UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
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WATER
DIVISION

MAY 0 2 2019

Mr. Barry Burnell
Administrator
Water Quality Programs
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706-1255

Re: EPA's Approval of Idaho's Revised Water Quality Standards, Aquatic Life Criteria for Copper using the Biotic Ligand Model, Docket 58-0102-1502

Dear Mr. Burnell:

Pursuant to Section 303(c)(3) of the Clean Water Act and 40 CFR Part 131, the U.S. Environmental Protection Agency approves the new and revised water quality standards addressing Idaho's revisions to its aquatic life criteria for copper at IDAPA 58.01.02.210.01 and 58.01.210.03.c.v., received by the EPA on January 28, 2019. Details of the submitted water quality standards and the EPA's action are outlined below and discussed in the enclosed Technical Support Document. Today's approval addresses only those submitted changes to IDAPA 58.01.02.210 that are new or revised water quality standards for the purposes of CWA Section 303(c).

Background

By letter dated January 8, 2019, the Idaho Department of Environmental Quality submitted new and revised water quality standards in Idaho's administrative code at IDAPA 58.01.02.210.01 and 58.01.02.210.03.c.v. These new and revised water quality standards were adopted and finalized by the 2018 Idaho Legislature, became effective under Idaho state law on March 28, 2018, and were certified by the Idaho Attorney General on December 17, 2018, as being duly adopted pursuant to state law. The rule incorporates by reference the "*Implementation Guidance for the Idaho Copper Criteria for Aquatic Life: Using the Biotic Ligand Model*," (*Implementation Guidance*) which details procedures for implementing the criteria. Idaho's process for adopting the submitted revisions, including the opportunity for public comment, is described in DEQ's submittal letter and its enclosures.

The water quality standards changes submitted to the EPA for review and action are identified in an enclosure to DEQ's January 8, 2019 submittal letter, and include:

- Revised aquatic life criteria for copper at IDAPA 58.01.02.210.01 footnote r to Idaho's table of numeric aquatic life criteria for toxic substances.
- Deletion of the hardness based acute and chronic aquatic life criteria values for copper and associated footnote i from Idaho's table of numeric criteria for toxic substance at IDAPA 58.01.02.210.01.
- The new provision at IDAPA 58.01.02.210.03.c.v. specifying the use of the Biotic Ligand Model (BLM) to derive aquatic life criteria for copper.

- Revised language at IDAPA 58.01.02.004.01 and 02 providing that codes, standards and regulations may be incorporated by reference in the rules, at which point they shall constitute full adoption.

The EPA's Action

Pursuant to Section 303(c)(3) of the CWA and 40 CFR Part 131, the EPA approves the submitted changes at IDAPA 58.01.02.210. This includes revisions to Idaho's copper aquatic life criterion as provided in the table of numeric criteria for toxic substances at IDAPA 58.01.02.210.01., including part of footnote r to the table and new language at IDAPA 58.01.02.210.03.c.v., specifying the use of the BLM to derive aquatic life criteria for copper.

The EPA is not acting on unrevised language and previously existing provisions, or provisions that the EPA has determined are not water quality standards subject to EPA review and action under Section 303(c) of the CWA. The EPA is not acting on the example values for acute and chronic copper provided in the table at IDAPA 58.01.210.01, as those values are for comparative purposes only, and part of footnotes i and r to Idaho's table of numeric criteria for toxics. In addition, the EPA is not acting on the revisions to IDAPA 58.01.02.004.01 and 02 as the EPA has reviewed and concluded that these provisions are not considered water quality standards. The EPA's action applies only to water bodies in the State of Idaho and does not apply to waters that are within Indian Country, as defined in 18 U.S.C. § 1151.

Idaho's rule specifies that copper criteria will be derived using the BLM, consistent with the EPA's 2007 national recommended aquatic life criteria for copper. Importantly, Idaho's rule also specifies that input data used to run the BLM "shall be planned to capture the most bioavailable conditions for copper." In the *Implementation Guidance*, DEQ discusses other important considerations such as how to address situations where data are unavailable to run the BLM, and how to reconcile multiple BLM outputs under different circumstances. The EPA expects by adopting the language into rule regarding implementation of the model during the times and conditions when copper is most bioavailable, coupled with the information in the *Implementation Guidance*, DEQ will implement the criteria in a manner that is protective of designated uses.

