What's inside:

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FALL NEWSLETTER

Protecting and Restoring Long Island's Peconic Bays

Above and Beyond

PEP is lucky to have dedicated staff members working every day to protect our estuary. This summer, New England Interstate Water Pollution Control Commission (NEIWPCC), who employs two staff on behalf of PEP, honored PEP Program Coordinator Sarah Schaefer with their ***Above and Beyond Award.*** Sarah was nominated by NEIWPCC's Kimberly Roth for her work to compile and draft the 5-year program evaluation of PEP. This 100+ page document, and the accompanying on-site visit from EPA staff, could not have been completed as smoothly without Sarah's persistence and drive and is a great representation of the critical addition she is to PEP. Congratulation Sarah!

Why is Salt Marsh Restoration Important?

BY ELIZABETH HORNSTEIN, PEP STATE COORDINATOR

Salt Marshes, also known as tidal wetlands, are vegetated areas around the edge of the estuary. They are inundated by seawater brought in by the tides twice-daily. Smooth cordgrass (Spartina alterniflora) is the dominant plant species in salt marshes. This plant is specially adapted to living in this unique environment.

"They are ideal habitats for juvenile fish and shellfish to grow and reproduce."

Salt marshes have many important functions and are some of the most productive habitats on Earth. They are ideal habitats for juvenile fish and shellfish to grow and reproduce. In fact, 3/4 of the fish and shellfish we eat rely on the marsh environment at some point during their life! Salt marshes are also important areas for waterfowl and shorebirds, and are home to the diamondback terrapin, an exclusively estuarine reptile.

Beyond serving as important habitat for a number of species, salt marshes help to slow shoreline erosion and provide a critical buffer between estuarine waters and the terrestrial environment. These habitats are capable of filtering a large amount of surface runoff from land, buffering the estuarine waters from excess nutrients and contaminants that might be contained in surface runoff.

Why is Salt Marsh Restoration Important? *(continued)*

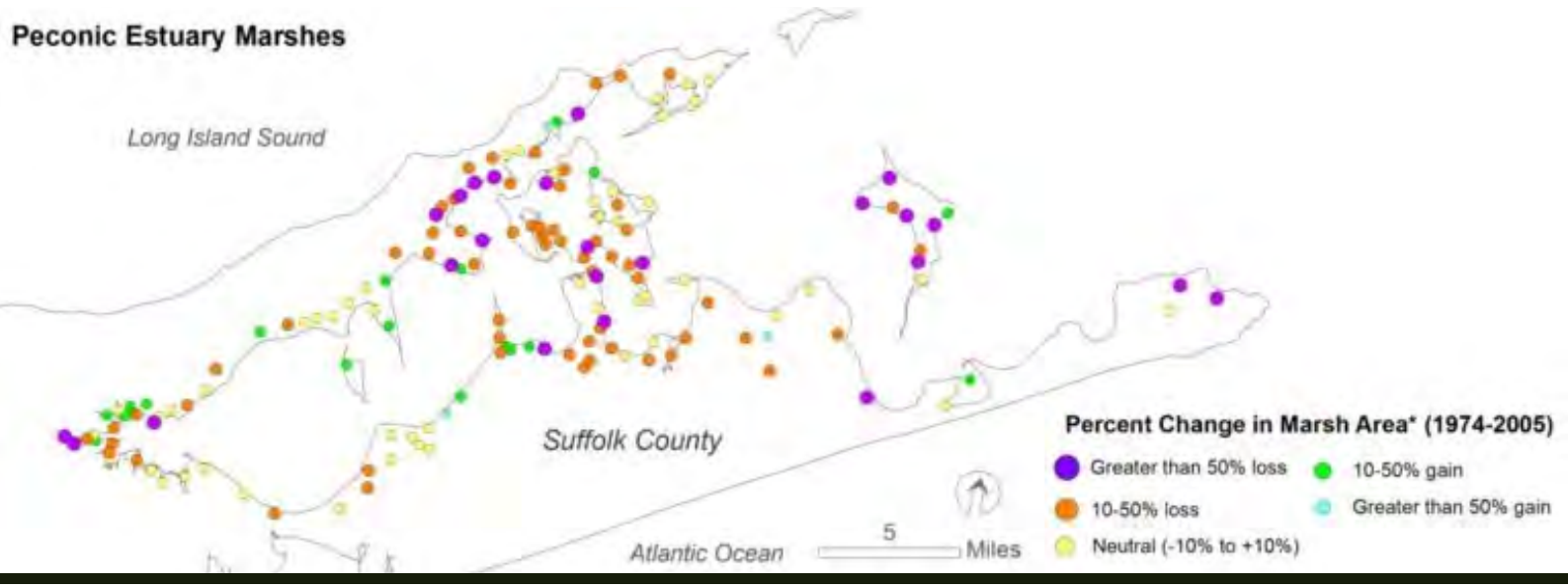
Conversely, salt marshes can absorb a large amount of floodwater from the estuary, providing protection to coastal communities during large storms.

