



ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OW-2016-0353; FRL 9957-26-OW]

Draft Field-Based Methods for Developing Aquatic Life Criteria for Specific Conductivity

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability.

SUMMARY: The Environmental Protection Agency (EPA) is announcing the availability of Draft Field-Based Methods for Developing Aquatic Life Criteria for Specific Conductivity for public comment. Elevated ionic concentration measured as specific conductivity has been shown to negatively impact aquatic life in a range of freshwater resources. Once finalized, states and authorized tribes located in any region of the country may use the methods to develop field-based conductivity criteria for flowing waters. This document does not impose binding water quality criteria on any state, but instead provides methods to assist states and tribes that seek to develop such criteria for adoption into their water quality standards. 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 document, as appropriate, and then publish a final document that will provide methods for states and authorized tribes that they may use to develop water quality standards.

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

ADDRESSES: Submit your comments, identified by Docket ID No. **EPA-HQ-OW-2016-0353**, 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 Once submitted, comments cannot be edited or withdrawn.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: Colleen Flaherty, Health and Ecological Criteria Division (Mail Code 4304T), Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460; telephone: (202) 564-5939; or e-mail: flaherty.colleen@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information:

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

1. Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Water Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The 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. For additional information about EPA's public docket, visit EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

II. Information on the *Draft Field-Based Methods for Developing Aquatic Life Criteria for Specific Conductivity*:

EPA has developed a set of draft methods that states and authorized tribes may use to derive field-based ecoregional ambient aquatic life criteria for ionic mixtures measured as specific conductivity, a measurement of ionic concentration, in flowing waters. Elevated ionic concentration measured as specific conductivity has been shown to impact aquatic life in a range of freshwater resources. Different mixtures of ions that increase specific conductivity are associated with natural and anthropogenic sources.

EPA's draft methods provide flexible approaches for developing science-based conductivity criteria for flowing waters that reflect ecoregional- or state-specific factors. Once final, states and authorized tribes located in any region of the country may use the methods to develop field-based conductivity criteria for flowing waters. The document does not impose binding water quality criteria on any state, but instead provides methods to assist states and tribes that seek to develop such criteria for adoption into their water quality standards. The draft document provides a scientific assessment of ecological effects and is not a regulation.

EPA's draft methods are based on effects observed in streams with different levels of specific conductivity and take into account natural variation in background specific conductivity and the aquatic species adapted to it. The draft document describes how to derive protective

field-based aquatic life criteria for specific conductivity, including how to estimate a criterion continuous concentration for chronic exposures, how to estimate a maximum exposure concentration protective of acute toxicity, how to assess geographic applicability and potential confounding factors, and how to determine duration and frequency parameters.

EPA is also providing four case studies to illustrate how states and tribes may use the draft field-based methods to develop criteria in ecoregions with different background ionic concentrations measured as specific conductivity and demonstrate how to assess the applicability of criteria developed for one ecoregion to a different ecoregion. The case studies use field data to demonstrate how to apply the methods to derive example criteria for specific conductivity for flowing waters dominated by sulfate and bicarbonate salts but not for flowing waters dominated by chloride salts.

EPA typically relies on laboratory toxicity test data for surrogate species as defined in the Agency's *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* (1985) for aquatic life criteria development. The draft field-based methods for specific conductivity were adapted to be consistent with the Agency's traditional approach to derive aquatic life criteria. The draft field-based methods rely on geographically referenced, paired observations of specific conductivity and the presence and absence or abundance of freshwater benthic macroinvertebrate genera from wadeable perennial streams. An analysis of data for fish from a composite of case study ecoregions demonstrates that the example criteria based on macroinvertebrates are also protective of fish.

This document underwent an internal EPA review and two independent contractor-led external peer reviews.

III. 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 field-based methods. EPA is also soliciting suggestions from the public for additional ecoregional case studies for future consideration.

Dated: December 16, 2016.

Joel Beauvais,

Deputy Assistant Administrator, Office of Water.

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