Cornell Cooperative Extension Marine Program

Cornell Cooperative Extension of Suffolk County
Suffolk County Marine Environmental Learning Center
3690 Cedar Beach Road
Southold, New York 11971
631-852-8660

March 14, 2025

Dear Ms. Fenlon,

Thank you for the continued opportunity to work with the Town of Southampton on CCE Marine Program's habitat and shellfish restoration initiatives and water quality improvement efforts based out of Tiana Bayside Facility. For this year's grant request we are proposing both a continuation of this work, as well as an expansion of related efforts to enable additional shellfish and habitat restoration areas to be supported in Quogue, East Quogue, and Sag Harbor. We look forward to the possibility of moving ahead with our proposed *Multi-Species, Ecosystem Approach to Habitat Restoration and Water Quality Improvement in Southampton Town Waters*.

Included in our application package you will find the 2025 CPF Application & Budget Form, EAF, Photos/Maps of restoration area, and detailed supplemental narrative documents that further clarify our proposed restoration, monitoring, and stewardship work.

Thank you again for your consideration of this current grant request and continued support of our existing efforts designed to enhance our marine and coastal environment in the Town of Southampton.

Sincerely,

Kimberly Barbour
Back to the Bays Initiative Director
Cornell Cooperative Extension Marine Program

TOWN OF SOUTHAMPTON
Department of Community Preservation
24 W Montauk Hwy, Hampton Bays, NY 11946
Ph: 631-287-5720 Fx: 631-728-1920
WQIP@southamptontownny.gov

Entity: CCE Marine Program
Project Name: Multi-species, Ecosyste

2025

COMMUNITY PRESERVATION FUND (CPF)
WATER QUALITY IMPROVEMENT PROGRAM
CHECKLIST/APPLICATION INSTRUCTIONS

The CPF Water Quality Improvement Project Plan (WQIPP) Fund follows the objectives in the adopted Water Quality Improvement Project Plan (see http://www.southamptontownny.gov/WQIPP)

To apply for funding, an application must be COMPLETED and submitted along with detailed narratives and supporting information as described below. The Water Quality Advisory Committee will rank and score projects based on the Scoring Criteria contained in the application materials. Parcel acquisitions will be considered on an ongoing basis, independent of this application process.

Note: Electronic application submission required and 4 - full printed sets of application, site plan and narrative.
Upload application at www.southamptontownny.gov/WQIPPSUBMISSION
A Public Hearing and Town Board Resolution will be required for individual or multiple projects.

WATER QUALITY IMPROVEMENT PROJECT MEANS:

[1] DEFINITIONS:

1. **Wastewater Treatment Improvement Project** means the planning, design, construction, acquisition, enlargement, extension, or alteration of a wastewater treatment facility, including alternative systems to a sewage treatment plant or traditional septic system, to treat, neutralize, stabilize, eliminate or partially eliminate sewage or reduce pollutants in treatment facility effluent, including permanent or pilot demonstration wastewater treatment projects, or equipment or furnishings thereof. Stormwater collecting systems and vessel pumpout stations shall also be included within the definition of a wastewater improvement project.

2. **Nonpoint Source Abatement and Control Program Projects** developed pursuant to section eleven-b of the soil and water conservation districts law, title 14 of article 17 of the environmental conservation law, section 1455b of the federal coastal zone management act, or article forty-two of the executive law;

3. **Aquatic Habitat Restoration Project** means the planning, design, construction, management, maintenance, reconstruction, revitalization, or rejuvenation activities intended to improve waters of the state of ecological significance or any part thereof, including, but not limited to ponds, bogs, wetlands, bays, sounds, streams, rivers, or lakes and shorelines thereof, to support a spawning, nursery, wintering, migratory, nesting, breeding, feeding, or foraging environment for fish and wildlife and other biota.

4. **Pollution Prevention Project** means the planning, design, construction, improvement, maintenance or acquisition of facilities, production processes, equipment or buildings owned or operated by municipalities for the reduction, avoidance, or elimination of the use of toxic or hazardous substances or the generation of such substances or pollutants so as to reduce risks to public health or the environment, including changes in production processes or raw materials; such projects shall not include incineration, transfer from one medium of release or discharge to another medium, off-site or out-of-production recycling, end-of-pipe treatment or pollution control.

5. **The Operation of the Peconic Bay National Estuary Program**, as designated by the United States Environmental Protection Agency. Such projects shall have as their purpose the improvement of existing water quality to meet existing specific water quality standards. Projects which have as a purpose to permit or accommodate new growth shall not be included within this definition

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COMMUNITY PRESERVATION FUND (CPF)

WATER QUALITY IMPROVEMENT PROGRAM

PROPOSAL SUMMARY

Project Applicant: Kimberly Barbour, Cornell Cooperative Extension Marine Program
Project Title: Multi-species, Ecosystem Approach to Habitat Restoration and Water Quality Improvement within Southampton Town Waters
Project Manager Name: Kimberly Barbour
Entity Anticipating Grant and Funding: Cornell Cooperative Extension of Suffolk County, Marine Program

Contact 1:

Name	Kimberly Barbour
Title	Senior Resource Educator
Organization	Cornell Cooperative Extension
Address	
Phone	631-461-5294
Email	kp237@cornell.edu

Contact 2:

Name	
Title	
Organization	
Address	
Phone	
Email	

Property owner (if different from Project manager organization):

Name	Town of Southampton
Affiliation	
Organization	Department of Parks and Recreation
Address	6 Newtown Road, Hampton Bays NY 11946
Phone	631-728-8585
Email	parksandrec@southamptontownny.gov

Project Address: 89 Dune Road, Hampton Bays NY (multiple locations - see supplemental) SCTM #(S) 4722689 386.000-00001.029.000

Type of Project (Check all that apply):
☐ Reduction ☑ Remediation ☑ Restoration

Project Summary: (Provide a brief narrative description of proposed WQIPP project)

In order to enable continuation and expansion of the ongoing habitat and shellfish restoration efforts being conducted by Cornell Cooperative Extension's Back to the Bays Initiative in the Town of Southampton, funds are being requested to support a multi-species, ecosystem approach to water quality improvement and habitat restoration. This project will include eelgrass restoration, hard clam and bay scallop restoration, oyster reef restoration, and coastal plant restoration activities. Funds would enable Tiana Bayside Facility-based shellfish and coastal plant nursery operations to continue, and enable the identification and establishment of additional growout locations within the Town. The primary areas of focus for restoration activities will be Quogue, East Quogue, Hampton Bays, and Sag Harbor.

In addition to utilizing CCE's proven multi-species restoration methodologies to achieve success, community stewardship and local student involvement opportunities will be made available, furthering the impact of the habitat restoration and water quality improvement goals of this proposed project. Long-term monitoring protocols will also be designed and implemented, to further gauge impacts of restoration activities.

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If additional information is needed to describe the project; a project narrative can accompany the application. Please limit the narrative to approximately 3 pages of project description, provide a summary of water quality benefits/objectives of approximately 2 pages and provide a cost estimate of approximately 2 to 4 pages with supporting estimates. Any additional materials should be focused specifically on the proposed project with references to other studies that are pertinent

1. PROJECT TYPE (check all that apply)

Must meet at least one of the definitions of "Water Quality Improvement Project" per State Law Chapter 551 cited above. Check all that apply. **Note: Monitoring costs are only potentially eligible for CPF funding within Aquatic habitat restoration projects.**

- [ ] Wastewater Treatment Improvement Project
- [ ] Non-point source abatement and control
- [x] Aquatic habitat restoration
- [ ] Pollution prevention
- [ ] Operation of Peconic Bay National Estuary Program (Grant Match)

2. PRIORITY AREA(S) (check all that apply)

Priority areas are defined in the Water Quality Improvement Project Plan (WQIPP).

- [x] 303(d) Impaired
- [ ] Peconic Estuary Program - PEP map
- [x] High
- [ ] Medium
- [ ] Outside High and Medium priority areas*

*If Outside High and Medium priority areas, explain how the project is relevant to WQIPP goals.

The areas in which work will be conducted are considered high priority and impaired, per the following maps in the WQIPP: East Quogue, pg. 26; Quogue, pg. 51; Hampton Bays pg. 34; Sag Harbor pg. 52.

3. PROJECT DESCRIPTION

3a. Existing conditions of applicable groundwater/sub-watershed/waterbody and most recent and relevant data available (provide sources).

The proposed restoration sites for the coastal and marine habitat restoration efforts have all been identified as areas capable of supporting such restoration activities. All sites where proposed work will be conducted as part of CCE Marine Program's Back to the Bays Stewardship Site network which has been designed to establish long-term receiving areas for various shellfish and habitat restoration efforts. Sites have been selected to have the highest impact on water quality improvement in areas within Quogue, East Quogue, Hampton Bays and Sag Harbor.

3b. How the proposed solution addresses the issue in the context of Reduction, Remediation and/or Restoration as per the CPF Water Quality Project Plan. Note all remediation and restoration projects must assure that reduction measures are also addressed.

This project specifically addresses the priority action of "Restoration of Coastal and Marine Habitats". By reducing loading generated by stormwater, groundwater inputs and atmospheric deposition through targeted habitat and shellfish restoration activities, reduction in nutrients, increased carbon sequestration and overall improvement in water quality will be realized. The plant and animal species affiliated with these projected improvements and a quantification of expected reductions are further outlined in the supplemental.

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3c. Describe the proposed technology and its demonstrated efficacy in similar settings. May include published data.

CCE has been conducting shellfish, eelgrass and wetland restoration for over 30 years, and are a local leader in developing successful restoration methodologies.

3d. How the project supports Town of Southampton, Suffolk County, NYSDEC, Long Island Nitrogen Action Plan (LINAP) or other adopted goals/policies (provide references with pages numbers).

This project supports many objectives of the WQIPP including Shellfish Restoration (p. 87) and Coastal Habitat Restoration (p. 89) in addition to meeting goals in the Trustee's Marine Resources Management Plan (p. 21, p.26). LINAP Scope document mentions bioextraction goals and coastal restoration (Section 6.1), both to be achieved as part of this project.

3e. Review the following statements and indicate whether they are applicable to your project. For all "Yes" responses, please indicate how your project addresses the requirements indicated.

