



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

1200 Sixth Avenue, Suite 155  
Seattle, WA 98101

WATER  
DIVISION

March 10, 2023

Mr. Deane Osterman  
Executive Director  
Kalispel Natural Resources Department  
P.O. Box 39  
Usk, Washington 99180

Re: EPA's Clean Water Act Action on the June 5, 2022 Submittal of Revisions to the Kalispel Tribe of Indians' Surface Water Quality Standards

Dear Mr. Osterman:

The U.S. Environmental Protection Agency has completed the review of the new and revised water quality standards (WQS) of the Kalispel Tribe of Indians ("Tribe"), submitted to EPA by the Kalispel Natural Resources Department by letter dated June 5, 2022. Under Clean Water Act (CWA) section 303(c) states and authorized tribes must submit new and revised WQS to EPA for review and action, and EPA must ensure that those WQS are consistent with the CWA and EPA's implementing regulations. The details of EPA's action are outlined below and are further described in the enclosed technical support document. EPA is very pleased that today's action constitutes the final agency approval of the entirety of the Kalispel Tribe's new and revised WQS.

EPA's action applies to waters within the boundaries of the Kalispel Reservation and Tribal trust lands. The action does not apply to waters outside of the Kalispel Reservation boundaries which are under Washington State jurisdiction. CWA section 518(e) authorizes EPA to treat an Indian tribe in a similar manner as a state to manage and protect water resources "within the borders of an Indian reservation," provided certain requirements are satisfied. The Tribe received approval for treatment in a similar manner as a state for the purpose of developing and administering the WQS and water quality certification programs, CWA sections 303(c) and 401, respectively, in 2002.

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

- I. Pursuant to EPA's authority under CWA section 303(c) and the implementing regulations at 40 CFR Part 131, EPA is approving the following new and revised WQS:
  - Section 10: The aquatic life criteria for aluminum, cadmium, and selenium, along with footnotes associated with the criteria and conversion factors (footnotes B, E, J, and endnote A), revised to be consistent with the CWA section 304(a) recommended criteria.
  - Section 10: Modified language mandating frequency and magnitude components of the Tribe's aquatic life criteria in the preamble to Table 2 and footnotes C and G.
  - Section 10: Amended language in the preamble to Table 2: Toxicity Criteria, footnote P, aquatic life criteria for DDT and its metabolites, and endnote A.

- Section 12(a): Revisions to the dissolved oxygen and turbidity provisions in sections 12(a)(2) and 12(a)(3) and application to the Cutthroat and Brown Trout Spawning, Incubation, and Rearing use.
- Miscellaneous editorial changes in the following sections of the Tribe's WQS:
  - Section 9(c): Revisions to the antidegradation provision for Tier 3 waters
  - Section 10: Editorial revisions in the narrative provisions for toxics substances and endnote A.

II. EPA is taking no action on the provisions in the following sections of the Tribe's WQS because EPA has determined they are not new or revised WQS that EPA has the authority to review and approve or disapprove pursuant to its CWA section 303(c) authority, 40 CFR Part 131.

- Section 10: Readopted aquatic life criteria for atrazine, mercury, and silver with associated footnotes, to be consistent with the criteria that are currently in effect for CWA programs.

Pursuant to section 7 of the Endangered Species Act, EPA developed a Biological Evaluation for consultation with the U.S. Fish and Wildlife Service (USFWS) for EPA's proposed approval of the Tribe's new or revised WQS related to aquatic life protection, including the acute and chronic aquatic life criteria for aluminum, cadmium and selenium. On February 17, 2023, the USFWS provided concurrence on EPA's determinations that approval of the Tribe's new and revised WQS is Not Likely to Adversely Affect bull trout and designated bull trout critical habitat.

EPA appreciates the efforts you and your staff have dedicated to providing new protections for the waters of the Kalispel Tribe and looks forward to continuing close collaborations with the Tribe. If you have any questions regarding this letter, please contact me at (206) 553-1855, or have your staff contact the EPA staff lead, Rachael Renkens, at Renkens.Rachael@epa.gov or (206) 553-1580.

Sincerely,

DANIEL  
OPALSKI

Digitally signed by  
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Daniel D. Opalski  
Director

Enclosure: Technical Support Document

cc (e-copy): Mr. Ken Merrill, Water Resources Program, Kalispel Tribe of Indians

U.S. ENVIRONMENTAL PROTECTION AGENCY – REGION 10

## Technical Support Document

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EPA's Clean Water Act Action on the New and Revised Surface Water  
Quality Standards of the Kalispel Tribe of Indians

Submitted to EPA on June 5, 2022

March 10, 2023

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## 1 Introduction

This technical support document provides the basis for the U.S. Environmental Protection Agency's (EPA) action under section 303(c) of the Clean Water Act (CWA) and the federal water quality standards (WQS) regulations at 40 CFR Part 131, to approve the new and revised WQS that the Kalispel Tribe of Indians ("Kalispel Tribe" or "Tribe") submitted to EPA on June 5, 2022.

