



## Maine Department of Environmental Protection 2024 Triennial Review of Water Quality Standards

### Department Proposals for Changes to WQS

Department staff submitted 2 proposals to be considered for changes to water quality standards:

#### **Clarification of Narrative Aquatic Life Criteria for Water Quality Class GPA**

##### **1. Citation for standard or rule to be changed:**

38 MRS §465-A.1.B. Class GPA waters must be described by their trophic state based on measures of the chlorophyll "a" content, Secchi disk transparency, total phosphorus content and other appropriate criteria. Class GPA waters must have a stable or decreasing trophic state, subject only to natural fluctuations, and must be free of culturally induced algal blooms that impair their use and enjoyment. The number of *Escherichia coli* bacteria in these waters may not exceed a geometric mean of 29 CFU or MPN per 100 milliliters over a 90-day interval or 194 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval. [PL 2021, c. 551, §13 (AMD).]

##### **2. Details of proposed change in standard or rule:**

The narrative aquatic life criteria for Maine waters currently includes language for each class as follows:

- Class AA, A and SA – aquatic life must be “as naturally occurs”
- Class B – waters must “support all aquatic species indigenous to those waters without detrimental changes in the resident biological community”
- Class C – waters must “support all species of fish indigenous to those waters and to maintain the structure and function of the resident biological community”
- Class SB – waters must “be of sufficient quality to support all estuarine and marine species indigenous to those waters without detrimental changes in the resident biological community”
- Class SC – waters must “support all species of fish indigenous to those waters and to maintain the structure and function of the resident biological community”

Although Class GPA language includes narrative criteria that “habitat must be characterized as natural”, it lacks aquatic life criteria as in the other classes above. This proposal is to add language to clarify the narrative aquatic life criteria for Class GPA waters. Draft language will be crafted in consultation with the Maine Department of Inland Fisheries and Wildlife.

##### **3. Provide a statement that justifies why the standard or rule should be changes as proposed:**

For water quality Classes AA, A, and SA, Maine statutes currently include language providing for the protection of aquatic life as part of the criteria. For Classes B, C, SB and SC, language is provided in the criteria and in relation to discharge provisions. For Class GPA, Maine statute

stipulates that these waters must provide natural habitat for aquatic life, but there are no specific aquatic life criteria. Under its existing and longstanding interpretations and practice with respect to the existing language, the Department has treated the existing statutory provisions as containing enforceable narrative aquatic life criteria for all Classes. The addition of the proposed language to the criteria section of Class GPA would thus clarify and reaffirm the Department's current and longstanding interpretations and practice of using the existing language to provide for the support and protection of aquatic life.

**4. How will the new standard affect stakeholders:**

Since the proposed change would follow existing interpretations and practice, it is not expected to have any impacts on stakeholders. However, as noted above, draft language will be crafted in consultation with the Maine Department of Inland Fisheries and Wildlife to ensure that it does not conflict with management of non-native

**Update the Criteria for DO for Class B Freshwaters to Clarify Magnitude, Duration and Frequency**

**1. Citation for standard or rule to be changed:**

38 M.R.S. Article 4-A §. 465, 3. Class B Waters

**2. Details of proposed change in standard or rule:**

Class B waters must be of sufficient quality to support all aquatic species indigenous to those waters without detrimental changes in the resident biological community. **The dissolved oxygen content of Class B waters may not be less than 7 parts per million or 75% of saturation, whichever is higher**, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the one-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas. Between April 15th and October 31st, the number of Escherichia coli bacteria in these waters may not exceed a geometric mean of 64 CFU or MPN per 100 milliliters over a 90-day interval or 236 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval.

The proposal is to modify the highlighted portion of text to clarify the criteria's magnitude, duration and frequency.

**3. Provide a statement that justifies why the standard or rule should be changes as proposed:**

The existing criterion statement was derived from a singular/instantaneous reading mindset. Continuous dissolved oxygen (DO) monitoring data are now routinely available, which has highlighted a rigidity to the standard that does not accommodate the natural variability and diurnal fluctuations that occur in many waters across the State for brief periods during the warmest times of the year. The proposed revisions are intended to accommodate these expected excursions below the currently rigid instantaneous standard and protect the aquatic

life designated use without providing significant allowances for DO excursions caused by anthropogenic loadings of Biological Oxygen Demand (BOD) or nutrients.

**4. How will the new standard affect stakeholders:**

It has been found that, on occasion, the existing standard is not always met even in natural reference streams and rivers. As a result, a strict 7 mg/L criterion has been challenging for DEP, the regulated community and other stakeholders, particularly when continuous data sets are available.

Discharges have been implicated in situations where the current 7 mg/L standard has been violated, but there is no suggestion that the discharge is the cause of the violation. The new standard would eliminate these false positives.

NGOs have advocated for water classification upgrades, which the Department has been unable to support due to continuous datasets that have highlighted brief periods non-attainment in the apparent absence of anthropomorphic stressors. The new criteria would provide more clarity to upgrade discussions and decisions and possibly allow for additional classification upgrades, which would in turn help 'lock in' improvements that have been made to water quality over time.

Stakeholders that collect water quality data may need to adjust their monitoring protocols and equipment to align with modified criteria. For example, groups that currently only collect discrete data may need to also collect continuous data.