



# **2010 Implementation Progress Report**

## **Eelgrass Management Plan for the Peconic Estuary**

**Submitted to:**  
**Peconic Estuary Program Management Committee**  
**June 2010**

**Prepared by:**  
**Peconic Estuary Program Natural Resources Subcommittee**  
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## **INTRODUCTION**

The “Eelgrass Management Plan for the Peconic Estuary” was adopted and finalized in June 2009. In an effort to ensure the Peconic Estuary Program (PEP) meets the objectives outlined in the Plan and implements the management actions and action steps detailed in the Plan, the PEP Natural Resources Subcommittee (NRS) has committed to track its implementation. The NRS will develop and submit annual Implementation Progress Reports (IPRs) to the Peconic Estuary Program (PEP) Management Committee. This will ensure proper accounting and tracking of implementation progress and will provide an adaptive and timely mechanism for notifying the Management Committee of new priorities, needs, and recommendations. What follows is a brief assessment of actions taken from June 2009 to June 2010.

## **MAJOR ACCOMPLISHMENTS**

### **1. Eelgrass Sanctuary Established in Bullhead Bay, Southampton**

*(Action Step 1.1.1)*

Monitoring data collected and reported under the Peconic Estuary Program Long-Term Eelgrass Monitoring Program indicated that the Bullhead Bay eelgrass bed, the western-most eelgrass bed in the Peconic Estuary system, was in severe decline and was impacted greatly by physical disturbances (i.e., shellfishing activity). As reported in the “Peconic Estuary Program 2008 Long-Term Eelgrass Monitoring Program Progress Report 9”, the annual mean shoot density at Bullhead Bay monitoring stations fell from 710 shoot m<sup>2</sup> to 46 shoot m<sup>2</sup> between 1997 and 2008. This information was presented to the Southampton Trustees, who then designated the bed as an eelgrass sanctuary in December 2009. Destructive physical disturbance of the bed is prohibited. The first Eelgrass Sanctuary was established in Napeague Harbor by the East Hampton Town Trustees in April 2008. Maps of both sanctuaries have been attached.

### **2. Seagrass Protection Act Bill (A10269)**

*(Action Step 1.1.3)*

In March 2010, the New York State Legislature introduced a bill to establish a Seagrass Protection Act which would authorize the New York State Department of Environmental Conservation to adopt rules and regulations to regulate the protection and conservation of seagrasses. Amendments to the Assembly version were submitted.

### **3. 2009 and 2010 Association of Marine Industries (AMI) Boater’s Guide**

*(Action Steps 2.1.2 and 2.1.3)*

The Peconic Estuary Program worked cooperatively with the AMI to include information on the value of eelgrass and how best to protect eelgrass while boating in the published and distributed 2009 and 2010 Boater’s Guide. 12,500 AMI Boater’s Guides are published annually and distributed to water dependent business. They, in turn, are made available to the boating public at water access points.

### **4. 2010 PEP Mini Grant: Group for the East End & Southampton Town Trustee Eelgrass Educational Brochure**

*(Action Steps 2.1.2 and 2.1.3)*

The Peconic Estuary Program selected the Group for the East End (GFTEE) and Southampton Town Trustees to receive a 2010 mini grant. Cooperatively, GFTEE and the

Southampton Trustees will develop a brochure which details what eelgrass is, why it's important, the multiple threats to eelgrass, and actions people can take to protect the species. Efforts will be coordinated with other Peconic municipalities, stakeholders, and industries to allow for distribution throughout the entire Peconic watershed. This brochure can be made available at access sites/points, sent to license and permit holders, and made available at other public venues.

## 5. East End Public Radio Spots on Eelgrass

*(Action Steps 2.1.3)*

The Peconic Estuary Program funded a short radio spot, narrated by Chris Pickerell of Cornell Cooperative Extension of Suffolk County, which hit the airwaves on WLNG, WRIV, WEHM and WBAZ in March 2010 and will run through summer 2010. It is expected to reach 1.5 million listeners. The audio version is expected to be posted to the PEP website shortly.

