

Technical Support Document

The EPA's Action on
the Revisions to Chapter 173-201A of the Washington
Administrative Code Regarding the Recreational Use
Criteria for Fresh and Marine Waters
Submitted March 1, 2019

April 30, 2019

I. Introduction

By letter dated March 1, 2019, Washington State Department of Ecology (Ecology) submitted revisions to various sections of Washington Administrative Code 173-201A to the U.S. Environmental Protection Agency (EPA) for review and action under section 303(c) of the Clean Water Act (CWA). The revisions were adopted on January 23, 2019, were certified by the Washington Attorney General on February 1, 2019 as duly adopted pursuant to state law, and became effective under Washington state law on February 23, 2019. Prior to adopting the revisions, Ecology provided several opportunities for public comment including two informational webinars on October 17, 2017, prior to initiating the rulemaking process, two additional webinars on June 14, 2018 on the preliminary decisions, and five public hearings, including two in-person hearings (August 29 and August 30, 2018) and three webinar hearings (two hearings on August 28 and one on September 5, 2018), on the proposed rule.

Washington submitted the following documents in support of its rulemaking and to meet the requirements of 40 CFR § 131.6:

- Cover letter from Heather R. Bartlett, Washington State Department of Ecology, Water Quality Program Manager to Daniel Opalski, EPA Region 10 Office Director dated March 1, 2019.
- Attachment A: Memorandum from Attorney General's Office certifying the standards were duly adopted pursuant to state law
- Attachment B: *Water Quality Standards for Surface Waters of the State of Washington, Chapter 173-201A WAC*, revised on January 23, 2019
- Attachment C: *Concise Explanatory Statement Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington*. Summary of Rulemaking and response to comments. January 2019. Ecology Publication no. 18-10-043.
- Attachment D: *Rule Implementation Plan. Water Quality Standards for Surface Waters of the State of Washington*. Amendments to Chapter 173-201A WAC. January 2019. Ecology Publication no. 18-10-042.
- Attachment E: *Final Regulatory Analyses – Chapter 173-201A WAC. Water Quality Standards for Surface Waters of the State of Washington*. January 2019. Ecology Publication no. 18-10-037.
- Attachment F: *Final Environmental Impact Statement. Washington State's Changes to Water Quality Standards for Surface Waters of the State of Washington – WAC 173-201A*. January 2019. Ecology Publication no. 18-10-041.
- Attachment G: *Water Quality Standards for the Surface Waters of the State of Washington, Chapter 173-201A WAC*, as revised on August 1, 2016, and approved by EPA.
- Attachment H: Comments received on the rule language proposed July 17, 2018.
- Attachment I: Track-changes version of the *Water Quality Standards for Surface Waters of the State of Washington, Chapter 173-201A WAC*, as revised on January 23, 2019.
- Memo to EPA, Supplemental EPA submittal Information, Explanation of Changes to Tables 602 and 610, AO# 16-07. April 26, 2019.

The revisions submitted to the EPA for review and CWA action update the bacteria criteria to protect primary contact recreation in fresh and marine waters at WAC 173-201A-200 and WAC 173-201A-210, respectively, and include editorial and administrative revisions to the other criteria sections at WAC

173-201A-320, WAC 173-201A-600, WAC 173-201A-602, WAC 173-201A-610 and WAC 173-201A-612, and revised or newly adopted definitions at WAC 173-201A-020.

The state of Washington is covered by the Beaches Environmental Assessment and Coastal Health Act of 2000 (BEACH Act), which has specific requirements regarding recreational water quality criteria for coastal recreation waters. The BEACH Act of 2000 directed the EPA to conduct studies associated with pathogens and human health, and to publish recommendations for pathogens and pathogen indicators based on those studies. On November 26, 2012, the EPA met those requirements with the release of its “Recreational Water Quality Criteria” recommendations (Office of Water 820-F-12-058).¹

Following the EPA’s publication of recommended new or revised coastal recreation water quality criteria, section 303(i)(1)(B) of the CWA directs states and authorized tribes with coastal recreational waters to adopt and submit new or revised pathogen water quality standards (WQS) for coastal recreation waters under their respective jurisdictions for all pathogens and pathogen indicators to which the publication of new or revised water quality criteria are applicable. As discussed below in the section titled “The EPA Action on New and Revised Water Quality Standards,” Washington’s revisions to WAC 173-201A-210 (3) addressing the bacteria criteria to protect primary contact recreation in marine waters are consistent with the EPA’s 2012 Recreational Water Quality Criteria, and thus address the BEACH Act requirements for coastal recreation waters in Washington. Furthermore, Washington’s revisions to WAC 173-201A-200 (2) addressing bacteria criteria to protect primary contact recreation in fresh water are also consistent with the EPA’s 2012 Recreational Water Quality Criteria.