The National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) have agreed with the EPA's determination that Idaho's copper aquatic life criteria based on the BLM complies with the reasonable and prudent alternative for copper aquatic life criteria in the 2014 NMFS and 2015 FWS Biological Opinions.

The EPA appreciates DEQ's commitment to update Idaho's WQS and looks forward to continuing the close collaboration with DEQ in implementing the copper BLM. The EPA recommends that future WQS revisions include additional regulatory language to codify the State's copper BLM implementation procedures in rule.

Please feel free to contact me or Lisa Macchio at (206) 553-1834 or macchio.lisa@epa.gov, if you have any questions.

Sincerely,

Daniel D. Opalski
Director

Enclosure: Technical Support Document

Electronic cc: Bill Lind, NMFS
Johnna Sandow, NMFS
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U.S. ENVIRONMENTAL PROTECTION AGENCY – REGION 10

Technical Support Document

The EPA's Approval of Idaho's Revised Aquatic Life Criteria for Copper using the Biotic Ligand Model Submitted January 28, 2019

May 2, 2019

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Technical Support Document
The EPA Approval of Idaho's Revised Aquatic Life Criteria for Copper using the Biotic Ligand Model

Idaho Rule Docket 58-0102-1502

I. Requirements of The Clean Water Act and EPA's Implementing Regulations

Under CWA Section 303(c), 33 U.S.C. § 1313(c), and the EPA's implementing regulations at 40 CFR § 131.4, states have the primary responsibility for reviewing, establishing, and revising water quality standards (WQS), which include the designated uses of a waterbody, or waterbody segment, and the water quality criteria necessary to protect those designated uses. Such criteria must be based on a sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use.

Section 303(c)(2)(B) of the CWA, 33 U.S.C. § 1313(c)(2)(B), requires states to establish water quality criteria for toxic pollutants listed pursuant to CWA Section 307(a)(1), for which the EPA has published criteria under CWA Section 304(a), where the presence of these toxics could reasonably be expected to interfere with the designated uses established by the state. In establishing such criteria, states 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 should establish narrative criteria where numeric criteria cannot be determined or to supplement numeric criteria (see 40 CFR § 131.11(b)(2)).

CWA Section 303(c), 33 U.S.C. § 1313(c), requires states to submit new or revised WQS to the EPA for review, and the EPA must ensure that those WQS are consistent with the CWA and the EPA's implementing regulations. The EPA is required to review these changes to ensure revisions to WQS are consistent with the CWA.

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 Section 303(c)(3).[1]

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

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

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

In addition, in accordance with 40 CFR § 131.5, the state must follow its own legal procedures for adopting such standards and submit certification by the state's attorney general, or other appropriate legal authority within the state, that the WQS were duly adopted pursuant to state law, 40 CFR § 131.6(e).

II. General Recommended Approach for Deriving Aquatic Life Criteria

Under the EPA's CWA Section 304(a) authority, the EPA develops and publishes methodologies and recommended water quality criteria to protect aquatic life and human health (referred to as 304(a) criteria recommendations). The EPA periodically reviews and revises those methodologies and criteria. The methodologies and criteria are subject to public and expert scientific review before the EPA issues them as formal agency recommendations for states to consider when developing and adopting water quality criteria pursuant to CWA Section 303(c), 33 U.S.C. § 1313(c).

To derive criteria for the protection of aquatic life, the EPA follows its *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses ("1985 Guidelines").*[2] These guidelines describe an objective way to estimate the highest concentration of a substance in water that will not present a significant risk to the aquatic organisms in the water. Numeric criteria derived using the EPA's *1985 Guidelines* are expressed as short-term (acute) and long-term (chronic) values. The combination of a criterion maximum concentration (a one-hour average value), and a criterion continuous concentration (a four-day average value), is intended to protect aquatic life from acute and chronic toxicity, respectively. Neither value is to be exceeded more than once in three years. When the EPA revises existing 304(a) criteria recommendations, it incorporates new data about species' chronic and acute sensitivity as well as new scientific knowledge about toxicity pathways.

