



WQS Triennial Review – Issue Paper:

Data and Information Needs Necessary for the State of Idaho to Consider Adoption of EPA 304(a) Aquatic Life Criteria for Mercury

Introduction

Under section 304(a) of the Clean Water Act, the US Environmental Protection Agency (EPA) is to develop and publish water quality criteria that reflect the latest scientific knowledge on the effects of a constituent concentration on animal and human health. These criteria are published as recommendations to states and authorized tribes for use in setting their water quality standards. While EPA provides scientific recommendations to protect aquatic life and recreation uses, these do not substitute for the Clean Water Act or EPA’s regulations, nor are they regulations themselves. As a practical matter, EPA uses recommended §304(a) criteria as one factor for determining whether to approve a state’s water quality standards. Revisions to Idaho water quality standards must be approved by EPA before they are applicable for Clean Water Act purposes. States must consider adopting new or updated Clean Water Act §304(a) criteria recommendations as part of their triennial review as described under 40 CFR 131.50(a).

States must consider adopting new or updated Clean Water Act §304(a) criteria recommendations as part of their triennial review process as described in 40 CFR 131.50(a). EPA produced a new §304(a) recommendation for Aquatic Life Use Designations and mercury (Hg) that DEQ has not formally considered. As such, Idaho will review Surface Water Quality Criteria for Aquatic Life Use Designations (IDAPA 58.01.02.250) in regards to Hg.

Current Idaho Rules

Currently, Idaho’s fish-only criterion for inorganic Hg (methylmercury) equals EPA’s organism-only criterion of 0.3 mg/kg. DEQ does not have aquatic life criteria for mercury because it is believed that, in most situations, applying the human health criterion for methylmercury also protects aquatic life.

Idaho’s numeric toxics criteria for aquatic life protection are found in IDAPA 58.01.02.210.01.a. Table 1 is an excerpt of the relevant IDAPA table and footnotes.

Table 1: Footnote and table excerpt from IDAPA 58.01.02.210.01.a.

<i>Criteria for Protection of Aquatic Life</i>					
<i>Compound</i>	<i>CAS Number</i>	<i>CMC (µg/L)</i>		<i>CCC (µg/L)</i>	
<i>Inorganic Compounds/Metals</i>					
<i>Mercury</i>	<i>7439976</i>		<i>e</i>		<i>e</i>

e No aquatic life criterion is adopted for inorganic mercury. However, the narrative criteria for toxics in Section 200 of these rules applies. The Department believes application of the human health criterion for methylmercury will be protective of aquatic life in most situations.

National Recommendations

National recommended aquatic life criteria for mercury are shown in Table 2.

Table 2: Table excerpt from National Recommended Aquatic Life Criteria Table (EPA 2013)

<i>Pollutant</i>	<i>CAS Number</i>	<i>Freshwater CMC^a</i> <i>(acute)</i> <i>(µg/L)</i>	<i>Freshwater CCC^b</i> <i>(chronic)</i> <i>(µg/L)</i>	<i>Publication Year</i>	<i>Notes</i>
<i>Mercury</i>	<i>7439976</i> <i>22967926</i>	<i>1.4</i>	<i>0.77</i>	<i>1995</i>	<i>Criteria for metals are expressed in terms of the dissolved metal in the water column</i>

^a*CMC: Criterion Maximum Concentration*

^b*CCC: Criterion Continuous Concentration*

Discussion

In 2003, DEQ began a negotiated rulemaking in response to a petition to update Idaho's mercury criteria (Docket No. 58-0102-0302). As a result of the negotiated rulemaking, DEQ proposed removal of acute and chronic numeric freshwater aquatic life criteria for mercury and the addition of footnote "g" to the toxic criteria table. On September 30, 2005, EPA disapproved Idaho's removal of mercury acute and chronic freshwater aquatic life criteria and footnote "g" stating that the proposed change was "inconsistent" with Clean Water Act Section 303(c) and 40 CFR 131.11. EPA provided several options to address the disapproval, listed below¹:

- evaluate the protectiveness of EPA's current 304(a) recommended numeric acute freshwater aquatic life criterion for mercury (1.4 µg/L);
- evaluate the protectiveness of Idaho's previous numeric chronic freshwater aquatic life criterion for mercury (0.012 µg/L);
- evaluate development of Idaho-specific numeric acute and chronic freshwater aquatic life criteria for mercury; and
- evaluate the use of a combination of protective numeric water column values and numeric wildlife criteria appropriate for Idaho species.

Currently, Idaho has no aquatic life criterion in rule. DEQ is requesting comments on whether to adopt aquatic life criteria, or to develop a strategy for demonstrating the human health criteria is protective of aquatic life through monitoring.

¹ L. Macchio, EPA, letter to Barry Burnell, DEQ. "EPA Disapproval of Idaho's Removal of Mercury Acute and Chronic Freshwater Aquatic Life Criteria, Docket No. 58-0102-0302. December 12, 2008.

References

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