

# PEP Talk

The Newsletter of the Peconic Estuary Program

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## Stormwater: Slow the Flow

Suffolk County is surrounded by lush marine environments that support recreational opportunities, unique wildlife habitats and important shellfishing resources. However, these are all threatened by a type of water pollution that most people never think about—stormwater. In natural landscapes, rainfall is largely filtered by soil and vegetation. Urbanized landscapes lack the ability to hold



Photo by Sean O'Donnell, CCE

rainfall, causing rain, snow melt and water from sprinklers to run off impervious surfaces (e.g., roads, sidewalks, driveways, roofs, parking lots) to surface waters via storm drains or overland flow. As stormwater travels across these surfaces, various pollutants (e.g., oil, grease, bacteria,

nutrients, litter) are carried, all of which eventually discharge to Suffolk County's streams and marine waters.

Suffolk County's water quality is suffering as a result of stormwater pollution. Several of the County's waterways, including the Peconic River and Flanders Bay, are impaired (i.e., closed to shellfishing), with the key cause listed by New York State as stormwater runoff and associated bacteria. As of 2001, 14% (2,952 acres) of productive shellfishing areas in the Peconics were closed due to failure to meet water quality standards.

There are many things you can do as a citizen, homeowner or business  
*See STORMWATER on Page 3*

## Paving Paradise

Is your neighborhood full of trees with a vast understory of shrubs, or is it cluttered with concrete patios, pools, large sheds, tennis courts and long driveways? Impervious surfaces are mainly constructed surfaces like rooftops, driveways, sidewalks, and parking lots that repel water and prevent rainfall and snow melt from infiltrating the ground. The amount of impervious cover in your neighborhood affects the health of the Peconic Estuary and its tidal creeks.

The amount of pollution delivered to area waters from stormwater runoff is directly related to the amount of  
*See IMPERVIOUS on Page 2*

### What's Inside?



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**September 24, 2005 is National Estuaries Day - Celebrate outdoors!**

## Buffer for a Healthier Bay

What's extremely important to water quality and shoreline habitats, but is being lost bit by bit??? The native trees, shrubs, and plants growing near the shore. These woodlands and wetlands buffer the bays. A healthy buffer 1) acts as a filter to catch sediment and pollutants before stormwater enters our creeks, ponds, and bays; 2) reduces the velocity of stormwater runoff; 3) provides an area for the runoff to permeate the soil; 4) contributes to groundwater recharge; and 5) can protect against coastal flooding. Protecting buffers also 6) ensures habitat and food sources for osprey, shorebirds, diamondback terrapins, and a variety of other animals.



Wide buffers are best. An ideal buffer zone would be wider than 100 m (>300ft), offering critical wildlife habitat, water quality protection, and a safeguard against sea level rise. Where there is natural habitat along the shore, it should be protected. In areas with cleared shorelines, buffer strips should be planted. The buffer would, ideally, be comprised of 100% cover of native vegetation and protected from disturbance. Because sea level is rising, provisions should be made to allow for either the buffer to be gradually moved back or an extra wide buffer be established today so that there will be a buffer in the future.

~Susan Antenen,  
The Nature Conservancy

### *IMPERVIOUS from Page 1*

impervious cover in a neighborhood. According to research by the Center for Watershed Protection, a non-profit based in Maryland, stream quality is expected to decline when impervious cover in a watershed exceeds 10%, with severe degradation expected beyond 25% impervious cover. These degradation thresholds may be a bit looser for the main bays because of tidal dilution and dispersion. Luckily, healthy wetland and stream buffers coupled with stormwater management and better site design can help mitigate some of the negative impacts from impervious cover.

The results from USGS' analysis

of impervious cover within the Peconic Watershed (as of 2001) are eye-opening when compared to the Center for Watershed Protection's thresholds. The Villages of Greenport (25.6% impervious) and Sag Harbor (22.8% impervious) have the highest percentages of impervious cover of all the municipalities. Comparing lands in each East End Town within the watershed, the Town of Riverhead heralds the most impervious cover with 10.4% and the Town of Brookhaven the least with 3.1%. The Towns of Southold, Southampton, and Shelter Island have 9.2%, 7.6%, and 7.4% impervious cover, respectively.

~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. Learn more at [www.peconicestuary.org](http://www.peconicestuary.org).



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## ***STORMWATER from Page 1***

owner to proactively slow the flow of stormwater from your property and minimize typical stormwater pollutants on site. *See the box below for more details.*

Detecting and eliminating illicit discharges to storm drains is also imperative. An illicit discharge is “any discharge entering a storm drain that is not composed entirely of stormwater,” although there are exceptions to this definition. The term “illicit” is used because the storm sewer system is not designed to treat these discharges. Illicit discharges can happen directly or indirectly and may or may not be intentional. Some examples include illegal connections of septic systems to storm sewers or the intentional dumping of wastes down storm drains. The Suffolk



*A well-placed downspout directs stormwater onto permeable ground. Photo by Rory MacNish, CCE.*

County Dept. of Public Works and Cornell Cooperative Extension (CCE) are currently inspecting all storm drain outfalls from County properties and roads to locate and monitor suspected illicit discharges to the storm drain system. You can support this effort by reporting suspected illicit connections to the Suffolk County Dept. of Health Services at 631-852-5750.

