



MASSACHUSETTS BAYS WINDOW

The Annual Newsletter for the Massachusetts Bays Program 2005 → 2006

It was hard to avoid the front page headlines

and national television coverage during the spring and summer of 2005: a “red tide” outbreak had spread deep into Massachusetts and Cape Cod Bays with devastating results.

Two strong May nor’easters combined with high freshwater inflow from heavy spring rains and snowmelt provided ideal conditions for the worst outbreak of *Alexandrium fundyense*, the predominant red tide species in the Gulf of Maine, since 1972. At the outbreak’s height, shellfish closures extended from mid-Maine through Martha’s Vineyard costing the New England shellfish industry an estimated \$3 million per week.

There may now be a large number of *Alexandrium* cysts buried in the seafloor sediment of the Massachusetts Bays that, given the right conditions, could grow and lead to future harmful blooms.

Thanks to excellent communication among local, state, and federal agencies, and the tireless work of their staff, there were no shellfish recalls, reported illnesses, or deaths associated with the 2005 red tide bloom. The toxin monitoring conducted by the Massachusetts Division of Marine Fisheries, as well as water quality monitoring conducted by the Massachusetts Water Resources Authority in Massachusetts Bay, ensured that contaminated shellfish beds were closed.

Such monitoring is expensive, however, so the Massachusetts Bays Program supports the expansion of state-sponsored water quality and harmful algal bloom monitoring to ensure that this essential work can continue. As was made abundantly clear in 2005, monitoring the Massachusetts Bays is vital to protect public health.

Photo: Woods Hole Oceanographic Institution



Welcome

From the Executive Director

Dear Readers,

Welcome to the second annual *Massachusetts Bays Window*, the newsletter of the Massachusetts Bays National Estuary Program!


As you read on the cover page, a historic red tide outbreak was the major Massachusetts Bays news story in 2005. However, there were many other significant developments in the region that never made it to the news this past year.

2005 was the twentieth anniversary of the landmark Boston Harbor clean-up case entering Judge A. David Mazzone's federal court. The settlement of the case led to the establishment of the Massachusetts Bays Program (MBP), and the new archive of the case's materials at the UMass-Boston library is an invaluable new resource for the study of the remarkable turnaround of Boston Harbor.

As a National Estuary Program, the MBP prides itself on working with countless partner organizations and individual volunteers. Max Schenk is one such volunteer, and in 2005 Max was celebrated as a national leader by receiving the NOAA Volunteer of the Year Award. Max has been a tireless volunteer for the MBP, numerous organizations within the North Shore (including our partner Eight Towns and the Bay), and the Massachusetts Bays Estuary Association, and we can't imagine a more deserving recipient.

The *Think Blue Massachusetts Bays* stormwater outreach campaign continues to take shape. The first major project undertaken with our sister nonprofit, the Massachusetts Bays Estuary Association, has grown to include dozens of partner organizations in preparation for a spring 2006 launch. An initial series of MBTA posters has been completed in partnership with the Charles River Watershed Association, and other campaign elements such as a *Think Blue* website, community and promotional events, and other creative communication strategies are in development for the coming spring.

The following pages will provide a quick look at just a handful of current MBP projects with a particular focus on the work of our regional coordinators. I encourage you to contact us at (617) 626-1230 or massbays@state.ma.us if you'd like to learn more about the Massachusetts Bays Program.



Jan P. Smith



Upper North Shore

Contact: Peter Phippen / Eight Towns and the Bay / (978) 375-0519 / www.8tb.org

GREAT MARSH KAYAKER'S GUIDE

The extensive network of rivers, bays, marsh creeks, and open ocean along the North Shore of Massachusetts makes this region particularly popular with kayakers. To meet the needs of a growing number of kayakers, the Eight Towns and the Bay Committee is developing an interactive website that will highlight access, cultural, historical, and trail information within the Great Marsh. Each clickable point will have pictures, maps, and information.

Kayaker's Guide Preview:

Deer Island Conservation Land Access to the Merrimack River

The Deer Island kayaker access is located at the downstream end of Deer Island in the Amesbury conservation property. The island is located off of Main Street in the Merrimack River adjacent to the Chain Bridge.



Deer Island Parking Area

There are about twenty unpaved, public parking spaces located up near the roadway. Boat access is several hundred yards from the parking area through the woods and saltmarsh. There are several areas to access the river. Depending on the height of the tide at any given time some areas are more desirable than others.



