Gold Book	Optional action: Non-priority
Lead (P)	EPA 1984b	Already Addressed
Malathion	EPA 1986 Gold Book	Already Addressed
Mercury (P)	EPA 1995	Already Addressed
Methoxychlor	EPA 1986 Gold Book	Already Addressed
Methyl Tertiary-Butyl Ether (MTBE)	EPA 2006 Update	Already Addressed
Mirex	EPA 1986 Gold Book	Already Addressed
Nickel (P)	EPA 1995	Already Addressed
Nonylphenol	EPA 2005b	Already Addressed
Nutrients, Lakes and Reservoirs	EPA 2021a	Future Action
Nutrients, Rivers and Streams	EPA 2000a	Not Scheduled For Adoption**
Oil and Grease	EPA 1986 Gold Book	Already Addressed
Oxygen, Dissolved Fresh Waters	EPA 1986 Gold Book	Already Addressed
Oxygen, Dissolved Salt Waters	EPA 2000b	Already Addressed
Parathion	EPA 1995	Already Addressed
Pentachlorophenol (P)	EPA 1995	Already Addressed
Perfluorooctane Sulfonate (PFOS)	EPA 2024a	Future Action

Parameter*	304(a) Criteria Document	Ecology Determination
Perfluorooctanoic Acid (PFOA)	EPA 2024b	Future Action
pH	EPA 1986 Gold Book	Already Addressed
Phosphorus Elemental	EPA 1986 Gold Book	Future Action
Polychlorinated Biphenyls (PCBs) (P)	EPA Criteria Table	Already Addressed
Selenium (P), Fresh Waters	EPA 2021b	Already Addressed
Selenium (P), Salt Waters	EPA 1999	Already Addressed
Silver (P)	EPA 1980e	Already Addressed
Solids Suspended and Turbidity	EPA 1986 Gold Book	Already Addressed
Sulfide-Hydrogen Sulfide	EPA 1986 Gold Book	Optional action: Non-priority
Tainting Substances	EPA 1986 Gold Book	Already Addressed
Temperature	EPA 1986 Gold Book	Already Addressed
Toxaphene (P)	EPA 1986 Gold Book	Already Addressed
Tributyltin (TBT)	EPA 2003	Already Addressed
Zinc (P)	EPA 1995	Already Addressed
4,4'-DDT (P)	EPA 1980f	Already Addressed

Table References

EPA. 1980a. Ambient Water Quality Criteria for Aldrin/Dieldrin. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-80-019.

EPA. 1980b. Ambient Water Quality Criteria for Endosulfan. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-80-046.

EPA. 1980c. Ambient Water Quality Criteria for Chlordane. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-80-027.

EPA. 1980d. Ambient Water Quality Criteria for Heptachlor. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-80-062.

EPA. 1980e. Ambient Water Quality Criteria for Silver. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-80-071.

EPA. 1980f. Ambient Water Quality Criteria for DDT. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-80-038.

EPA. 1984a. Ambient Water Quality Criteria for Cyanide – 1984. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-84-028.

EPA. 1984b. Ambient Water Quality Criteria for Lead – 1984. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-84-027.

EPA. 1986. Quality Criteria for Water 1986. “Gold Book”. Office of Water, Regulations and Standards. Washington, D.C. EPA 440/5-86-001.

EPA. 1988. Ambient Water Quality Criteria for Chloride – 1988. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-88-001.

EPA. 1989. Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989. Office of Water, Regulations and Standards, Criteria and Standards Division. Washington, D.C. EPA 440/5-88-004.

EPA. 1995. 1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water. Office of Water. Washington, D.C. EPA-820-B-96-001.

EPA. 1999. National Recommended Water Quality Criteria – Correction. Office of Water. Washington, D.C. EPA 822-Z-99-001.

EPA. 2000a. Ecoregional Nutrient Criteria for Rivers and Streams. Available at: https://www.epa.gov/nutrient-policy-data/ecoregional-nutrient-criteria-rivers-and-streams.

EPA. 2000b. Ambient Aquatic Life Water Quality Criteria for Dissolved Oxygen (Saltwater): Cape Cod to Cape Hatteras. Office of Water. Washington, D.C. EPA-822-R-00-012.

EPA. 2003. Ambient Aquatic Life Water Quality Criteria for Tributyltin (TBT) – Final. Office of Water. Washington, D.C. EPA 822-R-03-031.

EPA. 2005a. Aquatic Life Ambient Water Quality Criteria Diazinon. Office of Water, Office of Science and Technology. Washington, D.C. EPA-822-R-05-006.

EPA. 2005b. Aquatic Life Ambient Water Quality Criteria – Nonylphenol. Office of Water. Washington, D.C. EPA-822-R-05-005.

EPA. 2006. Aquatic Life Criteria – Methyl Tertiary-Butyl Ether (MTBE). Fact Sheet. EPA 822-F-06-002.

EPA. 2007. Aquatic Life Ambient Freshwater Quality Criteria – Copper. Office of Water. Washington, D.C. EPA-822-R-07-001.

EPA. 2009. Ambient Aquatic Life Water Quality Criteria for Acrolein (CAS Registry Number 107-02-8). Office of Water, Office of Science and Technology, Health and Ecological Criteria Division. Washington, D.C.

EPA. 2012. Aquatic Life Ambient Water Quality Criteria For Carbaryl -2012. Office of Water. Washington, D.C. EPA-820-R-12-007.

EPA. 2013. Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater 2013. Office of Water. Washington, D.C. EPA 822-R-18-002.

EPA. 2016. Aquatic Life Ambient Water Quality Criteria Cadmium – 2016. Office of Water. Washington, D.C. EPA-820-R-16-002.

EPA. 2018. Final Aquatic Life Ambient Water Quality Criteria for Aluminum 2018. Office of Water. Washington, D.C. EPA-822-R-18-001.

EPA. 2021a. Ambient Water Quality Criteria to Address Nutrient Pollution in Lakes and Reservoirs. Office of Water. Washington, D.C. EPA-822-R-21-005.

EPA. 2021b. 2021 Revision to: Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater 2016. Office of Water. Washington, D.C. EPA 822-R-21-006.

EPA. 2024a. Freshwater Aquatic Life Ambient Water Quality Criteria and Acute Saltwater Aquatic Life Benchmark for Pefluorooctane Sulfonate (PFOS). Office of Water. Washington, D.C. EPA-842-R-24-003.

EPA. 2024b. Freshwater Aquatic Life Ambient Water Quality Criteria and Acute Saltwater Aquatic Life Benchmark for Perfluorooctanoic Acid (PFOA). Office of Water. Washington, D.C. EPA-842-R-24-002.

EPA. 2025. National Recommended Water Quality Criteria – Aquatic Life Criteria Table. Available at: https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table.

Justification for Ecology's determination of "Not scheduled for adoption"

Below, we provide justification for each criterion in the above table where the determination was "Not scheduled for adoption."

Color

Criteria for color are found in EPA's Quality Criteria for Water 1986;[17] i.e., the "Gold Book". Criteria recommendations for color are:

> "Waters shall be virtually free from substances producing objectionable color for aesthetic purposes;
> the source of supply should not exceed 75 color units on the platinum-cobalt scale for domestic water supplies; and
> increased color (in combination with turbidity) should not reduce the depth of the compensation point for photosynthetic activity by more than 10 percent from the seasonally established norm for aquatic life."

Washington's standards already contain narrative criteria for aesthetics at WAC 173-201A-260(2)(b):

> "Aesthetic values must not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste..."

These criteria apply to all existing and designated uses for fresh and marine waters. Further, WAC 173-201A-230 provides guidance for establishing lake nutrient standards to protect aesthetics.

In addition, Washington's water quality standards define pollution as:

> "…contamination…of any waters of the state, including change in…color…as will or is likely to create a nuisance or renders such waters harmful, detrimental, or injurious to the public health…or other legitimate beneficial uses…or other aquatic life."

Per Washington's antidegradation policy (WAC 173-201A-300), all Washington waters use, at minimum, Tier I protections to "…ensure existing and designated uses are maintained and protected and applies to all waters and all sources of pollution."

Thus, Washington currently has approved water quality standards to protect waters from substances that would produce objectionable color for aesthetic purposes. This includes protection of domestic water supplies and aquatic life.

Regarding the decision not to adopt the EPA recommendation that sets a maximum of 75 color units for domestic water supplies, Ecology notes that "the effects of color on public water supplies…are principally aesthetic."[18] As stated above, Washington's standards already contain narrative criteria that would protect aesthetics of waters and protect against changes in color that could be harmful to aquatic life and human health. Further, Washington Department of Health, Office of Drinking Water, protects all public water systems by setting the secondary

[17] https://www.epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf.
[18] EPA. 1986. Quality Criteria for Water 1986 ("Gold Book"). Office of Water, Regulations and Standards, United States Environmental Protection Agency. Washington, D.C. EPA 440/5-86-001

maximum contaminant limit (MCL) to 15 color units (WAC 246-290-310[19] and WAC 246-291-170[20]).

Ecology is not adopting the EPA recommended criteria that "increased color, in combination with turbidity, should not reduce the depth of the compensation point for photosynthetic activity." Washington's standards already contain narrative criteria that would protect all waters against changes in color that could be harmful to aquatic life. Further, Washington has approved turbidity criteria for fresh water (WAC 173-201A-200(1)(e)) and marine water (WAC 173-201A-210(1)(e)) aquatic life use categories.

Ecology concludes that Washington's current standards provide sufficient protections against color contaminants in waters.

