



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

February 21, 2017

Mr. Christopher Clark, Town Administrator
Town Hall
732 Main Street
Harwich, Massachusetts 02645

Dear Mr. Clark:

I am writing in response to your letter dated January 12, 2017 regarding the steps the Department may take if Cape Cod communities fail to take timely action to address impaired estuarine systems on Cape Cod. Your letter followed a meeting on October 27, 2016 that I participated in with you, Elizabeth Sullivan, Dennis Interim Town Administrator, and Jeff Colby, Yarmouth Director of Department of Public Works, regarding the Towns' efforts to address water quality issues on Cape Cod.

The work of the Massachusetts Estuaries Project (MEP) has clearly demonstrated that many of Cape Cod's waters are impaired due to excessive nitrogen originating from a range of sources, primarily septic systems. MassDEP has proceeded to develop Total Maximum Daily Loads (TMDLs) based on the MEP Reports. A TMDL is a watershed plan that includes a pollution budget for a specific waterbody. While the TMDL is not an enforceable document by itself, MassDEP must utilize the TMDL in making decisions, such as setting permit limits for wastewater discharges. The TMDL is also used in developing our regulatory, policy and compliance and enforcement strategies to ensure water quality is restored and protected.

Over the years MassDEP has primarily focused on providing the scientific information and technical assistance to communities to aid them in understanding and addressing the water quality problems stemming from excessive nutrients. This has included the MEP and, more recently, the 208 Plan Update. Based on the MEP studies conducted to date, it has become increasingly clear to MassDEP that the most effective and affordable approach to solving Cape Cod's water quality problems is through a regional, watershed-based management approach. To facilitate such an approach, in 2013 MassDEP directed the Commission to prepare an update

to the 1978 Water Quality Management (WQM) Plan for Cape Cod in accordance with §208 of the Federal Clean Water Act (“CWA” or the “Act”).

On June 10, 2015, Governor Charles D. Baker certified the Plan Update pursuant to §208(b)(3) of the Federal Clean Water Act and submitted the plan to EPA. The Plan Update examines the causes of water quality issues on Cape Cod and provides options for communities to consider, including new planning tools to use in making local decisions about potential solutions. The Plan Update also offers greater flexibility and discusses financing and funding options to help implement those solutions. In addition, it offers details on the following:

- Opportunities for communities to share systems to reduce costs;
- Analysis and planning tools, such as GIS mapping, to further understand if alternatives to large sewer systems and sewage treatment plants can work in certain locations and circumstances;
- The potential use of enhanced septic technologies; and
- Natural solutions in areas near the water’s edge, such as the creation of wetlands, to help absorb nitrogen.

In submitting the Plan Update, Governor Baker also affirmed that the local communities identified as the designated management agencies (“DMAs”) under the 1978 WQM Plan will continue as the DMAs for the purposes of the new Plan Update. EPA approved on September 15, 2015.

We believe that these efforts provide a unique opportunity to empower the Cape communities to develop and implement the most affordable and effective solutions to the water quality problems facing Cape Cod, and MassDEP is committed to working with you to develop and implement these solutions.

However, with the scientific understanding and the tools in place to help develop the most effective solutions, the Department also has the responsibility to ensure that timely actions are taken to address the ongoing degradation of these water resources and the environment, particularly in those areas where significant ongoing discharges of pollutants creates serious impairments. The Plan Update discusses several existing authorities that are available to MassDEP and could be used if such action is not taken, including the following:

1. Designation of Nitrogen Sensitive Areas (“NSAs”)

MassDEP is authorized by Title 5 to identify certain areas as particularly sensitive to pollution from on-site wastewater systems and designate them as NSAs. MassDEP may consider watersheds to embayments on Cape Cod that exceed their critical load to be “nitrogen sensitive,” and it could proceed to designate, as needed, watersheds as NSAs if needed to meet water quality goals as identified in the TMDLs and the Surface Water Quality regulations (314 CMR 4.00). Currently Title 5 limits nitrogen loading in NSAs to 440 gallons per day (GPD)/acre. However, it is likely that in designating future NSAs, the Department would consider additional enhanced requirements under the NSA that specifically address circumstances for nitrogen

impaired water bodies, such as requirements for installation and operation of enhanced treatment on septic systems.

2. Changes to Ground Discharge Permits and Regulations:

MassDEP regulates discharges of pollutants to the ground waters of the Commonwealth through Massachusetts' Groundwater Discharge Permit Program, issuing permits for facilities discharging over 10,000 gallons per day. MassDEP could take the following actions related to this permitting program:

- Tighten Current Permit Limits: Most of the groundwater discharge permits for Cape Cod require an effluent treatment level of at least 10 milligrams per liter of nitrate, which, while about a two-thirds reduction in the amount of nitrogen leaving a septic system, is not necessarily low enough to achieve or maintain water quality in some impaired watersheds. MassDEP may lower current permit limits on these systems, which would likely require additional treatment. However, given the limited number of treatment plants on the Cape, both public and private, this alone will not be sufficient to reduce nitrogen loads to achieve TMDL compliance.
- Remove Title 5 Exemption: Currently, the Groundwater Discharge regulations exempt on-site septic systems less than 10,000 gallons per day provided they comply with Title 5 regulations, based on a presumption that compliant Title 5 systems meet water quality standards. In light of the demonstrated impact from these systems impacts to Cape Cod's waterbodies, MassDEP could adopt revisions to Title 5 and groundwater discharge regulations for septic systems in certain areas, where there is sufficient evidence to demonstrate that septic systems are a significant contributor to nonattainment. Such changes would likely require the installation and operation of enhanced treatment on septic systems.

As we discussed in our meeting on October 27, 2017, during our regulatory review efforts under Executive Order 562, a number of stakeholders asked MassDEP to consider changes to the Title 5 regulations (310 CMR 15.00) and related changes to the Groundwater Discharge Permitting regulations (314 CMR 5.00). Later this month, MassDEP will be convening an external stakeholder group representing a variety of interests and viewpoints to help us consider potential regulatory changes. These discussions will present an opportunity to discuss potential regulatory changes to address water resources significantly impacted by nitrogen discharges.

3. Formation of Water Pollution Abatement Districts ("WPADs")

Under state law, MassDEP is authorized to form WPADs consisting of one or more cities or towns, or designated parts, or require the enlargement or consolidation of a district, if necessary "for the prompt and efficient abatement of water pollution." After formation, the district would be an independent legal entity administered by a

“district commission,” and it would be responsible for developing watershed plans, applying for the requisite permits, and constructing and operating the treatment works necessary to meet permitting requirements. The establishment of districts for those watersheds remains a tool available for consideration in situations where quality problems are clearly going unaddressed.

MassDEP recognizes the challenges Cape Cod communities face in developing and implementing the most effective and affordable solutions to the Cape’s water quality problems. We also recognize the important and commendable work that communities have already done to advance such solutions. MassDEP hopes to continue to work with you to ensure progress in achieving our shared goal of protecting the Cape’s water resources and water quality.

If you have any further questions or require additional information, please feel free to contact Gary Moran, Deputy Commissioner of Operations and Environmental Compliance at 617-292-5775.

Sincerely,



Martin Suuberg
Commissioner

cc: Liz Sullivan, Town of Dennis
Bob Lawton, Town of Yarmouth
Ed Senteio, Town of Yarmouth