



## 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](mailto:WQIP@southamptontownny.gov)

Entity: \_\_\_\_\_

Project Name: \_\_\_\_\_

# 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](http://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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**2025**

## COMMUNITY PRESERVATION FUND (CPF) WATER QUALITY IMPROVEMENT PROGRAM PROPOSAL SUMMARY

Project Applicant: \_\_\_\_\_

Project Title: \_\_\_\_\_

Project Manager Name: \_\_\_\_\_

Entity Anticipating Grant and Funding: \_\_\_\_\_

**Contact 1:**

Name	
Title	
Organization	
Address	
Phone	
Email	

**Contact 2:**

Name	
Title	
Organization	
Address	
Phone	
Email	

**Property owner (if different from Project manager organization):**

Name	
Affiliation	
Organization	
Address	
Phone	
Email	

Project Address: \_\_\_\_\_ SCTM #(S) \_\_\_\_\_

**Type of Project (Check all that apply):**

- Reduction     
  Remediation     
  Restoration

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



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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
- 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 \(WQIPP\)](#).

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

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

## 3. PROJECT DESCRIPTION

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

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.



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**2025**

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

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 page numbers).

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	
<input type="checkbox"/>	<input type="checkbox"/>	<b>If stormwater system or drainage is proposed:</b> The project must indicate compliance with the New York State Stormwater Design Manual (2015 and as updated).
<input type="checkbox"/>	<input type="checkbox"/>	<b>If project is related to farmland:</b> Describe any Agricultural Stewardship Plan or other long term strategy for Nitrogen abatement.
<input type="checkbox"/>	<input type="checkbox"/>	<b>If the project is for habitat restoration:</b> The narrative must address how underlying causes are being ameliorated and expected outcomes for local species populations or other ecological considerations are given.
<input type="checkbox"/>	<input type="checkbox"/>	<b>If project is a Sewage Treatment Plant (STP) or cluster treatment system:</b> 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.
<input type="checkbox"/>	<input type="checkbox"/>	<b>If the project is requesting grant match:</b> 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.

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



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

## 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.

5b. Describe any matching funds to be provided.

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.

## 6. MANAGEMENT, EXPERIENCE, ABILITY

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

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

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



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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.

[Redacted area for maintenance, monitoring, and evaluation details]

## 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.

[Redacted area for project duration details]

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

[Redacted area for budget and milestones breakdown]

## 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: Matthew J. Sganeri Date 3/14/25

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

Signature: Matthew J. Sganeri 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-step1> or similar standardized methodology
- 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-	\$-	\$-	\$-	\$-
Task 2-	\$-	\$-	\$-	\$-
Task 3-	\$-	\$-	\$-	\$-
Task 4-	\$-	\$-	\$-	\$-
Task 5-	\$-	\$-	\$-	\$-
Task 6-	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
<b>Planning/Engineering/Design Cost Total</b>	\$-	\$-	\$-	\$-

Contractual Services				
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
<b>Contractual Services Cost Total</b>	\$-	\$-	\$-	\$-

Construction & Site Improvements				
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
	\$-	\$-	\$-	\$-
<b>Construction &amp; Site Improvements Cost Total</b>	\$-	\$-	\$-	\$-





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**2025**

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

### APPLICANT'S INFORMATION

Owner: Lee Foster, South Fork Land Foundation

Contact First and Last Name: Matthew Swain, Peconic Land Trust

Contact Address: 296 Hampton Road

Contact Phone: 631-283-3195

Contact Email: mswain@peconiclandtrust.org

### CONTRACT RECIPIANT INFORMATION

Name/Organization: Peconic Land Trust

Contact Person/Officer: Josh Halsey

Contact Address: 296 Hampton Road

Contact Phone: 631-283-3195

Contact Email: jhalsey@peconiclandtrust.org

### PROJECT INFORMATION

Project Title: Reducing Groundwater Nitrogen Input to Sagaponack Pond's Western Shoreline

Project Location: South Fork Land Foundation Highland Terrace farm

Project Description (1-3 sentences): \_\_\_\_\_

Install a subsurface permeable reactive barrier on the eastern edge of the South Fork Land Foundation Highland Terrace farm field to reduce groundwater nitrate coming from the Sagaponack watershed, prevent the nitrate from entering Sagg Pond, and to improve Sagg Pond water quality.