Nutrients for Rivers and Streams

Nutrient criteria for rivers and streams are found in a series of documents released by EPA[21] in 2000 and 2001, with each document corresponding to a specific nutrient ecoregion. For Washington, applicable nutrient ecoregions are:

- Ecoregion I: Willamette and Central Valleys
- Ecoregion II: Western Forested Mountains
- Ecoregion III: Xeric West

The following table contains criteria recommendations that are aggregate reference conditions based on 25th percentiles only:

Table A 4. EPA recommendations for nutrient criteria based on aggregate reference conditions

Nutrient Parameters	Aggregate Nutrient Ecoregion I Reference Conditions	Aggregate Nutrient Ecoregion II Reference Conditions	Aggregate Nutrient Ecoregion III Reference Conditions
Total phosphorus (µg/L)	47	10	21.88
Total nitrogen (mg/L)	0.31	0.12	0.38
Chlorophyll *a* (µg/L) (fluorometric method)	1.8	1.08	1.78
Turbidity (FTU)	4.25	1.3	2.34

[19] https://app.leg.wa.gov/wac/default.aspx?cite=246-290-310
[20] https://app.leg.wa.gov/wac/default.aspx?cite=246-291-170
[21] https://www.epa.gov/nutrient-policy-data/ecoregional-nutrient-criteria-rivers-and-streams

Washington's standards define pollution as:

> "…contamination…of any waters of the state…including change in…turbidity…as will or is likely to create a nuisance or renders such waters harmful, detrimental, or injurious to the public health…or other legitimate beneficial uses…or other aquatic life."

Per Washington's antidegradation policy (WAC 173-201A-300), all Washington waters use, at minimum, Tier I protections to "…ensure existing and designated uses are maintained and protected and applies to all waters and all sources of pollution."

Ecology has previously evaluated the feasibility and benefits of establishing nutrient criteria for rivers and streams.[22] During this past review, Ecology examined ecoregional data on periphyton growth, chlorophyll *a*, nitrogen, and total phosphorus. Researchers were "unable to find a predictive relationship between excess production and eutrophication and measured nutrient concentrations." Combined with confounding factors (e.g., flow rates, shading), Ecology chose an alternative pathway that relies on other indicators that provide a trigger for trophic health alongside water body specific modelling. In this alternate pathway, Ecology uses two indicators: dissolved oxygen and pH. Approved dissolved oxygen criteria provide not only protection for the metabolic function of aquatic life, but also set a value that cannot be attained in rivers with nuisance algal growth. The pH criteria serve as a supplementary trigger, since excess nutrients are identified in Washington by increasing trends in pH concentrations and exceedances of the upper pH criterion level. Using these two criteria, Ecology is able to identify waters impacted by excess nutrients, and the criteria "serve as targets for restoration and clean up."

The CWA section 304(a) recommended criteria use a reference condition approach that do not take into account the complexity of natural regimes in Washington's rivers and streams. Adopting these criteria could result in nutrient values that are ineffective in protecting aquatic life in Washington's fresh waters. Ecology believes that appropriate nutrient criteria recommendations for Washington need to consider an approach that can account for these complexities, such as modelling (as was used by EPA for developing lake and reservoir nutrient criteria).

Ecology is not scheduling adoption of these 304(a) ecoregional nutrient criteria for freshwater rivers and streams into Washington's standards. We do not consider these criteria viable due to the large and diverse dynamics of our river systems in Washington. Instead, Ecology will continue to use dissolved oxygen and pH criteria as indicators of potential nutrient problems for rivers and streams in Washington.

[22] Moore, Allen and Mark Hicks. 2004. Nutrient Criteria Development in Washington State – Phosphorus. Water Quality Program, Washington State Department of Ecology. Lacey, Washington. Publication Number 04-10-033.

Appendix B: Comments and Responses

We accepted comments on the 2025 Triennial Review draft workplan from February 25 until April 22, 2025. We received 14 comment submissions. To view a full copy of the comments received from each entity, go to Ecology's online comment webpage.[23]

Table 3 below provides all commenters listed alphabetically, followed by a commenter number to identify individual comments by commenter. In the following section, we organized responses to comments by commenter. Under each commenter, we separated comments by topic and summarized lengthy comments as appropriate.

Table B 1. List of commenters and commenter number

Commenter	Submitted by	Commenter number
American Rivers, American Whitewater, Cascade Forest Conservancy, The Pew Charitable Trusts, Trout Unlimited, Washington Wild, Wild Salmon Center	Heather Yu	1
Association of Washington Cities	Carl Schroeder	2
City of Hoquiam	Brian Shay	3
Environmental Protection Agency (EPA)	Rebecca Garnett	4
Greene, Duncan and Grifo, Jamie	Duncan Greene	5
International Zinc Association	Adam Ryan	6
Pickett, Paul	Self	7
Port Gamble S'Klallam Tribe	Josh Carter	8
Puget Soundkeeper Alliance	Kelsey Furman	9
Sierra Club Washington State	Elaine Packard	10
Snoqualmie Indian Tribe	Kelsey Payne	11
Spokane Riverkeeper	Katelyn Scott	12
Swinomish Indian Tribal Community	Galen Priest	13
Washington Conservation Action Education Fund	Katie Byrnes	14

[23] https://wq.ecology.commentinput.com/comment/extra?id=FMCVcP54g

1 – American Rivers, et al.

Comment 1.1 – Outstanding Resource Waters

Our organizations, American Rivers, American Whitewater, Cascade Forest Conservancy, The Pew Charitable Trusts, Trout Unlimited, Washington Wild, and the Wild Salmon Center, support efforts to conserve and protect the ecologically, culturally, and recreationally important rivers, streams, and wetlands of Washington State. These waters serve as life-support systems that provide clean drinking water for communities, sustain local economies, and offer unparalleled recreation opportunities for Washingtonians and visitors alike. They are critical to the health and abundance of fish and wildlife species, including endangered and rapidly declining salmon and trout species. These waters also provide the foundation for supporting Tribal treaty rights and ways of life for the sovereign Tribes who have inhabited and stewarded these lands since time immemorial.

We are writing today in support of the Washington Department of Ecology's ongoing commitment to protect and preserve Washington's waters, including through the future designation of ORWs. We are pleased to see consideration and designation of ORWs included in the Workplan as one of the actions and projects the agency plans to prioritize during the next three years of work. As climate change, human development, and other stressors converge to exert extreme pressure on our ecosystems and natural resources, preventing additional degradation to these important freshwater systems through ORW protection is critical. Simultaneously, activating state-level statutory tools to safeguard local resources will bolster the state's overall resiliency and ability to withstand new and unexpected threats to freshwater systems.

Response to comment 1.1

Thank you for your support. Ecology appreciates the commenters' work with Ecology on previous outstanding resource waters nominations.

2 – Association of Washington Cities

Comment 2.1 – Marine dissolved oxygen criteria

Ecology has acknowledged that it has no documentation as to the scientific basis for the marine DO standards that were adopted by a predecessor agency in 1967. In its acknowledgment of the lack of a scientific foundation, the agency pointed to a report from 1968 that included recommended marine DO criteria but also included a cautionary clause regarding its recommendation: The committee would like to stress the fact that, due to a lack of fundamental information on the DO requirements of marine and estuarine organisms, these requirements are tentative and should be changed when additional data indicate that they are inadequate.

These “tentative” requirements have become permanent simply through the passage of time. With that 56-year standing invitation to update the underlying criteria with “the fundamental information on the DO requirements” of the organisms, we continue to have concerns that Ecology continues to move forward without seeking or incorporating information on the dissolved oxygen needs of the organisms present in Puget Sound.

Response to comment 2.1

Ecology adopted marine dissolved oxygen criteria into our state's water quality standards in 1967. While it is correct that no definitive records were found that confirmed the origin of these standards, it is likely that the criteria were based upon a Department of Interior (DOI) federal report released in 1968, "Water Quality Criteria Report of the National Technical Advisory Committee to the Secretary of the Interior".[24] As mentioned, the document does provide recommendations while noting that "these requirements are tentative and should be changed when additional data indicate that they are inadequate."

In 2018, Ecology published a document on understanding the purpose and application of marine dissolved oxygen criteria[25]. In discussing the history and rationale of Washington's marine DO criteria, Ecology reviewed updated science regarding minimum DO requirements, which included a review article that looked at 872 published experiments across 206 species.[26] These studies generally align with the 1968 DOI recommendations of marine DO concentrations of 5 to 8 mg/L for protection of survival and growth of fish. Therefore, our previous review of the criteria did not lead us to any new information that would suggest these criteria are not protective, or that they are "inadequate" for providing protection for aquatic life in our marine waters.

We continue to be willing to review any new science that suggests Washington's marine DO criteria are not protective or that they are inadequate. We would also like to note that

[24] Federal Water Pollution Control Administration (FWPCA). 1968. Water Quality Criteria Report of the National Technical Advisory Committee to the Secretary of the Interior. Washington, D.C. 800R68900.
[25] Washington Department of Ecology. 2018. Washington State’s Marine Dissolved Oxygen Criteria: Application to Nutrients. Lacey, Washington.
[26] Vaquer-Sunyer, Raquel and Carlos M. Durate. 2008. Thresholds of hypoxia for marine biodiversity. Proceedings of the National Academy of Sciences. Volume 105(4):15452-15457.

while DOI's recommendations may have been posed as tentative, they were adopted by Washington state in 1967 to comply with Section 10 of the Federal Water Pollution Control act via Public Law 84-660, as mandated by the DOI, following all applicable regulation and state statutes in effect at the time of passing. In other words, we adopted these values into our Water Quality Standards -- they have not become "permanent simply through the passage of time."

In addition, we note that there have not been any further recommendations from EPA on marine DO criteria applicable to Washington State, as criteria recommendations for marine DO have been limited to either the waters from Cape Cod to Cape Hatteras[27] or site-specific applications like Chesapeake Bay.[28] Should EPA publish updated Clean Water Act (CWA) Section 304(a) recommended criteria for marine DO, we would be required under the CWA to consider these criteria for Washington.