Unfortunately, marsh habitats in our region and around the country are declining. Between 1974 and 2005 the Peconic Estuary lost around 10 percent of its salt marshes. Eighty-six marsh complexes, out of 159 identified in the Peconic Estuary, have been categorized as "at risk."

There are a number of reasons why salt marshes are declining. Land use activities adjacent to marshes such as development, dredging and hardening of the shoreline, o ver time have degraded marsh habitats. Rising seas also threaten to drown marshes. Marshes can migrate inshore gradually with rising water levels, but the rate at which the sea-level is rising is making it difficult for them to migrate inshore fast enough. Additionally, in some cases natural or man-made barriers may prevent marshes for migrating inland. Other threats to marsh habitat include excess nitrogen, the introduction of pollutants, and invasive plants that outcompete with native marsh plants.

To combat these threats and marsh loss, the Peconic Estuary Program and its partners are working to restore degraded marsh habitats around the Estuary. Restoration of salt marshes is essential to ensuring these habitats can continue to provide for wildlife, sustainable fisheries and resilient coastal communities.

We could use your help! **We will be hosting a salt marsh restoration volunteer planting day** in collaboration with Cornell Cooperative Ext. **September 16th, 1pm at 3690 Cedar Beach Road, Southold** in celebration of National Estuary Week. Come help us restore a salt marsh and learn more about these valuable habitats.



A new type of farming is coming to the east end of Long Island, but this kind of farming will take place in the waters of the Peconic Estuary!

BY KIM MANZO, CORNELL COOPERATIVE EXT. HABITAT RESTORATION EDUCATOR

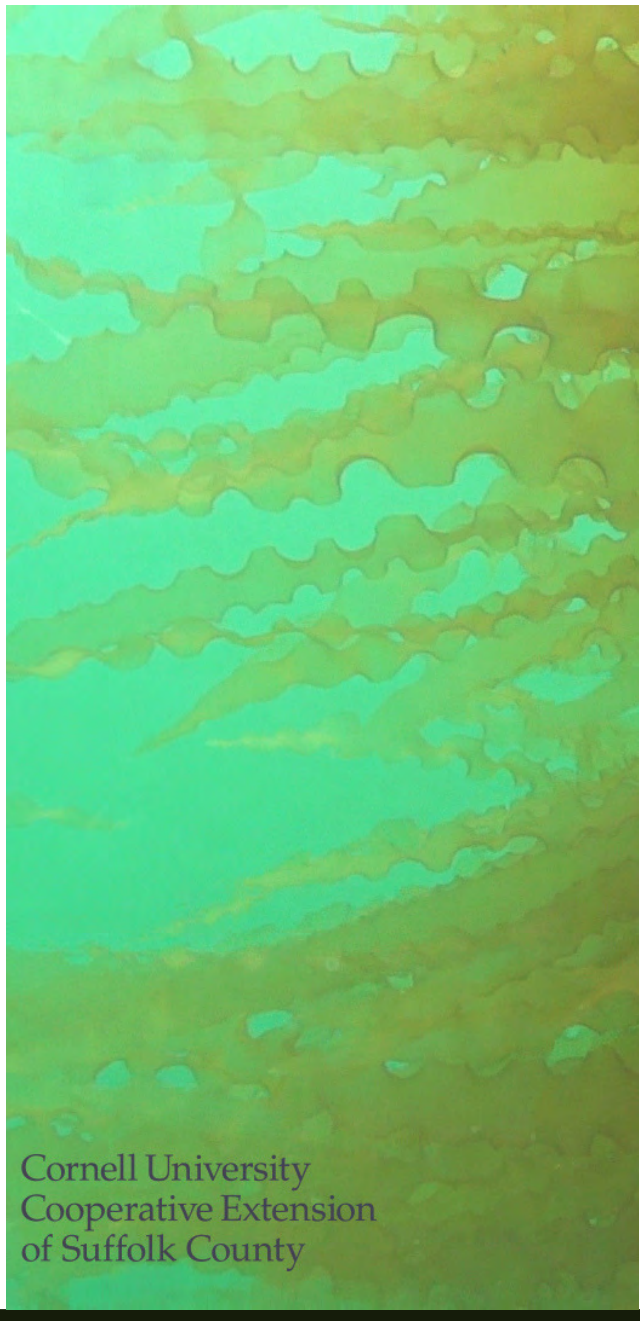
Seaweeds are integral components to our marine ecosystems, providing oxygen and food to the organisms that live there, but they are also important to humans in so many ways. Seaweeds, known as macroalgae to marine biologists, make up a multi-billion dollar industry in today's world market, with countries in Asia, South America and Europe dominating the market. Small scale operations that harvest wild seaweed do occur in North America, and most recently, the culture of sugar kelp (Saccharina latissima), a brown macroalgae, has become an up-and-coming industry here in the Northeast. Being that sugar kelp is a cold water species, thriving during the cooler months in our region (November – May), kelp could serve as a winter/spring crop in the Peconics. It grows at water depths of 10-20 feet and can grow to 16 feet long or more, and like most macroalgae, it requires a hard substrate to attach to. The demand for this local and sustainable product is growing, and entrepreneurs from many industries are ready to tap into this resource.

