Peconic Estuary Partnership

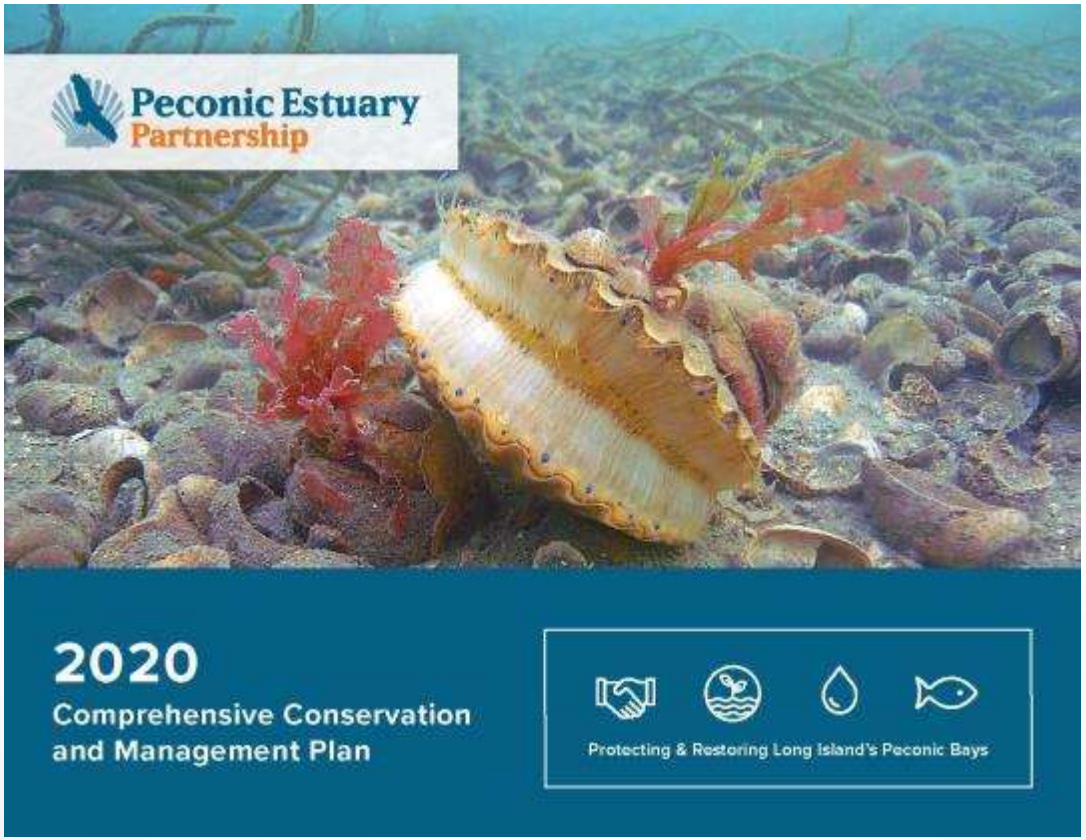
PROTECTING AND RESTORING LONG ISLAND'S PECONIC BAYS

UPDATE

November 2020

PEP CCMP Released!

- View the new 2020 CCMP and the 2020 CCMP summary document here: https://www.peconicestuary.org/ccmp2020/



PEP's Completed Projects!

- Check out the PEP Accomplishments page to view PEP's impact in the region and projects completed in 2019 and 2020!

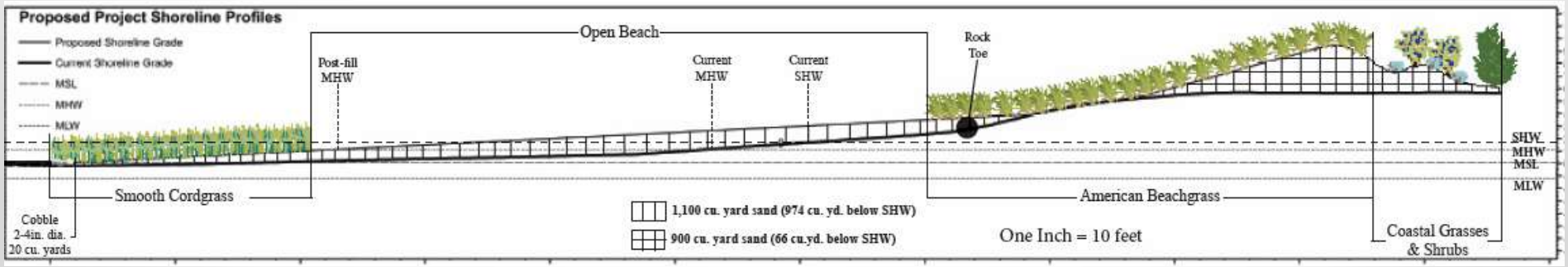
Living Shoreline Pilot Project- Greenport

PEP and Peconic Land Trust with Cornell Cooperative Extension (CCE)

Status: Completed August 2019, monitoring of living shoreline is ongoing.

Next Steps: Phase II of the project scope, extending the living shoreline to the entire property, has been developed by CCE and added to PEP Habitat Restoration Plan.