On November 4, 2002, EPA approved the Tribe's application for "treatment in a manner similar to a state" for administering WQS and water quality certification programs. On June 24, 2004, EPA approved the Tribe's initial WQS; these are referred to in this document as "2004 WQS." On October 27, 2017, the Tribe submitted new and revised WQS to EPA for CWA review and action ("2017 WQS"). In three separate actions on March 21, 2019, July 2, 2019, and September 27, 2021, EPA approved the Tribe's 2017 WQS, excluding certain WQS that were withdrawn by the Tribe by letter dated September 22, 2021. Today's action addresses the Tribe's WQS revisions which were submitted to EPA on June 5, 2022 ("2022 WQS"). The WQS amendments included in the 2022 WQS address the WQS that were withdrawn by the Tribe, incorporate the 304(a) national water quality criteria recommendations that have been updated since the 2017 WQS, and other recommendations made by EPA.

### 1.1 Clean Water Act Requirements for Water Quality Standards

Under section 303(c) of the CWA and the federal implementing regulations at 40 CFR § 131.4, states and authorized tribes<sup>1</sup> 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 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)).

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

Section 303(c) of the CWA requires states and tribes to submit new or revised WQS to EPA for review and action. EPA is required to review these changes to ensure revisions to WQS are consistent with the CWA and EPA's implementing regulations.

EPA considers four questions 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

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<sup>1</sup> The term "authorized tribe" means a tribe eligible under CWA section 518(e) and 40 CFR 131.8 for treatment in a similar manner similar as a state (TAS) for the purpose of administering a water quality standards program. In this document, the term "tribe" refers to authorized tribe.

WQS that EPA has the authority and duty to approve or disapprove under CWA section 303(c)(3) (“four-part test”). The following four questions are considered:<sup>2</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?
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?

According to the federal WQS regulations at 40 CFR § 131.21, when EPA approves a state or tribe’s WQS submission, such standard(s) shall thereafter be the applicable standard for CWA purposes. When EPA disapproves new or revised WQS, EPA shall notify the state or tribe 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 (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 CWA section 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 extend only to the non-substantive edits or changes themselves. EPA is not re-opening or reconsidering the underlying WQS which are the subject of the non-substantive edits or editorial changes.

## **1.2 Regulatory Requirements**

Section 303(c)(2)(B) of the CWA requires states and tribes to adopt water quality criteria for toxic pollutants that are listed pursuant to CWA section 307(a)(1) and for which EPA has published criteria under CWA section 304(a)<sup>3</sup> where the discharge or presence of these toxics could reasonably be expected to interfere with the designated uses adopted by the state or tribe. In adopting such criteria, states and tribes 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 and tribes should establish narrative criteria where numeric criteria cannot be determined or to supplement numeric criteria (see 40 CFR §131.11(b)(2)).

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<sup>2</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>

<sup>3</sup> Section 304(a) of the CWA directs EPA to publish and, from time to time, revise the water quality criteria to accurately reflect the latest scientific knowledge on the identifiable effects on health and welfare that might be expected from the presence of pollutants in any body of water. These national recommendations are referred to as “304(a) criteria recommendations” in this Technical Support Document.

## 2 The Kalispel Tribe's WQS Submittal

By electronic transmission dated June 5, 2022, the Kalispel Natural Resources Department submitted revisions to various sections of the Tribe's WQS to EPA for review and action under section 303(c) of the CWA. The 2022 WQS include new and revised aquatic life criteria along with miscellaneous revisions to other sections of the WQS. The 2022 WQS were certified by the Kalispel Tribe's senior tribal attorney as duly adopted pursuant to Tribal Law on February 15, 2022.

Prior to adopting the revisions, the Tribe offered a 54-day public comment period, which started on March 2, 2022, and held a public hearing on April 21, 2022. The invitation for comment and announcement of the public hearing was published in *The Newport Miner*, a community newspaper covering the Pend Oreille River Valley, and sent to EPA Region 10 and the Washington State Department of Ecology. The Tribe only received comments from EPA Region 10 during the public comment period. EPA's comments were in support of the Tribe's WQS revisions, and EPA's recommendations were incorporated into the Tribe's 2022 WQS.

The Tribe submitted the following documents via electronic mail to EPA in accordance with the minimum requirements of a WQS submittal at 40 CFR § 131.6:

- Transmittal email from Ken Merrill, Manager of the Water and Environment Program, Kalispel Natural Resources Department to Dan Opalski, EPA Region 10 Water Division Director.
- Kalispel Tribal Council Resolution No. 2022-41 approving the Tribe's 2022 WQS for proposal and initiating a formal public comment period, signed February 15, 2022.
- Letter from the Tribe's Legal Office certifying the standards were adopted pursuant to the Kalispel Constitution and Bylaws on February 15, 2022, dated June 1, 2022.
- Water Quality Standards Applicable to waters within the Kalispel Indian Reservation, revised June 2022.
- Tracked-change version of Water Quality Standards Applicable to waters within the Kalispel Indian Reservation, revised June 2022.
- Affidavit of publication for Public Notice of the opportunity for the public to review and comment on the proposed WQS, dated May 8, 2022.
- Letter from Mike Lithgow, Information and Outreach Coordinator/Policy Analyst, certifying that the Tribe held a public hearing on April 21, 2022, at the Camas Center for Community Wellness and no comments were received during the hearing.
- Limited Revisions to the Kalispel Tribe's Water Quality Standards Summary of Basis, as amended May 2022.

