



BAYWATCH

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CITIZENS FOR THE PROTECTION OF WAQUOIT BAY CPWB

WBNERR and CPWB Work Together, And Both Benefit from Your Support.

By Brendon Annett

The Waquoit Bay Research Reserve is one of 27 similar reserves in the National Estuarine Research Reserve System supported by the National Oceanic and Atmospheric Administration (NOAA). Each reserve protects a bay, or estuary, and lands around it to serve as a natural laboratory. Then facilitates scientific research and education programs which help communities to manage the coastal natural resources they value and depend on.

CPWB was integral in protecting the lands that now make up the Research Reserve (including South Cape Beach, Washburn Island, the Swift Estate and the Quashnet River Area). CPWB continually supports the day-to-day stewardship, research and education programs at the Reserve by providing funding for equipment, necessary supplies, education program expenses and more, as well as providing volunteers for a variety of tasks.

This year exciting new research projects continue to be conducted at Waquoit Bay, including studies of the physics of how water moves from underground aquifers to the ocean and how non-native crabs compete with native animals. Education program topics will include Cape Friendly Landscaping and Energy Efficient Living. The Reserve recently sponsored a special workshop for municipal officials about options available for financing much needed wastewater infrastructure and is planning future trainings for this audience. Planned stewardship projects include conducting a controlled forest fire on Washburn Island to manage habitat, implementation of the long planned salt marsh restoration at South Cape Beach and improvements to the trailhead and parking area at the Quashnet River Area. As always we have lots of summer programming scheduled to help folks learn about and enjoy the coast.

Your civic engagement, gifts to CPWB and volunteering at the Reserve are all needed for the

continued success of our partnership. It is particularly important for you to become educated about and to support local efforts to construct sewers and treat wastewater. If you are interested in volunteering, we could use your help inside the office or out in the field with a variety of projects.

A healthy and active CPWB is necessary for the maintenance of robust programming at the Research Reserve. And a strong Research Reserve can contribute greatly to the protection of Waquoit Bay and coastal waters throughout the region

OUR ANNUAL RAFFLE *How Members can Help make this fund raising project for the WBNERR Educational Programs a success.*

Every summer CPWB holds a Raffle whose proceeds are used by the Waquoit Bay National Estuarine Research Reserve to fund educational Programs held there. The CPWB Steering Committee needs members to sell these tickets to friends and neighbors and for members to volunteer an hour or two at Mahoney's or Kenyon's Market where we sell tickets on the weekends as well as pass out literature and acquaint the public with WBNERR and CPWB. Another way members can help is by donating prizes or soliciting them from local merchants. If you are unable to assist in either of these ways, please consider buying at least one book. Books cost 6 tickets for \$5.00 or one ticket for \$1.00. To Volunteer for this project, please call Toni Grady at 508-548-9457. Our wonderful Cape Cod waterways need your assistance in helping WBNERR educate our residents!!

Enclosed with this newsletter is one book of tickets for the 2007 CPWB Raffle. Some members have not been able to easily purchase tickets before the August Drawing. Therefore, we have sent everyone a book to purchase. Please fill out the top tickets, tear bottom part off, and return to CPWB P.O.Box 3021, Waquoit, Ma. 02536 with a check for \$5.00 per book.

Why You Learn It First from Waquoit Bay

By Chris Weidman

“Gee, I saw in the newspaper that Waquoit Bay sure has a lot of problems, nitrogen, losing eelgrass and now this mercury thing. What’s up with Waquoit Bay?”

I hear some version of the comment above from folks on the Cape almost every week or so since I became the Research Coordinator for the Waquoit Bay National Estuarine Research Reserve seven years ago. That adds up to a lot of questions and they are fair questions. People are responding to newspaper articles, radio reports or word of mouth about the results of some new research study out of Waquoit Bay and are concerned. So what’s up with Waquoit Bay anyway?