Click here for the Widow's Hole Preserve Story Map.



Seagrass Bio-optical Model

PEP and The Research Foundation of SUNY Stony Brook

Status: Model completed September 2019. Final report released in May 2020.

Next Steps: GIS tool for stakeholders is being developed.

Click here for a video about the project created by the PEP Education and Outreach Program: https://vimeo.com/377382663

- Report includes: Site specific information to inform eelgrass management and restoration programs. Report is linked below: Living on the edge- Analysis of Zostera marina and the potential for restoration in Peconic Bay (Long Island, NY) (2020)
- Final Seagrass Bio-optical Model results were presented at the PEP Technical Advisory Committee meeting on February 26th, 2020. Click here for the link to the presentation.

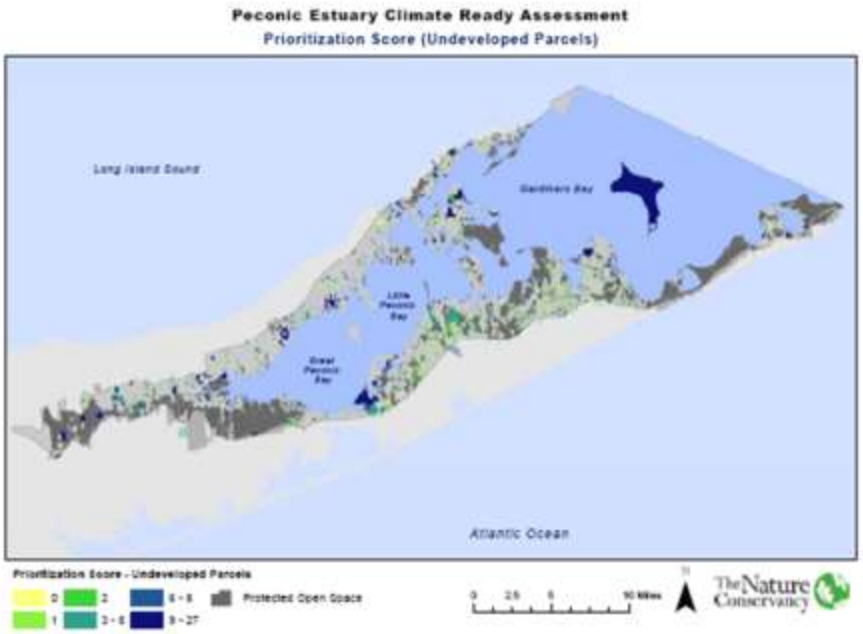
Critical Lands Protection Strategy Update and Climate Ready Assessment Services for PEP and Shinnecock Indian Nation

PEP and Anchor QEA

Status: Completed September 2019. Final reports available on PEP website here.

Next Steps: Municipal Training Workshops are being planned to distribute tools and information.

Figure 13: Undeveloped Priorization with protected



Report includes:

1)Updated Critical Lands Protection Strategy (CLPS).

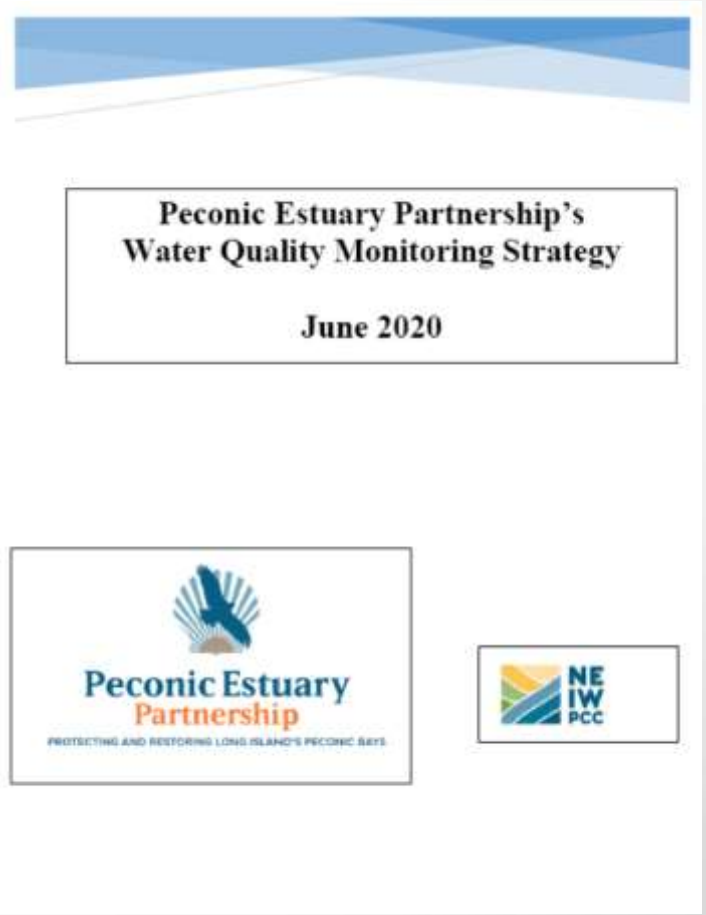
2)Assessment of climate change vulnerabilities for both the Peconic Estuary Program and Shinnecock Indian Nation.