The WQS revisions submitted to EPA for CWA review and action pursuant to CWA section 303(c) include new and revised aquatic life criteria, conversion factors, and miscellaneous editorial revisions.

The Tribe 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 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 EPA is Taking No Action On."

### 3 Summary of EPA's Action

EPA has completed its review of the June 5, 2022, WQS submittal and is approving the following new and revised WQS provisions under CWA section 303(c):

- Section 10: The aquatic life criteria for aluminum, cadmium, and selenium, along with footnotes associated with the criteria and conversion factors (footnotes B, E, J, and endnote A), revised to be consistent with the CWA section 304(a) recommended criteria.
- Section 10: Modified language mandating frequency and magnitude components of the Tribe's aquatic life criteria in the preamble to Table 2: Toxics Criteria and footnotes C and G.
- Section 10: Amended language in the preamble to Table 2: Toxics Criteria, footnote P, aquatic life criteria for DDT and its metabolites, and endnote A.
- Section 12(a): Revisions to the dissolved oxygen and turbidity provisions in sections 12(a)(2) and 12(a)(3) and application to the Cutthroat and Brown Trout Spawning, Incubation, and Rearing use.
- Miscellaneous editorial changes in the following sections of the Tribe's WQS:
  - Section 9(c): Revisions to the antidegradation provision for Tier 3 waters
  - Section 10: Editorial revisions in the narrative provisions for toxics substances and endnote A.

EPA is taking no action on the following because EPA has determined they are not new or revised WQS that EPA has the authority to review and approve or disapprove pursuant to CWA section 303(c):

- Section 10: Readopted aquatic life criteria for atrazine, mercury, and silver with associated footnotes, to be consistent with the criteria that are currently in effect for Clean Water Act programs.

Today's action applies only to water bodies under the jurisdiction of the Kalispel Tribe and does not apply to Washington State waters. Nothing in this letter and technical support document shall constitute an approval or disapproval of a WQS that applies to waters within state jurisdiction.

### 4 EPA's Action on the Kalispel Tribe's New and Revised WQS

#### 4.1 New and Revised Aquatic Life Criteria for Toxic Substances, Section 10

The Tribe's 2022 WQS include new or revised aquatic life criteria for aluminum, cadmium, and selenium, revisions to footnotes B, E, G, J, and P, and binding duration and frequency components applicable to the Tribe's aquatic life criteria for toxic substances. EPA's action and rationale for these WQS revisions are addressed below. The new or revised text is excerpted below in **bold and underline**; the removed text is in ~~strikeout~~.

Unless otherwise noted in the table below, the aquatic life CMC is applied as a 1-hour average concentrations, and the aquatic life CCC is applied as a 4-day average concentration. The CCC and CMC ~~should~~ **must** not be exceeded more than once every three years. Footnotes ~~G~~ **G** and O describes the exception to the frequency and duration of the criteria stated in this paragraph.



Pollutant	CAS Number	Aquatic Life	
		CMC (µg/L)	CMC (µg/L)
Aluminum ( <u>pH 5.0-10.5</u> )	7429905	<u>Footnote B</u>	<u>Footnote B</u>
Cadmium	7440439	<u>Footnote E</u>	<u>Footnote E</u>
Selenium	7782492	--	<u>Footnote J</u>

- B. These criteria are for total recoverable aluminum. Acute (CMC) and chronic (CCC) freshwater aluminum criteria values for a site shall be calculated using the 2018 Aluminum Criteria Calculator (*Aluminum Criteria Calculator V.2.0.xlsx*, or a calculator in R or other software package using the same 1985 Guidelines calculation approach and underlying model equations as in the *Aluminum Criteria Calculator V.2.0.xlsx*) as established in EPA’s Final Aquatic Life Ambient Water Quality Criteria for Aluminum 2018 (EPA 822-R-18-001). To apply the aluminum criteria for Clean Water Act purposes, criteria values based on ambient water chemistry conditions must protect the water body over the full range of variability, including during conditions when aluminum is most toxic.