YES	N/A	
☐	☑	**If stormwater system or drainage is proposed:** The project must indicate compliance with the New York State Stormwater Design Manual (2015 and as updated).
☐	☑	**If project is related to farmland:** Describe any Agricultural Stewardship Plan or other long term strategy for Nitrogen abatement.
☑	☐	**If the project is for habitat restoration:** The narrative must address how underlying causes are being ameliorated and expected outcomes for local species populations or other ecological considerations are given.
☐	☑	**If project is a Sewage Treatment Plant (STP) or cluster treatment system:** Fund allocation request is based on cost for reduction of pre-existing conditions and not for purpose of accommodating new density (describe pre-existing density and associated flow (gallons per day) and total projected nitrogen reduction in narrative). Include detailed information on how many homes the system would treat as well as potential for formation of Sewer District, if required by Suffolk County Health Department or Town Law.
☐	☑	**If the project is requesting grant match:** Include information related to funding program source and purpose of application and any relevant items on this checklist. Note: A Town Board resolution will be required in order to encumber matching funds for grant applications.

4. WATER QUALITY BENEFIT

4a. Identify Nitrogen, Pathogen or Pollutant of Concern (POC) including Existing Condition and Target Reduction.

-The primary pollutant of concern targeted through these proved efforts is nitrogen. Currently, the largest source of nitrogen in Long Island's water bodies is waste water. Planktonic algae bloom in the presence of excess nutrients, like nitrogen. Shellfish are effective filter feeders, and therefore, indirectly capable of removing nutrients from the water column (Newell, R. 2004; Rose, J. et al. 2015; Alber and Valiela, 1996). Eelgrass and salt marsh cordgrass are also adapted to uptake nitrogen directly from the water column and from the sediments.
-The secondary pollutant of concern is inorganic carbon (carbon dioxide), which has increased from fossil fuel use, leading to climate change. These plants are also highly effective carbon sinks, absorbing carbon dioxide during photosynthesis and storing it in their extensive root systems and sediments for 100s and 1000s of years. (for more detail and background see attached supplements)
-By targeting these pollutants with a multi-species approach, essential habitats will also be restored including oyster reefs, eelgrass meadows, and salt marshes.

4b. Describe plans for collecting and reporting on water quality over time.

The final number of shellfish produced and seeded will be documented, and survival and growth will be monitored in order to provide a projection of estimated nutrient reduction in the final project report. The expected benefit of shellfish restoration as proposed will expand beyond 5 years.

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4c. Indicate useful life of proposed technology (must meet or exceed five years).

The majority of plants and animals being produced for the purposes of this project are expected to survive at least five years (18-24 mos. for bay scallops), and contribute to the natural populations through spawning (shellfish), and vegetative propagation and seed spreading (eelgrass and coastal plants).

5. COST FACTORS

5a. Explain how you have confirmed that the proposed budget is reasonable, appropriate and necessary. If available, provide third party estimates or other documentation of how costs were determined.

CCE will be requesting 54% of the true cost of this project from the Town. Given the number of species being worked with and restoration methodologies employed to conduct this project, ample funds must be provided to support the percentage of CCE's infrastructure and staff time needed to carry out the proposed objectives.

5b. Describe any matching funds to be provided.

CCE will provide matching funds in the form of fringe benefit rate for salaries included in project, volunteer hours, private funds from foundation grants, and fundraising activities will also be applied.

5c. Explain: i. Why project cannot proceed and intended benefits cannot be achieved without external funding.
ii. if funds are awarded at a lower level than requested, or if there are cost overruns, explain how the project will proceed.

Funds are needed to enable work to continually be conducted at Tiana Bayside Facility in support of Town water quality and habitat restoration goals. Expansion of efforts to include operation of the Pine Neck facility to support increased need for shellfish and habitat nursery production within Southampton Town; as well as expansion and continuation of the restoration work being conducted at the Quogue and Sag Harbor Back to the Bays Stewardship Sites will help ensure the highest impacts to water quality improvement in these waterbodies will be achieved. CCE has historically and will continually seek supplemental funds to ensure annual plantings and stewardship activities may take place, but Town support enables these efforts to be done at a more meaningful level.

6. MANAGEMENT, EXPERIENCE, ABILITY

6a. Describe applicant's experience in completing similar projects.

CCE has successfully completed a multi-year project to lay the framework for long term eelgrass and shellfish cultivation and restoration in the sanctuary off Tiana Bayside, and more recently in the waters off of Sag Harbor and Quogue. The monitoring efforts conducted at these sites indicate a successful effort that this current project will build upon. CCE also has extensive coastal restoration experience that will be applied. Access to and involvement by CCE's aquaculture experts, habitat restoration scientists, field staff, interns and volunteers help ensure projects of this scale and nature are consistently able to be completed successfully.

6b. Describe community support or opposition to project. If there is opposition, explain how this is to be addressed.

CCE has received an incredible amount of support from local residents, community organizations, schools, and visitors of the Tiana Bayside Property, and volunteers part of our Back to the Bays Stewardship Site efforts. Our enclosed letters of support identify some of the key partners involved in our Quogue, Sag Harbor and Hampton Bays based Back to the Bays Stewardship Sites, and outline their commitment to be part of this important work which ranges from helping us grow shellfish and coastal plants, assisting in generating funds to utilize as match for this project, and participating in the stewardship sessions that will be offered to elevate the awareness and involvement in this important work.

6c. Describe any permits needed and time frame/status of approvals. If permits are approved, indicate same.

We currently have all permits in place to conduct the proposed shellfish and eelgrass restoration work at the 3 Stewardship Sites we are proposing an expansion of work at. Our existing DEC permit and Town Trustee permissions will enable our oyster reef, clam and scallop planting, marsh gras grow out and eelgrass related work to continue at these sites.

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7. MAINTENANCE, MONITORING, EVALUATION

Estimate ongoing maintenance costs and explain how these will be supported. Explain stewardship and monitoring activities planned for ensuring sustainability of the project.

CCE is committed to keeping the restoration work and educational stewardship work being conducted at our Stewardship Sites going for the long term. Revenue and fundraising in support of these efforts at these locations will ensure at least a baseline of annual activities will continue at this site, with expansion being made possible with grants such as this.

8. DURATION OF PROJECT

8a. Provide a projected project timeline. Note: The Committee will only make recommendations for shovel-ready projects that can commence this fiscal year.

*Feb-March: Planning, permissions for Restoration Raft installation, refinement of long-term monitoring protocols to ensure measurable impacts of restoration work can be quantified;
*April-May: Shellfish spawning, gear construction + set up, coastal plant propagation, installation of Restoration Rafts, pre-deployment monitoring;
*June-August: Shellfish nursery and growout, buoy deployed eelgrass seeding, oyster reef deployment;
*Sept-Dec: Clam and bay scallop seeding, eelgrass planting;
*Dec-March: Final report on activities completed;
*Monthly stewardship sessions will be held for duration of project period.

8b. If project is multi-year or phased, provide a breakdown of budget and milestones for each year and phase.

Funds requested will support the proposed restoration over a one-year timeframe and initial monitoring will provide a baseline. It is envisioned that all of these efforts will continue on a multi-year basis in order to realize the highest degree of restoration success and water quality improvement, should long-term funding be made available.

9. ATTESTATION

Allocation of CPF funds will not be for the purpose of accommodating new growth, as this is prohibited by State law.
Check all boxes & sign.

- ☑ We certify that funds will not be directed for projects for the purpose of accommodating new growth.
- ☑ We understand that progress reports will need to be generated as specified in our Water Quality Improvement Contract AND a final report showing qualitative and/or quantitative data will be generated upon project completion.
- ☑ I authorize the subject property to be inspected by Town Personnel.

Signature:_____ Date 3/14/25

10. I understand this is a reimbursement Grant and will submit proof of payment and final documents as needed.

Signature:_____ Date 3/14/25

11. REQUIRED ATTACHMENTS Confirm that the following required documents are attached to this application:

- ☑ Photos of existing conditions
- ☑ Location Map
- ☑ State Environmental Quality Review Act (SEQRA) Long or Short Environmental Assessment Form (EAF) https://www.dec.ny.gov/permits/6191.html
- ☐ Completed EPA Spreadsheet Tool for Evaluating Pollutant Load (STEPL) https://www.epa.gov/nps/spreadsheet-tool-estimating-pollutant-loads-stepl or similar standardized methodology (describe)
- ☑ Project budget (see attached template)
- ☑ Ownership commitment is provided via letter of intent (LOI) for non-municipal owners or municipal resolution for municipal owners
- ☐ Public agencies must complete SEQRA on the project and submit determination of significance and associated documentation.

12. OTHER ATTACHMENTS

List other attachments provided, including cost estimates, bids, plans, documentation of matching funds, and other as appropriate to demonstrate project readiness, quality, feasibility, and cost effectiveness.

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BUDGET PROPOSAL

Is the applicant incorporated or organized as a Not-for-Profit corporation or Not-for Profit limited liability company?
☑ Yes ☐ No **(If Yes, please submit a copy of the Certificate of Incorporation/Organization with this application)**
Is the applicant a municipality? ☐ Yes ☑ No
If yes, please enter the request date or anticipated request date of RFP (Request for Proposals) _____.

PLANNING/ENGINEERING/DESIGN	Town CPF Request	Matching Funds Committed	Matching Funds Pending	Estimated Total Project Costs
Task 1-Permitting, Site Planning, Restoration Design	$-28,000.00	$-12,000.00	$-	$-40,000.00
Task 2-Eelgrass Suitability Survey and Test Plantings	$-20,000.00	$-0.00	$-	$-20,000.00
Task 3-Long Term Water Quality Monitoring Design	$-10,000.00	$-5,000.00	$-	$-15,000.00
Task 4-	$-	$-	$-	$-0.00
Task 5-	$-	$-	$-	$-0.00
Task 6-	$-	$-	$-	$-0.00
	$-	$-	$-	$-0.00
Planning/Engineering/Design Cost Total	$-58,000.00	$-17,000.00	$-0.00	$-75,000.00

Contractual Services				
N/A	$-	$-	$-	$-0.00
	$-	$-	$-	$-0.00
	$-	$-	$-	$-0.00
	$-	$-	$-	$-0.00
	$-	$-	$-	$-0.00
	$-	$-	$-	$-0.00
	$-	$-	$-	$-0.00
Contractual Services Cost Total	$-0.00	$-0.00	$-0.00	$-0.00

Construction & Site Improvements				
Establishment of New Coastal Plant + Shellfish Nursery Operation (Quogue)	$-40,000.00	$-10,000.00	$-	$-50,000.00
Establishment of New Coastal Plant + Shellfish Nursery Operation (Sag Harbor)	$-40,000.00	$-10,000.00	$-	$-50,000.00
Operation + Maintenance of Existing Tiana Bayside Coastal Plant + Shelfish Nursery	$-25,000.00	$-5,000.00	$-	$-30,000.00
Eelgrass Restoration Plantings + Workshops	$-30,000.00	$-20,000.00	$-	$-50,000.00
Spat-on-Shell Oyster + Clam Production, Planting and Surveys	$-75,000.00	$-8,000.00	$-	$-83,000.00
Bay Scallop Production, Planting and Surveys	$-57,000.00	$-0.00	$-	$-57,000.00
	$-	$-	$-	$-0.00
Construction & Site Improvements Cost Total	$-267,000.00	$-53,000.00	$-0.00	$-320,000.00

