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Fact Sheet

MassDEP Regulatory Strategy for Estuaries Impaired by Nitrogen June 1, 2022

1. Nitrogen Sensitive Area Designations: A primary source of nitrogen contamination of coastal estuaries in Southeastern Massachusetts and Cape Cod and the Islands are on-site septic systems. MassDEP, in conjunction with local Boards of Health, regulates these systems through “Title 5” regulations, 310 CMR 15.00.

To ensure the Title 5 regulations are protective of the environment, particularly in relation to the impact of nitrogen discharges on surface water quality, MassDEP is proposing the following revisions to Title 5:

Establish New Nitrogen Sensitive Areas (NSAs)

To more effectively address nitrogen impacting estuaries, MassDEP is proposing to establish new “Natural Resource Area” NSAs for:

- any watershed to an embayment or sub-embayment that is the subject of a Nitrogen Total Maximum Daily Load (TMDL) approved by the EPA pursuant to the federal Clean Water Act and an Area-Wide Water Quality Management Plan pursuant to Section 208 of the Clean Water Act addressing nitrogen pollution:
 - A “TMDL” is an EPA-approved calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards for that particular pollutant. A TMDL determines a pollutant reduction target and allocates load reductions necessary to the sources of the pollutant.
 - All Cape Cod communities are subject to the “208 Plan” approved by EPA in 2015.
 - There are currently 30 watersheds across Cape Cod with EPA-approved nitrogen TMDLs.

- For these watersheds, the NSA designation is effective on the effective date of the final regulations.
- any watershed to an embayment or sub-embayment that is the subject to an EPA-approved TMDL or determined to be nitrogen sensitive by the Department based on scientific evaluation and adopted through a public process involving public notice, including the scientific and regulatory rationale for the designation, and a 60-day public comment period.
 - For these watersheds, the NSA designation is effective upon completion of the public process and MassDEP's issuance of the final designation.

New Requirements for Natural Resource Area NSAs

MassDEP is proposing new requirements for these new NSAs to more effectively address the specific problems related to septic systems contaminating coastal estuaries.

- Unless a community is the subject of a Watershed Permit described below, any system serving a new construction, or an existing facility must incorporate Best Available Nitrogen Reducing Technology within five years of the effective date of the NSA designation of the watershed in which they are located.
- Best Available Nitrogen Reducing Technology is an alternative system certified by MassDEP for general use pursuant to Title 5 which has the lowest effluent Total Nitrogen performance value. An alternative system granted provisional or pilot approval by MassDEP may also be utilized as long as such system has a Total Nitrogen performance value less than or equal to the lowest alternative system certified by the Department for general use.

Exemption from Enhanced Treatment Requirements in Watersheds with Watershed Permits

While the enhanced treatment requirements for septic systems will result in significant reductions in nitrogen pollution, they may not be the most effective and efficient way to restore the impacted estuaries and achieve established water quality goals. Therefore, MassDEP is also proposing a second, concurrent regulatory revision to formally establish a "watershed permit process." If communities take advantage of this approach, and obtain a watershed permit that covers an area that would be subject to new "Nitrogen Sensitive Area" regulations, the above Title 5 NSA requirements would not become effective for that area.

However, if a Watershed Permit is terminated by the permittee or revoked by MassDEP, new systems installed after the date of termination/revocation would have to install Best Available Nitrogen Reducing Technology and existing systems would have to install such technology within five years from the effective date of the new NSA regulations or two years of the date of termination/revocation, whichever is longer.

2. Watershed Permit Regulations: The Watershed Permitting regulations are a new, innovative approach to provide communities the opportunity to develop and implement the most effective

and efficient solutions to addressing water quality challenges. This approach provides the opportunity for communities to employ a greater range of solutions to address their water quality needs, including alternative or innovative approaches. The Watershed Permit is a 20-year permit instead of the traditional five-year permit which utilizes an adaptive management approach, requiring permittees to monitor, evaluate and report results, and adjust and modify the strategies and practices as needed to address conditions that are causing the water quality impairments.

Watershed Management Plan

The Watershed Permit is based on a “Watershed Management Plan” a long-term plan to address an existing water quality impairment to restore and protect water quality. The Watershed Management Plan must be approved by town meetings of each respective watershed permit applicant, and is based on a Comprehensive or Targeted Watershed Management Plan. The Plan provides a schedule and description of actions to restore the waterbody to applicable Water Quality Standards in accordance with any applicable TMDL and/or any other applicable scientific evaluation, such as the Massachusetts Estuaries Project (MEP) report.

For watersheds where a TMDL has been established, the Watershed Management Plan must achieve compliance with the Water Quality Standards required by the TMDL and demonstrate that at a minimum, 75% of the necessary pollutant reduction levels will be achieved within 20 years, unless MassDEP determines an alternative schedule is appropriate based on watershed-specific issues.

Watershed Permit Application

- Any Local Government Unit or Regional Local Government Unit can file for a watershed permit. Multiple local government units that share a watershed or sub-watershed may apply jointly for a Watershed Permit, provided they have entered into an enforceable agreement (e.g., Intermunicipal Agreement) that confirms each permittee’s percentage share of the aggregate pollutant removal responsibility and provides a framework to coordinate resource management decision-making and arrangements relating to the receipt and expenditure of funds for implementation.
- The Watershed Permit authorizes work needed to implement the Permittee’s mitigation strategy for the watershed or sub-watershed, therefore the Application must include the Watershed Management Plan for the watershed or sub-watershed including:
 - maps depicting the regulated area (watershed boundary) and a narrative describing the area proposed to be covered under a Watershed Permit;
 - a description of the current and historic water quality conditions, including short- (daily/seasonal) and long- (annual) term variability, proposed sentinel sampling locations within the watershed/stations, sampling frequency, parameters and sampling technique (e.g., grab/observation);

