



# The Three Bays Monitor

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## Town of Barnstable Holds Three Bays Estuaries Public Hearing and Mass. Department of Environmental Protection Holds Public Hearing on Total Maximum Daily Loads Report

Last December, the Town of Barnstable held a public hearing to present the Massachusetts Estuaries Project on Nitrogen Loading and Management Thresholds in the three bays estuarine system.

The presentation, delivered by Dr. Brian Howes, of The School for Marine Science and Technology (SMAST) at the University of Massachusetts Dartmouth, summarized 10 years of research. It focused on the degradation of our estuary by nutrient enrichment, primarily caused by nitrogen from surrounding watersheds entering the three bays. This over-fertilization adversely affects the health of the water, and can lead to phytoplankton

blooms, turbid waters, loss of eelgrass beds and decreases in benthic animals, fish and shellfish populations.

As a follow-up to this report, the Department of Environmental Protection held a public hearing to release their recommendations for Total Maximum Daily Loads (TMDL's) for the three bays estuary. A TMDL is a calculation of the maximum amount of a pollutant that a water body can accept on a daily basis and still meet the state's Water Quality Standards for public health and productive ecosystems. Steve Halterman of the state Department of Environmental Protection said that establishing sewer systems in large

areas of town was probably the only viable way to deal with the nitrogen entering the watershed.

Three Bays Preservation is working closely with the Town of Barnstable to help forward this agenda, and we need your help.

Please take a few minutes to write a letter to your town councilor, and let them know that dealing with the wastewater issue and nitrogen loading in the bays is a priority to you. Please stress that we need to make comprehensive wastewater planning and financing a top priority of the entire town!

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# State: Sewering can save Three Bays

HYANNIS - The science may be complex, but the equation is fairly simple.

Add nearly 60,000 residents to the 11,000 who lived in Barnstable, Mashpee and Sandwich in 1950. Then factor the number of septic systems it takes to service them and you get water quality so poor in parts of Cotuit, West and North bays that whole meadows of eelgrass have disappeared, mats of algae float on the water, and decreased levels of oxygen lead to fish kills.

Sounds pretty unappealing to tourists - our lifeblood - and to those who would buy a home here.

It could get worse, but it doesn't have to.

State officials aired a report last night at a public hearing at Barnstable Town Hall that explained how to restore eelgrass and water quality to what is known as the Three Bays Estuary.

The culprit is nitrogen, which acts as a fertilizer fueling the rapid growth of algae. These blooms suck the oxygen out of the water and keep light from reaching eelgrass, killing it. Three-quarters of the nitrogen reaching the estuary comes from septic systems. In some areas that amount of nitrogen

needs to be cut by 85 percent.

The goal is simple: to make Cape waters swimmable, fishable and populated with habitat like eelgrass, which can act as a nursery for marine species.

Steve Halterman of the state Department of Environmental Protection said that establishing sewer systems in large areas of the towns was probably the only viable way to deal with nitrogen. The report is part of a state-wide effort, known as the Massachusetts Estuaries Project, to determine the amount, and the sources, of nitrogen coming into the state's bays and estuaries.

The estuaries project was started in 2001 by the DEP and the University of Massachusetts Dartmouth in response to a federal Clean Water Act requirement that all communities need to set daily limits on the amount of nitrogen and other contaminants flowing into rivers, bays and lakes. These calculations require about three years of data. When all the information is collected, a total maximum daily limit of nitrogen is set by the state for each water body. It is then up to towns to determine how they want to reduce excess amounts of nitrogen.

“There’s a lot of focus on wastewater

said Ed Eichner, a water resources scientist for the Cape Cod Commission. Eichner said that, across the cape, 70 to 80 percent of the nitrogen flowing into the estuaries comes from wastewater, mostly from septic systems, but also wastewater treatment plants.

Chatham estimated that sewerage the remainder of the town will cost more than \$300 million and Falmouth figured more than \$500 million. Six estuaries on Cape have their final figures from the state, and 17 others are in various stages of completing their data gathering or analysis.

This article was written by Doug Fraser, a staff writer for the Cape Cod Times. Mr. Fraser can be reached at [dfraser@apecodonline.com](mailto:dfraser@apecodonline.com).

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<p align="center"><b>2007 Spring Membership Drive Coming Soon!</b></p>	<p align="center"><b>Welcome New Board Member</b></p>
<p>Time to think spring! Please keep an eye out for your membership renewal packets for the upcoming summer season. If you have any questions regarding membership, or gift memberships, please contact our office. Thank you to everyone who took the opportunity to renew their membership during our annual appeal. We look forward to seeing you enjoy the bays and Dead Neck Island this summer!</p>	<p>N. Harrison Buck (also known as Pete) has agreed to join our board and brings to it a deep interest in the welfare of the three bays and Nantucket Sound. Pete met his wife Nancy on the Cape in 1979 and has had a home in Osterville since 1993. Pete is a member of the Horizon Foundation board, a private foundation that funds environmental and educational initiatives in New Jersey, Massachusetts and Maine. Pete also serves on the Pomfret School board in Pomfret, Connecticut. When not in Osterville, Pete, Nancy and their three children live in Rowayton, Connecticut.</p>