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Equipment/Materials/Supplies	Town CPF Request	Matching Funds Committed	Matching Funds Pending	Estimated Total Project Costs
Restoration Rafts (modified FLUPSYs)	$-10,000.00	$-10,000.00	$-	$-20,000.00
Buoy Deployed Eelgrass Seeding Array	$-0.00	$-2,200.00	$-	$-2,200.00
Bay Scallop Cultivation and Monitoring Gear	$-1,500.00	$-0.00	$-	$-1,500.00
Greenhouse for new Coastal Plant Nursery Operation (Quogue)	$-1,200.00	$-0.00	$-	$-1,200.00
Deer Proof Raised Garden Bed Materials (3 @1,675)	$-1,675.00	$-3,350.00	$-	$-5,025.00
Raceways for Eelgrass Seed Storage (3 @ $375)	$-1,125.00	$-0.00	$-	$-1,125.00
Vehicle Expenses (Mileage @ .70/mile)	$-1,750.00	$-0.00	$-	$-1,750.00
				$ 0.00
				$ 0.00
				$ 0.00
				$ 0.00
				$ 0.00
				$ 0.00
				$ 0.00
Equipment/Materials/Supplies Total	$-17,250.00	$-15,550.00	$-0.00	$-32,800.00

Additional Cost				
Matching Salary Funds	$-	$-205,985.00	$-	$-205,985.00
Volunteer Time (@33.49/hr)	$-	$-	$-34,000.00	$-34,000.00
Indirect Rate (16.41% Negotiated Federal Rate)	$-56,163.00	$-	$-	$-56,163.00
FLUPSY Fabrication + BUDs set up	$-	$-10,000.00	$-	$-10,000.00
	$-	$-	$-	$-0.00
	$-	$-	$-	$-0.00
	$-	$-	$-	$-0.00
Additional Cost Total	$-56,163.00	$-215,985.00	$-34,000.00	$-306,148.00

Planning/Engineering/Design Cost Total (from page 7)	$-58,000.00	$-17,000.00	$-0.00	$-75,000.00

Total Project Cost	$-733,948.00
Applicant matching funds committed	$-301,535.00
Applicant matching funds pending approval (e.g. grant request submitted pending determination)	$-34,000.00
Total CPF Funds Requested	$-398,413.00

Source of matching funds	Amount
Back to the Bays Fund	$ 73,350.00
Fringe Benefit Package Rate + Matching Salary Funds	$ 205,985.00
NYS DOS South Shore Estuary Reserve Eelgrass Project Grant	$ 22,200.00

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COMMUNITY PRESERVATION FUND (CPF)
WATER QUALITY IMPROVEMENT PROGRAM
LETTER OF INTENT

APPLICANT'S INFORMATION

Owner: Cornell Cooperative Extension of Suffolk County
Contact First and Last Name: Kimberly Barbour
Contact Address: 423 Griffing Ave., Riverhead, NY 11901
Contact Phone: 631-461-5294
Contact Email: kp237@cornell.edu

CONTRACT RECIPIANT INFORMATION

Name/Organization: Cornell Cooperative Extension of Suffolk County
Contact Person/Officer: Vanessa Lockel
Contact Address: 423 Griffing Ave., Riverhead, NY 11901
Contact Phone: 631-727-7850
Contact Email: vl332@cornell.edu

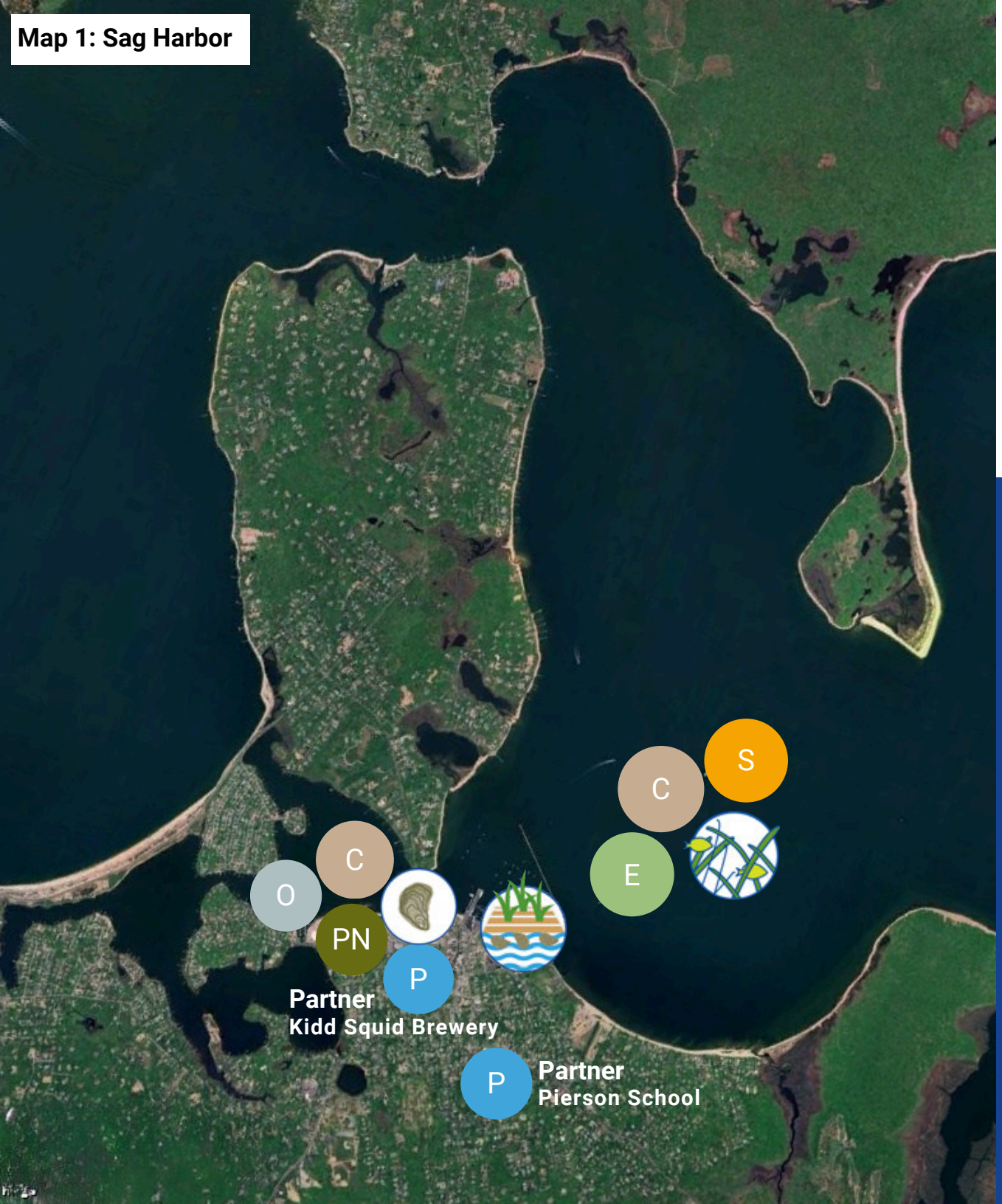
PROJECT INFORMATION

Project Title: Multi-species, Ecosystem Approach to Habitat Restoration and Water Quality Improvement within Southampton Town Waters
Project Location: Tiana Bayside Facility, 89 Dune Road, Hampton Bays NY (multiple locations - see supplemental)
Project Description (1-3 sentences):

In order to enable continuation and expansion of the ongoing habitat and shellfish restoration efforts being conducted by Cornell Cooperative Extension's Back to the Bays Initiative in the Town of Southampton, funds are being requested to support a multi-species, ecosystem approach to water quality improvement and habitat restoration. This project will include eelgrass restoration, hard clam and bay scallop restoration, oyster reef restoration, and coastal plant restoration activities. Funds would enable Tiana Bayside Facility-based shellfish and coastal plant nursery operations to continue, and enable the identification and establishment of additional growout locations within the Town. The primary areas of focus for restoration activities will be Quogue, East Quogue, Hampton Bays, and Sag Harbor.

ANTICIPATED PROJECT TIMELINE

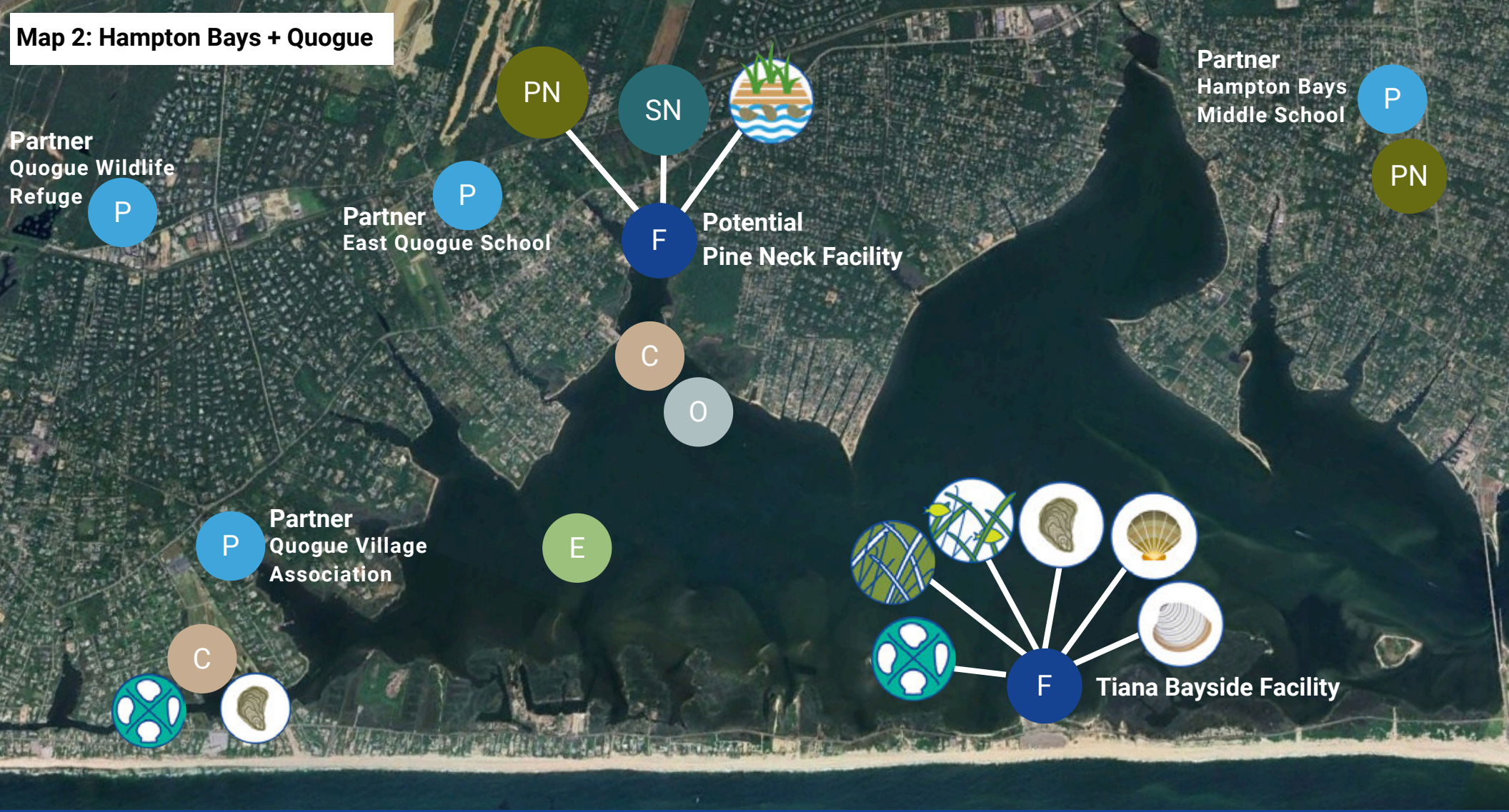
Begin: 3/1/26
Complete: 3/31/27
Notes:



Existing + Potential Restoration Activity Maps

Existing sites represent areas that CCE has received permits/permissions and has established various growout and planting activities. These sites are already in CCE's network of long-term Back to the Bays Stewardship Sites. Potential sites represent the areas that CCE would like to expand to as part of the project currently being proposed. The necessary site evaluation, design, and permissions will be obtained as part of the Planning and Design phase.

- Existing Oyster Reef
- O — Potential Oyster Reef
- S — Potential Scallop Sanctuary
- C — Potential Clam Sanctuary
- Existing Restored Eelgrass Meadow
- E — Potential Restored Eelgrass Meadow
- PN — Potential Coastal Plant Nursery
- Potential Restoration Raft Site



Existing Oyster Reef

Existing Scallop Sanctuary

Existing Coastal Plant Nursery

O Potential Oyster Reef

Existing Restored Eelgrass Meadow

PN Potential Coastal Plant Nursery

Existing Clam Sanctuary

E Potential Restored Eelgrass Meadow

Existing Shellfish Field Nursery

C Potential Clam Sanctuary

Potential Restoration Raft Site

SN Potential Shellfish Field Nursery

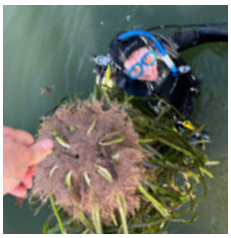
SHELLFISH + HABITAT RESTORATION
in Southampton Town Waters

BACK TO THE BAYS
Cornell Cooperative Extension | Marine Program

Overview

Cornell Cooperative Extension Marine Program has been “giving back to the bays” since 1985. CCE and Southampton Town have a long history of working together to meet goals in water quality improvement, marine habitat restoration, education and community stewardship. As regional leaders in coastal and marine restoration, we have made significant progress in enhancing the health of Southampton Town waters. Through the Back to the Bays Initiative we work with local supporters and stewards to provide meaningful involvement in this important work. The proposed project will continue and expand efforts in our Sag Harbor, Hampton Bays, and Quogue Stewardship Sites.

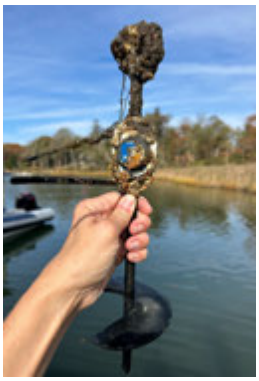




2026 Restoration + Water Quality Improvement Targets

Habitat + Coastal Plants

CCE aims to expand the eelgrass meadows in Sag Harbor and Shinnecock Bay, and perform site assessments for new plantings. Tiana Bayside’s coastal plant nursery will be maintained, and new gardens and marsh grass rafts will be established.



Monitoring Protocols

The highest level of water quality improvement can be achieved with a long-term commitment to monitoring the impacts and success of our restoration work. CCE is developing protocols based on published and experimental best practices.

Shellfish + Oyster Reefs

CCE‘s shellfish hatchery team will expand production of hard clams, bay scallops, and spat-on-shell oysters for grow-out and seeding in town waters, helping to improve water quality while offering enhanced hands-on community education opportunities.

Stewardship

Back to the Bays Stewardship Sessions provide involvement opportunities for local students, interns, and citizens to assist in our restoration and monitoring efforts, which both educates the public and increases the capacity and scope of our work.

SHELLFISH + HABITAT RESTORATION
in Southampton Town Waters

BACK TO THE BAYS
Cornell Cooperative Extension | Marine Program

Project Summary

In order to enable continuation and expansion of the ongoing habitat and shellfish restoration efforts CCE is conducting in the Town of Southampton, funds are being requested to support the following:

Eelgrass Restoration:

- Continuation of expansion of two meadows CCE has documented restoration success at (Tiana Sanctuary + Sag Harbor Shoals) via adult shoot transplant and seeding
- Suitability study and test plantings to identify 2-3 more potential eelgrass restoration sites within Town waters

Oyster Reef Restoration:

- Continuation of spat-on-shell deployments at 3 of the oyster reefs already permitted and part of CCE's long term Back to the Bays Stewardship Sites in Quogue, Hampton Bays, and Sag Harbor
- Continuation of Post Lane Bridge Oyster Restoration Raft grow out efforts
- Continuation of shell recycling, with a new community shell pile to be established in the East Quogue/Quogue area
- Site suitability study to be conducted to identify additional suitable reef site locations within Town waters

Hard Clam Restoration:

- Fabrication and installation of a Floating Upweller System (FLUPSY) to facilitate hard clam grow out at Pine Neck Marina or alternative property in Town waters. Addition of this new shellfish nursery site will help increase the scale of clam production for seeding at Back to the Bays Stewardship Sites within Town waters

Bay Scallop Restoration:

- Continuation of Tiana Bayside Facility based bay scallop nursery operation, currently the only such operation in service in Shinnecock Bay. Bay scallops produced will be seeded at designated sites in Town waters

Coastal Plant Nursery Operation + Expansion:

- Continuation of propagation and grow out of marsh grass, dune grass and coastal shrubs at Tiana Bayside for use in restoration plantings throughout the Town
- Expansion of grow out efforts to incorporate new sites into our network to further increase scale of production and efficiency when conducting Southampton Town projects
- Introduction of floating Marsh Grass Restoration Rafts and land-based efforts at appropriate sites which may include Pine Neck Marine Park, our 3 partner schools, and appropriate site in the Sag Harbor area

Stewardship:

- School + community partnerships have been established in the Quogue/East Quogue, Hampton Bays, and Sag Harbor areas (see letters of support)
- Students and community members will be presented with opportunities to assist CCE's team of experts in the multi-species grow out and restoration activities proposed.
- Continuation of Back to the Bays Stewardship Sessions at Tiana Bayside Facility

Monitoring:

- In order to best demonstrate and quantify restoration success and measurable water quality improvement, a detailed monitoring plan will be developed as part of this project

WATER QUALITY IMPROVEMENT

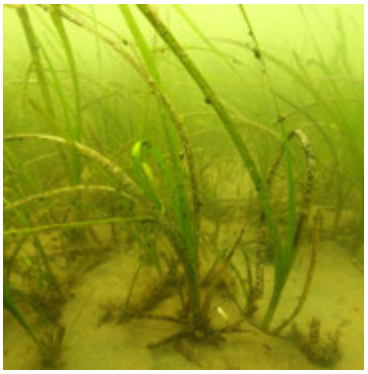
BACK TO THE BAYS

Cornell Cooperative Extension | Marine Program

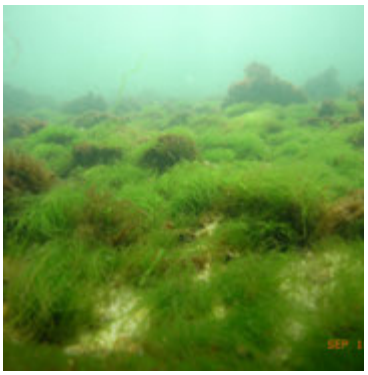
✔ Nitrogen – Primary Target Pollutant

Background of Problem

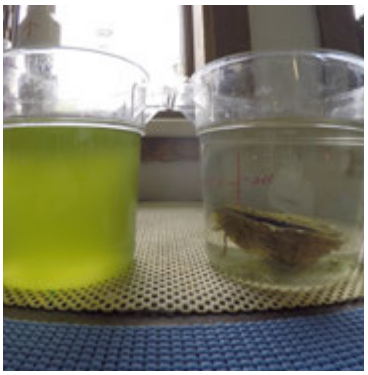
In a balanced ecosystem, nitrogen is naturally cycled from inert nitrogen gas to ammonia, nitrite, and the more biologically usable nitrate. Long Island's coastal water bodies have experienced a long history of **nitrogen loading**, from agricultural and lawn fertilization runoff, and now primarily, **waste water**. Under healthy conditions, usable nitrate in the water column is limited, keeping algae populations controlled. Excess nitrogen in coastal waters leads to **eutrophication -** blooms of both phytoplankton and macroalgae, which reduce light penetration to benthic plant species, like eelgrass. Toxic algal blooms, including brown tide and red tide, may also occur, harming shellfish and humans.