WQ Monitoring Assessment

PEP and CoastWise Partners.

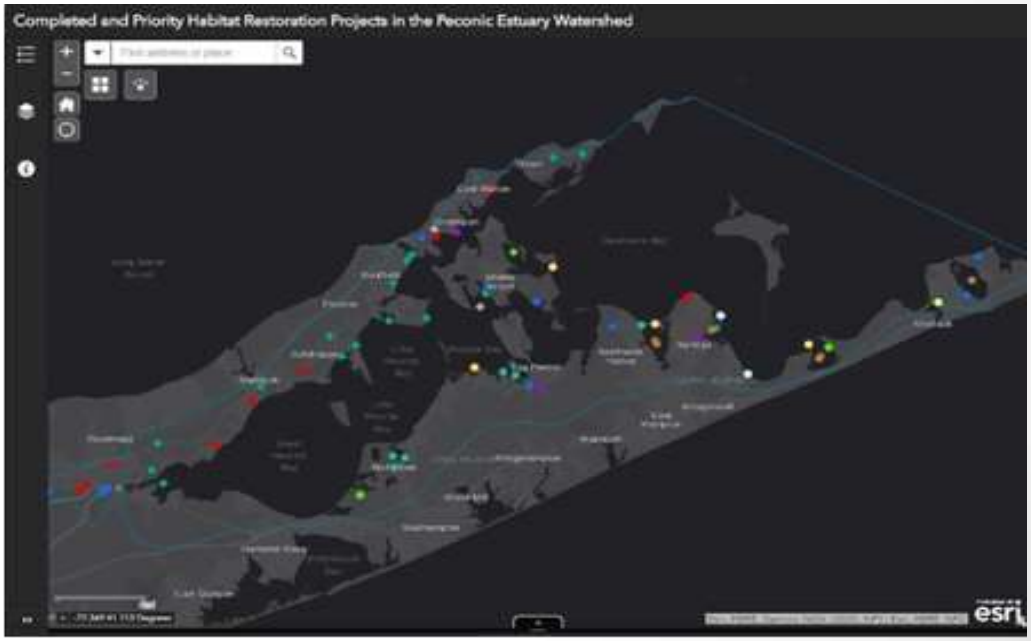
Status: The Final Strategy the document will be formally approved by the EPA and incorporated into CCMP.

- Goal is to create a PEP Monitoring Strategy that will be relevant for all decision makers. Develop appropriate indicators of estuarine health, and ensure appropriate parameters are collected on a temporal and spatial scale to assess these indicators. The results of the project are an updated PEP Water Quality Monitoring Strategy with the end goal of annual water quality reports.
- Services were recommended as a Finding of the EPA's 2017 Program Evaluation of the PEP.
- First meeting of the Monitoring Collaborative was held 10/19/2020.



2020 Habitat Restoration Plan Update

5 new projects added to the plan and 2 projects updated. 46 total projects in the Plan.
Status: Plan will be formally approved by the EPA and incorporated into CCMP.
Next Steps: Interactive GIS Map of Habitat Restoration Projects to be updated soon
https://www.peconicestuary.org/news-and-blogs/maps-gis/habitat-restoration/



Non-point Source Pollution Management Project

PEP and Village of Sag Harbor.

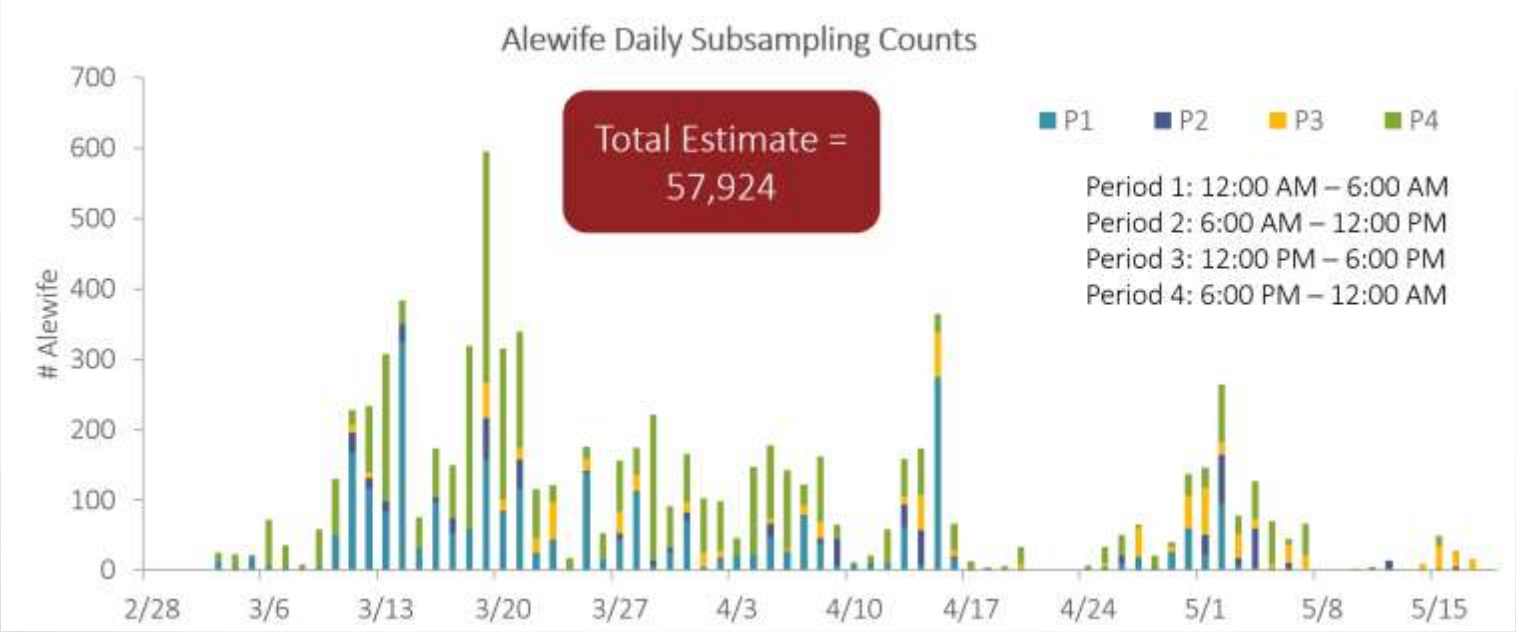
Status: Rain gardens were installed in 6/26/20. Educational sign was installed 9/23/20.