### ANTICIPATED PROJECT TIMELINE

Begin: Jan 2026 - upon funding availability assuming contract execution in Dec 2025

Complete: Dec. 2027

Notes: \_\_\_\_\_

Please see commitment letter from property owner

March 13<sup>th</sup>, 2025

Town of Southampton  
Water Quality Advisory Committee  
116 Hampton Road, Southampton NY 11968

Dear Members of the Water Quality Advisory Committee,

I am writing to express my strong support for the project titled "*Reducing Groundwater Nitrogen Input to Sagaponack Pond's Western Shoreline*", which seeks funding from the Town of Southampton Community Preservation Fund Water Quality Improvement Program. This initiative proposes the installation of a Permeable Reactive Barrier (PRB) on the South Fork Land Foundation's Highland Terrace farm in Bridgehampton, NY. The project is being led by the Peconic Land Trust in collaboration with Cornell Cooperative Extension of Suffolk County.

As President of the South Fork Land Foundation and property owner at Highland Terrace, I endorse the proposed remediation plan, which includes the strategic placement of PRBs in areas where nitrate-rich groundwater is entering Sagg Pond. Given the natural characteristics of the watershed, including the soil type and groundwater flow direction, legacy nitrogen inputs from the inland subwatershed are impacting the western shoreline of Sagg Pond via the Highland Terrace property. Based on my understanding, the property is well-suited for this PRB approach and has the potential to provide significant improvements to the water quality of the pond. I will allow the installation and monitoring of the PRBs on <sup>this</sup> my property, provided that funding is secured and all necessary approvals are obtained prior to the commencement of the project.

Both the Peconic Land Trust and the South Fork Land Foundation have long been leaders in preserving and protecting the region's land use and water quality. I am confident that they are acting with the best interests of Sagg Pond and its surrounding watershed in mind. Therefore, I strongly urge the committee to support this important initiative by providing the essential financial resources needed to advance this project and protect the water quality of Sagg Pond. Thank you for your consideration of this vital proposal.

Sincerely,



President, South Fork Land Foundation

# Reducing Groundwater Nitrogen Input to Sagaponack Pond’s Western Shoreline

## 2. Priority Area

Sagaponack Pond (Sagg Pond) is a brackish coastal waterbody that has experienced significant ecological stress. Notable sources of environmental degradation include nutrient loading from septic systems and fertilizers, introduced via stormwater runoff and groundwater seepage. These nutrient inputs contribute to eutrophication and seasonal harmful algal blooms, which inhibit recreational activities such as swimming (Fig. 1). The pond is closed to shellfishing year-round, although other recreational activities—such as eel and blue crab fishing, bird watching, and waterfowl hunting—are permitted. Surrounding the pond is a relatively narrow wetland buffer, predominantly composed of *Phragmites australis*, which provides habitat for

species such as geese and red-winged blackbirds. Additionally, carp are known to spawn in the shallow vegetated areas of the wetland. The south shore beach serves as a critical nesting site for the endangered Piping Plover, and periodic sand dredging is conducted by the Trustees, with Army Corps of Engineers authorization, to facilitate the connection of Sagg Pond to the Atlantic Ocean. Since 2021, the Peconic Land Trust (PLT) has been funding pond monitoring. PLT has contracted Cornell Cooperative Extension (CCE) and Coastline Evaluation Inc. to conduct comprehensive water quality monitoring of Sagg Pond's porewater, surface water, and groundwater. This multi-phase effort has been focused on the site characterization and implementation of permeable reactive barriers (PRBs) for



**Figure 1:** Photo from Bridge Lane alerting residents of the harmful algae bloom detected in Sagaponack Pond.

groundwater treatment. Initial monitoring efforts successfully identified priority zones with elevated nitrogen loading from groundwater seepage and established baseline water quality conditions.

Sagaponack Pond is a prime location for addressing the Town of Southampton's Water Quality Improvement Plan (ToSH WQIP) objective to reduce nitrogen (N) inputs to local surface waters. The pond is classified as a New York State 303d impaired water body due to the presence of pathogens, and the surrounding properties are identified as high priority within the WQIP on both the Bridgehampton and Sagaponack sides. Furthermore, the Suffolk County Subwatershed Plan (SCSWP) classifies Sagaponack Pond as poorly characterized (Table 2-32), yet it is ranked within the highest priority category (Priority 1) for nitrogen load reduction (SCSWP, pg. 2-73). While the area was historically agricultural, land use has transitioned to residential and now the subwatershed is predominantly comprised of residential properties with outdated septic systems. Model projections indicate that 33% of the groundwater contributing to the Sagaponack Pond and Poxabogue Pond subwatershed has a travel time of 0-2 years, and 50% has a travel time of 2-25 years (SCSWP, pg. 2-163). This suggests that nitrogen deposited in groundwater decades ago is currently seeping into Sagaponack Pond.

