



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

1200 Sixth Avenue, Suite 900  
Seattle, WA 98101-3140

OFFICE OF  
WATER AND WATERSHEDS

May 12, 2016

Jason Pappani  
Idaho Department of Environmental Quality  
1410 N. Hilton  
Boise, Idaho 83706

RE: EPA's Comments on Idaho's Options for Updating Idaho's Freshwater Aquatic Life Criteria for Copper, Docket No. 58-0102-1502,

Dear Jason:

The EPA appreciates the opportunity to provide comments to the Idaho Department of Environmental Quality (DEQ) on the four options for updating Idaho's aquatic life copper criteria using the copper biotic ligand model (BLM). These options were presented by DEQ at the April 20, 2016 negotiated rulemaking meeting.

The BLM for copper (EPA 2007) should be applied in a consistent, protective, and repeatable manner. For example, BLM input parameter data should be sufficiently representative of the spatial and temporal variability of conditions at a site. With this issue in mind, for any copper criteria option ultimately chosen by DEQ, the EPA strongly recommends that DEQ include implementation procedures either in the revised rule or adopt them by reference in the revised rule language and include them as part of DEQ's rule submittal to the EPA. This will assist EPA's review in ensuring that the copper BLM produces predictable, repeatable outcomes that are protective of Idaho's designated uses.

Implementation methods are critical for model-derived criteria because models rely on input parameters that can vary in concentration or level over time and spatially throughout a site. The implementation methods that the EPA recommends DEQ develop should detail how DEQ intends to apply the copper BLM to a waterbody in order to provide clarity for the public and regulated community. These implementation methods should address key considerations for model inputs and outputs, such as site selection and characterization and how critical conditions will be determined (including analyzing model outputs, identifying the estimated defaults) for Idaho waters. In addition, the methods should identify when default values are to be used in lieu of ambient data at a particular site, provide recommendations for sampling frequency and locations, and describe the methodology for data screening, data processing, and model output interpretation.

EPA offers the following comments and suggestions for your consideration on the four options DEQ presented at the negotiated rulemaking meeting.

Option 1 - Move forward with the current preliminary draft rule with all implementation and defaults in guidance.

As stated in the EPA's comment letter dated January 12, 2016, the preliminary draft rule language in Option 1 is purely a narrative reference to the model, without any implementation procedures. The EPA sees implementation procedures as important for applying the copper BLM in a consistent, repeatable, and protective manner.

Option 1 includes example calculated values for the acute and chronic freshwater copper criteria in Idaho's water quality standards table of toxic criteria, along with a footnote describing the model inputs that were used to derive the example values. The role of these example criteria is unclear in a plain reading of the table, and the example criteria could be falsely identified as default values to use in situations where model input data are unavailable. The EPA suggests that DEQ delete the comparative values in the table and, instead, provide in the rule the default input values for the model input parameters. Procedures identified in the EPA's *Draft Technical Support Document: Recommended Estimates for Missing Water Quality Parameters for Application in EPA's Biotic Ligand Model (the Missing Parameters Document)* should be followed in establishing estimated defaults.

To ensure that aquatic life uses in Idaho are appropriately protected, conservative default parameter inputs should be established and used for Clean Water Act actions when site-specific data are not available for input into the BLM. It is the EPA's understanding that data for the ten input parameters to calculate freshwater copper criteria (temperature, pH, dissolved organic carbon (DOC), calcium, magnesium, sodium, potassium, sulfate, chloride, and alkalinity) on a waterbody-specific basis in Idaho may be currently limited and/or non-existent. Therefore, it is particularly important for DEQ to provide binding default values for the input parameters to be used in the absence of ambient data at a site. Identifying these default parameters in the rule language will provide clarity to the regulated community, permit writers, the public, and other stakeholders regarding the appropriate criteria at any given location when sufficiently representative input parameter data are unavailable. As indicated above, examples of such default parameters can be found in the *Missing Parameters Document*.

As another example, the EPA's proposed rule for the Oregon freshwater copper criterion, published on April 18, 2016, included default input parameters for the copper BLM. In accordance with the procedures of the *Missing Parameters Document*, the proposal includes protective default input parameters for calcium, magnesium, sodium, potassium, alkalinity, chloride, sulfate and DOC. We note that default input parameters for pH and temperature are absent from the *Missing Parameters Document* and the federal proposal for Oregon, given that the EPA strongly recommends that pH and temperature data are collected at the site where the BLM is applied. EPA also recommends site-specific collection of DOC data because DOC levels strongly influence BLM output. DEQ should consider including the applicable defaults in the draft criteria table or by incorporating by reference the relevant portions of the *Missing Parameters Document* into the rule language.

In summary, Option 1, as the EPA understands it, does not sufficiently ensure that the copper BLM is applied in a consistent, repeatable, and protective manner. Therefore, the EPA does not support DEQ moving forward with this option as it is currently written.