Ecology also submitted provisions or specific changes that do not constitute new or revised WQS actionable under section 303(c) of the CWA because they do not establish the desired condition or instream level of protection for any waters to which the EPA’s authorities under CWA section 303(c) and 40 CFR Part 131 apply. These non-WQS provisions are discussed in the section titled “Provisions that the EPA is Not Taking Action On.”

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. The EPA, or authorized Indian Tribes, as appropriate, retain the authority to establish WQS for waters within Indian Country.

II. Clean Water Act Requirements for Water Quality Standards

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 WQS, which consist primarily of 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 and authorized tribes to work with local communities to adopt appropriate designated uses (as required in 40 CFR § 131.10(a)) and to adopt criteria to protect those designated uses (as required in 40 CFR §131.11(a)).

¹ 2012 Recreational Water Quality Criteria. Available at <https://www.epa.gov/wqc/2012-recreational-water-quality-criteria>

States and authorized tribes 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 and authorized tribe must follow applicable legal procedures for revising or adopting such standards (40 CFR § 131.5(a)(6)) and submit certification by the state's or authorized tribe's attorney general, or other appropriate legal authority within the state/authorized tribe, that the WQS were duly adopted pursuant to state/tribal law (40 CFR §131.6(e)). The EPA's review authority and the minimum requirements for state and authorized tribal submissions are described in 40 CFR § 131.5 and 131.6.

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

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

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

Section 303(c) of the CWA also requires states and authorized tribes to submit new or revised WQS to the EPA for review and action. The EPA is required to review these changes to ensure revisions to WQS are consistent with the CWA and EPA's implementing regulations. The 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 the EPA has the authority and duty to approve or disapprove under CWA § 303(c)(3).²

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?
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?

Furthermore, the federal WQS regulations at 40 CFR § 131.21 state, in part, that when the EPA disapproves a state's or authorized tribe's WQS, the EPA shall specify the changes that are needed to assure compliance with the requirements of the CWA and federal WQS regulations.

Finally, the EPA considers non-substantive edits to existing WQS to constitute new or revised WQS that the EPA has the authority to approve or disapprove under § 303(c)(3). While these edits and changes do

² *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>

not substantively change the meaning or intent of the existing WQS, the 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 CWA purposes. The EPA notes that the scope of its review and action on non-substantive edits or editorial changes extend only to the edits or changes themselves. The EPA is not re-opening or reconsidering the underlying WQS which are the subject of the non-substantive edits or editorial changes.

III. The EPA’s Action on New and Revised Water Quality Standards

The EPA’s action and rationale on the new and revised WQS submitted by Ecology are provided below.

WAC 173-201A-020 Definitions

Washington added definitions of “Ambient water quality” and “*E. coli*” at WAC 173-201A-020:

"Ambient water quality" refers to the conditions and properties of a surface water of the state as determined by the results of water samples, measurements, or observations.

"*E. coli*" is a bacterium in the family Enterobacteriaceae named Escherichia coli and is a common inhabitant of the intestinal tract of warm-blooded animals, and its presence in water samples is an indication of fecal pollution and the possible presence of enteric pathogens.

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves these new definitions. The definitions explain the terms as they are used in Washington’s WQS, and provide information needed for the application and implementation of the WQS. They are consistent with section 303(c) of the CWA.

Washington removed the definitions of “**Extraordinary primary contact**” and “**Secondary contact recreation**” at WAC 173-201A-020. The EPA addressed the removal of these definitions below.

WAC 173-201A-200 (2) - Recreational Uses in Fresh Waters

WAC 173-201A-200 (2)(b) - Water contact recreational bacteria criteria

The substantive changes to Table 200 (2)(b) and related updated language from WAC 173-201A-200 (2)(b)(i)(B) in Washington’s WQS are identified below:

Bacterial Indicator	Criteria
<i>E. coli</i>	<i>E. coli</i> organism levels within an averaging period must not exceed a geometric mean value of 100 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained within the averaging period exceeding 320 CFU or MPN per 100 mL.

(B) Ambient water quality samples: When averaging bacteria sample values for comparison to the geometric mean criteria, it is preferable to average by season. The averaging period of bacteria sample data shall be ninety days or less.