South-Side Access and Chain Bridge

The bank of the river in most locals is gently sloping and comprised of fine sand or soft mud. Currents can be of concern, with quietest water most often at the very downstream tip of the island. Boat traffic can also be relatively heavy on summer weekends.

Photos by Peter Phippen

Fieldwork for nine of the Great Marsh communities was completed in 2005. To help with field visits, a consultation team was developed including commercial kayak outfitters in the Great Marsh region as well as with avid kayakers and boaters who utilize this coastal resource. For several areas within the marsh, typical waterways used by kayakers and non-motorized boaters were observed and digitally photographed. Information on tidal concerns, boat traffic, unique and interesting views and resources was recorded and photographed. Boat access points and vehicle parking locations and information were also documented and photographed. This included a checklist of parking and access information ranging from the number of available parking spaces at a site to water accessibility for boat put-in and take-out. Important cultural, historical, and recreational sites in the region encountered along land-based routes have also been photographed.

The data collected thus far is in the process of being organized, and a pilot data set is currently being created to help in the development of GIS maps. The interactive map promises to be not only informative for novice and advanced kayakers alike, but also a great way to encourage stewardship of the invaluable Great Marsh ecosystem.



Salem Sound

Contact: Barbara Warren / Salem Sound Coastwatch / (978) 741-7900 / www.salemsound.org

SALEM SOUND BOATER'S SURVEY

Salem Sound Coastwatch (SSCW) has worked for 15 years to study and combat land-based pollution into Salem Sound, such as stormwater runoff. In the summer of 2005, however, SSCW took a first look at the boating community to better understand boater knowledge and behavior regarding sewage disposal, as well as to understand the frequency and reasons for vessel sewage discharge and the obstacles to proper disposal.

Called the Salem Sound Marine Sanitation Needs Assessment, SSCW staff created and distributed over 4,000 anonymous surveys for recreational boaters, and interviewed harbor masters, pumpout operators, and marina operators within Salem Sound during the summer of 2005. The survey received an amazing 871 responses, or a 21% return rate.

Selected survey results:

- 96% of respondents were aware of federal law prohibiting discharge of untreated sewage from vessels within 3 miles of the coast.
- Over 80% of respondents were aware that sewage may cause problems at beaches and increase health risks.
- 24% of respondents had a portapottie onboard their vessel.
- 58% of respondents have never used pumpout services, which include 11% of the boat owners with holding tanks.
- 70% of respondents never dump overboard, but approximately 15% dump untreated sewage within 3-miles of shore or at the mooring or slip.
- 86% of respondents said they would support a "No Discharge Zone" for Salem Sound.

The results from the survey indicate that the vast majority of boaters in Salem Sound are aware of laws that prohibit untreated sewage discharge from vessels, and are aware of the environmental impacts of sewage on our coastal waters. However, some boaters appeared to be confused over the meaning of "treated" and "untreated" sewage. For example, some boat owners with onboard portapotties and holding tanks incorrectly think that their sewage is treated. In addition, survey results estimate that less than half of the boaters have ever used a pumpout service and at least a quarter of the Salem Sound boating community is not aware of any pumpout facilities that pump waste out of a boat's sewage holding device.

These and a wealth of other insights into boater knowledge and behavior from the marine sanitation survey provide SSCW with very specific outreach and education goals for the coming years. SSCW will work

with the boating community, harbor masters, yacht clubs, and marinas to improve services and boater education with the goal of reduced illegal sewage dumping and cleaner water in Salem Sound.

Welcome...

Barbara Warren, the new Salem Sound Coastwatch (SSCW) Executive Director, began her work at SSCW as a volunteer monitoring salt marshes. She has also volunteered as a Conservation Commissioner, a land trust board member, and a monitor of juvenile lobsters for the Lobster Conservancy. Barbara has earned an M.S. in Environmental and Conservation Biology from Antioch New England and a Masters in Education from Lesley College. She and her husband have sailed out of Salem Harbor for close to twenty years, and she welcomes the opportunity to increase the public's knowledge and appreciation of the natural resources of the Salem Sound and its watershed.





South Shore

Contact: Wendy Garpow / North and South Rivers Watershed Association / (781) 659-8168 / www.nsrwa.org

GREENSCAPES

Homeowners with landscaping duties that beckon every spring may be encouraged to hear that there are countless ways to spend less time, money, and worry on their lawns. The Greenscapes program, led by the North and South Rivers Watershed Association, is designed to teach citizens how to have attractive, healthy lawns and gardens while reducing the use of water and chemicals. Greenscapes have plants and turf with deep roots that are naturally resistant to drought, weeds, and disease. The goal of Greenscapes is to let nature provide the landscapes' water and nutrient needs.