- The Village of Sag Harbor implemented a water quality improvement project at Havens Beach to remove pollution from stormwater.
- Two rain gardens were built to treat stormwater that would have otherwise flowed directly into Sag Harbor Bay. Rain gardens are comprised of native plants planted in a small depression or on a slope and is designed to temporarily hold and allow the rainwater from roofs, driveways, patios and lawns to soak into the ground.
- This project will reduce the amount of nitrogen pollutant to Sag Harbor Bay and improve the overall health of the Peconic Estuary.

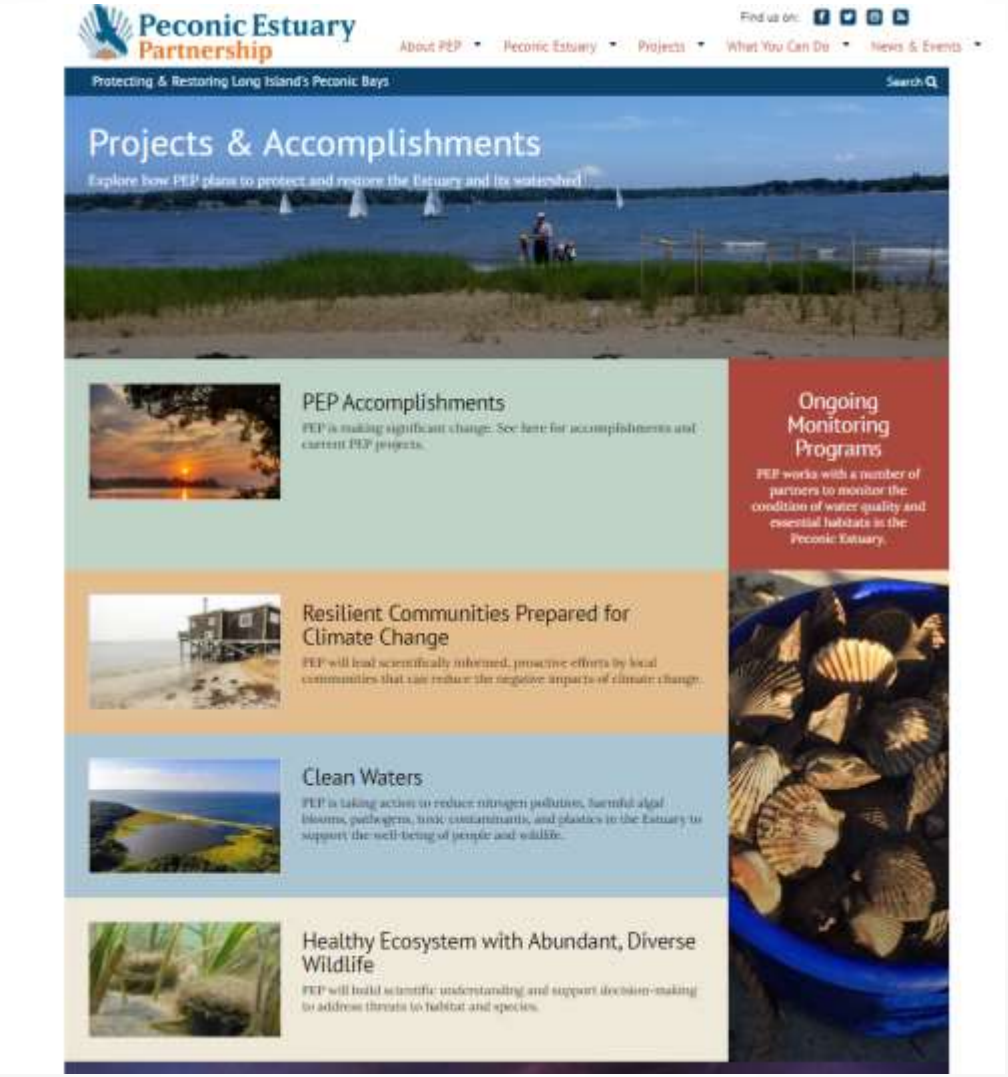
Photo Credit: Cassandra Castano, Nelson Pope and Voorhis

