

PECONIC ESTUARY PROGRAM

FY16 - FY19 REVISED WORKPLAN



Submitted by:
PEP Management Conference

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Peconic Estuary Program
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PECONIC ESTUARY PROGRAM FY 16 - FY19 REVISED WORKPLAN

I. INTRODUCTION

The Peconic Estuary System consists of over 100 distinct bays, harbors, embayments and tributaries, the surface area of these waters exceed 158,000 acres. The population of the East End towns surrounding the Peconic Estuary System more than doubles during the summer months. These residents and visitors use the system and its resources extensively for beach-going, swimming, boating, fishing, shellfishing, and other water-dependent activities, contributing significantly to the local economy. However, there are problems in the system ranging from increased nutrient loading to declines in habitat quality and quantity, and reduction in catch of commercially and recreationally important finfish and shellfish. Other issues of concern include closure of shellfish beds due to contamination by coliform bacteria (used as an indicator for pathogens), potential contamination with toxic substances, the relationship of land use to water quality and the health of the living resources, and the occurrence of harmful algal blooms, e.g. Brown Tide, and *Cochlodinium polykrikoides*. The effects of these problems are a significant threat to the overall health of the Peconic Estuary System and its resources.

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 (PEP) 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. The 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 for the Peconic Estuary are 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. Much has changed since the CCMP was approved in 2001 and the USEPA recommended a revision of the CCMP. The CCMP revision will begin during 2016 and is planned to be completed in 2018.

II. WAIVER REQUEST

The Peconic Estuary Program (PEP) – NEP Grant FFY09-FFY12 Agreement No. CE992002-17 is scheduled to expire on September 30, 2016, PEP is requesting a no-cost time extension until September 30, 2019.

Nearly all of the salary, fringe benefit, and supply funding has been drawn down, and we expect that it will all be expended by the original expiration date. Contractual funds for the first annual portion of the grant (992002-17-0) will be fully expended by the original expiration date as well. Contractual funds for 7 projects in total, among the 3 amended annual awards (992002-17-1, 992002-17-2, and 992002-17-3), remain outstanding. Most of these funds are now, or will soon be, encumbered in contracts. All of the projects are expected to be completed by September 2019.

This program has experienced several set-backs in recent years that have prevented us from timely expenditure of funds in this grant:

- The program was without a permanent Director for 18 months during the grant period (the former Director retired in spring 2010 and was not replaced with a new permanent Director until fall 2011). There was also turn-over in every program staff position during this grant period. This caused delays in many projects and initiatives.

- Significant decreases in the NEP funding level in 2013 and 2014 prevented the planned rebuilding of program staff, further exacerbating delays and slowing the financial “catch-up” process.
- Until 2008, grants were awarded in 1-year increments. This grant represents the first “bundled” grant where annual awards were issued as amendments for a total of four years. Some of the funds in this grant were awarded only three years ago.
- This multi-year grant arrangement was set up without the benefit of discussions with program staff who understood the financial management of this program at its interface with the host agency processes. Grant periods of three and four years are simply not practical given the extensive processes required for appropriation, procurement and contracting.

Since late in 2011, the program staff has been working extremely hard, with the host agency, to catch-up with delayed projects and to streamline the expenditure process for contractual funds. Since 2013, the program staff has, in consultation with the Management Conference, been moving contractual funds from Suffolk County to New England Interstate Water Pollution Control Commission (NEIWPCC) to expedite grant draw down. Although progress has been substantial, it has not yet been sufficient to accommodate the shortened timelines presented by multi-year grants.

This no-cost time extension is necessary to allow PEP to complete the projects in our annual workplans, as well as the projects that constitute the non-federal match to this award. The Peconic Estuary Program Office is presenting a revised work plan with specific milestones to ensure that the projects are completed by the extension end date; the Project Officer will ensure the remaining Interagency Agreement (IA) funds will be expended as quickly as possible, including an assurance that the responsible Project Officer, through baseline and advanced monitoring, will oversee recipient progress in achieving agreed-upon milestones. The PEP Management Committee will track project progress at every management committee meeting (quarterly) to ensure progress is being made. Table 1 details the status of contractual projects under this grant and the expected completion date of each project.