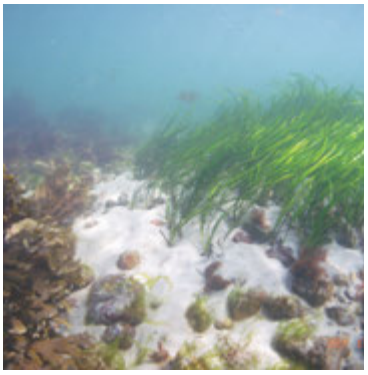
a. Eelgrass struggling in brown tide



b. Macroalgae (Ulva) bloom outcompetes eelgrass



c. Single oyster filters 1 liter of algae-dense water in 1 hr.



d. Healthy light penetration

Multi-species, Ecosystem Solution

Shellfish - Oysters, Clams + Scallops

Phytoplankton pull nitrogen directly from the water column. Shellfish filter-feed on phytoplankton, incorporating the nitrogen into their shells and tissues, and excreting it onto the sediment as feces or pseudofeces. In these ways, shellfish indirectly remove excess nitrogen from the water, while harvested animals permanently remove it from the system. Individual oysters contain on average 0.28 grams of nitrogen (hard clams - 0.22 g N).[1] Studies estimate that successful restored oyster reefs may remove 7 times more nitrogen per day than unrestored sand/mud areas, and 20% of planktonic algae can be removed per 300 linear meters of restored reef. [2]

Coastal Plants - Eelgrass + Smooth Cordgrass

Eelgrass and smooth cordgrass are marine plants, uniquely adapted to absorb nitrogen both directly from the water column and the sediments. Salt marsh habitats as a whole (including the ribbed mussels that inhabit them) act as a filter, absorbing nitrogen and other pollutants from land runoff before it enters coastal waters, thereby reducing nutrient overloading.

Target Reduction + Monitoring

Nitrogen removal will be estimated based on the number of shellfish and biomass of grasses introduced and their average growth weight over the duration of the restoration period. CCE aims to raise 10 million oyster larvae added to over 45 cubic feet of recycled shell, up to 1 million hard clams, and up to 100,000 bay scallops, when combined will filter millions of gallons of seawater per day. Target goal for smooth cordgrass is the production of 100 trays of cordgrass plugs with the potential to propagate 15,000 gallon sized pots of cordgrass capable of planting 1/3 of an acre of marsh. Monitoring protocols will be developed beginning in 2025, and may also include local parameters, such as macroalgae and phytoplankton density (chlorophyll a), dissolved oxygen, pH, water temperature.

WATER QUALITY IMPROVEMENT

BACK TO THE BAYS

Cornell Cooperative Extension | Marine Program

✔ Carbon Dioxide – Secondary Target Pollutant

Background of Problem

Carbon naturally cycles between inorganic carbon dioxide gas and organic carbon, making up all living organisms. Plants absorb CO2 through photosynthesis and convert it into organic carbon that can be used by all living organisms. Since the Industrial Revolution, fossil fuel use has dramatically increased the concentration of atmospheric CO2, which acts as a greenhouse gas, leading to **climate change** and increased ocean temperatures. Studies have demonstrated that eelgrass and scallops are negatively impacted by warmer temperatures (citation). Additionally, excess dissolved CO2 in seawater has resulted in **ocean acidification** (lower pH), which damages shellfish and other calcium carbonate building organisms. For these reasons, excess inorganic carbon is considered a marine pollutant.

Multi-species, Ecosystem Solution

Blue Carbon Background

Blue Carbon refers to the **carbon dioxide sequestered** by oceans and coastal ecosystems, like seagrass meadows and salt marshes, considered to be efficient, long-term **carbon sinks.**[3] Due to their high growth rates, Blue Carbon plants absorb carbon, on average, 10x faster than tropical rainforests.[4]

Eelgrass Meadows

Eelgrass, like other seagrasses, have demonstrated a tremendous ability to sequester carbon, storing a majority of this biomass below the sediment in its extensive root system. In a global study of *Zostera marina*, western Atlantic meadows are storing ~1,350 grams of organic carbon per square meter. [5] This supports the protection of these carbon stocks, and highlights the potential of new meadows as carbon sinks.

Smooth Cordgrass + Salt Marshes

Wetland soils are anaerobic, lacking oxygen, which causes plants to decompose slowly, preserving and storing their carbon for 100s or 1000s of years. Marsh grasses are highly productive, sequestering 26,766 pounds of carbon per acre, annually.[6]

Target Reduction + Monitoring

Carbon sequestration is difficult to isolate and quantify, varying depending on many environmental factors. CCE aims to increase production of smooth cordgrass, and test new long term eelgrass receiving areas within Shinnecock Bay, which collectively have the potential to sequester 9 lbs of carbon/square meter restored. Monitoring protocols and reduction estimates will be further developed beginning in 2025.

a. Submerged cordgrass at high tide

b. Eelgrass dense rhizome and root system

c. Peat – carbon-rich sediment forms in marshes

d. Large scale cordgrass restoration project by CCE

HABITAT RESTORATION

BACK TO THE BAYS
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✔ Ecosystem Benefits of Marine Habitats

Background of Problem

Long Island's surrounding marine environments have faced a multitude of confounding impacts from human development and coastal activity. Although, many regulations are now in place to protect these economically, culturally, and biologically important resources, historical use of land and waterways have resulted in significant marine habitat degradation. Oyster reefs have been all but entirely decimated by over-harvesting and dredging. Eelgrass meadows suffered 90% loss in the 1930s from wasting disease, while poor water quality, warming waters, bottom trawling, and boating activity hinders recovery. Salt marshes were drained and filled for coastal development, and all species are further impacted by climate change. Because of the natural interconnectivity of these habitats and their key species, restorative solutions must incorporate multiple species.

Multi-species, Ecosystem Solution

Oyster Reefs

Oysters are a keystone species in marine ecosystems, capable of building reefs that prevent erosion, buffer storm energy, and provide 3D structure for a diversity of marine life. A Chesapeake Bay study showed that areas with high oyster density supported 5,000 macrofauna per square meter. Juvenile crabs sheltered in oyster reefs were 3-4 times more likely to survive predation than on a sandy bottom. And the abundance of invertebrate and small fish is higher on restored oyster reefs, especially those with more live oysters.[2] Aquaculture gear (rafts and cages) also provides structural shelter for juvenile fish and crabs.

Eelgrass Meadows + Salt Marshes

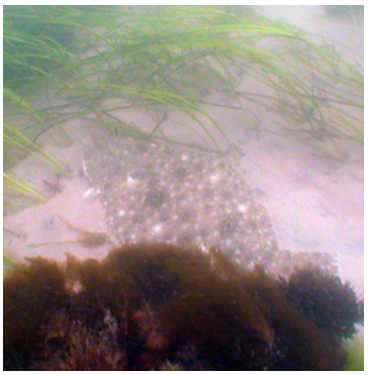
Eelgrass meadows provide essential habitat for a diversity of commercially and ecologically important marine species, such as juvenile striped bass, bay scallops, blue crabs, and flounder. **Salt marsh** habitats serve as nesting and breeding grounds for residential and migratory birds, tidal shelter for marine fish and invertebrates, and buffer waves and storm surges, preventing erosion. For instance, 1 square acre of salt marsh has be shown to support 2,225,850 ribbed mussels, 4,856,400 snails, 214,491 fiddler crabs, 32,376 clam worms, 40 billion nematodes, and enormous concentrations of healthy marine bacteria (harmful *E. coli* exhibit reduction after a period of time in marsh).[6]

Target Goals + Monitoring

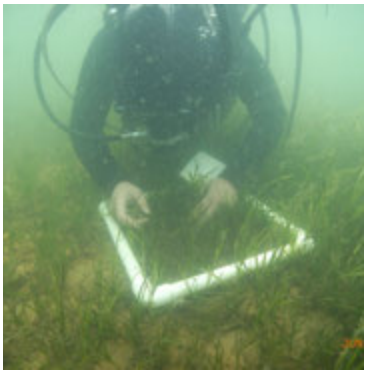
Eelgrass and cordgrass plantings with be surveyed for flora and fauna as part of monitoring protocols, including observations of faunal presence and recruitment. Oyster cages, FLUPSYs, and restoration rafts will also be monitored by underwater video cameras. Monitoring protocols for all habitats will be refined and expanded upon beginning in 2025.

a. Example of a restored spat-on shell oyster reef

b. Bay scallop spat on oyster reef cluster



c. Summer flounder sheltering among eelgrass



d. Diver surveying eelgrass meadow for flora + fauna

In-text citations (in order of first appearance)

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3. Herr, D., Pidgeon, E., & Laffoley, D. D. A. (2012). Blue carbon policy framework 2.0: based on the discussion of the International Blue Carbon Policy Working Group. IUCN.
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SHELLFISH RESTORATION

BACK TO THE BAYS

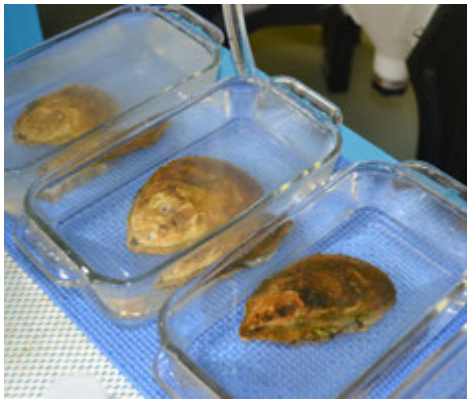
Cornell Cooperative Extension | Marine Program

Shellfish + Algae Production

Hatchery + Nursery Operation

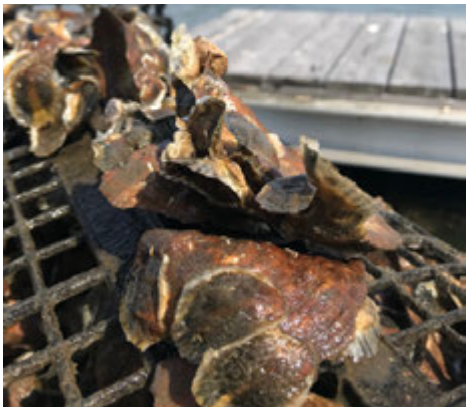
- ✔ CCE's Southold Shellfish Hatchery facilities spawn millions of shellfish for restoration + enhancement projects
- ✔ Microalgae is grown as shellfish food in spawning, hatchery + nursery stages
- ✔ Shellfish are transported to numerous field nursery sites within Southampton Town for growout + final deployment

a. Growing algae is necessary for feeding all the shellfish



b. Scallops, clams + oysters spawn in controlled settings

c. The Hatchery is a unique + valuable educational resource



d. Spat-on-shell oysters held in cages + rafts for continued growth before deployment at reef sites

e. Clams are grown + maintained in FLUPSYs until large enough for seeding in Town waters

f. Bay scallops are protected in nets in the field nursery site until planting in Town waters

SHELLFISH RESTORATION

BACK TO THE BAYS

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Oyster Reefs

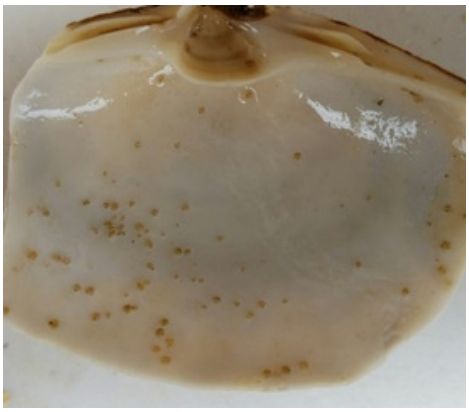
Crassostrea virginica

- Spat-on-shell oysters are used to form oyster reefs.
- Oysters are effective filter feeders and improve water quality.
- Oyster reefs serve as important habitat and prevent erosion.