Seaweeds are not only an important and nutritious source of food in many cultures, but they also provide us with additives used in foods and products we use every day! Carrageenan, agar and alginate produced from seaweeds are used as binding, thickening and gelling agents in ice cream, baby food/formula, yogurt, salad dressings, basically most creamy foods we eat, as well as non-edible products

we use every day such as toothpaste and shaving cream. Other important industries that rely on seaweed additives are the pharmaceutical/medical industry (petri dish medium, capsules, vitamins), the cosmetic industry (lipstick, lotion), the textile industry (fabrics), the farming industry (fertilizer) and most recently for the production of biofuel. Kelp, specifically, is mainly used for food, alginate and fertilizer applications.

Seaweed aquaculture has tremendous economic potential for Long Island, but the bonus is that it can also benefit the environment. This emerging "green industry" can improve water quality by extracting nitrogen and carbon from the water, all while producing a high-demand, renewable product. This ability of seaweed to extract nutrients directly from the water column is utilized by modern fish farming industries as a natural way to treat waste water, known as Integrated Multi-Trophic Aquaculture, and the resulting seaweed can then be used for feed, fertilizer or other uses. Basically, it is a "win-win" situation no matter what the primary application is.

The first step in developing the industry on Long Island is to test the feasibility of growing kelp, and other seaweeds, in local waters in a sustainable and profitable way, without interfering with other marine industries. The "Peconic Estuary Seaweed Aquaculture Feasibility Study," funded by Suffolk County and implemented by Cornell Cooperative Extension (CCE), aims to evaluate the potential of this new industry in Suffolk County waters within the Peconic Estuary. With guidance from Dr. Charles Yarish of the University of Connecticut, the region's leading expert on seaweed culture, scientists are growing sugar kelp at several sites spanning the Peconics, from Flanders to Gardiners Bay.



This past December, we deployed the kelp "seed strings", which is basically "baby kelp" that has set on a small diameter, nylon line. The lab at UCONN produced these seed strings by extracting spores from reproductive kelp collected by CCE divers last fall (2016). This fall, we are preparing to attempt to create the kelp "seed strings" ourselves, which, if successful, will be used for another round of kelp aquaculture as we scale up efforts at sites that were found to successfully grow kelp during the first phase of the feasibility study.

Celebrating National Estuaries Week

Each year in September, agencies and organizations working to protect and restore estuaries, like PEP, celebrate National Estuaries Week. National Estuaries Week is an opportunity to spread the word about how important estuaries are to the environment, quality of life, and economy of our coastal communities here in the Peconic region, and around the country. Many states, and the US Senate commemorate the occasion each year by officially proclaiming National Estuaries Week. Last year, Suffolk County Executive Steven Bellone declared National Estuaries Week in Suffolk County. This year, the NYS Senate and Assembly, led by Long Island's Assemblymen Thiele and Englebright and Senator LaValle, passed resolutions formally requesting such a declaration be made by New York State Governor Andrew Cuomo.