Waquoit Bay is just like most tidal bays and ponds on Cape Cod. For example, it has the same geology, biology, meteorology, oceanography and even the same human population. What’s different though is that Waquoit Bay has played host to hundreds of research studies over the last four decades.

Marine scientists from nearby Woods Hole, such as the Woods Hole Oceanographic Institution, the Marine Biological Laboratory, U.S. Geological Survey and many other science organizations and universities throughout the country come to Waquoit Bay to do their research. Their scientific results provide a continuous stream of information about how the coastal environment functions.

Since 1989, the 1300 acres of Waquoit Bay waters and 1300 acres of surrounding watershed upland and marshes have been designated as part of National Estuarine Research Reserve System (NERRS), a federal-state partnership program between the National Oceanic and Atmospheric Administration and, here in Massachusetts with, the Massachusetts Department of Conservation and Recreation.

The mission of the Reserve system is to promote the health of the nation’s estuaries through research, education and stewardship. Waquoit Bay NERR carries out this mission in many ways, but primary among

them is to act as a dedicated site for coastal research. This makes Waquoit Bay a kind of natural laboratory, which allows scientists to carry out more advanced research.

One of the consequences of all this science focused closely on one Cape Cod estuary is that the public often first learns of new coastal issues as something “discovered in Waquoit Bay.” An unintended result is that the press and public can sometimes misinterpret this information as somehow unique to Waquoit Bay or that Waquoit Bay seems to be having an unusual number of environmental problems. In reality, of course, Waquoit Bay is pretty much your typical Cape Cod bay, just like the ones in which you like to swim, boat and fish. Things discovered “happening” in Waquoit Bay are scientifically important precisely because they represent conditions throughout the U.S. Northeast region.

So when marine scientists working in Waquoit Bay find that excessive nitrogen from wastewater, lawn fertilizers and atmospheric deposition are causing the waters of Waquoit Bay to degrade, its underwater eelgrass habitat to disappear and its shellfish populations to decline, they are not suggesting that these conditions are special to Waquoit Bay. And recently, when the Cape Cod Times reported that a group of scientists from Woods Hole had discovered mercury entering the bay through groundwater, though not a health risk here for those eating fish and shellfish, it did bring attention to a previously unknown coastal process with important regional and worldwide implications.

So what’s happening in Waquoit Bay is very likely what’s happening in your own favorite bay on Cape Cod. It’s just that you learned it first from Waquoit Bay. That’s what’s up with Waquoit Bay.

For more understanding of education projects at WBNERR, please attend **CPWB Annual Meeting on Monday, July 9th at 7:00pm** with guest speakers Pat Harcourt, WBNERR Education Director and Rick York, Mashpee Shell Fish Warden.

Bringing Estuaries into the Classroom

By Erin Baker, AmeriCorp Member and WBNERR Intern

This year's CPWB annual 3rd grade estuary presentations and poster contest were a great success. Over 200 students at East Falmouth Elementary and Quashnet School in Mashpee had the opportunity to learn about estuaries and the creatures that live there, through lessons taught by AmeriCorps Cape Cod member and WBNERR intern, Erin Baker.

The presentations included an introduction to estuaries and their importance to the plants and animals that live there, as well as their importance to people. Working in teams to assemble puzzles, the students determined what different estuarine creatures need to survive, such as clean water, a food source, and many young. The highlight for many students was the opportunity to meet some of their neighbors that live in estuaries. Students viewed mussels, barnacles, shrimp, scallops, periwinkles, and even a mummichog! At the end of the presentations, each class was asked to think of ways that they could help to keep our estuaries clean and healthy. The students were enthusiastic, encouraging each other to clean up trash, reduce energy use, and not to over fish! The culmination of the presentations was a challenge to create a poster illustrating the theme "*Fishes of the Estuary.*"

Each of the students participating in the poster contest this year will receive a small estuary related prize, while two winners from each class will receive additional prizes. Come see the winning posters on display at WBNERR .