The development of water quality criteria for certain pollutants may be based on certain water characteristics (e.g., pH, temperature, hardness, dissolved organic carbon, etc.), since water chemistry can influence a pollutant's bioavailability and toxicity.

III. National 304(a) Recommended Criteria for Copper

Prior to 2007, the EPA used hardness as an indicator of the site water chemistry, and published criteria recommendations for copper that were equations where the resulting copper values depended on the level of hardness in the water. The hardness-based equation accounts for only one of the many variables affecting bioavailability of copper in real world conditions, and that

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[2] USEPA. 1985. *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses.* Office of Research and Development, Environmental Research Laboratories. EPA PB85-227049.

variable (hardness) is not strongly predictive of copper bioavailability compared to pH and dissolved organic carbon content. Therefore, hardness-based copper criteria may not be protective enough under some conditions due to the lack of consideration of the full range of relevant water chemistry parameters.

Because the hardness-based equation may misrepresent the bioavailability of copper and its toxicity, the EPA recognized a need for an approach that (1) explicitly and quantitatively accounted for the effect of individual water quality parameters that modify metal toxicity and (2) could be applied more cost-effectively and easily, and hence more frequently, across spatial and temporal scales.

To meet those goals, the EPA developed and issued the 2007 revised recommended copper criteria using the Biotic Ligand Model (BLM). The EPA's 2007 *BLM Criteria Document* incorporated the latest scientific information, including updated toxicity information for six sensitive species.[3]

IV. Background

DEQ initiated the rulemaking process to update Idaho's copper aquatic life criteria in October 2015 in response to the reasonable and prudent alternatives for copper, identified in the FWS and NMFS biological opinions.[4] DEQ held nine negotiated rulemaking and guidance development meetings between October 28, 2015 and July 18, 2017, including four public comment periods for various drafts of the rule as well as Idaho's *"Implementation Guidance for the Idaho Copper Criteria for Aquatic Life: Using the Biotic Ligand Model," (Implementation Guidance).*[5] The proposed rule was published in the September 6, 2017 Idaho Administrative Bulletin, followed by a formal 30-day comment period. The rule was presented to the Idaho Board of Environmental Quality on November 16, 2017, was approved by the 2018 Idaho Legislature and became effective under state law on March 28, 2018. The WQS were certified by the Idaho Attorney General as duly adopted pursuant to state law on December 17, 2018. By letter dated January 8, 2019, the DEQ submitted the revised WQS to the EPA for review and action under the CWA Section 303(c), 33 U.S.C. § 1313(c). Due to the federal government shutdown, the EPA did not receive the submittal until January 28, 2019.

To inform development of Idaho's *Implementation Guidance* DEQ conducted surface water monitoring from September 6, 2016 to October 27, 2016, and utilized the data collected to determine the BLM inputs to identify conservative criteria estimates that can be used for

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[3] *Aquatic Life Ambient Water Quality Criteria for Copper – Freshwater, 2007,* EPA 822-R-07-001.
[4] U.S. Fish and Wildlife Service. 2015. *Biological Opinion for the Idaho Water Quality Standards for Numeric Water Quality Criteria for Toxic Pollutants.* (01EIFW00-2014-F-0233). February 27, 2015. NOAA, National Marine Fisheries Service. 2014. *Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Water Quality Toxics Standards for Idaho. (*NMFS No. 2000-1484). May 7, 2014.
[5] Idaho Department of Environmental Quality. 2017. *Implementation Guidance for the Idaho Copper Criteria for Aquatic Life Using the Biotic Ligand Model.* November 2017.

implementing the copper criteria based on the BLM when site-specific data are not available.[6] A draft of both reports was provided for public review and comment during DEQ's rulemaking process of the revised copper aquatic life criteria and final documents were developed in August 2017.

