



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

1200 Sixth Avenue, Suite 155  
Seattle, WA 98101

WATER  
DIVISION

November 19, 2021

Mr. Vince McGowan  
Water Quality Program Manager  
Washington State Department of Ecology  
PO Box 47600  
Olympia, Washington 98504-7600

Re: EPA's Action on Revisions to the Washington State Department of Ecology's Surface Water Quality Standards for Natural Conditions Provisions

Dear Mr. McGowan:

The U.S. Environmental Protection Agency (EPA) has completed the review and reconsideration of Washington's natural conditions provisions (WAC 173-201A-200(1)(c)(i), 173-201A-210(1)(c)(i), 173-201A-200(1)(c)(v), 173-201A-200(1)(d)(i), 173-201A-210(1)(d)(i), 173-201A-200(1)(d)(ii), and 173-201A-260(1)(a)), which were submitted to EPA by the Washington Department of Ecology in 2003 and 2006. Under section 303(c) of the Clean Water Act (CWA), 33 U.S.C. § 1313(c), states must submit new and revised water quality standards to EPA for review and action, and EPA approves those water quality standards if they meet the requirements of the CWA and EPA's implementing regulations. EPA's review and reconsideration is outlined below and further described in the enclosed Technical Support Document.

As you are aware, on February 10, 2014, the Northwest Environmental Advocates filed a complaint in U.S. District Court for the Western District of Washington (Case No. 2:14-cv-0196-RSM) challenging, in part, EPA's February 11, 2008 CWA section 303(c) approval of the natural conditions provisions identified above. On October 17, 2018, the Court issued an Order Granting a Stay (Dkt. 95) pending EPA's reconsideration of its prior determinations. The Court subsequently granted an extension for EPA to complete its reconsideration by November 19, 2021 (Dkt. 118).

EPA's CWA section 303(c) action applies only to waters in the State of Washington and does not apply to waters that are within Indian Country, as defined in 18 U.S.C. § 1151. Nothing in the enclosed decision document shall constitute an approval or disapproval of a water quality standard that applies to waters within Indian Country. EPA, or authorized Indian Tribes, as appropriate, will retain responsibilities for water quality standards for waters within Indian Country.

### **Summary of EPA's Action**

EPA has completed its reconsideration, as contemplated by the Court's Order, and is not changing its February 11, 2008 approval of the revisions to the following sections of WAC Chapter 173-201A.

- WAC 173-201A-200(1)(c)(v): Natural condition narrative aquatic life temperature criteria for lakes

- WAC 173-201A-200(1)(d)(ii): Natural condition narrative aquatic life dissolved oxygen criteria for lakes

Because EPA is not changing its earlier approval, it is taking no new action with respect to those provisions.

EPA has completed its reconsideration, as contemplated by the Court's Order, and is disapproving revisions to the following sections of WAC Chapter 173-201A pursuant to its authority under section 303(c)(3) of the CWA, 33 U.S.C. § 1313(c)(3), and 40 CFR Part 131:

- WAC 173-201A-260(1)(a): Natural and irreversible human conditions
- WAC 173-201A-200(1)(c)(i) and WAC 173-201A-210(1)(c)(i): Allowable human contribution to natural conditions provisions for aquatic life temperature (fresh water and marine water, respectively)
- WAC 173-201A-200(1)(d)(i) and WAC 173-201A-210(1)(d)(i): Allowable human contribution to natural conditions provisions for aquatic life dissolved oxygen (fresh water and marine water, respectively)

EPA appreciates Ecology's commitment and ongoing work to update Washington's water quality standards. We also appreciate the collaboration by your staff to address the complexities associated with criteria revisions. If you have any questions regarding this letter, please contact me at (206) 553-1855 or Lindsay Guzzo, EPA staff lead, at (206) 553-0268 or [Guzzo.Lindsay@epa.gov](mailto:Guzzo.Lindsay@epa.gov).