As noted in the Town WQIP (pg. 21, pg. 73, pg. 75), the use of Permeable Reactive Barriers (PRBs) is considered an effective solution for improving groundwater by reducing nitrate contamination typically by 75-95% before it reaches surface waters. The implementation of Innovative/Alternative Onsite Wastewater Treatment Systems in groundwater-recharge areas within the pond's subwatershed is essential for long-term groundwater improvements. However, these measures alone will not be sufficient to meet the targeted nitrogen load reductions (SCSWP, pg. 2-224, Table 2-49). Consequently, supplementary strategies, such as PRBs, can provide nitrogen reductions while ongoing efforts to reduce nitrogen pollution at the source continue.

### **3a. Existing Conditions**

This multi-phase project began in April 2021 when PLT contracted CCE and Coastline Evaluation Inc. to survey pond conditions offshore of the Smith Corner Preserve

and along the shoreline of relevant nearby properties. In 2021-2022, surface water nitrogen concentrations around the pond ranged from 0.8 – 5.2 mg N-NO<sub>3</sub><sup>-</sup>/L. The SCSWP uses 0.32 mg N/L as a threshold for surface water of undrained fresh waterbodies (pg. 2-103), thus surface water concentrations within the pond are well above the levels generally accepted as healthy.

Nitrogen concentration of water within the pond sediment that is seeping into the surface water, also known as porewater, has been measured over multiple years. Our initial study identified several submarine groundwater discharge (SGD) zones with elevated porewater nitrogen values and seepage rates which are regions delivering the greatest nitrogen load to pond surface water. Most recently in 2023 porewater nitrate concentrations along the Sagg Pond western shoreline ranged from <0.4 – 16 mg N-NO<sub>3</sub><sup>-</sup>/L (Fig. 2).

In the 2023 application cycle, PLT applied for and received funding from the ToSH Community Preservation Fund (CPF) to install a permeable reactive barrier (PRB) at 334 Bridge Lane and to conduct site characterization for an additional PRB in Bridgehampton. The CPF proposal identified 363 Sagaponack Road, Bridgehampton, NY, as the location for site characterization. However, subsequent porewater and seepage studies conducted by Coastline Evaluation Inc. (CLEAR) in 2023 (Fig. 2) revealed that a more appropriate location due to higher groundwater nitrogen loading was slightly further south, downgradient of Highland Terrace in Bridgehampton.

From a project feasibility perspective, the farm field at 281 Highland Terrace, owned by the South Fork Land Foundation, offers a highly suitable site for a long horizontal barrier, which can facilitate a greater reduction in groundwater nitrogen than possible at 363 Sagaponack Road due to above ground structures. Consequently, due to both the higher anticipated nitrogen loading and improved feasibility, PRB site characterization activities started at 281 Highland Terrace in March 2025. Upon the time of this proposal submission site characterization activities are ongoing and include the installation and sampling of groundwater wells, hydrogeological measurements, and the collection and analysis of soil borings.

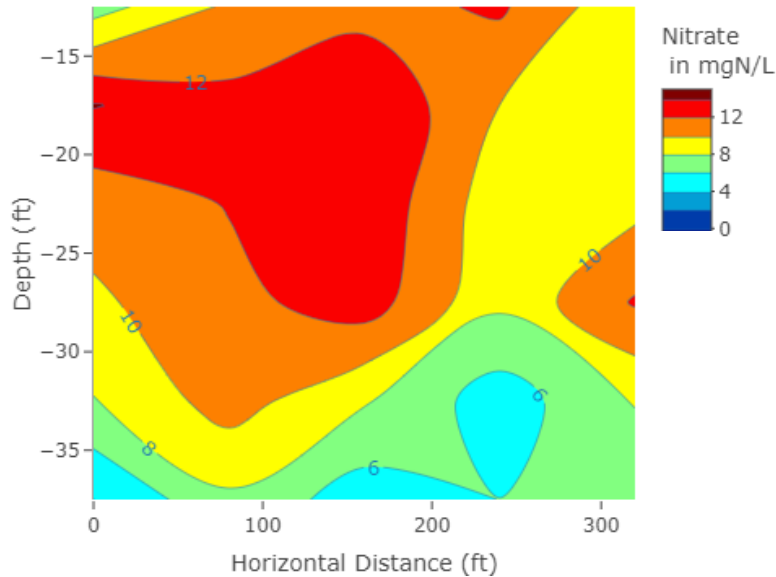
Currently 5 wells across a span of 320 ft were sampled and the highest groundwater nitrate concentration measured thus far was 14.1 mg N/L at 15-20 feet below grade, approximately 10 feet north of the southern boundary of the property, at well HTPW1 (Fig. 3).