Table 1: Comparison of Washington’s Revised Criteria at WAC 173-201A-200 (2)(b) to Protect Primary Contact Recreation in <u>Fresh Water</u> with the EPA’s 2012 Recreational Water Quality Criteria Recommendations		
Criteria Component – Fresh Water	EPA’s 2012 Recommendation	Washington’s Revision
Indicator	Enterococci <u>or</u> <i>E. coli</i>	<i>E. coli</i>
Magnitude (CFU or MPN/100 mL)	Recommendation 1 - Illness Rate of 36/1,000 Enterococci: GM = 35; STV = 130 <i>E. coli</i> : GM = 126; STV = 410	Illness Rate of 32/1,000 <i>E. coli</i> : GM = 100; STV = 320
	Recommendation 2 - Illness Rate of 32/1,000 Enterococci: GM = 30; STV = 110 <i>E. coli</i> : GM = 100; STV = 320	
Duration and Frequency – GM	Not to be exceeded in any 30-day interval	Consistent with the EPA’s recommendation in the Narrative Justification for Longer Duration Period for Recreational Water Quality Criteria (see Washington’s adopted language in the Duration and Frequency discussion below)
Duration and Frequency – STV	Not to be exceeded more than 10% of the time in the same 30-day interval assessed for the GM	Consistent with the EPA’s recommendation in the Narrative Justification for Longer Duration Period for Recreational Water Quality Criteria (see Washington’s adopted language in the Duration and Frequency discussion below)

GM = Geometric Mean; STV = Statistical Threshold Value; CFU = Coliform Forming Units

Indicator

Washington adopted *E. coli* as the indicator of bacterial contamination in fresh water. The EPA recommends the use of either *E. coli* or Enterococci as indicators of bacterial contamination in freshwater; thus, Washington's adoption of *E. coli* is appropriate to protect a primary contact recreation use.

Magnitude

Washington adopted a geometric mean (GM) of 100 colony forming units (CFU) or most probable number (MPN) per 100 mL, and a statistical threshold value (STV) of 320 CFU or MPN per 100 mL, which are consistent with the EPA's recommendation for *E. coli* at an illness rate of 32/1,000 primary contact recreators. The EPA recommends adoption of both a GM and a STV at an estimated illness rate of either 36/1,000 primary contact recreators or 32/1,000 primary contact recreators. The EPA's criteria recommendations at both estimated illness rates (and therefore Washington's selected magnitude associated with the illness rate of 32/1,000) are protective of the designated use of primary contact recreation in fresh waters.

Duration and Frequency

Washington's revised criteria to protect primary contact recreation in fresh water specify, "*E. coli* organism levels within an averaging period must not exceed a geometric mean value of 100 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained within the averaging period exceeding 320 CFU or MPN per 100 mL." Ecology clarified in their response to comments that when calculating the geometric mean within the averaging period, that the 10 percent exceedance value must be calculated using the same subset of data³. Washington's revised criteria to protect primary contact recreation in fresh water also specify that the averaging period of bacteria sample data shall be "ninety days or less." According to the Narrative Justification for Longer Duration Period for recreational Water Quality Criteria, by the Standards and Health Protection Division, October 2015, the EPA analysis has shown that a geometric mean not to exceed 90 days, in combination with the protective criteria magnitudes, is protective of a primary contact recreation use and consistent with the EPA's 2012 Recreational Water Quality Criteria recommendations data and analysis.⁴

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves the water contact recreational bacteria criteria for *E. coli* in fresh water in Table 200 (2)(b) and the last sentence at WAC 173-201A-200 (2)(b)(i)(B). The EPA is taking no action on the first sentence of WAC 173-201A-200 (2)(b)(i)(B) as it establishes a preference for averaging by season which is not legally binding and, therefore, is not a WQS under section 303(c) of the CWA.

³ Attachment C: *Concise Explanatory Statement Chapter 173-201A WAC* Water Quality Standards for Surface Waters of the State of Washington. Summary of Rulemaking and response to comments. January 2019. Ecology Publication no. 18-10-043. Available at <https://fortress.wa.gov/ecy/publications/documents/1810043.pdf>

⁴ Communication from EPA's Standards and Health Protection Division to the Water Quality Standards Coordinators: *Narrative Justification for Longer Duration Period for Recreational Water Quality Criteria*. (Oct. 30, 2015).

As shown in Table 1 and discussed above, the EPA has determined that each component of Washington’s revised criteria (indicator organism, magnitude, duration, and frequency) is consistent with the EPA’s 2012 Recreational Water Quality Criteria recommendations and/or the Narrative Justification for Longer Duration Period for Recreational Water Quality Criteria paper from the EPA’s Standards and Health Protection Division, October 2015. Therefore, Washington’s revised criteria are protective of primary contact recreation in fresh waters for the reasons discussed in the EPA’s criteria development document (Office of Water 820-F-12-058)⁵. The EPA addresses the transition period in WAC 173-201A-200(2)(b) in the section below, titled “Transition Period.” The EPA addresses the revisions to WAC 173-201A-200 (2)(b)(i) and WAC 173-201A-200 (2)(b)(i)(A) in the section below titled, “Provisions that the EPA is Not Taking Action On.”

