FY25 WORKPLAN AND BUDGET -DRAFT

EPA Grant #: CE- 1



Applicant: Stony Brook Research Foundation

Submitted by: PEP Management Conference

> Start Date of Grant October 1, 2025

Prepared by: Peconic Estuary Partnership Office Riverhead County Center Room 250S 300 Center Drive Riverhead, NY 11901 (631) 852-2961

Draft for Management Committee recommendation for approval to the Policy Committee

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I. INTRODUCTION

The Peconic Estuary is one of 28 estuaries in the country designated by U.S. Environmental Protection Agency as an "estuary of national significance" under Section 320 of the Federal Clean Water Act. The National Estuary Program (NEP) was established to protect and restore nationally significant estuaries threatened or impaired by pollution, development, and overuse. The Peconic Estuary Was formally accepted as part of the NEP in 1992. Officially commenced in 1993, the Peconic Estuary Program includes numerous stakeholders, representing citizen and environmental groups, businesses and industries, academic institutions, and local, county, state and federal governments. The EPA, New York State Department of Environmental Conservation (NYSDEC) and the Suffolk County Department of Health Services (SCDHS) are the sponsoring government agencies for the program. Stony Brook University is the host entity and this grant commences October 1, 2025.

The PEP 2020 Comprehensive Conservation Management Plan (CCMP) guides the priorities of the organization and as such all projects and plans detailed in this workplan relate directly to the actions established to achieve our four goals: strong partnerships and engagement, clean waters, resilient communities prepared for climate change, and a healthy ecosystem with abundant, diverse wildlife.

Overall Funding Sources

The core FY25 budget reflects the following sources of funding:

EPA FY25 Base Funding: \$850,000.00* Non-Federal Match: \$850,000.00** Total: \$1,700,000.00

Resources Requested

The total Section 320 funds requested in this NEP grant to Stony Brook University is \$635,000 which will be matched at the required 1:1 rate, making the full budget of the Stony Brook award \$1,270,000.

*EPA FY25 Base funding will be provided to Suffolk County Department of Health Services (SCDHS) in the amount of \$215,000 which will be matched at the required 1:1 rate, making the full budget of the Suffolk County award \$430,000. This award is submitted as a separate application.

**The non-Federal match is provided by NYSDEC, The Town of Southampton, and SCDHS. New York State, Suffolk County, and other partners are expected to provide significant support above and beyond the committed match in the budget table in support of Peconic Estuary Partnership goals and objectives.

II. SUMMARY OF FY24 ACCOMPLISHMENTS

Operational Accomplishments

The PEP program office is growing and PEP hired a Grant Manager and a Water Quality Outreach Assistant during this period. The Tracking System continues to be our main portal to track our CCMP progress and we are expanding the data hub. PEP completed the State of the Estuary Report.

PEP Committees

The Technical Advisory Committee (TAC) met on Agendas, minutes and video recordings. The TAC held meetings on December 31,2024; May 7,2025; August 20,2025; November 5,20250

Natural Resource Subcommittee of the TAC : November 20, 2025; February 5, 2025: August 20,2025 Management Committee meetings:October 30, 2024; February 26, 2025; May 14,2025; August 6,2025 Policy Committee meetings: October 30,2024; March 19,2025

Citizens' Advisory Committee: The Citizens' Advisory Committee (CAC) met on November 20, 2024, March 4, 2025, Other 2025 Dates TBD

Local Government Committee: The Local Government Committee (LGC) met on March 12, 2024, June 11, 2025, and September 10, 2025.

PEP staff has expanded regional partnerships to include the Atlantic Coast Joint Venture (ACJV) Saltmarsh Sparrow restoration priority planning and is a member of the Coastal Habitat and Resources Restoration and Management (CHaRRM) facilitating collaboration and communication among the mid-atlantic coastal management stakeholders. PEP is also coordinating with other National Estuary Programs, the National Parks Service, and EPA on a regional effort to protect and restore seagrass. PEP continues to work with Long Island Nitrogen Action Plan (LINAP) as they evolve to the Long Island Action Plan.

Water Quality

PEP continues to support the SCDHS and USGS water quality monitoring systems:

Suffolk County Department of Health Service Bathing Beach and Surface water; USGS continuous water quality monitoring at Peconic River Station; Shelter Island Station; Orient Harbor Station. <u>N</u>itrogen Atmospheric Deposition Monitoring Program results are here (NADP).

PEP continues to monitor the oil injection Permeable Reactive Barrier (PRB) in Three Mile Harbor at Tanbark Creek in East Hampton. PEP funded the monitoring of this project for 2023 to assess success in nitrogen reduction at the immediate pore water monitoring wells and measure if there is a quantitative reduction in nitrogen downstream in Three Mile Harbor. The USGS-PEP Solute Transport Modeling Project is finalizing the dashboard for public use. PEP hosted stakeholder update meetings on October 6th and November 17th of 2024. PEP continues to support the Suffolk County Reclaim Our Water Initiative which provides increased protection of water resources. The Initiative used existing legal framework and County and Town grant and loan opportunities to assist homeowners in upgrading to Innovative and Alternative On-Site Wastewater Treatment Systems (I/A OWTS) . PEP is partnering with Suffolk County to host and lead outreach events to promote the I/A OWTS program and disseminate information about the financial programs available. PEP continues the research on microp[lastics in the Peconics with the identification of polymers, additives, and pigments that can potentially tell us what sort of product was the source of microplastics in the environment. Identification of microplastic pollution

HABs in the Peconic Estuary Priority Embayments

PEP continues to work with the Gobler lab at Stony Brook to develop end points for Nitrogen and HABs species.. This project aims at answering vital questions regarding HABs dynamics and the effect of nutrients, such as: Are the events similarly promoted by excessive nitrogen? What is the spatial and temporal variability of the nutrients promoting these events? What degree of nitrogen reduction is needed to lessen the intensity of these events?

Healthy Ecosystems

PEP continues to collaborate with eelgrass experts from across the North East to develop a regional approach to eelgrass restoration. The TAC agreed to change the method of annual survey and the Quality Assurance Project Plan is underway. PEP is assisting NYS on the development of seagrass management areas, as well as regional coordination efforts for seagrass protection. PEP completed the 20 year data review of the state of SAV in the Peconics and developed a story map. Final surveys completed in October 2024 and groundtruthing complete Nov 2024. Orthoimagery completed in March of 2025. SeagrassNET sites are under consideration. Partners have aided in the development of criteria for a standardized monitoring plan. This monitoring strategy will also support the statewide and the regional seagrass habitat preservation efforts. Geospatial Center also continues to build out infrastructure for the "PEP Central Data Hub" and "PEP Maps and GIS Data Hub". This will allow partners to submit all relevant data to an online database for easy access and organization.

Ongoing work continues with PEP, Suffolk County, the Long Island Power Authority, and the Town of Riverhead to complete a Land Use Agreement to pass the one barrier remaining on the main stem of the Peconic River at **Upper Mills Dam**. PEP is also working closely with the NYS Department of Environmental Conservation to draft a plan to utilize eDNA as a methodology to determine the presence, migration patterns, and abundance of diadromous fish within the Peconic River system. A pilot study for this project began in February 2025.

The PEP Aquaculture Impact Study Phase I is complete and final reporting is underway here. Phase II involves the investigation of aquaculture operations and their effect on invertebrates, sediment analysis, and discreet microenvironments in and around aquaculture operations. Phase II has completed the lab portion of the study, and aims to continue the study with field experimentation and analysis. Link to Phase II presentation can be found here.

Resilient Communities

PEP has continued its partnership with stakeholders of East Hampton Town's **Accabonac Harbor**. We are working with SMARTeams (regional experts that have developed an emerging, minimally invasive wetland restoration technique) to **restore over 30 acres of salt marsh in Accabonac Harbor**. Permit-ready plans a final workshop to aid in permitting. Outreach on this project has continued as PEP has participated in Accabonac Protection Committee meetings and assisted in fieldwork led by US Fish and Wildlife Service alongside The Nature Conservancy to survey for Saltmarsh Sparrow. The **Paul Stoutenburgh Habitat Restoration Project** aims to **restore six acres of salt marsh** and has completed an assessment of the hydrology of the southwest portion of the Paul Stoutenburgh Preserve. Engineering plans were completed and permits drafted for the town to correct the culvert to repair hydrologic flow to restore wetland area.

The wetland restoration at Indian Island is complete and restores 56 acres on Terry's Creek.

Shoreline Adaptation Initiative & Work Group: In partnership with New York Sea Grant (NYSG), PEP program office is co-chairing an innovative and collaborative initiative devoted to moving Long Island forward in the realm of living shoreline implementation and nature-based adaptations. This is a series of 1:1 information-gathering meetings with town planning departments, elected officials, and permitting entities. Progress is underway on a needs assessment and set of recommendations. The initiative began the contracting process with the Virginia Institute of Marine Science to adapt the established Shoreline Management Model used in the permitting process in Maryland to the Peconic estuary.

Strong Partnerships and Engagement

<u>Association of National Estuary Programs Tech Transfer Conference-PEP co-hosted the 2024 ANEP Tech</u> Transfer Conference on November 13th-15th 2024 at Stony Brook University. Almost all of the 28 NEP's were represented, with a total of 94 registrants.

2024 PEP Mini Grant Program

The 2024 PEP Mini Grant winners are:

- The Perfect Earth Project with "Reducing Nutrient Pollution in the Peconic Estuary Watershed Through Residential Outreach and Nature-Based Land Care Education".
- The Accabonac Protection Committee with "Enhancing Water Quality Communications in the Accabonac Watershed
- The Citizen Science Learning Center with "Adopt-a-Pond Water Quality Monitoring and Pond Keepers Educational Programing"

2023 Mini Grant Program Progress

- Shinnecock Indian Nation Kelp Farm Pilot Project: Contracting is in progress
- Seatuck Half Shells for Habitat: This project accomplished the following tasks
 - Identified interests and engaged East End towns in oyster shell recovery and recycling program.
 - Seatuck is actively working in partnership with other organizations and townships to develop another localized shell deposit location on the east end of Long Island.

For more information, visit <u>https://data.gss.stonybrook.edu/sk/dataset/east-end-town-oyster-shell-recovery-and-recycling-program-expansion</u>

- Peconic Baykeeper Project R.I.S.E.: Peconic Baykeeper's Project R.I.S.E is complete. For more information, and to find a Chronolog Stations, visit https://peconicbaykeeper.org/programs/project-r-i-s-e and https://data.gss.stonybrook.edu/sk/dataset/project-r-i-s-e
- Cornell Cooperative Extension Horseshoe Crabs and Diamondback Terrapin: Tags were successfully placed on horseshoe crabs in Spring 2024. The tags showed limited detections from horseshoe crab tags. Tagging of the diamondback terrapins was successful, with a lot of data from

those tagged off of Orient Harbor. Data will be reviewed in the spring/summer of 2025. For more information, visit: <u>https://data.gss.stonybrook.edu/sk/dataset/satellite-telemetry-tags-</u>horseshoe-crab-diamondback-terrapin

Community Science Long Island Webinar Series 2025

PEP has partnered with Long Island Sound Study, New York Sea Grant, South Shore Estuary Reserve, and the Seatuck Environmental Association to host the Community Science Webinar Series; an outreach series aimed at raising awareness for citizen science opportunities on Long Island and the importance of those projects in supporting research and local environmental management efforts.

Winter Walk Series with Peconic Estuary Partnership and Peconic Baykeeper 2024/25

The Peconic Estuary Partnership and Peconic Baykeeper hosted our third annual Winter Walk Series. Nature walks were held on alternating Friday and Saturdays, December 2024 through March 2025, at 5 parks/locations throughout the watershed.

<u>Nitrogen Reduction Outreach - PEP</u> continues outreach to the public to educate them on septic improvement, and encourage them to use available funding to upgrade their septic systems. PEP held a Local Government Committee meeting in October 2024 to discuss the Suffolk County Septic Improvement Program, and the East Hampton, Shelter Island, and Southampton town rebate programs. Further discussions on optimizations.