# Three Bays Preservation Awards Grant to Support Rushy Marsh Project

The project to restore the opening to Rushy Marsh Pond in Cotuit from Nantucket Sound is continuing to move through the permitting process. The project was approved by the Barnstable Conservation Commission last fall. From there it moved to the State for review under the Massachusetts Environmental Policy Act, more commonly referred to as MEPA. This review brings together several state agencies to assess the impact of the project on a variety of environmental resources, including the impacts on fisheries, coastal dunes, benthic or bottom dwelling animals, endangered species, and water quality to name a few. The review insures that the project as proposed will not adversely affect these resources and that the project can be constructed as designed. This is an important project to improve the water quality of Rushy Marsh Pond. If the project goes as planned, the residence time in the pond (the length

of time it takes a drop of water to enter the pond and return to Nantucket Sound) will be reduced from 47 days to 1.6 days. Also, total nitrogen concentrations in the pond will be reduced by up to 72%. This lowered level will meet the threshold limits set for the pond in the TMDL report by the Department of Environmental Protection. The restored tidal flow will not significantly increase flooding on the land adjacent to Rushy Marsh Pond, and the project will greatly enhance the habitat of the pond.

All of the folks who have worked long and hard on this project are to be commended. The Friends of Rushy Marsh, the volunteer water quality monitors, the professional consultants, the staff and members of the Barnstable Conservation Commission, and Three Bays Preservation have put forth a great team effort to keep this project

moving. To that end, the board of Three Bays Preservation has recently awarded a grant to the Town of Barnstable to ensure that the work on this important project keeps moving forward.



*Partially buried exchange pipe between Nantucket Sound and Rushy Marsh Pond Summer 2005*



## Summer Jobs on Dead Neck!

Program Manager Judy Heller is looking to hire summer rangers to help monitor Dead Neck Island throughout the spring and summer months. Rangers are responsible for monitoring boat and beach traffic, checking memberships, and enforcing our no pet policy. There are full and part-time positions available with flexible hours. Candidates must be 18 years or older, outgoing and friendly, and know how to use a boat. Three Bays Preservation will provide a boating safety course and a current CPR certification course. For more information, please email Judy at [jheller@3bays.org](mailto:jheller@3bays.org).

### *Three Bays Preservation, Inc. Staff*

Lindsey B. Counsell, Executive Director  
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Judy Heller, Program Manager

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### *Please feel free to drop by the Three Bays Preservation office at:*

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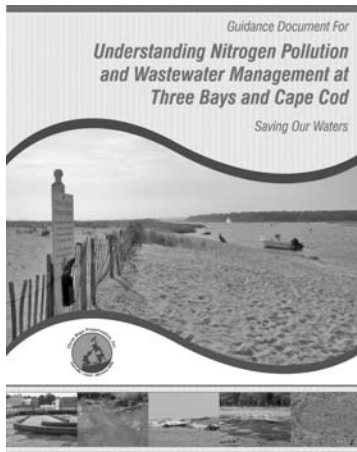
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## Three Bays Preservation to Publish Guidance Document for Understanding Nitrogen Pollution and Wastewater Management in the Three Bays and Cape Cod.



Our Vice President, Don Schwinn, has teamed up with the local engineering firm of Sterns and Wheler to create a reference document for residents of the three bays area that explains the causes and effects of the excess nutrients in the bays. The document includes basic descriptions of the wastewater management tools available to reduce current and future wastewater nitrogen loadings to the bays. This document will be mailed to members and residents in the three bays watershed this spring. All are encouraged to attend a follow-up meeting, with a brief presentation and opportunity for Q&A, on Thursday, June 14<sup>th</sup> at 6 p.m. at the Wianno Yacht Club.

Ten basic questions outlined in the document are:

1. How are wastewater and nitrogen hurting the three bays estuary?
2. Is phosphorus a problem too?
3. Where do the nitrogen and phosphorus come from, and how much needs to be removed?
4. How can wastewater be managed to remove nitrogen?
5. What types of sewers could be used?
6. Can we reuse wastewater after it is used?
7. How much space do wastewater management systems require, and how do we find that space?
8. How much does it cost and how will we pay for it?
9. What is the process that will identify and implement the solution?
10. How do we get started?

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**Mark Your Calendar  
Presentation and Q&A  
Thursday, June 14, 2007  
6:00 PM  
Wianno Yacht Club, Osterville**

### Tid Bits

Please remember to visit our web site, [www.3bays.org](http://www.3bays.org), to keep up to date on current reports and press clippings of interest. Also, if you would prefer to receive your newsletter electronically, please email our office at [info@3Bays.org](mailto:info@3Bays.org) and let us know. This helps us to save on paper, printing, and postage expenses.

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