PEP Talk

The Newsletter of the Peconic Estuary Program

Volume 1, Issue 1 · Fall 2004

What's an Estuary?

Long Island's renowned East End boasts wineries, the Hamptons, pumpkin picking...and an estuary. One of the 28 "nationally significant" estuaries, no less. The Peconic Bays, spanning Flanders to Gardiners and everything in between, comprise an estuary, a partially enclosed area where fresh and salt water meet and mix. Estuaries are the most productive ecosystems on earth, containing more life per square inch than the lushest rainforest canopy. The Peconic Estuary lives up to this high standard—animal and plant life abound. Indeed, the combination of undisturbed habitats and productive bays prompted The Nature Conservancy to designate the Peconics as one of the "Last Great Places."

Photo by Ralph Pugliese

Sponsored by the U.S. Environmental Protection Agency, New York State Department of Environmental Conservation, and Suffolk County Department of Health Services, the Peconic Estuary Program (PEP) oversees many initiatives designed to protect and restore living resources and the habitats that support them, and to improve environmental quality with respect to nutrients, pathogens, toxics, and Brown Tide.

On September 25th, 2004, the nation celebrates National Estuaries Day, an annual salute to these enchanting environments. In observance of this day, the Peconic Estuary Program is launching its new newsletter, PEP Talk. Please read on to learn more about this natural treasure in our own backyards—the Peconic Estuary.

~Shana Miller, NY Sea Grant

Nitrogen: Friend or Foe?

The richness of estuaries stems from the nutrients that come from the surrounding landscape, tidal creeks, groundwater, and even the atmosphere. Nutrients are essential for sustaining life, but when present at high levels from sources such as fertilizers and septic systems, they can be harmful to an estuary. Excess nutrients, especially nitrogen, stimulate the growth of aquatic plants, including blooms of algae and "seaweeds." Aquatic plants produce oxygen during the day, but at night they consume oxygen; when the blooms die they can cause low dissolved oxygen levels, harming fish, shellfish, and other animals. Excessive algae

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What's Inside?

Don't Dump It, Pump It!

Boating is a great way to enjoy the Peconics, but be aware that the entire Peconic Estuary is a Vessel Waste No Discharge Zone, designated in May 2002. This means that treated and untreated discharges from marine toilets are prohibited in all Peconic waters, including bays, harbors and creeks.

While in a Vessel Waste No Discharge Zone, the discharge valve of a Type I or Type II marine sanitation device must be visibly secured in the closed position so that wastes cannot readily be discharged overboard. Compliance can be as simple as closing and locking the seacock of your marine toilet with a padlock or non-releasable wire tie, or removing the valve handle altogether. A Type III marine sanitation device, or holding tank, is permitted provided you use pump-out facilities.

Numerous harbors in the Peconic Estuary have FREE pump-out stations and boats. Pump-out boats can be hailed on VHF Channel – 73 (VHF Channel – 9 in Greenport). Once a pump-out boat arrives at your boat, "It is a no fuss situation for the boater," says Ted Sadleir, Senior Bay Constable for the Town of Southampton. "Our pump-out boats will come to you in the open waters of the Peconics or even to your marina. An average boat's holding tank takes five minutes to pump out – we will pump out your porta-potties too."

Compliance with the Vessel Waste No Discharge designation helps keep our waters safe and clean. Pathogens in untreated sewage increase the potential for human illness and the possibility of additional shellfish bed and swimming area closures, especially in enclosed harbors where boaters congregate to anchor, swim, and fish. In addition to polluting, violation of the New York State no discharge laws (NYS Navigation Law §33.e) will cost you - fines up to $500 are issued for the first offense and $1,000 for subsequent violations.

Bon Voyage!

A note to municipalities: By taking advantage of the current state and county programs, a municipality could recoup 73% of the final cost of purchasing a pump-out boat. Please give the PEP Program Office a call for more details.

~Laura Bavaro, Suffolk County Department of Health Services

PEP Talk is published by the Peconic Estuary Program (PEP), a partnership of governments, environmental groups, businesses, industries, academic institutions, and citizens. The PEP's mission is to protect and restore the Peconic Estuary system.

PEP Talk is produced by New York Sea Grant and printed by the Suffolk County Department of Health Services, both under cooperative agreements through Section 320 of the Clean Water Act with the U.S. Environmental Protection Agency (CE-98272300 and CE-992002, respectively).

For a free subscription, contact: PEP Talk, SCDHS-Office of Ecology, Riverhead County Center, Riverhead, NY 11901, 631-852-2077, peptalk@peconicestuary.org

Printed on 100% post-consumer recycled paper using soy-based inks.