<u>Earth Day Alewife Walk with PEP and PBK -</u> In April 2025, PEP partnered with Peconic Baykeeper for our annual event celebrating Earth Day and Long Island Migratory Fish Week, for a nature walk in Southampton's Alewife Creek. Educational components included history of these threatened and ecologically important fish, current monitoring efforts, and restoration efforts.

Homeowner Rewards Program

PEP continues to provide financial rewards for homeowners who remove turf and pavement, and add green alternatives to their properties that benefit the environment. Homeowners can earn up to \$500 to offset the expense of installing green infrastructure on their properties including rain barrels, rain gardens, and native plant gardens. PEP's Homeowner Rewards Program opened for applications on March 17, 2025.

River Herring and Eel Survey

The annual Long Island Volunteer River Herring & Eel Survey is one of Long Island's longest running community science projects.

Horseshoe Crab Monitoring at Squire's Pond

The Peconic Estuary Partnership is part of the Horseshoe Crab Monitoring Network hosting a monitoring site at Squires Pond at the end of East Landing Road in Hampton Bays.

Long Island Wildlife Monitoring Network

PEP continued the highly successful citizen science partnership between Seatuck Environmental and PEP, the Long Island Wildlife Monitoring Network.

Workgroups and Symposiums

<u>Bay Scallop Symposium -</u> One July 16th, the Peconic Estuary Partnership hosted a Bay Scallop Symposium in partnership with NY Sea Grant. This meeting was built out of the Peconic Estuary Partnership's Bay Scallop Technical Advisory Committee. The goal of this symposium was to bring stakeholders, government

representatives, researchers, and members of industry together to discuss the state of the bay scallop fishery of the Peconic Bays. The symposium also provided a forum for individuals to be updated on the active, on-going bay scallop research supported by PEP.

<u>Shoreline Adaptation Initiative - PEP and New York SeaGrant work in coordination with local municipalities</u> to review codes and policies, document hurdles, and suggest improvements that will result in these resilient shoreline adaptation methods becoming a more feasible option across the Peconic Estuary. Shoreline Adaptation Initiative worked with NY Sea Grant Law Fellow to work on wetland code updates for Shelter Island town council that were considered and implemented in 2024 code amendment process. The initiative finalized a Peconic Estuary Shoreline Needs Assessment,

<u>Shoreline Adaptation Summit: Biennial Conference</u> -This summit will also serve as the PEP Biennial conference as outlined in the CCMP. and will be held in June 2025 bringing together stakeholders from across the estuary who are involved in shoreline protection and adaptation. Presentations will also share info on the process of technical resources being developed for shoreline managers and regulators.

III. PEP FY2025 Workplan

CCMP Goals

Strong Partnerships, Resilient Communities, Clean Water, and a Healthy Ecosystem are the four pillars of our foundation, The CCMP lays out 8 Objectives and 35 Actions that will guide PEP and our partners to address the challenges facing our watershed.

Budget and Staff Elements

Program Office Staff

The following outlines FY25 §320 budget requests to support the Peconic Estuary Partnership Office to implement the CCMP. Costs include salary and fringe.

Program Office Staff Total Cost: \$410,529

Executive Director

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 250S, Riverhead, NY Responsibilities: Provides overall leadership to the program office, management and administration to the Program on behalf of the Management Conference.

Grants Manager

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 250S, Riverhead, NY Responsibilities: Manage Federal and Local Government Grants, track deliverables, invoices, and subawards.

Natural Resources Program Manager

Location: New York State Department of Environmental Conservation, Marine Resources Headquarters 123 Kings Park Blvd. (Nissequogue River State Park) Kings Park, NY

Responsibilities: Lead existing and develop new natural resource related projects in the watershed and acts as support for a variety of other projects carried out by the program office. Works closely with NYS DEC to coordinate habitat and wildlife related projects and PEP administrative tasks.

Communication and Outreach Manager

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 250S, Riverhead, NY Responsibilities: Lead existing and develop new outreach and education activities for PEP focusing on the four goals laid out in the 2020 CCMP. Works closely with Stony Brook Research Foundation to coordinate activities in support of PEP.

Coastal Resilience and Communities Coordinator

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 250S, Riverhead, NY Responsibilities: Coordinates PEP watershed resilience initiatives including wetland restoration projects. Builds partnerships with the PEP local communities to foster a stronger understanding of the estuarine challenges and assist local governments in finding solutions.

Water Quality Outreach - (NYS & Local Government Funds)

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 250S, Riverhead, NY

Responsibilities: Assist the Outreach Coordinator with communication around nutrient reduction. Help to coordinate civic engagement about septic improvement and fertilizer use. Develop materials for distribution specifically focused on septic improvement and fertilizer reduction. Develop social media campaigns and update website regularly.

Budget Summary

ltem	FY25 Request	Notes
Personnel(salary & fringe)	\$410,529	See Budget Details on page 42
Travel	\$14,000	See Travel section on page 41
Equipment	\$0	
Supplies	\$3,455	Field supplies, field gear, homeowner rewards and rain garden supplies, and office supplies
Contract	\$0	
Other	\$24,000	Website, CCMP Tracking System and GIS technical services, Homeowner Rewards
Subawards	\$35,000 \$25,000	WQ Reporting Mini Grant
Total Direct	\$511,948	
Indirect (26%)	\$124,052	IDC on direct charges @26% on program office costs, the first 26% of subawards (and incl in WQ Reporting cost)
Total EPA §320 Request	\$636,000	
NYSDEC Match	\$500,000	
East End Town Match	\$136,000	
TOTAL EPA §320 AWARD	\$1,272,000	
Suffolk County EPA §320 Funds Request	\$214,000	These funds will be detailed on the Suffolk County Grant Application for FY25
Suffolk County Match	\$214,000	This match will be detailed on the Suffolk County Grant Application for FY25
Total Project Cost	\$1,700,000	

FY25 Workplan

This workplan includes all projects which PEP plans to be involved with in the coming fiscal year. Projects that are funded under the Investment and Infrastructure and Jobs Act (IIJA; formerly referred to as Bipartisan Infrastructure Law or BIL) will be included in this workplan but no details will be provided. Full details of the IIJA projects will be included in the IIJA workplans, formerly referred to as BIL workplans (IIJAYR12, IIJAYR2, etc) and approved by the PEP Management Conference. Each of these projects supports PEP's 2020 CCMP, which also highlights PEP's role as an active partner with other government agencies and nonprofits working in the Peconic.

Our continued focus on partnership results in some of PEP's staff time focusing on supporting projects directed and funded by partners. In these cases, PEP staff is responsible for providing technical expertise, coordinating projects, and facilitation of collaboration as needed; their responsibilities support the ultimate project outcomes but can be accomplished even if the project does not move forward.

New FY25 §320 projects are identified in Table 2 with funding sources clarified. Ongoing FY24 §320 projects that use previous years' (FY22-FY24) funding and staff time for FY25 are identified in Table 3. The projects approved by the PEP Management Conference to be funded with the IIJA funding are identified in Table 4; while these funds will be applied for and tracked under a separate agreement with EPA, their nomination and approval follows the same process as all PEP projects and are therefore listed in our annual workplan.

Project	CCMP Action	Primary Funding Body	PEP Role	Funding requested from FY25 §320 award
PEP Outreach	Actions 6,7,8,&9	EPA/Local Government	Lead	Staff Time
Water Quality Report	Actions 17	EPA	Lead	\$35,000
Lake Montauk Stormwater Management Plan	Action 18	Local Government (\$134,000)	Lead	Staff Time
Homeowner Rewards	Action 18	EPA	Lead	\$8,000
HABs Priority Project Year 3	Action 19	NYS FY25 (\$120,000)	Co-Lead	Staff Time

Table 2: Summary of New Projects (FY25) and CCMP Actions

Three Mile Harbor PRB Monitoring at Tanbark Creek- year 4	Action 18	Local Government (\$75,000)	CCE Lead	Staff Time
Mini Grant	ССМР	EPA/Local Gov't (\$50,000)	PEP	EPA \$31,500
eDNA Alewife/American Eel	Action	NYS (\$20,000)	NYSDEC	Staff Time
Recreational Map	Action	Local Govt (\$32,392)	PEP	Staff Time

Alewife Monitoring Woodhull & Grangebel	Action 29	Local Government – New (\$12,000)	SCCC Lead	Staff Time
eDNA Monitoring of Diadromous Fish in the Peconic River System	Action 29	NYS (\$15,000)	Lead	Staff Time
CCMP Aligned Fellowship Project	All	Local Government - New FY25 MCP	Co-Lead with Stony Brook	Staff time
Continuous Water Quality Monitoring (USGS)	Action 16 & 18	NYS (\$173,500)	PEP/USGS/N YS	Staff Time
Shoreline Adaptation Site Suitability Model	Action	NYS FY24 (\$114,122)	PEP/VIMS/S BU	Staff Time
Mini-Grant FY25	Goal: Clean Water	EPA; Local Government (\$56,500)	Multiple-PEP Lead	Staff Time

Table 3: Summary of Ongoing projects and CCMP Actions

Description	CCMP Action		Primary Funding Body	PEP Role	Funding requested from previous §320 award
Microplastics in the Peconic Estuary	Action 22		FY22 (\$120,744); (\$75,000)	Stony Brook Lead-PEP Support	Staff Time
SAV Historical Data Compilation and Story Map	Action 12 & 30	Local FY23 (Government (\$32,038)	PEP Lead / Stony Brook / CCE	Staff Time
PeconicSAVCoordinationandStrategy Development	Action 30	Local FY23 (Government (\$85,000)	PEP, NYSDEC, Dr Lefcheck	Staff Time
Wildlife Conservation Initiative (Otter Strategy and Horseshoe Crab Plan facilitation)	Action 33	Local Government (\$32,500)		Co-Lead Seatuck, PEP	Staff Time
Horseshoe Crab Habitat Site Suitability Review – Bulkhead and Revetment Groundtruthing	Action 33 & 34	NYS FY23 (\$51,500)		CCE Lead	Staff Time
Eelpass Installation at Bridal Falls Grangebel	Action 29	Local FY23 (Governments \$1,966)	Co-Lead PEP- Seatuck	Staff Time
Communication Strategy	Actions 6,7,8 &9	EEEEI FY23 (\$80,000)		Lead	Staff Time
HABs Priority Embayments Project (Year 1)	Actions	NYSFY22 (\$110,000)		Co-lead SBU PEP	Staff Time
HABs Priority Embayments Project	Actions	NYSFY	/24 (\$119,957)	Co-lead SBU	Staff Time

(Year 2)			PEP	
Shelter Island Wetland Assessment & Concept Planning	Actions	NYSFY24 (\$100,000)	TBD	Staff Time
Mini-Grant FY23	Goal: Clean Water	EPA; Local Government (\$31,500)	Multiple-PEP Lead \$94,500	Staff Time
Shoreline Adaptation Initiative	Action 11	\$110,311 Total ; EPA FY22 (\$15,278); NYSFY19 (\$46,742; FY21 (\$40,291); Local Government FY22 (\$8,000)	PEP/NY SeaGrant	Staff Time
Peconic Land Trust Broad Cove Master Plan	Action	NYS FY24 (\$89,100) Phase 1: IIJA2 workplan (\$150,000) Phase 2: IIJA Y3 workplan (\$150,000)	PEP & Peconic Land Trust	Staff Time

NYMRC				
MARCO – Mid-Atlantic Carbon Project		Staff Time	MARCO	Staff Time
Facilitate Narrow River Wetland Restoration Project	Action 31	Ducks Unlimited, Town Southold, NYDEC	Partner	Staff TIme
Continue to distribute information and tools developed in the CLPS and CRA to municipalities and work with the East End Towns to implement climate resiliency actions.	Action 11	EPA; Local Governments	Lead	Staff time
Accabonac Harbor Saltmarsh Complex Restoration	Action 31	SC Capital budget total (\$150,000) SC Capital 2022 budget: (\$100,000); SC Capital budget 2018 (\$50,000)	Lead	Staff Time