Spring 2020 Alewife Monitoring

- Video camera installed at Grangebel fishway on Peconic River for second year. Suffolk County Community College Professor (Kellie McCartin) and students helped with video monitoring analysis.
- Alewife Count Total Estimate: From 02/28/20 - 05/18/20, 57,924 alewife are estimated to have passed through the camera. Last year's total estimate was around 34,500.
- Anna Perruzza (intern) presented on 2020 Peconic River Alewife Monitoring results at Natural Resources Subcommittee meeting, 10/28/20. A Report will be circulated with monitoring results.



Current Projects



Paul Stoutenburgh Preserve Habitat Restoration

Status: An RFP for Engineering Design and Permitting was planned to be advertised in Summer 2020.

COVID-19 Update: Suffolk County Capital Budget funding for project has not been approved by SC Legislature. Project not moving forward at this time.

- Paul Stoutenburgh Preserve is a Town owned 52 acre nature preserve on the west side of Arshamomaque Pond with an adjacent 7 acre County preserve. Several areas along the shoreline and interior have pockets of invasive *Phragmites australis* resulting in low quality wetlands. Invasive mile-a-minute weed has become established and is rapidly increasing in areas adjacent to tidal and fresh water wetland areas. The project site was nominated by the Town of Southold to be included in the Peconic Estuary Program Habitat Restoration Plan in 2013 and the project was prioritized for habitat restoration in 2016. Habitat restoration is recommended and is anticipated to involve the removal of the invasive species using currently accepted removal and restoration practices, and changes to drainage infrastructure in the area to make conditions less suitable for invasive vegetation.

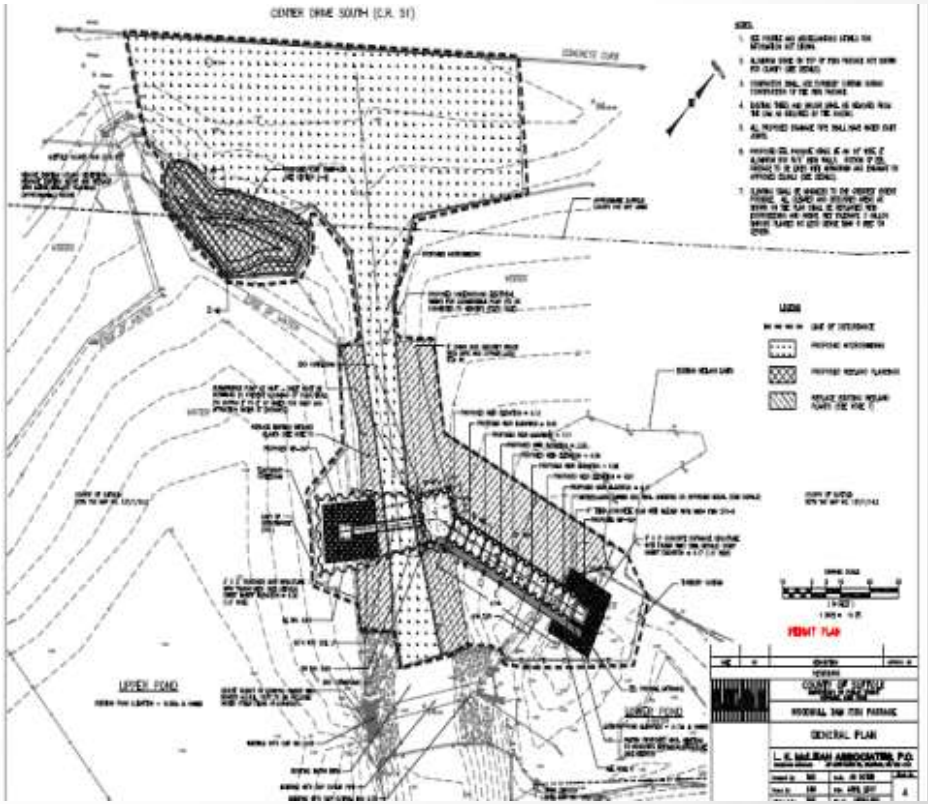
- The goal of the project is to improve the freshwater and tidal wetland habitat and to promote the re-establishment of native vegetation and important waterfowl, shorebird, wading bird and migratory bird habitat.

Woodhull Dam Fish Passage

PEP and Suffolk County contracted with L.K. McLean Associates

Status: PEP has secured additional funds ($250K from Suffolk County WQPRP & $50K from USFWS) and hoped to complete construction in 2020.