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can also cloud the water, blocking sunlight from reaching submerged aquatic vegetation such as eelgrass, which provides prime nursery and spawning habitat for juvenile finfish and shellfish. Nitrogen is also strongly suspected of playing a role in triggering and sustaining Brown Tide blooms. Too much nitrogen can cause shifts and changes in the entire estuarine food web. The long-term impacts of excess nitrogen are difficult to measure but probably include changes to the numbers and kinds of aquatic life present in estuaries.

Fortunately, about 97% of the Peconic Estuary meets environmental standards for dissolved oxygen. However, nitrogen loadings (inputs) to the entire estuary are estimated to be at an all-time high, fueled by increased inputs from the atmosphere and groundwater. Contrary to popular belief, stormwater is not a significant contributor to nitrogen loadings in the Peconics. Due to less tidal flushing and high nitrogen inputs, the western estuary is critically stressed (specifically, the tidal Peconic River, Meetinghouse Creek, and East Creek in Riverhead). Studies and monitoring suggest that nitrogen stresses may also exist in Flanders Bay, Great Peconic Bay and numerous tidal creeks that feed the estuary.

So is nitrogen a friend to the Peconic Estuary or a foe? Without nitrogen, the Peconic Estuary would not be the ecologically rich and diverse system that it is—nitrogen is an essential element for healthy coastal waters. But when it comes to nitrogen, it is possible to have too much of a good thing.

The Peconic Estuary Program is taking a number of important actions to limit and reduce nitrogen loads (see box below). If we are all willing to make small changes to reduce or even eliminate excess nitrogen in our bays, we can keep our estuary healthy for this and future generations.

What are some of the PEP's initiatives to manage nutrients?

- Imposing limits on the amount of nitrogen that is discharged from the major sewage treatment plants and upgrading treatment systems to meet the limits.
- Supporting open space acquisition, particularly in nitrogen-stressed sub-watersheds (a benefit of natural lands protection is controlling nitrogen loads).
- Working with farmers to reduce the fertilizer (nitrogen) load from agriculture by 25%.
- Working with the 34 golf courses on the East End to reduce the amount of fertilizer (nitrogen) that leaches to groundwater and surface water.
- Developing more specific recommendations for homeowners and landscapers to reduce or eliminate fertilizer (nitrogen) losses to groundwater and runoff from lawn care and landscaping.
- Promoting the use of the treated wastewater from the Riverhead Sewage Treatment Plant to irrigate and "fertigate" the adjacent golf course.
- Working with the boating community to implement the "Vessel Waste No Discharge Zone" for the entire Peconic Estuary.
- Sponsoring shellfish and wetland restoration projects (both can help improve water quality).
- Supporting the construction of Crescent Duck Farm's treatment plant to better treat processing waters.
- Working with governments to implement additional stormwater remediation projects on roadways.
- Investigating opportunities to reduce nutrient loadings from on-site wastewater disposal systems ("septic systems" or "cesspools").
- Adopting the innovative policy of water quality preservation in the eastern estuary to accompany necessary mitigation projects.

Golf Courses Are up to the Challenge

Since May 2003, the PEP has teamed up with a popular and thriving East End industry—Golf. The *East End Nitrogen Management Challenge for Golf Courses* is an effort to reduce nitrogen inputs to the estuary that may result from fertilizing greens and fairways. The industry's overall response has been fantastic!

Through the *Challenge*, the U.S. Golf Association (USGA) and Cornell University will provide technical assistance to participating golf courses, enabling each course to better manage their fertilizer use. The chief goal of the *Challenge* is implementing best management practices for fertilizer applications so that each golf course's overall contribution to groundwater is not more than 2 mg/l total nitrogen (a level that is less than half that resulting from typical residential development). As part of this voluntary program, comprehensive nitrogen management plans will be developed, and an annual evaluation will track each course's progress. Of the 34 East End golf courses, including both public and private facilities, more than 85% have formally agreed to take the *Challenge*. The industry cooperation has been commendable, and we look forward to a long-term partnership with the golf industry to improve the environmental quality of the Peconics.