In addition to adopting the EPA's 2007 304(a) aquatic life criteria for copper (i.e., the BLM), Idaho's rule incorporates by reference the *Implementation Guidance* which details procedures for implementing the criteria including determining minimum data requirements for BLM inputs, reconciling multiple BLM outputs at a site, and providing guidance for estimating conservative criteria when data to run the BLM are incomplete or unavailable.[7]

V. The EPA's Review and Action on Idaho's Copper Aquatic Life Criteria

The following is Idaho's new and revised rule language regarding copper aquatic life criteria. Underlined text indicates the new and or revised language, and strikeout text indicates DEQ's previous text, which have been replaced.

Subsection 210.01. Criteria for Toxic Substances

(Number) Compound	CAS Number	CMC (µg/L)	CCC (µg/L)
6 Copper[2]	7440508	~~17~~ i 12.3 r	~~11~~ i 7.6 r
[2] Not yet effective for CWA purposes. The CMC, CCC, and footnote are not effective for CWA purposes until the date EPA issues written notification that the revisions adopted under Rule Docket No. 58-0102-1502 have been approved.			

Parts of footnotes i and r to the copper aquatic life criteria values in table 210.01:

i. Aquatic life criteria for these metals are a function of total hardness (mg/L as calcium carbonate), the pollutant's water effect ratio (WER) as defined in Subsection 210.03.c.iii. and multiplied by an appropriate dissolved conversion factor as defined in Subsection 210.02.

r. Aquatic life criteria for copper shall be derived in accordance with Subsection 210.03.c.v.

Footnote r. is not effective for CWA purposes until the date EPA issues written notification that the revisions adopted under Rule Docket No. 58-0102-1502 have been approved.

[6] Idaho Department of Environmental Quality. 2017. *Statewide Monitoring for Inputs to the Copper Biotic Ligand Model.* August 2017.

[7] Idaho Department of Environmental Quality. 2017. *Implementation Guidance for the Idaho Copper Criteria for Aquatic Life Using the Biotic Ligand Model.* November 2017.

Subsection 210.02. Factors for Calculating Hardness Dependent Metals Criteria

Metal	*mA*	*bA*	*mc*	*bc*	*Acute Conversion Factor*	*Chronic Conversion Factor*
Copper	*0.9422*	*-1.464*	*0.8545*	*-1.465*	*0.960*	*0.960*
The values for calculating hardness dependent metal criteria for copper, set out in the Copper row above, are effective for CWA purposes until the date EPA issues written notification that the revisions adopted under the Rule Docket No. 58-0102-1502 have been approved. The Copper row will be deleted upon EPA approval.						

Subsection 210.03.c.v. Copper Criteria for Aquatic Life

v. Copper Criteria for Aquatic Life.

(1) Aquatic Life criteria for copper shall be derived using:

(a) Biotic Ligand Model (BLM) software that calculates criteria consistent with the "Aquatic Life Ambient Freshwater Quality Criteria – Copper": EPA-822-R-07-001 (February 2007); or

(b) An estimate derived from BLM outputs that is based on a scientifically sound method and protective of the designated aquatic life use.

(2) To calculate copper criteria using the BLM, the following parameters from each site shall be used: temperature, pH, dissolved organic carbon (DOC), calcium, magnesium, sodium, potassium, sulfate, chloride, and alkalinity. The BLM inputs for humic acid (HA) as a proportion of DOC and sulfide shall be based on either measured values or the following default values: 10% HA as a proportion of DOC, 1.00 x 10^{-8} mg/L sulfide. Measured values shall supersede any estimate or default input.

(3) BLM input measurements shall be planned to capture the most bioavailable conditions for copper.

(4) A criterion derived under Subsection 210.02.c.v.(1)(a) shall supersede any criterion derived under Subsection 210.02.c.v.(1)(b). Acceptable BLM software includes the "US EPA WQC Calculation" for copper in BLM Version 3.1.2.37 (October 2015).

(5) Implementation Guidance for the Idaho Copper Criteria for Aquatic Life. The "Implementation Guidance for the Idaho Copper Criteria for Aquatic Life: Using the Biotic Ligand Model" describes in detail methods for implementing the aquatic life criteria for copper using the BLM. This guidance, or its updates, will provide assistance to the Department and the public for determining minimum data requirements for BLM inputs and how to estimate criteria when data are incomplete or unavailable. The "Implementation Guidance for the Idaho Copper Criteria for Aquatic Life: Using the Biotic Ligand Model" is available at the Department of Environmental Quality, 1410 N. Hilton, Boise, Idaho 83706, and on the DEQ website at www.deq.idaho.gov/58-0102-1502.

