FY20 WORKPLAN AND BUDGET

Applicant:
Suffolk County Department of Health Services

Submitted by:
PEP Management Conference

Prepared by:
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Peconic Estuary Partnership

FY20 WORKPLAN AND BUDGET

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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 Partnership 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. In 2019, the Peconic Estuary Partnership re-named to the Peconic Estuary Partnership (PEP) to more accurately reflect the varied partnerships that allow the NEP to thrive.

The original PEP Comprehensive Conservation and Management Plan (CCMP) was approved by the EPA Administrator on November 15, 2001, with the concurrence of the New York State Governor. The CCMP promotes a holistic approach to protecting, enhancing and restoring the Estuary and its watershed. Priority management topics in the original PEP CCMP include Brown Tide, nutrients, habitat and living resources, pathogens, toxic pollutants, and critical lands protection. These six priority topics, together with public education and outreach, financing, and post-CCMP management, form the basis for the CCMP action plans. The Peconic Estuary Partnership has submitted an updated final draft CCMP for EPA review and acceptance to address new issues that have arisen; the 2020 CCMP is anticipated to be published in early summer 2020.

Overall Funding Sources

The core FY20 budget reflects the following sources of funding:

EPA FY20 Base Funding	$662,500.00*
Non-Federal Match	$662,500.00**
Total	**$1,325,000.00**

Resources Requested:

The total Section 320 funds requested in this **NEP grant to the Suffolk County Department of Health Services is $133,120** which will be matched at the required 1:1 rate, making the full budget of this award $266,240.

*EPA FY20 Base funding will be provided to Suffolk County Department of Health Services (SCDHS) ($133,120) and NEIWPCC ($529,380).

**The non-Federal match is provided by the Suffolk County Department of Health Services (SCDHS) ($XXX) and the New York State Department of Environmental Conservation ($XXX). Match is itemized in detail in Section IV. Suffolk County, New York State 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. [April 2020 DRAFT does not include match documentation yet, match amount is not final].

II. SUMMARY OF FY19 ACCOMPLISHMENTS

The FY19 year for the Peconic Estuary Partnership was a year filled with milestones and new beginnings. We began the Organizational Assessment which was initiated using EPA funds and as a result of our 2017 Program Evaluation. This process is on-going and has thus far resulted in significant progress such as draft Organizational documents which outline the roles and responsibilities of our Committees, draft By-Laws and Guiding Principles, and a partnership willing to make changes for the successful future of the organization. Perhaps, most telling is the unanimous decision by the Policy and Management Committees to change our name from the Peconic Estuary Program to the Peconic Estuary Partnership; thus reflecting the commitment by all members to work together going forward. Additionally, and also as a result of the 2017 Program Evaluation, we have progressed with the Water Quality Assessment and have finalized water quality targets to use in our annual water quality reports which will be released in Fall annually, beginning with 2020.

PEP remained on-track to submit the Final Draft of the CCMP to the EPA for approval. Through a long and publicly engaging process the PEP has been able to develop a document that has extensive public input as well as substantial input from all of our committee members and active partners. We are excited for the new goals and actions we have identified to be rolled out to our watershed

PEP completed extensive work under funded by EPA Assistance Award No: 99200217; the Workplan goals, completed projects and outcomes are summarized below in Section III these projects inlcude: the Peconic Estuary Seagrass Bio-Optical Model, the Living Shoreline Demonstration Project in Greenport, the Climate Ready Assessment for our watershed and the Shinnecock Indian Nation, and the Conceptual Habitat Restoration Design Plans in the Towns of East Hampton, Riverhead, Southampton, and Southold.. PEP also made substantial progress on diadromous fish passage projects on the Peconic River using partner funding. Additional partner grant funding has been secured for the Woodhull Dam Fish Passage Construction (planned for fall 2020) and the final engineering designs are being developed for the Upper Mills Fish Passage project. Moreover, the PEP is assisting the Town of Brookhaven in their efforts to finalize engineering design and move forward with the construction of the Fish Pass at Forge Road Dam. PEP has also begun to work with the Town of Southampton to right-size the existing culvert at Noyak Road and implement some stormwater control measures on Alewife Creek in Southampton to allow for improved aquatic organism passage and diadromous fish migration.