Table 1: NEP Grant FFY09-FFY12 CE99200217 Status of Projects and Expected Completion Dates

NEP Grant and Workplan Year	Total Budgeted	Total Remaining Balance	Task/Contractor	Expended	Not yet Expended	Contract Status	Expected Task Completion Date*
1093 NEP 2009 CE99200217-0	\$490,000.00	\$36,031.36	A.1) Submerged Aquatic Vegetation Management/Cornell Cooperative Extension (CCE)	\$90,895.00	\$15,000.00	2015 Monitoring completed. The final task is in progress and expected to be submitted in June 2016, funds for the final task will be expended before September 2016.	September 2016
1432 NEP 2010 CE99200217-1	\$650,000.00	\$107,894.15	B.1) National Atmospheric Deposition Program monitoring	\$7,698.50	\$7,301.50	Work underway	December 2016
			B.2) Living Resources, CCMP	\$0.00	\$100,000.00	RFP advertised April 2016	October 2018

			Tasks/Contractor TBD after advertising				
1569 NEP 2011 CE99200217-2	\$548,800.00	\$317,151.78	C.1) Habitat Restoration Plan Implementation	\$0.00	\$150,000.00	Work underway	June 2019
			C.2) Nitrogen Assessment	\$0.00	\$100,000.00	RFP being drafted	March 2019
			C.3) Public education Mini-Grants	\$5,000.00	\$15,000.00	Mini-grant work is underway and work under one remaining contract is currently being completed.	May 2017
			C.4) Eelgrass/Bio-Optical Study	\$0.00	\$35,311.00	Contract signed May 2016, work has begun	April 2018
1759 NEP 2012 CE99200217-3 <i>Funds for task D1 in the 2012 workplan have also been reallocated from FY09 and FY11 awards</i>	\$81,689.00	\$81,689.00	D.1) Climate Ready Estuaries Critical Lands Protection Strategy (CLPS) Updates	\$0.00	\$35,000.00 +\$21,031 from FY09 award +\$12,350 from FY2011 = \$68,381 total for task	RFP awaiting advertisement	December 2018
			D.2) Eelgrass/Bio-Optical Study	\$0.00	\$46,689.00	Contract signed May 2016 (see C.4)	April 2018
Total Remaining Balance:		\$542,766.29					

**Task Completion Date refers to the completion of work under the contract. Billing and funds drawdown occurs at the end of the quarter (occurring March, June, September, or December) in which the work was completed.*

Peconic Estuary Program proposes the reallocation of the unexpended funds in Table 2 (\$33,381.39) to augment the funding for another task being funded by the CE992002-17 grant year, Climate Ready Estuaries CLPS Updates (Refer to Task D.1). The projects listed below were completed under budget, with the exception of the PEP Talk Newsletter that is currently published in an electronic version. The reallocated funding will specifically be used to fund the public participation tasks associated with the services, thus aligning with the tasks for which a majority of these funds were originally allocated. The reallocation of the below funds to the Climate Ready Estuaries CLPS Updates was approved by the EPA Project Officer and the PEP Management Committee.

Table 2: NEP Grant FFY09-FFY12 CE99200217 Reallocated Funds

NEP Grant and Workplan Year	Task/Contractor	Expended	Not yet Expended	Contract Status
CE99200217-0	Public Participation, CCE- Agriculture Stewardship	\$79,121.61	\$20,878.39	Completed
	Conceptual Habitat & Land Use	\$79,847.00	\$153.00	Completed
CE99200217-2	US Geological Survey- Water Quality Monitoring	\$46,450.00	\$3,550.00	Completed
	PEP Talk Newsletter	\$0.00	\$8,800.00	Funds no longer needed for this task-change to an electronic newsletter
Total: \$33,381.39				

III.**IV. REVISED WORKPLAN****Task A. 1:** SAV Management, Cornell Cooperative Extension (CCE)

Original Task: FY2009 Workplan – Task b. Submerged Aquatic Vegetation Management and Long Term Monitoring

Grant year:

1093

NEP 2009 CE99200217

Partners & Roles: Suffolk County Department of Health Services (SCDHS) and Cornell Cooperative Extension of Suffolk County, Marine Program. SCDHS acts as the contracting agency for this project and oversees progress of SAV management activity tasks and goals. CCE is subcontracted by SCDHS and provides SAV management services by carrying out monitoring and management activities and produces annual reports.

Objectives: Evaluate success of seagrass restoration efforts. Refine habitat restoration site suitability indices (based on light, temperature, and seagrass extent) used in planning the extensive seagrass habitat restoration program funded by PEP and its partner agencies, primarily NYS and Suffolk County. Additionally, these data contribute to scientific studies and will be used in future seagrass management plan developed through the New York State Seagrass Protection Act.