- C. The acute and chronic criteria for ammonia are expressed in mg/L as total ammonia nitrogen (mg TAN/L). The criteria are as follows:

**ACUTE CRITERION (CMC):** The acute criterion is a one hour average not to be exceeded more than once in a three year period. In the following equations, temperature (T) is in degrees Celsius, and pH is in standard units.

$$CMC = MIN \left( \left( \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}} \right), \left( 0.7249 \times \left( \frac{0.0114}{1+10^{7.204-pH}} + \frac{1.6181}{1+10^{pH-7.204}} \right) \times (23.12 \times 10^{0.036 \times (20-T)}) \right) \right)$$

**CHRONIC CRITERION (CCC):** The chronic criterion is a 30-day rolling average not to be exceeded more than once in a three year period.

$$CCC = 0.8876 \times \left( \frac{0.0278}{1 + 10^{7.688-pH}} + \frac{1.1994}{1 + 10^{pH-7.688}} \right) \times (2.126 \times 10^{0.028 \times (20-MAX(T,7))})$$

In addition to the above equation for the CCC, the highest four day average within the 30-day averaging period ~~should~~ may not be more than 2.5 times the CCC more than once in three years on average (e.g., 2.5 x 1.9 mg TAN/L = 4.8 mg TAN/L at pH 7 and 20°C).

- E. The criterion is expressed in terms of dissolved concentration in the water column. The criterion for this metal is expressed as a function of hardness (mg/L) in the water column. To calculate the criteria, use the formula in expanded Endnote A at the end of these footnotes.
- G. The copper criteria are derived using the biotic ligand model (BLM) based on EPA’s Aquatic Life Ambient Freshwater Quality Criteria – Copper, 2007 Revision. The CMC is applied as a one-hour average concentration that ~~should~~ must not be exceeded more than once in three years. The CCC is applied as a 4-day average concentration that ~~should~~ must not be exceeded more than once in three years.

J EPA is in the process of revising its selenium criteria. In the interim selenium in point source discharges to tribal waters should follow the Tribe's guidance titled *The Kalispel Tribe's Selenium Implementation Guidance for Using the Narrative Toxic Criterion for Selenium*. The selenium aquatic life criterion is shown in the following table. The criterion includes four parts, where fish tissue elements supersede the water elements and the egg-ovary tissue element supersedes all other tissue elements, as indicated in the table's footnotes.

<u>Criterion Element</u>	<u>Magnitude</u>	<u>Duration</u>	<u>Frequency</u>
<u>Fish Tissue<sup>a</sup> (Egg-Ovary)<sup>b</sup></u>	<u>15.1 mg/kg dw</u>	<u>Instantaneous measurement<sup>c</sup></u>	<u>Not to be exceeded</u>
<u>Fish Tissue<sup>a</sup> (Whole Body or Muscle)<sup>d</sup></u>	<u>8.5 mg/kg dw</u> <u>or</u> <u>11.3 mg/kg dw muscle (skinless, boneless filet)</u>	<u>Instantaneous measurement<sup>c</sup></u>	<u>Not to be exceeded</u>
<u>Water Column<sup>e</sup> (Monthly Average Exposure)</u>	<u>1.5 µg/L in lentic aquatic systems</u>  <u>3.1 µg/L in lotic aquatic systems</u>	<u>30 days</u>	<u>Not more than once in three years on average</u>
<u>Water Column<sup>e</sup> (Intermittent Exposure)<sup>f</sup></u>	<u><math>WQC_{int} = \frac{WQC_{30-day} - C_{bkgnd}}{f_{int}}</math></u>	<u>Number of days/month with an elevated concentration</u>	<u>Not more than once in three years on average</u>

<sup>a</sup> Fish tissue elements are expressed as steady-state.  
<sup>b</sup> Egg/ovary supersedes any whole-body, muscle, or water column element when fish egg/ovary concentrations are measured.  
<sup>c</sup> Fish tissue data provide point measurements that reflect integrative accumulation of selenium over time and space in fish population(s) at a given site.  
<sup>d</sup> Fish whole-body or muscle tissue supersedes water column element when both fish tissue and water concentrations are measured.  
<sup>e</sup> Water column values are based on dissolved total selenium in water and are derived from fish tissue values via bioaccumulation modeling. Water column values are the applicable criterion element in the absence of steady-state condition fish tissue data.  
<sup>f</sup> Where  $WQC_{30-day}$  is the water column monthly element, for either a lentic or lotic waters;  $C_{bkgnd}$  is the average background selenium concentration, and  $f_{int}$  is the fraction of any 30-day period during which elevated selenium concentrations occur, with  $f_{int}$  assigned a value  $\geq 0.033$  (corresponding to 1 day).

P. This criterion applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites ~~should~~ may not exceed this value).

ENDNOTE A – Equations for Hardness Dependent Freshwater Metals Criteria and Conversion

## Factor Table

The freshwater criterion for this metal is expressed as dissolved with two significant figures, and is a function of hardness (mg/L) in the water column. Criteria values for hardness are calculated using the following formulas (CMC refers to the acute criterion; CCC refers to the chronic criterion):

$$\text{CMC} = (\exp(mA * [\ln(\text{hardness})] + bA)) * CF$$

$$\text{CCC} = (\exp(mC * [\ln(\text{hardness})] + bC)) * CF$$

“CF” is the conversion factor used for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column. For ambient waters with a hardness of 400 mg/L or less, the ambient hardness of the surface [waters] must be used in the equations. The hardness value used must be consistent with the design discharge conditions in Table 1 for design flows and mixing zones. For ambient waters with a hardness of greater than 400 mg/L, a hardness of 400 mg/L must be used in the equations.