Continuous Water Quality Monitoring (USGS)	Action 16	NYSFY18 (\$164,504); Suffolk County (\$150,000); USGS	Co-Lead	None
Water Quality Monitoring Collaborative	Action 17	EPA	Lead	Staff time
LINAP / LI Watershed	Action 17	NYSDEC	Supporting partner	Staff time
Peconic Estuary Solute Transport Model	Action 17	NYSDEC	Supporting partner	Staff time
Subwatershed Plan	Action 18	Suffolk County	Supporting partner	Staff time
Upper Mills Fish Pass – Land Use Agreement	Action 29	EPA	Lead	Staff Time
Non-Point Source reduction-Green Infrastructure school pilot	Action 18	Local Government (\$24,000)	Lead	Staff time
PEPC	Action 21	Local Governments (\$56,000)	Supporting partner	Staff time
Ecosystem-Based Model of the Peconic Estuary	Action 23	NYSFY19 (\$200,000)	Lead partner + Stony Brook University and NYSDEC	Staff time
Peconic River Fish Pass – Upper Mills	Action 29	Suffolk County; NYSDEC, LIPA/PSE&G	Lead partner	Staff time
Alewife Creek Fish Pass	Action 29	Southampton	Partner	Staff Time
Alewife Monitoring on the Peconic River	Action 29	EPA (\$500), NYSFY24 (\$12,000)	Lead	Staff Time& \$500 Supply Funds (EPA)
Aquaculture Impacts Study (Phase 1)	Action 34	NYSFY22 (\$150,505)	Lead	Staff Time
Aquaculture Impacts	Action	NYSFY23 (\$150,000)	Lead	Staff Time

Study (Phase 2)

FY25 Projects

CCMP GOAL: STRONG PARTNERSHIP AND ENGAGEMENT

ACTION 2: Maintain the CCMP Tracking System on PEP Website to report progress in implementing CCMP actions.

Performance Measure: Management of web-based CCMP Tracking System within three years of the final Revised CCMP.

CCMP Tracking System Management-Annual Management and GIS Updates

New/On-going

- a. Estimated Budget: FY25 \$22,000 (\$12,000 EPA; \$10,000 Local Govt)
- b. **Partners and their roles**: PEP (Lead); Stony Brook
- c. **Description and Objectives:** To continue to facilitate implementation of the 2020 CCMP, PEP will retain the services of the Geospatial Institute at Stony Brook University to update the tracking system and provide ongoing GIS to support the Program Office.
- d. **Outputs and Deliverables**: Maintenance of the on-line tool for tracking CCMP success. Up-to-date maps of program work products.
- e. Estimated Milestones: Annual updates with project maps provided as needed.
- f. Long Term Outcomes: PEP staff, our Management Conference and all partners will be able to easily track progress of all goals and actions of the CCMP and retain an online geospatial tool for telling the story of the estuary.
- g. Clean Water Act Core Programs: N/A
- h. External Constraints: N/A

Objective B (Overarching Priority Objective): Empower local communities to support estuary health **ACTION 6:** Increase community members' awareness of the Peconic Estuary, key issues relating to the CCMP's Goals, and PEP as a resource to help them address the issues.

ACTION 7: Involve community members in citizen science programs to cultivate personal connections to the Peconic Estuary and inspire positive behavioral change to support Estuary health;

ACTION 8: Conduct outreach events and programs that engage community members in learning about the Peconic Estuary and taking action to support Estuary health;

Performance Measures: Includes all listed.

Communication Strategy

- a. Estimated Budget: \$100,000 (FY23-East End Economic and Environmental Institute-EEEEI)
- b. Partners and their roles: PEP (Lead); Management Conference
- c. Description and Objectives: The Communication Strategy will enable the program to most

effectively communicate science, ensure our communities are aware of issues facing the estuary, empower local governments to make positive changes in their municipalities, and highlight the work of the PEP. This project is moving forward with the selected contractor. It is anticipated this will be complete in 2025

- d. **Outputs and Deliverables**: Strategy Document which will guide solicitation and securing of a contractor for a ten year communication strategy plan.
- e. Estimated Milestones: Quarterly CAC meetings to guide this process
- f. Long Term Outcomes: More engaged communities and empowered local governments
- g. Clean Water Act Core Programs: N/A
- h. External Constraints:

PEP Outreach

New & Ongoing

- a. Estimated Budget: Staff Time
- b. Partners and their roles: PEP
- c. **Description and Objectives**: Continued maintenance and creation of new partnerships as appropriate that expand outreach efforts, CCMP related information dissemination, and maintaining and developing digital outreach activities and initiatives.
- d. **Outputs and Deliverables**: Based on the Communication Strategy and annual strategy development and implementation of social media and digital communication and outreach materials including up to four PEP Newsletters per year, PEP website, and beach clean-up.
- e. Estimated Milestones: CAC meetings (up to four)
- f. Long Term Outcomes: To achieve Objective B of the 2020 CCMP and empower communities to support estuary health
- g. Clean Water Act Core Programs: All
- h. External Constraints: N/A

PEP Outreach – Nutrient Reduction Concentration

New & Ongoing

- a. Estimated Budget: \$ 81,400 (FY24 Local Government)
- b. Partners and their roles: PEP
- c. **Description and Objectives**: Carry out community meetings with civic associations and other community groups to discuss septic improvement and fertilizer reduction. Create content for social media and website about nutrient reduction, update social media and website regularly, content for PEP Newsletter.
 - Long Island Estuary Program Coordination
 - PEP Citizens' Advisory Committee Albany Education Day
 - Nitrogen Reduction Outreach
 - Earth Day Alewife Walk with PEP and PBK
 - Homeowner Rewards Program
 - River Herring and Eel Survey
 - Long Island Wildlife Monitoring Network
 - Horseshoe Crab Monitoring
 - International Coastal Cleanup Day
 - A Day in the Life of the Peconic River
- d. **Outputs and Deliverables**: social media and digital communication and outreach materials, PEP Newsletter, PEP website content
- e. Estimated Milestones: at least one meeting per month, two Newsletters annually, and weekly nutrient focused social media post

- f. Long Term Outcomes: A more informed community base and nutrient reduction
- g. **Clean Water Act Core Programs:** Nutrient Reduction; Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs), Elements of this project prevent or mitigate the impacts of nutrient pollution.
- h. External Constraints: scheduling for community groups can be challenging

Marine Conservation and Policy Fellowship

New & Ongoing-New Funding and Research Topic annually

- a. Estimated Budget: Staff time (\$6,000 Local government)
- b. Partners and their roles: PEP (Lead); Stony Brook SoMAS
- c. **Description and Objectives:** In FY21 PEP initiated the first PEP Fellowship with the Stony Brook University Marine Conservation and Policy Program. This fellowship is a competitive award open to students currently enrolled in this Graduate Program and requires project proposals to assist PEP with working toward one of the 35 actions listed in the 2020 CCMP. In FY24 the fellow worked with the Volkenborn Lab at the School of Marine and Atmospheric Sciences to assess pollution reduction of aquacultured oysters. The FY25 project is still to be determined.
- d. Outputs and Deliverables: Completion partial of CCMP Actions and/or research priorities
- e. **Estimated Milestones**: Presentation to TAC Committee, Presentation to Local Government Committee, Presentation to Management and Policy Committee.
- f. **Long Term Outcomes**: Increasing the visibility of PEP in the emerging local academic community, educating students on the mission of PEP and the importance of a healthy estuary, implementation of the 2020 CCMP
- g. Clean Water Act Core Programs: TBD
- h. External Constraints: N/A

CCMP GOAL: RESILIENT COMMUNITIES PREPARED FOR CLIMATE CHANGE

Objective C: Help local communities to take meaningful, well informed action to prepare for and adapt to climate change impacts in the Peconic Estuary.

PEP CCMP-Based Mini Grant Program

New

- a. Estimated Budget: \$75,000
- b. Partners and their roles: PEP (Lead); EPA \$25,000; Local Government (\$50,000)
- c. **Description and Objectives:** To provide funding to our communities to allow for the implementation of the 2020 CCMP and empower them to take action toward clean water and healthy habitats in the watershed and prepare for a changing climate.
- d. **Outputs and Deliverables**: The creation of 2-4 projects in the watershed that work toward the completion of the 2020 CCMP.
- e. **Estimated Milestones**: Grant call to go out in Fall 2025, grant awards announced Winter 2025/2026 and project initiation by Spring 2026. Completion of projects within two years.
- f. **Long Term Outcomes**: More engaged communities that are working toward clean water and a healthier estuary.
- g. Clean Water Act Core Programs: All
- h. External Constraints: N/A

PEP CCMP-Based Mini Grant Program - In Process

Ongoing

a. Estimated Budget: \$125,000 (EP FY22 7 FY24), \$50,000 (Local Government FY22&FY24)

- b. **Partners and their roles**: PEP (Lead); Seatuck Environmental, Cornell Cooperative Extension of Suffolk County, Peconic Baykeeper, Shinnecock Indian Nation, PRFCT Earth Project, Accabonac Protection Committee, Citizen Science Learning Center, Local Governments.
- c. Description and Objectives: Four mini-grants were awarded in FY23 (using funds from FY22), and three were awarded in FY24 for projects as follows: Half Shells for Habitat (oyster shell recycling program Seatuck Environmental); Satellite tagging of diamondback terrapin (CCE); Project R.I.S.E. (Peconic Baykeeper); Pilot Kelp project (Shinnecock Indian Nation); Native plan initiative and education (PRFCT Earth); bilingual outreach for clean water programs (Accabonac Protection Committee); Water Quality Monitoring of freshwater ponds (Citizen Science Learning Center).
- d. **Outputs and Deliverables**: Seven projects in the watershed that work toward the completion of the 2020 CCMP.
- e. Estimated Milestones: Completion of seven projects and presentation to PEP Committees.
- f. **Long Term Outcomes**: More engaged communities that are working toward clean water and a healthier estuary.
- g. Clean Water Act Core Programs: All
- h. External Constraints: N/A

ACTION 11: Provide tools and assistance to local governments to mitigate and adapt to the impacts of climate change.

Performance Measure: Delivery of the Critical Lands Protection Strategy Maps and ArcGIS data to Peconic Estuary resource managers to utilize as a broad tool for planning and adaptation initiatives

Performance Measure: Implementation of Actions and Strategies of the Peconic Estuary Climate Ready Action Plan

Performance Measure: Development of model code for local implementation of zoning and other land use tools in The Climate Adaptation Toolbox for Land Use and Municipal Planning identified in the Climate Ready Action Plan

Shoreline Adaptation Initiative

Ongoing

- a. **Estimated Budget**: EPA \$110,311; EPA (FY22 \$15,278); NYS(FY19 \$46,742; FY21 \$40,291); Local Government (FY22 \$8,000)
- b. **Partners and their roles**: PEP (Lead); Sea Grant (Lead); NYS (Funding Body); Local Governments (Funding Body)
- c. **Description and Objectives:** This project is the continuation of NY Sea Grant participation as the co-chair of the PEP Shoreline Adaptation Initiative. Overall this work looks to answer the question- What factors are contributing to the issues faced in the process of thoughtful climate resilience planning on the shorelines of the Peconic Estuary? The Shoreline Adaptation Initiative synthesizes information gathered from partnerships within the many subgroups within it to leverage funds to create resources and draft policy/process changes to align decision-making, goals, and interpretation of shoreline policies in the Peconic Estuary. This initiative includes the continued coordination of subgroups, including the Core Assessment, Homeowner Decision makers, Implementers Experience, and Shoreline Policy-makers Groups, all needed to address current challenges related to thoughtful shoreline decision making within the Peconic Estuary.