Comment 2.2 – Marine dissolved oxygen criteria

AWC requests Ecology update the science on the dissolved oxygen needs of marine organisms in Puget Sound. We request a review of the anthropogenic and non-anthropogenic causes and impacts of low dissolved oxygen conditions on site-specific organisms present in each of the watersheds and basins of the Salish Sea. In addition, we ask Ecology to identify data gaps and recommend, if appropriate, additional science needed to fill those gaps. Through this process, please clarify how the agency compares scientific literature relating to the DO needs of marine organisms in other parts of the world to make determinations on needs of organisms present in the Puget Sound.

We request Ecology update the marine dissolved oxygen standard if the current standard is not supported by data and best practices identified through this review. This update should include reviewing whether the numeric criteria are both protective of designated uses, and not unduly over conservative and directing an excessive level of public investment in nutrient reduction than is needed to protect the organisms of the Puget Sound.

Response to comment 2.2

Under the federal Clean Water Act, each state is required to adopt numeric criteria that are protective of all aquatic uses. Recently, in 2018, we did an analysis of the available literature related to dissolved oxygen needs of marine aquatic species. That report[29] looked at all available published data to determine if our standards should be updated. We

[27] Environmental Protection Agency (EPA). 2000. Ambient Aquatic Life Water Quality Criteria for Dissolved Oxygen (Saltwater): Cape Cod to Cape Hatteras. Office of Water, Washington, D.C. EPA-822-R-00-012.
[28] EPA. 2003. Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll *a* for the Chesapeake Bay and Its Tidal Tributaries. Region III Chesapeake Bay Program Office, Annapolis, Maryland. EPA 903-R-03-002.
[29] https://www.ezview.wa.gov/Portals/_1962/Documents/PSNSRP/Marine%20DO%20Paper%20Guidance%20Updated%20July%202018.pdf

did not find any credible or relevant science indicating that our standards needed to be updated.

We also want to note that we are updating the marine dissolved oxygen criteria for sites in Puget Sound through our recent rule revisions adopting natural conditions criteria into our Standards, and our current efforts to revise the marine dissolved oxygen methodology for use in a performance-based approach.

When deriving protective water quality criteria values, generally two approaches can be taken by states and tribes:

(1) Use a biologically-based approach (e.g., Stephen et al., 1985[30]), where there is a process to derive protective aquatic life criteria using the results of laboratory studies. These laboratory studies investigate and determine the dissolved oxygen concentrations where impacts to lifestyle (e.g., reproduction, growth) or lethality occur to aquatic life; or

(2) Pursue a natural conditions approach, where historical data and models are used to estimate the quality of waters prior to any anthropogenic impacts. Pre-anthropogenic water quality would support the species that exist in those waters, as those species have adapted over time to those natural water qualities. Therefore, any such derived criteria are protective of existing and designated uses.[31]

There is no guidance or recommendations from EPA that asserts one approach is better than or preferred over the other. Therefore, both are equally viable options for developing criteria protective of aquatic life. A site-specific approach may better reflect the needs of the species within a specific site compared to the broader area, as criteria reflect those aquatic organisms which have adapted over time to the unique conditions of that specific waterbody.

To protect aquatic life in Puget Sound, we have chosen to pursue site-specific criteria for marine dissolved oxygen to best protect aquatic life, existing uses, and designated uses. Specifically, Ecology has chosen to pursue a natural conditions approach for criteria development. Ecology believes that this approach best reflects the biological needs of the organisms in the waters while recognizing the unique, natural traits of Puget Sound.

Finally, we note that even if biologically-based marine DO criteria (i.e., derived via method #1 from above) were changed, site-specific natural conditions criteria may still need to be developed for Puget Sound, as waters naturally still might not be able to meet the biologically-based criteria.

[30] https://www.epa.gov/sites/default/files/2016-02/documents/guidelines-water-quality-criteria.pdf
[31] https://www.epa.gov/sites/default/files/2014-08/documents/naturalbackground-memo.pdf

3 – City of Hoquiam

Comment 3.1 – Setting water quality standards

Ecology needs to review water quality during the storm seasons in addition to the pristine months where water is crystal clear and flowing smoothly like the picture in your promotional e-mail. As we have seen over the past week, when we get intensive rains our rivers and streams turn dark brown for all of the sediments that was into the streams. This sediment is a naturally occurrence that will happen regardless of any recent logging, farms or manmade activities. When Ecology establishes standards for stream conditions, we also need to remember the conditions our streams face in the winter so that we are not creating overly burdensome regulations beyond what we see caused by natural events.

Response to comment 3.1

We set water quality criteria based on the biological needs of fish and other aquatic life that are found in our waterways, and to protect the health of people who eat fish and shellfish or drink untreated water. If water quality data show that a stream is not meeting water quality standards for a specific parameter such as turbidity, we may evaluate whether that is due to the natural conditions of the stream.

4 – Green, Duncan

Comment 4.1 – Waters of the State

Commenter requests Ecology to clarify through rulemaking the definition of "waters of the state," including as it applies to wetlands. This definition should clarify which waters would be considered wetlands, and which land use activities would be regulated on wetlands.

Response to comment 4.1

Thank you for your comments. Ecology's Water Quality Triennial Review is developed to review water quality standards based on the Federal Clean Water Act's requirements in 40 C.F.R. § 131.20. Specifically, it is to review water quality standards adopted pursuant to 40 C.F.R. §§ 131.9 through 131.15 and federally promulgated water quality standards. Therefore, comments unrelated to the review of these water quality standards are beyond the scope of this Triennial Review.

However, Ecology recently announced that it is undergoing a rulemaking process to establish a permit program under Chapter 90.48 RCW for wetlands and other state waters. Here is a link to the announcement: CR-101.[32] Any updates to this rulemaking will be provided at the rulemaking webpage here: WAC 173-217 - Washington State Department of Ecology.[33]

The definition of "surface waters of the state" is included in the state's surface water quality standards regulations at WAC 173-201A-020 and reads: "Surface waters of the state" includes lakes, rivers, ponds, streams, inland waters, saltwaters, wetlands and all other surface waters and water courses within the jurisdiction of the state of Washington." In addition, wetlands have been explicitly affirmed as waters of the state by Washington state tribunals. See, e.g., Pac. Topsoils, Inc. v. Dep't of Ecology, 157 Wn. App. 629, 238 P.3d 1201 (2010), review denied, 171 Wn.2d 1009 (2011); DP2 Properties, LLC v. Dep't of Ecology, 20 Wn. App. 1017, 2021 WL 5564408 (2021); Building Industry Association of Washington, et al. v. State of Washington, et al., Thurston Co. 91-2-02895-5, p. 13-14 (1993); Leone v. Dep't of Ecology, Pollution Control Hearings Bd. No. 17-079 (Aug. 9, 2018).

Comment 4.2 – Wetland permitting

Ecology should take the following steps to reform its procedures and provide greater predictability and transparency to landowners and applicants: Creation of a State Wetland/Waters Permitting Program: Ecology should pursue rulemaking and legislation as needed to establish a state permitting program for wetlands and waters, with appropriate exemptions and clear guidelines. Such a program should be informed by a robust stakeholder process to ensure it meets the needs of the regulatory community. The current "permitting" process used by Ecology for impacts to non-federally regulated wetlands and other waters,

[32] https://ecology.wa.gov/getattachment/94d92d0e-551b-42c8-8732-116ee663452e/WSR-25-13-032.pdf
[33] https://ecology.wa.gov/regulations-permits/laws-rules-rulemaking/rulemaking/wac-173-217

which involves issuing an "Administrative Order" (AO), is ambiguous, inefficient, unfair, and probably illegal.

Response to 4.2

Ecology recently announced that it is undergoing a rulemaking process to establish a permit program under Chapter 90.48 RCW for wetlands and other state waters. Here is a link to the announcement: CR-101. Any updates to this rulemaking will be provided at the rulemaking webpage here: WAC 173-217 - Washington State Department of Ecology.

Comment 4.3 – Application of Water Quality Standards

Incorporating express agricultural exemptions into the WQS could help to ensure that the very designated/beneficial uses that the WQS are designed to protect are not effectively prohibited as a result of Ecology's interpretation and application of the Water Pollution Control Act (WPCA) and the WQS. For example, Ecology has recently pursued enforcement actions against ranchers for stock watering activities that are clearly exempt under the federal Section 404 permitting program, claiming that those activities violate the Water Pollution Control Act and the WQS. Ecology should incorporate clear exemptions for agricultural and other activities into the WQS to ensure that the primary aims of protecting and preserving designated and beneficial uses will not be prohibited as a consequence of Ecology's interpretation and application of the WQS.

Response to 4.3

The Water Pollution Control Act doesn't include the types of exemptions described in this comment. Agriculture practices can have significant impacts on state waters including isolated wetlands. It is important that our water quality standards apply to all state waters to support their protection and restoration, consistent with the policy of the Water Pollution Control Act to ensure the quality of all waters of the state and control the pollution of state waters.

Comment 4.4 – Guidance documents

For [agricultural and land use] activities that are not exempt, Ecology's Water Quality Guidance for agriculture should be updated to address a critical fairness issue: how landowners and agricultural operators should determine whether an area might be a wetland or other "water of the State." Current guidance fails to resolve this issue, especially as to small and isolated wetlands, which Ecology admits can be difficult or impossible for a lay person without hiring an expert consultant. Current guidance and regulations also fail to provide any clear safe harbor for agricultural owners and operators. Ecology should adopt regulations that provide an explicit safe harbor for non-exempt activities that comply with guidance. As explained above, Ecology should also adopt "good-faith" enforcement exceptions for owners and operators who engaged in a prohibited activity but did so in good faith, without reason to believe it would result in a violation.