WAC 173-201A-200 (2) – Table 200 (2)(b)

Consistent with the indicator organism revisions from fecal coliform to *E. coli*, for primary contact recreation in fresh water, Washington revised the title and two headers for the criteria table contained within WAC 173-201A-200 (2). The title changed from “Table 200 (2)(b) Water Contact Recreation Bacteria Criteria in Fresh Water” to “Table 200 (2)(b) Primary Contact Recreation Bacteria Criteria in Fresh Water.” The Table headings changed from “Category” to “Bacterial Indicator” and from “Bacteria Indicator” to “Criteria.”

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves these non-substantive editorial and housekeeping changes as providing useful clarifying information regarding the bacteria criteria contained within WAC 173-201A-200 (2).

The EPA’s approval of these non-substantive editorial and housekeeping changes to previously approved WQS is to ensure public transparency as to which provisions are effective for purposes of the CWA. The scope of the EPA’s action in approving such provisions extends only as far as the actual changes themselves. The EPA’s action here does not constitute an action on the underlying previously approved WQS.⁶

WAC 173-201A-210 (3) – Recreational Uses in Marine Waters

WAC 173-201A-210 (3)(b) – Water contact recreation bacteria criteria

Substantive changes to Table 210 (3)(b) and related updated language from WAC 173-201A-210 (3)(b)(i)(B) in Washington’s WQS are identified below:

Bacterial Indicator	Criteria
Enterococci	Enterococci organism levels within an averaging period must not exceed a geometric mean value of 30 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample values exist) obtained within the averaging period exceeding 110 CFU or MPN per 100 mL.

⁵ 2012 Recreational Water Quality Criteria. Available at <https://www.epa.gov/wqc/2012-recreational-water-quality-criteria>

⁶ 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>

(B) Ambient water quality samples: When averaging ambient bacteria sample values for comparison to the geometric mean criteria, it is preferable to average by season. The averaging period of bacteria sample data shall be ninety days or less.

Table 2: Comparison of Washington’s Revised Criteria at WAC 173-201A-210 (3)(b) to Protect Primary Contact Recreation in <u>Marine Water</u> with the EPA’s 2012 Recreational Water Quality Criteria Recommendations		
Criteria Component – Marine Water	EPA’s 2012 Recommendation	Washington’s Revision
Indicator	Enterococci	Enterococci
Magnitude (CFU or MPN/100 mL)	Recommendation 1 - Illness Rate of 36/1,000 GM = 35; STV = 130	Illness Rate of 32/1,000 GM = 30; STV = 110
	Recommendation 2 - Illness Rate of 32/1,000 GM = 30; STV = 110	
Duration and Frequency – GM	Not to be exceeded in any 30-day interval	Consistent with the EPA’s recommendation in the Narrative Justification for Longer Duration Period for Recreational Water Quality Criteria (see Washington’s adopted language in the Duration and Frequency discussion below)
Duration and Frequency - STV	Not to be exceeded more than 10% of the time in the same 30-day interval assessed for the GM	Consistent with the EPA’s recommendation in the Narrative Justification for Longer Duration Period for Recreational Water Quality Criteria (see Washington’s adopted language in the Duration and Frequency discussion below)

GM = Geometric Mean; STV = Statistical Threshold Value; CFU = Coliform Forming Units

Indicator

Washington adopted Enterococci as the indicator of bacterial contamination in marine waters, consistent with the EPA's 2012 recommendations.

Magnitude

Washington adopted a GM of 30 CFU or MPN per 100 mL and a STV of 110 CFU or MPN per 100 mL, which are consistent with the EPA's recommendation for Enterococci at an estimated illness rate of 32/1,000 primary contact recreators. The EPA recommends adoption of both a GM and a STV at an estimated illness rate of either 36/1,000 primary contact recreators or 32/1,000 primary contact recreators. The EPA's criteria recommendations at both estimated illness rates (and therefore Washington's selected magnitude associated with the illness rate of 32/1,000) are protective of the designated use of primary contact recreation in marine waters.

Duration and Frequency

Washington's revised criteria to protect primary contact recreation in marine waters specify, "Enterococci organism levels within an averaging period must not exceed a geometric mean value of 30 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained within the averaging period exceeding 110 CFU or MPN per 100 mL." Ecology clarified in their response to comments that when calculating the geometric mean within the averaging period, that the 10 percent exceedance value must be calculated using the same subset of data⁷. Washington's revised criteria to protect primary contact recreation in marine waters also specify that the averaging period of bacteria sample data shall be "ninety days or less." According to the Narrative Justification for Longer Duration Period for recreational Water Quality Criteria, by the Standards and Health Protection Division, October 2015, the EPA analysis has shown that a geometric mean not to exceed 90 days, in combination with the protective criteria magnitudes, is protective of a primary contact recreation use and consistent with the EPA's 2012 Recreational Water Quality Criteria recommendations data and analysis.⁸

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves the water contact recreational bacteria criteria for Enterococci in marine water in Table 210 (3)(b) and the last sentence at WAC 173-201A-210 (3)(b)(i)(B). The EPA is taking no action on the first sentence of WAC 173-201A-210 (3)(b)(i)(B) as it establishes a preference for averaging by season which is not legally binding and, therefore, is not a WQS under Section 303(c) of the CWA.

