

Proposed Aquatic Life and Aquatic-Dependent Wildlife Selenium Criterion for California Fresh Waters

Summary

The Environmental Protection Agency (EPA) is proposing to establish a federal Clean Water Act (CWA) selenium water quality criterion for California fresh waters that protects aquatic life and aquatic-dependent wildlife. Elevated selenium levels can contribute to the decline of fish and aquatic-dependent birds, with the most severe toxic effects being reproductive impairments.

Background

To protect aquatic communities from the harmful effects of pollutants in surface waters, states must establish criteria for their waters that are designated for such uses. The EPA periodically publishes criteria recommendations under CWA section 304(a) for states to consider.

The EPA promulgated the State's existing selenium criteria for certain waters on the State's behalf in 1992 as part of the National Toxics Rule (NTR), and again in 2000 as part of the California Toxics Rule (CTR) based on available science. In 2016, the EPA published a revised recommended aquatic life selenium criterion for freshwater based on the latest scientific knowledge (see the EPA's Final Aquatic Life Ambient Water Quality Criteria for Selenium – Freshwater 2016 at:

<https://www.epa.gov/wqc/aquatic-life-criterion-selenium-documents>).

In 2013, the Our Children's Earth Foundation and Ecological Rights Foundation ("plaintiffs") sued the EPA alleging in part that the EPA had failed to establish selenium criteria in the CTR consistent with the requirements of the CWA. In August 2014, the EPA entered into a consent decree with the plaintiffs that required the EPA to propose selenium criteria for California fresh waters covered by the CTR to protect aquatic life and aquatic-dependent wildlife by November 30, 2018.

Overview of the proposed selenium criterion

The EPA is proposing a chronic criterion for California based on the EPA's current CWA 304(a) recommended criterion for selenium. The proposed selenium water quality criterion is comprised of criterion elements of fish tissue, bird tissue, and a performance-based approach for translating the bird and fish tissue elements into site-specific water column elements.

The EPA is proposing selenium fish and bird tissue elements because they reflect biological uptake through diet, the predominant pathway for selenium toxicity, and because they are most predictive of the observed biological endpoint of concern, reproductive toxicity.

Specifically, the EPA is proposing its recommended 2016 CWA section 304(a) selenium criterion for freshwater with the addition of a bird tissue criterion

element and the replacement of the 304(a) selenium monthly average exposure water column criterion elements with a performance-based approach. The approach would be used by California to translate the tissue criterion elements into protective water column elements on a site-specific basis. This performance-based approach maximizes the flexibility for the State to develop water-column translations specifically tailored to each individual waterbody. Additionally, the performance-based approach provides two methodologies for deriving site-specific water column criterion elements: the mechanistic modeling approach and the empirical bioaccumulation factor (BAF) approach.

The EPA's proposed rule does not apply to California waters where site-specific selenium criteria have been adopted, nor does it apply to California waters with selenium criteria promulgated in the NTR. In other words, this proposal would not apply to the San Joaquin River from Sack Dam to Vernalis, Mud Slough, Salt Slough, the constructed and reconstructed water supply channels in the Grasslands watershed, surface waters that are tributaries to the Salton Sea, nor the San Francisco Bay and Delta.

Is the EPA soliciting comments on any specific element of the proposed rule?

The EPA welcomes comments concerning any component of the proposed rule and the EPA requests any additional information for consideration by the Agency. The EPA is also specifically soliciting comment on the following:

- The *Draft Translation of Selenium Tissue Criterion Elements to Site-Specific Water Column Criterion Elements for California, Version 1, August 2018* and how it has been applied in this proposed rule.
- Whether or not the EPA should include the 2016 CWA section 304(a) water column criterion elements in addition to the performance-based approach to translate site-specific water column criterion elements.
- Whether or not the EPA should include the 2016 CWA section 304(a) water column

criterion elements instead of including the performance-based approach.

- Whether or not the EPA should include two criteria instead of one criterion; one criterion to protect aquatic life designated uses and the other to protect wildlife designated uses.

Public hearings on the proposed rule

The EPA is offering two online public hearings so that interested parties may provide oral comments on this proposed rule. The first public hearing will be on Tuesday, March 19, 2019 from 9 AM – 11 AM PT. The second public hearing will be on Wednesday, March 20, 2019 from 4 PM – 6 PM PT.

Where can I find more information?

Contact Julianne McLaughlin at (202) 566-2542, mclaughlin.julianne@epa.gov, Danielle Anderson at (202) 564-1631, anderson.danielle@epa.gov, or Diane Fleck at (415) 972-3527, fleck.diane@epa.gov. To access the proposed rule, supporting documents, and more details on how to make written comments and/or how to register to make oral comments at the online public hearings, visit the EPA's Water Quality Standards website at:

<https://www.epa.gov/wqs-tech/water-quality-standards-establishment-numeric-criterion-selenium-fresh-waters-california>.