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United States
Environmental Protection Agency

Aquatic Life Criteria – Cadmium

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Revision Information

Node ID	Revision ID	Author	Current State	Revised On
126163	346513	rkearney	Draft	03/29/2016 8:28AM

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What is cadmium?

Cadmium is a relatively rare, naturally occurring metal found in mineral deposits and distributed ubiquitously at low concentrations in the environment.

How is cadmium used?

Cadmium's primary industrial uses are for the manufacturing of batteries, pigments, plastic stabilizers, metal coatings, alloys and electronics. Recently, cadmium has been used in manufacturing nanoparticles (quantum dots) for use in solar cells and color displays.

How does cadmium affect aquatic life?

Cadmium is a non-essential metal with no biological function in aquatic animals. In addition to acute effects such as mortality, chronic exposure to cadmium can lead to adverse effects on growth, reproduction, immune and endocrine systems, development, and behavior in aquatic organisms.

2016 Aquatic Life Criteria for Cadmium

The Environmental Protection Agency's (EPA) national recommended ambient water quality criteria for cadmium reflects the latest scientific information, and current EPA policies and methods. EPA's water quality criteria for cadmium will provide recommendations to states and tribes authorized to establish water quality standards under the Clean Water Act. In adopting water quality standards, states set exposure protections for aquatic life. In addition to acute effects such as mortality, chronic exposure to cadmium can lead to adverse effects on growth, reproduction, immune and endocrine systems, development, and behavior in aquatic organisms. Cadmium enters the environment by natural and human processes, however, human sources, such as mining and urban processes, are responsible for contributing approximately 90 percent of the cadmium found in surface waters.

- Fact Sheet: Aquatic Life Criteria for Cadmium (March 2016)
- Pre-publication: Aquatic Life Ambient Water Quality Criteria for Cadmium - 2016 (PDF) (6 pp, 58 K, About PDF) (March 30, 2016)
- Aquatic Life Ambient Water Quality Criteria for Cadmium – 2016
- External Peer Review Report for the Draft Cadmium Aquatic Life Ambient Water Quality Criteria
- EPA Response to External Peer Review Report on the Draft Cadmium Aquatic Life Ambient Water Quality Criteria
- EPA Response to Public Comments on 2015 Draft Cadmium Aquatic Life Ambient Water Quality Criteria

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