Our partnership based work became stronger this year, as Suffolk County released the draft Subwatersheds Wastewater Plan to tackle nitrogen pollution into the estuary and PEP has worked with multiple community organizations and local governments throughout the watershed to highlight this work and teach the public about the importance of nitrogen reduction. PEP has also begun the process of working closely with the NYSDEC Long Island Nitrogen Action Plan to align the goals and actions of each organization to maximize funding opportunities and work products.

Our outreach efforts continued and were further developed in FY19. We created a series of short informative videos for the public and conducted social media campaigns, including #NitrogenActionLI with our Long Island Nitrogen Action Plan partner to improve our efforts on social media. This has resulted in an increase in followers across our social media channels. We have also expanded our efforts for bi-lingual outreach by hiring a Spanish speaking outreach intern and creating a Spanish language video for the public entitled: *La Importancia del Estuario Peconic*. All videos can be found here: https://www.peconicestuary.org/news-and-blogs/media-library/. Outreach efforts also resulted in an increase in attendance at Citizens' Advisory Committee meetings and an increase in reinvigorated and enthusiastic members. Educational programs, citizen science internships, and distributing digital and print outreach materials have expanded PEP's footprint and impact in the watershed.

III. WORKPLAN

1. CCMP Goals

With a new CCMP being rolled-out, our goals and actions have been updated to reflect current issues affecting the Peconic watershed. Our strong focus will be on reducing nitrogen pollution in our estuary, advancing our on-going diadromous fish passage projects and wetland restoration work, and securing funding for eel grass restoration for both blue carbon initiatives and increased shellfish and juvenile fish nursery habitat. In order to achieve the goals laid out in this workplan, the program office staff will facilitate committee meetings in conjunction with the Committee Chairs as follows, note meeting frequency may be altered based on Partnership needs: Policy Committee (two meetings annually – one jointly with Management Committee), Management Committee meetings (four meetings annually, one jointly with Policy Committee), Technical Advisory Committee (TAC) meetings (four meetings annually, one jointly with Natural Resource Sub-Committee), Natural Resource Sub-Committee meetings (two meetings annually, one jointly with TAC), Citizens' Advisory Committee (CAC) meetings (three meetings annually), Local Government Committee meetings (two meetings annually), Peconic Bay Scallop Technical Review Committee meetings (up to six meetings annually). The following CCMP Actions will specifically be addressed this year by the portion of the grant addressed in this workplan:

2. Budget and Staff Elements

Program Office Staff

All funding to be used for direct staff time is covered under the NEIWPCC portion of the NEP grant request. For information regarding staff funding of the Peconic Estuary Partnership staff in FY2020, please see the workplan for grant agreement CE97230304 to NEIWPCC. However, time from the following staff will be used toward managing the projects funded via the NEP grant awarded to the Suffolk County Department of Health Services since this award supports the Peconic Estuary Partnership:

Director:

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 204N, Riverhead, NY 11901

Responsibilities: Provides overall leadership to the program office, management and administration to the Program on behalf of the Management Conference.

Program Coordinator:

Location: Suffolk County Department of Health Services, 300 Center Drive, Room 204N, Riverhead, NY 11901

Responsibilities: Coordinates all projects in Suffolk County and acts as support and lead for a variety of other projects carried out by the program office.

3. New and On-Going Project Information

In addition to the *New* projects listed below that will be funded with FY20 §320 funds; the PEP Staff will be working on the following *Ongoing* tasks funded by previous §320 Budgets and Grant Awards awarded to SCDHS.

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 recommendations regarding changes to water quality data collection in order to adequately monitor all waterbodies in the Estuary.