** This year's participating classes and winners are:

East Falmouth

Ms. Skehill
1st Dominic, 2nd Maia Rogers

Ms. Scholes
1st Alex Yarosh, 2nd Emma Loveett

Ms McDonald
1st Shane Windward, 2nd Caroling Raposo

Mashpee

Ms Arsenault 3AR
1st Kailey Barrows, 2nd Caitlin Lee

Ms. Nelson 3NE
1st Carlie, 2nd Kiana Lopes

Ms. Stickley 3ST
1st Ashley Carpentier, 2nd Abigail Tremarche

Ms. Giuggio 3GI
1st Samantha Fraser, 2nd Rachel Bridges

Ms. Schreiner 3SCH
1st Kyle, 2nd Jeffrey D.

Ms. Cullum 3CU
1st Simone Kaplan, 2nd Sara Mac Rae

CPWB thanks Erin for her work with the 3rd Grade Poster Project and shares with you a few facts about the WBNERR internship and being an Americorp member

Erin Baker has been serving as an environmental educator at WBNERR since October 2006. Originally from Spencerport, New York, Erin graduated from the State University of New York College at Geneseo in 2005 with a B.A. in Geography and a minor in Environmental Studies. After spending a year working in an office, she joined AmeriCorps Cape Cod, and has been loving every minute of it. As an AmeriCorps member, Erin spends two days a week with her fellow Corps members participating in group service projects throughout the Cape, focused primarily on natural resource management, disaster preparedness, community education, and volunteer engagement.

She also spends two days a week at WBNERR, serving with Pat Harcourt to bring science and nature to students and teachers around Cape Cod. The opportunities afforded to AmeriCorps members are endless, and Erin is thrilled with the experience that she has had thus far. She is extremely grateful to be a member of such an extraordinary organization, and such an amazing community. Erin will continue serving with AmeriCorps and WBNERR through the end of July, before heading down to New Orleans to help with the ongoing recovery efforts following Hurricane Katrina.

Energy Conservation Promoted and Practiced at WBNERR

By Hank Bode

It was a clear, cool day in early Spring when Joan Muller and I met to discuss WBNERR's initiatives to conserve energy in their daily operations. The osprey had just returned to the bluff and chickadees, robins and tit-mice, or is it meese, were prematurely heralding the change of seasons, soon to be delayed by a couple of nasty storm systems.

Joan, in her role as Education Coordinator, has full access to the Reserve's activities in energy conservation. Consistent with its primary role to help us all conserve the environment, and particularly our local estuary, WBNERR has consciously sought ways to adopt and promote energy conservation in all aspects of the center's activities. In addition to the climate change impacts of the burning of fossil fuels (for instance sea level rise), atmospheric deposition from the burning of fossil fuels is right behind wastewater as a contributor of nitrogen to Waquoit Bay.

As we sat and talked in the main room of the "big house," two obvious efficiency actions were immediately visible. Overhead, the ceiling lights were all the energy saving fluorescent type. These lights which look like tightly twisted glass pretzels have gotten much attention now that their costs have been reduced to about twice that of a traditional bulb. They come in a number of configurations but most are direct screw in replacements for incandescent bulbs and they consume only a third of the power. As electricity costs rise this increased efficiency is a real benefit.

The second indication of conservation was the ceiling fan. The center does not use air conditioning in its main spaces and in summer ceiling fans provide comfort at a small fraction of the energy needed for air conditioning. Fortunately the building's location on the bluff is the beneficiary of prevailing breezes most of the time.