Outputs and Deliverables: Continued meetings with each subgroup, draft the documentation of regulatory agencies, property owners, & implementer's shoreline permitting experiences to collaboratively find meaningful solutions. Work with NYSG Law Fellow to draft code changes to benefit all stakeholders. Outreach materials thoughtfully targeting each audience to suggest opportunities for change and better navigate the process. Provide initial development and

investigating of funding sources for localized technical resources. <u>The initiative</u> finalized a Peconic Estuary Shoreline Needs Assessment, Literature Review, Outreach materials including fact sheets and Website, Technical Resource Recommendations, next steps and more. The initiative began contracting process with the Virginia Institute of Marine Science to adapt the established <u>Shoreline Management Model</u> used in the permitting process in Maryland to the Peconic estuary. This will use physical data to give viable shoreline adaptation site suitability recommendations to waterfront parcel managers and will be validated against local permit code to ensure suitable recommendations. The Shoreline Adaptation Initiative collaborated across projects to begin contracting with the SBU Geospatial Center to pull together past project deliverables such as SAV mapping and hardened shoreline assessments to create a base shoreline inventory for model use.

- d. Estimated Milestones: Information sharing summit
- e. Long Term Outcomes: State, County, and local governments working together to make decisions about regional climate adaptation planning that prioritizes conserving natural shorelines. A more informed public about shoreline adaptation issues and the value and importance of natural shorelines.
- f. Clean Water Act Core Programs: Protecting Wetlands
- g. h. External Constraints: N/A

VIMS Model

- New
- a. Estimated Budget: NYS FY 24: \$36,758 (VIMS); NYS 24: \$56,220 (SBU Geospatial)
- b. b. **Partners and their roles**: PEP (Lead); Virginia Institute of Marine Science (Lead); Stony Brook University Geospatial Center (Lead) New York State (Funder)
- c. **Description and Objectives:** This project is a result of the Sea Grant work carried out under the previous NYS award to develop workgroups which identified the need for shoreline modeling. The creation of a shoreline adaptation inventory and development of the PEP Shoreline Adaptation Site Suitability Model. Geospatial center will deliver geospatial datasets depicting the up-to-date coastal conditions and characteristics of the shoreline in the Peconic Estuary. This work will provide the geospatial information necessary to complete the <u>Shoreline Management Model</u> (<u>SMM</u>) developed by research teams at the Virginia Institute of Marine Science (VIMS). This will be used to inform decision-making by local managers in the State of NY. This geospatial data task recommends strategies for tidal shoreline erosion mitigation and shows users where a nature-based solution may be suitable. Stakeholder need for this model was documented through the work of the Shoreline Adaptation Initiative (PEP & NY Sea Grant Shoreline Project 2022) as available technical resources were identified as a major hurdle in the implementation of nature-based solutions.
- d. Outputs and Deliverables: Adaptation of the established Shoreline Management Model currently used in neighboring states. The model will be developed alongside the program office and stakeholders gathered through the shoreline adaptation initiative. Model data will be input and validated alongside regulators for viable recommendations.
- e. Estimated Milestones: Information sharing at shoreline summit, and established workgroup meetings.
- f. Long Term Outcomes: Technical resource to facilitate State, County, and local governments working together to make decisions about shoreline adaptation and planning that prioritizes conserving natural shorelines. A more informed public on adaptation issues and the value and importance of natural shorelines.
- g. Clean Water Act Core Programs: Preserving wetlands
- h. h. External Constraints: N/A

Continue to distribute information and tools developed in the Peconic Estuary Critical Lands Protection Strategy and Climate Ready Action Plan to municipalities within the watershed and work with the East End Towns to implement climate resiliency actions

Ongoing

- a. Estimated Budget: Staff time
- b. **Partners and their roles**: PEP (Lead Partner), Local Governments, Anchor QEA and TNC (Supporting Partner)
- c. Description and Objectives: PEP completed an update to the Peconic Estuary Critical Lands develop the Peconic Estuary Partnership Climate Vulnerability Assessment and Action Plan consistent with EPA's Climate Ready Estuaries Program. PEP plans to use the information in this report and associated tools to assist East End municipalities with planning decisions related to resiliency and climate adaptation. See <u>here for the CLPS story map and tool</u> PEP also plans to work with East End municipalities to develop model codes that will help increase climate resiliency on the East End.
- d. **Outputs and Deliverables**: Development of model codes and implementation of strategies in the Peconic Estuary Climate Ready Action Plan
- e. Estimated Milestones: Begin to develop draft model codes for local implementation in FY21 f
- f. **Long Term Outcomes**: Educated local governments equipped with tools and information to plan for a changing climate.
- g. g. Clean Water Act Core Programs: N/A
- h. External Constraints: N/A ACTION 13: Collaborate on coastal and ocean acidification monitoring and research

Broad Cove Phase 2: Peconic Land Trust

New Project - Phase II is a new project and follow-on from the Broad Cove Phase I project funded under IIJA Year 2. Broad Cove is a 100-acre former duck farm in the Town of Riverhead, NY that was purchased by the Peconic Land Trust in FY22. This acquisition will be the only large waterfront property acquisition that will be entirely devoted to passive recreation and education. PEP IIJA Y2 funds were devoted to implementing an invasive species removal plan to create parking area infrastructure needed to achieve safe water access goals, the expansion of trail systems as well as the development of educational signage for outreach. To continue our partnership, PEP will devote IIJA Y3 funds to the continuation of expanding the trail system, needed emergency access infrastructure for safe water access, continued invasive removal and revegetation for erosion control, as well as educational signage relating to the impacts of climate change and water access programming, such a as, a sensory garden. This site lies entirely within a NYSDEC proposed Environmental Justice area.

Relevant CCMP Actions:

CCMP Objective B: Overarching Priority Objectives

• Action 9: Incorporate environmental justice considerations into public outreach. CCMP Objective C: Helping communities take meaningful, well-informed action to prepare for and adapt to climate change impacts in the Peconic Estuary

• Action 12: Mitigate climate change through coastal ecosystem management. • Action 14: Increase public awareness of anticipated impacts of climate change on the Peconic Estuary

- a. Estimated Budget: IIJA funds: \$166,456
- b. **Partners and their roles:** Peconic Land Trust (Property Owner), PEP (Partner), NYSDEC, Long Island Invasive Management Area (Project Partner)
- c. **Description:** Located at 40.9343657N -72.6235418W, Broad Cove, a 100-acre waterfront parcel on Flanders Bay in Aquebogue, a hamlet in the Town of Riverhead. The land, a former duck farm,

long sought after for conservation, is now available for passive recreation, while also providing shoreline resiliency, wildlife habitat, and water quality protection in this part of the Peconic Bay Flanders East/Center and Tributaries) Estuary. Bav (https://www.dec.ny.gov/chemical/31290.html), has а nitrogen TMDL in place 10(https://www.dec.ny.gov/docs/water pdf/tmdlnitrpecn1.pdf), and this sub-watershed is a potential Environmental Justice Area in New York State (https://www.arcgis.com/home/webmap/viewer.html?url=https://services6.arcgis.com/DZH aqZm9cxOD4CWM/ArcGIS/rest/services/Potential Environmental Justice Area PEJA Comm unities/FeatureServer&source=sd).

- d. **Objectives:** Increased safe shoreline and water access in a disadvantaged community; increased community knowledge about climate related issues; natural shoreline flood protection, enhanced ecological community.
- e. **Outputs and Deliverables:** Expansion of trail system, invasive removal with needed permits, revegetation in disturbed or vulnerable areas, educational signage, educational program, construction of fencing and emergency access infrastructure.
- f. **Estimated Milestones:** The Peconic Land Trust will lead this project. Quarterly progress meetings will take place, educational signs will be developed, and community engagement will take place as part of this process.
- g. Long Term Outcomes: This project will provide safe access to the shoreline in a historically disadvantaged area. On-site education related to shoreline protection, adaptation, and community engagement will take place. Invasive species management will enhance habitat quality and. This project is located between Meetinghouse and Terry's Creek, both listed as impaired waterbodies on the NYSDEC Priority Waterbodies List. Additionally, this project will contribute to coastal resiliency in an NYS proposed environmental justice area by providing much needed storm surge protection by providing an extensive buffer of natural shoreline. Educational signage and programming will create a community more educated in both potential adaptation solutions, and reduced burden of flooding.
- h. External Constraints: N/A

Shelter Island Wetland Assessment and Concept Plan

New/Ongoing

- a. Estimated Budget: NYFY24 (\$100,000)
- b. Partners and their roles: PEP (Co-lead), TBD (Co-lead), NYSDEC (Lead Partner)
- c. Description and Objectives: There has been a rapid loss of Shelter Island's marsh islands in numerous creeks, including Dickerson Creek, Gardiner Creek and Hay Beach Pond. Additionally, the Long Island Wetlands Trends Analysis indicated Shelter Island has lost 45% of its overall marsh area from 1974 to 2005 and 20 wetland complexes were classified as "at risk" (>10% marsh loss). There is a need to assess the areas with large marsh loss and then develop restoration strategies, where appropriate. This has been assessed as a Tier 1 project in accordance with the Peconic Estuary Partnership's 2020 Habitat Plan.
- d. Estimated Milestones: Identify, map, and assess current wetland extent.
- e. Long Term Outcome: Coordination of stakeholders group to guide project planning, creation of a desk-based assessment utilizing aerial imaging, shapefiles, and other mapping techniques to determine the status of the Shelter Island wetlands, and comprehensive field assessment of the wetlands
- f. Clean Water Act Core Programs: N/A
- g. External Constraints: N/A

Mid-Atlantic Regional Council on the Ocean (MARCO) – Mid-Atlantic Carbon Project

New

- h. Estimated Budget: Staff time
- i. Partners and their roles: PEP (Supporting Partner), NYSDEC (Lead Partner)
- j. **Description and Objectives**: MARCO has a new work group focusing on enhanced marine carbon dioxide removal (mCDR), coastal blue carbon accounting, and nature-based solutions to coastal ocean carbon uptake. Partnering with researchers at the Virginia Institute of Marine Science (VIMS) to compile existing data on Blue Carbon stocks in the Mid-Atlantic.
- k. **Outputs and Deliverables**: Collaborative document for the Mid-Atlantic Region.
- I. Estimated Milestones: Monthly meetings
- m. Long Term Outcome: A cohesive and collaborative approach to carbon removal using nature based solutions and working in tandem with regional partners and best scientific information available. Regional adoption of recommendations from the NY OA Task Force as appropriate for the watershed.
- n. g. Clean Water Act Core Programs: N/A
- o. External Constraints: N/A

CCMP GOAL: CLEAN WATERS

Objective D: Protect areas with clean water from degradation.

ACTION 16: Identify areas of clean water quality and deliver information that local governments and others can use to protect those areas.

Performance Measure: Annual review of water quality data and water quality monitoring programs with assessment and recommendation regarding changes to water quality data collection in order to adequately monitor all waterbodies in the Estuary.

ACTION 18: Implement science-based approaches for monitoring and reducing nutrient pollution.

Performance Measure: Work in conjunction with our partners to contribute to the NYSDEC effort to centralize water quality data with the creation of a portal to allow all interested stakeholders, such as local monitoring groups, non-profits, or governmental agencies, to share water-quality monitoring data through the Long Island Water Quality Information Data System (LIQWIDS).

Continuous Water Quality Monitoring

New & Ongoing

- a. **Estimated Budget:** Approximately \$180,000 annually funded through the USGS and using PEP NYS EPF Funds.
- b. **Partners and their roles:** United States Geological Survey (USGS) (Lead Partner and Contracting Entity), PEP (Co-Lead), NYSDEC (Funding Entity), Suffolk County (Funding Entity)
- c. **Description and Objectives:** USGS maintains three continuous water quality monitoring stations in the Peconic Estuary, one located at the mouth of the <u>Peconic River</u>, one in <u>Orient</u>, and one nd one on <u>Shelter Island</u>. These three monitoring stations complement the periodic sampling conducted by SCDHS by providing continuous sampling of the water quality conditions within the estuary. The stations provide high frequency measurements of key water quality parameters to allow long-term trend assessment of climate and other incremental changes; estimates of frequency, severity, and duration of hypoxia and anoxia.
- d. **Outputs and Deliverables:** USGS produces daily data reports, real-time data downloadable via the internet, incorporated by PEP staff into State of the Bays Report and used by researchers and partner other agencies.
- e. Estimated Milestones: Annual review with USGS and PEP. PEP Water Monitoring collaborative

provides input to effectiveness and use of data.