Description: Eelgrass was at one time abundant throughout the Peconic Estuary. At least 82% of the Peconic's eelgrass meadows have disappeared since the 1930s - only 1,550 acres of eelgrass remain. This submerged, marine plant is inextricably linked to the health of the Estuary, providing an important shellfish and finfish habitat in nearshore waters and a food source for organisms ranging from bacteria to waterfowl. While Brown Tide has not occurred in harmful concentrations in almost a decade, eelgrass beds and scallop populations have not rebounded. Because of the importance of eelgrass habitat to the biodiversity and health of the Peconic Estuary, the Peconic Estuary Program will continue to contract Cornell Cooperative Extension (CCE) to track the health and extent of the eelgrass beds in the estuary and identify management needs. The Submerged Aquatic Vegetation Management and Long Term Monitoring Project includes vegetative sampling at six sites (Gardiners Bay, Orient Harbor, Southold Bay, Northwest Harbor, Three Mile Harbor, and Bullhead Bay). Additionally, a portion of the FY09 allocation for this project will be used to conduct an

updated aerial photography survey. Aerial maps will be produced to indicate the status and extent of both eelgrass beds and hardened shoreline throughout the Peconics. This information is integral to eelgrass research and restoration.

Related CCMP Action: HLR-6.2, CCMP Page 4-39; HLR 16.8, CCMP Page 4-65

Total Budgeted: \$105,895.00

Expended: \$90,895.00

Not yet Expended: \$15,000.00

Status: The Submerged Aquatic Vegetation Management and Long Term Monitoring Project includes vegetative sampling at eight sites (Gardiners Bay, Orient Harbor, Southold Bay, Northwest Harbor, Three Mile Harbor, Southold Bay and Bullhead Bay). 2015 SAV Monitoring is completed. The draft final report review is in progress and the final report is expected to be submitted before the original grant deadline of September 2016.

Table 3: Task A.1 Outputs/Deliverables & Milestones

Task	Description	Contract Year One (September 2013-December 2013)	Contract Year Two (January, 2014-December, 2014)	Contract Year Three (January, 2015-December, 2015)	Expected Completion Date
Contract Task 1	Long Term SAV Monitoring Services	\$7,500.00 Completed	\$7,500.00 Completed	\$7,500.00 Completed	N/A
Contract Task 2	Temperature, Light, and Sediment Monitoring Services	\$7,500.00 Completed	\$7,500.00 Completed	\$7,500.00 Completed	N/A
Contract Task 3	SAV Long Term Monitoring Services	\$15,000.00 Completed	\$15,000.00 Completed	\$15,000.00 Not Completed	September 2016

Anticipated Outcomes:

Short Term: Final annual report summarizing methods and results, including maps of seagrass bed extent (current and change) and analyses of relationships between water and sediment quality parameters and seagrass success

Annual reporting, periodic status and trends assessments corresponding to Environmental Indicators Report schedule. Assessment of eelgrass health; identification of research needs; greater understanding for restoration site selection; increased understanding of reasons for decline in eelgrass abundance; and a greater awareness among natural resource managers of the need for protective management measures to be taken.

Intermediate: Ongoing research and monitoring will help decision makers identify appropriate management efforts; established management efforts can be translated in an education and outreach program

Changes in Pressure Targets: Research, monitoring and management recommendations have been compiled into the PEP Eelgrass Management Plan, which is was adopted by the PEP Management Conference in summer of 2009. Since 2009, an Implementation Progress Report: Eelgrass Management Plan for the Peconic Estuary has been produced every year to document the progress of the Eelgrass Management Plan.

Long Term: Local management efforts will aid in heightened protection of existing eelgrass beds; increased success in restoration activities; mitigation and elimination of threats to eelgrass; increased research undertaken in the Peconic system

Clean Water Act Core Programs: Protecting Wetlands

Task B. 1: National Atmospheric Deposition Program Monitoring (NADP), Ill State, Frontier

Original Task: FY2010 Workplan-Task I: National Atmospheric Deposition Program -NTN and Mercury Monitoring Costs

Grant Year:

1432

NEP 2010 CE99200217-1

Partners & Roles: Suffolk County Department of Health Services, Office of Ecology is responsible for sample collection; University of Illinois (cations) and Frontier Global Sciences, Inc. (mercury) are responsible for data analysis; University of Illinois 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)

Objectives: Evaluate success of Clean Air Act policies and program in reducing atmospheric deposition of nitrogen in the Peconic region. Track progress toward nitrogen TMDL goals.

