

Final Federal Aquatic Life Criteria for Aluminum in Oregon Fresh Waters

Summary

EPA has finalized federal Clean Water Act (CWA) water quality criteria for fresh waters in the state of Oregon that are jurisdictional under the CWA to protect aquatic life from the effects of exposure to harmful levels of aluminum. Aluminum is an abundant element in the earth's crust and naturally occurs in surface waters, such as rivers and lakes. However, aluminum can be mobilized in the environment through anthropogenic activities, such as mining, land management and industrial practices. Depending on local water chemistry conditions, aluminum can be toxic to aquatic life. EPA's final rule uses the latest scientific knowledge on the interaction between water chemistry and aluminum toxicity in water.

Background

To protect aquatic communities from the harmful effects of pollutants in surface waters, states must establish water quality criteria for their water bodies that are protective of designated aquatic life uses. EPA periodically publishes national criteria recommendations under CWA Section 304(a) for states to consider.

In 2013, EPA disapproved Oregon's freshwater acute (short-term) and chronic (long-term) aluminum criteria as not meeting CWA requirements to protect aquatic life in the state. Per the terms of a consent decree with Northwest Environmental Advocates, EPA was required to sign a final rule no later than six months after the date on which the National Marine

Fisheries Service (NMFS) issued a Biological Opinion under Section 7 of the Endangered Species Act regarding EPA's proposal to promulgate aluminum criteria for Oregon. NMFS issued its Biological Opinion on July 1, 2020.

EPA's final aluminum aquatic life criteria for Oregon

The final rule applies to all fresh waters under Oregon's jurisdiction and covered by the CWA that have a designated aquatic life use. EPA's aluminum criteria for Oregon fresh waters are based on the Agency's 2018 national CWA Section 304(a) recommended freshwater aquatic life criteria for aluminum (see relevant documents online at www.epa.gov/wqc/2018-final-aquatic-life-criteria-aluminum-freshwater). The criteria recommendation includes a calculator for deriving criteria output values based on site-specific ambient water chemistry, including pH, dissolved organic carbon (DOC), and total hardness. EPA's final rule establishes acute and chronic aluminum criteria for Oregon consistent with that calculation approach. The state will use the calculated outputs to identify acute and chronic aluminum criteria values to protect aquatic life over the full range of water chemistry conditions, including during conditions when aluminum is most toxic.

The aluminum criteria allow flexibility in application by regulated entities to account for site-specific water quality characteristics that affect aluminum toxicity. The final rule also addresses Oregon's ability

to use emerging analytical methods to measure bioavailable aluminum for characterizing aluminum toxicity in ambient waters, where scientifically appropriate and allowable by state and federal regulations.

How EPA's final rule relates to Oregon's efforts to develop criteria

If Oregon adopts and submits new or revised aluminum criteria that EPA finds meet CWA requirements, and EPA approves such criteria, EPA would undertake a rulemaking to withdraw the federal aluminum criteria such that Oregon's criteria would be effective for CWA purposes.

Where can I find more information?

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