Response to 4.4

Ecology recently announced that it is undergoing a rulemaking process to establish a permit program under Chapter 90.48 RCW for wetlands and other state waters. Here is a

link to the announcement: CR-101. Any updates to this rulemaking will be provided at the rulemaking webpage here: WAC 173-217 - Washington State Department of Ecology. Ecology is also in the process of completing the Clean Water Guidance for Agriculture. Five chapters of the guidance were finalized in 2022. The remaining chapters are currently under development. Those chapters will be available for public review and comment later this summer. However, in the Voluntary Clean Water Guidance we defer to wetlands specific guidance. Specifically "Wetlands in Washington State - Volume 2: Guidance for Protecting and Managing Wetlands. Publication number 05-06-008 (April 2005)."[34] To the extent the commenter is interested in wetlands specific guidance we encourage reviewing that guidance document.

Comment 4.5 – Implementation tools

State-Level Jurisdictional Determinations: Ecology should develop and implement a state-level jurisdictional determination (JD) tool, similar to those used by the federal Army Corps of Engineers and regulators in other states like Oregon. Adding a state-level JD tool would provide clarity and certainty to many landowners and applicants, ensuring that they can make informed decisions about the need for permitting and the scope of regulations that apply to their land. However, a JD process would not help in situations where a landowner has no reason to suspect an area might be regulated, raising significant questions about fairness and due process. Ecology has a moral and legal obligation to confront this issue head-on by adopting policies and procedures that require staff to resolve such situations fairly and consistent with due process, such as "good-faith" enforcement exceptions.

Response to 4.5

Ecology recently announced that it is undergoing a rulemaking process to establish a permit program under Chapter 90.48 RCW for wetlands and other state waters. This rulemaking will include information on how Ecology will implement the permit program. Here is a link to the announcement: CR-101. Any updates to this rulemaking will be provided at the rulemaking webpage here: WAC 173-217 - Washington State Department of Ecology.

In addition, the Office of Regulatory Innovation and Assistance (ORIA) provides resources for landowners to determine what permits may be needed for a project. Landowners can look to local critical areas maps and National Wetland Inventory maps to get an idea of whether their project may affect wetlands. Maps are only an indication of whether wetlands might be present. Determination of whether a wetland is or is not present must be verified on site.

Comment 4.6 – Staff training

Training for Ecology Staff: Ecology's staff must be trained not only in the technical aspects of water quality protection, but also in understanding the full range of beneficial uses of water. This includes recognizing the importance of productive designated and beneficial uses, like

[34] https://apps.ecology.wa.gov/publications/SummaryPages/0506008.html

agriculture and stock watering. Staff training should emphasize the need to protect not just the environmental qualities of water but also these designated and productive uses, in line with Ecology's own guidance and policies.

Ecology staff often fail to follow the "Procedures for applying water quality criteria" in WAC 173-201A-260(3), which requires Ecology to evaluate water quality in wetlands by applying specific criteria. The water quality criteria for wetlands state that "[w]ater quality in wetlands is maintained and protected by maintaining the hydrologic conditions, hydrophytic vegetation, and substrate characteristics necessary to support existing and designated uses." Rather than applying these factors to each project on a site-specific basis, however, Ecology staff often skip that step—disregarding existing and designated beneficial uses, and assuming the existence of beneficial wetland values that must be protected at all costs, often to the detriment of a productive use.

Response to 4.6

Thank you for your comment regarding staff training. Ecology water quality staff are well trained. Trainings include information on the Clean Water Act and water quality standards.

The CFR defines designated uses at 40 CFR 131.3 as "those uses specified in water quality standards for each water body or segment whether or not they are being attained." The regulations further provide that "States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use." 40 CFR 131.11. We recognize the value of all designated uses, and our water quality criteria are written, in accordance with the CFR and Clean Water Act, to ensure that water quality is equal to or better than what is needed to support the most sensitive use.

Comment 4.7 Protection of designated uses

Ecology staff have failed to protect stock watering, a designated use that must be protected under the WQS, even when a stock watering use is clearly "existing" on a particular site. This approach is illegal and contrary to Ecology's own guidance, which recognizes that wetlands are often used for stock watering, and that, despite "considerable debate concerning the use of wetlands for stock watering," the law still requires that stock watering "must" be "protected." The guidance recommends that Ecology find a balance between protecting stock watering and preventing the activity from "significantly degrad[ing] a waterbody's ability to perform other beneficial uses (e.g., fish and wildlife habitat)," and that Ecology do so "through BMPs and other regulatory and nonregulatory efforts is essential to ensuring wetlands and other waterbodies can support all legitimate beneficial uses possible."

Response to 4.7

It appears you are referencing the document "Water Quality Guidelines for Wetlands", 1996. This guidance recognizes the need to protect stock watering; however, it also says "[S]tock watering cannot significantly degrade a waterbody's ability to perform other beneficial uses (e.g., fish and wildlife habitat). Finding this balance through BMPs and other

regulatory and nonregulatory efforts is essential to ensuring wetlands and other waterbodies can support all legitimate beneficial uses possible."

It should also be noted that protecting a designated use does not necessarily give individuals unfettered rights to access or use waterbodies. In the context of water quality standards, protection of a designated use means ensuring sufficient water quality so that the use is supported. Further, when multiple uses are designated for a waterbody, the most protective criteria must be applied to ensure the most sensitive designated use is protected.

5 – Environmental Protection Agency

Comment 5.1 – Tracking federal water quality standards

Given the EPA's revisions to a number of water quality standards regulatory requirements, the EPA strongly encourages Ecology to use the triennial review process to update any of Washington's water quality standards regulations that are inconsistent with the EPA's revised water quality standards regulations.

Response to 5.1

Ecology will continue to use the Triennial Review process to regularly review and hold public hearings on the state water quality standards and to identify inconsistencies with the federal regulations. Our workplan identifies water quality standards updates we intend to begin over the next three years, some of which are to align with federal recommended criteria. Following the triennial review and publication of the final workplan, Ecology will initiate rulemakings as appropriate to update the water quality standards.

6 – International Zinc Association

Comment 6.1 – Zinc aquatic life toxics criteria

Ecology needs to move away from hardness-based equations and utilize more accurate BLM or MLR-based approaches for zinc ALC. Both approaches are far superior to the hardness equation. Our recommendations to improve the freshwater zinc ALC in Washington – in order of scientific rigor, are to:

1. Revise the freshwater zinc ALC by using the updated unified zinc BLM (Ryan et al. in review).

2. Revise the freshwater zinc ALC by using the zinc MLR models described by DeForest et al. (2023).

3. Revise the freshwater zinc ALC by using the zinc MLR models that will be the basis for the forthcoming nationally recommended zinc ALC that U. S. EPA will develop through the ongoing CRADA efforts3.

Response to 6.1

We agree that zinc criteria based on BLM and MLR models are superior to the hardness-based equation. Our current strategy is to wait until EPA national recommendations are updated for zinc. There is a concern that adopting the BLM or MLR model as currently published in literature may differ from EPA national recommendations and that we will have to conduct a rulemaking update twice (EPA could disapprove the update if protection level differs from their final recommendation). Rulemakings are very time and resource intensive and doubling of efforts can detract from other work. If there is another effort to update aquatic life criteria in the near future, updating zinc will be discussed. We appreciate your offer of support.

7 – Pickett, Paul

Comment 7.1 – Nutrient criteria

Lake criteria seem like a low priority, given that there are already criteria in the standards. Lakes are so unique, they generally need a lake-specific model to determine if they are meeting standards. Some simple screening criteria would suffice to decide if they are 303d listed or not (or the existence of a lake study already done). The TMDL would be the definitive assessment.

Response to 7.1

Washington does not currently have statewide, numeric nutrient criteria for lakes in Washington's water quality standards. Water quality standards under WAC 173-201A-230 are not lake criteria, but rather are an aid for Ecology if and when we develop site-specific criteria for nutrients in lakes. This site-specific criteria development still requires a formal rulemaking to adopt any developed criteria into our water quality standards.

We agree that lakes are unique and generally need site-specific data, but do not necessarily need a lake-specific model. For instance, EPA's recommended criteria for nutrients in lakes and reservoirs uses linked stressor-response models. Such models, including any adjustments for Washington's lakes, may be an approach for developing nutrient criteria when paired with each lake's unique, site-specific data.

Finally, for clarification, TMDLs are not the process Ecology uses to assess waters. Rather, this is done in our Water Quality Assessment process and provided to the public in our Integrated Report. TMDLs are cleanup plans for waters that have been identified as impaired.

Comment 7.2 – Cold water refuge

From my experience the most important, highest priority activity with the standards would be to establish criteria for cold water refuges. Currently the standards actually appear to prohibit evaluating and protecting cold water refuges ("Temperature measurements should be taken to represent the dominant aquatic habitat of the monitoring site. This typically means samples should: (A) Be taken from well mixed portions of rivers and streams; and (B) Not be taken from shallow stagnant backwater areas, within isolated thermal refuges, at the surface, or at the water's edge."

With climate change, protections of cold water refuges is of critical importance. This was a key finding of the South Fork Nooksack temperature TMDL, came up in the Pend Oreille River temperature TMDL, and is a key element of the Columbia/Snake River temperature TMDLs. The survival of salmon in our inevitably warming future will depend on those refuges. Please give this your top priority for standards revision.

Response to 7.2

Washington's Water Quality Standards include protective criteria for designated uses that typically occur throughout the water column. For instance, temperature criteria were chosen to ensure protection for aquatic life in all parts of the water, and sampling conducted in the dominant aquatic habitat is done to ensure compliance with these standards. If samples were collected only from cold-water refugia, there could be scenarios where higher temperatures not meeting the assigned criteria are missed.