COVID-19 Update: Suffolk County Capital Budget funding allocated to this project is not currently available. Project will not move forward until Suffolk County has sufficient cash on hand to allocate to project or secures additional grant funds. Grant request from Southampton CPF is pending.



Lake Montauk Alewife Access and Habitat Enhancement

Status: Completed Conceptual Habitat Restoration Design in September 2019. East Hampton Town reviewed plans.

Next steps: Partial funding secured for Lake Montauk portion and will move forward with construction project in coordination with partners.

COVID-19 Update: Lake Montauk portion of project is funded by Suffolk County Capital Budget funds. PEP has not been notified of funding restrictions at this time, but could be an issue for this project in the future.

Click here for the Lake Montauk Alewife Access and Habitat Enhancement Conceptual Design Plan.

- PEP recently completed a conceptual habitat restoration design plan to restore connectivity for diadromous fish species between Lake Montauk and Big Reed Pond by replacing an undersized culvert, and between Lake Montauk and Stepping Stones Pond by replacing an undersized, impassable culverts under Old West Lake Drive and removing debris.
- Suffolk County Capital funds have been secured to replace the culvert that leads to Big Reed Pond and PEP staff will be working with Suffolk County parks to complete the permitting and construction.
- PEP staff are also working with partners to secure funding to complete engineering design plan and construction of the culvert leading to Stepping Stones Pond.

Meetinghouse Creek Main Road Wetland Construction/ Restoration

Status: Completed Conceptual Habitat Restoration Design in September 2019. Funding is secured for Engineering Design and Permitting.

Next Steps: An RFP for Engineering Design and Permitting was advertised 10/19/20, responses are due 12/1/2020. PEP will begin work with selected contractor.

- PEP recently completed a conceptual habitat restoration design plan for Meetinghouse Creek. This site is located at a large wetland area that forms the headwaters to Meetinghouse Creek in Riverhead, NY. Meetinghouse Creek is listed as an impaired waterbody on the NYSDEC Priority Waterbodies List. The wetland vegetation at this site is dominated by *Phragmites*.
- The conceptual design recommendation is to construct a 1.2-acre stormwater wetland to treat stormwater runoff in the 5.6 acre contributing watershed. This will improve water quality in the downstream wetland and surface waters. Additionally, it will greatly increase the ecological quality of the habitat and improve plant and wildlife diversity.
- PEP will work with the selected contractor and Town of Riverhead to complete the Engineering Design and Permitting services.

Click here for the Meetinghouse Creek Wetland Restoration/ Construction Conceptual Design Plan.

Narrow Road Wetland Restoration

Status: Completed Conceptual Habitat Restoration Design in September 2019. Southold Town and stakeholders reviewed plans.

Next steps: Secure funding and develop engineering design plans.

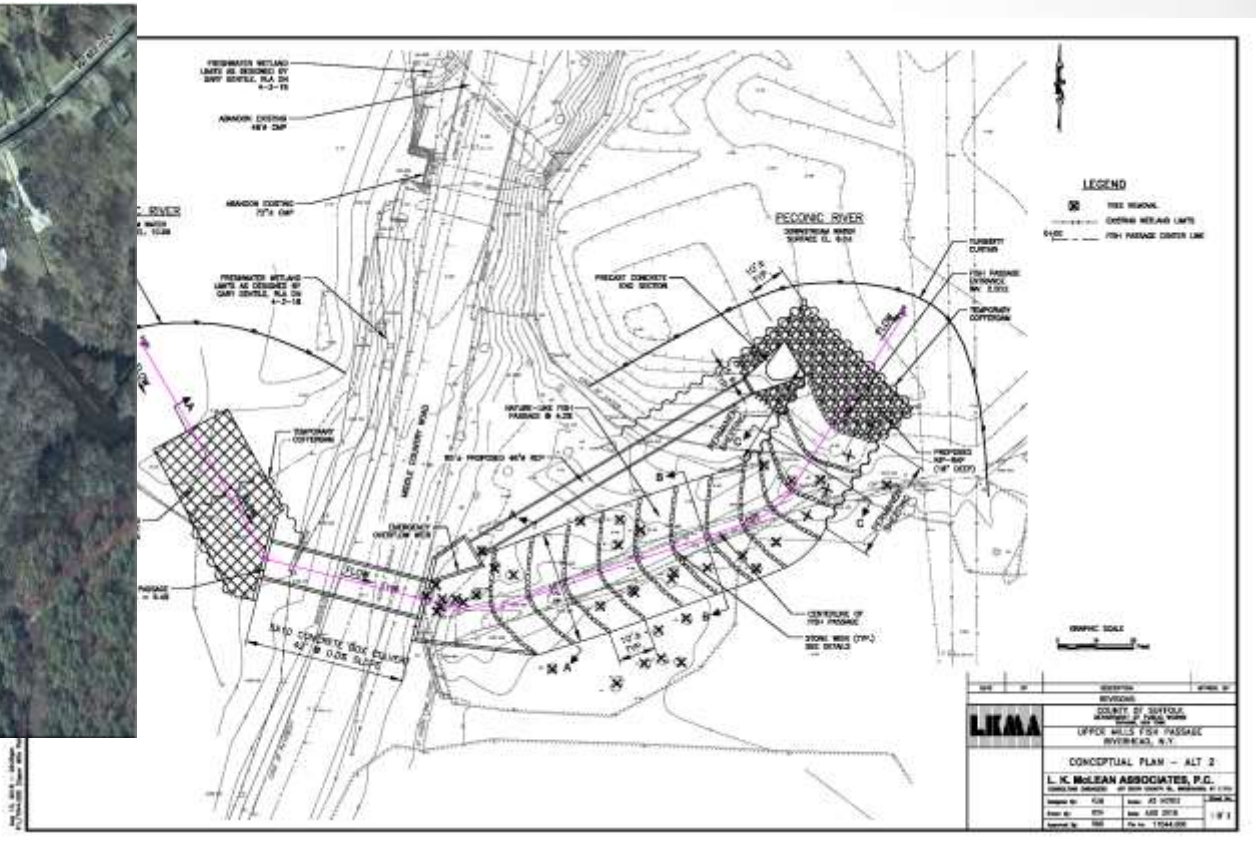
- Narrow River is a tributary of the Peconic Bay and flows south from the Town's Whitcom Marsh Preserve under Route 25 and along the eastern side of Narrow River Rd in Orient, NY. An earthen dam was constructed after the 1938 hurricane to prevent tidal flooding of the lands north of the dam. The western-most section of the dam blocked the tidal flow from Narrow River to the large meadow area north of the dam known as Broad Meadows and Whitcom Marsh Preserve north of Route 25.
- Remediation of the culvert and earthen dam is needed to improve the tidal exchange throughout the extent of the river and increase the salinity of the river to promote the re-establishment of native vegetation and important waterfowl and wading bird habitat. The potential extent of the restoration area is 80 acres.
- PEP is working with partners to secure funding for engineering design plans and construction.