As shown in Table 2 and discussed above, the EPA has determined that each component of Washington's revised criteria (bacterial indicator, magnitude, duration, and frequency) is consistent with

⁷ Attachment C: *Concise Explanatory Statement Chapter 173-201A WAC* Water Quality Standards for Surface Waters of the State of Washington. Summary of Rulemaking and response to comments. January 2019. Ecology Publication no. 18-10-043. Available at <https://fortress.wa.gov/ecy/publications/documents/1810043.pdf>.

⁸ Communication from EPA's Standards and Health Protection Division to the Water Quality Standards Coordinators: *Narrative Justification for Longer Duration Period for Recreational Water Quality Criteria*. (Oct. 30, 2015).

the EPA's 2012 Recreational Water Quality Criteria recommendations and/or the Narrative Justification for Longer Duration Period for Recreational Water Quality Criteria paper from the EPA's Standards and Health Protection Division, October 2015. Therefore, Washington's revised criteria are protective of primary contact recreation in marine waters for the reasons discussed in the EPA's criteria development document (Office of Water 820-F-12-058).⁹ The EPA addresses the transition period in WAC 173-201A-210(3)(b) in the section below, titled "Transition Period." The EPA addresses the revisions to WAC 173-201A-210 (3)(b)(i) and WAC 173-201A-210 (3)(b)(i)(A) in the section below titled "Provisions that the EPA is Not Taking Action On."

WAC 173-201A-210 (3) – Table 210 (3)(b)

Consistent with the indicator organism revisions from fecal coliform to enterococci, for primary contact recreation in marine water, Washington revised the title and two headers for the criteria table contained within WAC 173-201A-210 (3). The title changed from "Table 210 (3)(b) Water Contact Recreation Bacteria Criteria in Marine Water" to "Table 210 (3)(b) Primary Contact Recreation Bacteria Criteria in Marine Water." The Table headings changed from "Category" to "Bacterial Indicator" and from "Bacteria Indicator" to "Criteria."

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves these non-substantive editorial and housekeeping changes as providing useful clarifying information regarding the bacteria criteria contained within 173-201A-210 (3).

The EPA's approval of these non-substantive editorial and housekeeping changes to previously approved WQS is to ensure public transparency as to which provisions are effective for purposes of the CWA. The scope of the EPA's action in approving such provisions extends only as far as the actual changes themselves. The EPA's action here does not constitute an action on the underlying previously approved WQS.¹⁰

Unit of Measurement changes

Washington changed the unit of measurement for all bacterial indicators from either "colonies / 100 mL" or "colony forming units (CFU) / 100 mL" to "CFU or most probable number (MPN) per 100 mL." The specific sections that now include this update are listed below.

- WAC 173-201A-200 (2)(b)
- WAC 173-201A-200 (2)(b) - Table 200 (2)(b)
- WAC 173-201A-210 (2)(b)
- WAC 173-201A-210 (3)(b)
- WAC 173-201A-210 (3)(b) - Table 210 (3)(b)
- WAC 173-201A-320 (3)(c)

In addition to the change above, Washington added or revised the following sections to clarify the expression of the bacteria criteria. Underlined text indicates the new and/or revised language, and ~~strikeout text~~ indicates Ecology's previous text, which has been replaced by the new or revised text.

⁹ 2012 Recreational Water Quality Criteria. Available at <https://www.epa.gov/wqc/2012-recreational-water-quality-criteria>

¹⁰ 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>

WAC 173-201A-200 (2)(b)

The following language was added: “These criteria are based on *Escherichia coli* (*E. coli*) and fecal coliform organism levels, and expressed as colony forming units (CFU) or most probable number (MPN).”

Table 200 (2)(b)

The expiring fecal coliform criteria was updated to: “Fecal coliform organism levels within an averaging period must not exceed a geometric mean value of 100 ~~((colonies/100))~~ CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained ~~((for calculating the geometric mean value))~~ within an averaging period exceeding 200 ~~((colonies/100))~~ CFU or MPN per 100 mL.”

