



January 25, 2023

MassDEP, Bureau of Water Resources
Division of Watershed Management
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Proposed Title 5 & Watershed Permit Regulations
310 CMR 15.00 and 314 CMR 21.00

To Whom It May Concern:

The Board of the Brewster Ponds Coalition (BPC) has reviewed the proposed changes to the State Environmental Code Title 5 (310 CMR 15.00), and the proposed Massachusetts Watershed Permit Regulations (314 CMR 21.00). In general, the BPC supports the regulations being proposed by MassDEP. We offer recommendations below which we believe will help implement the proposed regulations and improve the protection of all of our water resources, including estuaries, Cape Cod Bay, and freshwater ponds.

We are an environmental nonprofit organization formed in 2014 with a mission to improve the health of Brewster's ponds through science, education and advocacy. Our work is important not only for the environment but also the economic health of our town. Brewster is graced with more pond acreage than any town on Cape Cod and is home to over 80 freshwater kettle ponds. The ponds are important ecosystems providing recreational and economic value to our town. But they are fragile and many are nutrient impaired; they need action now to protect and improve them.

Septic systems contribute most of the nutrients to Brewster's groundwater, surface waters, bays and estuaries. 100% of Brewster is on septic systems. Every home, communal living facility, restaurant, business and school in Brewster is connected to a septic system. In total, these septic systems process 300-400 million gallons of wastewater every year, the equivalent of 2-3 average sized swimming pools for every household in Brewster. It is with this awareness and concern that the BPC offers our comments below.

Comment 1 – Consider the Need to Protect Freshwater Resources

The proposed regulations focus exclusively on the impact of nitrogen on the Cape's impaired saltwater bays and estuaries. Reducing nitrogen is the key driver for these proposed regulations, as nitrogen is seen as the key nutrient causing estuary impairment. While the BPC supports this focus on nitrogen related to impairments, we urge the DEP to also consider the need to protect our ponds and freshwater resources. To protect and improve these, the contribution of both phosphorus and nitrogen from septic systems to ponds and freshwater resources needs to be addressed. If not, the condition of our already impaired ponds will only worsen.

A concern about the current regulations is that they will focus all efforts and resources on the protection of impaired estuaries, specifically by reducing nitrogen discharges to these estuaries. In Brewster, this would include Pleasant Bay, the Herring River (in Harwich), and the Bass River/Swan Pond estuaries. No measures to protect and improve ponds and freshwater resources are included in the regulations. We are concerned that the regulations will inadvertently result in delayed or reduced efforts to protect and improve freshwater resources. The narrowly focused regulations will divert or monopolize funding, technical support (e.g., engineering and science resources), and regulatory resources (at both the state and local levels) to protection of estuaries, with the effect of reducing the amount of the support and funding available to address the problems facing ponds and freshwater resources. It would be a tragic and flawed outcome if freshwater ponds were neglected from this regulatory effort - estuaries improved at the expense of ponds being allowed to become more impaired.

We urge the MassDEP to consider the measures and level of effort needed for protection and remediation of impaired ponds when proposing these regulations, and not just the resources needed related to estuaries. **The MassDEP should make sure that adequate funding and resources are planned to address freshwater protection needs. With many ponds already impaired by discharges from septic systems, we urge development as soon as possible of regulations to address septic system discharge impacts on ponds.**

Comment 2 - Deadline to Upgrade Septic Systems in Natural Resource Areas

Section 15.215.2.a in the proposed regulations states that Best Available Nitrogen Reducing Technology (BANRT) systems must be installed within five years of the effective date of the new regulations at all properties within a Natural Resource Area - i.e. areas draining to impaired estuaries - unless a notice of intent to apply for a watershed permit is submitted by the towns in which the Natural Resource Area is located. The BPC is concerned that this will result in a very large number of septic systems that need to be installed or upgraded.

It seems unlikely that there will be sufficient engineers, designers, installers and products available to handle demand in a 5-year window. Further, there would be a large and perhaps unmanageable burden placed on local boards of health, who must consider and approve individually each septic system installation or upgrade.

There are several possible means to address this resource and logistical concern. We recommend that priority could be given to upgrading septic systems likely to have the most immediate impact on impaired estuaries. These would be the septic systems in close proximity, such as within 1,000 feet, and flowing directly to estuaries without first flowing to a freshwater pond (i.e. an unattenuated watershed). Properties with systems beyond 1,000 feet of the estuary or where groundwater does not flow directly to the estuary (attenuated watersheds) could be allowed more time to upgrade their septic systems, such as 10 or 15 years.

Extending this time frame would reduce the concerns about finding contractors to install the BANRT systems and give each Board of Health more time to work with property owners to upgrade their systems. **This approach would also help with the resource issue raised in Comment 1 above.** An extended timeframe is also more consistent with the 20-year timeframe granted to Towns under a watershed permit to achieve nitrogen removal required to protect the estuaries.

