

## Proposed Rule to Establish Protective Water Quality Standards for Aquatic Life in the Delaware River

December 2023

The United States Environmental Protection Agency is proposing revised water quality standards (WQS) to protect aquatic life in certain zones of the Delaware River under the jurisdiction of Delaware, New Jersey, and Pennsylvania. Specifically, the EPA is proposing an additional designated use for the river that includes aquatic life propagation (production, growth, and survival of early life stages resulting in the addition of new individuals to the population), and water quality criteria for dissolved oxygen to help protect that use.

### Background

Clean Water Act (CWA) section 101(a)(2) establishes the national goal that water quality should provide for the protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water. The EPA's regulation at 40 CFR 131.10(g) implements this statutory provision by requiring that WQS protect these "101(a)(2) uses" unless they are shown to be unattainable. WQS define the water quality goals of a waterbody and consist of three core components: designated uses, water quality criteria that identify conditions that support the designated uses, and antidegradation requirements.

On December 1, 2022, the EPA issued an Administrator's Determination that in Zone 3, Zone 4, and the upper portion of Zone 5 of the Delaware River (approximately from Philadelphia, PA to Wilmington, DE), a revised designated use to protect aquatic life propagation, and corresponding dissolved oxygen criteria, are necessary to meet CWA requirements. In these zones of the Delaware River, there are two oxygen-sensitive species – Atlantic Sturgeon and Shortnose Sturgeon – that are federally listed as endangered under the Endangered Species Act.

### Proposed Designated Use

The EPA is proposing a designated use that includes the protection and propagation of resident and migratory aquatic life. The EPA's proposed designated use would apply in addition to the states' designated uses that are already applicable for CWA purposes.

### Proposed Dissolved Oxygen Criteria

The EPA used site-specific data and information from published scientific literature relevant to the endangered sturgeon species to derive the proposed dissolved oxygen criteria. The EPA's proposed criteria are based on the latest scientific knowledge about dissolved oxygen levels that would support the proposed aquatic life designated use which includes propagation. The EPA's proposed dissolved oxygen criteria would replace each of the three states' currently applicable dissolved oxygen criteria for the specified zones of the Delaware River.

The EPA is proposing dissolved oxygen criteria for three seasons based on early life stages of oxygen-sensitive aquatic species (as shown in Table 1):

- 1) *Spawning and Larval Development* (March 1 – June 30);
- 2) *Juvenile Development* (July 1 – October 31); and
- 3) *Overwintering* (November 1 – February 28/29).

The proposed criteria for each season consist of three components: magnitude, duration, and exceedance frequency. The magnitude component indicates the required minimum level of dissolved oxygen in the water. The duration component specifies the time period over which dissolved oxygen levels are averaged before comparison with the magnitude. The exceedance frequency component specifies how often each magnitude can be exceeded in each season while still ensuring that the use is protected. For dissolved oxygen, an exceedance occurs when the oxygen level in the water is below the magnitude.

Table 1. The EPA’s Proposed Dissolved Oxygen Criteria to Support Oxygen-Sensitive Aquatic Species

Season	Magnitude (Percent Oxygen Saturation)	Duration	Exceedance Frequency
Spawning and Larval Development (March 1 – June 30)	66%	Daily Average	10% (12 Days Cumulative)
Juvenile Development (July 1 – October 31)	66%	Daily Average	10% (12 Days Cumulative)
	74%	Daily Average	50% (61 Days Cumulative)
Overwintering (November 1 – February 28/29)	66%	Daily Average	10% (12 Days Cumulative)

### Public Hearings and Comments on the EPA’s Proposed Rule

Once the proposed rule is published in the Federal Register, the EPA will accept comments on it for 60 days. In addition to accepting written comments from the public, the EPA is offering two online public hearings on the proposed rule so that individuals may provide oral comments. For details on how to submit comments and/or attend an online public hearing, visit: <https://www.epa.gov/wqs-tech/water-quality-standards-delaware-river>.

### Where Can I Find More Information?

Contact Hannah Lesch at (202) 566-1224 or [Lesch.Hannah@epa.gov](mailto:Lesch.Hannah@epa.gov), or contact Erica Fleisig at (202) 566-1057 or [Fleisig.Erica@epa.gov](mailto:Fleisig.Erica@epa.gov). To access the proposed rule, Federal Register notice, and supporting documents, visit EPA’s [Water Quality Standards website](#).