WAC 173-201A-210 (2)(b)

Ecology made the following changes: “Shellfish harvesting bacteria criteria. ~~((To protect shell fish harvesting, fecal coliform organism levels))~~ Fecal coliform organism levels are used to protect shellfish harvesting. Criteria are expressed as colony forming units (CFU) or most probable number (MPN). Fecal coliform must not exceed a geometric mean value of 14 ~~((colonies/))~~ CFU or MPN per 100 mL, and not have more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained for calculating the geometric mean value exceeding 43 ~~((colonies/))~~ CFU or MPN per 100 mL.”

WAC 173-201A-210 (3)(b)

The following language was added: “These criteria are based on enterococci and fecal coliform organism levels and expressed as colony forming units (CFU) or most probable number (MPN).”

Table 210 (3)(b)

The expiring fecal coliform criteria was updated to: “Fecal coliform organism levels within an averaging period must not exceed a geometric mean value of 14 ~~((colonies/100))~~ CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained ~~((for calculating the geometric mean value))~~ within an averaging period exceeding 43 ~~((colonies/100))~~ CFU or MPN per 100 mL.”

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves the added and revised language changes above and all changes in WAC-173-201A to include both CFU and MPN per 100 mL, as both units of measure (CFU and MPN) correspond to specific analytical methods used to appropriately measure bacteria.

Category Use Revision

Washington is now protecting all the waters in the state for primary contact recreation. Historically there were three recreational use sub-categories, including extraordinary primary contact (fresh waters only), primary contact, and secondary contact. Each recreational use category had corresponding fecal coliform criteria. The use change raises all waters previously designated for secondary contact recreation up to full CWA section 101(a)(2) use protection as primary contact recreation. All waters previously classified as either extraordinary primary contact or primary contact will remain fully protected for CWA section

101(a)(2) uses. Since all waters of the state of Washington are now classified as primary contact recreation, with associated protective *E. coli* and Enterococci criteria consistent with the EPA's 2012 Recreational Water Quality Criteria recommendations, all references to extraordinary primary contact recreation and secondary contact recreation and any associated criteria were removed from WAC 173-201A.

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves the recreational use change to include only primary contact recreation.

40 CFR § 131.10 (j)(2) states “A State must conduct a use attainability analysis as described in §131.3(g), and paragraph (g) of this section, whenever: The State wishes to remove a designated use that is specified in section 101(a)(2) of the Act, to remove a sub-category of such a use, or to designate a sub-category of such a use that requires criteria less stringent than previously applicable.”

40 CFR § 131.10 (k)(2) states “A State is not required to conduct a use attainability analysis whenever: The State designates a sub-category of a use specified in section 101(a)(2) of the Act that requires criteria at least as stringent as previously applicable.

Washington revised its use sub-categories as well as the bacteria criteria associated with those use sub-categories. A straight comparison between Washington's previously applicable fecal coliform criteria for extraordinary primary contact recreation, and the revised *E. coli* criteria adopted for primary contact recreation in fresh waters cannot be made because the criteria are for different indicators. The EPA has discouraged the use of total and fecal coliforms as indicators of fecal contamination since 1986 because they are not reliable indicators of illness to swimmers.¹¹ Washington is replacing fecal coliform with *E. coli* in fresh waters, a better and more protective indicator. The EPA finds that the new criteria for primary contact recreation are at least as stringent as the previous criteria for extraordinary primary contact recreation, and therefore finds Washington's removal of its extraordinary primary contact recreation use (and replacement with its primary contact recreation use) to be consistent with 40 CFR § 131.10 (k)(2).

The EPA approves the removal of extraordinary primary contact and secondary contact recreation definitions at WAC 173-201A-020, as well as the change for all waters of the state now being protected for primary contact recreation.

Transition Period

Washington's revised criteria to protect primary contact recreation in fresh and marine waters include a transition period to phase out the previously applicable fecal coliform criteria which will officially expire December 31, 2020. This transition period and expiration date is set forth in Table 200 (2)(b), Table 210 (3)(b) and in the following sections:

¹¹ “...total coliforms and fecal coliforms showed very weak correlations to gastroenteritis”, the primary illness caused by swimming in waters with bacterial contamination. EPA's Ambient Water Quality Criteria for Bacteria – 1986 at Page 5 (January 1986). “...the purpose of the 1986 bacteria criteria document [was] to recommend that States replace their fecal coliform criteria for recreation with enterococci or *E. coli* criteria because studies showed low correlation between fecal coliform densities and illness rates...the unequivocal conclusion of the entire document [was] that the fecal coliform criteria for recreation is not a reliable indicator of illness to swimmers.” 69 FR 67218 at 67230 (November 16, 2004).

WAC 173-201A-200 (2)(b): The use of fecal coliform organism levels to determine compliance will expire December 31, 2020.

WAC 173-201A-210 (3)(b): The use of fecal coliform organism levels to determine compliance will expire December 31, 2020.