Compound	mA	bA	mC	bC
Cadmium	<del>1.0166</del> <b>0.9789</b>	<del>-3.924</del> <b>-3.866</b>	<del>0.7409</del> <b>0.7977</b>	<del>-4.719</del> <b>-3.909</b>

The conversion factors (CF) below must be used in the equations above for the hardness-dependent metals in order to convert total recoverable metals criteria to dissolved metals criteria. For metals that are not hardness-dependent (i.e. arsenic, chromium VI, **mercury (acute)**, selenium, and silver (chronic)) the criterion value associated with the metal in Table 2 already reflects a dissolved criterion based on its conversion factor below.

**Conversion Factor (CF) Table for Dissolved Metals**

Compound	Freshwater	
	Acute	Chronic
Selenium	---	<del>0.922</del> <b>1.00</b>

## EPA Action

In accordance with its CWA authority, CWA section 303(c)(3), and 40 CFR Part 131, EPA approves the following new and revised WQS in section 10: Toxics Substances:

- The new aquatic life criteria for aluminum and selenium and the revised aquatic life criteria for cadmium provided in footnotes B, J, E, and endnote A;
- The revised conversion factor for selenium used to convert between total recoverable and dissolved selenium in endnote A;

- Revisions to the duration and frequency components for the Tribe’s aquatic life criteria to specify that they are binding requirements not to be exceeded in the preamble to Table 2: Toxic Substances, footnote C for ammonia, footnote G for copper; and
- Additional clarifications incorporated into the preamble to Table 2: Toxic Substances, footnote P for DDT and its metabolites, and endnote A.

## Rationale

EPA is approving the aquatic life criteria for aluminum, selenium, and cadmium (incorporated into footnotes B, J, E and endnote A) because the criteria meet the requirements at 40 CFR §§131.11(a)(1) and (b)(1)(i), which specify that states and authorized tribes must adopt water quality criteria that are based on sound scientific rationale, such as EPA’s 304(a) criteria recommendations. The Tribe’s new and revised criteria are consistent with EPA’s current 304(a) aquatic life criteria, which were developed according to methods specified in EPA’s 1985 *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* (“1985 Guidelines”).<sup>4</sup> The EPA criteria document for each of the three recommended criteria provide detailed scientific bases and rationales for the criteria and for their protectiveness of aquatic life.<sup>5</sup>

In 2021, EPA published a revision to the 304(a) criteria document for selenium to address errata in the footnotes associated with the chronic criterion.<sup>6</sup> The corrected footnote e now states: “Water column values are based on dissolved total selenium in water and are derived from fish tissue values via bioaccumulation modeling. When selenium inputs are increasing, water column values are the applicable criterion element in the absence of steady-state condition fish tissue data.” Footnotes b and d also reflect that footnote e was corrected. EPA is approving the Tribe’s aquatic life criteria for selenium in footnote J; however, EPA recommends that the Tribe consider updating the footnotes in the selenium criteria table to be consistent with the revised 304(a) criteria document in its next triennial review of the Kalispel Tribe’s WQS.

The Tribe’s new conversion factor for selenium is consistent with question 3-5 in *Frequently Asked Questions: Implementing Water Quality Standards Based on EPA’s 2016 Recommended Selenium Criterion in Clean Water Act Section 402 NPDES Permits*.<sup>7</sup> In the document, EPA recommends a conversion factor of 1.00 for converting between total recoverable and dissolved selenium. In the Tribe’s new and revised criteria, the Tribe has adopted a conversion factor of 1.00 consistent with EPA’s recommendation; therefore, EPA is approving the Tribe’s new conversion factor.

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<sup>4</sup> U.S. Environmental Protection Agency. 1985. *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses*. Accessed at <https://www.epa.gov/sites/production/files/2016-02/documents/guidelines-water-quality-criteria.pdf>

<sup>5</sup> U.S. Environmental Protection Agency. 2018. Aquatic Life Ambient Water Quality Criterion for Aluminum – Freshwater 2018 (EPA 822-R-18-001). Office of Water, Washington, DC

U.S. Environmental Protection Agency. 2016. Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater 2016 (EPA 822-R-16-006). Office of Water, Washington, DC

U.S. Environmental Protection Agency. 2016. Aquatic Life Ambient Water Quality Criterion for Cadmium – Freshwater 2016 (EPA 820-R-16-002). Office of Water, Washington, DC <https://www.epa.gov/wqc/aquatic-life-criteria-cadmium>

<sup>6</sup> U.S. Environmental Protection Agency. 2021. 2021 Revision to: Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater 2016 (EPA 822-R-21-006). Office of Water, Washington, DC

<sup>7</sup> *Frequently Asked Questions: Implementing Water Quality Standards Based on EPA’s 2016 Recommended Selenium Criterion in Clean Water Act Section 402 NPDES Permits* Retrieved from:

<https://www.epa.gov/system/files/documents/2021-10/selenium-faq-cwa402-draft-2021.pdf>

EPA's 1985 Guidelines recommend that aquatic life criteria include three components: the magnitude of the criterion, the averaging period for the criterion, or "duration component," and the maximum frequency at which the criterion may be exceeded. The 1985 Guidelines indicate that aquatic ecosystems can generally recover from most exceedances in about three years, and therefore, EPA recommends three years as the maximum frequency of exceedance for aquatic life criteria. The Tribe's 2017 WQS expressed the maximum frequency of exceedance as a recommendation ("should") and, in EPA's 2021 approval action, EPA recommended that the Tribe adopt binding language to mandate the maximum frequency at which criteria may be exceeded.

The Tribe's revisions in the preamble of Table 2 and the copper criteria in footnote G address EPA's recommendation to include legally binding language, requiring that the CCC and CMC not be exceeded more than once every three years; therefore, EPA is approving the Tribe's revisions to the duration and frequency components for the Tribe's aquatic life criteria. Additionally, the Tribe amended the language in footnote C to clarify that the maximum magnitude and frequency of exceedance for the chronic aquatic life criteria for ammonia are binding requirements. The revised language is consistent with the 304(a) criteria recommendations for ammonia; therefore, EPA is approving the revised language in footnote C.<sup>8</sup>

Clarifying language was incorporated into Table 2's preamble, footnote P, and endnote A. The clarification in the preamble to Table 2 lists that footnotes G and O describe exceptions to the frequency and duration components of the aquatic life toxics criteria, footnote P was revised to specify that the total concentration of DDT and its metabolites may not exceed the numeric criteria, and mercury (acute) was added to the list of metals criteria that are not hardness dependent. EPA notes that the approval of these editorial, non-substantive changes does not alter the EPA's prior approval of the underlying WQS provisions. Since the revisions do not change the previously approved WQS provisions, EPA is approving these changes as non-substantive revisions.

#### **4.2 Dissolved Oxygen and Turbidity Criteria for Cutthroat and Brown Trout Spawning, Incubation, and Rearing Use, Section 12(a)(2)-(3)**

In the 2017 WQS, the designated use of brown trout spawning in Cee Cee Ah Creek was modified to "Cutthroat and Brown Trout Spawning, Incubation, and Rearing." The same dissolved oxygen, turbidity, total dissolved gas, and pH criteria from the 2004 WQS were applied to this modified use. The modified designated use and associated total dissolved gas and pH criteria were approved in EPA's 2021 CWA action; however, the Tribe withdrew the application of dissolved oxygen and turbidity criteria to the modified designated use from EPA's review on September 22, 2021, and indicated an intention to revise the dissolved oxygen and turbidity criteria during the next WQS revision. Thus, application of the dissolved oxygen and turbidity criteria to the modified designated use was not part of EPA's 2021 approval action. As part of this current action, the Tribe has submitted revisions to the dissolved oxygen and turbidity provisions in sections 12(a)(2) and 12(a)(3) as applied to the modified designated use of Cutthroat and Brown Trout Spawning, Incubation, and Rearing.

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<sup>8</sup> U.S. Environmental Protection Agency. 2013. Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater, 2013. EPA 822-R-13-001. Office of Water, Washington, DC

#### 4.2.1 Dissolved Oxygen Criteria for the Protection of the Cutthroat and Brown Trout Spawning, Incubation, and Rearing Use, Section 12(a)(2)

In 2004, EPA approved the Tribe's absolute minimum criterion for dissolved oxygen relative to brown trout spawning. In the current submittal, the same absolute minimum criterion is applied to the modified designated use which includes spawning, incubation, and rearing for cutthroat trout and brown trout. In addition, clarifications were made regarding the applicability of the dissolved oxygen criterion of 8 mg/L during cutthroat and brown trout spawning/incubation, and rearing seasons. The following dissolved oxygen provision is included in section 12(a)(2) of the 2022 WQS for the protection of the Cutthroat and Brown Trout Spawning, Incubation, and Rearing use (the **bold and underlined text** below indicate new text that were not included in the 2004 WQS):

##### **12(a) Cutthroat and Brown Trout Spawning, Incubation, and Rearing**

2) Dissolved oxygen shall not fall below 8 mg/L at any time. **During the spawning and incubation season (October 1st through May 31st), 8 mg/L applies to inter-gravel waters, and 9 mg/L applies to the water column. During the juvenile rearing season (June 1st through September 30th), 8 mg/L applies to the water column.** When natural background conditions prevent attainment of the numeric dissolved oxygen criteria, all human-caused conditions and activities considered cumulatively can lower dissolved oxygen levels by only an additional 0.2 mg/L.

##### **EPA Action**

In accordance with its CWA authority, CWA section 303(c)(3) and 40 CFR Part 131, EPA approves the revisions to the dissolved oxygen criteria in section 12(a)(2) and the application of the criteria to protect the Tribe's Cutthroat and Brown Trout Spawning, Incubation, and Rearing use.