While reducing your landscaping work load is always nice, the benefits of Greenscapes go way beyond reducing everyday yard work nuisances. During the summer season, many communities are faced with water demands that are two to three times more than the winter season, putting stress on both the environment and water supply systems. In addition, chemicals found in fertilizers, herbicides, and insecticides used for landscaping can flow off of lawns and end up polluting our water through stormwater runoff. Greenscaping practices drastically reduce water use, encourage groundwater recharge, protect water supplies, and reduce stormwater pollution.

The Greenscapes Reference Guide explains dozens of simple ways to practice Greenscapes techniques on your property — visit www.Greencscapes.org or contact the North and South Rivers Watershed Association at 781-659-8168 to get a free copy.

Want to show off your Greenscapes yard?

If you're a South Shore resident and practice some of the Greenscapes recommendations on your landscape, then you can earn a free Greenscapes lawn sign. This attractive sign is a great way to tell your community that you know how to have a beautiful landscape and protect our water sources, too. For more information, contact the North and South Rivers Watershed Association at (781) 659-8168 or visit www.Greencscapes.org.



Welcome...

Sara Grady, the newest addition to the Mass. Bays Program regional staff, earned her Ph.D. in Biology from the Boston University Marine Program in Woods Hole this past May. She is sharing the South Shore Regional Coordinator position with Wendy Garpow, and also working as Watershed Ecologist for the North and South Rivers Watershed Association. Among her current projects are a survey of marine invasives in the North and South Rivers Watershed, a study of road salt infiltration in Third Herring Brook, and an effort to construct raingardens in fourteen South Shore towns.



Cape Cod

Contact: Steve Tucker / Cape Cod Commission / (508) 362-3828 / www.capecodcommission.org

CAPE COD MARITIME DAYS

The Massachusetts and Cape Cod Bays have been the defining essence of Cape Cod since the Pilgrims dropped anchor in Provincetown Harbor in 1620. The Cape is now home to two town fishing fleets, scores of sailboats, schooners, yachts, and commercial fishing vessels. Whale watching excursions depart from Barnstable and Provincetown harbors for Stellwagen Bank, one of the world's finest whale feeding grounds.

Cape Cod has a rich maritime heritage and the annual Cape Maritime Days provide residents and visitors alike with an opportunity to learn more about the cultural heritage, both past and present, of the region. The week-long festival provides a flourish of community activity when hunkered-down New Englanders begin to enjoy longer days and warming sunshine, but more importantly, it invites them to rekindle the passion for the coastal environment that, in many cases, drew them (or their ancestors) to the Cape in the first place.

The 13th Annual Cape Cod Maritime Days will kick off on May 13, 2006 along with the 10th Annual Cape Cod Maritime History Symposium, sponsored by the Cape Cod Maritime Research Association. Activities will be held throughout the Cape and will include lighthouse & walking tours, nautical art exhibits and lectures on maritime lore to boat-building exhibits and kayaking excursions. (www.CapeCodMaritimeDays.com)

While Cape Cod Maritime Days is entering its 13th season, the participation of Massachusetts Bays Program (MBP) staff has helped to expand the program to include educational opportunities for young and old to foster a heightened sense of responsibility for the stewardship of the Cape's coastal environment. For example, MBP staff coordinated the participation of the Whale and Dolphin Conservation Society who, with the assistance of the Stellwagen Bank National Marine Sanctuary, will display a life-size inflatable whale in the main hall of the Cape Cod Mall. The MBP and Cape Cod Commission also worked in 2005 to develop a partnership between the Stellwagen Bank Marine Sanctuary and festival planners to screen a documentary on the discovery of the wreck of the steamship Portland. This event featured Sanctuary staff that played a key role in the exploration of the wreck with scientists from NOAA, the University of Rhode Island and the Woods Hole Oceanographic Institution, many of whom are members of the Cape Cod community. The film screening was a capstone event for the grassroots festival.