2020 Task 1: Water Quality Monitoring (New/ Ongoing)

a. **Estimated Budget:** $60,400: §320 funds Request in FY20 budget*
   *Suffolk County is utilizing ULO §320 Budget funds from previous years in the amount of $62,200.00 awarded to Suffolk County for personnel to supplement the funding request for this task. These changes are reflected in modification requests to award numbers 99200218 and 99200219.
b. **Partners and their roles:** Suffolk County Department of Health Services (SCDHS), Office of Ecology (Lead Partner and Contracting Entity), PEP (Supporting Partner).
c. **Description and Objectives:** SCDHS monitors water quality of surface and marine waters within the Peconic Estuary. The water quality monitoring program conducted by the SCDHS Office of Ecology includes monthly monitoring at approx. 40 Peconic surface water quality stations throughout the year, periodic monitoring of approx. 30 point source and stream stations, and weekly monitoring at the NADP rain and atmospheric deposition gauge. Task funds will be used

to support 2 Suffolk County personnel monitoring water quality of surface and marine waters within the Peconic Estuary as part of the Suffolk County Department of Health Services (SCHDS) Surface Water Quality Monitoring Program.

d. Outputs and Deliverables: Routine monitoring conducted in the Peconic Estuary makes it possible for the PEP to have accurate, up-to-date information regarding water quality conditions throughout the Estuary. All Suffolk County Department of Health Services Water Quality Data and Information is available here: (https://gisportal.suffolkcountyny.gov/gis/home/group.html?id=cbd4d20b287d4ef79af28a9b56cea71a#overview)

e. Estimated Milestones: Annual water quality summary report.

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. **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.

Performance Measure: Annual water quality data reports that support partner's efforts to increase local and regional stewardship of areas of clean water quality.

2020 Task 2: Water Quality Data Analysis and Reporting (New)

a. **Estimated Budget:** $32,720: §320 funds Request in FY20 budget

b. **Partners and their roles:** Suffolk County Department of Health Services (SCDHS), Office of Ecology (Lead Partner), PEP (Supporting Partner).

c. **Description and Objectives**: The SCDHS Surface Water Quality Monitoring Program data will be analyzed by personnel within the SCDHS Office of Ecology and water quality monitoring reporting will be produced for the Peconic Estuary Partnership to incorporate in the Annual "State of the Bay" Report. Task funds will be used to support personnel time allocated to this task.

d. **Outputs and Deliverables**: Routine analysis of SCDHS Surface Water Quality Monitoring Program and an annual water quality summary report.

e. **Estimated Milestones**: Annual water quality summary report.

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. **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.

2020 Task 3: National Atmospheric Deposition Program (New/ Ongoing)

a. **Estimated Budget:** $10,000: §320 funds Request in FY20 budget
b. **Partners and their roles:** Suffolk County Department of Health Services, Office of Ecology (Lead Partner and Contracting Entity) is responsible for sample collection; University of Wisconsin (cations) and Frontier Global Sciences, Inc. (mercury) are responsible for data analysis; University of Wisconsin National Atmospheric Deposition Program is responsible for data assessment, reporting, and coordination with the national network; Mercury Deposition analyses are funded through a partnership with New York State Energy Research and Development Authority (NYSERDA)., PEP (Supporting Partner).
c. **Description and Objectives:** Monitor local atmospheric deposition of major cations in precipitation and local mercury deposition in precipitation at Site ID 96 at Cedar Beach Southold, NY. Objective is to evaluate success of Clean Air Act policies and program in reducing atmospheric deposition of nitrogen in the Peconic region and track progress toward nitrogen TMDL goals.
d. **Outputs and Deliverables:** Results published as part of the National Atmospheric Deposition Program system on their website: (http://nadp.slh.wisc.edu/data/sites/siteDetails.aspx?net=NTN&id=NY96)
e. **Estimated Milestones:** Annual Reporting
f. **Long Term Outcomes:** To assess the long term trends of nitrogen and mercury and nitrogen deposition in the Peconic watershed and Estuary. Utilize the results to understand the sources of nitrogen pollution and implement science-based approaches for monitoring and reducing nitrogen pollution. Results will be used to determine implications for coastal acidification in the 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.

