

# The Three Bays Monitor

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## **A Mixed Bag: Water Quality Report Finds Some Good, Some Bad in Estuary System**

Several parts of the Three Bays estuary system are experiencing alarmingly high levels of nitrogen and fecal coliform, according to a report released recently by Three Bays Preservation, Inc.

The report represents the first comprehensive documentation of contamination in the estuary system that includes the Marstons Mills River, Prince's Cove, Warren's Cove, and Cotuit, North, and West Bays. Although the year-long study finds much of the Three Bays estuary to be in good health relative to other embayments on the Cape's south shore, it highlights several areas suffering from contamination that has led to shellfish bed closings and could pose a threat to human safety.

Prepared by Brian Howes of the Center for Marine Science & Technology and George Hampson of the Woods Hole Oceanographic Institution, the report should serve as a wake-up call to all Cape Cod communities concerned about the health of their coastal waters.

Among the findings gleaned from 21 monitoring stations throughout the estuary system:

- The Three Bays Estuary appears to be nitrogen limited. That is, additions of nitrogen will increase algae production, which, in turn, will lead to further shellfish deaths.
- The upper estuary from the mouth of the Marstons Mills River through the narrows to North Bay and Prince Cove are showing poor nutrient-related health.
- The Marstons Mills River appears to be a major "point source" of nitrogen.
- Fecal coliform levels are generally low within the lower estuary, but high within the upper estuary.
- Prince Cove, arguably the most stressed area investigated, is eutrophic.

"We are hopeful of using these findings to generate more community and political interest in the plight of our coastal embayments," said Lindsey Counsell, Three Bays Preservation Project Manager. "There are significant problems out there, and unless we take a comprehensive approach to limiting the amount of contaminants entering the water, those problems will only get worse."

Three Bays Preservation, Inc. will continue to monitor the estuary system, paying particular attention to the source or sources of the high fecal counts documented in the report. We are working with Dr. Mansour Samadpour of the University of Washington, Seattle, to determine by DNA typing whether humans or other animals are responsible for the fecal coliform. This knowledge will go a long way to helping us gauge the scope of

the problem - human waste is far more dangerous than that of other animals - and the approach we will take to fix the problem.

## **Report from MAS-CWP**

As the summer comes to a close for the 2000 season, the Massachusetts Audubon Society's Coastal Waterbird Program is glad to report another successful year of bird breeding and human recreation on Dead Neck/Sampson's Island. Our monitor/naturalists, Melissa Rose and Chris McDowell, had the opportunity to speak with hundreds of visitors to the island and were pleased with the cooperation they received.

As in previous years, productivity for the Piping Plovers that nested on the island was very good. At the recent statewide plover and tern summit, we reported the second highest productivity rate in the entire state! Nine pairs of plovers fledged thirty chicks.

The terns nesting on the island did very well also. Thanks to the assistance of Three Bays, we were able to maintain the snow-fencing that encloses a large percentage of the over four hundred tern nests found on Dead Neck this year. Due to the disturbance (and manpower) it would require, the CWP doesn't monitor tern productivity as closely as we do plovers. However, all indications point to many tern chicks being raised successfully this year. We anticipate an even larger tern colony next season!

CWP extends our thanks to our monitors, Three Bays Preservation, Inc., and the Audubon members who visited the island for an outstanding 2000 season! We are confident that, working together, we can accomplish even more in 2001.

Matthew Bailey  
Cape Cod Coordinator  
MAS-CWP

## **More Dredging on the Horizon**

Judging by the health of Dead Neck/Sampson's Island, last year's dredging was an unqualified success. More than 15,000 cubic yards of sand were deposited on the rapidly eroding barrier beach (bringing the three-year total to 211,000 cubic yards), and today it appears strong and healthy. Of course, the primary purpose of dredging is to increase water circulation in the bays, with an eye to better flushing out pollutants. Toward that end, we will be dredging again for a few weeks in West Bay and Cotuit Bay. Look for the heavy machinery in late December, when you'll be reminded that your Three Bays Preservation doesn't hibernate in winter.

## **Visit Our New Website: [3bays.org](http://3bays.org)**

Three Bays Preservation is not going into the new millennium kicking and screaming. No, we embrace technology, and not just the type we use to monitor water quality in our embayments. Exhibit A: Our new web site. Thanks to board member and web guru

Frederick Wrightson, everyone can now click to [3bays.org](http://3bays.org) and find out all you ever wanted to know about our organization. No matter where you are in the world, now you just need a modem to access progress reports on our ongoing activities, a site guide, glossary of technical terms, and helpful links to other environmental and governmental organizations. You can also check out weather in the bays and even buy a book through on-line retailer [amazon.com](http://amazon.com), which will send a portion of the proceeds back to us. Thanks, Rick!

## **Hail to the New Board Members**

We at Three Bays Preservation are thrilled to announce that we have two new board members. Sally Sharp Lehman comes to us from the Mass. Audubon Society, and Tony Will is probably familiar to many of you as commodore of the Wianno Yacht Club. Also, at our recent annual meeting, we announced that Joan Gill has been named an honorary board member. Joan is the widow of Bob Gill, who passed away last fall. Bob, of course, was our vice-president for several years and, more importantly, was instrumental in forming Three Bays Preservation as a vehicle for fixing many of the problems affecting our beloved bays.

## **A Great Turn-out for the Annual Meeting**

Sometimes, when you're in the trenches - or on the flats - trying to get a handle on nitrogen levels and eelgrass loss, you can forget that Three Bays Preservation is an organization of people who care about their community. Thankfully, we were reminded of what makes us tick at our recent annual meeting. More than 75 people crowded the Wianno Yacht Club to ask questions and show their support for what we are doing. Some of the faces were familiar, while others were new. It was also nice to see two members of the Barnstable Town Council, President Royden Richardson and Gary Blazis. Their comments were much appreciated, and we are looking forward to working with them to help solve some of the problems affecting the bays.

All in all, the questions and comments were a good mix of technical and anecdotal. One person talked about the efficacy of denitrification package treatment plants, while another mentioned where she had been seeing large congregations of ducks this summer.

Of course, we are an organization about nitrogen and eelgrass. But at its heart, Three Bays Preservation is about people who are eager to identify problems and fix them.