Title 5 Updates

and

Watershed Permitting

Massachusetts Department of Environmental Protection
(MassDEP)

June 25, 2024

What is the Problem?

- Nitrogen discharged into the estuaries has resulted in eutrophication causing growth of nuisance plants and algae, depleting the oxygen in the water, forcing out finfish, shellfish, and indigenous plant species
- Water bodies impacted by nitrogen are visually displeasing, emit unpleasant odors, and are unable to support uses that estuaries have historically offered
- If not addressed it is likely to harm the Cape's economy through a decline in fishing, shellfishing, tourism, and property values

Nitrogen Sensitive Areas

On July 7, 2023, 30 watersheds in 14 towns on Cape Cod were designated as Natural Resource Area Nitrogen Sensitive Areas (NRANSAs) upon promulgation of the regulations

NRANSAs encompass embayments:

- Subject to the 2015 Cape Cod Commission 208 Plan, and
- With an EPA Approved Nitrogen Total Maximum Daily Load (TMDL)

Requirements for NRANSAs

- Septic systems must be upgraded to Best Available Nitrogen Reducing Technology (BANRT)
  - BANRT required for "New Construction" starting July 8, 2024
  - Existing systems within 5 years of promulgation of regulations

Unless

- Community(ies) operate under a **Watershed Permit**
  - Filing a Notice of Intent to apply for a Watershed Permit suspends the need for installing BANRTs

OR

- Town files for *De Minimis* Nitrogen Load Exemption
  - The contribution from the town is less than or equal to 3% of the Controllable Attenuated Nitrogen Load for the entire watershed or sub-watershed

Watershed Permit

- 20-year permit
- Issued to Local Government Unit, Regional Government Unit, Multiple Local Government
- Provide communities the opportunity to employ a greater range of solutions to address their water quality needs, including alternative or innovative approaches
- Watershed Permit is based on an approved "**Watershed Management Plan**"

Watershed Management Plan

Major components:

- Current nitrogen load, projected loads, necessary nitrogen load reductions
- Conventional/alternative technologies proposed and associated nitrogen load reduction for each
- Backup plan if alternative and innovative technologies do not function as predicted
- Cost estimates for proposed actions
- Watershed monitoring plan with sampling plan and Quality Assurance Program Plan
- Implementation plan and schedule that demonstrates at least 75% reduction with 5-year reporting of the necessary nitrogen load within the 20-year permit term

Watershed Permit Implementation

- MassDEP can provide technical assistance to guide Watershed Management Plan development and implementation

- Towns can:
  - Utilize existing approved Comprehensive or Targeted Watershed Management Plans
  - Present data for acknowledgement of ongoing nitrogen removal projects
  - Choose to use one permit to cover multiple watersheds
  - Address other pollutants in addition to nitrogen

Best Available Nitrogen Reducing Technology (BANRT)

The Title 5 regulations define BANRT as:

1. A system(s) which has a Total Nitrogen effluent performance value of 10 mg/L or less and is certified by the Department for **General Use**, or; if no such alternative system(s) meeting 10 mg/L or less has received general use, then an alternative system(s) with the lowest Total Nitrogen effluent performance value certified by the Department for general use,

or;

BANRT, cont.

2. An alternative system(s) granted **Provisional or Piloting Use** by the Department provided that alternative system(s) has a Total Nitrogen performance value less than or equal to 10 mg/L; or, if no system(s) with a Total Nitrogen performance value less than or equal to 10 mg/L has received General Use approval, then a system(s) with a Total Nitrogen effluent performance value less than or equal to the lowest alternative system(s) certified by the Department for General Use.

General Use Technologies

Company	Technology	Facility Type	Flow (gpd)	TN Approval Limit	# of sites used (n)
SeptiTech, Inc. Lewiston, ME	STAAR by SeptiTech/Bio-Microbics of Maine, Inc.	Residential	< 2,000	19 mg/L	56
Orenco Systems, Inc. Sutherlin, OR	Advantex Treatment System (AX20 models)	Residential	< 2,000	19 mg/L	97

Provisional Use Technologies

Company	Technology	Facility Type	Flow (gpd)	TN Approval Limit	# of sites used (n)
Lombardo Associates, Inc. Newton, MA	Nitrex	Residential	< 2,000	10 mg/L	8
KleanTu LLC. Bridgeville, PA	NitROE	Residential and Non-Residential	< 2,000	11 mg/L	45
Lombardo Associates, Inc. Newton, MA	Nitrex	Residential and Non-Residential	2,000 – 10,000	25 mg/L	4
Aquapoint.3 LLC New Bedford, MA	Bioclere	Residential and Non-Residential	2,000 – 10,000	25 mg/L	32
Bio-Microbics of Maine, Inc. Lewiston, ME	SeptiTech	Residential and Non-Residential	2,000 – 10,000	25 mg/L	4

Piloting Technologies

Company	Technology	Facility Type	Flow (gpd)	TN Approval Limit	# of sites used (n)
Biomicrobics Inc. Lenexa, KS	BioBarrier	Residential & Non-Residential	2,000 – 10,000	19 mg/L	4

BANRT, cont.

Requirement to use BANRT for New Construction starts July 8, 2024
(revised from January 8, 2024)

Funding Opportunities

- NRANSA Grants – In early 2024 Healey-Driscoll Administration awarded $300,000 in grants to 5 communities
  - MassDEP expects to release two RFPs for NRANSA grants in coming months, capital funded grant of up to $600,000, and a Clean Water Trust Funded Grant of at least $400,000

- Southeast New England Program Watershed Implementation Grant funding - https://estuaries.org/snep-watershed-grant/

- State Revolving Fund/ Clean Water Trust - https://www.mass.gov/service-details/srf-clean-water-program

Funding Opportunities

- MassDEP Grants & Financial Assistance: Watersheds & Water Quality | Mass.gov
  - 319 Nonpoint Source Grants (prevention, control, and abatement of nonpoint source pollution) – 30 proposals requesting $8.3M with ~$3.1M in available funds
  - 604b Water Quality Management Planning (water quality assessment and management planning) – 14 proposals requesting $2.3M with $916K in available funds
  - CWMPs and TWMPs will have to meet criteria for EPA's 9-element Watershed Based Plans to receive 319 funds, but 604(b) funds can be used to develop, or convert a CWMP or TWMP to a 9-element Watershed Based Plan

Grant Information

General Information and Grant Information

- lealdon.langley@mass.gov (617) 259-0537

NRANSA Grant Information

- courtney.starling@mass.gov (617) 620-5409

604(b) and 319 Grant Information

- padmini.das@mass.gov (585) 500-0424

Technical Assistance

Watershed Permitting Program and Wastewater Management Plans inquiries:
andrew.osei@mass.gov (857) 383-7042

Southeast region Title 5 requirements and other groundwater discharge program inquiries:
ian.jarvis@mass.gov (781) 898-8636

Innovative Alternative Technology related inquiries :
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Thank You !