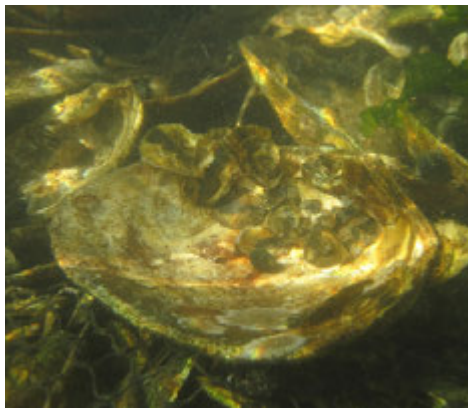
a. Oysters are spawned in CCE's hatchery in Southold.

b. Recycled shell substrate is cleaned and prepared.

c. Oyster larvae is added to the setting tanks.



d. Larvae sets on shell, becoming spat-on-shell (SOS).



e. SOS oysters continue to grow until ready to plant at suitable restoration sites.

f. CCE Marine staff and volunteers deploy spat-on-shell to form new oyster reefs.

SHELLFISH RESTORATION

BACK TO THE BAYS

Cornell Cooperative Extension | Marine Program

Restoration Raft

Improving Oyster Growth

- Modified FLUPSYs installed at high tidal flow sites allow for increased oyster spat growth without electricity
- Hanging oyster cages on marsh grass Restoration Rafts offers increased oyster growth and community education on shellfish care + multi-species ecosystem-based restoration

a. Spat-on-shell is produced in specialized hanging trays at the Southold Hatchery

b. The restoration raft is secured at the designated location

c. The oyster spat size is measured + recorded for comparison

d. Trays of SOS are transferred into the raft where they will hang for maximum 1 month

e. Periodic maintenance by CCE Marine staff is required to ensure optimal survival

f. Trained Stewards record the number + sizes of spat before planting to assess growth rate

SHELLFISH RESTORATION

BACK TO THE BAYS

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Bay Scallops

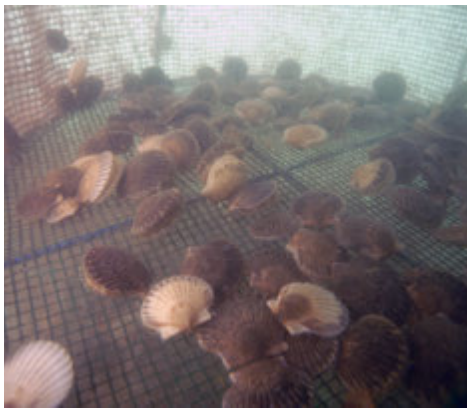
Argopectin irradians

- CCE has led local bay scallop restoration efforts for over 15 years.
- Bay scallops are economically important to the region.
- Tiana Bayside Facility hosts the first and only successful scallop nursery in Shinnecock Bay.

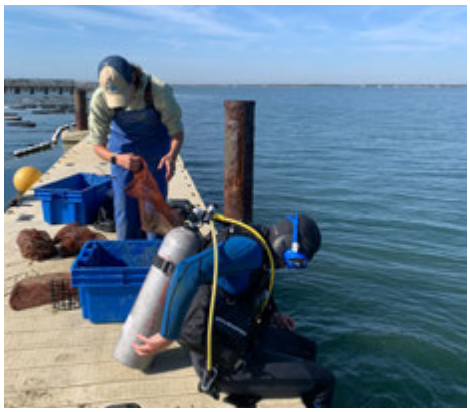
a. Bay scallops are spawned in CCE's Hatchery.

b. Scallops are cared for in a nursery setting to encourage growth and increase survival.

c. A floating nursery cage system will be installed and maintained at Tiana Bayside.



d. Scallops held in lantern nets are protected from predators.



e. Scallops are maintained using CCE staff and vessels.

f. Once large enough, scallops are planted in designated sanctuary areas.

SHELLFISH RESTORATION

BACK TO THE BAYS

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Hard Clams

Mercenaria mercenaria

- Hard clams, or Quahogs, are historically important to the region.
- Clams are filter-feeders, helping to remove nutrients and microalgae from the water.
- Clams also provide food for fish and invertebrates, and aerate the sediment as they burrow.

a. Clams are spawned in CCE's Hatchery, and cared for to increase growth and survival

b. Juvenile clams grown out in FLUPSYs help to filter surrounding water

c. Volunteers help maintain the clams, and FLUPSYs serve as an educational tool for the public

d. Clams are seeded into predetermined sanctuary sites

e. Volunteers can get involved during the seeding of clams

f. Growing clams filter water and reproduce, supplementing the wild population

COASTAL PLANT RESTORATION

BACK TO THE BAYS
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Eelgrass

Zostera marina

- Our local seagrass species provides critical nursery habitat for commercially and recreationally important species
- Important foraging and nesting habitat for our fish and waterfowl
- Dense rhizome system holds sediment and protects shorelines from erosion

Eelgrass Restoration via the "Tortilla Method"

a. Live eelgrass shoots collected from healthy donor meadows

b. Eelgrass "tortillas" are assembled by volunteers.

c. Holding system at Tiana Bayside enhances restoration efforts

d. Tortillas being unloaded just prior to planting

e. CCE divers hand plant each tortilla holding 10 shoots.

f. Eelgrass plantings monitored for survival and species utilization

COASTAL PLANT RESTORATION

BACK TO THE BAYS

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Eelgrass

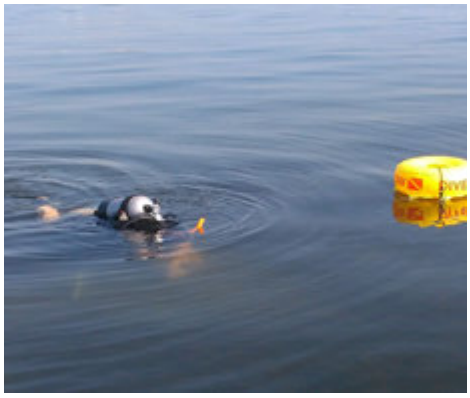
Zostera marina

- Helps mitigate climate change by absorbing and sequestering large amounts of carbon dioxide from our atmosphere.
- Absorbs excess nutrients, like nitrogen and phosphorus, that can lead to harmful algae blooms.

Eelgrass Restoration via Seed Harvest and Broadcast

a. New restoration sites to be chosen based on monitoring in 2025

b. Wild seeds in Shinnecock Bay monitored for development in June



c. Eelgrass flower shoots containing seeds are collected at peak (late June-early July)

d. Flower shoots held in tanks with running seawater until seeds have dispersed

e. After 2-3 weeks, seeds are cleaned from decaying plant matter and held in upwellers

f. Seeds to be broadcasted in the fall or winter once temps have dropped to avoid seed predation

COASTAL PLANT RESTORATION

BACK TO THE BAYS
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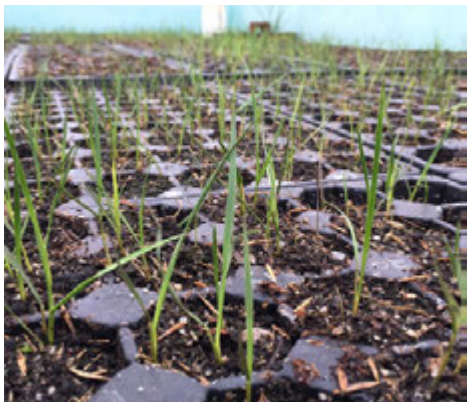
Smooth Cordgrass

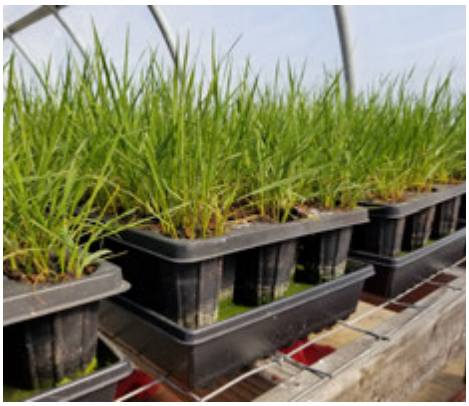
Sporobolus alterniflorus

- Inundated by the tides, this species serves as a critical buffer between land and sea
- Absorbs nutrients and pollutants from land-based runoff, and sequesters atmospheric carbon
- Important foraging and nesting habitat for our fish and waterfowl

a. Local seed collected in the fall during a carefully monitored collection window

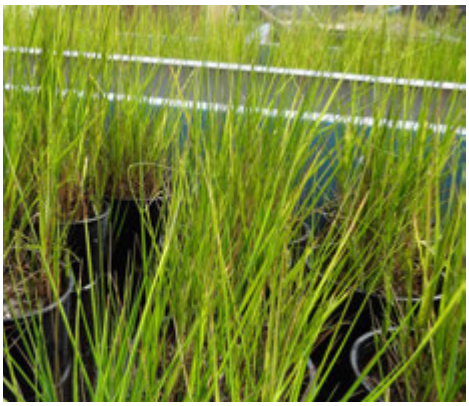


b. After winter stratification, a seed mix is prepared, and plug trays begin to germinate



c. Seedling growout + root expansion (1-2 months); adaptable for classroom settings.

d. Plant propagation begins; volunteers help "up-pot" plugs or split the pots



e. Each plug will be split + up-potted a total of 4 times, creating 16 planting units

f. Plants transported from CCE nursery to restoration site and planted by CCE staff + volunteers