Description: On behalf of the Peconic Estuary Program, the Suffolk County Department of Health Services- Office of Ecology has participated in the National Atmospheric Deposition Program (NADP) since Winter 2004 by constructing and operating a rain collection site at Cedar Beach County Park in Southold. Every Tuesday according to established protocols, the site is maintained and a water sample collected from the rain gauge is sent to the Illinois State Water Survey for testing (pH, SO₄, Cl, NO₃, NH₄, and base cations). With funding from the USEPA, the Cedar Beach County Park site will also monitor mercury deposition this year. Funding in the amount of approximately \$6,000/ year is needed in order to continue the National Trends Network contract with the Illinois State Water Survey. Funding in the amount of approximately \$9,000/ year is needed to contract Frontier Geosciences for one year of analyzing rain samples for total mercury. Both of these contracts are a requirement of the NADP.

Related CCMP Action: N-9.4, CCMP Page 3-36

Total Budgeted: \$15,000.00

Expended: \$7,698.50

Not yet Expended: \$7,301.50

Status: NADP monitoring currently underway for October 1st, 2015 to December 31st, 2016 contract. Work is expected to be completed within contract time period.

Table 4: Task B.1 Outputs/Deliverables & Milestones

Task	Start Date	Expected Completion Date
Contract Deliverable 1: Data available online, quarterly reports of results and collection/analytical issues	October 2015	December 2016
Contract Deliverable 2: Annual reporting, periodic status and trends assessments performed by PEP and EPA staff as needed (e.g. 5-year TMDL assessment)	October 2015	December 2016

Anticipated Outcomes

Short Term: The national collaboration of all the partners, including the PEP, who participate in weekly wet deposition sampling for the National Trends Network, is contributing to increased knowledge and awareness of the importance of atmospheric deposition.

Intermediate: Quality control is a key element in sample collection. Practices to ensure samples are not contaminated in any way are taught to sample collectors via workshops and informational updates. In addition, the NADP Management Committee makes recommendations and mandates changes in procedure and equipment as appropriate to improve the accuracy and efficiency of the sampling process.

Change in Pressure Targets: Site specific requirements and recent equipment update mandates have slowed the process of integrating the site to perform Mercury sampling in addition to wet deposition sampling.

Long Term: A long term, national data set is being contributed to with every sample analyzed. This data set will help to determine long term trends and can serve as baseline information as to the elements that make up our atmosphere and how they are circulated across the country.

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

Task B.2: Living Resources, CCMP Tasks, Tasks/Contractor TBD after advertising

Original Task: FY2010 Workplan-Task C: Program Priority Living Resource and CCMP Tasks

Grant Year:

1432

NEP 2010 CE99200217-1

Partners & Roles: Suffolk County Department of Health Services (SCDHS) and Consultant TBD. SCDHS will act as the contracting agency for this project and oversees the development of conceptual design plans for each of the restoration sites to be carried out by a consultant.

Objectives: Funding the conceptual design of top ranked habitat restoration projects identified in the 2009 PEP Habitat Restoration Plan in each of the five east-end towns.

Description:In 2009, the PEP Natural Resource Subcommittee Co-Chairs embarked on an effort to update the 2000 PEP Habitat Restoration Plan (Plan). Funding availability, permitting requirements and other complicating factors have made it difficult for habitat restoration projects to occur within the Peconic Estuary. The first step in trying to increase the frequency and effectiveness of habitat restoration efforts has been taken by updating the Plan, and the next step needed is to attain funding to implement these projects. In attempts to mitigate some of the difficulties associated with initiating restoration efforts and ensure each of the east-end towns has at least one “ready to go” project, the PEP plans to provide funding for the conceptual design of the top ranked habitat restoration project (as per the Plan) in each of the five east-end towns.

Related CCMP Action: HLR-7 CCMP Page 4-40

Total Budgeted: \$100,000.00

Expended: \$0.00

Not yet Expended: \$100,000.00

Status: The Peconic Estuary Conceptual Habitat Restoration Design Plan Services Request for Proposals (RFP) is currently awaiting advertisement in the Suffolk County Contracts Unit. Conceptual habitat restoration designs are requested for four sites: 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.

Table 5: Task B.2 Outputs/Deliverables & Milestones

Task	Expected Start Date	Expected Completion Date
RFP advertisement	April 2016	October 2016
Contracting for Services	October 2016	April 2017
Contract for Services (Tasks 1-6 outlined in RFP)	May 2017	October 2018

Anticipated Outcomes:

Short Term: In order to advance the success and number of habitat restoration projects eligible for funding, it is necessary to develop conceptual design plan that will make permitting and other requirements for these projects able to be fulfilled in a timely manner

Intermediate: 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.