Click here for the Narrow River Road Wetland Restoration Conceptual Design Plan.

Upper Mills Dam Fish Passage

PEP and L.K. McLean Associates for engineering and permitting services

Status: Design alternative selected at April 9th, 2019 stakeholder meeting. Engineering designs have been finalized, permitting is in progress. Anticipated completion February 2021.



Expansion and Monitoring of the Town of Southold Living Shoreline

PEP and Cornell Cooperative Extension

Status: Work is underway. Expected project completion in August 2021.

COVID-19 Update: This project's EPA grant funding was due to expire 9/30/2020. The EPA approved a grant extension on funding until 9/30/2021. Project contract will be extended accordingly.

Figure 2. Location of proposed living shoreline project on Southold Town Trustee land near Suffolk County Marine Environmental Learning Center.

- Expansion to an existing Town of Southold Living Shoreline Demonstration Project.
- Goal is to establish a larger project area and the addition of monitoring services at the project site.
- Enable the quantification of nitrogen uptake of *Spartina alterniflora* and ribbed mussels.

Nitrogen Load Reduction Assessment Project

PEP and Anchor QEA, LLC.

Status: Project is ongoing. Expected completion September 2021.

COVID-19 Update: This project's EPA grant funding was due to expire 9/30/2020. The EPA approved a grant extension on funding until 9/30/2021. Project contract will be extended accordingly. Planned presentation on project at February 2021 TAC meeting.

- Objective is to compile and assess the cost per pound of nitrogen reduction to groundwater for various nitrogen reduction best management practices (BMPs) currently being employed throughout the country.
- The project will provide a decision-making tool to guide cost effective management scenarios to reduce nitrogen on a subwatershed basis in the
- Peconic Estuary.

Peconic Estuary Ecosystem Study

PEP, NYSDEC and SUNY Stony Brook.

Expected completion Fall 2021.

Status: Advertising for a Post-Doctoral position.

COVID-19 Update: Timeline for hiring the Post-Doctoral position is delayed.

- Analyze spatial and temporal trends in the Peconic Estuary finfish trawl survey dataset, and develop risk metrics from ecological relationships for the Peconic Estuary that examine whether local and regional environmental changes have increased the vulnerability of individual finfish and mobile invertebrate species, community assemblages, and ecosystem processes.
- ECOSIM is a quantitative modeling framework that can represent all major ecosystem functional groups and can be used to identify and assess structural changes in the ecosystem in response to environmental change.
- The proposed study will identify vulnerable species, critical habitats, and ecosystem properties within the Peconic Estuary.
- This information has direct application to decisions affecting the use, management, and conservation of the natural resources in the bay.

New USGS Continuous Tide-Warning Station

Status: Station planned to be installed Spring 2020.

COVID-19 Update: Station installation delayed. Funding for addition of WQ Monitoring equipment through Suffolk County Capital Budget has not been allocated at this time.

- Two continuous USGS continuous WQ monitoring stations exist in the Peconic Estuary (one at the estuary head near its confluence with the tidal Peconic River, and the other near the estuary mouth in Orient Harbor). The PEP, along with the NYSDEC and USGS, support the operation and maintenance of the two continuous water quality monitoring stations in the Peconic.
- The USGS, in cooperation with the PEP and NYSDEC, are establishing a third station on Shelter Island Sound at the South Ferry dock on Shelter Island which originally was planned to have a tide-warning base station operational in late spring 2020 but the installation has been delayed. This additional station will provide tide-warning capabilities and the option to add on water quality monitoring parameters as additional funding becomes available.

