



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OW-2017-0260; FRL-9965-39-OW]

Request for Scientific Views: Draft Updated Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Availability.

SUMMARY: The Environmental Protection Agency (EPA) is announcing the availability of Draft Updated Aquatic Life Ambient Water Quality Criteria for Aluminum in Freshwater for public comment. EPA first released freshwater criteria for aluminum in 1988 to protect aquatic life from harmful effects of aluminum toxicity. EPA is updating its recommended aluminum criteria to reflect the latest science and to provide users the flexibility to develop site-specific criteria based on site-specific water chemistry. The draft document provides a scientific assessment of ecological effects and is not a regulation. Following closure of this 60-day public comment period, EPA will consider the comments, revise the draft document, as appropriate, and then publish a final document that will provide recommendations for states and authorized tribes to establish water quality standards. The recommendations found in this draft document do not replace or supersede EPA's 1988 national recommended criteria for aluminum in ambient water.

DATES: Comments must be received on or before **[insert date, 60 days after publication in the Federal Register]**.

ADDRESSES: Submit your comments, identified by Docket ID No. **EPA-HQ-OW-2017-0260**, to the *Federal eRulemaking Portal*: <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or withdrawn. EPA may

publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION CONTACT: Diana Eignor, Health and Ecological Criteria Division, Office of Water (Mail Code 4304T), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone: (202) 566-1143; or e-mail: eignor.diana@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. How Can I Get Copies of This Document and Other Related Information?

1. Docket. EPA has established a docket for this action under Docket ID No. EPA-HQ-OW-2017-0260. Publicly available docket materials are available either electronically through www.regulations.gov or in hard copy at the Water Docket in the EPA Docket Center, (EPA/DC) EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426.

2. *Electronic Access.* You may access this Federal Register document electronically from the Government Printing Office under the “Federal Register” listings FDSys (<http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=FR>).

II. What is Aluminum and How Does it Affect Aquatic Life?

Aluminum is found in most soils and rocks and is the third most abundant element and the most common metal in the earth's crust. Aluminum can enter the water via natural processes, like weathering of rocks. Aluminum is also released to water by mining, industrial processes using aluminum, and waste water treated with alum, an aluminum compound. Aluminum is considered a non-essential metal because fish and other aquatic life do not need it to function. Elevated levels of aluminum can affect some species ability to regulate ions and inhibit respiratory functions. Aquatic plants are generally less sensitive to aluminum than fish and other aquatic life.

III. What are EPA’s Updated Recommended Levels of Aluminum in Freshwater?

The recommended level of aluminum in freshwater depends on a site’s water quality parameters. Studies have shown that three water chemistry parameters, pH, dissolved organic carbon (DOC), and hardness, can affect the toxicity of aluminum by affecting the bioavailability of aluminum in the water to aquatic species. Unlike the fixed criteria values in EPA’s 1988 criteria document, these updated draft criteria use a Multiple Linear Regression (MLR) model to normalize the data, and the resulting criteria are based on site pH, DOC, and hardness. This allows users to develop site-specific aluminum criteria for fresh waters that appropriately reflect water quality parameters. See Table 1 for a comparison of EPA’s currently recommended and updated draft criteria values.

Table 1: 2017 Draft Aluminum Aquatic Life Criteria Compared to Current 1988 Criteria^a

Version	Freshwater Acute (1 day, total aluminum)	Freshwater Chronic (4-day, total aluminum)
2017 Draft AWQC Criteria (MLR normalized to pH = 7, hardness = 100 mg/L, DOC = 1 mg/L)	1,400 µg/L	390 µg/L
1988 AWQC Criteria (pH 6.5 – 9.0, across all hardness and DOC ranges)	750 µg/L	87 µg/L

^a Values are recommended not to be exceeded more than once every three years on average. Note: Values will be different under differing water chemistry conditions as identified in this document.

IV. What are Section 304(a) Water Quality Criteria?

Section 304(a) water quality criteria are recommendations developed by EPA under authority of section 304(a) of the Clean Water Act based on the latest scientific information which examines the effect of a particular constituent concentration on an aquatic species and/or human health.

Section 304(a)(1) of the Clean Water Act directs the EPA to develop and publish and, from time to time, revise criteria for water quality accurately reflecting the latest scientific knowledge. Water quality criteria developed under section 304(a) are based solely on data and scientific judgments on the relationship between pollutant concentrations and environmental and human health effects. Section 304(a) criteria do not reflect consideration of economic impacts or the technological feasibility of meeting pollutant concentrations in ambient water.

Section 304(a) criteria provide guidance to states and authorized tribes in adopting water quality standards that ultimately provide a basis for controlling discharges of pollutants. The criteria also provide guidance that EPA considers when promulgating federal regulations under section 303(c) when such action is necessary. Under the Clean Water Act and its implementing

regulations, states and authorized tribes are to adopt water quality criteria to protect designated uses (*e.g.*, aquatic life, recreational use). EPA's water quality criteria recommendations are not regulations. Thus, EPA's recommended criteria do not constitute legally binding requirements. States and authorized tribes may adopt other scientifically defensible water quality criteria that differ from these recommendations. As part of the WQS triennial review process defined in section 303(c)(1) of the CWA, the states and authorized tribes are responsible for maintaining and revising WQS. Standards consist of designated uses, water quality criteria to protect those uses, a policy for antidegradation, and may include general policies for application and implementation. Section 303(c)(1) requires states and authorized tribes to review and modify, if appropriate, their WQS at least once every three years. States and authorized tribes must adopt water quality criteria that protect designated uses. Consistent with EPA's regulations at 40 CFR 131.11(a), protective criteria must be based on a sound scientific rationale and contain sufficient parameters or constituents to protect the designated uses. Criteria may be expressed in either narrative or numeric form. States and authorized tribes have four options when adopting water quality criteria for which EPA has published section 304(a) criteria. They may:(1) Establish numerical values based on recommended section 304(a) criteria; (2) Adopt section 304(a) criteria modified to reflect site-specific conditions;(3) Adopt criteria derived using other scientifically defensible methods; or (4) Establish narrative criteria where numeric criteria cannot be established or to supplement numeric criteria (40 CFR 131.11(b)).

V. Solicitation of Scientific Views

EPA is soliciting additional scientific views, data, and information regarding the science and technical approach used in the derivation of the draft criteria.

Dated: July 17, 2017.

Michael H. Shapiro,

Acting Assistant Administrator.

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