Changes in Pressure Targets: The high cost of habitat restoration projects and the time and effort needed to apply for funding sources and attain permits highlighted the need for the PEP to provide assistance in advance to local governments to scope out site specific habitat restoration project plans. By updating the PEP Habitat Restoration Plan, the program has been able to work closely with the East-End towns to prioritize projects based on their readiness and likelihood of being successful.

Long Term: 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.

Task C.1: Habitat Restoration Plan Implementation

Original Task: FY2011 Workplan- Task b. Program Priority Living Resource and CCMP Tasks

Grant Year:

1569

NEP 2011 CE99200217-2

Partners & Roles: Suffolk County Department of Health Services (SCDHS) and Consultant TBD. SCDHS will act as the contracting agency for this project and oversees the development of conceptual design plans for each of the restoration sites to be carried out by a consultant.

Objectives: Funding the implement one or more of the top ranked conceptual habitat restoration design projects identified in the 2009 PEP Habitat Restoration Plan.

Description: In 2009, the PEP Natural Resource Subcommittee Co-Chairs embarked on an effort to update the 2000 PEP Habitat Restoration Plan (Plan). Funding availability, permitting requirements and other complicating factors have made it difficult for habitat restoration projects to occur within the Peconic Estuary. The first step in trying to increase the frequency and effectiveness of habitat restoration efforts has been taken by updating the Plan, and the next step needed is to attain funding to implement these projects. In attempts to mitigate some of the difficulties associated with initiating restoration efforts and ensure each of the east-end towns has at least one “ready to go” project, the PEP plans to provide funding for the conceptual design of the top ranked habitat restoration project (as per the Plan) in each of the five east-end towns. Using FY 11 funding the next step in the process is to implement one or more of the conceptual design projects.

Related CCMP Action: HLR-7 CCMP Page 4-40

Total Budgeted: \$150,000.00

Expended: \$0.00

Not yet Expended: \$150,000.00

Status: The funds allocated to this task were originally planned to partially fund two habitat restoration projects which were later funded through another grant award. These unspent funds will augment funding the Peconic Land Trust is allocating to a habitat restoration project at Widow’s Hole Preserve in Greenport, NY that will involve non-native species removal restoring degraded saltmarsh and shoreline communities. The preliminary designs for the habitat restoration project are completed and the permits are currently being completed. Peconic Land Trust is doing invasive species removal on the upland portion of the site and has started to collect material for replanting and have set up a small nursery at the Peconic Land Trust Agriculture Center in Southold for transplanting. The project will preserve critical lands in the Peconic Estuary watershed and fulfill the CCMP Action: HLD-2. CCMP Page 4-30.

Table 6: Task C.1 Outputs/Deliverables & Milestones

Task	Expected Start Date	Expected Completion Date
Final Design	December 2015	July 2016
Permit Submittal & Approval	July 2016	January 2017
Procurement Waiver	January 2017	June 2017

Contracting	June 2017	December 2017
Construction	January 2018	June 2019

Anticipated Outcomes:

Short Term: Fund and support a habitat restoration project in the Peconic Estuary watershed.

Intermediate: Fund habitat restoration projects and further the habitat and living resource actions identified in the CCMP. The use of living shorelines will provide an opportunity to analyze the effectiveness of living shorelines in the Peconic Estuary.

Changes in Pressure Targets: PEP will provide assistance to local governments and partners to support habitat restoration project plans.

Long Term: The benefits of habitat restoration efforts will be seen over a long period of time, and 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.

Task C.2: Nitrogen Assessment

Original Task: FY2011- Task f.: Nitrogen Assessment

Grant Year:

1569

NEP 2011 CE99200217-2

Partners & Roles: Suffolk County Department of Health Services (SCDHS), Contractor TBD. SCDHS Office of Ecology will oversee the development and implementation of the fertilizer nitrogen reduction program.

Objective: To develop and implement a fertilizer reduction program in the Peconic Estuary watershed.

Description: A scientific evaluation will be prepared to assess the impacts, potential loading rates and available management practices that reduce or eliminate pollution from fertilizer use in the Peconics. Fertilizer use from residential lawn care is known to be an important contributor of nutrients that impair water quality in the watershed. The information gathered will be used to guide regulators, resource managers, and the general public on action to address this pollution source.

Related CCMP Action: N 3.1 Page 3-21

Total Budgeted: \$155,000.00*

Expended: \$0.00

Not yet Expended: \$155,000.00*

*\$100,000 was allocated to the FY2011 Nitrogen Assessment task. FY2011 funds will be combined with \$55,000 allocated to the FY13 Nitrogen Source Loading Assessment to complete this task.