Option 2 – Modeled after the EPA’s proposed rule for copper in Oregon.

An Idaho freshwater copper rule that includes the elements in the EPA’s proposed federal rule for copper in Oregon waters is likely to be protective of Idaho waters. In addition to the description of the federal rule proposal under Option 1 above, this approach includes specifying that the lowest 10<sup>th</sup> percentile of instantaneous water quality criteria (IWQC) calculated at a site is used as the criterion magnitude, and that default input parameters for all inputs except for pH and temperature (which are to be measured at each site) are defined in the rule. However, because the Oregon federal rule is a proposed rule and is not expected to be finalized until January 2017, the EPA acknowledges that the federal rule proposal may be modified due to input received during the public comment period and/or additional information that is identified. Also, DEQ should note that the preamble language to the proposed rule includes specific information regarding implementation of the copper BLM to ensure protectiveness. The EPA recommends that DEQ closely examine the preamble language as it considers implementation procedures for protection of Idaho waters. As noted earlier, the EPA strongly recommends that DEQ develop implementation procedures for the copper BLM, including additional methods for site selection and evaluation.

In summary, the EPA supports DEQ moving forward with Option 2.

Option 3 – Use “low end” percentile of the distribution of the IWQC.

The EPA requires further information and detail regarding how DEQ defines the “selected low end distribution value.” The EPA would be supportive of the use of the 10<sup>th</sup> percentile of a sufficiently representative distribution of IWQCs as the low end of the distribution and could possibly support an alternative low percentile if it is appropriately justified given the distribution of the IWQCs at the site(s) in Idaho. Although it is unclear from the information in the April 20, 2016 DEQ PowerPoint presentation, the EPA is assuming that Option 3 would include the identified low end percentile IWQCs in rule language, together with sufficient justification in DEQ’s supporting documentation. The EPA requests that DEQ clarify that the percentile(s) would be specified in rule and, if the “low end percentile” differs from the 10<sup>th</sup> percentile specified in Option 2, that DEQ provide a technical justification for the alternative percentile.

The EPA reiterates support for the use of default input data that generate conservative criteria when input data are absent. This point is particularly important with the use of the copper BLM on a statewide basis. Therefore, the EPA is supportive of DEQ’s inclusion of default criteria as an element of Option 3. However, as presented in the DEQ PowerPoint presentation, Option 3 includes use of the copper benchmark concentrations from Table 3 in Appendix C of the NOAA Biological Opinion (2014), and furthermore has expanded the use of these benchmark concentrations to all surface waters in Idaho. The EPA would need to carefully review the basis of the NOAA benchmarks to assess how well they protect Idaho’s aquatic life uses. In addition, the EPA recommends that DEQ clarify whether it intends to include the benchmarks in rule or guidance. Finally, even if the benchmarks prove to be protective of Idaho aquatic life uses

statewide, it would still be important for DEQ to develop implementation methods to apply the BLM in a protective manner for a specific site.

In summary, the EPA requires additional information regarding Option 3 before determining if it could support such an approach.

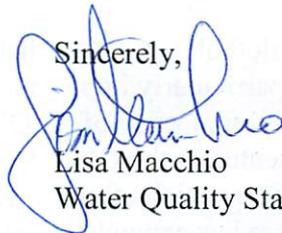
Option 4 – Use low end distribution of IWQC. Collect statewide input data to identify critical conditions throughout the state, develop conservative default criteria to use when data are absent.

The EPA is supportive of DEQ's inclusion of the collection of data and the specification of conservative default criteria in Option 4. However, the EPA requests more information on DEQ's plan for the collection of the statewide data, as well as the time needed for completion of the data collection efforts and default criteria development. In addition, the EPA requests clarification and additional information on DEQ's intended application of the BLM-generated IWQCs and their interpretation spatially and temporally. The EPA strongly supports DEQ's efforts to collect Idaho-specific data to derive copper criteria using the BLM and notes the importance of collecting enough samples over a long enough time period to capture the variability and sensitive conditions at a site.

While the EPA acknowledges that DEQ would need time to collect statewide data that could be used under this option, DEQ and the EPA, collectively, need to be cognizant of the Biological Opinions from NOAA and FWS that contain a reasonable and prudent alternative (RPA) and interim measures for copper. As you know, the interim measures and RPA are premised on having updated copper criteria in place for Idaho waters within a certain time period. Therefore, it is important for the EPA to understand the timing of data collection activities and criteria development tasks in Option 4, as well as the timing of DEQ's expected adoption of revised copper criteria. In summary, the EPA believes that Option 4 could be a promising approach but requires additional information before determining if it could support such an approach.

The EPA appreciates DEQ's commitment to update Idaho's aquatic life copper criteria based on the most current science and is available to provide assistance to DEQ on further development of the criteria and recommended implementation procedures. If you have any questions or would like to discuss these comments further, please contact me at (206) 553-1834.

Sincerely,



Lisa Macchio

Water Quality Standards Coordinator