For cold-water refugia protection in general, our water quality standards do provide the option for designating a waterbody as an outstanding resource water (ORW). Waterbodies have specific requirements to be eligible for an ORW designation, and these requirements do include waters that have "cold water thermal refuges critical to the long-term protection of aquatic species" as an option (WAC 173-201A-330(1)(e)). Anyone can nominate waters for ORW designations. Details of this process are found in our Tier III - Protection of Outstanding Resource Waters section of our Water Quality Standards (WAC 173-201A-330).

8 – Port Gamble S'Klallam Tribe

Comment 8.1 – Tribal designated uses

[T]he Tribe recommends that Ecology begin by updating its designated uses statewide to explicitly include Tribal fishing, shellfishing, and other aquatic-dependent resources and practices reserved by Tribal right holders. See, e.g., 40 C.F.R. §§ 131.9(a), 131.10(i), 131.3(e), (r). Through this action, Ecology will eliminate any confusion, feigned or otherwise, as to whether the State must set its criteria to be protective of Tribal existing uses that have persisted since time immemorial and that were reserved to the Tribes by treaty. With specific respect to the Stevens Treaties entered into by Tribes in what is now western Washington, PGST recommends that Ecology update its designated uses throughout what is known as the "Case Area" of United States v. Washington. The Tribe suggests that Ecology refer to court decisions in that proceeding in order to understand the scope of Tribal reserved rights, including commercial, cultural, and subsistence uses, that must be protected in fresh and marine waters throughout Tribal U&A.…All of these waters are tribal U&A and thus the WQS for all such waters must be set to be protective of tribal fishing and shellfishing, tribal member health, and fish populations necessary for Tribes to meaningfully exercise their reserved commercial, ceremonial, and subsistence fishing rights.

Response to 8.1

Thank you for your comment. We appreciate the Tribe sharing information related to Tribal reserved rights and how we could consider the protection of those rights in future water quality standards revisions. We would like to schedule time in the future to talk through your comments and develop a plan for next steps. In addition to staff level conversations, we also invite future formal consultation with the Tribal government to discuss this request.

Comment 8.2 – Project priorities

The Tribe largely approves of Ecology's direction with the Group 1 and 2 projects.

Response to 8.2

Thank you for your support.

Comment 8.3 – Freshwater temperature

In the case of freshwater temperature we believe criteria should be developed to reflect the fact that climate change induced temperature rises are not natural conditions. This would provide the impetus to mitigate the effects of climate change on freshwater systems, giving species precious extra time to adapt to our warming environment.

Response to 8.3

We agree that natural conditions criteria must reflect the historic, pre-anthropogenic temperature regime of waters. Our water quality standards define "natural conditions" and "natural background levels" as surface water quality that was present before any human-caused pollution. This includes local and regional impacts, such as point-source discharges, and global effects, such as climate change.

Comment 8.4 – Pollutant data review (Group 2)

Ecology intends to review modern data for pollutants, which we would like to see done with every Triennial Review. Particularly given EPA's recent abrogation of its mission, Ecology must use the best available science when crafting water quality standards.

Response to 8.4

Thank you. States often rely on EPA to review new scientific information that lead to updates or new Clean Water Act recommendations. When EPA's scientific review and criteria updates are delayed, we have the ability to conduct reviews of scientific studies and tools as time and resources allow. The continual release of scientific literature creates a need to regularly review the latest information.

Comment 8.5 – Variances

We ask that Ecology be very careful in determining when variances are appropriate for a water body: they should only be approved when absolutely necessary. Cost-saving and convenience are not appropriate reasons to approve of any kind of degradation of a water body, even if temporary, and we are concerned that variances may be granted in these situations.

Response to 8.5

Federal and state water quality standards allow the adoption of variances to provide permitted dischargers with a time-limited path to meeting water quality standards. A variance can be requested if a discharger or group of dischargers cannot meet effluent limits due to specific biological, chemical, physical, or economic factors listed in the federal water quality regulations (40 CFR 131.14) and there is uncertainty on whether the effluent limit can ultimately be met. A variance is a time-limited plan to reduce pollution to the maximum extent practical. It is not a pass from meeting water quality standards and shall not result in lowering of water quality (unless temporarily through restoration activities).

Ecology will carefully review any requests for variances, including supporting documentation that shows how a discharger cannot meet the water quality standard because of one or more factors stated in rule, and a plan for how a discharger will minimize pollution while the variance is in place. Variances also require public review and consultation with Tribes through a formal rulemaking process before we would consider them for adoption.

Comment 8.6 – Aquatic life criteria for PFOA and PFOS

Ecology's plan to evaluate whether its PFOS/PFAS and related compound standards are protective is laudable. Regulations for these chemicals are crucial in ensuring waters are safe for humans and wildlife, but it's important to regulate these chemicals as a class versus on a chemical-by-chemical basis; historically manufacturers have taken advantage of regulators by simply switching from compounds with proven health effects to similar compounds that may have similar health effects, but lack the research to show them.

Response to 8.6

PFOA and PFOS are two of the most prevalent PFAS found in the environment and therefore, are the most studied. Unfortunately, PFAS chemicals have unique structures and have variable toxicity and environmental fate and transport. Applying statewide criteria to all PFAS chemicals is not feasible at this time until a model or approach is developed to account for unique physiochemical properties of PFAS.

Comment 8.7 – Chemical mixtures (Group 3)

We approve of Ecology's approach to explore chemical interactions that may impact Water Quality Standards. WQS all too often only consider pollutants in isolation and not the interactions between them that can magnify the toxicity many times over than each pollutant possesses on its own.

However, we would like to see this as a higher priority project, as it applies to virtually every polluted system. Given the PFAS/PFOS and 6PPD-q crises, it seems prudent to study to how these and other pollutants interact with one another and affect the organisms living in these systems. There are already many known chemicals that possess this "synergy of evil,"2 and it is crucial for both human and environmental health that these interactions be explored as more and more chemicals are developed and discharged into Washington's waters.

Response to 8.7

We appreciate the support for our objective to review approaches to criteria for chemical mixtures. To clarify, at this time the scope of this project is limited to mixtures of chemicals within the same chemical class. This is a logical first step to addressing mixtures, while other exploratory research in the future could consider approaches to criteria for mixtures of chemicals from different chemical classes. This remains as a Group 3 or exploratory project because we have not yet settled on an approach for setting criteria for mixtures. This project involves lengthy reviews of large datasets to understand the state of the science, and we are not prepared for rulemaking. This project may receive higher priority in the next triennial review based on our findings.

9 – Puget Soundkeeper Alliance

Comment 9.1 – 6PPDQ

Ecology should include 6PPD/Q criteria for chronic freshwater and acute and chronic for marine waters in this next round of triennial planning. These criteria all play an important role for the quality of Washington's waters, particularly for the Sound and its tributaries which include a mix of both fresh and marine waters. Effective environmental management requires understanding and mitigating each of these types of effects to preserve aquatic life and biodiversity.

Soundkeeper asks Ecology to use the power of momentum around 6PPD/Q to develop chronic freshwater and marine criteria. Given the extreme mortality caused by this chemical wherever it is discharged – including into estuaries, rivers, marshes, and in places at the very mouths of salmon spawning streams, Soundkeeper also asks Ecology to apply the current freshwater acute criteria in marine waters as well.

Response to 9.1

Addressing 6PPDQ in the environment is a high priority at Ecology. Unfortunately, there are limited toxicity datasets for freshwater chronic, saltwater acute, and saltwater chronic studies. At this time there is not adequate scientific data to develop other 6PPDQ criteria. We will continue to evaluate data as it is published and presented and may consider new 6PPDQ criteria in the future.

Comment 9.2 – Plastics and aquatic litter

[W]e ask that Ecology prioritize plastics and aquatic litter. Soundkeeper engages in regular cleanups around the Sound and has a front row seat to the plastic pollution problem in Washington. Plastic does not break down; it breaks up into smaller and smaller pieces. Microplastics pose a serious threat to our wildlife species due to ingestion and toxic accumulation.

For these reasons we ask that plastic and aquatic litter are prioritized for inclusion in the next water quality assessment and 303(d) list preparation.

Response to 9.2

The Triennial Review sets priorities for updating the water quality standards. The water quality assessment is outside the scope of the Triennial Review. However, Ecology recognizes the prevalence of microplastics and aquatic litter in surface waters in Washington. The Water Quality Assessment (Assessment) recently evaluated microplastics data submitted for the 2018 Assessment. While data evaluated in the 2018 Assessment did not meet our credible data requirements to make determinations as to whether microplastics were causing water quality impairments, we will continue to consider submitted microplastics and aquatic litter data in the Assessment.

In line with other pollutants for which we do not have numeric water quality criteria, any submitted microplastics and aquatic litter data will be evaluated against Washington's narrative standards (WAC 173-201A-260(2)) – see "Information submittals based on

narrative standards" in Policy 1-11, Chapter 1.[35] All submitted data must meet the credible data requirements specified in Policy 1-11, Chapter 2.[36] We requested new data for the 2026 Assessment from May 5 until July 7, 2025. For this assessment, we will be looking at data collected between Jan. 1, 2015, and Dec. 31, 2024.

[35] https://apps.ecology.wa.gov/publications/documents/1810035.pdf
[36] https://apps.ecology.wa.gov/publications/documents/2110032.pdf

10 – Sierra Club Washington State

Comment 10.1 – Project priorities

The proposed language appears to be well-thought-out and demonstrates that Ecology's WQP is "on-target" with three realistically achievable actions that will provide more robust water quality protections in the future. Ecology utilizes a straightforward, transparent prioritization process for evaluating proposed Priority Actions.

Response to 10.1

Thank you for your comment.