### ***“Voices of the Bays - East Enders protecting and restoring Long Island's Peconic Bays***

*Hi I'm Chris Pickerell, eelgrass program manager for Cornell Marine, speaking on behalf of the Peconic Estuary Program. The Peconic Estuary is an amazing ecosystem which is home for a wide variety of species. Eelgrass, an underwater plant species, is as important to the bay as trees are to our environment. In fact seagrass habitats are some of the most biodiverse communities on earth. Eelgrass provides habitat and food for many commercial species including bay scallops, it can improve water quality by extracting nutrients, producing oxygen, slowing currents, and reducing erosion. Unfortunately we have seen drastic declines in the abundance of eelgrass and eelgrass beds in the Peconic Estuary, so please be extra careful not to disturb any underwater plants, by walking, boating, or anchoring on or near them. For more information please visit the Peconic Estuary Program's website at [www.peconicestuary.org](http://www.peconicestuary.org).”*

## 6. Eelgrass and Groundwater Interaction Research and Monitoring

*(Management Action 4.2)*

The New York State Seagrass Task Force has funded research to investigate submerged groundwater discharge and eelgrass interactions in addition to limited herbicide toxicity research. The Peconic Estuary Program has also funded additional, expanded groundwater and eelgrass interaction monitoring at beds monitored under the Peconic Estuary Program Long-Term Eelgrass Monitoring Program. Results and data are not available yet.

## 7. Light and Temperature Loggers

*(Management Action 4.2)*

The Peconic Estuary Program is funding Cornell Cooperative Extension of Suffolk County to purchase and deploy light and temperature loggers to assist in refining deep water edges of prospective restoration plots and to also provide essential monitoring information on existent eelgrass bed requirements.

## **SHORTCOMINGS & CHALLENGES**

### 1. Eelgrass Inventory

*(Management Action 3.1)*

The last comprehensive eelgrass survey was completed using 2000 aerials. The next survey, funded by New York State Department of State (NYSDOS), was slated to occur in 2008. NYSDOS has experienced nearly 2 years of contracting delays; consequently, the last

eelgrass survey is now 10 years old. This is not consistent with the recommendation to conduct inventories every two (2) years.

## **2. Timely reporting and availability of annual PEP Long-Term Eelgrass Monitoring Reports**

*(Management Action 3.3)*

This information and data is critical to responding to new stressors and threats. Not all annual monitoring reports are posted and archived on the PEP website.

## **RECOMMENDATIONS**

1. It is of highest priority to conduct a new eelgrass inventory as soon as possible. PEP allocated \$73,000 in FY09 for the next inventory following the proposed 2008 NYSDOS inventory. Since the NYSDOS inventory has not occurred yet, PEP should expedite using these funds.
2. The PEP Program Office should catalogue and post all prior PEP Long Term Eelgrass Monitoring Reports to the PEP website. These annual reports must also be analyzed on a more frequent basis.
3. As eelgrass beds are becoming fewer in number, investigate options to monitor additional eelgrass beds in Town waters, not currently in PEP's Long Term Eelgrass Monitoring Program. This may include exploring responsible parties, resources, and extensiveness of standardizing methodologies and monitoring parameters to further document status and trends.
4. Reconvene the PEP Technical Advisory Committee (TAC) or a scientific panel to synthesize all existing and future eelgrass data and research.
5. Convene one (1) collective annual meeting with East End elected officials to further educate, engage, and foster local implementation of management actions.
6. Continue all ongoing efforts, including implementation of the new projects and initiatives outlined under the "Major Accomplishments" heading.

## **IMPLEMENTATION TRACKING TABLE**

Below, is an Implementation Tracking Table which reports progress made under each objective, management action and action step in the "Eelgrass Management Plan for the Peconic Estuary" during the period of June 2009- June 2010.