For septic systems discharging in attenuated watersheds (i.e., to a pond before reaching an impaired estuary), the septic system upgrades needed to protect or improve ponds likely will mean upgrades that remove phosphorus in addition to nitrogen. Phosphorus is generally the key nutrient that leads to algae and cyanobacteria blooms in freshwater ponds. Regulations that only address nitrogen will fall short of what is needed to improve and protect our pond waters. Published science research points to limiting both nitrogen and phosphorus as critical to protect and remediate pond impairment. **We think a holistic approach should be taken. Such a holistic approach supports the idea of additional time given to septic systems in attenuated watershed areas - time that can be used by the DEP to develop the measures and strategies to address freshwater protection and improvement.**

Comment 3 - Definition of Best Available Nitrogen Reducing Technology

The definition for BANRT focuses only on the extent of nitrogen removal a septic system attains. It states that a BANRT is “an alternative system certified by the Department for general use pursuant to 310 CMR 15. 288 which has the lowest effluent Total Nitrogen performance value.” This definition seems to say that only one technology could be used for all systems installed to comply with these regulations. The BPC believes a better alternative is to define the level of nitrogen discharge that should be met to qualify as BANRT. For example, BANRT could be defined as any septic system capable of treating sewage to a discharge level of 12 mg/l or less of total nitrogen on a sustainable basis. This would open the market for such systems, encourage innovation, allow more vendors and contractors to enter the market and generally expand resources for implementation of the regulations.

The BPC also thinks MassDEP should consider the implications of defining BANRT solely in terms of nitrogen removal, particularly for septic systems upgradient of ponds (attenuated watershed areas.) For such systems, removal of phosphorus to protect ponds will be as important as nitrogen removal, as mentioned in Comment 2. Defining BANRT only in terms of nitrogen removal may not help ponds at all and could lead to a waste of money and resources for upgrading of septic systems in attenuated watersheds. **Where phosphorus is the more critical pollutant, BANRT should be defined in terms of phosphorus removal, or perhaps in terms of both phosphorus and nitrogen removal (and thus would be “BAPRT” or just “BAT”) – which perhaps could mean nitrogen removal to a lesser extent than for systems focused on only nitrogen removal.** This concern also supports the idea of further time to upgrade septic systems in attenuated watershed areas, as per Comment 2 above, as the further time may (and we surely hope will) give time for MassDEP to develop a regulatory strategy to protect and improve impaired freshwater resources, including a BAT definition that includes phosphorus removal.

Comment 4 - Proposed Watershed Permit Regulations

Brewster’s participation in the Pleasant Bay Alliance and in the development of the Pleasant Bay Watershed Permit provides background on the process for developing and implementing a watershed permit. This permit, which we believe was (and still is) the first of its kind in Massachusetts, took considerable effort to develop, negotiate between Cape Cod towns, and gain approval of the DEP.

The regulations now proposed seem aimed to encourage towns to obtain watershed permits, as this would allow more time for septic system upgrades, allow alternative strategies to septic system upgrades, possibly make public funding available (such as from the Cape and Islands

Water Protection Fund) and reduce direct cost impact to homeowners. For these reasons, the BPC supports and encourages the watershed permit approach.

However, we think that there are several areas where the proposed watershed permit regulations need further clarity or revision to make this approach more workable:

- a. The BPC is concerned about the resources required to develop watershed permits – the personnel, time and funds required from towns, consultant availability, and DEP review and approval resources. These resources can be substantial. As per our Comment 1, we are concerned that the effort to obtain watershed permits for impaired coastal estuaries will divert much needed resources to address impaired ponds and freshwater resources. Processes that are clear and foster rapid, straight-forward development and approval of watershed permits – and modification when needed - are thus essential. **Adequate resourcing must be available within the DEP to process the permits for estuaries while also proceeding with the regulatory and technical work needed to protect and improve ponds.**
- b. Our understanding is that watershed permits developed under this regulation will focus solely on the management of nitrogen within watersheds to impaired coastal estuaries. **If this is DEP's intent, the language should be clarified to confirm that.** If the plan is to allow watershed permits for other purposes, such as phosphorus management near freshwater ponds, then this needs to be clearly explained along with the requirements to develop such a permit, such as a specific TMDL for a pond.
- c. The BPC would like to see a watershed permit approach to protect ponds and freshwater resources. The needed regulatory background and development work has not yet been done to propose such regulations. We hope this will change soon. In the meantime, until such freshwater protection regulations and watershed permit processes are developed, it may be premature to require watershed permits to included areas upgradient of ponds (attenuated watershed areas), since eventual measures needed to protect and improve the ponds may be different from those needed to protect and improve estuaries, as discussed. **Again, a holistic approach should be taken. We hope and encourage the DEP to extend their focus to include freshwater resources as well as estuaries as soon as possible.**
- d. Watersheds to most of the nitrogen-impacted estuaries extend across more than one town. Where the portion of the watershed in one town is very small and nitrogen reductions required in this portion of the watershed are minimal or unnecessary, it would be a waste of funds and resources to require full development of or participation in a watershed permit for that town. If that town can document that the nitrogen load from their portion of the watershed is low enough that no action is required or can be managed with a simple, straightforward strategy, that should be allowed. For example, in Brewster this concern would particularly apply to Brewster's small share of the Bass River/Swan Pond watershed, where no nitrogen reduction is believed to be needed. **This would help better use available resources of towns, consultants and the DEP, helping with the resource concern raised in our Comment 1 above.**
- e. It would be helpful to clarify if the monitoring contemplated in Paragraph 2.b.13 is focused on the nitrogen reductions implemented under the permit (such as monitoring of a wastewater treatment facility) or focused on changes in water quality in the estuary itself. **This concern will also surface in any requirements developed to protect and improve freshwater resources – e.g., will monitoring apply to the discharges from septic systems or wastewater treatment plants, or to the ponds and streams being protected?**

Thank you for your leadership on these issues. We look forward to helping the DEP and the Town of Brewster develop the strategies and means to protect our ponds and freshwater resources.

Respectfully,

Susan Bridges, Board President

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