Sincerely,

Daniel D. Opalski  
Director

Enclosure: Technical Support Document

cc (e-Copy): Ms. Melissa Gildersleeve, Water Quality Management Section Manager, Ecology  
Mr. Chad Brown, Water Quality Management Unit Supervisor, Ecology

# Technical Support Document

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EPA's Clean Water Act Action on Revisions to the  
Washington State Department of Ecology's Surface  
Water Quality Standards for Natural Conditions  
Provisions

November 19, 2021

## I. Clean Water Act Requirements for Water Quality Standards

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters with an interim goal, where attainable, to achieve water quality that provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water. Under section 303(c) of the CWA and federal implementing regulations at 40 CFR § 131.4, states (and authorized tribes) have the primary responsibility for reviewing, establishing, and revising water quality standards (WQS). These standards include the designated uses of a waterbody or waterbody segment, the water quality criteria that protect those designated uses, and an antidegradation policy. This statutory and regulatory framework allows states to work with local communities to adopt appropriate designated uses (as required at 40 CFR § 131.10(a)) and to adopt criteria to protect those designated uses (as required at 40 CFR § 131.11(a)).

States are required to hold public hearings for the purpose of reviewing applicable WQS periodically but at least once every three years and, as appropriate, modify and adopt these standards (40 CFR § 131.20). Each state must follow applicable legal procedures for revising or adopting such standards (40 CFR § 131.5(a)(6)) and submit certification by the state's attorney general, or other appropriate legal authority within the state, that the WQS were duly adopted pursuant to state law (40 CFR § 131.6(e)). The U.S. Environmental Protection Agency's (EPA) review authority and the minimum requirements for state WQS submittals are described at 40 CFR § 131.5 and 131.6, respectively.

States are required by 40 CFR § 131.11(a) to adopt water quality criteria that protect their designated uses. In adopting such criteria, states should establish numeric values based on one of the following:

- (1) CWA section 304(a) guidance;
- (2) CWA section 304(a) guidance modified to reflect site-specific conditions; or,
- (3) Other scientifically defensible methods (40 CFR § 131.11(b)(1)).

In addition, states should establish narrative criteria where numeric criteria cannot be established or to supplement numeric criteria (see 40 CFR § 131.11(b)(2)).

Section 303(c) of the CWA requires states to submit new or revised WQS to EPA for review and action. EPA reviews these changes and approves the WQS if they meet the requirements of the CWA and EPA's implementing regulations.

EPA considers four questions (described below) when evaluating whether a particular provision is a new or revised WQS. If all four questions are answered "yes" then the provision would likely constitute a new or revised WQS that EPA has the authority and duty to approve or disapprove under CWA § 303(c)(3).<sup>1</sup>

1. Is it a legally binding provision adopted or established pursuant to state or tribal law?
2. Does the provision address designated uses, water quality criteria (narrative or numeric) to protect designated uses, and/or antidegradation requirements for waters of the United States?

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<sup>1</sup> *What is a New or Revised Water Quality Standard under 303(c)(3)? Frequently Asked Questions*, EPA No. 820F12017 (Oct. 2012). Available at <https://www.epa.gov/sites/production/files/2014-11/documents/cwa303faq.pdf>

3. Does the provision express or establish the desired condition (e.g., uses, criteria) or instream level of protection (e.g., antidegradation requirements) for waters of the United States immediately or mandate how it will be expressed or established for such waters in the future?
4. Does the provision establish a new WQS or revise an existing WQS?

If EPA approves a state's WQS submission, such standard(s) shall thereafter be the applicable standard for CWA purposes. When EPA disapproves a state's WQS, EPA shall notify the state and specify why the WQS is not in compliance with the requirements of the CWA and federal WQS regulations and specify any changes that are needed to meet such requirements (33 U.S.C. § 1313(c)(3); 40 CFR § 131.21).

Finally, EPA considers non-substantive edits to existing WQS to constitute new or revised WQS that EPA has the authority to approve or disapprove under § 303(c)(3). While such edits and changes do not substantively change the meaning or intent of the existing WQS, EPA believes it is reasonable to treat such edits and changes in this manner to ensure public transparency as to which provisions are applicable for purposes of the CWA. EPA notes that the scope of its review and action on non-substantive edits or editorial changes extends only to the edits or changes themselves. EPA does not reopen or reconsider the underlying WQS that are the subject of the non-substantive edits or editorial changes.