## Eelgrass Management Plan for the Peconic Estuary: Implementation Tracking Table

Objective 1: Enhance protection of existing and future eelgrass beds from physical disturbances.	June '09-June '10 Progress
<b>Management Action 1.1:</b> Identify and promote new protection measures (regulatory mechanisms at all level of government). Particular attention immediately directed to areas where eelgrass beds recently disappeared, such that disturbances can be limited to allow for natural re-vegetation.	
<b>Action Step 1.1.1:</b> Designate appropriate eelgrass and eelgrass habitat areas as “shellfish spawner sanctuaries”, “eelgrass sanctuaries”, “eelgrass management areas”, “habitat management areas” and limit activity in and around said areas. <i>Responsible entity: NYSDEC, Town Board/Trustees</i> <i>Timeframe: Immediate and Ongoing</i>	Eelgrass Sanctuaries have been established in Napeague Harbor, East Hampton (East Hampton Trustees, April 2008) and Bullhead Bay, Southampton (Southampton Town Trustees, Dec 2009). Shellfish harvesting and other harmful activities are prohibited. Discussions have commenced to establish a protective area in Hallock's Bay, Southold.
<b>Action Step 1.1.2:</b> Implement area restrictions, gear restrictions, activity restrictions in and/or near eelgrass. <i>Responsible entity: NYSDEC, Town Board/Trustees</i> <i>Timeframe: Long Term (10 years)</i>	Some Towns prohibit churning in eelgrass beds. Some Towns have also created shellfish spawner sanctuaries in/near eelgrass and implement restrictions in those sanctuaries and buffer areas.
<b>Action Step 1.1.3:</b> Adopt new, New York State regulations (legislation if necessary) specific to the protection and conservation of eelgrass. <i>Responsible entity: NYSDEC</i> <i>Timeframe: Long Term (10 years)</i>	Seagrass Protection Act bill (A10269) introduced March 2010, <a href="http://open.nysenate.gov/legislation/api/html/bill/A10269">http://open.nysenate.gov/legislation/api/html/bill/A10269</a>
<b>Management Action 1.2:</b> Identify areas where eelgrass exists and maintenance navigational dredging or excavation activities are needed; in those cases, implement a dredging window and material placement strategy that maximizes eelgrass protection. <i>*Please note that dredging for purposes of increasing flushing may also be beneficial to eelgrass beds. See Management Action 6.3.</i> <i>Responsible entity: PEP NRS, Towns Board/Trustees</i> <i>Timeframe: Short Term (5 years)</i>	No substantial progress to report.
Objective 2: Increase stakeholder, user group, and public awareness of eelgrass and the importance of the species in an effort to foster responsible steward-like resource enjoyment.	June '09-June '10 Progress
<b>Management Action 2.1:</b> Build awareness of eelgrass bed locations and the importance of eelgrass through a public education/outreach campaign; special attention to identifying and promoting citizens/stakeholder/user group actions.	
<b>Action Step 2.1.1:</b> Design and install signs at waterfront public access points, including marinas and boat ramps. <i>Responsible entity: PEP NRS, PEP CAC, NYSDEC, Town Board/Trustees, Marina operators</i> <i>Timeframe: Immediate and Ongoing</i>	No substantial progress to report.