Subsection 210.03.c.v is not effective for CWA purposes until the date EPA issues written notification that the revisions adopted under Rule Docket No. 58-0102-1502 have been approved.

The EPA Action

In accordance with its CWA authority, 33 U.S.C. § 1313(c)(3) and 40 CFR Part 131.11, the EPA approves the following:

- Idaho's deletion of the comparative example values for acute and chronic copper based on the hardness-dependent equation along with part of footnote i to the table as it applies to copper which specifies the hardness-based equation at IDAPA 58.01.02.210.01.
- Idaho's deletion of that part of IDAPA 58.01.02.210.02 applicable to copper, which specifies the factors used in calculating hardness-dependent copper criteria.
- Part of Idaho's new footnote r to the table of numeric criteria for toxic substances at IDAPA 58.01.02.210.01 which specifies that aquatic life criteria for copper are to be derived in accordance with Subsection 210.03.c.v.
- Idaho's new provisions at IDAPA 58.01.02.210.03.c.v. specifying the use of the BLM to derive copper aquatic life criteria, that the criteria will be calculated to capture when copper is most bioavailable or toxic and the use of DEQ's BLM *Implementation Guidance*.

The EPA Rationale

Idaho deleted the previous hardness-based copper aquatic life criteria provided at IDAPA 58.01.02.210.01 and 210.02 and revised it with copper aquatic life criteria based on the BLM at IDAPA 58.01.02.210.01 and 210.03.c.v. Idaho's revised copper aquatic life criteria, based on the BLM, are consistent with the EPA's 2007 304(a) recommendations for freshwater copper aquatic life criteria. The EPA's 304(a) recommendation provides an extensive technical basis and justification as to how the recommended aquatic life criteria adequately protect aquatic life uses.[8] The 2007 304(a) recommendation, the copper BLM, uses ten input parameters to calculate instantaneous water quality criteria, which are the protective criteria magnitudes corresponding to the water quality conditions for which they are calculated. The copper BLM more accurately reflects the aqueous toxicity of copper in a waterbody than the EPA's previous recommendation, which used an equation that calculated copper criteria based solely on the hardness of the water.

New footnote r to the copper aquatic life criteria in the table of numeric criteria for toxic substances at Subsection 210.01 specifies that aquatic life criteria for copper shall be derived in accordance with Subsection 210.03.c.v, which further specifies the use of the BLM. The EPA does not consider the remaining part of footnote r, which explains that the acute and chronic values of 12.3 and 7.6 ug/L, respectively, in the table are for comparative purposes only, a water quality standard subject to review and action under CWA 303(c). See Section VI of this document, Provisions Which the EPA Has Determined Are Not Water Quality Standards, for a more detailed discussion.

Subsection 210.03.c.v. specifies that aquatic life criteria for copper shall be derived using the BLM or an estimate derived from BLM outputs that is based on a scientifically sound method and protective of the designated aquatic life use. Additionally, this subsection specifies that a

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[8] U.S. EPA. 2007. *Aquatic Life Ambient Water Quality Criteria for Copper – Freshwater, 2007,* EPA 822-R-07-001.

criterion derived using the BLM software shall supersede any criterion derived under Subsection 210.03.c.v.(1)(b) and acceptable BLM software includes BLM Version 3.1.2.37 (October 2015), which is the most recent version of the BLM. Furthermore, and fundamental to BLM-based copper criteria, subsection 210.03.c.v. states that measured BLM inputs must be planned to capture the most bioavailable conditions for copper. The provision also describes the input parameters/water chemistry data to be collected at a site to calculate copper criteria using the BLM.