Status: The original intent of this funding, for a fertilizer reduction program, is currently being conducted by the Suffolk County Department of Economic Development and Planning. Therefore, the Nitrogen Assessment FY2011 funds and Nitrogen Source Loading Assessment FY2013 funds will fund the action identified in the Nitrogen Management action 7N in the PEP 2015-2018 Action Plan. The nitrogen assessment project will assess potential usefulness of nitrogen

mitigation techniques through pilot projects that evaluate innovative technologies and practices to reduce the impact of existing contaminated groundwater on the Estuary, including but not limited to: Permeable Reactive Barriers; Agricultural pilot projects to be identified by the Management Committee; and Bioharvesting (e.g. shellfish, algae aquaculture). An RFP for the nitrogen assessment services will be drafted and finalized by PEP program staff by August 2016.

Table 7: Task C.2 Outputs/Deliverables & Milestones

Task	Expected Start Date	Expected Completion Date
RFP Advertisement	October 2016	March 2017
Contracting	March 2017	October 2017
Contract for Services	October 2017	March 2019

Anticipated Outcomes:

Short Term: Quantify nitrogen load reduction to groundwater entering the Peconic Estuary with experimental pilot projects.

Intermediate: Provide information for policy and management tools to reduce nitrogen in the Peconic Estuary.

Changes in Pressure Targets: This task will result in information to help determine cost-effective management actions to reduce nitrogen loads to the estuary.

Long Term: To improve water quality in the estuary, optimize eelgrass habitat and allow for recertification of closed shellfish areas.

Task C.3: Public education Mini-grants

Original Task: FY2011 Workplan- Task h: Mini-grants

Partners & Roles: Suffolk County Department of Health Services (SCDHS). SCDHS Office of Ecology will oversee the development and implementation of the mini grants.

Description: The PEP has historically offered Mini-Grant opportunities to local entities to carry out small scale projects as they relate to PEP CCMP priorities. The Mini-Grant Program was offered in 2004, 2006, 2009 and 2015. In each round, local municipalities, civic groups, academic institutions and non-profits carried out an array of projects in support of PEP objectives. Currently contracted Partner Grant projects include:

- Conscience Point Shellfish Hatchery Corp.Educational Program Services: Educational materials and brochures for Southampton Town’s Founder’s Day Event and provide an educational program for families and an aquaculture program and bioremediation reef tour.
- Quality Parks, Inc Educational Program Services: Preparation of Quality Parks Master Naturalist educational materials that include information on nutrient pollution reduction, climate change and sea level rise, preserving and restoring landscapes and stormwater runoff reduction via green infrastructure techniques for a certification program entitled “Quality Parks Master Naturalist”. Perform seven promotional sessions and seven educational sessions to the community within the Peconic Estuary.
- Central Pine Barrens Joint Planning and Policy Commission Educational Program Services: Provided training services to educators within the community to facilitate the collection and supply of data to estuary-wide research.Provided a citizen science, research educational program entitled “ A Day in the Life of the Peconic Estuary”.

- Peconic Green Growth Educational Program Services: Map water quality conditions and parcel data in the Peconic Estuary.

Related CCMP Action: M-1.1, CCMP Page 10-16

Total Budgeted: \$20,000.00

Expended: \$5,000.00

Not yet Expended: \$15,000.00

Status: One Mini-grant is completed. Remaining Mini-grant work is underway and one remaining contract is currently being completed by the Suffolk County Contracts Unit.

Table 8: Task C.3 Outputs/ Deliverables & Milestones

Contracts (4) (April, 2015-September, 2016)	Tasks	Status	Start Date	Expected Completion Date
Conscience Point Shellfish Hatchery Corp.	Educational Program Services	Completed	April 2015	N/A- completed
Quality Parks, Inc.	Educational Program Services	Currently completing tasks	April 2015	September 2016
Central Pine Barrens Joint Planning and Policy Commission	Educational Program Services	Tasks completed and waiting for report summarizing tasks	April 2015	N/A- completed
Peconic Green Growth	Educational Program Services	Work completed. Contract currently being finalized	April 2015	May 2017

Anticipated Outcomes:

Short Term: This project will increase awareness of PEP objectives and encourage community involvement projects and programs related to estuarine protection.

Intermediate: The mini-grant program is intended to fund projects that increase and encourage active public participation in protecting and restoring the Peconic Estuary.

Changes in Pressure Targets: The mini grant program allows stakeholders to conduct projects that demonstrated a variety of CCMP outcomes or has solved an immediate stakeholder-identified need in the state.