## **II. Background**

On February 10, 2014, the Northwest Environmental Advocates filed a complaint in U.S. District Court for the Western District of Washington (Case No. 2:14-cv-0196-RSM) challenging, in part, EPA's February 11, 2008 CWA section 303(c) approval of the natural conditions provisions. On October 17, 2018, the Court issued an Order Granting a Stay (Dkt. 95) pending EPA's reconsideration of its prior determinations. The Order noted that EPA may complete its reconsideration by October 17, 2021, by making approval or disapproval decisions, or a final determination that such provisions are not water quality standards. The Court subsequently granted an extension for EPA to complete its reconsideration by November 19, 2021 (Dkt. 118).

This Technical Support Document constitutes EPA's reconsideration of the remaining provisions subject to the Court Order. EPA previously completed its review and reconsideration of the other provisions in actions dated April 30, 2019, October 13, 2020, and September 30, 2021.

## **III. Results of EPA's Reconsideration**

In its February 11, 2008 action, EPA approved the revised natural conditions provisions at:

- WAC 173-201A-200(1)(c)(i) and WAC 173-201A-210(1)(c)(i): Allowable human contribution to natural conditions provisions for aquatic life temperature (fresh water and marine water, respectively);
- WAC 173-201A-200(1)(c)(v): Natural condition narrative aquatic life temperature criteria for lakes;
- WAC 173-201A-200(1)(d)(i) and WAC 173-201A-210(1)(d)(i): Allowable human contribution to natural conditions provisions for aquatic life dissolved oxygen (for fresh water and marine water, respectively);

- WAC 173-201A-200(1)(d)(ii): Natural condition narrative aquatic life dissolved oxygen criteria for lakes; and
- WAC 173-201A-260(1)(a): Natural and Irreversible Human Conditions.

Upon reconsideration, EPA is not changing and taking no action with respect to the February 11, 2008 approval of the provisions at WAC 173-201A-200(1)(c)(v) and WAC 173-201A-200(1)(d)(ii). EPA is disapproving the provisions at WAC 173-201A-200(1)(c)(i), WAC 173-201A-210(1)(c)(i), WAC 173-201A-200(1)(d)(i), WAC 173-201A-210(1)(d)(i), and WAC 173-201A-260(1)(a).

EPA’s CWA section 303(c) action and the associated rationales are provided below. Today’s action applies only to waters within the jurisdiction of the State of Washington and does not apply to waters that are within Indian Country, as defined in 18 U.S.C. § 1151. Nothing in this decision document shall constitute an approval or disapproval of a WQS that applies to waters within Indian Country. EPA, or authorized Indian Tribes, as appropriate, retain the authority to establish WQS for waters within Indian Country.

## **1. Natural Conditions Narrative Criteria For Lakes**

In its February 11, 2008 action, EPA approved the revised temperature and dissolved oxygen natural conditions narrative criteria for lakes at WAC 173-201A-200(1)(c)(v) and WAC 173-201A-200(1)(d)(ii), respectively. More detail and information regarding EPA’s action can be found in the 2008 decision document.<sup>2</sup>

The underlined text indicates the new and/or revised language from Ecology’s 2006 WQS submittal, and strikeout text indicates Ecology’s previous text, which had been replaced by the new or revised text.

### **Aquatic life temperature criteria for lakes**

**WAC 173-201A-200(1)(c)(v):** For lakes, human actions considered cumulatively may not increase the 7-DADMax temperature more than 0.3°C (0.54°F) above natural conditions.  
~~Temperature – no measurable change from natural conditions.~~

### **Aquatic life dissolved oxygen criteria for lakes**

**WAC 173- 201A-200(1)(d)(ii):** For lakes, human actions considered cumulatively may not decrease the dissolved oxygen concentration more than 0.2 mg/L below natural conditions.  
~~Dissolved oxygen – no measurable decrease from natural conditions.~~

**EPA’s Reconsideration:** EPA has completed its reconsideration and is taking no action with respect to its February 11, 2008 approval of the revisions at WAC 173-201A-200(1)(c)(v) and WAC 173-201A-200(1)(d)(ii).