The EPA interprets the provision at IDAPA 58.01.02.210.03.c.v.(1)(b) and (3) to mean that the State will calculate criteria that protect the designated uses of Idaho waterbodies at all times, including under the most bioavailable or toxic conditions, and in doing so, that Idaho will determine where and when the most bioavailable condition occurs at a site. The EPA anticipates that the State will use appropriate statistical methods to collect sufficiently representative data in order to ensure that the most bioavailable period is captured by the dataset. For example, in DEQ's *Implementation Guidance* and supported by analyses therein, DEQ states that, "*Generally, 24 consecutive, monthly instantaneous water quality criteria (IWQC) calculated over the course of 2 years would be considered appropriate to characterize seasonal variability for any single location. However, users should consider any site-specific factors that may require additional sampling to fully capture site variability.*"

Subsection 210.03.c.v. also incorporates DEQ's BLM *Implementation Guidance*, or its updates, by reference. DEQ's *Implementation Guidance* includes procedures that will be used to substitute an estimate or default value for missing input parameter data when calculating copper criteria with the copper BLM. These substitution methods are important for situations when sufficient high-quality input data to represent a waterbody's water quality conditions are unavailable. Chapter 6 of DEQ's *Implementation Guidance* provides a discussion regarding estimating copper aquatic life criteria when data are absent. As discussed in the document, when no data are available, DOC or pH data are absent, or available data are determined not to adequately characterize critical conditions of a waterbody, conservative criteria estimates should be used to estimate critical conditions and ensure criteria are protective of aquatic life. To that end, DEQ collected full BLM input data from 189 sites throughout the state and developed potential conservative criteria based on five regional classifications which consist of basin, ecoregion, stream order, site class and site class plus river/stream.[9] These criteria are put forth in Table 2 in the *Implementation Guidance.* Furthermore, DEQ states that the values in Table 2 should be considered protective of the most bioavailable conditions for any given site. The EPA anticipates that Idaho will continue to collect data and recalculate the criteria as necessary to ensure protectiveness over the long term should water quality conditions change.

Idaho's legally binding provisions governing the use of the copper combined with the considerations outlined in Idaho's BLM *Implementation Guidance* document provide additional detail such that the EPA considers Idaho's adoption of the BLM reasonably consistent with the definition of a "performance-based approach," as articulated in the preamble to the "Alaska Rule" (65 FR 24641): "A performance-based approach relies on adoption of a process *(i.e.,* a

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[9] Idaho Department of Environmental Quality. 2017. *Statewide Monitoring for Inputs to the Copper Biotic Ligand Model.* August 2017.

criterion derivation methodology) rather than a specific outcome *(i.e.,* concentration limit for a pollutant) consistent with 40 CFR §§ 131.11 & 131.13. When such a "performance-based" approach is sufficiently detailed and has suitable safeguards to ensure predictable, repeatable outcomes, the EPA approval of such an approach can also serve as approval of the outcomes as well." The EPA has determined that Idaho has provided sufficient information such that the EPA expects that derivation of individual numeric values will be in a manner that is publicly transparent and repeatable and any site-dependent copper criteria derived using these criteria procedures should be consistent with CWA requirements and do not require individual EPA approval under Section 303(c) of the CWA, 33 U.S.C. § 1313(c).

In addition, since Idaho's copper criteria align with the EPA's current 304(a) recommendations, includes a provision in rule specifying that criteria will be calculating to capture when copper is most bioavailable or toxic, incorporates the copper BLM software by reference, and combined with Idaho's *Implementation Guidance* describes considerations for deriving copper criteria, and provides conservative estimated/default criteria to use in appropriate situations, the EPA deems that Idaho's copper criteria are protective of Idaho's aquatic life uses, and are consistent with Section 303(c) of the CWA, 33 U.S.C. § 1313(c).

Furthermore, the EPA expects DEQ will implement the criteria in a manner that is consistent with the biological opinions from NMFS and the FWS. Therefore, the EPA has determined, and the Services agree[10] with the EPA, that Idaho's copper criteria coupled with the expectation regarding Idaho's implementation of the criteria, is consistent with the reasonable and prudent alternatives identified in the biological opinions from the Services.[11]

VI. Provisions Which the EPA Has Determined Are Not Water Quality Standards

Subsection 004. Incorporation by Reference
The following is Idaho's new and revised rule language regarding incorporation by reference. Underlined text indicates the new and or revised language, and strikeout text indicates DEQ's previous text, which have been replaced.