<b>Action Step 2.1.2:</b> Work with boating and fishing associations to promote less harmful practices to eelgrass habitat and incorporate educational materials with boat registrations and fishing, shellfishing and access permits, passes and licenses. <i>Responsible entity: PEP NRS, PEP CAC, NYSDEC, NYS DMV, AMI, Town Trustees, Fishing and Boasting Assoc.</i> <i>Timeframe: Immediate and Ongoing</i>	Included info on the value of eelgrass and how to protect eelgrass in the 2009 & 2010 AMI Boaster's Guide. PEP selected the Group for the East End & Southampton Town Trustees to receive a 2010 mini grant to develop a brochure for all East End Towns to use and distribute w/ licenses and permits.
<b>Action Step 2.1.3:</b> Develop and distribute up-to-date education materials that will improve public understanding of the value, habitat requirements, status, and trends of eelgrass. <i>Responsible entity: PEP CAC, CCE, NY Sea Grant</i> <i>Timeframe: Immediate and Ongoing</i>	Included info on the value of eelgrass and how to protect eelgrass in the 2009 & 2010 AMI Boaster's Guide. PEP selected the Group for the East End & Southampton Town Trustees to receive a 2010 mini grant to develop brochure for all East End Towns to use and distribute. 2010 PEP Radio Spot on WLNG, WRIV, WEHM and WBAZ March-Aug/Sept 2010- expected to reach 1.5 million
<b>Objective 3: Build an established, consistent and comprehensive eelgrass inventory program and sentinel monitoring program.</b>	<b>June '09-June '10 Progress</b>
<b>Management Action 3.1:</b> Perform eelgrass inventories and mapping efforts in the Peconic Estuary every two (2) years. <i>Responsible entity: PEP NRS (lead), NYSDEC, NYSDOS, USFWS, CCE</i> <i>Timeframe: Immediate and Ongoing</i>	Last comprehensive survey was completed in 2000. The 2008 survey (to be funded by NYSDOS) has not yet occurred due to contracting delays- may happen in 2010. PEP allocated \$73,000 of its FY09 NEP budget for the following survey.
<b>Management Action 3.2:</b> Coordinate efforts with other Long Island seagrass mapping initiatives to support consistency through the New York State Seagrass Task Force. <i>Responsible entity: PEP NRS, NYSDEC, NYS Seagrass Taskforce, LISS, SSER</i> <i>Timeframe: Ongoing</i>	2008 (now expected to be a 2010) survey will be done simultaneously with the South Shore. The last Long Island Sound survey was conducted in 2009. This close timeframe should be adequate to get a regional perspective.
<b>Management Action 3.3:</b> Ensure results are reported to and easily accessible by stakeholders, local governments, and other permitting government agencies in the Peconic Estuary. <i>Responsible entity: PEP Program Office</i> <i>Timeframe: Ongoing</i>	Several annual PEP Long Term Eelgrass Monitoring Reports must still be posted to the PEP website for easy access. The 2008 Report was submitted in Nov 2009.
<b>Objective 4: Improve our knowledge and understanding of eelgrass through research initiatives to ensure that efforts to protect and restore resources are successful and effective. [Impacts of climate change and sea level rise are to be addressed under this objective].</b>	<b>June '09-June '10 Progress</b>
<b>Management Action 4.1:</b> Establish a Peconic Estuary Program Eelgrass Workgroup to provide a forum for discussion and coordinate with New York State Seagrass Task Force efforts. <i>Responsible entity: PEP NRS</i> <i>Timeframe: Immediate and Ongoing</i>	No substantial progress to report. A separate Workgroup was not established, although the PEP Natural Resources Subcommittee has been filling this role.

<b>Management Action 4.2:</b> Formulate and test hypotheses through research initiatives to identify threats and factors affecting eelgrass existence, health, and restoration efforts.  <i>Responsible entity: New PEP Eelgrass Workgroup, NY Sea Grant, TNC, SUNY</i> <i>Timeframe: Ongoing</i>	The NYS Seagrass Task Force has funded several investigations and studies in the Peconics- submerged groundwater discharge characteristics and how they may affect eelgrass, and herbicide toxicity to eelgrass. PEP funded additional groundwater work and installation of light and temperature loggers. TNC funding regional Genetic Diversity and Multiple Stressors research project. Results TBD.
<b>Management Action 4.3:</b> Implement an adaptive eelgrass management and restoration program reflective of research results, conclusions and recommendations. <i>Responsible entity: PEP NRS, New PEP Eelgrass Workgroup and all partners</i> <i>Timeframe: Ongoing</i>	Ongoing effort through CCE. Visit <a href="http://www.seagrassli.org">www.seagrassli.org</a> for more information on current restoration projects.
<b>Objective 5: Increase eelgrass bed abundance and density through physical restoration efforts.</b>	<b>June '09-June '10 Progress</b>
<b>Management Action 5.1:</b> Assess the current quantitative restoration goal (a 10% increase in current acreage in 10 years) and set a new goal, if applicable, using the new 2009 Peconic Eelgrass Inventory and level of restoration success in the Peconic Estuary as justification. <i>Responsible entity: New PEP Eelgrass Workgroup</i> <i>Timeframe: Short Term (5 years)</i>	No substantial progress to report.
<b>Management Action 5.2:</b> Develop an up-to-date Peconic Estuary eelgrass restoration tracking database (past and current) to identify restoration test plot and full scale restoration attempts, locations, restoration method used, results, etc.. <i>Responsible entity: New PEP Eelgrass Workgroup, CCE</i> <i>Timeframe: Short Term (5 years) and Ongoing</i>	CCE has posted this info on <a href="http://www.SeagrassLI.org">www.SeagrassLI.org</a> . Other restoration attempts (some successful, though most not) are included in the Peconic Estuary Program Completed Habitat Restoration Project Inventory.
<b>Management Action 5.3:</b> Implement restoration efforts.	
<b>Action Step 5.3.1:</b>  Continue to use and refine the Peconic Eelgrass Restoration Site Suitability Index Model to identify and prioritize potential restoration locations. Adapt the model on an as needed basis as additional information becomes available (e.g. light logger data) and technologies evolve. <i>Responsible entity: CCE (lead), New PEP Eelgrass Workgroup</i> <i>Timeframe: Ongoing</i>	Ongoing effort through CCE. <a href="http://counties.cce.cornell.edu/suffolk/gis/sampleProject1.html">http://counties.cce.cornell.edu/suffolk/gis/sampleProject1.html</a>
<b>Action Step 5.3.2:</b> Continue to monitor success of restoration efforts. <i>Responsible entity: CCE, Towns</i> <i>Timeframe: Ongoing</i>	Ongoing effort through CCE.