At Joan's suggestion we headed outside to view some less common energy saving applications. The first was a system for lighting/marketing the paths at night. Last Fall while attending a CPWB meeting I had walked along the trail and noticed the posts with small LED

lights. In our rapidly advancing electronic world, LED's (light emitting diodes) are in frequent use as indicators and illuminators on equipment. LEDs draw very little power and that characteristic allows the trail lights to get their energy from the sun via photovoltaic (PV) systems. PV panels are often made with one of nature's magic materials, silicon. (yes, beach sand is also mostly silicon!) The sun's energy causes arrays of panels of this highly engineered material to generate a direct current to flow which charges a bank of batteries. The batteries subsequently power the LEDs at night. At the Reserve a complete system is in each of three simple wooden towers on Reserve property. In the early 1980s the efficiency of PV panels was only 3-4%. Today it's in the range of 20% and growing. As efficiencies rise and rebates of close to 50% are offered, the private use of photovoltaics is becoming more and more popular.

We next walked toward the Gate House, a dormitory for visiting researchers and summer employees at the Reserve, to view the recently installed solar hot water system. As we passed the garage/barn/summer laboratory, Joan exclaimed "Oh, here's our brand new Ford Escape hybrid. It has almost doubled the gas mileage of a traditional vehicle." Yet another example of energy conservation in action at WBNERR.

CALENDAR

June 4th - 7:00pm CPWB Meeting at WBNERR
 June 23rd - Washburn Island clean-up
 July 9th - 7:00pm CPWB Annual Meeting guest speakers Pat Harcourt and Rick York
 July 18th - Annual Reserve Cup Regatta
 August 6th - 7:00pm CPWB Meeting at WBNERR
 Tuesday, August 7th - Watershed Block Party will be held

Each Tuesday at 6:30PM in July the WBNERR will hold it's ever popular Evenings on the Bluff series.

July 10 - not filled yet
 July 17 - Nationally recognized storyteller Michael Caduto
 July 26 - Wampanoag Singers and Dancers
 July 31 - Earth Tunes with John and Rachel Nicholas and Hugh O'Doherty

WANT ADS

New and exciting ideas for the 2007 Raffle. Please join us in this planning during the winter. Call Toni Grady at 508-548-9457.

Regatta planning and/or volunteer for July 18th, 2007 Annual Reserve Cup Regatta. Call Don Lunn 508-540-4893.

Volunteer to assist with the June mailing of the CPWB newsletter. Requires time to adhere labels and stamps. Call Maureen Jankauskas 508-477-9463

Assist with Washburn Island clean-up June 23rd..
Call Jayne Abbott 508-540-1948

Call now to volunteer!

Renew your membership CPWB Dues Notice is attached for your convenience.

Our membership year runs from July 1st through June 30th. Please check to see if your membership is current. CPWB dues notice is included to assist members.

Your \$10.00 membership fee supports educational programs. Is your neighbor a member? We are working to grow our membership, the CPWB brochure with application is available at WBNERR.

CPWB thanks the membership that give additional contributions. CPWB is a non-profit organization concerned with the health of the area's waters. CPWB serves as the Friends Group for the Waquoit Bay National Estuarine Research Reserve, supporting their educational programs and seminars. We are committed to providing critical support through our membership base to support WBNERR.

Please mark your calendar to attend the CPWB Steering Committee meeting.

Meetings are held every other month on the first Monday at 7:00pm at the reserve. CPWB's next scheduled meeting is June 4th. The CPWB Annual Meeting is July 9th, guest speakers are Pat Harcourt and Rick York.

RENEW MY MEMBERSHIP: (Please make checks payable to CPWB, P.O. Box 3021, Waquoit, MA 02536)

\$ 10.00 Membership \$ _____ Contribution

Names: _____

Address: _____

Summer Address: _____

Phone: _____

Email Address _____

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Why You Learn It First from Waquoit Bay

Bringing Estuaries into the Classroom

Energy Conservation Promoted and Practiced at WBNERR

Are you a member? For \$10.00 you can be a member and receive our newsletters.

**Citizens for the Protection of Waquoit Bay CPWB
P.O. BOX 3021
WAQUOIT, MA 02536**

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