Comment 10.2 – Harmful algal blooms

Sierra Club supports Ecology proposing to establish freshwater numeric recreational criteria (200 CFUs) for cyanotoxins such as microcystins and cylindrospermopsin. This follows EPA's proposed nationwide HAB permit. To its credit, Ecology is considering additional criteria for Saxitoxin and Anatoxin-a, two other toxins associated with HABs. EPA has no nationally recommended criteria for these toxins.

Response to 10.2

We appreciate your support for Ecology exploring possible rulemaking for cyanotoxin criteria in freshwaters. We note that we have not yet initiated rulemaking for cyanotoxins; thus, specific criteria values have not yet been determined. Part of our rulemaking process would include review of EPA's recommended criteria and all other available, applicable science to determine protective criteria values for Washington.

Comment 10.3 – Nutrient criteria for lakes and reservoirs

Sierra Club supports Ecology taking steps to reduce phosphorus and nitrogen flowing into lakes and reservoirs by proposing nutrient criteria (numeric standards) for phosphorus and nitrogen for freshwater lakes and reservoirs.

Response to 10.3

Thank you for your comment and support.

Comment 10.4 – Nutrient criteria for lakes and reservoirs

We recommend adopting numeric criteria for rivers and streams.

Response to 10.4

We appreciate your comment and recommendation for future work. As we noted in our draft workplan, EPA does have recommended nutrient criteria for rivers and streams. However, these criteria do not consider the complexity of the natural regimes in Washington's rivers and streams, and thus adopting these criteria could result in nutrient values that are ineffective in protecting aquatic life in Washington's fresh waters. To effectively protect aquatic life in Washington's waters we believe nutrient criteria need to be derived using an approach that accounts for these complexities, such as a model-based approach.

Comment 10.5 – Performance-based approach methods document

Sierra Club supports Ecology's intent to finalize this ongoing work that will be used to set criteria for dissolved oxygen in marine waters and beginning a chapter that addresses temperature criteria for freshwaters of Washington State. Overtime, Sierra Club members as well as members of the public will reap the rewards through improved water quality in all state waters.

Response to 10.5

We appreciate your comment and support for our work on finalizing the methodology for developing natural conditions criteria using the performance-based approach for marine dissolved oxygen, as well as starting a similar chapter for freshwater temperature natural conditions criteria.

Comment 10.6 – Outstanding resource waters

Sierra Club supports Ecology designating outstanding resource waters, which are waters of extraordinary quality.

Response to 10.6

Thank you for your support.

Comment 10.7 – Use attainability analysis (UAA)

Sierra Club supports Ecology's internal review of the appropriateness of use of the Use Attainability Analysis (UAA).

Response to 10.7

Thank you for your support.

Comment 10.8 – Variances

Sierra Club supports Ecology's denial of a request for temporary change (aka variance) to water quality standards as this proposed action will likely degrade water quality.

Response to 10.8

Federal and state water quality standards allow Ecology to consider the adoption of variances to provide permitted dischargers with a time-limited path to meeting water quality standards. A variance can be requested if a discharger or group of dischargers cannot meet effluent limits due to specific biological, chemical, physical, or economic factors listed in the federal water quality regulations (40 CFR 131.14) and there is uncertainty on whether the effluent limit can ultimately be met. A variance is a time-limited plan to reduce pollution to the maximum extent practical. It is not a pass from meeting water quality standards and shall not result in lowering of water quality (unless temporarily through restoration activities).

Ecology will carefully review any requests for variances, including supporting documentation that shows how a discharger cannot meet the water quality standard, and a plan for how a discharger will minimize pollution while the variance is in place. Variances

also require public review and consultation with Tribes through a formal rulemaking process before we would consider them for adoption.

Comment 10.9 – Aquatic life criteria for Iron hydrogen sulfide, heptachlor epoxide, and alkalinity

Sierra Club supports Ecology's proposal to develop aquatic life toxics criteria since EPA has not updated these criteria since the 1980s.

Response to 10.9

Thank you for your support. We will evaluate the available data and decide on future actions related to these four chemicals.

Comment 10.10 – Aquatic life criteria for PFOA and PFOS

Washington adopted perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) aquatic life toxics criteria in August 2024. Sierra Club supports Ecology's proposal to evaluate whether Washington's PFOA and PFOS criteria are protective of aquatic life, including endangered species, and if we should adopt EPA's final recommended criteria.

Response to 10.10

Thank you for your support.

Comment 10.11 – Chemical mixtures (Group 3)

Sierra Club supports Ecology reviewing toxicity data within chemical classes of about 125 chemical mixtures to determine if state water quality standards for these chemical compounds are protective of aquatic life.

Response to 10.11

Thank you for your support on addressing chemical mixtures. We aren’t certain if 125 chemical mixtures will be evaluated but mixtures within major chemical classes will be reviewed.

Comment 10.12 – Tracking federal water quality standards development (Group 3)

Sierra Club supports Ecology: 1. Evaluating human health criteria for perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), and perfluorobutane sulfonic acid (PFBS), 2. evaluating new bioavailability models for metals criteria, 3. including EPA's Office of Pesticide Programs aquatic life benchmarks as CWA 304(a)(1) criteria or 304(a)(2) benchmarks, and 4. developing criteria for ions, mercury, cyanide, arsenic, and selenium aquatic dependent wildlife.

Response to 10.12

Thank you for your support.

11 – Snoqualmie Indian Tribe

Comment 11.1 – Project priorities

We are supportive of the project priorities as Ecology has identified them.

Response to 11.1

Thank you for your support.

Comment 11.2 - Aquatic life criteria for PFOA and PFOS

We request that Ecology adopt the most conservative values for PFOA and PFOS.

Response to 11.2

We appreciate your comment on adopting the most conservative PFOA and PFOS criteria. We support using the latest science to update and set protection levels for aquatic life exposed to PFOA and PFOS. The EPA final acute and chronic PFOA and acute PFOS criteria are more stringent than the state adopted criteria (we adopted EPA draft recommendations), while the adopted chronic PFOS criterion is lower than the EPA final criterion. The final EPA recommendations integrate the most recent scientific data, and we have included on our workplan a review of the most recent data.

Comment 11.3 – Tribal designated uses

Tribal cultural uses should be included in the State's considerations for assigning designated uses for a water body. Cultural uses for waters throughout Washington State can be understood and included in planning through tribal consultation.

Response to 11.3

We appreciate the Tribe's comment that Ecology should consider the protection of Tribal cultural uses in assigning designated uses. We would like to schedule time in the future to talk through your comment and develop a plan for next steps. In addition to staff level conversations, we may also invite future formal consultation with the Tribal government to discuss this request.

Comment 11.4 – Natural conditions

When setting natural conditions, please take into consideration cumulative effects on waterways from human activities, and how our current status and trends differ from historic baselines.

Response to 11.4

We define "natural conditions" or "natural background levels" in our water quality standards as the water quality that was present before any human-caused pollution. Therefore, when we develop natural conditions criteria through a site-specific process, it requires us to identify, account, and remove all known sources of human impacts to the water. This includes local and regional impacts, such as point-source discharges, and global influences, such as climate change.

In other words, cumulative anthropogenic effects on a waterbody must be accounted for and removed when Ecology develops natural conditions criteria for a waterbody.

12 – Spokane Riverkeeper

Comment 12.1 – 6PPDQ

This plan should include measures to assess and address impacts from 6PPD and 6PPD-qunione due to its significant and well-documented toxic effects on aquatic life, particularly salmon and other sensitive fish species. As a widely used chemical in vehicle tires, 6PPD degrades into 6PPD-quinone, a contaminant that enters waterways through stormwater runoff. Scientific research has linked this compound to acute mortality in coho salmon and other species critical to the health of our ecosystems and Tribal cultural resources. The importance of data collection of 6PPD and 6PPD-q cannot be overstated. The ubiquity of tires, and their use of 6PPD, leaves no watershed or community unimpacted by 6PPD and 6PPD-q, however, we are only now beginning to understand the impact of these chemicals. Scientists believe that many species are impacted by 6PPD-q, as it is the second-most toxic chemical for aquatic species ever evaluated.

However, we cannot wait to understand the dangerous effects of 6PPD and 6PPD-q fully, as it is clear action is needed now. Given the state's commitments to protecting designated uses such as aquatic life and supporting Tribal rights, it is essential that 6PPD-quinone be prioritized for assessment under water quality standards, with the goal of developing protective criteria and effective strategies for reducing its presence in Washington's waters.

Response to 12.1

We developed a freshwater acute 6PPDQ criterion and adopted it into state rule in August 2024. We are awaiting EPA approval to be able to implement this criterion into Clean Water Act programs. We will continue to assess 6PPDQ toxicity data as it is published and evaluate whether data exists to develop additional criteria.

We reviewed 6PPDQ monitoring data paired with narrative information and identified one stream as Category 5 (impaired) and two streams as Category 2 (water of concern) stream as impaired for 6PPDQ through our narrative criteria in the latest assessment that we submitted to EPA in April 2025. We are currently awaiting EPA approval of this assessment. As more monitoring data becomes available and EPA approves our state-adopted criterion, more opportunities will be available to assess waterbodies for 6PPDQ impairments.

Comment 12.2 – Nutrient criteria for lakes and reservoirs

We appreciate and support Ecology's ongoing efforts to address nutrient pollution in Washington's lakes, particularly the work being done to prioritize the development of a lake nutrient criterion. As part of this work, we urge Ecology to ensure that nutrient criteria apply not only to natural lakes but also to reservoirs, consistent with EPA's recommendations. Reservoirs function as lakes in many respects, serving critical roles in recreation, habitat, and ecosystem health, and they are equally vulnerable to the impacts of nutrient pollution—such as algal blooms, oxygen depletion, and fish kills.