> *004. INCORPORATION BY REFERENCE.*
>
> *Codes, standards and regulations may be incorporated by reference in these rules pursuant to Section 67-5229, Idaho Code. Such incorporation by reference shall constitute full adoption by reference, including any notes or appendices therein, unless expressly provided otherwise in these rules. Copies of the codes, standards or regulations adopted by reference throughout these rules are available in the following locations:*

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[10] March 12, 2019 Letter from Michael Tehan, Assistant Regional Administrator NMFS, NOAA, Portland Oregon, to Hanh Shaw, Water Quality Standards Unit Manager, EPA R10, Re: Implementation of Reasonable and Prudent Alternative for the Copper Aquatic Life Criteria in the 2014 Biological Opinion on Idaho's Water Quality Standards for Toxic Substances (NMFS No: WCR-2000-1484). March 19, 2019 Letter from Russ Holder for Greg Hughes, State Supervisor USFWS, Boise Idaho to Hanh Shaw, Water Quality Standards Unit Manager, EPA R10, Re: Implementation of Reasonable and Prudent Alternative for the Copper Aquatic Life Criteria in the 2015 Biological Opinion on Idaho's Water Quality Standards for Toxic Pollutants (01EIFW00-2014-F-0233).

01. Guidance and Technical Support Documents. Idaho Department of Environmental Quality, 1410 N. Hilton, Boise, Idaho 83706-1255, www.deq.idaho.gov; and

~~02. Law Library. State Law Library, 451 W. State Street, Boise, Idaho 83720.~~

~~03. Federal Documents~~ Code of Federal Regulations. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, www.ecfr.gov, and State Law Library, 451 W. State Street, Boise, Idaho 83720.

The revisions to IDAPA 58.01.02.004.01 004.02 and 004.03 merely provide that codes, standards and regulations may be incorporated by reference in Idaho's rules, at which point they shall constitute full adoption, which includes DEQ's incorporation of the EPA's criteria document for copper. DEQ provided the following explanation in its summary of the rulemaking:

> "Pursuant to Section 67-5229(2)(a), Idaho Code, incorporation by reference is necessary:
>
> EPA national recommended criteria, "*Aquatic Life Ambient Freshwater Quality Criteria – Copper*": EPA822-R-07-001 (February 2007), is incorporated by reference in the proposed rule. This document provides guidance for calculating aquatic life criteria for copper using the Biotic Ligand Model software. Incorporation by reference benefits the regulated community by ensuring that the state rule is consistent with the EPA guidance. The alternative to incorporating by reference is to restate the document in the rule, which would be impractical and costly."

The EPA has reviewed and concluded that the revisions to IDAPA 58.01.02.004 do not establish a legally binding requirement and do not describe a desired ambient condition of a waterbody to support a particular designated use.[11] Therefore, the EPA does not consider it a WQS subject to EPA review and approval under Section 303(c) of the CWA and is taking no action on subsection 004.01., 004.02 and 004.03.

Subsection 210.01. Part of Footnote r to the Table of Numeric Criteria for Toxic Substances

The following is part of footnote r that the EPA does not consider a WQS subject to EPA review and approval under Section 303(c) of the CWA.

> *For comparative purposes only, the example values displayed in this table correspond to the Biotic Ligand Model output based on the following inputs: temperature = 14.9°C, pH = 8.16, dissolved organic carbon = 1.4 mg/L, humic acid fraction = 10%, calcium = 44.6 mg/L, magnesium = 11.0 mg/L, sodium = 11.7 mg/L, potassium = 2.12 mg/L, sulfate = 46.2 mg/L, chloride = 12.7 mg/L, alkalinity = 123 mg/L CaCO3, and sulfide = 1.00 x 10^{-8} mg/L.*

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[11] *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.

This part of footnote r merely states that the example values for acute and chronic copper aquatic life criteria found in the table at subsection 210.01 were derived using the stated input parameter values into the BLM. This statement does not establish a legally binding requirement and does not describe a desired ambient condition of a waterbody to support a particular designated use.[12] Therefore, the EPA does not consider it a WQS subject to EPA review and approval under Section 303(c) of the CWA and is taking no action on parts of footnote r.

[12] *Id.*