- the earlier planning approaches taken prior to filing the application, including any related findings and recommendations;
- the types, locations, and timing of any on-going and proposed TMDL or alternative TMDL implementation activities within the watershed or sub-watershed proposed for coverage;
- a table identifying the nitrogen load that the area proposed for coverage under the watershed permit contributes to the surface waters of the watershed for the past 10 years and projected loads for the following 10 and depicting the necessary load reductions (removal requirements) within the watershed to meet the TMDL or TMDLs and a concise description of the means of achieving those specified reductions during the term of the permit;
- the Conventional Control Technologies and Alternative Control Approaches or Technologies selected for pollutant load reductions, the area covered by these approaches, and identification of the permittee who will be responsible for implementing each activity;
- the estimated load reductions needed to meet the threshold concentration(s) at the sentinel station(s) for each of the selected Conventional Control Technologies and Alternative Control Approaches or Technologies;
- the implementation schedule for each Alternative Control Approach or Technology proposed, including a timeframe for demonstration, testing, and acceptance or abandonment of such approaches or technologies;
- the Core Sewer Area and the service areas prioritized for wastewater collection and treatment after accounting for implementation of the selected Alternative Control Approaches and Technologies;
- if Alternative Control Approaches and Technologies are proposed, a contingency plan for a back-up Conventional Control Technology in the event that the Alternative Control Approaches and Technologies selected do not function as predicted;
- the proposed approach to control 100% of all future pollutant loads to ensure that loads will always stay below the applicable threshold levels cost estimates for the infrastructure and programs associated with the proposed actions, if available;
- an implementation schedule, not to exceed 20 years, currently envisioned by the applicant(s), including a designated set of activities that will occur in the first 5-year block of time, and the results of which will enable the permittee to revise the implementation plans for the next 5-year period as necessary to meet load reduction requirements as specified.

Standard Watershed Permit Provisions

- The Department shall not issue a Watershed Permit if the Watershed Management Plan does not provide for achievement of the Surface Water Quality standards applicable to the

water bodies covered by the permit or if the permit does not provide for reasonable progress in achievement of the TMDL load reductions necessary to meet water quality standards.

- Consistent with the Watershed Management Plan, the permit shall require that 75% of the necessary pollutant reduction levels will be achieved within 20 years, unless MassDEP determines an alternative schedule is appropriate based on watershed-specific issues.
- The proposed activities, implementation schedule for such activities, and facilities set forth in the applicant's Watershed Management Plan shall be enforceable requirements, incorporated in a Watershed Permit.
- Subject to Department approval, a permittee is granted pollutant reduction credit for Alternative Control Approaches and Technologies only if the permittee implements and maintains such approaches and/or technologies in accordance with the terms and conditions of the Watershed Permit.
- The permittee shall provide a Contingency Plan in its Watershed Management Plan that relies on Conventional Control Technologies to achieve the target threshold concentrations identified in the Watershed Management Plan.
- The permittee shall monitor water quality in accordance with the permittee's monitoring plan and report the results in the Annual Reports required by the Watershed Permit.
- The Permit requires annual reporting, with 5-Year Reports evaluating results of program and proposed adjustments through adaptive management.
- Any prospective changes to the Watershed Management Plan or the approved implementation schedule shall be identified in the Annual Reports required by the Watershed Permit. Any such proposed changes to the Watershed Management Plan shall be subject to the Department's review and approval.
- For a permittee(s) to terminate permit coverage, they must provide public notice and hold a public meeting.
- Any permits issued by the Department that comprise a component of the implementation activities or are applicable to the pollutant discharges in the watershed shall be incorporated by reference into the Watershed Permit.

Watershed Permit Process

- The applicant shall publish public notice of the Watershed Permit proceeding in the MEPA Environmental Monitor and in a newspaper circulated within the area that will be affected by the Watershed Permit. The Department will post the notice on the Department's webpage.
- Public notice will afford a comment period of at least 60 days.
- A public hearing will be held if requested by the applicant, or if the Department determines a public hearing to be in the public interest.

- After the conclusion of the 60-day public comment period, the Department may issue or deny a final Watershed Permit.
 - If no comments objecting to the issuance or terms of the Watershed Permit were received by the Department during the public comment period, then the Watershed Permit shall take effect upon issuance.
 - If comments objecting to the issuance or the terms and conditions of the Watershed Permit were received by the Department during the public comment period, then the final Watershed Permit shall become effective 21 days after issuance, unless a request for an adjudicatory hearing is timely filed.
 - During the 21-day period following issuance of the Watershed Permit or determination to deny, any person aggrieved by the decision may file a request for an adjudicatory hearing with the Department.

Watershed Permit Modification/Suspension/Revocation

- The Department may propose and determine to modify, suspend or revoke any Watershed Permit, in whole or in part, for cause including, but not limited to, violation of any permit, obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts or any change in or discovery of conditions that calls for reduction or discontinuance of the authorized discharge or activity.
- The Department shall process a Watershed Permit modification, suspension or revocation in the same manner as an application for a Watershed Permit; provided, however, that the Department may revise a schedule in a Watershed Permit at the request of a permittee if the Department determines that good and valid cause, for which the permittee is not at fault, exists for such revision, and in such cases the provision for public notice and hearing shall not apply.
- Any one or more of the permittees may terminate coverage under this Permit by providing written notice to the Department at least 60 days in advance of the date such termination is to take effect. Such notice will include public notice of a public hearing to be held at least 30 days prior to the termination date. Such notice will be published in the MEPA Environmental Monitor and in a newspaper circulated within the area affected by the Watershed Permit at least 30 days prior to the hearing.