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 nitrogen pollution.

Performance Measure: Completion of BMP cost per pound of nitrogen removal assessment from nature-based point source removal technologies. This will help to develop cost-effective, subwatershed-specific strategies to achieve target nutrient load reductions.

Ongoing Task: Peconic Estuary Nitrogen Load Reduction Cost Assessment (Ongoing- FY15 Workplan and Budget)

a. **Estimated Budget**: §320 funds: $87,000 (FY15)
b. **Partners and their roles:** PEP (Lead Partner), Anchor QEA, LLC. (Contractor), Suffolk County Department of Health Services (Contracting Entity)
c. **Description and Objectives**: Assessment of the cost per-pound of nitrogen reduction to groundwater for various nature-based nitrogen reduction best management practices (BMPs) currently being employed in the New England and Mid-Atlantic region of the United States that,

based on the geographical, environmental and climate based needs of the County, have potential to be installed in Suffolk County. The contractor will be responsible for comparing the cost and benefit estimates based on a per-pound of nitrogen reduction for any public or private property owner. This information will be analyzed and developed into a user friendly tool by the contractor in conjunction with and with approval of the County. This tool will be made available for the public to use and will also be used as a tool for municipalities for geographic and financial planning purposes.

d. **Outputs and Deliverables**: On-line tool to assess cost per pound of nitrogen in nature-based nitrogen pollution reduction techniques.
e. **Estimated Milestones**: Completion Fall 2020.
f. **Long Term Outcomes:** Enable communities and local governments to achieve the most cost effective measures to reduce nitrogen in the 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.

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

Ongoing Task: Peconic Estuary Non-Point Source Pollution Management Program (Ongoing-FY14 Workplan and Budget)

a. Estimated Budget: §320 funds: $24,711 (FY14)
b. **Partners and their roles:** PEP (Lead Partner), Village of Sag Harbor (Contractor/property owner), and Suffolk County (Contracting Entity).
c. **Description and Objectives:** Implement a non-point source pollution management project at Havens Beach Sag Harbor, NY. The project involves utilizing green infrastructure best management practices to treat stormwater that would otherwise flow across the beach and/ or through an existing discharge pipe directly to Sag Harbor Bay.
d. **Outputs and Deliverables:** A waterfront stormwater retention and filtration system using native plants. Educational signage at the site about the benefits of stormwater retention and rain gardens.
e. Estimated Milestones: Completion Fall 2020
f. **Long Term Outcomes:** Long term filtration of stormwater and related pollutants associated with this non-point source pollution. Significant reduction in the nitrogen pollutant loads to the waterbody and improving the overall health of 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.

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CCMP GOAL: HEALTHY ECOSYSTEMS WITH ABUNDANT, DIVERSE WILDLIFE

Objective H: Restore and protect key habitats and species diversity in the Peconic Estuary and its watershed.

Action 30: Monitor and protect existing eelgrass beds; where appropriate, restore and expand eelgrass beds.

Performance Measure: Financial and logistical support for the Annual Long-term Eelgrass Monitoring Program to monitor changes in eelgrass density end extent.

2020 Task 4: Submerged Aquatic Vegetation Long Term Monitoring and Management (SAV Monitoring) (New/Ongoing)

a. **Estimated Budget**: $30,000: §320 funds Request in FY20 budget
b. **Partners and their roles:** Cornell Cooperative Extension of Suffolk County (Contractor), Suffolk County (Contracting Entity), PEP (Supporting Partner)
c. **Description and Objectives:** Monitoring of seagrass survival and bed expansion at thirteen eelgrass beds located throughout the estuary. Nine sites are monitored annually and four additional sites are monitored biennially. Long-term measurements of seagrass extent and deep edge location, eelgrass shoot density, measurements of light, temperature, macroalgae cover and sediment conditions are done at these sites. Measurements of light and temperature were only monitored at six of those sites.
d. **Outputs and Deliverables:** Maps of individual eelgrass beds with shoot density, imagery, and bed alterations on an annual timescale.
e. **Estimated Milestones:** Annually and report generated in March.
f. Long Term Outcomes: An extensive and accurate record of eel grass beds on a micro scale to allow for successful management decisions.
g. Clean Water Act Core Programs: Protecting Wetlands

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.