### **EPA Rationale for the 2008 approval:**

In 2006, Ecology submitted revisions to the temperature and dissolved oxygen aquatic life criteria for lakes. The revisions clarified and quantified the previous criteria of “no measurable change from natural

<sup>2</sup> February 11, 2008. Letter from Michael F. Gearheard, Director, Office of Water & Watersheds, EPA Region 10, to David C. Peeler, Program Manager, Department of Ecology, re: EPA Approval of the 2003/2006 Revisions to the Washington Water Quality Standards Regulations. Available at: <https://www.epa.gov/sites/production/files/2017-10/documents/wawqs-letter-02112008.pdf>

conditions” (for temperature) and “no measurable decrease from natural conditions” (for dissolved oxygen) by identifying a 0.3°C increase in temperature and a 0.2 mg/L decrease in dissolved oxygen as what would constitute a “measurable” departure from natural conditions. For temperature, the revision also added a 7-DADMax metric to the criterion.

In the February 11, 2008, Technical Support Document, EPA concluded that a 0.3°C increase in temperature from natural conditions was insignificant and well within the range of uncertainty of the thermal requirements for salmon, which is approximately +/- 0.5°C. EPA also noted that 0.3°C was consistent with reliable field detection levels for temperature and is therefore considered within the error band associated with typical temperature monitors (pp. 27-28). The revised temperature criterion also added the 7-DADMax metric recommended for temperature standards by the *Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards* (EPA910-B-03-002, April 2003, hereinafter referred to as “Temperature Guidance”) and that EPA determined to be scientifically defensible (p.4). EPA’s 2008 approval, therefore, concluded that Washington’s revisions to the aquatic life temperature criterion for lakes were protective of designated uses and scientifically defensible.

In assessing Washington’s revisions to the dissolved oxygen criterion for lakes, EPA similarly concluded that a 0.2 mg/L decrease from natural conditions was insignificant. The 2008 approval rationale explained that an allowable decrease of 0.2 mg/L is within the monitoring measurement error for recording instruments typically used to monitor dissolved oxygen. EPA also explained that numerous factors impact oxygen levels in lakes and without at least some allowance for insignificant decreases a natural conditions criterion for dissolved oxygen in lakes would be unnecessarily restrictive for the protection of designated uses (p. 32). EPA’s 2008 approval, therefore, concluded that Washington’s revisions to the aquatic life dissolved oxygen criterion for lakes was protective of designated uses and scientifically defensible.

The narrative criteria are the applicable temperature and dissolved oxygen criteria for lakes in Washington, and leaving in place EPA’s 2008 approval of these criteria ensures that aquatic life criteria for temperature and dissolved oxygen in lakes remain in effect for CWA purposes.

## **2. Natural and Irreversible Human Conditions**

In its February 11, 2008 action, EPA approved the new narrative natural conditions provision at WAC 173-201A-260(1)(a) and took no action on the irreversible human conditions provision at WAC 173-201A-260(1)(b) after concluding the provision is not a WQS that EPA has the authority to approve or disapprove under section 303(c) of the CWA. More detail and information regarding EPA’s action can be found in the 2008 decision document.<sup>3</sup>

With respect to WAC 173-201A-260(1)(a), EPA’s 2008 decision stated that it is acceptable, under certain circumstances, for water quality criteria to reflect the natural condition of a water body as an alternative to the generally applicable numeric criteria. The rationale for this was that Washington’s designated uses were supported by the water in its natural condition, prior to any human effects on water quality.

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<sup>3</sup> February 11, 2008. Letter from Michael F. Gearheard, Director, Office of Water & Watersheds, EPA Region 10, to David C. Peeler, Program Manager, Department of Ecology, re: EPA Approval of the 2003/2006 Revisions to the Washington Water Quality Standards Regulations. Available at: <https://www.epa.gov/sites/production/files/2017-10/documents/wawqs-letter-02112008.pdf>

The text of the provision first appeared in a 2003 water quality standards submittal to EPA and again in a 2006 submittal and is excerpted below.

**WAC 173-201A-260(1):** Natural and irreversible human conditions.

(a) It is recognized that portions of many water bodies cannot meet the assigned criteria due to the natural conditions of the water body. When a water body does not meet its assigned criteria due to natural climatic or landscape attributes, the natural conditions constitute the water quality criteria.

**EPA's Reconsideration:** EPA has completed its reconsideration and in accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR Part 131, disapproves the provision at WAC 173-201A-260(1)(a).

