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Cadmium: U.S. Environmental Protection Agency Public Notices Availability of Revised Recommended Aquatic Life Ambient Water Quality Criteria

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The United States Environmental Protection Agency ("EPA") noted in the April 4th Federal Register the availability of revised recommended aquatic life water quality criteria for cadmium. See 81 Fed. Reg. 19176.

EPA states that it has updated its national recommended ambient water quality criteria for cadmium in order to "reflect the latest scientific information, and current EPA policies and methods."

The Clean Water Act requires that states adopt water quality criteria protective of the designated uses for their various waterbodies. They must specify the maximum concentration of pollutants that may be present in the water without impairing its suitability for certain uses.

Water quality criteria generally assume three forms that include:

- Numeric terms reflecting maximum concentration of a particular pollutant in the receiving water
- Bioassay or biomonitoring results which reflect mortality rates of certain waterborne organisms relative to the concentrations of particular pollutants
- Terms narrative in nature

The Clean Water Act requires that EPA periodically issue new or revised water quality criteria. See 33 U.S.C. § 1304.

EPA states that its water quality criteria for cadmium provides recommendations to the states and tribes authorized to establish water quality standards under the Clean Water Act. The agency also notes that:

... In adopting water quality standards, states set exposure protections for aquatic life; acute exposure to cadmium results in lethality, while chronic exposure to cadmium negatively impacts growth, development, behavior, reproduction, and immune and endocrine systems in aquatic life. Cadmium enters the environment by natural and human processes, however, human sources, such as mining and urban process, are responsible for contributing approximately 90 percent of the cadmium found in surface waters.

The Federal Register contains a table summarizing 2001 and 2016 aquatic life AWQC for cadmium.

	2016 AWQC update		2001 AWQC	
	Acute (1-hour Dissolved Cd)	Chronic (4-day, dissolved Cd)	Acute (1-day dissolved Cd)	Chronic (4-day, dissolved Cd)
Freshwater (Total Hardness = 100 mg/L as CaCO3)	1.8 ug/L	0.72 ug/L	2.0 ug/L	0.25 ug/L
Estuarine/marine.....	33 ug/L	7.9 ug/L	40 ug/L	8.8 ug/L

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