Ongoing Task: PEP Expansion and Monitoring of the Town of Southold Living Shoreline Demonstration Project (Ongoing-Referred to as Nitrogen Mitigation Pilot Asessment - FY18 Workplan and Budget)

a. Estimated Budget: §320 funds: $155,000. $55,000 (FY15) ($100,000 (FY11) spent down).
b. **Partners and their roles:** PEP (Supporting Partner), Cornell Cooperative Extension of Suffolk County (Contractor), Suffolk County Department of Health Services (Contracting Entity)

c. **Description and Objectives:** Expansion and Monitoring of the Town of Southold Living Shoreline Demonstration Project. This project involves expansion to an existing Town of Southold Living Shoreline Demonstration Project contract with the Town of Southold Trustees and the Suffolk County DEDP. The PEP funded project establishes a larger geography of the project and monitoring services to run in tandem with the existing project to enable the quantification of nitrogen and pathogen uptake results and assessment of the effectiveness of the living shoreline to mitigate nitrogen pollution in the Peconic Estuary. The living shoreline coconut fiber (coir) logs, planting of *Spartina alterniflora* and hatchery cultivated ribbed mussels to provide shoreline stabilization, improve habitat, reduce nitrogen and enhance ecosystem services. Assess the project's ability to improve water quality and use results to develop decision-support information.
d. **Outputs and Deliverables:** The creation of a living shoreline demonstration project using ribbed mussels and *Spartina alternaflora* in a sheltered embayed coastal habitat. Educational materials for public dissemination and permanent signage at the demonstration site.
e. **Estimated Milestones:** Completion Fall 2020
f. **Long Term Outcomes:** The results from these analyses are intended to be used in recommendations for future nitrogen and pathogen mitigation techniques and nitrogen and pathogen management activities, including those regarding cost-effective nitrogen removal strategies on a subwatershed basis, thus assisting local decision makers determine the most cost-effective means of reducing nitrogen in subwatersheds.
g. **Clean Water Act Core Programs:** Elements of this project prevent or mitigate the impacts of nutrient pollution. Wetlands Protection.

4. Completed Major Projects

a. Seagrass Bio-optical model (Peconic Estuary Partnership Eelgrass Assessment Services)

Objective: This project obtained specific information to inform eelgrass management and restoration programs to lead to a better understanding of specific light and temperature requirements for eelgrass in the PE as well as the factors that contribute to reduced light conditions throughout the PE. The project will lead to a better understanding of the effects of eelgrass restoration projects and pollution prevention initiatives undertaken within the PE Watershed.
Description: Eelgrass beds in the Peconic Estuary (PE) were decimated by disease in the 1930's and further impacted by reduced light penetration due to the Brown Tide blooms of 1985-1995. Eelgrass is also damaged by excess nitrogen inputs, anchor scarring, and boating in shallow water. Eelgrass coverage declined by at least eighty-two percent (82%) from the 1930's through 2000; an inventory taken in year 2000 found only 1,550 acres of eelgrass in one-hundred and nineteen (119) beds within the PE, and a 2014 survey showed that nearly half of that had been lost, leaving less than nine-hundred (900) acres of seagrass remaining. The benefits that this ecosystem provides, including preventing shoreline erosion, supporting species valuable to our economy, and improving water quality, has a monetary value twice that of other marine habitats. Over the past few decades, eelgrass restoration projects have been completed and few have been successful, partly due to the lack of understanding of light requirements for local eelgrass populations and water quality and sediment condition requirements. The PEP contracted with The Research Foundation of SUNY Stony Brook to examine the combined effects of light and temperature on eelgrass physiology and survival.
Lead Implementer: PEP (Project Lead), The Research Foundation of SUNY Stony Brook (Contractor), SCDHS (Contracting Entity)