**EPA Rationale:** The natural conditions narrative provision at WAC 173-201A-260(1)(a) is broadly drafted and does not specify the types of criteria or pollutants to which it applies. On reconsideration, EPA concludes that as written this provision could be applied to a wide range of naturally occurring pollutants, including toxic pollutants, and could even allow an exception from otherwise applicable numeric human health criteria. Therefore, it is not consistent with EPA's interpretation of the relationship between natural conditions and the protection of designated human health uses, which is articulated in EPA's November 5, 1997 policy guidance entitled "Establishing Site Specific Aquatic Life Criteria Equal to Natural Background."<sup>4</sup> EPA's 2008 decision document cited to the 1997 policy guidance, as well as to language in an Advance Notice of Proposed Rulemaking for the Water Quality Standards program (*see* 63 Fed. Reg. 36,724, 36761 (Jul. 7, 1998)), as setting forth the relevant policy considerations for establishing water quality criteria based on natural conditions. However, what EPA failed to appropriately consider in its 2008 decision is that these documents only addressed the establishment of aquatic life criteria for pollutants at levels equal to the natural background condition, and expressly did not apply to human health uses, whereas the provision at WAC 173-201A-260(1)(a) is not similarly limited in scope to aquatic life uses or to specific pollutants.

In contrast with aquatic life uses, a naturally occurring level of a pollutant does not necessarily protect designated human health uses. Naturally occurring levels of a pollutant are assumed to protect aquatic life species that have naturally developed in the affected waters. However, humans generally do not adapt to higher ambient pollutant levels, even if they are naturally caused. Consequently, the same assumptions of protectiveness cannot be made with regard to designated uses that affect human health (*e.g.*, people eating fish or shellfish from Washington waters, and recreating in Washington waters). For this reason, EPA's 1997 guidance also states that where the natural background concentration exceeds the state-adopted human health criterion, at a minimum, states should re-evaluate the human health use designation.<sup>5</sup>

**No Changes Necessary to Address the Disapproval:** The effect of EPA's disapproval is that, as of the date of this action, the provision at WAC 173-210A-260(1)(a) is no longer an applicable WQS for CWA purposes. Because Washington's WQS currently include applicable numeric criteria that EPA determined to be protective of designated uses, no changes to Washington's WQS are necessary to meet the requirements of the CWA. Therefore, EPA is not specifying any changes that Washington must

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<sup>4</sup> Davies, Tudor T., *Establishing Site Specific Aquatic Life Criteria Equal to Natural Background*, EPA Memorandum to Water Management Division Directors, Regions 1–10, State and Tribal Water Quality Management Program Directors, posted at: <https://www.epa.gov/sites/default/files/2014-08/documents/naturalbackground-memo.pdf>

<sup>5</sup> *Id.* at p. 2.



adopt to meet CWA requirements. EPA provides the following discretionary recommendations for the State's consideration.

EPA understands that WAC 173-201A-260(1)(a) was developed in parallel with numeric aquatic life criteria for marine and fresh waters, and that Washington intended to rely on the natural condition narrative to address circumstances where waterbody conditions are naturally less stringent than the adopted biologically-based numeric aquatic life criteria. In this respect the availability of a criterion that accounts for less stringent natural conditions was an important consideration in the establishment of numeric criteria for aquatic life. EPA continues to believe that appropriately drafted natural condition provisions can serve an important role in state WQS by reflecting a naturally occurring spatial and temporal variability in water quality that is protective of uses. A new general natural condition provision that is narrowly tailored to aquatic life uses could be adopted as a narrative criterion where numerical criteria cannot be established or to supplement numerical criteria (40 C.F.R. § 131.11(b)(2)). Alternatively, the adoption of a performance-based approach could be used to establish aquatic life criteria reflecting a natural condition for specific pollutants (see discussion for temperature and dissolved oxygen below).

EPA recommends removing the current WAC 173-201A-260(1)(a) from the State's WQS regulations to avoid confusion and provide greater clarity as to what is in effect for CWA purposes.