Cape Cod Sustainability Report

The Cape Cod Center for Sustainability was founded in 1991, driven by rising awareness and concern about the effects of development and other alterations to the Cape's environment. The first Cape Cod Sustainability Indicators Report was published in 1999 as a tool to better understand both positive trends and alarm bells for trends which threaten the sustainability of Cape Cod and its communities. Notable for its absence, particularly for a place like the Cape that derives much of its identity from the use of its coastline and its historic ties to the sea, was any discussion of the coastal and marine environment. After two years of work with the Cape Cod Sustainability Indicators Council, MBP staff identified three coastal indicators for inclusion in the most recent report. Although they won't provide a complete picture of the health of the Cape's coast, the three indicators will help to illustrate the links between day-to-day life on the Cape and impacts to the coastal environment. MBP staff will continue to identify more accurate and comprehensive indicators to better assess the sustainability of the Cape's communities and its coastal environment.

Central Staff

Contact: Massachusetts Bays Program / (617) 626-1230 / www.massbays.org

ECOSYSTEM BASED MANAGEMENT

The MBP is working to spearhead a new approach to improve protection and maintenance of coastal resources using Ecosystem Based Management (EBM) principles. The idea is to manage an ecosystem based on how the system functions instead of managing its individual parts separately. EBM also incorporates the importance of human quality of life. Estuaries are complex ecosystems in which myriad habitats and species (including humans) constantly interact with and affect each other, so it's only natural that we manage all of these elements together. MBP central staff developed and facilitated a two-day workshop for all 28 National Estuary Programs (NEPs) in the fall of 2005 to explore how NEPs already use EBM strategies and how the NEPs might pilot work that incorporates cutting-edge EBM principles to enhance our coastal resource monitoring, research, and management.

In 2006 MBP will begin work on a pilot EBM project with the Environmental Protection Agency's New England office, fellow New England NEPs, and other partners. The current proposal is to apply coastal habitat mapping to environmental management within the Massachusetts Bays. Numerous current mapping projects within the Massachusetts Bays, such as eelgrass mapping, wetlands health assessment mapping, and seafloor mapping have tremendous value for the management of the Bays' coastal resources. These efforts can serve as the building blocks for EBM tools. MBP has elected to serve as a "natural laboratory" to test and develop a new EBM approach to ecosystem assessment and, ultimately, management of the Massachusetts Bays ecosystem.

Massachusetts Bays Estuary Association

Contact: Paula Jewell / Massachusetts Bays Estuary Association / (781) 378-1610 / www.massachusettsbays.org

THINK AGAIN. THINK BLUE.

The Massachusetts Bays Estuary Association (MBEA) continues to spearhead the *Think Again. Think Blue.* Massachusetts Bays stormwater pollution outreach and education campaign in close partnership with the MBP. Slated for a spring 2006 launch, *Think Blue* is a highly creative campaign to inspire individual stewardship of the Massachusetts Bays. Based on the results of an April 2005 telephone survey of residents within the Massachusetts Bays region, MBEA and its partners (called the *Think Blue Coalition*) decided upon specific messages that they wanted to convey to the public regarding stormwater pollution.

As MBEA discovered in its market research, most people want to do their part to keep coastal waters clean, but don't realize how many everyday activities harm the Massachusetts Bays through stormwater pollution. But armed with the right information, every citizen can help protect our precious coastal waters. Over the next several years *Think Blue* will reach across all media—television, newsprint, radio—will be on the ground in point-of-purchase displays, sports franchise promotions, and community events. It will speak to people during their commute via displays on trains and boats and during the nightly news through weathercaster broadcasts. By targeting our messages to specific audiences, the *Think Blue* campaign will have a positive impact on the Massachusetts Bays.



MASSACHUSETTS BAYS PROGRAM

HELPING COMMUNITIES CARE FOR OUR COAST



The Massachusetts Bays Program is a cooperative venture of the Massachusetts Executive Office of Environmental Affairs/Coastal Zone Management and the U.S. Environmental Protection Agency.



Keep up on the latest news...

Be sure to visit the Massachusetts Bays Program online at www.massbays.org and check out our event calendar, publications, background information on the Bays, and more!

The screenshot shows a website interface with a navigation menu including "about us", "estuaries", "what's new", "publications and the plan", "contact us", and "links". It also features a sidebar with the text "Our Mission: The Massachusetts Bays Program is a partnership of state, community and government that works to protect and enhance the coastal environment of Massachusetts Bay and Cape Cod Bay."

Commonwealth of Massachusetts
Mitt Romney, Governor
Kerry Healey, Lieutenant Governor



Executive Office of Environmental Affairs
Stephen R. Pritchard, Secretary



Massachusetts Office of Coastal Zone Management
Susan Snow-Cotter, Director

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This information is available in alternate formats upon request.

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