

Independent Opinion

# A Watershed Approach To Restoring The Peconic Estuary

*Independent / Rachel Gruzen**By Rachel Gruzen*

Many Long Islanders are familiar with the term “estuary” -- a place where fresh and salt water meet -- and can distinguish the Peconic Estuary as the 158,000 acres of surface water starting at the Peconic River in Brookhaven and ending at Block Island Sound between Plum Island and Montauk Point.

The term “watershed,” on the other hand, may be less familiar. A watershed is the land surfaces off of which rainwater flows, and in the case of the Peconic Estuary watershed, includes 125,000 land acres from the high points of the North and South Fork terminal moraines to the flats of the coastal zone. Fresh water flows off these lands, down rivers and streams, and meets the tidal salt water in the Estuary’s creeks, harbors, and bays.

Today water quality in the Peconic Estuary is impaired. Harmful algal blooms are more frequent, eelgrass beds are sparse, and harbor bottoms have become near deserts. Scientific studies point to waste streams in our watershed as the culprit. Sanitary waste, excess fertilizers, pesticides and plastics discharged onto land surfaces and injected into the ground, even miles inland, are flowing with gravity into the Estuary. Waste is also flowing into aquifers and drinking water.

The pollutants impact the health of vegetation, shellfish, finfish, humans, and an entire ecosystem upon which the Eastern Long Island economy and quality of life depends. Solving these problems requires a change in behaviors at home and in the community. Species can rebound and ecosystems can recover if given

opportunity, but this demands a comprehensive, watershed approach and effort to mitigate pollution.

Suffolk County and the scientific community have identified nitrogen pollution as the largest factor in water quality decline in the Peconic Estuary. Most nitrogen is attributed to residential septic waste conveyed by groundwater flow into the Estuary. The county and some Eastern Long Island townships have developed septic improvement programs with grants and rebates to incentivize upgrades to new nitrogen-reducing systems. Innovative/Alternative Onsite Wastewater Treatment Systems use electricity and concentrated microbes to accelerate the biological breakdown of organic material.

Stormwater provides additional pathways for pollution to enter

the Peconic Estuary. Rainwater washes off paved surfaces, picks up contaminants such as excess fertilizer, pesticides, motor oil, road salts, loose sediment from construction sites, and floatable plastics, and directly carries them into the harbors and bays. Stormwater also carries bacteria, known as pathogens, which accumulate in overflowing septic systems, dog poop, and the feces of dense colonies of waterfowl like Canadian geese or ducks. High levels of pathogens are the reason why waters are sometimes closed to shellfish harvesting or bathing.

Everyone can reduce pollution in the Peconic Estuary watershed. Nitrogen and pathogens can be mitigated by upgrading septic systems or regularly inspecting and pumping existing tanks, picking

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# Thanksgiving At Sofo

By Peggy Spellman Hoey

The South Fork Natural History Museum is hosting a free family Thanksgiving open house on Saturday from 10 AM to 4 PM.

The event will feature a full day of information about astronomy and outer space exploration where families can learn about binoculars and telescopes, space telescopes, and the Earth from our doorstep to outer space. Children can write a note to a space alien, enjoy crafts, face painting, have a blast with their own special stomp rocket, pose for an astronaut photo-op, or view a demonstration of a solar house with its own solar car. Visitors can take in the museum's StarLab planetarium show for a small fee -- SoFo members are \$3 per person, non-members \$5 per person.

"This day of fun and informative events about astronomy and space is just one of the many new topics you'll find at the South Fork Natural History Museum's

Thanksgiving open house," said Carol Crasson, the museum's education director. "We're cosponsoring the day with the terrific Montauk Observatory, and adding information about space exploration and outer space to our thinking about the natural world." The subject matter, she continued, "could not be timelier with NASA getting ready to send humans back to the moon, SpaceX's rocket launches, and continued plans for more Mars explorations."

The indoor StarLab planetarium shows, which last about 20 minutes, will begin at 10:30 AM and will be offered at the following times: 10:30, 11:10, 11:50, 1:10 PM, 1:50, 2:30, and 3:10. Advance reservations for the StarLab showings are strongly suggested. The museum asks those who are interested in attending a StarLab showing to call SoFo at 631-527-9735 to schedule the preferred time of their visit and to indicate the number of people attending.

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up dog waste, recycling, and not feeding waterfowl. Homeowners can ensure their neighbors know about the Suffolk County Fertilizer Reduction Initiative, which bans the application of fertilizer from November 1 to April 1 when the ground cannot absorb the nutrients.

There is room for creativity as we steward our watershed, too. The Roanoke Elementary School and the Riverhead Engineering Department collaborated on a design competition whereby second graders created sketches for rain gardens and rain barrels to fabricate at home. Three student designs received awards from the town supervisor on World Oceans Day. The Peconic Estuary Program has a \$500 rebate program for homeowners who replace lawn and pavement with bioswales and gardens. The vegetation retains stormwater and pollutants, and allows the water to percolate into the soil where it ultimately recharges the aquifer. The Village of Sag Harbor distributes a Guide to Native Plants, which use less irrigation, maintenance, and fertilizer than non-natives.

There are also many examples where one motivated group is teaching its larger community to engage on estuary health. The

Springs School fourth graders wrote an opera titled, "Beyond the Duck Pond," which educated fellow students and their families about the ecological harm of feeding ducks in Pussy's Pond at the headwaters of Accabonac Harbor. Four Greenport restaurants partnered with the Product Stewardship Institute in a pilot program to reduce single-use plastics in restaurant operations, serving as a role model for other waterfront businesses on keeping plastics out of the Estuary.

The Peconic Estuary Protection Committee, formed in 2015, is an intermunicipal alliance that shares technical resources and cooperates on education and planning to protect water quality in the Estuary. Members are the Towns of Brookhaven, East Hampton, Riverhead, Shelter Island, Southampton, and Southold; the Villages of Greenport, North Haven and Sag Harbor; Suffolk County; and the New York State Department of Transportation. Visit [www.PeconicProtection.info](http://www.PeconicProtection.info) for creative ways in which you can take a watershed approach to protect the Peconic Estuary, or write the Committee at [PeconicEstuary@gmail.com](mailto:PeconicEstuary@gmail.com) to share your ideas.

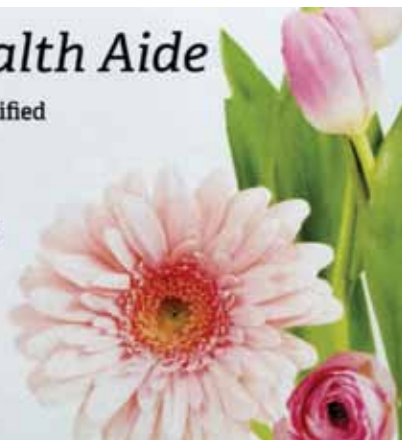
Rachel Gruzen, MEM, LEED AP is the coordinator for Peconic Estuary Protection Committee.

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