### **3. Allowable Human Contribution to Natural Conditions Provisions for Aquatic Life Temperature and Dissolved Oxygen Criteria For Fresh and Marine Waters**

In its February 11, 2008 action, EPA approved the new and revised natural conditions provisions for temperature in fresh and marine waters at WAC 173-201A-200(1)(c)(i) and WAC 173-201A-210(1)(c)(i), respectively; and for dissolved oxygen in fresh and marine waters at WAC 173-201A-200(1)(d)(i) and WAC 173-201A-210(1)(d)(i), respectively. More detail and information regarding EPA's action can be found in the 2008 decision document.<sup>6</sup>

In the 2008 approval, EPA determined that insignificant temperature increases or insignificant decreases of dissolved oxygen concentrations above or below the natural condition were protective of the applicable designated uses because such insignificant departures from the natural condition were within the range of scientific uncertainty of effects on designated uses and/or within the error band associated with typical monitoring equipment. Specific to temperature, these "de minimis" allowable human-caused increases above natural conditions are consistent with the Temperature Guidance.<sup>7</sup>

The texts of each of the provisions are excerpted below.

#### **Allowable human contribution to natural conditions provisions for aquatic life temperature:**

**Freshwater, WAC 173-201A-200(1)(c)(i):** When a water body's temperature is warmer than the criteria in Table 200 (1)(c) (or within 0.3°C (0.54°F) of the criteria) and that condition is due to

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<sup>6</sup> February 11, 2008. Letter from Michael F. Gearheard, Director, Office of Water & Watersheds, EPA Region 10, to David C. Peeler, Program Manager, Department of Ecology, re: EPA Approval of the 2003/2006 Revisions to the Washington Water Quality Standards Regulations. Available at: <https://www.epa.gov/sites/production/files/2017-10/documents/wawqs-letter-02112008.pdf>

<sup>7</sup> EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards. EPA-910-B-03-002. April 2003. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1004IUI.PDF?Dockey=P1004IUI.PDF>

natural conditions, then human actions considered cumulatively may not cause the 7-DADMax temperature of that water body to increase more than 0.3°C (0.54°F).

**Marine water, WAC 173-201A-210(1)(c)(i):** When a water body's temperature is warmer than the criteria in Table 210 (1)(c) (or within 0.3°C (0.54°F) of the criteria) and that condition is due to natural conditions, then human actions considered cumulatively may not cause the 7-DADMax temperature of that water body to increase more than 0.3°C (0.54°F).

#### **Allowable human contribution to natural conditions provisions for aquatic life dissolved oxygen:**

**Freshwater, WAC 173- 201A-200(1)(d)(i):** When a water body's D.O. is lower than the criteria in Table 200 (1)(d) (or within 0.2 mg/L of the criteria) and that condition is due to natural conditions, then human actions considered cumulatively may not cause the D.O. of that water body to decrease more than 0.2 mg/L.

**Marine water, WAC 173-201A-210(1)(d)(i):** When a water body's D.O. is lower than the criteria in Table 210 (1)(d) (or within 0.2 mg/L of the criteria) and that condition is due to natural conditions, then human actions considered cumulatively may not cause the D.O. of that water body to decrease more than 0.2 mg/L.

**EPA's Reconsideration:** EPA has completed its reconsideration and in accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR Part 131, disapproves the provisions at WAC 173-201A-200(1)(c)(i), WAC 173-201A-210(1)(c)(i), WAC 173-201A-200(1)(d)(i) and WAC 173-201A-210(1)(d)(i).

#### **EPA Rationale:**

The allowable human contribution to natural condition provisions for temperature (WAC 173-201A-200(1)(c)(i) and 210(1)(c)(i)) and dissolved oxygen (WAC 173-201A-200(1)(d)(i) and 210(1)(d)(i)) allow for human actions considered cumulatively to cause insignificant increases in temperature (0.3°C) or decreases in dissolved oxygen (0.2mg/L) from the natural condition of the waterbody. As discussed above, EPA is disapproving the provision at WAC 173-201A-260(1)(a) that allows for the natural condition of a waterbody to constitute the applicable criteria when the natural condition is less stringent than otherwise applicable numeric criteria.<sup>8</sup> Absent an approved WQS that allows for the natural condition to constitute the applicable water quality criteria, the applicable criteria for temperature and dissolved oxygen in Washington waters are the numeric criteria in Tables 200(1)(c) and (1)(d) and 210(1)(c) and (1)(d). However, the temperature and dissolved oxygen natural condition provisions are based on the natural condition of the waterbody; the provisions do not authorize human actions to cause insignificant exceedances to the applicable numeric criteria. EPA is therefore disapproving the temperature and dissolved oxygen provisions that allow insignificant human impacts to the natural condition because such impacts are not tied to approved criteria that are in effect under the CWA.