Peconic Estuary Solute Transport Model

PEP and United States Geologic Survey

Status: Final Model Development phase and scenario finalization. Anticipated completion Spring 2021.

Next project meeting scheduled for January/February 2021.

Link to PE Solute Transport Model Webpage

Objective: This Solute Transport Model will be a tool to estimate time-varying nitrogen loading rates to the Peconic Estuary

Specifically, the objectives of the investigation are to:

1) develop data sets representing current and historic land uses relevant to nitrogen loading in coastal watersheds

2) estimate current estuarine loading rates and nutrient concentrations in the aquifer, and

3) use these current-condition models to simulate the response to possible wastewater-management actions.

Hardened Shoreline GIS Mapping

Status: Hardened Shoreline GIS Mapping Project was presented at the PEP Natural Resources Subcommittee on June 28th, 2019.
Final report is anticipated in 2020.

- PEP completed a GIS mapping project to quantify the amount of hardened shoreline in the Estuary. The last survey was in 2003 using maps from 2001.
- The preliminary results are being reviewed and ground-truthed in advance of final report distribution.

Bulkhead Distribution in the Peconic Estuary Watershed

Organizational Assessment

PEP and CoastWise Partners.

Status: Org Assessment is still under review. After Management and Policy Committee approval of the Strategy the document will be formally approved by the EPA and incorporated into CCMP.

- Management and Policy Committee Joint Retreat held October 9th, 2019 and February 5th, 2020.
- Examine the relationships between all groups in the Management Conference and provide recommendations about how they can work together more effectively.
- The purpose of this project is to develop a set of guiding policies for the Management Conference and sub-groups.
- Services were recommended as a Finding of the EPA's 2017 Program Evaluation of the PEP.

Quality Assurance Project Plan Development for Supplemental Water Quality Sediment Data Collection

PEP and Tetra Tech, Inc.

Status: The project Technical Advisory Committee is reviewing the final draft Quality Assurance Management Plan. Anticipated completion December 2020.

- A NYSDEC and EPA approved Quality Assurance Management Plan (QAMP) is under development;
- Identify and prioritize subwatersheds in the Peconic Estuary that should be targeted for water quality improvement activities; ensure water bodies are properly listed on the NYS Impaired Waters list;
- Help the PEPC members and partners assess the current baseline in water quality, and effectiveness of water quality improvement interventions over time.

Education and Outreach Highlights

- PEP is developing a **Wildlife Monitoring Network** for Long Island. The goal of the Wildlife Monitoring Network is to create a brand and central website where all LI wildlife monitoring projects are housed together (links to surveys). This makes it easy for partners to collaborate and avoid overlap, and for the public to become aware of all the efforts going on and get involved with multiple citizen science programs. With this brand and central website, this should increase citizen participation, data collection, and partner collaboration.

- Kick-off meeting was on July 15th. PEP discussed idea and gained positive feedback from the group. Second meeting was held October 8th. A draft layout of the Wildlife Monitoring Network website was provided. Currently reviewing website domain name votes and collecting wildlife monitoring surveys to launch the website. This first batch of collection is due by November 13th. A third meeting will be scheduled to showcase the draft official website before launch. To access the survey collection form to submit a survey, contact Lauren Scheer LS893@cornell.edu

Education and Outreach Highlights

- The third CAC meeting conducted virtually on zoom resulted in 77 registrations and approximately 34 attendees.
- See the CAC webpage for resources from the meeting.
- Suffolk County presented a workshop on the Septic Improvement Program at PEP's August 2020 Citizens' Advisory Committee Meeting. Attendees learned how to apply and were provided all details about the program to upgrade their cesspool or septic system for cleaner water quality.

Education and Outreach Highlights

- The fourth CAC meeting conducted virtually on zoom resulted in 36 registrations and approximately 19 attendees.
- See the CAC webpage for resources from the meeting.
- During National Estuaries Week, we celebrate Estuary Day with Long Island Sound Study and South Shore Estuary Reserve to bring awareness to the work that we do and inspire communities to get involved in our efforts to create a cleaner and more vibrant future.

Education and Outreach Highlights

https://lirpc.org/our-work/long-island-nitrogen-action-plan/nitrogen-pledge/

Reduce Nitrogen Pledge

LONG ISLAND REGIONAL PLANNING COUNCIL
Leadership on Regional Issues

TAKE THE PLEDGE: COMMIT TO PERSONAL STEPS TO REDUCE NITROGEN POLLUTION

Peconic Estuary Partnership

Nitrogen pollution is a leading cause of water quality impairment on Long Island.

Small steps can lead to big changes and there are plenty of actions we can take to reduce nitrogen in our waterways. Take this straightforward pledge and create a cleaner future for our most precious resource.

Take The Pledge Now!

10 Things You Can Do to Reduce Personal Nitrogen Pollution