- f. Long Term Outcomes: Water quality data will be used to assess environmental conditions in the Peconic Estuary and refine management programs as necessary. Based on water quality data, priority projects and research initiatives can be identified and the PEP can continue its success in efforts to protect and restore the Estuary. Data collected by these monitoring efforts inform periodic reporting, including environmental indicators reports and "State of the Bay" publications, and support adaptive management.
- g. g. Clean Water Act Core Programs: Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.
- h. External Constraints: N/A

Water Quality Annual Report

Ongoing

- a. Estimated Budget: FY24 \$35,000
- b. **Partners and their roles:** Stony Brook (Gobler Lab)(lead), Stony Brook SoMAS Geospatial Center (lead), PEP
- c. **Description and Objectives:** The development of an annual water quality report that links to the water quality app that delivers easy to understand results to the public to enhance the ability of municipalities to make management decisions.
- d. **Outputs and Deliverables:** Annual report
- e. **Estimated Milestones:** Data collection and collation and then report release. f. **Long Term Outcomes**: A more informed public and local governments.
- f. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals.
- g. External Constraints: this has experienced delays due to PEP programmatic issues in 2024. Water Quality reporting was carried out as part of the PEP STate of the Estuary Report released in September 2024 (PEPFY23)

Water Quality App and Data Platform

- a. Estimated Budget: \$27,720 (Local Government).
- b. **Partners and their roles:** Stony Brook Geospatial Center, Suffolk County, USGS, Cornell Cooperative Extension, and NYSDEC
- c. **Description and Objectives:** The development of an application to get water quality data easily from a phone, tablet or computer app. This will be an outreach tool used for teaching and community engagement as well as a way to share important water quality data. HABs will also be included in the App and will serve as a public outreach tool for HAB waters and human health.
- d. **Outputs and Deliverables:** An app that is user friendly and helps people make more informed decisions.
- e. Estimated Milestones: Data collection and collation and then app development and release.
- f. Long Term Outcomes: Water quality data will be used for citizens, local governments, community civic associations and schools to make better decisions about local water usage. Create a more informed watershed population.
- g. **Clean Water Act Core Programs:** Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals;
- h. External Constraints: This project has been delayed due to PEP staffing issues. It is envisioned that

this will work in tandem with the annual reporting

Objective E: Increase understanding of nutrient pollution in groundwater and surface waters, and decrease negative impacts from legacy, current, and future nutrient inputs.

ACTION 17: Plan science-based approaches for monitoring and reducing nutrient pollution

Performance Measure: Collaborate with the NYSDEC to compile and update a database of completed nitrogen management projects within the Peconic Estuary watershed to guide current and future nitrogen management actions. Utilize database to track nitrogen reduction efforts within the watershed.

Long Island Nitrogen Action Plan (LINAP) - Long Island Action Plan

New & Ongoing

- a. Estimated Budget: Staff time
- b. **Partners and their roles:** NYSDEC (Lead) and the Long Island Regional Planning Council (LIRPC), in partnership with numerous local governments and interested organizations on Long Island, Long Island Sound Study and the NYS South Shore Estuary Reserve. PEP (Supporting Partner)
- c. Description and Objectives: The Long Island Nitrogen Action Plan (LINAP) has worked to determine nitrogen load reduction targets as well as alternatives and strategies to meet those targets. Recently, the LINAP is evolving to encompass all water quality issues and not be limited to nitrogen. Through LINAP, PEP has worked to provide information that local governments need to reduce nitrogen loading. PEP and LINAP developed a Cross-walk document outlining specific actions where we can coordinate and future actions. As this partnership has grown, we worked together to expand the PEP Homeowner Rewards Program throughout Long Island (Long Island Garden Rewards Program), common messaging for fertilizer usage on Long Island, and streamlined nutrient reduction efforts. Recently, PEP is working to expand the remit of LINAP to a Long Island watershed plan.
- d. Outputs and Deliverables: Long Island Watershed Plan
- e. **Estimated Milestones:** Monthly calls/and or meetings between PEP and LINAP; participation in visioning meetings to develop the watershed plan.
- f. Long Term Outcomes: Streamlined plan that avoids duplication of efforts by partners and achieves a more efficient way forward for achieving nitrogen reduction goals and watershed protection in the Peconic watershed.
- g. Clean Water Act Core Programs: Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.
- h. External Constraints: N/A

Performance Measure: Completion of the Peconic Estuary Solute Transport Model analysis to understand historical nitrogen loading and to develop management strategies based on future scenarios.

Peconic Estuary Solute Transport Model

- a. Estimated Budget: Staff time, NYS 2015 Budget: \$750,000
- b. **Partners and their roles:** USGS (Contracting Entity), PEP (Supporting Partner), NYSDEC (Funding Entity)
- c. **Deliverables and Objectives:** Develop a solute transport model to be used in conjunction with the results of the Nitrogen Load Model to establish updated load reduction goals for non-point source loads.
- d. Outputs and Deliverables: A USGS report will document model development as well as analytical

results for a limited set of representative wastewater management scenarios. The report will be designed with the dual purposes of 1) documenting the models and methods developed as part of the USGS investigation and 2) providing a detailed description of surface-water loading rates under changing land-based nitrogen-input conditions. Numerical models and data used to represent nitrogen source terms will be publicly disseminated as a separate web-hosted USGS dashboard, in accordance with USGS policies. PEP staff acts as project manager, coordinating all meetings and working in conjunction with the TAC on technical review of the body of work. PEP staff organize quarterly progress meetings, distribute summary minutes and work with USGS to gather the necessary data inputs for the model.

- e. Estimated Milestones: Modeling was due to be completed in FY22. Final product now due in 2025.
- f. **Long Term Outcome**: Reduce nitrogen loads to the Peconic Estuary towards attainment of the Peconic Estuary TMDL and ensure a healthy and productive estuarine ecosystem.
- g. Clean Water Act Core Programs: Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads.
- h. External Constraints: This project has experienced severe delays. Covid 19 caused a one year delay followed by additional delays as the USGS worked to align this project with a Long Islandwide endeavor. PEP is waiting on the final report and dashboard tool to allow for easy use of the data by local municipalities.

ACTION 18: Implement science-based approaches for monitoring and reducing nutrient pollution.

Performance Measure: Phased Implementation of the Suffolk County Subwatershed Wastewater Plan to abate septic-related current and future nitrogen loading.

Three Mile Harbor PRB Monitoring at Tanbark Creek

New and Ongoing

- a. Estimated Budget: FY25 \$75,000; \$75,000 (FY24 Local Governments) FY23 \$50,132 Local Government
- b. **Partners and their roles**: East Hampton and Cornell Cooperative Extension (lead); PEP (Supporting Partner).
- c. **Description and Objectives**: In 2022, with New York State funds, the Town of East Hampton and Cornell Cooperative Extension installed an oil injection Permeable Reactive Barrier (PRB) in Three Mile Harbor at Tanbark Creek. This was a pilot project. PEP will be funding the monitoring of this project to assess success in nitrogen reduction at the immediate pore water monitoring wells and measure if there is a quantitative reduction in nitrogen downstream in Three Mile Harbor. A monitoring plan will be developed prior to sampling.
- d. **Outputs and Deliverables**: Monitoring plan has been developed. Sampling will continue to occur at the frequency and location identified in the monitoring plan and nitrogen reduction will be assessed.
- e. Estimated Milestones: Quarterly calls/ and or meetings between PEP, East Hampton, and CCE.
- f. Long Term Outcomes: An understanding of the success of oil-injection PRBs.
- g. **Clean Water Act Core Programs**: Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs); Elements of this project prevent or mitigate the impacts of nutrient pollution.
- h. External Constraints: N/A

Suffolk County Subwatersheds Wastewater Plan (SWP)

Ongoing

- a. Estimated Budget: Staff time
- b. **Partners and their roles**: Suffolk County Department of Health Services (funding agency), Long Island Sound Study, South Shore Estuary Reserve, PEP (Supporting Partner).
- c. **Description and Objectives**: The purpose of the SWP is to provide a wastewater management plan specific to all parcels within the priority subwatersheds of Suffolk County in order to meet the County's first order of nitrogen load reduction goals for surface water restoration and the protection of groundwater and drinking water. In FY21, PEP established priority embayments to move forward the Water Quality strategy goals and based them off of the SWP priority areas.
- d. **Outputs and Deliverables**: PEP will continue to work with Suffolk County to identify communities in the high need area (Level 1) to focus PEP efforts for Septic Improvement and other nutrient reduction plans.
- e. Estimated Milestones: Quarterly calls/ and or meetings between PEP and Suffolk County.
- f. Long Term Outcomes: Streamlined plan that avoids duplication of efforts by partners and achieves a more efficient way forward for achieving nitrogen reduction goals in the Peconic watershed.
- g. Clean Water Act Core Programs: Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.
- h. External Constraints: N/A
- i. **Performance Measure:** Increase funding and expanded outreach for PEP's Homeowner Rewards Program, which provides financial incentives for homeowners to install rain gardens, native plantings, and/or rain barrels on their properties that benefit the environment.

Non-Point Source Reduction for Schools, Community Groups, and Homes

New & Ongoing

- a. Estimated Budget: FY24 \$15,000 (EPA), FY24 \$10,000 Local Government, (Local Government FY23 \$24,000)
- b. **Partners and their roles**: PEP (Lead); LINAP; LISS; SSER, Center for Advocacy and Support (CAST) (new partner)
- c. Description and Objectives: For many years, The <u>Peconic Estuary Partnership (PEP) Homeowner</u> <u>Rewards Program</u> has provided financial rewards for homeowners, who live within the Peconic Estuary watershed, to add rain gardens, native plantings, and/or rain barrels to their properties. Simultaneously, the program educates the community about the benefits of rain gardens, rain barrels, and native plants for nitrogen reduction, stormwater pollution reduction, and other ecosystem benefits. In FY21, PEP began working with the NYS Long Island Nitrogen Action Plan (LINAP), the Long Island Sound Study (LISS), and the NYS South Shore Estuary Reserve (SSER) to streamline our messaging about fertilizer use across Long Island. In FY23 and FY24 PEP worked with the Center for Advocacy, Support and Transformation (CAST) to install a native plant garden and install educational signs.
- d. **Outputs and Deliverables**: Installation and completion of sustainable landscaping projects on properties within the Peconic Estuary watershed.
- e. Estimated Milestones: Annual spring fall season application period.
- f. Long Term Outcomes: Improve public's understanding of benefits or sustainable landscaping and long-term and widespread behavior change favoring landscaping best management practices. Reductions in fertilizer use, pesticide use, water use, and the promotion of natural vegetation and

benefits to pollinators and native fauna. Less fertilizer usage in the watershed, decreased stormwater runoff, and increased native plants and localized habitats.

- g. Clean Water Act Core Programs: Elements of this project prevent or mitigate the impacts of nutrient pollution; assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.
- h. External Constraints: PEP faced numerous challenges to this project. Working directly with schools has proven to be difficult due to contracting funds. We expanded the partners to include local non-profits to allow them to receive funds and carry out work on school and non-profit properties. PEP funded an initial native plant garden with educational materials in multiple languages. We will be building on this to expand the project with CAST.