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves the deletion of the fecal coliform criteria that will be effective on December 31, 2020. Washington has adopted scientifically defensible indicators and has opted to include a transition period during which the previous fecal coliform criteria will continue to be effective as well as the new *E. coli* and Enterococci indicators. The transition period will allow laboratories time to become accredited by the State for analyzing samples under the new methods. This accreditation is an existing state requirement to ensure laboratories are conducting analyses according to prescribed methods. Laboratories must prove they are capable of providing accurate and defensible analytical data.

WAC 173-201A-602 Table 602—Use designations for fresh waters by water resource inventory area (WRIA).

WAC 173-201A-602 (3)

Ecology added section WAC 173-201A-602 (3) which states: “The department has identified waterbodies, or portions thereof, in Table 602 use designations which have additional requirements for supplemental spawning and incubation protection for salmonid species. See WAC 173-201A-200 (1)(c)(iv) for more information.” Ecology also added a column in Table 602 titled “Additional info for waterbody” to provide reference for those waterbodies affected by the previously approved standard at WAC 173-201A-200 (1)(c)(iv).

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves the addition of section WAC 173-201A-602 (3) and the additional column in Table 602 as non-substantive edits to Washington’s existing WQS. This set of provisions clarify which waterbodies are affected by the previously approved standard at WAC 173-201A-200 (1)(c)(iv) and cross reference the applicable criteria. The EPA is approving these non-substantive revisions to ensure public transparency as to which provisions are applicable for CWA purposes. This action does not re-open the EPA’s prior approval of the underlying standard at WAC 173-201A-200 (1)(c)(iv).

WAC 173-201A-602 (4)

Ecology added section WAC 173-201A-602 (4) which states: “The coordinates listed in Table 602 are defined in the North American 1983 Datum High Accuracy Reference Network (NAD83 HARN).” Ecology also updated Table 602 to remove river mile descriptions and add descriptive language and geographical coordinates (using the NAD83 HARN) to describe the beginning location of designated use delineations. According to an April 26, 2019 memo to the EPA, Ecology explains “these river mile references were added to the surface water quality standards based on the 1975 Stream Catalog by the Washington Department of Fish and Wildlife and the U.S. Geological Survey 7½ (24k) quadrangle maps from 1967 to 1975. Due to the dynamic nature of rivers to change course, river mile calculations can change geographical location over time. Ecology referenced the river miles from these historic documents and applied geographical coordinates to each river mile location as it was originally

intended. This was necessary to ensure that designated use delineations remain static over time. These actions did not change any designated use assignments to state waters.¹²”

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves the added language at WAC 173-201A-602 (4) and the revisions from river miles to latitude and longitude as non-substantive edits to Washington’s existing WQS because they do not change the existing waterbody delineations. The EPA is approving these non-substantive revisions to ensure public transparency as to which provisions are applicable for CWA purposes. This action does not re-open the EPA’s prior approval of the waterbody boundaries nor does it change any requirements, but adds transparency as to where the coordinates were obtained and clarifies the boundaries of the affected waterbodies.

Formatting of Table 602

Washington updated the format of Table 602 to appear as a portrait-oriented table instead of landscape-oriented images. The format of the table also changed from a grid format with check marks for designated uses to a tabular format that includes only those uses in which there are differences between waterbodies. Each area, or water resource inventory area (WRIA), in Table 602 now appears as a stand-alone table, with any notes as text below the table. The hyphens following the waterbody name were bolded, and the first letter of the following word capitalized, per Code Reviser standards. The intent of these changes is to make Table 602 easier to read, and to make any necessary edits in future rulemakings.

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves these non-substantive editorial changes as providing useful clarifying information regarding waterbodies listed in WAC 173-201A-602.

The EPA’s approval of these non-substantive editorial and housekeeping changes to previously approved WQS at WAC 173-201A-602 ensures public transparency as to which provisions are effective for purposes of the CWA. The scope of the EPA’s action in approving such provisions extends only as far as the actual changes themselves. The EPA’s action here does not constitute an action on the underlying previously approved WQS.¹³

WAC 173-201A-612 Table 612 – Use designations for marine waters

WAC 173-201A-612 (2)

Washington added the following section WAC 173-201A-612 (2): “All marine waters listed in Table 612 are protected for the miscellaneous uses of aesthetics, boating, commerce/navigation, and wildlife habitat.”

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves these non-substantive editorial changes as providing useful clarifying information regarding use classifications for waterbodies listed in WAC 173-201A-612. Previously each

¹² Memo to EPA, Supplemental EPA submittal Information, Explanation of Changes to Tables 602 and 610, AO# 16-07. April 26, 2019.

¹³ 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>

use was listed in Table 612 separately for each waterbody. This new provision does not change any use classifications, only the way they are expressed within the section.