<b>Action Step 5.3.3:</b> Identify and undertake new restoration efforts based upon results of restoration site monitoring. <i>Responsible entity: New PEP Eelgrass Workgroup, CCE, Towns</i> <i>Timeframe: Ongoing</i>	Ongoing effort through CCE.
<b>Objective 6: Ensure the existence of water quality conditions necessary for conserving, maintaining, and restoring eelgrass.</b>	<b>June '09-June '10 Progress</b>
<b>Management Action 6.1:</b> Reduce and minimize pollutant generation within the Peconic Estuary watershed.	
<b>Action Step 6.1.1:</b>  Implement regulatory and voluntary measures and initiatives to reduce nutrient pollution and create a balanced nutrient regime. These may include: turf grass (including golf courses) and landscape fertilizer management; onsite wastewater disposal system management (e.g., inspections, mandatory upgrades of substandard systems, and incentives); the use of new nitrogen removing technologies and alternative uses for Sewage Treatment Plant (STP) effluent; Clean Air Act standards to minimize nitrogen loadings from atmospheric deposition; implementation of the Peconic Nitrogen Total Maximum Daily Load (TMDL); implementation of the NYSDEC Municipal Separate Storm Sewer Systems (MS4s) stormwater permit; agricultural stewardship activities; open space preservation; and shellfish restoration initiatives.  <i>Responsible entity: Private land and property owners (including homeowners, golf courses, agricultural operators), SCDHS, Towns, STPs, NYSDEC, USEPA</i> <i>Timeframe: Ongoing</i>	PEP is implementing the Nitrogen TMDL and funding agricultural stewardship activities in nitrogen impaired watersheds. All Peconic Towns and Villages are now permitted under the MS4 stormwater permit. Suffolk County is implementating its fertilizer reduction law/campaign and PEP's nutrient mgmt challenge for golf courses. The PEP will be fully assessing TMDL implementation and analyzing groundwater nitorgen data in 2010-2011.
<b>Action Step 6.1.2:</b>  Implement regulatory and voluntary measures and initiatives to reduce toxic pollution. These may include: pesticide and herbicide management; agricultural stewardship activities; and implementation of the NYSDEC Municipal Separate Storm Sewer Systems (MS4s) and Industrial Multi-Sector stormwater permits. <i>Responsible entity: Private land and property owners (including homeowners, golf courses, agricultural operators), Towns, NYSDEC</i> <i>Timeframe: Ongoing</i>	When available, current herbicide toxicity research results may require additional pesticide/herbicide mgmt efforts.
<b>Management Action 6.2:</b> Reduce and intercept stormwater and urban runoff.	
<b>Action Step 6.2.1:</b> Reduce runoff volumes by decreasing impervious surfaces, increasing infiltration areas, and installing detention and infiltration technologies. <i>Responsible entity: Towns, private property owners, NYSDEC, NYSDOT, SCDPW</i> <i>Timeframe: Ongoing</i>	Ongoing.
<b>Action Step 6.2.2:</b> Incorporate the use of Low Impact Development (LID) practices, including but not limited to conservation landscaping, rain gardens, permeable pavements, and green roofs, into new and existing development. <i>Responsible entity: SC Planning, Towns, private property owners, PEP</i> <i>Timeframe: Ongoing</i>	Ongoing. PEP to be funding FY10 demo Conservation Landscaping Rebate Program.