The PEP Citizens Advisory Committee sincerely thanks the following golf institutions, and the management and superintendents of the facilities, who were so instrumental in obtaining this agreement:

Atlantic Golf Club
Bridgehampton Club
Calverton Links
Cedars Golf Club
East Hampton Golf Club
Fox Hill Golf Club
Friar's Head
Gardiners Bay Country Club
Goat Hill at Shelter Island Country Club
Great Rock Golf Club
Hampton Hills Golf Club
Indian Island Golf Course
Islands End Golf Club
Laurel Links Country Club
Long Island National Club
Maidstone Club
Montauk Downs
National Golf Links of America
North Fork Country Club
Noyac Golf Club
Old Vine Country Club
Poxabogue Golf Course
Quogue Field Club
Rock Hill Golf Club
Sag Harbor Golf Club
Shinnecock Hills Golf Club
South Fork Country Club
The Bridge
Westhampton Country Club

~Kevin McDonald, Citizens Advisory Committee Chair

National Golf Links of America, Photo by Rick Balla

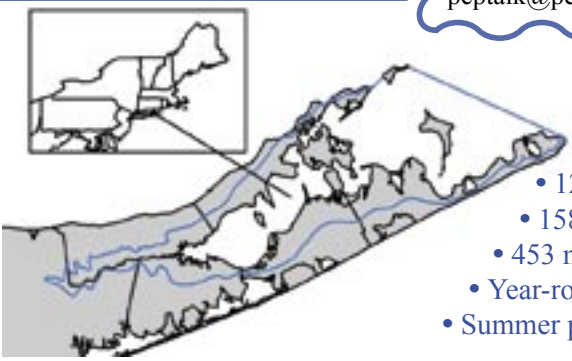
Estuarine Explorers

"In the end, we will conserve only what we love, love only what we know, and know only what we are taught."
~Baba Dioum

Interested in learning more about YOUR estuary? Sign-up for a FREE subscription to PEP Talk! And request a FREE copy of the PEP Comprehensive Conservation and Management Plan (CCMP) Public Summary!

Contact: PEP Talk, SCDHS-Office of Ecology, Riverhead County Center, Riverhead, NY 11901, 631-852-2077, peptalk@peconicestuary.org

Where are the Peconics?



- 125,783 land acres
- 158,056 surface water acres
- 453 miles of shoreline
- Year-round population of 100,000
- Summer population of 280,000

Peconic Pals

Peconic Wildlife Word Search

T S L I P P E R S H E L L B I C
O L E M E R G A N S E R T E H S
Y Y B F A U R H S I F E U L B T
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O P L I T U R I R I N O R E H K
V A A N C H O V Y D F P I N A S

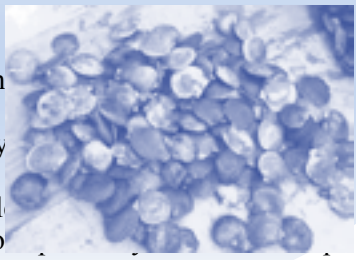
They're hiding up, down, across, diagonally, and backwards...
Help us find these Peconic critters!

Alewife, anchovy, bay scallop, blue crab, bluefish, clam, deer, dolphin, egret, eider, flounder, harbor seal, heron, horseshoe crab, merganser, oyster, seahorse, sea turtle, scup, slipper shell, striped bass, tautog, terrapin, weakfish, whelk

Coming Soon: www.peconicestuary.org

Species Snapshot

Bay Scallop (*Argopecten irradians*)



It is only fitting to do our first species snapsh
and the PEP—the bay scallop. Scallops, unlike
relatives, do not burrow in the sand. As spat (y
eelgrass or other submerged aquatic vegetation.
bottom and swim by using their adductor muscl
The adductor muscle is what will end up on yo
in a restaurant.

Around the edge of a scallop's mantle (the tissue that produces the shell) is a series of blue eyes that can detect movement, including that of predators like the seastar. Scallops themselves are filter feeders, sifting plankton out of the surrounding waters. Few scallops live more than 2 years. They are hermaphroditic (each individual is both male and female) and mature within 6 months to 1 year.

Scallops were once the biggest fishery in the Peconics, but in 1985, a toxic alga known as Brown Tide virtually wiped out the population. Although there has not been a significant Brown Tide event in nearly 10 years, scallop populations have not rebounded. A decline in their favorite habitat, eelgrass, may be partly responsible for scallops' troubled times. Fearing that there are not enough bay scallops to reproduce successfully, Cornell Cooperative Extension and Southampton College of Long Island University are launching a four-year large-scale bay scallop seeding effort in the Peconic Estuary. The Nature Conservancy is also working to increase the spawning potential of bay scallops by stocking "no-take" spawner sanctuaries – five have been designated in the Peconics to date.

Did you know? The bay scallop was named the New York State Shell in 1988. Indeed, bay scallops from the Peconics are so revered that they are the farmed scallop of choice in China!

~Shana Miller, NY Sea Grant

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