This year from **September 16-23**, join PEP in celebrating our estuaries by attending or planning events, taking action to protect and restore your local waterbody, and posting on social media about why you care about the Peconic Estuary. Photos of your organization or family enjoying the Peconic Bays are great way to jazz up your social media, and remember to use the hashtag **#estuariesweek** and tag **@PeconicEstuary** for all of your posts. For ideas, or to find an event near you, please visit our friends at Restore America's Estuaries and follow PEP and other coastal programs on social media.

Last year during National Estuaries Week, 19,146 volunteers and participants contributed 90,307 hours to improving, restoring, and appreciating their local waterways. 151 events were held across 24 states and Puerto Rico. Estuary lovers made a whopping 6.5 million social media impressions on Twitter and Instagram alone, with 1,594 posts from 669 unique users on Twitter, Instagram, and Facebook. With your help we can make National Estuaries Week 2017 even better!

Did you know that Suffolk County has a law banning the application of fertilizer between November 1st and April 1st?

Using pesticides and fertilizers on your lawn or garden poses a threat to water quality. Even though you are applying these chemicals directly to your lawn, there are many ways that they can percolate to groundwater, become airborne, or run off into storm drains and eventually surface waters. Fertilizers and pesticides should be used sparingly or not at all. If you choose to use fertilizers or pesticides on your lawn, it is important to be a responsible user of these chemicals.

To protect Long Island's waters, Suffolk County passed a fertilizer law in 2007 to reduce nitrogen pollution. Applying fertilizer in Suffolk County from November 1st to April 1st is prohibited. During that time of year, the grass is dormant and is not taking up fertilizer to grow. This is when the potential for fertilizer to move down through the soil and pollute our groundwater and runoff to our surface waters is greatest. When fertilizing your lawn be sure to fertilize properly, at the correct rate and time of the year.

If you need to use pesticides or fertilizers please keep the following in mind o minimize your contribution to water pollution: 1. Never apply either fertilizers or pesticides before a rainfall is forecasted. The chemicals you apply will be washed away, leaving your lawn untreated and polluting surface waters. 2. Always follow the manufacturer's instructions when using pesticides, herbicides or fertilizers on your lawn or garden. Please don't "double the dose" for good measure. This only

You can help MARCO

MARCO
Mid-Atlantic Regional Council on the Ocean

Through the Mid-Atlantic Regional Council on the Oceans (MARCO), the five states are conducting an online survey of people who participate in ocean and coastal recreational activities. The purpose of the survey is to understand what types of recreational activities (e.g. surfing, boating, whale watching, birding, diving) people take part in throughout the Mid-Atlantic region (i.e. Delaware, Maryland, New Jersey, New York, and Virginia), and what concerns recreational ocean users may have about other current and possible uses of ocean and coastal resources. This information will be used by States' Coastal Management Programs to guide ocean and coastal management policies and programs and help inform Ocean Planning in the region.

(Continued on page 08)

increases the amount that could get washed away. 3. When applying, be careful not to apply fertilizer to the driveway or sidewalk. These chemicals will easily be washed into the street and storm drains. Granular pesticides on these impervious surfaces should be swept up. 4. If you do use a fertilizer, choose one that contains at least 30 percent slow-release nitrogen and check the three numbers on the front of the bag to select the right mixture for your soil. The numbers represent the fertilizer's percent nitrogen (first number), phosphorus (second number) and potassium (third number) content. The best way to determine what fertilizers you need is to have your soil tested pre-application. Remember that using a fertilizer that a plant does not need, or applying fertilizers or pesticides beyond the recommended dose, is harmful and a waste of money!

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You can help MARCO

We need your help to get the word out to recreational users about the survey! The link to the survey can be found here: Non Consumptive Use Survey. The survey only takes 15-20 minutes to complete and will close on September 5, 2017. Please forward information about the Mid-Atlantic recreational use survey to your email lists and members. The more recreational users that take the survey, the more valuable the information is to inform ocean and coastal policies and programs.