<b><u>Management Action 6.3:</u></b> Protect and restore vegetated buffers, wetland, and open space. <i>Responsible entity: Towns, private property owners, NYSDEC, Suffolk County, TNC</i> <i>Timeframe: Ongoing</i>	Ongoing. PEP's 2009 Habitat Restoration Plan is being implemented. PEP funding conceptual habitat restoration design plans for 10 listed sites.
<b><u>Management Action 6.4:</u></b> Explore and investigate, on a case-by-case, as needed basis, the use of inlet maintenance dredging to increase flushing capacity to improve water quality conditions for eelgrass. <i>*Please note that dredging activities may also be harmful to eelgrass beds. See Management Action 1.2.</i> <i>Responsible entity: New PEP Eelgrass Workgroup</i> <i>Timeframe: Short Term (5 years)</i>	No substantial progress to report. PEP is planning a separate Dredging Meeting in 2010.
<b><u>Objective 7: Minimize and mitigate the negative effects from the construction of new and previously placed docks and other shoreline stabilization structures including but not limited to bulkheads, seawalls, groins, and jetties in and around eelgrass beds or in areas where restoration or re-colonization is likely. [Sea level rise is addressed under this objective].</u></b>	June '09-June '10 Progress
<b><u>Management Action 7.1:</u></b> Minimize the effect of docks and other SSS on sensitive eelgrass beds through existing permitting processes or other regulatory measures, including but not limited to a restoration mitigation strategy, promoting dock construction (or reconstruction) that allows for maximum light penetration, a no-net increase policy, and, if possible a net decrease policy. <i>Responsible entity: NYSDEC, Towns, TNC, public and private waterfront businesses/ owners</i> <i>Timeframe: Ongoing</i>	Ongoing.
<b><u>Objective 8: Prevent, if possible, and minimize shading and other negative impacts associated with the onset of future harmful algal blooms and Brown and Red Tide episodes.</u></b>	June '09-June '10 Progress
<b><u>Management Action 8.1:</u></b> Support existing and expand Brown Tide monitoring, research, and management initiatives to help identify environmental factors responsible for blooms. Implement initiatives to prevent and alleviate the effects of Brown tide blooms, including but not limited to nutrient management plans (*See Management Objective 6). <i>Responsible entity: NY Sea Grant, SUNY, SCDHS, PEP</i> <i>Timeframe: Ongoing</i>	Ongoing.
<b><u>Management Action 8.2:</u></b> Support existing and expand phytoplankton and other harmful algal species monitoring, research, and management initiatives to help identify environmental factors responsible for blooms. Implement initiatives to prevent and alleviate the effects of phytoplankton and other harmful algal species blooms, including but not limited to nutrient management plans (*See Management Objective 6). <i>Responsible entity: NY Sea Grant, SUNY, SCDHS, PEP</i> <i>Timeframe: Ongoing</i>	Ongoing.



NAPEAGUE HARBOR EELGRASS SANCTUARY  
LONG ISLAND, NY



**Legend**  
Napeague Harbor Eelgrass Sanctuary

0 1,050 2,100 Feet





# BULLHEAD BAY EELGRASS SANCTUARY LONG ISLAND, NY



## Legend

 Bullhead Bay Eelgrass Sanctuary

0 850 1,700 Feet