Accomplishments and Deliverable(s): An eelgrass site suitability index and bio-optical model and an improved ability to make management decisions for eelgrass protection and restoration within the Peconic Estuary. The suitability index and bio-optical model provide an understanding of the light and temperature dynamics associated with eel grass in the Peconics. This has allowed for the creation of eel grass zones for appropriate management of the resource with specific light and temperature conditions, existing and predicted. This habitat is especially sensitive to higher temperatures as a result of climate change and this work has allowed the program to begin development of a climate related management strategy. Report: The Peconic Estuary Seagrass Bio-optical Model Final Report.
§320 grant/cooperative agreement funds: $82,000 (§320 funds: $35,311 (FY 11); $46,689 (FY12))
Expected Long-term Outcomes: Increase understanding of light limits of seagrass plants under different temperature conditions so that numeric nutrient criteria can be established for the maintenance of sufficient light for plant survival. Increased light availability for healthier eelgrass due to the implementation of regulatory and voluntary programs to manage for nitrogen loadings, suspended sediment, or other factors.
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; addressing diffuse, nonpoint sources of pollution.

b. Climate Ready Estuaries – Climate Ready Assessment and Critical Land Protection Strategy

Objective: Update the PEP 2004 Critical Land Protection Strategy, taking into account climate related variables, specifically sea level rise, in order to update acquisition priorities. Provide climate change analysis of the environmental restoration and protection programs of both the PEP and Shinnecock Indian Nation and to conduct a risk based climate change vulnerability assessment, and to develop an adaptation action plan consistent with USEPA's Climate Ready Estuaries Program.
Description: The Peconic Estuary faces numerous pressures including development, habitat loss, and nutrient loading. Climate change poses another set of challenges; among them are sea level rise (SLR), more frequent and more intense storms, and changing weather patterns. Suffolk County has already seen a 2.3°C (4.14°F) increase in annual temperature since the late 1890s, above the 1°C average increase for the United States over the same period (Mufson et al. 2019). All these pressures and challenges have the potential to further degrade water and habitat quality and lead to greater habitat loss and fragmentation. But PEP's 2001 CCMP and 2004 CLPS do not take climate change into account. In 2016, PEP embarked on a Climate Ready Assessment (CRA) Project to incorporate climate change into an updated CLPS, to conduct a risk based climate change vulnerability assessment, and to develop an adaptation action plan consistent with USEPA's Climate Ready Estuaries Program. The CRA included broad stakeholder outreach and collaboration to fully identify risks. It also included the development of tools to identify the spatial distribution of potential climate change impacts and to provide a way to prioritize land for protection based on revised environmental criteria that include climate change considerations.
Lead Implementer: PEP (Project Lead), Anchor QEA, LLC. (Contractor), the Nature Conservancy (Sub-contractor), SCDHS (Contracting Entity)
Accomplishments and Deliverable(s): A report documenting the approach, methods, and results of the CRA,
Procedures for ensuring climate change considerations are incorporated into all environmental protection and restoration activities of the Peconic Estuary Partnership and Shinnecock Indian Nation to create a more climate resilient program positioned to track climate indicators, manage adaptively and participate in regional climate initiatives.
Reports: Peconic Estuary Partnership Climate Vulnerability Assessment and Action Plan.