Suffolk County’s efforts to minimize stormwater pollution also includes public education and participation, implementation of construction site best management practices, and development of a pollution prevention plan for County facilities and employees. For more information, please contact CCE at [jlc254@cornell.edu](mailto:jlc254@cornell.edu).

~Joanna Corey

Cornell Cooperative Extension

### **Stormwater Pollution: What You Can Do**

- 1. Protect or establish a buffer (100 meters wide, if possible) around all creeks, ponds, and bays.** *See page 2 for details.*
- 2. Minimize impervious surfaces on your property.** Remove unused portions of driveway and outdoor concrete and replace them with shrubs and trees.
- 3. Disconnect impervious surface conduits.** For example, a downspout from your roof leading to your driveway sends stormwater directly to the road and a storm drain. Move the downspout a few inches to your lawn or a rain garden and allow stormwater to infiltrate naturally.
- 4. Create a rain garden.** Rain gardens are designed to collect and infiltrate stormwater with moisture tolerant native plantings.
- 5. Pick up pet waste, and dispose of it in the trash.**
- 6. Don’t feed waterfowl or create unnatural conditions where they congregate (e.g., lawns that extend to the water’s edge).** Non-migratory Canada geese are especially a problem.
- 7. Use fertilizers sparingly or not at all, and never apply them before a rainfall.** Keep fertilizers and pesticides off impervious surfaces where they will be washed away.
- 8. Keep your curbside clean and free of leaves, grass clippings, sand, and litter that will wind up in catch basins or surface waters.**
- 9. Never dump motor oil or other hazardous waste down storm drains or onto the ground.** Motor oil is accepted at numerous locations for recycling. Check with your town for hazardous waste collection days (*i.e.*, STOP days).
- 10. Make repairs to stop leaks of motor oil, antifreeze, and other automotive toxics from your car.** If leaks occur, use kitty litter or sand to soak up the liquid; when dry, sweep and dispose in the trash.
- 11. Wash your car using phosphate-free detergents on grass or a gravel surface.** Alternatively, use a commercial car wash that treats and recycles its water.

# Mini-Grants, Major Impacts

The first cycle of the Peconic Estuary Program Mini-Grants Program has come to a close. And the PEP is thrilled with the results! For just \$8,000, countless have been educated about the Peconic Watershed, a garden habitat was created, and lots of people have gone the distance – 5 kilometers, to be exact – for healthy bays.

Launched in April 2004, the mini-grants program was designed to enable Peconic Estuary stakeholders to carry out small-scale projects designed to increase public awareness of the estuarine environment and/or encourage active public participation in protecting and restoring the Peconic Estuary. The following four projects were selected for support:

- **North Fork Environmental Council, in support of Earth's Garden at Oysterponds School in Orient, NY:** Over 100 elementary school students joined in planting a garden on their school grounds. Designed by Maureen Cullinane, the butterfly-shaped butterfly garden will continue to serve as a living lab to teach students about the importance of native and xeriscapic plants, wildlife habitat, and chem-free landscape maintenance to the health of the Peconics.
- **Southampton College:** 170 freshmen launched their college careers by learning about water quality in the Peconic Estuary in a core course entitled, *Peconic Water Karma*. The students' term project involved developing



Photo by Jocelyn Ozolins

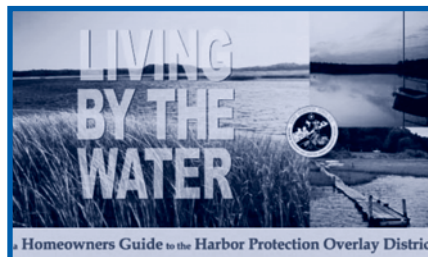


Photo by Lindsey Rohrbach

mini-grant proposals of their own, with the winning project being selected for implementation in the spring semester. *Healthy Bodies, Healthy Bays*, a 5K race and eco-fair on the shores of the estuary near Sag Harbor was realized on April 24, 2005. Congressman Tim Bishop fired the gun that started nearly 60 runners on their way. Having garnered corporate sponsors

and a raffle for race day, the Southampton students raised almost \$2,700 for the Cornell Cooperative Extension of Suffolk County Marine Program for after-school marine environmental programming in the Peconic watershed.

