

# **Title 5 Updates and Watershed Permitting**

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**and**

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**Massachusetts Department of Environmental Protection  
(MassDEP)**

**June 18, 2024**



# What is the Problem?



- Nitrogen discharged into the estuaries have 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 Nitrogen Sensitive Areas (NRNSAs) upon promulgation of the regulations

NRNSAs are any embayment with:

- An EPA Approved Nitrogen Total Maximum Daily Load (TMDL), and
- Is subject to the 2015 Cape Cod Commission 208 Plan



# Requirements for Natural Resource Area NSAs

- 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 instead of the traditional five-year permit
- Issued to Local Government Unit, Regional Local 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 conventional technologies do not function as predicted
- Cost estimates for proposed actions
- Watershed monitoring plan with sampling plan and Quality Assurance Program Plan
- Implementation schedule in 5-year increments and within 20 years accounting for growth



# Watershed Permit Implementation

- MassDEP can provide technical assistance meetings to guide Watershed Management Plan development and implementation
- Towns can utilize existing approved Comprehensive or Targeted Watershed Management Plans
- Towns can present data for acknowledgement of ongoing nitrogen removal projects
- Towns can choose to use one permit to cover multiple watersheds
- Towns can address other pollutants in addition to nitrogen



# Status of Watershed Permits

- Pleasant Bay Watershed Permit issued in 2018 to Brewster, Chatham, Harwich and Orleans
- Barnstable applied for a Watershed Permit in September 2023 for all 7 watersheds in town
- Nine towns submitted 29 NOIs for 27 watersheds
- One town submitted two De Minimis Load applications
- Watershed Permits will cover all but 2 watersheds on the Cape





# 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;**

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



# 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.



# **BANRT, cont.**

**Requirement to use BANRT for New Construction  
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# Provisional Use Technologies

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

# General Use Technologies

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

# 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

# Funding Opportunities

- Natural Resource Nitrogen Sensitive Area Grants – In early 2024 Healey - Driscoll Administration awarded \$300,000 in grants to 5 communities
- MassDEP expects to release two RFRs for NRNSA 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 funding
  - 604b Water Quality Management Planning (water quality assessment and management planning) – 14 proposals seeking \$2.3M in grants with \$916K of 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 9-element Watershed Based Plans, or convert a CWMP or TWMP to a 9-element Watershed Based Plan



# Grant Information

## [General information and grant information](#)

- [lealdon.langley@mass.gov](mailto:lealdon.langley@mass.gov) (617) 259-0537
  - NRNSA Grant Information
- [courtney.starling@mass.gov](mailto:courtney.starling@mass.gov) (617) 620-5409
  - 604(b) and 319 Grant Information
  - [padmini.das@mass.gov](mailto:padmini.das@mass.gov) (585) 500-0424

# Technical Assistance

General information

[gerard.martin@mass.gov](mailto:gerard.martin@mass.gov) (857) 207-0640

For questions on Title 5 requirements and other groundwater discharge program inquiries:

[aaron.raposo@mass.gov](mailto:aaron.raposo@mass.gov) (857) 286-0014

[ian.jarvis@mass.gov](mailto:ian.jarvis@mass.gov) (781) 898-8636

[samantha.berlo@mass.gov](mailto:samantha.berlo@mass.gov) (857) 408-0439

For hydrogeological determination related inquiries:

[sean.carney@mass.gov](mailto:sean.carney@mass.gov) (781) 227-1184

For questions on Watershed Permitting Program and Wastewater Management Plans:

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An aerial photograph of a coastal region, likely a bay or estuary, showing a large body of water in the center surrounded by land. The land is a mix of green and brown, indicating vegetation and developed areas. The water is a deep blue-green color. The text "Thank You !" is overlaid in the center of the image.

**Thank You !**