Shinnecock Indian Nation Climate Vulnerability Assessment and Action Plan.
§320 grant/cooperative agreement funds: $97,699 (§320 funds: Various (FY09, FY11, FY12, FY14)
Expected Long-term Outcomes: This project will result in the protection and acquisition of lands the will continue to preserve and improve water and habitat quality in the face of rising sea levels and increased temperatures. It will allow for the natural inland migration of critical salt marsh habitats as sea level rises and preserve living shorelines in an environment where shoreline hardening is likely to become increasingly common. The information resulting from the Services will serve as an important tool for New York State, Suffolk County, and local agencies. The Services will be a critical step towards updating the current PEP CCMP and addressing a long-term goal of prioritizing management actions and planning within the Peconic Estuary watershed. It will be a first step towards the PEP and SIN working together toward climate adaptation by assessing our highly overlapping climate vulnerabilities.
Clean Water Act Core Programs: Elements of this project prevent or mitigate the impacts of nutrient pollution. Wetlands Protection.

c. **Widows Hole Living Shoreline Demonstration Project (Habitat Restoration Plan Implementation)**

Objective: Provide funding for the habitat restoration project at the Peconic Land Trust's (PLT) Widow's Hole Preserve in Greenport, NY that will involve non-native species removal restoring degraded saltmarsh and shoreline communities.
Project Description: Widow's Hole Preserve is a property owned by the Peconic Land Trust that was developed for commercial purposes and used as a petroleum product storage facility which has resulted in degradation of the shoreline and native plant species. The Peconic Land Trust, in coordination with the Cornell Cooperative Extension of Suffolk County, designed and implemented plans for salt marsh restoration and coastal grass restoration at the site. The project resulted in a living shoreline restoration project and educational signage and materials.
Lead Implementer; **Partners and Their Roles:** PEP (Project Lead), PLT (Contractor), Cornell Cooperative Extension of Suffolk County (Sub-contractor).
Accomplishments and Deliverable(s): Advance a habitat restoration project in Greenport Village within the Town of Southold which completed the first Living Shoreline Demonstration Project in the Peconic Estuary watershed.
Report: Widows Hole Preserve Living Shoreline Project- Final Report
§320 grant/cooperative agreement funds: $150,000 FY11 §320 Funds
Expected Long-term Outcomes: The use of living shorelines will provide an opportunity to analyze the effectiveness of living shorelines in the Peconic Estuary. Provide assistance to local governments and partners to support habitat restoration project plans. Enhancement of existing resources and/or restoration of habitats that have been lost or degraded.
Clean Water Act Core Programs: Wetlands Protection

d. Conceptual Habitat Restoration Design Planning Services

Objective: Peconic Estuary Conceptual Habitat Restoration Design Plans, feasibility assessments, conceptual designs/ plans and planning-level cost estimates for four designated habitat restoration projects identified in the 2009 Peconic Estuary Partnership Habitat Restoration Plan.
Project Description: Conceptual habitat restoration design plans for Southold: Narrow River Road, Southampton: Iron Point Wetland Restoration, East Hampton: Lake Montauk Alewife Access and Habitat Enhancement, and Riverhead: MH-2 Main Road Wetland Construction.

Lead Implementer; **Partners and Their Roles:** PEP (Project Lead), Land Use Ecological Services, Inc. (Contractor)

Accomplishments and Deliverable(s): The PEP contracted with Land Use Ecological Services, Inc. to complete feasibility assessments, conceptual designs/plans and planning-level cost estimates for nine designated habitat restoration projects in support of implementing the PEP Habitat Restoration Plan. The development of conceptual design plans in the five East End Towns will make permitting and other requirements for these projects able to be fulfilled in a timelier manner for habitat restoration projects to be completed.

Reports: Conceptual Habitat Restoration Design- Narrow River Road (2019); Conceptual Habitat Restoration Design-Iron Point Park (2019); Conceptual Habitat Restoration Design- Lake Montauk (2019); Conceptual Habitat Restoration Design- Main Road (2019)

§320 grant/cooperative agreement funds: $99,980 §320 funds (FY10)

Expected Long-term Outcomes: Having conceptual plans completed will facilitate applying for funding sources as they become available. It is also more likely that habitat restoration efforts will be fulfilled and thus the benefits of such projects can be realized. 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. Significant natural habitats such as eelgrass beds and wetland complexes will benefit from restoration efforts.