Spokane River watershed in particular urgently needs protective nutrient criteria. Nutrient pollution has already caused significant and recurring water quality problems. Long Lake Reservoir experiences persistent eutrophication and algal blooms, threatening public health,

aquatic life, and the usability for recreation. Similarly, in the Hangman Creek Basin excessive nutrient loading has contributed to severe algae overgrowth, degrading water quality and further impairing habitat for fish and other aquatic species (see photo below, from Summer of 2024, where duckweed overgrowth completely overtook Hangman Creek). These issues highlight the need for comprehensive criteria that address both point and nonpoint sources of nutrients.

Response to 12.2

EPA's nutrient criteria for lakes and reservoirs are Clean Water Act Section 304(a) water quality criteria recommendations. Therefore, we are required to adopt these criteria, modified or alternative versions of these criteria, or justify why these criteria are not being adopted in our state, such as for reservoirs. The determination for where any lake and reservoir nutrient criteria will apply will be decided during any future rulemaking process for nutrient criteria in these systems.

We agree that both lakes and reservoirs are important for both humans and aquatic species alike, and we must protect these systems against harmful conditions like eutrophication. In addition to potential future rulemaking, Ecology currently addresses nutrient issues in our water cleanup plans.

Further, Ecology has previously published how we develop nutrient criteria in the state for phosphorus,[37] and this document includes sections describing how we protect systems from excess nutrients in rivers and marine waters by using dissolved oxygen and pH as indicators for ecosystem health, as these both serve as sensitive indicators of eutrophication.

Comment 12.3 - Nutrient criteria for lakes and reservoirs

Washington's nutrient pollution challenges are not limited to lakes and reservoirs. We encourage Ecology to be proactive in preparing and implementing nutrient criteria for rivers and streams. The current approach is not enough to address the significant issues our waterways face. Excess nutrients contribute to degraded water quality both locally and downstream, exacerbating eutrophication and negatively impacting wildlife. Addressing nutrients across all waterbody types is essential for protecting designated uses, meeting Clean Water Act goals, and ensuring the health of Washington's waters for future generations. We look forward to supporting Ecology in advancing nutrient criteria that reflect this comprehensive and science-based approach—one that prioritizes places like the Spokane River and its tributaries where nutrient pollution is already causing well-documented harm.

Response to 12.3

We appreciate your suggestion for future work developing criteria for rivers and streams.

We do want to reiterate what we stated in our draft and final workplan regarding nutrient criteria for these systems. While we recognize that EPA has recommended 304(a) criteria

[37] https://apps.ecology.wa.gov/publications/documents/0410033.pdf

for nutrients in rivers and streams, we do not believe that these criteria are sufficient or protective of aquatic life in Washington's fresh waters. To effectively protect aquatic life in Washington's waters we believe nutrient criteria need to be derived using an approach that accounts for the complexities in nutrient criteria development and Washington's unique systems, such as a model-based approach.

We agree that nutrient issues aren't just limited to lakes and reservoirs, and our current work addresses eutrophication in other waters. We currently use sensitive indicators, dissolved oxygen and pH, to identify areas of riverine eutrophication, which can lead to establishing permit limits or load and wasteload allocations through our water clean plans (e.g., TMDLs). We discuss this approach in the 2004 publication Nutrient Criteria Development in Washington State: Phosphorus.[38]

Comment 12.4 - Aquatic life criteria for PFOA and PFOS

We support Ecology's ongoing updates to water quality criteria for PFOA and PFOS as an important step in protecting public health and aquatic life from harmful PFAS contamination, and support the adoption of EPA's more stringent criteria. Washington's current criteria are well above the levels understood to be harmful to aquatic and human health, and should be updated.

Response to 12.4

Thank you for your comment. We will review EPA's final PFOA and PFOS criteria and take future action if it is found that current criteria are not protective.

Comment 12.5 - Aquatic life criteria for PFOA and PFOS

We also urge Ecology to broaden its efforts beyond the EPA's criteria to include the evaluation and development of criteria for additional PFAS chemicals beyond PFOA and PFOS, including PFBS. Given the widespread use, persistence, and toxicity of many other PFAS compounds, a more comprehensive approach is necessary to fully address the risks these substances pose to Washington's waters, fish, and communities.

Response to 12.5

Aquatic life criteria for PFAS chemicals, other than PFOA and PFOS, have not been developed because toxicity data is limited. EPA found adequate data to develop and recommend 304(a)(1) criteria for PFOA and PFOS. EPA has developed aquatic life benchmarks for eight other PFAS chemicals, including PFBS. Benchmarks are associated with more uncertainty than Clean Water Act criteria recommendations because they do not meet the minimum data requirements for criteria derivation according to EPA guidelines. States have the opportunity to evaluate and adopt aquatic life benchmarks if found appropriate for their state. We have added the evaluation of EPA's eight PFAS benchmarks to our Group 3 priority projects based on this comment.

[38] https://apps.ecology.wa.gov/publications/documents/0410033.pdf

Comment 12.6 – Chemical mixtures (Group 3)

Spokane Riverkeeper strongly supports the development of water quality criteria for chemical mixtures. Our watershed faces the challenge of complex chemical interactions, and it's crucial that regulations evolve to address the complex nature of these chemicals. Incorporating site-specific data and prioritizing this work in future rulemaking will help create enforceable standards that reflect the unique environmental conditions of the Spokane River, offering stronger safeguards for the health of our river ecosystem.

Response to 12.6

Thank you for your support. While this objective does not refer to the incorporation of site-specific data, there is a possibility through modeling that site-specific criteria could be developed for mixtures within chemical classes. We currently aren't aware of any approaches to criteria for mixtures from various chemicals classes but will explore this suggestion as part of our group 3 projects.

Comment 12.7 – Tracking federal water quality standards developments (Group 3)

We support Ecology's active participation in the federal process as the EPA updates national water quality standards. It is critical that Washington remains engaged in these discussions to ensure the state's perspective, priorities, and commitment to science-based decision-making are reflected as federal policies evolve. Washington has long been recognized as a national leader in water protection, setting strong, protective standards that can serve as a model for other states and the nation as a whole. We appreciate the state's ongoing efforts to strengthen water quality protections that safeguard the health of our rivers, lakes, and streams, ensuring clean water for communities, fish, and wildlife now and for future generations. As Washington continues to lead in advancing water quality standards, we hope the State will push our nation to do better—adopting more comprehensive, protective, and forward-thinking policies that reflect the urgency of today's water challenges and uphold our shared responsibility to protect clean water for all.

Response to 12.7

Thank you for your support.

13 – Swinomish Indian Tribal Community

Comment 13.1 – Harmful algal blooms

Currently, Ecology's 2025-2027 Draft Workplan includes establishing freshwater human health recreational water quality criteria for cyanotoxins Microcystin and Cylindrospermopsin based on the EPA's 2019 recommendation, and to investigate criteria for Saxitoxin and Anatoxin-a. Although EPA recommendations only cover freshwater human health recreational criteria, a body of existing research shows that all of these cyanotoxins are toxic to aquatic life in freshwater and marine environments, can bioaccumulate in marine and freshwater organisms, and can be transported downstream from freshwater into marine environments. Creating freshwater recreational criteria for these toxins should not be a difficult task, particularly given that Washington State already uses provisional recreational guidance for several of these toxins (DOH 332-118, October 2011) which can be updated with EPA recommendations and included in water quality criteria.

Recommendation: In addition to establishing freshwater recreational criteria, Ecology should begin working toward establishing aquatic life criteria for these toxins in freshwater and marine environments by gathering information on species-specific toxicity, bioaccumulation, and transport.

Response to 13.1

Thank you for your suggestion on expanding the recreational and cyanotoxin criteria scoping. Establishing cyanotoxin criteria for marine systems is something we may consider in future rulemaking efforts after completing work on recreational cyanotoxins. Fresh and marine waters generally have different cyanobacteria and associated cyanotoxins. For instance, microcystins toxins are primarily produced by the freshwater species *M. aeruginosa*, while some species of *Pseudo-nitzschia*, which are marine diatoms, produce domoic acid (responsible for amnesic shellfish poisoning). While there is overlap for certain cyanotoxins that are found in both environments (e.g., saxitoxin), our criteria development process generally will involve consideration of different studies, compounds, and cyanobacteria for each system.

Comment 13.2 – Aquatic life criteria for PFOA and PFOS

Ecology's 2025-2027 Draft Workplan gave no detail about the differences between the EPA's final recommended Aquatic Life Criteria for PFOA (Perflourooctanoic acid) and PFOS (Perflourooctanesulfonic acid) 3 and those previously adopted by Ecology. During informational webinars, Ecology staff were also vague on the details, stating "some of the new standards were higher, some were lower." This is misleading since the EPA's recommended criteria were in some cases many times more protective than those previously adopted by Ecology, and in cases where Ecology's standards were more protective, it was by relatively minor amounts.

For example, the EPA's recommended Acute Water Column Criterion Maximum Concentration for PFOS and PFOA in freshwater are 3.1mg/L and 0.071 mg/L, respectively, with a 1-hour average not to be exceeded more than once in three years on average. By contrast, Ecology's criteria for PFOS and PFOA are 49 mg/L (15 times higher) and 3 mg/L (42 times higher) with a

four-day average concentration not to be exceeded more than once in three years on average. High levels of PFOS in shellfish is a human health concern, especially for tribal communities who rely on shellfish as a traditional food source. The ability to harvest shellfish is both culturally and commercially important for tribes and high levels of PFOS contamination is can limit access to important harvest locations in the Tribe's usual and accustomed areas.

Ecology should adopt any and all of the new EPA recommended criteria which are more protective of aquatic life and therefore treaty-reserved and culturally important aquatic resources.