- **Town of East Hampton:** The Town produced and distributed a brochure to educate homeowners, particularly those residing in the Harbor Protection Overlay District, about what they can do to prevent pollutants from entering the East End harbors and bays. A comprehensive native plant list was developed to complement the project and is available online at [www.town.east-hampton.ny.us/naturalresources/Native\\_Plant\\_Species.htm](http://www.town.east-hampton.ny.us/naturalresources/Native_Plant_Species.htm).
- **Town of East Hampton:** Educational signage was produced for display at Louse Point in Accabonac Harbor and Maidstone Beach in Three Mile Harbor. The signs depict the geological history of the area, as well as information about local habitats, animals, recreation, and environmental management.



The PEP is eager to build on the success of this year's program and launch the next round of mini-grants. Expect the next Request for Proposals in Spring 2006. Start brainstorming!

~Shana Miller, NY Sea Grant

# Estuarine Explorers

**“Autumn is a second spring  
when every leaf is a flower.”**

~Albert Camus

## Peconic Must-Sees

**Mashomack Preserve (Shelter Island)** has been called the “Jewel of the Peconics.” With over 2,000 acres of woodlands and wetlands, and 10 miles of coastline, it’s not hard to see why. The Nature Conservancy owns the property and operates a visitor center onsite. This year marks the 25<sup>th</sup> anniversary of the preserve. Check out the fall foliage from the manor house or one of the four hiking trails. Open year-round. For more information, call (631) 749-1001.

## WE’VE MOVED!

After more than a decade in Riverhead, the PEP Program Office has migrated west to a new habitat in Yaphank. Please note our new contact information.

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## Help Us Save Trees (& Money)!

Sign up to receive *PEP Talk* via e-mail instead of snail mail. Please send your e-mail address and preference for electronic delivery to [peptalk@peconicestuary.org](mailto:peptalk@peconicestuary.org).

## Peconic Pals

### Scrambled in the Storm Drain

Lurking below are examples of the many different pollutants found in Peconic stormwater. Unscramble them to reveal a hidden message about what all of us in the estuary need to do...

1. LPERTUEMO   ○
2. SAGERE    ○
3. ILO   ○
4. ETLRIT    ○
5. SVEALE    ○
6. ECSDIEPTIS   ○
7. IRFZETILRE   ○
8. ZIFENETEAR   ○
9. LENCOHIR    ○
10. SILO   ○
11. ISTLPAC    ○
12. ARC POSA    ○
13. OYFAMSRTO   ○
14. TPE TSWAE   ○

\_\_\_\_\_ & \_\_\_\_\_ the Peconics!  
1 2 3 4 5 6 7   8 9 10 11 12 13 14

#### Need a Hint? Take a Dip in the Word Bank:

antifreeze, car soap, chlorine (from swimming pools), fertilizer, grease, leaves, litter, oil, pesticides, plastic, petroleum, pet waste, soil, styrofoam

**Peconic Estuary: The Video Game?** Yes, indeed - the rumors are true. Play it yourself, and save the fish from the dreaded dead zone at [www.peconicestuary.org](http://www.peconicestuary.org)!

# Species Snapshot

## American Eel (*Anguilla rostrata*)

As you read this, snake-like creatures are working their way down the tributaries of the Peconic Estuary to begin the long migration to their spawning grounds in the Sargasso Sea, south of Bermuda. What fish is capable of undergoing the 1,000+ mile journey? The American eel.

A “catadromous” fish, the American eel is born in the ocean but spends the majority of its life in fresh and brackish water, returning to the sea only to spawn. After hatching in the Sargasso Sea, eel larvae, or leptocephali, drift on oceanic currents. Upon reaching the continental shelf, they undergo a metamorphosis into crystal clear, elongated glass eels. With help from the tide, glass eels swim toward the coast and eventually wind up in coastal estuaries, rivers, and lakes, sometimes hundreds of miles inland. It is believed that eel larvae inhabit any part of the range, regardless of where their parents spent their freshwater lives.

Once in their new homes, glass eels gradually develop pigmentation, transforming into the common green or yellow eel. Eels will remain in this life phase for upwards of twenty years as they continue to grow, seldom moving from where they first settled, until the maturation process is triggered.

In the fall of each year, mature eels descend rivers and estuaries on their migration towards the ocean. During this phase, eels transform dramatically into their final life stage – the silver eels. Their skin thickens and takes on a dark brassy hue, their eyes enlarge, their fins blacken, and their digestive tract atrophies. So changed, the eels have barely enough energy to swim back to the Sargasso Sea where the adults will spawn for the first time in their lives, and then die.

American eel populations have declined dramatically due to extensive fishing pressure and dams that block access to riverine habitats, among other reasons. In fact, they are now being considered for listing on the U.S. Endangered Species Act. Here in the Peconics, we’re working to build eelways to bridge dams so each fall we can say goodbye to a bounty of silver eels as they leave for the Sargasso.

*Did you know?* Contrary to popular belief, American eels have scales.

~Vic Vecchio, NYS Department of Environmental Conservation



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ADDRESS CORRECTION REQUESTED