Clean Water Act Core Programs: Wetlands Protection; Elements of this project prevent or mitigate the impacts of nutrient pollution.

IV. BUDGET DETAILS

1. Resources Requested

The total 320 funds requested in this PEP grant to Suffolk County Department of Health Services is **$133,120.** This grant will be complimented by a request for PEP support to NEIWPCC for $529,380, and together these two components make up the full Peconic Estuary Partnership FFY2020 workplan for a total §320 request of $662,500 with a total of $662,500 match.

The $133,120 funding to Suffolk County Department of Health Services, and the required 1:1 match, is distributed among the following budget categories:

BUDGET DETAIL 2020 Workplan	Total Requested from EPA	Total Match Provided by Applicant	Total
Personnel	**$93,120.00**	**$60,400.00**	**$153,520.00**
2020 Task 1 - Ongoing Personnel - wages and salary*	**$60,400.00**	**$60,400.00**	**$120,800.00**
Monitoring Personnel: Chemist	$29,150.00	$29,150.00	$58,300.00
Monitoring Personnel: Boat Operator	$31,250.00	$31,250.00	$62,500.00
*Suffolk County is utilizing ULO §320 Budget funds from previous years in the amount of $62,200 awarded to Suffolk County for personnel to supplement the funding request for this task. These changes are reflected in modification requests to award numbers 99200218 and 99200219.			

2020 Task 2 - Personnel – wages and salary	**$32,720.00**	**$0.00**	**$32,720.00**
Other	**$40,000.00**	**$72,720.00**	**$112,720.00**
2020 Task 3 - Ongoing Atmospheric Deposition Monitoring via NADP	**$10,000.00**	**$0.00**	**$10,000.00**
2020 Task 4 - Ongoing SAV Monitoring via Cornell Cooperative Extension	**$30,000.00**	**$0.00**	**$30,000.00**
Water Quality Protection and Restoration Program (WQPRP) Projects & Suffolk County Capital Projects	**$0.00**	**$72,720.00**	**$72,720.00**
TOTAL	**$133,120.00**	**$133,120.00**	**$266,240.00**

2. Non-Federal Contribution

Suffolk County will provide $133,120 in matching funds toward water quality monitoring. The total non-federal contribution is $133,120 for this award.

3. Grant Agreement Allocations For 2020

The Federal Fiscal Year Award is expected to be awarded by Cooperative Agreement CE-99200220-2. The table below details the agreement.

Grant/Amendment Number	CE-99200220	CE-99200220-1	CE-99200220-2	Total CE-99200220
Federal Fiscal Year	**FFY 2018**	**FFY 2019**	**FFY 2020**	
1. Personnel	$40,000.00	$40,000.00	$153,520.00	$233,520.00
2. Fringe Benefits	$0.00	$0.00	$0.00	$0.00
3. Travel	$0.00	$0.00	$0.00	$0.00
4. Equipment	$0.00	$0.00	$0.00	$0.00
5. Supplies	$0.00	$0.00	$0.00	$0.00
6. Contractual	$0.00	$0.00	$0.00	$0.00
7. Construction	$0.00	$0.00	$0.00	$0.00
8. Other	$40,000.00	$40,000.00	$112,720.00	$192,720.00
9. Total Direct Charges	$80,000.00	$80,000.00	$266,240.00	$426,240.00
10. Indirect Costs: % Base	$0.00	$0.00	$0.00	$0.00
11. Total (Share: Recipient 50.00 % Federal 50.00 %.)	$80,000.00	$80,000.00	$266,240.00	$426,240.00
12. Total Approved Assistance Amount				$0.00
13. Program Income	$0.00	$0.00	$0.00	$0.00
14. Total EPA Amount Awarded This Action	$40,000.00	$40,000.00	$133,120.00	$213,120.00
15. Total EPA Amount Awarded To Date				$213,120.00