Response to 13.2

Thank you for your comment. We did not include specific numeric values in the triennial review presentation because the intent was to have a high-level discussion on prioritization of upcoming water quality standard's projects. In the triennial review work plan we state: "The EPA's final freshwater acute and chronic criteria for PFOS and freshwater acute for PFOA are significantly lower than their draft recommendations." This statement indicates that EPA's final criteria are more stringent. The reason for lower criteria was the integration of insect toxicity data into the final criteria recommendations. The primary purpose of the work plan is to receive feedback on whether this action should be prioritized. We appreciate the support to prioritize this project and adopt EPA final recommended criteria for PFOS and PFOA.

Comment 13.3 – Accounting for climate change

The Tribe urges Ecology to revise the 2025-2027 Draft Workplan to include investigation and implementation of ways to account for future conditions under climate change in all water quality regulations, and particularly when it applies to the Skagit River watershed, where stream and river temperatures are already negatively impacting Treaty-reserved resources and ESA-listed salmon. This includes in developing antidegradation policies and implementation methods, establishing water-quality based effluent limits, and issuing National Pollution Discharge Elimination System (NPDES) permits. In addition, Ecology should be using its regulatory authority to require the restoration of riparian areas along already temperature impaired streams to help ameliorate worsening conditions.

Response to 13.3

We recognize the impact that temperature has on aquatic life in Washington's waters, including the rise of instream temperatures due to climate change.

We recently adopted natural conditions criteria in our water quality standards in November 2024. These criteria updates included revised human-use allowances for temperature impacts when natural conditions are the applicable criteria for a waterbody. The revised provision to limit human-caused pollution accounts for climate change in the sense that they prohibit human-caused global trends (climate change) from negatively impacting our state's waters. This is because our antidegradation policy in Tier I (WAC 173-201A-310) already states that no sources outside of those listed exceptions in our water

quality standards can lower water quality. Climate change is not a listed exception in our standards.

Further, our temperature criteria reflect the biological needs of organisms and does not, on its own, provide for allowances or adjustments due to human impact (e.g., climate change). In addition, if and when Ecology develops natural conditions for a waterbody, all sources of human pollution to the waters must be accounted for and removed, including global climate impacts to the system, when determining natural conditions criteria values.

In terms of how we address climate change in our water quality work, this is done through a combination of water cleanup plans (like TMDLs or ARPs), issued permits (such as NPDES permits), and other Ecology programs (e.g., Air Quality). We do appreciate your comment that we should continue to explore how we can incorporate climate change into our implementation actions, such as issuing or revising NPDES permits or adding requirements in water cleanup plans for riparian restoration.

Comment 13.4 – Instream flows

Low summer flows result in increased water temperatures, lowered dissolved oxygen, increased susceptibility to disease, and reduced spawning and rearing habitat, all of which contribute to lower survival and productivity of salmonids in our streams and rivers. In 2021, low flows and higher temperatures led to the death of 80% or ~2,500 returning Chinook Salmon in the South Fork of the Nooksack River. Despite this, Skagit County recently included in their Draft Comprehensive Plan a goal to secure additional water withdrawals for agriculture in the lower Skagit River basin. This goal would directly undermine the requirements of the Skagit Instream Flow Rule (WAC 173-503) that protects essential stream functions and federally reserved tribal senior water rights.

The Tribe strongly requests that Ecology include in the 2025-2027 Workplan additional protections for Skagit River and other regulatory instream flows as well as related water quality conditions for salmon. Climate warming impacts will continue to intensify, and all land uses, including agriculture, can and should be required to adapt where simple solutions, such as planting riparian habitat, exist. Salmon populations however, cannot adapt to these human-induced changes, and will simply continue to decline toward extinction unless Ecology prioritizes protections to instream flows and restoration of critical riparian areas.

Response to 13.4

Ecology appreciates the comment regarding aquatic habitat conditions in the Skagit watershed. Ecology is currently working in collaboration with the Swinomish Tribe and other Federal Energy Regulatory Commission licensing parties to improve flow and water quality conditions related to the Seattle City Light Skagit Hydroelectric Project relicensing process. The water quality standards triennial review focuses on actions that implement WAC 173-201A and Chapter 90.48 RCW. Although this Water Quality Program process does not directly inform the implementation of Washington Instream Flow Rules that are developed by Ecology's Water Resources Program, pursuant to Chapters 90.54 and 90.22 RCW, we will provide this comment to those staff who administer the instream flow rules and water rights.

Comment 13.5 – Water Quality Assessment

The Clean Water Act requires that Washington Department of Ecology produce a Water Quality Assessment (WQA), including a list of impaired water bodies (303(d) list) every two years.

Since 2012, Ecology has only produced three such WQAs, including the most recent 2022 assessment (rather than the required 6 during this period). Lack of up-to-date information impairs the ability of tribal nations like Swinomish to understand whether waterbodies are meeting water quality standards, whether state water quality policies are preventing degradation, and whether either is causing impairment to Treaty reserved resources. Unnecessary and preventable delays in water quality assessments degrade public trust, impede the ability of entities to make decisions and prioritize water quality projects, and prevents the state from enforcing water quality standards in a timely manner.

The Tribe urges Ecology to follow the recommendations in the November 2023 report form the U.S. Government Accountability Office (GAO-24-105687) to work with the EPA to develop a plan to address this issue and add it to the 2025-2027 Workplan.

Response to 13.5

The Triennial Review sets priorities for updating the water quality standards. The water quality assessment is outside the scope of the Triennial Review.

As recommended in the GAO Report, Ecology and the EPA engaged in process improvement planning in 2024 related to the timeliness of the Assessment. Washington has one of the largest and most complex Assessments in the nation (the most recent assessment submitted to EPA in April 2025 evaluated over 85 million data points in surface water, fish and shellfish tissue, and benthic sediments). Less than 2 weeks after submitting the candidate 2022 Assessment to the EPA, Ecology began the 2026 WQA by announcing the call for data submittals to include in the next evaluation.

Ecology will continue implementing process improvements related to the Assessment and has identified those commitments in the 2025-2027 Environmental Performance Partnership Agreement between Ecology and the EPA.

14 – Washington Conservation Action Education Fund

Comment 14.1 Performance-based approach methods document

Establishing natural conditions for marine dissolved oxygen and freshwater temperature is well grounded in scientific approaches and modeling applications. Ecology has used consistent approaches for over 20 years and publishing the generalized approach is good practice.

We concur with publishing the final methodology for calculating natural conditions criteria for marine dissolved oxygen as part of Project 1. As we included in our July 9, 2024 comment letter (attached), it is imperative that Ecology maintain strict standards for marine dissolved oxygen and ensure swift rulemaking. We expect aggressive attempts to weaken the dissolved oxygen standards by municipal sewage treatment plant dischargers. This is a blatant attempt to avoid regulations that are needed to protect Puget Sound and other marine waters. The rest of the United States is moving toward nutrient-removal technology and even zero-ocean discharge, and this small contingent of municipalities is out of step with the rest of the country. Ecology has strong examples of municipalities adequately planning ahead for expected regulations and should not reward the delay tactics of seeking to weaken marine dissolved oxygen standards while others, like Pierce County's Chambers Creek plant, planned ahead over 20 years ago for advanced wastewater treatment.

We also concur with developing a new chapter with a performance-based approach to calculating natural conditions for freshwater temperature as part of Project 1. Rivers and streams are too hot for salmon throughout the state. While lack of riparian vegetation remains the primary driver, even restoring full shade may not meet the numeric standards in some waters and must be addressed based on modeling. We also expect that polluters will attempt to capitalize on this rulemaking to weaken temperature standards for rivers and streams. Ecology should swiftly address this need to fill an important gap that resulted from legal action against EPA.

Response to 14.1

We appreciate your comment and support for our development of a performance-based approach methodology for natural conditions criteria for marine dissolved oxygen and future work towards a methodology for natural conditions freshwater temperature criteria.

Comment 14.2 – Aquatic life criteria for PFOA and PFOS

We agree with Ecology's inclination to evaluate PFOA and PFOS in light of EPA's final recommended criteria to ensure that Washington's standards are as protective as possible of aquatic life. However, given the uncertainty of the current federal administration, we caution Ecology against embarking on additional rulemaking that could lead to a weakening of our current criteria for PFOS and PFOA.

Given the rollback of many environmental protections under the current administration, we recommend Ecology strongly consider the current federal climate and the possibility that reopening this process could lead to erosion of the standards that were previously adopted.

Response to 14.2

Thank you for your support and advice.

Comment 14.3 – Use Attainability Analysis and Variances

We do not support Ecology responding affirmatively to requests for Use Attainability Analyses or Variances for either marine dissolved oxygen or freshwater temperature as part of Project Group 2.

Response to 14.3

If Ecology receives a request to remove a designated use that is not existing or attainable, we would review information that supports that request through a use attainability analysis. A use attainability analysis must demonstrate with sufficient information that the use is neither existing nor attainable based on physical, chemical, biological or economic factors.

Likewise, federal and state water quality standards allow Ecology to consider the adoption of variances to provide permitted dischargers with a time-limited path to meeting water quality standards. A variance can be requested if a discharger or group of dischargers cannot meet effluent limits due to specific biological, chemical, physical, or economic factors listed in the federal water quality regulations (40 CFR 131.14) and there is uncertainty on whether the effluent limit can ultimately be met. A variance is a time-limited plan to reduce pollution to the maximum extent practical. It is not a pass from meeting water quality standards and shall not result in lowering of water quality (unless temporarily through restoration activities).

Ecology will carefully review any requests for variances, including supporting documentation that shows how a discharger cannot meet the water quality standard because of one or more factors stated in rule, and a plan for how a discharger will minimize pollution while the variance is in place.

Variances and UAA processes both require public review and consultation with Tribes through a formal rulemaking process before we would consider them for adoption. If in the future Ecology proceeds with a rulemaking regarding the consideration of a variance or UAA, we welcome your review and input during that rulemaking process.