COASTAL PLANT RESTORATION

BACK TO THE BAYS

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Photo credit IISD.org

Restoration Raft

Multi-species concept

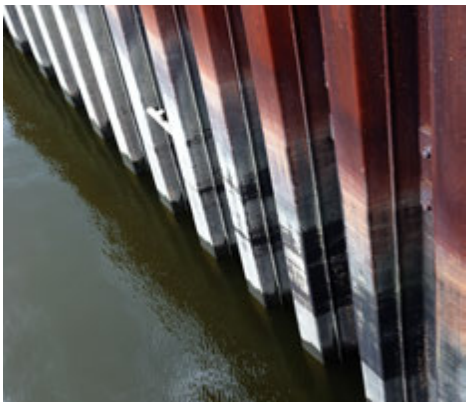
- ✓ Upcycling of floating aquaculture dock (FLUPSY) into a multi-species floating wetland
- ✓ To be utilized in areas lacking a natural shoreline for nutrient uptake + species grow out

a. FLUPSY's will be reconstructed to serve as multi-species "Restoration Rafts"

b. Marsh grass will be planted in submerged coir fiber logs/mats within the raft

Photo credit IISD.org

c. Submerged roots + microbes attached to the roots assimilate nutrients



d. In absence of natural shoreline, restoration rafts serve to bioremediate nutrients

Photo credit CCA Louisiana

e. Restoration rafts will also serve as educational tools for students + volunteers

f. Raft structure will support natural recruitment of ribbed mussels + hold oyster cages

COASTAL PLANT RESTORATION

BACK TO THE BAYS
Cornell Cooperative Extension | Marine Program
An initiative of Cornell Cooperative Extension | Marine Program

Beach Grass

Ammophila breviligulata

- Dune-forming species, traps + accumulates sand
- Critical for erosion protection during storms
- Its presence is required for many beach nesting birds

a. Will expand + maintain Tiana Bayside Coastal Plant Nursery + demonstrative garden

b. Clusters are harvested + separated to single culms for restoration planting

c. Individual culms planted at least 8" deep minimum + 1' on center

d. Marked frames help with plant spacing; volunteers help plant out dune on town property, 2024

e. Coastal Plant Nursery also serves as an educational site for students and volunteers

f. Shoots clone + spread rapidly at restoration sites after winter dormancy, building sand dunes

COASTAL PLANT RESTORATION

BACK TO THE BAYS

Cornell Cooperative Extension | Marine Program

An initiative of Cornell Cooperative Extension | Marine Program

Coastal Plant Nurseries

- Expansion and maintenance of Tiana Bayside Nursery and Garden
- Creation of a large new nursery at Pine Neck Park Location
- Critical for coastal plant restoration and stewardship

a. Existing Coastal Plant Nursery + demonstrative garden at Tiana Bayside Facility will be expanded and maintained

b. A new nursery will be created at Pine Neck Park, with a large area for plant propagation

c. The installation of a greenhouse at Pine Neck will enable seed germination for south fork restoration projects

d. Currently CCE germinates local seed out of Southold exclusively; a new south fork greenhouse can serve Southampton Town projects

e. Seed collection + stratification can also take place at Pine Neck increasing capacity, efficiency and outreach opportunities

f. The Coastal Plant Nurseries also serve as an important edu-cational site for students and volunteers to work

STEWARDSHIP

COMMUNITY ENGAGEMENT

BACK TO THE BAYS

Cornell Cooperative Extension | Marine Program

Reef Raisers

Students + Citizens Help to Raise Spat-on-Shell Oysters

- ✔ Aquaculture + oyster reef restoration activities in local classrooms inspire students to become stewards of Southampton Town waters
- ✔ Community participation in Stewardship Sessions helps CCE re-establish Long Island's oyster reefs, improving water quality + habitat value

a. CCE educators introduce aquaculture through classroom modules + public lectures

b. CCE hatchery-raised spat-on-shell (SOS) oysters delivered to classrooms + restoration rafts

c. Students help develop care, feeding + monitoring protocols for education

d. Students measure for growth rate + mortality, with option to conduct experiments

e. SOS oysters grow, tended by staff + volunteers, in tanks + restoration rafts until planting

f. Students + volunteers help deploy new SOS oyster reefs in local suitable restoration sites

STEWARDSHIP

COMMUNITY ENGAGEMENT

BACK TO THE BAYS

Cornell Cooperative Extension | Marine Program

Meadow Makers

Students + Citizens Help Restore Eelgrass Meadows

- ✔ Students take part in eelgrass restoration by making burlap "tortillas" to be woven with live shoots and planted by CCE divers.
- ✔ Students learn about the importance of eelgrass as foraging and nesting habitat for our fish and waterfowl, and how the dense rhizome system holds sediment, prevents erosion, and captures carbon.

a. Classroom modules + lectures engage the public in eelgrass importance + restoration

b. Burlap "tortillas" made in classrooms by students assist in planting efficiency

c. Tortillas are stockpiled and used for future workshops

d. Students + community weave live shoots into "tortillas" at Marine Meadows Workshops

e. Each tortilla holds 10 shoots, enabling thousands of shoots to be planted

f. Divers plant eelgrass in suitable areas + monitor for survival + species utilization

STEWARDSHIP

COMMUNITY ENGAGEMENT

BACK TO THE BAYS

Cornell Cooperative Extension | Marine Program

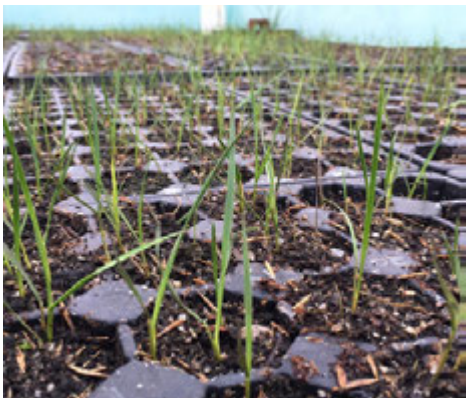
Meadow Makers

Students + Citizens Help Restore Smooth Cordgrass, Pollinator Plants + Coastal Shrubs

- ✔ Students + public help grow marshgrass in CCE and school greenhouses, and make SEAd Bombs to support local plants
- ✔ Informs community about importance of salt marshes as a buffer between land and sea, and as foraging and nesting habitat for fish and waterfowl

a. SEAd Bombs - mix of native annual + perennial seeds, support local pollinators

b. Cordgrass germination - students + stewards mix seed + soil in plug trays



c. Plug trays begin to germinate and root expansion takes place in school + CCE greenhouses

d. Students + community assist with propagation once plugs become root bound

Photo credit CCA Louisiana

e. Cordgrass also grown in restoration rafts, further educating community

f. Students + Volunteers assist in planting at Southampton Town restoration sites

EAST QUOGUE
UNION FREE SCHOOL DISTRICT

Michael Miller, *Superintendent of Schools/Principal*
Kelly Freeborn, *Assistant Principal/ Director of Student Services*
Robert Doyle, *Business Official/Treasurer*

March 6, 2025

Town of Southampton Department of Community Preservation
24 W. Montauk Highway
Hampton Bays, NY 11946
Ph: 631-287-5720 Fx: 631-728-1920

Re: Letter of Support for Cornell Cooperative Extension's Back to the Bays Shellfish and Habitat Restoration Initiative

To Whom it May Concern,

As a teacher at East Quogue UFSD, I am writing to express my support of Cornell Cooperative Extension Marine Program (CCE) in applying for the above referenced Community Preservation Fund grant. This funding will enable the continuation of habitat and water quality restoration in our community and engage our young citizens through the delivery of "Reef Raisers + Meadow Makers" programs in local schools, including ours.

If funded, these programs would enable our students to get involved with local efforts to restore oyster reefs and critical coastal and marine plants in their communities. Actively participating in restoration and water quality improvement initiatives will help increase our students' awareness of human impacts on marine environments. The knowledge and sense of stewardship our students gain from raising oysters and/or coastal plants in the classroom, and assisting CCE staff with field plantings, will make them better informed citizens, and more likely to make decisions that positively impact water quality and habitat health.

As one of the community partners in this project we will work with CCE to ensure this educational stewardship programming is delivered and coordinate logistics in our classroom settings, as well as continued involvement opportunities in the grow-out and planting stages of both oyster reefs and coastal plants.

We look forward to furthering our community's collaboration with CCE Marine staff to meet these important habitat, shellfish, and water quality restoration goals. If you have any questions or need additional information regarding our engagement in this project, please contact Jackie Alessi via email at jalessi@eqschool.org

Sincerely,

Jackie Alessi

Jackie Alessi
6th Grade Science Teacher
East Quogue UFSD

Hampton Bays Middle School

Dennis J. Schug, Jr.
Principal
dschug@hbschools.us

Jonathan DellaSperanza, Ed.D.
Assistant Principal
jdellasperanza@hbschools.us

March 7, 2025

Town of Southampton Department of Community Preservation
24 W. Montauk Highway
Hampton Bays, NY 11946
Ph: 631-287-5720 Fx: 631-728-1920

Re: Letter of Support for Cornell Cooperative Extension's Back to the Bays Shellfish and Habitat Restoration Initiative

To Whom It May Concern,

As a teacher at Jamie Huebner, I am writing to express my support of the Cornell Cooperative Extension Marine Program (CCE) in applying for the above-referenced Community Preservation Fund grant. This funding will enable the continuation of habitat and water quality restoration in our community and engage our young citizens through the delivery of "Reef Raisers + Meadow Makers" programs in local schools, including ours.

If funded, these programs would enable our students to get involved with local efforts to restore oyster reefs and critical coastal and marine plants in their communities. Actively participating in restoration and water quality improvement initiatives will help increase our students' awareness of human impacts on marine environments. The knowledge and sense of stewardship our students gain from raising oysters and/or coastal plants in the classroom and assisting CCE staff with field plantings will make them better-informed citizens and more likely to make decisions that positively impact water quality and habitat health.

As one of the community partners in this project we will work with CCE to ensure this educational stewardship programming is delivered and coordinate logistics in our classroom settings, as well as continued involvement opportunities in the grow-out and planting stages of both oyster reefs and coastal plants.

We look forward to furthering our community's collaboration with CCE Marine staff to meet these important habitats, shellfish, and water quality restoration goals. If you have any questions or need additional information regarding our engagement in this project, please contact me via email at jhuebner@hbschools.us.

Sincerely,

Jamie Huebner

KIDD SQUID LLC
d/b/a/ Kidd Squid Brewing Company
(631) 500-0533
kiddsquid.com

Physical Address:
11 Spring Street
Sag Harbor, NY 11963

Mailing Address:
PO Box #2125
Sag Harbor, NY 11963

March 6, 2025

Town of Southampton Department of Community Preservation
24 W. Montauk Highway
Hampton Bays, NY 11946
Ph: 631-287-5720 Fx: 631-728-1920

Re: Letter of Support for Cornell Cooperative Extension's Back to the Bays Shellfish and Habitat Restoration Initiative

To Whom it May Concern,

I am writing to express my support of Cornell Cooperative Extension Marine Program (CCE) in applying for the above referenced Community Preservation Fund grant to enable the continuation of habitat and shellfish restoration, and water quality improvement initiatives in our local communities.