Center for Advocacy, Support, and Transformation (CAST) – Native & Pollinator Gardens

Ongoing

- a. Estimated Budget: FY24 \$20,000
- b. Partners and their roles: CAST (Lead), PEP (Lead)
- c. Description and Objectives: In FY23, PEP supported CAST to install a small native plant garden and educational sign. In FY24, PEP increased support to CAST to enable them to expand their garden and add pollinator species, maintain existing garden area, and increase their educational work using this site. CAST uses these educational materials to enhance literacy among their communities, build skills, and educate community members on the importance of pollinator species and stormwater management
- d. **Outputs and Deliverables**: Installation and completion of sustainable landscaping projects at CAST, completion of educational materials.
- e. Estimated Milestones: garden planting, signage installation, educational forums
- f. Long Term Outcomes: Improve public literacy and understanding of benefits or sustainable landscaping and long-term and widespread behavior change favoring landscaping best management practices. Reductions in fertilizer use, pesticide use, water use, and the promotion of natural vegetation and benefits to pollinators and native fauna. Less fertilizer usage in the watershed, decreased stormwater runoff, and increased native plants and localized habitats.
- g. Clean Water Act Core Programs: Elements of this project prevent or mitigate the impacts of nutrient pollution; assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.
- h. External Constraints: N/A

Action 19: Collate results of Harmful Algal Bloom (HAB) monitoring and deliver findings to support management decision making

Performance Measure: Implementation of the Suffolk County Harmful Algal Blooms Action Plan

HABs Priority Project

New and Ongoing

- a. Estimated Budget: FY25 \$120,000 NYS (FY24 \$119,957 NYS)
- b. **Partners and their roles**: PEP (Lead); Stony Brook (Lead); NYS (Funding Body), Local Government (Funding Body)
- c. **Description and Objectives:** In FY24 Stony Brook University completed the second year of study which has established a set of preliminary results for assessing the degree of nitrogen necessary to lessen the intensity of HAB events in priority Peconic Embayments. The HABs *Cochlodinium*

polykrikoides, Alexandrium, and *Dinophysis acuminate* have recurred annually across the Peconic Estuary with intensities and impacts varying year-to-year. Continuing to investigate the role of nitrogen in different HAB species and the spatial and temporal availability wil help estuary managers make more informed decisions about reducing nitrogen. This monitoring follows the recommendations of the 2017 Suffolk County HABs Action Plan

- d. **Outputs and Deliverables**: What level of nitrogen reduction will reduce HABs.
- e. Estimated Milestones: bi-annual reports and final report and presentations.
- f. Long Term Outcomes: A greater understanding of the drivers and dynamics of recurring HABs in the Peconic estuary.
- g. Clean Water Act Core Programs: Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.
- h. h. **External Constraints:** severe contracting delays with NYS funds due to PEP staff issues has led to delays in this project.

Ashawagh Hall Stormwater Control

Ongoing

- a. Estimated Budget: \$110,000 (Local Government funds)
- b. Partners and their roles: PEP (Lead); East Hampton (Funding Body)
- c. **Description and Objectives:** PEP will work with a consultant to create a bioswale on the North side of the property, install permeable pavers, and install educational signs at the Ashawagh Community Hall in East Hampton.
- d. **Outputs and Deliverables**: Bioswale and permeable pavers installed and educational signage installed.
- e. **Estimated Milestones**: annual reporting, presentation to East Hampton community at Ashawagh Hall
- f. **Long Term Outcomes**: A more informed community about the issues surrounding stormwaer control. Actual increased flood control at the location.
- g. Clean Water Act Core Programs: Identifying Polluted Waters and Developing Plans to Restore Them (TMDLs): Assessment of progress toward TMDL goals; refinement of implementation plan and TMDL goals for land-based loads; Elements of this project prevent or mitigate the impacts of nutrient pollution.
- h. External Constraints: none

Objective F: Reduce current and future inputs of toxics, pathogens, and marine debris into groundwater and surface waters, and minimize their impacts

ACTION 21: Expand non-point source subwatershed management plans to all pathogen-impaired waterbodies and continue to use existing plans

Performance Measures: Development of strategies and outreach materials to help achieve stormwater reduction goals.

Performance Measure: Review of current PEP Non-point Source Subwatershed Management Plans and initiation of viable projects.

Performance Measure (under Action 31): Complete engineering designs for ongoing, priority wetland restoration project at Meetinghouse Creek.

Action 22: Assess Marine Debris in the Peconic Estuary and develop plans to address problems that are found.

Microplastics in the Peconic Estuary

Ongoing

- a. Estimated Budget: \$75,000 (EEEEI); \$120,744 (NYS funds)
- b. **Partners and their roles: Stony Brook (lead)** PEP (Partner), NYSDEC (Funding Entity), NYS Attorney General's office (Funding Entity).
- c. **Description and Objectives**: The identification of polymers, additives, and pigments can potentially tell us what sort of product was the source of microplastics in the environment. Using a 3-dimensional chemical map will reveal certain particles beach debris. This work will determine if the microplastic pollution in the Peconic Estuary is also the result of recycled products and can further identification of other sources of plastic pollution in our estuary be identified?
- d. **Outputs and Deliverables:** Identification of microplastic pollution in the Peconic Estuary and its source.
- e. **Estimated Milestones:** Quarterly reports and annual presentation to PEP Committees and the NYS Attorney General's office.
- f. **Long Term Outcomes:** An understanding of the sources of microplastic pollution in the Peconic Bays to inform management decisions.
- g. Clean Water Core Programs: Identifying Polluted Waters and Developing Plans to Restore Them.
- h. External Constraints: NYS contract delays have led to project delays

CCMP GOAL: HEALTHY ECOSYSTEM WITH ABUNDANT, DIVERSE WILDLIFE

Objective G: Expand scientific understanding of the Peconic Estuary ecosystem and deliver information that supports management decision-making

ACTION 23: Conduct scientific studies to expand understanding of the Peconic Estuary ecosystem and support ecosystem-based management.

Performance Measure: Development of an ECOSIM model to characterize the estuarine food web and examine structural changes in ecosystem properties over time.

Performance Measure: Detailed spatial and temporal analysis of the Peconic Estuary trawl survey data to assess how species use the Estuary and how species and communities have responded to local and regional environmental changes over time.

Ecosystem-Based Model of the Peconic Estuary

- a. Estimated Budget: Staff time, \$200,000 NYS FY18 Funds
- b. **Partners and their roles:** PEP (Lead Partner), NYSDEC (Funding Entity), The Research Foundation at Stony Brook University (Contractor).
- c. **Description and Objectives**: 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.
- d. Outputs and Deliverables: ECOSIM and ECOPATH Model, plan and facilitate meetings.
- e. **Estimated Milestones:** This project was delayed due to COVID-19. Originally due to begin in FY19, Stony Brook University was not able to begin this work until FY20. Model developed is anticipated to be complete by March 2024.

- f. Long Term Outcomes: An understanding of the food web dynamics and organism/habitat interactions will allow for optimized planning for the Peconic Bays.
- g. Clean Water Core Programs: protecting Large Aquatic Ecosystems.
- h. h. External Constraints: N/A

ACTION 29: Maintain, restore, and enhance viable diadromous fish spawning and maturation habitat in the Peconic Estuary watershed.

i. **Performance Measures:** Restore and protect key habitats and species diversity in the Peconic Estuary and its watershed.

j. **Performance Measure**: Completion of the Woodhull Dam, Forge Road Dam, and Upper Mills Dam diadromous fish connectivity project on the Peconic River to restore 300 acres of habitat.

Complete design and construction of diadromous fish passage projects on the Peconic River Ongoing – details in project descriptions

- a. Estimated Budget: Staff time, Partner funds (details in project description section)
- b. Partners & Roles: PEP, Suffolk County, NYSDEC, East End towns and villages.
- c. **Description and Objectives**: Support fish passage construction in the Peconic River and its tributaries. During the upcoming year PEP and its partners are working towards opening up acres of freshwater spawning area to diadromous fish through the completion of fish passage projects. PEP will continue to support the design, permitting and construction of fish passage throughout the Peconic River. Descriptions, budgets, and anticipated external constraints for each project are listed below.
- d. **Outputs and Deliverables:** Successful completion of fish passage design, permitting and construction. Installation of eel pass at Grangebel Park.
- e. **Estimated Milestones:** Land Use Agreement for Upper Mills Fish Pass by Fall 2024, secure construction funds by March 2025.
- f. Long Term Outcomes: Restoring and strengthening ecosystem services, fish and wildlife of the Peconic Estuary will benefit from access to critical habitat, increased biodiversity and restoration of historic food webs.
- g. Clean Water Act Core Programs: protecting Large Aquatic Ecosystems.
- h. External Constraints: N/A

Eelpass at Bridal Falls in Grangebel Park, Riverhead

Ongoing

- a. Estimated Budget: \$1,966 (FY23 Local Government); Staff Time
- b. **Partners and their roles**: PEP (Lead); Suffolk County; Town of Riverhead, Seatuck Environmental, Long Island Diadromous Fish Workgroup
- c. **Description and Objectives:** American eel face a barrier from the Peconic River to the Little River which inhibits migration. This hopes to provide a temporary barrier crossing and plan for a more permanent solution.
- d. **Outputs and Deliverables**: A functioning eelpass at this location.
- e. Estimated Milestones: LI Diadromous Fish Workgroup meeting updates.
- f. Long Term Outcomes: A thriving American eel population in the Peconic River system
- g. Clean Water Act Core Programs: protecting Large Aquatic Ecosystems
- h. External Constraints: N/A

Upper Mills Dam Fish Pass -Land Use Agreement

Ongoing

a. Estimated Budget: Staff Time

- b. Partners and their roles: PEP (Lead); Suffolk County; Town of Riverhead, PSE&G/LIPA
- c. **Description and Objectives:** In FY21 the Engineering design and permitting was completed for the fish pass project at the Upper Mills Dam. This is a complicated site that will cross ownership boundaries between the Town of Riverhead, Suffolk County, and the power company PSE&G LIPA. During the course of this process, it was determined that before construction can begin, a land use agreement would need to be put in place so all parties are in agreement with the final installation of the fish ladder.
- d. Outputs and Deliverables: A signed land use agreement by all necessary parties.
- e. **Estimated Milestones**: PEP will carry out meetings as necessary and liaise with all entities to ensure this agreement moves forward.
- f. Long Term Outcomes: A legal agreement to allow for the construction of the fish ladder at Upper Mills
- g. Clean Water Act Core Programs: N/A
- h. External Constraints: N/A
- i. **Performance Measure**: Completion of culvert improvements on Alewife Creek to enhance the largest alewife run on Long Island;
- j. **Performance Measure:** Completion of priority diadromous fish habitat connectivity projects identified in the PEP Habitat Restoration Plan or Long Island Diadromous Fish Restoration Strategy, or through the Volunteer Alewife Monitoring Survey, in other areas of the Peconic watershed to restore additional habitat.

Complete design and construction of diadromous fish passage projects in other priority tributaries in the Peconic Estuary watershed

Ongoing – details in project descriptions

- a. Estimated Budget: Staff time, Partner funds (details in project description section)
- b. Partners & Roles: PEP, Suffolk County, NYSDEC, East End towns and villages.
- c. **Description and Objectives**: During the upcoming year PEP and its partners are working towards opening up acres of freshwater spawning area to diadromous fish through the completion of fish passage projects. PEP will continue to support the design, permitting and construction of fish in priority tributaries in the Peconic Estuary watershed. Descriptions, budgets, and anticipated external constraints for each project are listed below.
- d. **Outputs and Deliverables:** Successful completion of fish passage design, permitting and construction.
- e. Estimated Milestones: Meetings with partners to advance these projects.
- f. Long Term Outcomes: Restoring and strengthening ecosystem services, fish and wildlife of the Peconic Estuary will benefit from access to critical habitat, increased biodiversity and restoration of historic food webs.
- g. Clean Water Act Core Programs: protecting Large Aquatic Ecosystems.
- h. **External constraints:** Various constraints related to funding due to COVID19 and project details are outlined in the individual projects.

Alewife Creek –

New & Ongoing

- a. **Estimated Budget**: Staff time, \$410,000 NYS Climate Smart Communities Grant, \$410,000 Southampton Town Community Preservation Fund
- b. Partners and Roles: Town of Southampton, Diadromous Fish Work Group, PEP, NYS
- c. **Description and Objectives:** The Town of Southampton received a Climate Smart Communities Grant award to complete the engineering design and construction of the Alewife Creek Habitat

Enhancement project which includes the right-sizing of the existing culvert under Noyac Road, reducing stormwater runoff and enhancing the ability of alewife to reach freshwater spawning habitat in Big Fresh Pond within the Town of Southampton. PEP will assist in guiding the design of the project. Culvert installation on Noyac Rd was completed in 2024. Ongoing discussions on the improvement of Alewife Creek will continue.