**No Changes Necessary to Address the Disapproval:** The effect of EPA's disapproval is that, as of the date of this action, the provisions at WAC 173-201A-200(1)(c)(i), WAC 173-201A-210(1)(c)(i), WAC 173-201A-200(1)(d)(i), and WAC 173-201A-210(1)(d)(i) are no longer applicable WQS for CWA purposes. Because Washington's WQS currently include applicable biologically-based numeric criteria

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<sup>8</sup> EPA's interpretation of WAC 173-201A-260(1)(a) is consistent with Ecology's January 29, 2016 letter in which it stated "[t]he rule makes it clear that where Ecology identifies a natural condition that is less stringent than the numeric criteria in the state's water quality standards, the natural condition supersedes the numeric criteria." Letter from David C. Peeler, Water Quality Program Manager, Ecology, to Michael Gearheard, EPA Region 10, Re: Ecology Responses to USEPA Region 10 Questions Regarding Washington's 2003 Adopted Water Quality Standards, p. 2.

for temperature and dissolved oxygen that EPA determined to be protective of designated uses, no changes to Washington's WQS are necessary to meet the requirements of the CWA. Therefore, EPA is not specifying any changes that Washington must adopt to meet CWA requirements. EPA provides the following discretionary recommendations for the State's consideration.

Washington, at its discretion, could adopt new natural conditions criteria specific to temperature and/or dissolved oxygen. One possibility would be for Washington to adopt into its WQS a performance-based approach for establishing temperature and/or dissolved oxygen criteria representative of the natural condition of a waterbody. A performance-based approach is a binding methodology that provides a transparent, predictable, repeatable, and scientifically defensible procedure to derive numeric criteria or to translate a narrative criterion into quantifiable measures that are protective of designated uses. The performance-based approach relies on the adoption of a systematic process (i.e., a criterion derivation methodology) rather than a specific outcome (i.e., concentration limit for a pollutant) consistent with 40 CFR Sections 131.11 and 131.13. When such a performance-based approach is sufficiently detailed and has suitable safeguards to ensure predictable, repeatable outcomes, EPA approval of such an approach also serves as approval of the outcomes as well. *See EPA Review and Approval of State Water Quality Standards*, 65 FR 24,641, 24,649 (Apr. 27, 2000).

A second possibility would be for Washington to adopt numeric temperature and dissolved oxygen criteria that account for natural conditions using the best available relevant data. EPA encourages Washington to consider magnitude, frequency, and duration components in setting water quality criteria to protect against acute and chronic effects.<sup>9</sup> This may include establishing protective site-specific criteria accounting for specific characteristics, such as unique temperature and/or dissolved oxygen regimes in different waterbodies (see EPA's Temperature Guidance).<sup>10</sup> Site-specific criteria established in this manner would be subject to CWA section 303(c) review.

Washington, at its discretion, could also choose to adopt new WQS provisions that allow for human actions, considered cumulatively, to cause insignificant exceedances in temperature and dissolved oxygen. As articulated in the 2008 Technical Support Document, EPA believes insignificant or de minimis exceedances to applicable temperature and/or dissolved oxygen criteria caused by human actions, considered cumulatively, may still be protective of designated uses.<sup>11</sup> Any such human use allowance provision must be scientifically defensible and tied to approved criteria that are protective of designated uses, which could include criteria based on the natural condition of the waterbody.

EPA recommends removing the disapproved provisions from the State's WQS regulations to avoid confusion and provide greater clarity to what is in effect for CWA purposes.

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<sup>9</sup> EPA Water Quality Standards Handbook – Chapter 3: Water Quality Criteria. EPA-823—B-17-001; 2017. Available at <https://www.epa.gov/sites/production/files/2014-10/documents/handbook-chapter3.pdf>

<sup>10</sup> EPA Issue Paper 3: Spatial and Temporal Patterns of Stream Temperature (Revised), October 2001. EPA-910-D-01-003, pages 2-9. Available at <https://www.epa.gov/sites/production/files/2018-01/documents/r10-water-quality-temperature-issue-paper3-2001.pdf>

<sup>11</sup> 2008 TSD at pp. 20-21, 32.