##### **Rationale**

The Kalispel Tribe's dissolved oxygen criterion states that the dissolved oxygen concentration shall not fall below 8 mg/L at any time. The Tribe's revised language clarifies that the criterion is applied where the relevant trout life stages are present, that is, to inter-gravel waters to protect spawning and incubation when brown trout and cutthroat trout are spawning, and to the water column to protect juvenile rearing during the juvenile rearing season.

EPA is approving the Tribe's revisions to dissolved oxygen criteria as consistent with EPA's national recommendations for the protection of early life stages of cold-water biota. In addition, the Endangered Species Act section 7 consultation completed by Region 10 regarding Oregon's WQS demonstrated that a dissolved oxygen concentration of 8 mg/L is protective of salmonids when applied to inter-gravel waters for life stages that reside in the gravel.<sup>9</sup>

The revised timeframe for the application of the dissolved oxygen criteria to support the modified use of brown and cutthroat trout spawning and incubation are consistent for the timeframes for the application of the Tribe's temperature criteria which were approved in EPA's 2021 action. The October 1<sup>st</sup> through

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<sup>9</sup> USFWS. 2015. Biological Opinion/Letter of Concurrence regarding U.S. Environmental Protection Agency's Proposed Approval of Revised Oregon Water Quality Standards for Temperature and Intergravel Dissolved Oxygen. File Number: 01EOFWO0-2014-F-0087.

May 31<sup>st</sup> timeframe encompasses the spawning period of brown trout (typically October-December)<sup>10</sup> and the springtime spawning season of westslope cutthroat trout.<sup>11</sup> The juvenile rearing season of brown trout and cutthroat trout typically occurs during the summer months, which is encompassed by the Tribe's identified timeframe of June 1<sup>st</sup> through September 30<sup>th</sup>.

#### 4.2.2 Turbidity Criteria for the Protection of the Cutthroat and Brown Trout Spawning, Incubation, and Rearing Use, Section 12(a)(3)

EPA approved the Tribe's narrative criterion for turbidity in 2004 relative to brown trout spawning. The narrative turbidity criterion is now applied to the modified designated use for cutthroat and brown trout spawning, incubation, and rearing. The 2022 WQS include the following revision to the turbidity criteria (indicated in **bold and underline**) to clarify that the allowable increase of 5 NTU (nephelometric turbidity units) or ten percent increase in turbidity reference natural background turbidity levels, not ambient background levels:

Turbidity shall not exceed 5 NTU over **natural** background turbidity when the background turbidity is 50 NTU or less, or have more than a 10% increase in turbidity when the background turbidity is more than 50 NTU.

#### **EPA Action**

In accordance with its CWA authority, CWA section 303(c)(3) and 40 CFR Part 131, EPA approves the revisions to the turbidity criteria in section 12(a)(3) and application of the criteria to protect the Cutthroat and Brown Trout Spawning, Incubation, and Rearing use.

#### **Rationale**

Section 12(a)(3) of the Tribe's WQS provides a turbidity provision that is based on background conditions and is consistent with Washington's criteria for adjacent state waters. Since the distinctions in terminology for background conditions, natural conditions, and natural background can be unclear, in previous communications with the Tribe,<sup>12</sup> EPA requested clarification on the intention for this standard (i.e., if the Tribe intended to implement the turbidity criterion based on natural background, as opposed to ambient turbidity levels that may include an anthropogenic component). The Tribe's 2022 turbidity criteria respond to EPA's request and recommendations by clarifying that the Tribe intends to implement the turbidity criterion based on natural background. This revision effectively provides a cap for the turbidity criteria, ensuring that allowed increases in the turbidity criteria are based on the natural background, defined in the Tribe's WQS as "Background conditions due only to non-anthropogenic sources. Water quality present prior to or without human-caused influences. A neighboring or similar system may be used as a reference."

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<sup>10</sup> Miller, M., E. Iverson, and D. Essig. 2014. Geography and Timing of Salmonid Spawning in Idaho. Report commissioned by Idaho Department of Environmental Quality, Boise, ID.

<sup>11</sup> U.S. Environmental Protection Agency. 2001. Issue Paper 2, Salmonid Distributions and Temperature. EPA-910-D-01-002. Prepared as Part of EPA Region 10 Temperature Water Quality Criteria Guidance Development Project by Jason Dunham (U.S. Forest Service), Jeff Lockwood (National Marine Fisheries Service), and Chris Mebane (Idaho Department of Environmental Quality). Accessed at <https://www.epa.gov/sites/production/files/2018-01/documents/r10-water-quality-temperature-issue-paper2-2001.pdf>.

<sup>12</sup> Shaw, Hanh. 2021. Letter to Ken Merrill, Kalispel Natural Resources Department requesting clarification related to certain elements of the Tribe's 2017 WQS.