- **d. Outputs and Deliverables:** Retrofit of Noyack Rd culvert complete. Establishment of monitoring to be worked on.
- e. Estimated Milestones: Meetings with partners to advance these projects.
- f. **Long Term Outcomes:** Restoring and strengthening ecosystem services, fish and wildlife of the Alewife Creek area will benefit from access to critical habitat, increased biodiversity and restoration of historic food webs.
- g. Clean Water Act Core Programs: protecting Large Aquatic Ecosystems.
- h. **Performance Measure**: Development of an alewife survey to monitor the population and assess the success of fish connectivity projects.

Alewife Monitoring on the Peconic River

New & On-going

- a. Estimated Budget: NYS FY25 \$12,000; (FY24 \$12,000 NYS); Staff time, Supply funds (EPA \$500)
- b. **Partners and Roles:** PEP (lead), NYSDEC, Suffolk County Community College, Hofstra, Peconic Baykeeper, Seatuck Environmental Association
- c. **Description and Objectives**: PEP completed an EPA and DEC approved QAPP for alewife monitoring in the Peconic watershed. This includes a coordinated effort to analyze video footage to estimate alewife abundance. Additionally, we will continue to collect biological data (sex, size and age) on the Peconic River alewife population with the assistance of partners and continue to promote and expand the Long Island Volunteer River Herring Survey. Abundance data will be used by the Peconic Estuary Partnership and our partners to evaluate the success of fish passage restoration efforts. Additionally, the data will be provided to the New York Department of Environmental Conservation and the Atlantic States Marine Fisheries Commission to aid in stock assessments and the management of alewife.
- d. **Outputs and Deliverables:** Annual alewife monitoring reports.
- e. **Estimated Milestones:** Annual alewife monitoring report winter 2023. Hold trainings in Winter 2023 for Volunteer River Herring Survey.
- f. **Long Term Outcomes:** Accurately track alewife abundance in the Peconic River, evaluate the success of fish passage restoration efforts and guide management of the species.
- g. Clean Water Act Core Programs: protecting Large Aquatic Ecosystems.
- h. External Constraints: N/A

eDNA Pilot Study to Monitor Diadromous Fish in the Peconic River System

New & On-going

- a. Estimated Budget: NYS (\$15,000), PEP Staff Time
- b. Partners and Roles: PEP (co-lead), NYSDEC
- c. **Description and Objectives**: PEP will be coordinating efforts in partnership with the marine fisheries division of the NYSDEC, to conduct a pilot study using eDNA methodologies to assess the populations of blue river herring and alewife within the Peconic River System. This project is the first step in hopes to validate sampling conducted by our citizen science partners, to investigate the utilization of constructed fish passes within the estuary's river systems, and to determine population dynamics of these species throughout the Peconic Estuary.
- d. Outputs and Deliverables: Assessment of eDNA as a tool for diadromous fish monitoring

- e. Estimated Milestones: Annual report of pilot study findings
- f. Long Term Outcomes: Utilize eDNA as a tool to determine presence, migration patterns, and potential abundance in the Peconic River Systems.
- g. Clean Water Act Core Programs: protecting Large Aquatic Ecosystems.
- h. External Constraints: N/A

Peconic SAV Coordination and Strategy Development

Ongoing

- a. Estimated Budget: FY24 \$93,500 NYS Funds; Staff time; \$85,000 (FY23 Local Government funds)
- b. Partners and their roles: PEP (Lead Partner), Dr Jonathan Lefcheck (UMCES)
- c. Description and Objectives: Develop an SAV Management Strategy for PEP and Coordinate the North East Regional Collaborative for SAV management and preservation. Convene a PEP SAV workgroup and provide training to PEP and partners for emerging techniques of management and monitoring. Work with Dr Brad Peterson and Dr Joe Tamborski, co-recipients of the 2022 EPA Coastal Watershed Grant, as they develop results and use this for informed management decisions. Work with NYSDEC Eelgrass Coordinator to assist NYS in adherence of the Sea Grass Protection Act and the development of eelgrass management areas, as appropriate.
- d. Outputs and Deliverables: PEP Staff support, SAV Management Plan, SAV Workgroup, Training Materials, Regional Collaborative
- e. Estimated Milestones: QAPP, Management Plan, Bi-Monthly meetings
- f. Long Term Outcomes: Protection of existing eelgrass beds in the Peconic Estuary and expansion of eelgrass habitat, where feasible.
- g. Clean Water Act Core Programs: protecting Large Aquatic Ecosystems.

ACTION 31: Use available habitat quality assessment and climate change resiliency tools to prioritize wetland restoration projects identified in the 2020 PEP Habitat Restoration Plan and implement the top projects.

Performance Measure: Complete engineering designs for ongoing, priority wetland restoration project Paul Stoutenburgh Preserve

h. External Constraints: N/A

Complete Engineering Design Plans for Paul Stoutenburgh Habitat Restoration Project

- a. Estimated Budget: Staff time, \$100,000 (2017 Suffolk County Capital Budget Funds).
- b. Partners & Roles: PEP (Lead Entity), Town of Southold, Suffolk County
- c. **Description and Objectives:** PEP via Suffolk County awarded the contract for engineering design to a consulting firm in FY21. PEP will work with Town of Southold and Suffolk County to complete engineering design and permitting for a habitat restoration project at Paul Stoutenburgh Preserve in the Town of Southold. This project involves improving the tidal flow into the wetland and removal of 6 acres of invasive *Phragmites* and restoration to native vegetation within the larger Paul Stoutenburgh Preserve (formerly Arshamomaque Pond Preserve).
- d. Outputs and Deliverables: Final engineering design and permitting of wetland habitat restoration at site.
- e. Estimated Milestones: Quarterly meetings with Town of Southold and other project partners
- f. Long Term Outcome: The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
- g. g. Clean Water Act Core Programs: Wetland Protection
- h. External Constraints: Project was delayed in FY20 due to COVID-19 related funding uncertainties

but has moved forward in FY21.

ACTION 31: Use available habitat quality assessment and climate change resiliency tools to prioritize wetland restoration projects identified in the 2020 PEP Habitat Restoration Plan and implement the top projects.

Performance Measure: Complete construction of priority wetland restoration project.

Complete Construction of Indian Island Wetland Restoration Project

Ongoing

- a. Estimated Budget: In FY23, PEP Management Committee amended workplans FY21 and FY22 providing \$60,000 to support this project, Staff time; \$1,406,666 from partner awards and match: NYSDEC WQIP/AHR Grant (\$788,000 award & \$262,666 match; \$56,000 FY00 Grant), \$300,000 Suffolk County, EPA 320 SC Award FY21 (\$27,646.82), EPA 320 SC Award FY22(\$36.586.00)
- b. **Partners and Roles**: PEP (project coordinator), NYSDEC (Funding and Contracting Entity), Suffolk County (Lead Partner)
- c. Description and Objectives: This project aims to restore a tidal wetland located within the Indian Island County Park that adjoins with Terry Creek and Flanders Bay. Dredging of nearby creeks in the 1940s-1970s accounted for nearly 1 million cubic yards of dredge material being placed over 54 acres at Indian Island County Park- wiping out an entire tidal wetland ecosystem. This project seeks to excavate approximately 6,400 cubic yards of previously placed dredge materials from the site, install tidal channels and restore the area to a productive salt marsh ecosystem. The restored marsh system will be established based on similar local reference high and low marsh elevations; with particular focus to allow for marsh migration and vegetation shifts in response to sea level rise. PEP is assisting Suffolk County and providing technical guidance on the design plans.
- d. **Outputs and Deliverables:** Final engineering design, permitting, and implementation of wetland restoration at site
- e. **Estimated Milestones:** Project expected to be completed December 2024
- f. **Term Outcomes:** The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
- g. Clean Water Act Core Programs: Wetland Protection
- h. **External Constraints:** This project has experienced severe delays to date. The funds are currently expiring in December 2023. If this work is not completed in this time frame the possibility exists that it will not move forward as funding will be lost.

Performance Measure: Complete engineering designs for ongoing, priority wetland restoration project at Narrow River/Broad Meadows marsh.

Performance Measure: Complete construction of Narrow River/Broad Meadows Wetland Restoration

Accabonac Harbor Saltmarsh complex Restoration

Ongoing

- a. **Estimated Budget:** PEP is using \$150,000 of Suffolk County capital funds to carry out the expansion of current conceptual designs to surround marsh complex public lands, develop permit-ready designs and bring through permitting. TNC has previously spent \$30,000 for conceptual plans on some parcels.
- Partners and Roles: PEP (project coordinator), Suffolk County (funder), TNC (funder and project lead), SMARTeams (contractor), Town of East Hampton (partner), and Accabonac Protection Committee (partner)

Description and Objectives: The regional group of experts, Salt Marsh Adaptation & Resiliency

Teams, or SMARTeams have piloted new techniques to address hydrologic dysfunction found within landscapes of salt marshes across the northeast region. This project will be amongst the first-of-its-kind restoration practice, with implications for marsh restoration approach across Suffolk County. PEP and Suffolk County Health Services is currently leading the next phase of design and permitting. This project will introduce an alternative to traditional high disturbance restoration to Peconic Estuary with a focus on designs based in historic farming legacy features in the landscape. The project will facilitate continued stakeholder engagement and education on this restoration approach that will allow for the implementation of these strategies on other properties as appropriate.

- c. **Outputs and Deliverables:** Expansion of conceptual designs to surrounding public lands of the marsh complex, permit-ready designs, and permitting as well as stakeholder engagement and education workshop that will align our resource managers with lessons learned across the region to advance large scale protection of wetland systems.
- d. Estimated Milestones: Project expected to be completed December 2025
- e. Long Term Outcomes: The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources, coastal resilience habitat service, and/or restoration of habitats that have been lost or degraded.
- f. Clean Water Act Core Programs: Wetland Protection
- g. External Constraints: N/A

ACTION 31: Use available habitat quality assessment and climate change resiliency tools to prioritize wetland restoration projects identified in the 2020 PEP Habitat Restoration Plan and implement the top projects.

Performance Measure: Complete construction of priority wetland restoration project.

Facilitate Narrow River Wetland Restoration Project

- a. Estimated Budget: Staff time
- b. **Partners and their roles**: PEP, NYSDEC (Co-Lead/property owner), Town of Southold (Co Lead/property owner), Ducks Unlimited (Co-Lead),
- c. c. Description and Objectives: In 2019 PEP completed a conceptual design plan for wetland restoration at Narrow River/Broad Meadows marsh. 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. NY State owns most of the properties on the east side of Narrow River Rd and the Town and County own farm land development rights on both sides of the road that includes tributaries to Narrow River. 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. The dam was modified overtime to include culverts, but these culverts are no longer functioning as originally designed and allow very little water to drain to the south. Additionally, the wetlands north of the earthen dam and culvert to Whitcom Marsh Preserve, which were historically used for duck hunting, are currently choked with *Phragmites*. 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. These actions will help to eradicate the *Phragmites* and will promote the re establishment of native vegetation and important waterfowl and wading bird habitat. The potential extent of the restoration area is 80 acres.
- d. **Outputs and Deliverables**: Final engineering design, permitting, and implementation of wetland restoration at site

- e. Estimated Milestones: quarterly project meetings
- f. Long Term Outcomes: The benefits of habitat restoration efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
- g. Clean Water Act Core Programs: Wetland Protection
- h. **External Constraints:** Securing implementation funding could be a challenge due to the high cost of the project and the unique hydrology the project plan presents.

ACTION 33: Implement living shoreline projects, monitor for ecological and financial benefits, and use model projects to educate planners and homeowners on the benefits of living shorelines over hardened shorelines

Performance Measure: Dissemination of monitoring results from two pilot living shoreline projects; **Performance Measure:** Development of user-friendly living shoreline guides for homeowners.

ACTION 34: Develop habitat protection and restoration strategies for key species in the Peconic Estuary and its watershed, including the river otter, diamondback terrapin, and horseshoe crab.

Performance Measure: Expansion of monitoring and research for river otters, diamondback terrapins and horseshoe crabs to understand habitat utilization and identify threats to these species.