The health of our waters, for both local citizens and marine life, is of high importance to Kidd Squid and other members of our Sag Harbor community. If funded, CCE's initiatives will help revitalize our local marine environments and preserve our community's maritime heritage. In addition, CCE's commitment to community stewardship would allow our citizens to get involved with local efforts to restore oyster reefs, shellfish populations, and critical marine plants in our coastal habitats. Actively participating in restoration and water quality improvement initiatives will help increase citizens' awareness of human impacts on the environment, encouraging future decisions and behaviors that positively impact water quality and habitat health.

We look forward to furthering our community's collaboration with CCE Marine staff to meet these important habitat, shellfish, and water quality restoration goals. If you have any questions or need additional information regarding our support of this project, please contact Rory McEvoy via email at rory@kiddsquid.com.

Sincerely,

Rory McEvoy
Owner
Kidd Squid LLC

3/14/2025

Town of Southampton Department of Community Preservation
24 W. Montauk Highway
Hampton Bays, NY 11946
Ph: 631-287-5720 Fx: 631-728-1920

Re: Letter of Support for Cornell Cooperative Extension's Back to the Bays Shellfish and Habitat Restoration Initiative

To Whom it May Concern,

As a Town resident, business owner and Vice President of the Board of Directors of Cornell Cooperative Extension of Suffolk County (CCE) I am writing to express my support of the CCE Suffolk Marine Program in applying for the above referenced Community Preservation Fund grant to enable the continuation of habitat and shellfish restoration, and water quality improvement initiatives in our local communities.

If funded, CCE's initiatives will help revitalize our local marine environments and preserve our community's maritime heritage. As a resident of Quogue, the health of our local waters is paramount to me. Through the help and expertise of CCE Marine, I have helped introduce a new oyster reef project in Quogue that will actively help improve water quality in the Quogue canal. This is one of dozens of projects that CCE Marine supports and this type of funding is critical to help continue their commitment to community stewardship and improve shellfish populations and our coastal habitats.

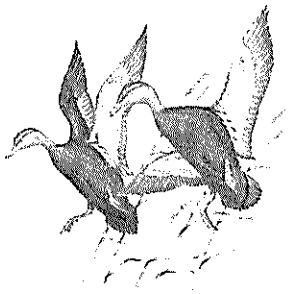
I look forward to furthering our community's collaboration with CCE Marine staff to meet these important habitat, shellfish, and water quality restoration goals. If you have any questions or need additional information regarding our support of this project, please contact me via email at aglynch@hamptonjitney.com.

Sincerely,

Andrew Lynch
Executive Vice President
Hampton Jitney, Inc.

Quogue Wildlife Refuge

Southampton Township Wildfowl Association



Town of Southampton
Department of Community Preservation
24 W. Montauk Highway
Hampton Bays, NY 11946
Ph: 631-287-5720 Fax: 631-728-1920

March 12, 2025

Re: Letter of Support for Cornell Cooperative Extension's Back to the Bays Shellfish and Habitat Restoration Initiative

To Whom it May Concern,

I am writing to express the Quogue Wildlife Refuge's support of Cornell Cooperative Extension Marine Program (CCE) in applying for the above referenced Community Preservation Fund grant to enable the continuation of habitat and shellfish restoration, and water quality improvement initiatives in our local communities.

The health of our waters, for both local citizens and marine life, is of high importance to the Quogue Wildlife Refuge, our patrons and many members of our Southampton Town community. If funded, CCE's initiatives will help revitalize our local marine environments and preserve our community's maritime heritage. In addition, CCE's commitment to community stewardship would allow our citizens to get involved with local efforts to restore oyster reefs, shellfish populations, and critical marine plants in our coastal habitats. Actively participating in restoration and water quality improvement initiatives will help increase citizens' awareness of human impacts on the environment, encouraging future decisions and behaviors that positively impact water quality and habitat health.

We have enjoyed a collaborative working relationship with CCE over the years, and we look forward to furthering the Refuge's collaboration with CCE Marine staff to meet these important habitat, shellfish, and water quality restoration goals. If you have any questions or need additional information regarding our support of this project, please contact ma via email at Marisa@QuogueWildlifeRefuge.org.

Respectfully,

Marisa Nelson
Assistant Director

The Quogue
ASSOCIATION

P.O. Box 671, Quogue, NY 11959

March 10th 2025

Town of Southampton Department of Community Preservation
24 W. Montauk Highway
Hampton Bays, NY 11946

Letter of Support for Cornell Cooperative Extension's Back to the Bays Shellfish and Habitat Restoration

To Whom It May Concern,

As President of The Quogue Association, I am pleased to offer our strong support for the Cornell Cooperative Extension Marine Program (CCE) and their application for the Community Preservation Fund grant. Established over a century ago, The Quogue Association is dedicated to promoting the well-being of the Village of Quogue and preserving its character as a desirable and vibrant residential community. Given our proximity to the water, safeguarding water quality is one of our highest priorities.

The proposed grant would enable CCE to continue its critical work in habitat and shellfish restoration, as well as water quality improvement initiatives that directly benefit our community. Last year, we made a significant contribution to support CCE's efforts in Quogue, and we remain committed to supporting their valuable work in the years ahead.

The health of our waters is essential—not only for local residents but also for the marine life that depends on these ecosystems. Funding for CCE's initiatives will revitalize our marine environments, preserve our community's maritime heritage, and enhance local engagement through hands-on restoration efforts. By actively participating in these projects, community members gain a deeper awareness of human impacts on the environment, fostering long-term stewardship and responsible decision-making that positively affect water quality and habitat health.

We look forward to continuing our collaboration with CCE Marine staff to advance our shared water quality restoration goals. If you have any questions or require additional information regarding our support of this project, please feel free to contact me via email at stevensmark1@gmail.com.

Sincerely,

Mark Stevens
President, The Quogue Association

Town of Southampton
6 NEWTOWN ROAD
HAMPTON BAYS, NEW YORK 11946

PARKS & RECREATION DEPARTMENT
Telephone (631) 728-8585
kdoulos@southamptontownny.gov

KRISTEN M. DOULOS
TOWN PARKS DIRECTOR

March 12, 2025

Dear Mrs. Fenlon and CPF Water Quality Advisory Committee Members,

I am writing in support of Cornell Cooperative Extension Marine Program's grant proposal which would allow them to expand shellfish and habitat restoration related efforts to additional Back to the Bays Stewardship Sites within the Town.

Our department has successfully partnered with the CCE Marine Program for many years. Since 2012 we've offered an Oyster Gardening program that gets filled to capacity with 100 participants each summer. In 2017, the Town entered into a License Agreement with CCE to create a Marine Outreach and Education Center at the Tiana Bayside Recreational Facility in Hampton Bays where they have since run STEAM based camps, established a coastal plant nursery, and expanded their SPAT (Suffolk Project in Aquaculture Training) program.

The CCE Marine Program was able to meaningfully enhance their efforts in 2020 when they were awarded a Community Preservation Fund grant to increase their water quality improvement initiatives to benefit our local waters in the Town of Southampton. The millions of oysters, clams and scallops CCE produced for this project have been successfully grown and planted within our waters, and observations find that these shellfish are thriving, thus actively filtering our waters and adding to the spawning populations.

Recent years have yielded some of the highest landings of commercially important shellfish within our Town, and the lowest occurrence of harmful algal blooms, and projects like the one funded CCE to conduct are helping this trend. We are also seeing expansion of the eelgrass meadow that CCE established using their various restoration methodologies, which is important to the lifecycle of shellfish and other marine species that help make our waters healthy.

I feel strongly it is important to address water quality initiatives in a multitude of ways. We see what CCE Marine Program does through their restoration work and related community programs as an important approach and a very worthwhile utilization of CPF water quality improvement funds. Further, our department is committed to helping CCE coordinate efforts to utilize additional Town properties to assist in fulfilling these goals where appropriate.

Sincerely,

Kristen M. Doulos

Kristen M. Doulos
Town Parks Director

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. **The applicant or project sponsor is responsible for the completion of Part 1.** Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Cornell Cooperative Extension of Suffolk County

Name of Action or Project:

Tiana Bayside Habitat Restoration in Support of Water Quality Improvement

Project Location (describe, and attach a location map):

Tiana Bayside Facility 89 Dune Road Hampton Bays, NY

Brief Description of Proposed Action:

Production of bay scallops, oysters, clams, marsh grass and dune grass, at Tiana Bayside Facility for restoration purposes.
The proposed project would enable a spat-on-shell oyster reef expansion; cultivation, planting, and monitoring of bay scallop populations; and eelgrass plantings and seeding to be conducted in the Town designated sanctuary in the waters off Tiana Bayside; site planning and assessment required to support the removal of the gabion structures on the shoreline of the Tiana Bayside Facility and replacement with a living shoreline installation.

Name of Applicant or Sponsor:	Telephone: 631-461-5294
Kimberly Barbour	E-Mail: kp237@cornell.edu

Address:

423 Griffing Avenue

City/PO:	State:	Zip Code:
Riverhead	NY	11972

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Southampton Town Trustees	☐	☑

3. a. Total acreage of the site of the proposed action? >1 acres
   b. Total acreage to be physically disturbed? 0 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? >1 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☐ Residential (suburban)
☐ Forest ☐ Agriculture ☑ Aquatic ☐ Other(Specify):
☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☐	☑
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑

	NO	YES
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		
If Yes, identify: _____	☑	☐

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation services available at or near the site of the proposed action?	☑	☐
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☑	☐

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies: _____ _____	☐	☑

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water: _____ _____	☑	☐

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment: _____ _____	☑	☐

	NO	YES
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	☑	☐
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☑	☐

	NO	YES
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☐	☑
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☐	☐
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ Western Shinnecock Bay >1 acre. _____ _____		

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☑ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional

☑ Wetland ☐ Urban ☐ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☑	☐
16. Is the project site located in the 100-year flood plan?	☐	☑
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☑	☐
If Yes,		
a. Will storm water discharges flow to adjacent properties?	☑	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☑	☐
If Yes, briefly describe: _____		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?	☑	☐
If Yes, explain the purpose and size of the impoundment: _____		
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?	☑	☐
If Yes, describe: _____		
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?	☑	☐
If Yes, describe: _____		

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: Kimberly Barbour Date: 3/14/25

Signature _____ Title: Project Manager

PRINT FORM