



Board of Environmental Protection
Department of Environmental Protection
17 State House Station
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Augusta, ME 04333-0017

January 28, 2025

Written Comments on Rulemaking for Chapter 583: Nutrient Criteria for Class AA, A, B, and C Fresh Surface Waters

Dear Members of the Board of Environmental Protection,

On November 21, 2024, the Board of Environmental Protection was introduced to the proposed Chapter 583 rules by staff from the Department of Environmental Protection (DEP), and the Board voted to post the rule changes for public comment and public hearing. The public hearing was held on January 16, 2025. I attended both meetings and provided testimony in support of the proposed rule changes at the public hearing. I am now providing follow-up written comments regarding the information I presented at the public hearing.

Reasons We Support Chapter 583 Rulemaking Overall

As populations within Maine continue to grow and more development pressure is placed on watersheds across the state, more waterbodies will be at risk of eutrophication if adequate management actions are not taken. Currently, there is a concerning trend of increasing cyanobacteria blooms in inland lakes and macroalgae blooms in coastal waters in Maine. Although these rules only apply to freshwater rivers and streams, these moving waterbodies are the primary vehicles by which nutrients enter our lakes and coastal waters. By establishing a framework to determine if freshwater rivers and streams are impaired for nutrients using a combination of total phosphorus (TP) concentrations and response indicators (e.g., nuisance algal cover, chlorophyll-*a* concentrations, and sewage fungus), these rules will allow DEP staff to designate waterbodies experiencing eutrophication as impaired for nutrients. This designation will open the door for federal funding and other resources that can be used to develop and implement management strategies to reduce nutrients and improve water quality across the state.

These rules have been developed with sound scientific justification, extensive stakeholder engagement, and close coordination with the Environmental Protection Agency. Although these rules reflect a big step in the positive direction for the protection of surface waters from nutrients, they would not trigger a substantial change in the number of waterbodies that are currently listed as impaired due to the similarities between the response indicators used in the rule and the current process that DEP uses to evaluate attainment of aquatic life use standards through biomonitoring (i.e., a lot of the waterbodies that would now be considered impaired under this rule are already impaired for aquatic life use or other reasons). This positive but relatively modest change to the number of waterbodies listed as impaired within the state will allow the waterbodies that need comprehensive nutrient management to receive funding to perform that management without overwhelming department staff with an influx of new impaired waterbodies or threatening to divert funding away from other waterbodies with important water quality impairments other than nutrients.



Other downstream positive impacts that this rule will have on water quality in Maine include:

- Encouraging more TP and chlorophyll-*a* data to be collected across the state as municipalities, watershed associations, and other interested parties evaluate whether their waterbodies of interest are attaining the criteria.
- Enabling the early detection of eutrophication issues by establishing a framework where TP concentrations can be compared to an established threshold before that threshold is surpassed and broader impacts to the ecosystem are observed (i.e., response indicators).

Technical Questions

We have a few technical questions about the specific methods used to develop the TP concentrations displayed in Table 1 and the reasoning behind the changes to the proposed TP and chlorophyll-*a* concentrations in prior drafts of the nutrient criteria compared to the current TP and chlorophyll-*a* concentrations in the proposed rules today.

These questions are as follows:

1. What is the Department's reasoning behind using the regression equations of TP and chlorophyll-*a* concentrations and the changepoint analysis of percent nuisance algal cover and TP concentrations for the determination of the TP criteria for Class C waters and not in the determination of the criteria for Class AA & A and Class B? Were these additional analyses used for Class C waters because there were an insufficient number of samples to compute the probability of low gradient sites attaining at least Class C standards?
2. What is the Department's reasoning for adjusting the methodology and subsequently the proposed values for the TP and chlorophyll-*a* concentrations from prior drafts of the nutrient criteria to the proposed values in the rules today?

Recommendations to Improve the Rules

To improve clarity and flexibility in the rules, we propose the following recommendations:

- Consider allowing Department staff to conduct a study to develop a site-specific TP value for Case C in the decision framework (Figure 1) like Case B. Case C is the situation where TP concentrations are below the criteria but one or more of the response variables is in non-attainment. In the current rules, the Department can conduct a study to develop a site-specific value for a nutrient other than TP, but not TP. Due to the heterogeneity in nutrient conditions across waterbodies, it is possible that some waterbodies have a lower TP threshold than others, which could warrant the development of a lower criteria similar to how higher criteria can be developed in Case B.
- Recommend adjusting the table on page one of the rules that outlines which waterbodies are covered by Chapter 583 so that it is clearer, particularly as it pertains to impoundments. The applicability of the rules to impoundments is clear from the Definitions section, but the size restrictions attached to the impoundments in table on page one introduces confusion.



Natural Resources Council of Maine

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Thank you for the opportunity to provide input on this rulemaking; we appreciate the Department's consideration of these comments. Please feel free to contact me if you have any questions or need additional information.

Sincerely,

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