Additionally, the Tribe’s turbidity criteria are consistent with the EPA’s 304(a) criteria, which state, “Settleable and suspended solids 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.”<sup>13</sup> As such, EPA is approving the Tribe’s turbidity criteria for the protection of the Cutthroat and Brown Trout Spawning, Incubation, and Rearing designated use.

### **4.3 Editorial Revisions**

The 2022 WQS revisions include several editorial clarifications to the Tribe’s WQS that do not alter the substance of the Tribe’s WQS. These include correcting spelling/spacing errors, various typographical edits, and adding a reference to footnotes in the WQS. Descriptions of these editorial changes are listed below:

- Antidegradation Policy for Tier 3 Waters, Section 9(c): Corrections to spelling and spacing.
- Toxic Substances, Section 10(4): Editorial correction changing “an cancer risk...” to “a cancer risk...”

### **EPA Action**

In accordance with its CWA authority, CWA section 303(c)(3) and 40 CFR 131, EPA approves the editorial revisions listed above. EPA notes that the approval of these editorial changes does not alter the EPA’s prior approval of the provisions.

### **4.4 Readopted Criteria Currently in Effect Under the CWA**

As described in the Tribe’s Statement of Basis that was submitted with the 2022 WQS,<sup>14</sup> the Tribe inadvertently omitted the aquatic life criteria for atrazine and mercury and the conversion factor for mercury from its 2017 WQS. Footnote f (2004 WQS) was also inadvertently removed from the silver criterion without the application of the parallel footnote O, a revision of the former footnote f.<sup>15</sup>

On September 22, 2021, the Tribe withdrew the deletion of the aquatic life criteria for atrazine and mercury, the conversion factor for mercury, and the removal of footnote f from the silver criterion from EPA’s review under CWA 303(c). As a result, EPA did not take action on these criteria in EPA’s September 27, 2021 action letter. Since EPA did not take action on the withdrawn WQS revisions, the following WQS remain in effect for CWA purposes: the criteria for atrazine in footnotes x and y; the CMC for mercury in Table 2; the mercury conversion factor in Table 4; and the application footnote f to silver from the Tribe’s 2004 WQS. With the 2022 WQS, the Tribe readopted these CWA effective criteria. Footnotes x and y were renamed as footnotes S and T, Table 4 was incorporated into Endnote A, and footnote f was renamed as footnote O.

Readopted criteria and footnotes in Table 2. Toxic Substances:

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<sup>13</sup> U.S. Environmental Protection Agency. 1986. Quality Criteria for Water, 1986. EPA 440/5-86-001. Office of Water, Washington, D.C.

<sup>14</sup> Kalispel Natural Resources Department. 2022. Limited Revisions to the Kalispel Tribe’s Water Quality Standards – Summary of Basis, Revised May 2022.

<sup>15</sup> Footnotes in the 2004 WQS are indicated by lowercase letters. The footnotes in the Tribe’s 2017 and 2022 WQS are identified using capital letters.



Compound	Aquatic Life CMC (µg/L)	Aquatic Life CCC (µg/L)
Mercury	1.4	---
Silver	See Footnotes E and O	---
Atrazine	See Footnote S	See Footnote T

- O. These criteria are based on EPA recommendations issued in 1980 that were derived using guidelines that differed from EPA’s *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* (1985 Guidelines) which update minimum data requirements and derivation procedures. The CMC for these compounds must not be exceeded at any time. The CMC may be applied using a one hour averaging period not to be exceeded more than once every three years, if the CMC values given in Table 2 are divided by 2 to obtain a value that is more comparable to a CMC value derived using the 1985 Guidelines. The CCC must not be exceeded based on a 24-hour average.
- S. Average of all samples collected in one hour with a concentration not to exceed 350 µg/L more than once every three years on the average. This is a draft criterion (66 FR 49186, September 26, 2001) the Tribe will interpret its toxic narrative criterion using this draft criterion.
- T. Average of all samples taken in four consecutive days with a concentration not to exceed 12 µg/L more than once every three years on the average. This is a draft criterion (66 FR 49186, September 26, 2001) the Tribe will interpret its toxic narrative criterion using this draft criterion.

Readopted conversion factor in endnote A:

**Conversion Factor (CF) Table for Dissolved Metals**

Compound	Freshwater	
	Acute	Chronic
Mercury	0.85	0.85

**EPA Action and Rationale**

As described in Section 1.1 of this technical support document, EPA considers four questions when evaluating whether a particular provision is a new or revised WQS.

Since the criteria for atrazine, footnotes x and y (renamed footnotes S and T) and the CMC for mercury in Table 2 of the 2004 WQS, the conversion factor for mercury, and the application of footnote f (renamed footnote O) to silver remain in effect for CWA purposes, the readoption of the criteria do not establish new WQS or revise existing WQS under the CWA (see question 4 of the “four-part test”). Therefore, the

changes do not constitute new or revised WQS that EPA has the authority to review and approve or disapprove pursuant to CWA section 303(c). As such, EPA is taking no action on the reinstatement of aquatic life criteria for atrazine and mercury, the conversion factor for mercury, or the application of footnote O to silver.