



Tisbury Board of Health

Proposal

Tisbury Regulations Governing Nitrogen Discharge From New Development





Nitrogen Discharge from New Development

History:

- In 1975, in response to septic contamination of the harbor, the Tisbury Board of Health established a moratorium on the issuance of new septic permits in the downtown commercial area. Today the downtown district is sewerred and the moratorium lifted.





Nitrogen Discharge from New Development

History:

- In 1975, in response to septic contamination of the harbor, the Tisbury Board of Health established a moratorium on the issuance of new septic permits in the downtown commercial area. Today the downtown district is sewerred and the moratorium lifted.
- In 2014, the island's Boards of Health established regulations restricting the amount and type of nitrogen that could be applied to lawns. The regulations were approved island-wide with only 1 voter in dissent.





Tisbury Findings

- Population growth has overwhelmed Tisbury's nitrogen removal capabilities, posing an emerging threat to human health, and the health and quality of the Tashmoo and Lagoon estuaries.
- Specifically, food-derived septic waste accounts for over 75% of the nitrogen entering the Tisbury's estuaries.
- The MVC and the MEP forecast a maximum property build-out of 49%. The Tisbury Planning Board estimates the 20-year build out at 15%.





Scope of Tisbury's Nitrogen Problem

(Annual Data)

	Sustainable N Influx	Total N Influx	Targeted N Removal		Lawn Fertilizer		Septic Waste		<u>All Other</u>	
	<u>TONS</u>	<u>TONS</u>	<u>TONS</u>	<u>%</u>	<u>TONS</u>	<u>%</u>	<u>TONS</u>	<u>%</u>	<u>TONS</u>	<u>%</u>
<u>TASHMOO</u>	6.4	9.5	3.1	32%	0.4	4%	7.6	80%	1.5	16%
<u>LAGOON</u>	4.6	7.2	2.5	35%	0.3	5%	5.5	76%	1.4	19%
<u>TOTAL</u>	11	17	5.6	33%	0.7	5%	13	78%	2.9	17%
TOTAL w/15% Build Out	11	19	7.6	42%	0.7	5%	15	78%	2.9	17%



Tisbury Waste Water Committee

- Tisbury Selectmen, Melinda Loberg
- Tisbury Finance Committee, Nancy Gilfoy
- Tisbury Board of Health, Malcolm Boyd
- Tisbury Board of Health, Michael Loberg
- Tisbury Planning Board, Dan Seidman
- Tisbury Shellfish Constable, Danielle Ewart
- Tisbury Public Works Department, Tomar Waldman
- Lagoon Pond Association, Doug Reece
- At Large, Gerard Hokanson
- At Large, Bill Straw

With Technical Support from:

- MVC Executive Director, Adam Turner
- MVC Commissioner, Joan Malkin
- MVC Water Resource Director, Sheri Caseau
- Tisbury Town Administrator, Jay Grande
- Tisbury Health Agent, Maura Valley





No New Net Nitrogen Regulation

- BoH regulation limiting the amount of nitrogen entering Tisbury's water bodies from New Residential Construction.
- The property owner's Mitigation Fee is a function of amount of waste nitrogen produced in the home, the various on-site nitrogen mitigation options selected by the property owner, and Tisbury's minimum cost to remove any residual nitrogen entering the groundwater.
- New property owners who pull a building permit would meet with the BoH, present their planned nitrogen mitigation strategy and receive an appropriate Mitigation Fee "credit".





Annual Mitigation Fee

Residential New Development	Annual Median Water Usage ¹ (gal)	Annual Septic Wastewater Flow (gal) ²	Pounds of Nitrogen Entering Groundwater Annually			Annual Mitigation Fee at a Charge of \$300 per Pound of Nitrogen Entering Groundwater ³		
			Title 5 Septic System (0.00022 pounds of nitrogen per gallon)	Enhanced De-Nitrification Septic Technology ~33% Credit	Denitrifying Toilets ⁴ ~90% Credit	Title 5 Septic System	Enhanced De-Nitrification Septic Technology	De-Nitrifying Toilets
3 Bedroom Home	~54,000	~49,000	10.8 Pounds	7.2 Pounds	1.1 Pounds	~\$3,200	~\$2,100	~\$320
One Bedroom Addition								
Based on average water usage differences between homes varying in size by 1 Bedroom						~\$1200	~\$900	~\$120
Replacing Title 5 Septic System with Enhanced De-Nitrification Technology						NA	\$0	



No New Net Nitrogen Regulation

- Regulations apply only to properties lying within the Tisbury portion of the Tashmoo and Lagoon watersheds;
- Mitigation Fees assessed semi-annually based on actual water usage, and invoiced as part of the water bill
- Mitigation fee ends the earlier of 20 years after commencement or when Tisbury certifies that it has met established water standards.
- All mitigation fees will be retained by the town and used solely to reduce nitrogen pollution in the watershed of origin.
- The property owners may “clawback” up to 30% of their aggregate Mitigation Fee payments to fund subsequent on-site denitrification strategies, eg. sewer hook-up, advanced septic systems, enhanced toilet technologies etc.





Purpose and Status

Regulatory Purpose

- Contain the nitrogen problem while continuing to allow new residential development;
- Allow time for our denitrification toolkit to mature;
- Create community awareness
 - As to the extent of the problem;
 - Its possible solutions;
 - And our personal and financial accountability;

Regulatory Status:

The Tisbury Board of Health will be holding public hearings on the regulations commencing in June.





Become Engaged

Help Us Go from Pretty Good to Better

Tisbury Draft Regulations Available at:

www.MVBOH.org