Long Term: These projects will generate products that assist in long term public awareness of the estuarine environment and/or encourage long term active public participation in protecting and restoring the Peconic Estuary.

Task C.4 : Eelgrass/Bio-Optical Study

Grant Year:

1569

NEP 2011 CE99200217-2

***See Task D.2**

Task D.1: Climate Ready Estuaries CLPS Updates

Original Task: FY2012 Workplan-Task 2012-6: Climate Ready Estuaries: Climate Ready Critical Lands Protection Strategy

Grant Year:
1759
NEP 2012 CE99200217-3

Partners & Roles: The Program Office in the Office of Ecology in the Division of Environmental Quality in the Suffolk County Department of Health Services will issue an RFP from qualified entities.

Objectives: Update the Peconic Critical Lands Protection Strategy, taking into account climate related variables, specifically sea level rise, in order to update acquisition priorities.

Description: Generally, acquisitions, conservation easements, and purchases of development rights are tracked by the Peconic Estuary Program and the towns. Developed parcels can be removed from the available lands inventory. The criteria originally used to prioritize available parcels have not been reviewed or updated in a substantial way in about 10 years. With the availability of good climate change projections and the recent development of local, reliable, GIS-based sea level rise prediction tools through the PEP and the Nature Conservancy, the PEP would like to update its Critical Lands Protection Strategy, taking into account climate related variables, specifically sea level rise in order to update acquisition priorities.

We envision overlaying the 50 and 100 year sea level rise predictions over the CLPS maps, and re-evaluating the original prioritization strategy. The product of this CLPS re-evaluation would be a new Critical Lands Protection Strategy and new maps prioritizing parcels for protection/acquisition with the goal of protecting water and habitat quality. This updated, climate-ready, strategy would be used by State, County, Town, and Village governments to assist in their open space preservation and land acquisition planning and would inform local and regional smart-grown initiatives. It would also be used by non-profit organizations which seek to preserve and protect the environment through the preservation of critical lands. Finally, it could be used to inform outreach efforts that encourage private citizens and organizations to consider selling land, development rights, or conservation easements to such municipal or not-for-profit entities for the purpose of water quality and habitat protection. This strategy would serve as an example for climate-based modifications to land protection and development in other coastal communities on Long Island and throughout the country.

Related CCMP Action:CLPP-1.-7. CCMP Page 7-14.

Total Budgeted: \$63,381.00*

Expended: \$0.00

Not yet Expended: \$63,381.00*

*Reallocated \$320 funds to Task D.1: \$20, 878.39 (FY09 Public Participation, CCE (incl. Ag Stew)); \$153 (FY09 Conceptual Habitat & Land Use); \$3,550 (FY11 US Geological Survey- Water Qual Mont); \$8,800 (FY11 PEP Talk Newsletter) (Refer to Table 2).

Status: The Peconic Estuary Climate Ready Assessment Services RFP is currently awaiting advertisement in the Suffolk County Contracts Unit. This Services will include Project 1: Climate Change Assessment of the PEP Critical Lands Protection Strategy, and Project 2: Peconic Estuary Program and Shinnecock Indian Nation ("SIN") Climate Vulnerability Assessment. Combining the reallocated FY09 and FY11 funds with FY12 funds allocated for Climate Ready Estuaries CLPS Updates (\$35,000.00) with FY14 funds allocated for Climate Vulnerability Assessment (\$30,000.00).

Table 9: Task D.1 Outputs/Deliverables & Milestones

Tasks	Expected Start Date	Expected Completion Date
RFP advertisement	June 2016	November 2016
Contracting for Services	November 2016	June 2017
Contract for Services (Project 1: Tasks 1-4 and Project 2: Tasks 1-3 outlined in RFP)	June 2017	December 2018

Anticipated Outcomes:

Short Term: This project will result in the creation of a new, Climate-Ready Critical Lands Protection Strategy for the Peconic River. This revision to the existing strategy will result in the generation of new maps prioritizing land parcels for acquisition and protection with the goal of protecting water and habitat quality. Additionally, the Services are required in order for the PEP and SIN to be able to assess the climate change vulnerabilities of the environmental restoration and protection programs of both the PEP and SIN (Project to be initiated in 2016 and completed in 2017).