Formatting of Table 612

Washington updated the format of Table 612 from a grid format with check marks for designated uses to a tabular format that includes only those uses in which there are differences between waterbodies. Washington also updated the format by removing the column labeled “Misc. Uses,” combining the columns for “Shellfish Harvesting” and “Harvesting,” and changed how the uses appear in the table. The intent of these changes is to make Table 612 easier to read.

The EPA Action and Rationale: In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR 131, the EPA approves these non-substantive editorial changes as providing useful clarifying information regarding waterbodies listed in WAC 173-201A-612.

The EPA’s approval of these non-substantive editorial and housekeeping changes to previously approved WQS at WAC 173-201A-612 ensures public transparency as to which provisions are effective for purposes of the CWA. The scope of the EPA’s action in approving such provisions extends only as far as the actual changes themselves. The EPA’s action here does not constitute an action on the underlying previously approved WQS.¹⁴

IV. Provisions that the EPA is Not Taking Action On

WAC 173-201A-200(2)(b)(i)(B) and WAC 173-201A-210(3)(b)(i)(B)

As noted in Section III above, the EPA is not taking action on the first sentences of WAC 173-201A-200(2)(b)(i)(B) and WAC 173-201A-210(3)(b)(i)(B) because the sentences express a preference for averaging and are not legally binding provisions and therefore not WQS.

WAC 173-201A-200(2)(b)(i) and WAC 173-201A-210(3)(b)(i)

At WAC 173-201A-200(2)(b)(i) and WAC 173-201A-210(3)(b)(i) Ecology states: “A minimum of three samples is required to calculate a geometric mean for comparison to the geometric mean criteria. Sample collection dates shall be well distributed throughout the averaging period so as not to mask noncompliance periods.”

The EPA did not act on these new provisions at WAC 173-201A-200(2)(b)(i) and WAC 173-201A-210(3)(b)(i) as they are not WQS under section 303(c) of the CWA. These provisions are related to data sufficiency for assessing compliance with the recreational criteria.

WAC 173-201A-200 (2)(b)(i)(A) and WAC 173-201A-210 (3)(b)(i)(A)

At WAC 173-201A-200 (2)(b)(i)(A) and WAC 173-201A-210 (3)(b)(i)(A) Ecology states: “Effluent bacteria samples: When averaging effluent bacteria sample values for comparison to the geometric mean criteria, or for determining permit compliance, the averaging period shall be thirty days or less.”

The EPA did not act on these new provisions at WAC 173-201A-200 (2)(b)(i)(A) and WAC 173-201A-210 (3)(b)(i)(A) as they are not WQS under section 303(c) of the CWA. These provisions related to

¹⁴ 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>

effluent bacteria samples are permitting implementation provisions which are used by Washington in National Pollutant Discharge Elimination System (NPDES) permit compliance and enforcement actions.

WAC 173-201A-200 (2)(b)(iv) and WAC 173-201A-210 (3)(b)(iv)

At WAC 173-201A-200 (2)(b)(iv) and WAC 173-201A-210 (3)(b)(iv) Ecology clarified that alternative indicator bacteria criteria established on a site specific basis need to be submitted to and approved by the EPA in accordance with Washington's site specific criteria regulations at WAC 173-201A-430.

The EPA did not act on the provisions at WAC 173-201A-200 (2)(b)(iv) and WAC 173-201A-210 (3)(b)(iv) in previous decision documents nor will the EPA act on the current changes as these provisions are not WQS under section 303(c) of the CWA. These provisions are general statements explaining that an alternative site-specific criteria may be authorized at some future date. Washington adopted a provision for developing site-specific criteria, and the EPA approved that provision as consistent with the CWA on January 12, 2005. If the state develops a site-specific criterion, the EPA will act on it when it is submitted to the EPA for approval.

WAC 173-201A-602

Based on comments received from the Puyallup Tribe, Washington updated WAC 173-201A-602 (WRIA 10 Puyallup-White) Notes to include: "1. The Puyallup Tribe regulates water quality from the mouth of the Puyallup River to the up-river boundary of the 1873 Survey Area of the Puyallup Reservation."

The EPA is taking no action on the addition of footnote 1 to WAC 173-201A-602 because it is not a WQS under Section 303(c) of the CWA. The addition of footnote 1 references Puyallup Tribal water quality regulation and the 1873 Survey Area of the Puyallup Reservation and is a statement of legal jurisdiction that does not address designated uses, water quality criteria or antidegradation requirements and is therefore not a WQS.

Website update throughout the document

Washington revised several sections by updating their website to accurately reflect their current web domain. The change was from www.ecy.wa.gov to www.ecology.wa.gov. The EPA acknowledges this revision but is not acting on it because it is not a WQS under section 303(c) of the CWA.