Performance Measure: Development of estuary-wide habitat protection and restoration strategies for river otters, diamondback terrapins and horseshoe crabs

Continue to expand monitoring of key estuary species and convene a sub-workgroup to develop a habitat restoration and protection strategy for horseshoe crabs.

Ongoing

- a. Estimated Budget: Staff time
- b. Partners and their roles: PEP (Lead Partner), Seatuck Environmental Association, CCE, NYSDEC
- c. Description and Objectives: In FY21, the through the Long Island Wildlife Monitoring Network, PEP will continue to expand monitoring of key estuary species, including river otters, diamondback terrapins, and horseshoe crabs (see Outreach and Education Task 4). Additionally, the PEP will convene a sub-workgroup of the NRS to identify current monitoring gaps for horseshoe crabs and work on the development of an estuary-wide habitat restoration and protection strategy. The development of a strategy for horseshoe crabs has been identified as a priority by the NRS. An initial kick-off meeting with the NRS is planned for spring 2021.
- d. **Outputs and Deliverables**: Increase monitoring for key estuary species and development of a habitat restoration and protection strategy for horseshoe crabs in the Peconic Estuary
- e. **Estimated Milestones**: Meetings with the horseshoe crab sub-workgroup and other relevant partners/stakeholders, as appropriate.
- f. Long Term Outcomes: The benefits of habitat restoration and protection efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
- g. Clean Water Act Core Programs: Wetland Protection
- h. **External Constraints:** Securing implementation funding could be a challenge due to the high cost of the project and the unique hydrology the project plan presents.

Wildlife Conservation Initiative

- a. Estimated Budget: Staff Time; \$32,500 Local Government funding
- b. **Partners and their roles:** PEP (Lead Partner), Seatuck Environmental Association, CCE, Stony Brook University, NYSDEC
- c. Description and Objectives: PEP will work with Seatuck to carry out 2023-2024 Otter monitoring

and develop a conservation plan for otters in the Peconic watershed. The plan will work with NYSDEC and other partners to develop a series of actions and recommendations for otter conservation. This initiative will also see the coordination of a new Horseshoe crab conservation plan and Seatuck will develop a stakeholder group to work with Cornell Cooperative extension, Stony Brook University, NYSDEC and others to gather data and make initial recomendations for moving forward.

- d. **Outputs and Deliverables**: 2023-2024 otter monitoring results, otter conservation strategy, and horseshoe crab stakeholder group, initial horseshoe crab conservation recommendations for next steps.
- e. **Estimated Milestones**: Bi-monthly meetings for otter strategy development; quarterly meetings for horseshoe crab stakeholder coordination.
- f. **Long Term Outcomes:** The benefits of habitat restoration and protection efforts will be seen over a long period of time, but will result in enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
- g. Clean Water Act Core Programs: N/A
- h. External Constraints: N/A

Horseshoe Crab Habitat Site Suitability Review – Bulkhead and Revetment Groundtruthing

Ongoing

- a. Estimated Budget: Staff time; \$51,500 NYS funding
- b. Partners and their roles: PEP (Support); Cornell Cooperative Extension (Lead) ; NYS (Funding Body)
- c. **Description and Objectives:** In 2019, PEP carried outa desk based analysis of hardened shorelines in the Peconic watershed. In order to make initial determinations about which natural shorelines to assess for horseshoe crab habitat prioritization, it is necessary to groundtruth the existing dataset. We will be focusing on the bulkhead and revetments identified in the 2019 study to produce a document which confidently assess the percent of the watershed shoreline that is hardened and that which remains natural shoreline and thus can move forward for sediment analysis as potential horseshoe crab habitat to recommend for protection.
- d. **Outputs and Deliverables**: A final document of groundtruthed hardened shorelines focusing on bulkheads and revetments. GIS layer.
- e. Estimated Milestones: Quarterly meetings and final report
- f. Long Term Outcomes: Baseline data for horseshoe crab habitat prioritization, A final PEP assessment of natural shorelines vs bulkheaded areas in the marine area (excluding creeks);
- g. Clean Water Act Core Programs: Protecting large aquatic ecosystems
- h. External Constraints: N/A

Objective G Expand scientific understanding of the Peconic Estuary ecosystem and deliver information that supports management decision-making

Action 23. Conduct scientific studies to expand understanding of the Peconic Estuary ecosystem and support ecosystem-based management

Action 24. Review and update data for rare, protected and endangered species in the Peconic Estuary to support the development of protection strategies

Sea Turtle and SAV Interactions

Tracking post-release movement patterns of New York's rehabilitated sea turtles provides insights into their utilization of New York waters New

- a. Estimated Budget: Staff time; \$73,600 (local government funding)
- b. **Partners and their roles**: New York Marine Rescue Center (Lead), PEP (Support); Local Governments (Funding Body)
- c. **Description and Objectives:** The aim of this project is to monitor the post-release movement patterns of sea turtles that have been rehabilitated at New York Marine Rescue Center (NYMRC) utilizing satellite tags. Using data obtained from these tags, we seek to further understand sea turtle utilization of New York waters and identify potential important habitats and foraging grounds for four species of turtle. This data will be able to address action items outlined within the Comprehensive Conservation and Management Plan (CCMP
- d. **Outputs and Deliverables**: A final document and map based tool to rack interactions. e. e. e.
- e. Estimated Milestones: Quarterly meetings and final report
- f. Long Term Outcomes: Data collected from these tags support the rehabilitation efforts put forth by NYMRC and illustrate the post-release movement behavior of the once stranded sea turtles (Caillouet et al., 2016; Robinson et al., 2020). Data from these turtles provides crucial information on local foraging areas used by these species in New York state and federal waters in the late summer and early fall;
- g. Clean Water Act Core Programs: Protecting large aquatic ecosystems
- h. External Constraints: N/A

Aquaculture Impacts Study (Phase 1)

Ongoing

- a. Estimated Budget: Phase I: \$150,505 (NYS PEP-EPF Funding)
- b. Partners and their roles: PEP (Lead); Stony Brook ; NYS (Funding Body)
- c. **Description and Objectives:** Shellfish aquaculture, can provide a range of ecosystem services beyond food supply, such as creating habitat for fish species, augmenting the spawning potential of native shellfish populations, and improving water quality by increasing filter feeder abundance. However, to-date there has been no scientific investigations to evaluate the impact of aquaculture operation on ecosystem function and services in the Peconic Estuary. This is a two part project. Shellfish aquaculture cages may act as artificial reefs, attracting greater numbers of fish than found on bare bottom, but there is currently no data on which species are attracted and to what density, nor an understanding of why fish utilize these structures (e.g., food source, shelter from predation or refuge from current flow). The proposed research will address critical questions raised by regulatory agencies and substantially advance the understanding of how aquaculture operations influence Peconic fish communities.
- d. **Outputs and Deliverables**: An understanding of the ecology surrounding oyster aquaculture equipment and effects these operations are having on the Bay.
- e. Estimated Milestones: One year report and presentation.
- f. Long Term Outcomes: A better understanding of aquaculture in the Peconic Bays;
- g. Clean Water Act Core Programs: Protecting large aquatic ecosystems.
- h. External Constraints: N/A

Aquaculture Impacts Study (Phase 2)

- a. Estimated Budget: \$150,000 (funding NYS)
- b. Partners and their roles: PEP (Lead); Stony Brook; NYS (Funding Body)
- c. **Description and Objectives:** Building off of Phase I of this project, Phase II will involve the investigation of aquaculture cages and operations and their effect on invertebrates, sediment analysis, and discreet microenvironments in and around aquaculture operations. The data

provided through this project will allow linking environmental conditions to oyster filter feeding behavior and oyster aquaculture productivity which will be useful for the aquaculture community. It will also quantitatively assess co-benefits of oyster aquaculture with respect to water quality improvements through removal of particles (including organic matter and nitrogen within) from the water column which is expected to vary between sites and operation types. Such information would be relevant to inform water quality improvement strategies and nutrient credit trading programs in which oyster growers would be compensated for the nutrient removal provided by their oysters in addition to bio-extraction through the oyster harvest. Information on the structure and composition of repacked organic material in combination with hydrodynamic models of the Peconic Estuary can be used to determine the likely fate of this material for different aquaculture locations and operation types.

- d. **Outputs and Deliverables**: An understanding of the ecology surrounding oyster aquaculture equipment and effects these operations are having on the Bay.
- e. Estimated Milestones: One year report and presentation.
- f. Long Term Outcomes: A better understanding of aquaculture in the Peconic Bays;
- g. Clean Water Act Core Programs: Protecting large aquatic ecosystems
- h. External Constraints: N/A

IV. BUDGET DETAILS

Resources Requested

The total requested in this PEP budget to Stony Brook is **\$636,000.** This grant will be complimented by a request for PEP support to Suffolk County Department of Health Services in the amount of **\$214,000** and together these two components make up the full Peconic Estuary Partnership FFY2024 workplan for a total grant request of \$850,000.

Non-Federal Match: NYSDEC and Local Governments will provide **\$636,000** for the Stony Brook RF grant application (CE-. Suffolk County will provide **\$214,000** to match the grant application for Suffolk County Department of Health Services (CE -).

Date	Meeting/Event	Purpose	Destination	Number of Staff	Estimated Cost
Fall 2025	ANEP Fall meeting	Tech Transfer	Mobile, AL	4	\$8,000
March 2026	NEP-EPA	EPA HQ	Washington DC	2	\$5,000
April 2026	LI Natural History	Local Tech Transfer	Long Island	6	\$ 650

Travel Costs **Table 5:** Trips Anticipated for PEPFY2025

April 2026	Association of Science Communicators	Optimize Outreach	Raleigh, NC	3	\$4,000
10/1-9/30	Local Travel	Partnership	East End of Long Island	5	\$7,000

Table 6: Trips Taken During PEPFY2024

Date	Meeting/Event	Purpose	Destination	Number of Staff	Final Cost
October 2024	RAE	Tech Transfer	Virginia	2	\$4,000
March 2025	EPA-NEP	Tech Transfer	Washington, DC	2	\$3,000
February 2025	CAC Albany Education Trip	Education of representatives and DEC staff on PEP work	Albany, NY	2	\$700
Nov 2024	NY NEP Tech Transfer	Travel and hotel for NEP Tech Transfer	Long Island NY	6	\$1,000

Detailed Budget **Table 7:** Detailed PEP FY25 Budget

Item	Detail	FY25 Request	Notes
Personnel	Salary & fringe	\$410,529	Executive Director, Natural Resources Program Manager, Outreach & Communication Manager, Grants Manager, Water Quality Outreach, and Coastal Resilience and Communities Coordinator
Salary	\$294,286		
Fringe (40%)	\$116,243		

Travel		\$14,000	See Travel section on page 42
Supplies		\$ 3,455	Field supplies, field gear, homeowner rewards and rain garden supplies, and office supplies
Contract		\$0	
Other		\$84,000	
Website annual costs	\$4,000		Includes costs for printing & production, website update and services, advertising, telephone.
Homeowner Rewards	\$8,000		
Annual Water Quality Report	\$35,000		Funds for the Gobler Lab at SoMAS to collect, analyze, and report on annual water quality data. IDC included
CCMP Tracking and GIS updates	\$12,000		GIS services, server maintenance, and online tracking tool maintenance
Minigrant	\$25,000		Mini-Grant Program-item included in total 'Other' request - IDC of 26% is included in the <i>Indirect</i> row
Total Direct		\$511,984	
Total Indirect (26%)		\$124,016	Subawards and contracts have 26% applied to the first \$25,000 (CAST & Staff Development)
Total EPA §320 Funds Request		\$636,000	
NYSDEC Match		\$500,000	
East End Town Match		\$136,000	
TOTAL Stony Brook EPA §320		\$1,270,000	
Suffolk County EPA §320 Funds		\$215,000	Funds detailed on Suffolk County Application FY24
Suffolk County Match		\$215,000	Match detailed Suffolk County Application FY24
Total EPA §320 Project Cost		1,700,000	

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