Intermediate: Like the original critical lands prioritization, this new strategy, that prioritizes parcels based on climate predictions as well traditional criteria, will be used by the Peconic Estuary Program, Suffolk County, other municipalities within the Peconic Estuary watershed, and other Program partners, such as non-profit organizations, to target land acquisition and protection efforts to maximize the benefits to the Peconic Estuary. The Services will also identify methods to ensure that current and future programmatic actions take climate risks and vulnerabilities into account in all phases of planning, designing, and execution by assessing how the PEP's [Comprehensive Conservation and Management Plan](#) ("CCMP") priorities and the SIN management plan will most likely be affected by climate change.

Changes in Pressure Targets: This project addresses a major change in the paradigm of land protection and acquisition. The criteria used ten or fifteen years ago to determine a parcel's suitability for protection are being re-considered in light of new information about climate change and predictions of its effects in the region, especially sea level rise.

Long Term: This project will result in the protection and acquisition of lands that 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: (not applicable)

Task D.2: Eelgrass/Bio-Optical Study

Original Task: FY2012 Workplan- Task 2012-5 :Eelgrass light/temperature thresholds and Peconic Estuary Bio-optical model

Grant Year:
1759

NEP 2012 CE99200217-3

Partnerships & Roles: The Program Office in the Office of Ecology in the Division of Environmental Quality in the Suffolk County Department of Health Services will a contract with The Research Foundation of State Univeristy of New York at Stony Brook.

Objectives: This task will fund two related eelgrass research projects to examine the combined effects of light and temperature on eelgrass physiology and survival. It will help us better understand the causes of the decline in eelgrass over the last few decades and allow us to develop a targeted management strategy to address the factors causing a continued decline and preventing the population from rebounding. It will also inform the PEP restoration strategy and ultimately, increase restoration success.

Description: A RFP will be issued by Suffolk County to solicit proposals from Stony Brook University, Cornell Cooperative Extension, and any other interested parties. This information will provide an improved site suitability index and an improved ability to make management decisions for eelgrass protection and restoration within the Peconic Estuary.

Building on a previous PEP-funded project, specific light, temperature, and combined light-temperature thresholds for eelgrass health and survival will be developed for the Peconic Estuary by measuring physiological parameters in eelgrass plants during the critical times of high-temperature, low-light, and high shoot mortality. This will result in an improved site suitability index for eelgrass restoration, improved understanding of the combined effects of multiple stressors, increased success of future restoration efforts, and the ability to target preservation and restoration efforts differently in different areas of the estuary, if necessary.

This project will develop a bio-optical model specific to the Peconic Estuary, quantifying the relative contributions of water-column constituents to light attenuation. This will allow us to determine what the causes of reduced water clarity are, identify which components are dominant in different zones of the estuary, and will quantify the relative contribution from phytoplankton (one main pathway of the effect of increased nitrogen loading). This information is a critical step in the path toward quantifying the nitrogen load that the estuary can tolerate and the setting of nitrogen load limits designed to preserve the natural ecosystem in the Peconic Estuary.

Related CCMP Action: N-1.2 CCMP page 3-22, HLR 6.1, 6.2, 7.5, 8.3, 16

Total Budgeted: \$82,000.00 (FY11 \$35,311 & FY12 \$46,689)

Expended: \$0.00

Not yet Expended: \$82,000.00

Status: Eelgrass Assessment Services Contract is currently being finalized and contract services with the Reasearch Foundation at SUNY Stony Brook will being May 1, 2016.

Table 10: Task D.2 Outputs/Deliverables & Milestones

Tasks	Description	Expected Start Date	Expected Completion Date
Contract Task 1	Quality Assurance Project Plan	May 2016	April 2018
Contract Task 2	Field Sampling and Analysis of Water Quality and Bio-Optical Model		
Contract Task 3	Light, Temperature and Combined Thresholds for		

	Eelgrass Survival		
Contract Task 4	Site Suitability Index		
Contract Task 5	Reporting		

Anticipated Outcomes:

Short Term: Optical model (to determine what is decreasing light available to eelgrass, and what pollutants or activities need to be managed, including determining nitrogen loads for eelgrass protection (in addition to achieving dissolved oxygen standards)) .Peconic-specific light and temperature thresholds for eelgrass survival (including the combined effects).

Intermediate: 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.

Changes in Pressure Targets: Habitat restoration efforts have not been extremely successful in the past so revision of the habitat suitability indices used to select restoration sites is required. The impacts of rising water temperatures on eelgrass survival and habitat restoration success has emerged as an important issues and is being incorporated into ongoing eelgrass protection and restoration efforts through this study.

Long Term Outcomes: Recovery of eelgrass in the Peconic Estuary, providing enhanced habitat for shellfish and finfish, improved sediment stability and oxygenation.

Clean Water Act Core Programs: (potentially: water quality standards, TMDLs, water quality)