The average nitrate concentration across all samples taken thus far from depths ranging from 10 to 40 feet below grade is  $9.3 \pm 2.8$  mg N/L. Ten out of 26 samples had greater than 10 mg N/L which is above the EPA drinking water standard. All samples had  $> 3.44$  mg N/L which is the average Long Island Upper Glacial Aquifer nitrate value (Bellone, 2015). The estimated groundwater velocity is 2.7 ft/day which is higher than the estimated groundwater velocity on the eastern side of Sagg Pond at 334 Bridge Lane ( $\sim 1.5$  ft/day). Higher groundwater velocity equates to higher nitrogen loading. Using average nitrate concentration and estimated velocity, nitrate load entering a 300 ft long by 40 ft deep PRB is 1,514 g N/day (3.3 lb N/day). If the PRB removes 75% of the nitrate load, this equals 911 lbs N removed per year.

Groundwater flow occurs both vertically and horizontally within the aquifer, and the depth profile can be interpreted as a timeline. Shallower water, closer to the water table, represents more recent groundwater, while deeper groundwater indicates older water and legacy nitrogen. Recent nitrogen inputs (0-2 years) are typically found closer to the surface of the water



**Figure 2:** Porewater data collected by Coastline Evaluation Inc. in 2023 along the Sagg Pond western shoreline. Porewater nitrate values ranged from below detection ( $<0.4$ ) up to 16 mg N- $\text{NO}_3^-$ /L. Sample names are in yellow. Darker red colors indicate higher nitrate concentration. 281 Highland Terrace property for proposed PRB is highlighted in blue.



**Figure 3:** 281 Highland Terrace groundwater nitrate contour plot. Data collected in March 2025 as part of the CPF funded site characterization. For example, the bright red and blue color represents nitrate between 12-14 and 4-6 mg N/L, respectively. The y-axis is vertical depth below grade and the x-axis is horizontal distance along the eastern edge of the property from south to north. Plot is not to scale.

table in shallow depth intervals, as vertical mixing is minimal. The depth to water at 281 Highland Terrace was approximately 10 feet below grade. If the highest nitrogen concentration was at the water table (between 10-15 feet below grade), this would suggest nitrogen originates from direct fertilizer applications on the farm field. However, this was not the case. The consistently elevated nitrate levels (> 6 mg N/L) found between 10 and 40 feet below grade suggest that most of the nitrogen present in

the groundwater is derived from legacy sources. While inputs from the farm field may play a role, the site characterization indicates groundwater nitrogen from further inland within the subwatershed—originating from legacy agricultural practices and residential septic systems—travels beneath the property and contributes to nitrogen loading along the western shoreline of Sagg Pond.

Data from this multi-phase Sagg Pond survey, site characterization, and remediation was discussed publicly on May 2022, May 2023, and Oct 2023. Presentations can be found on Youtube with the following links:

<https://www.youtube.com/watch?v=FY9voB1gsyY&t=503s>

<https://www.youtube.com/watch?v=RRZWz-8J494>

<https://www.youtube.com/watch?v=aduf0cMr9Go>

### **3b. How the Proposed Solution Addresses Nitrogen Remediation**

#### **CURRENT FUNDING REQUEST**

##### **PRB Design and Installation Objectives:**

1. Design a PRB using a cost-effective and appropriate design
2. Install PRB at South Fork Land Foundation property 281 Highland Terrace, Brighampton
3. Document the design and installation process and provide a final report to the Town
4. Provide educational content related to water quality and PRBs to stakeholders and the community

##### **Site Characterization Objectives:**

1. Evaluate groundwater conditions on the Sagaponack western shoreline several hundred feet north of Bridge Lane which is also a high nitrogen loading area (Fig. 2)
2. Determine the site suitability for nitrogen remediation with a PRB
3. Document the site characterization and provide a final report to the Town
4. Communicate site characterization results and provide educational content to stakeholders and the community

At the South Fork Land Foundation property, located at 281 Highland Terrace, Bridgehampton, NY, we will design and install a permeable reactive barrier (PRB) utilizing the most suitable installation method for the site. It is anticipated that the installation will occur with a series of woodchip-filled columns, arranged in a staggered array across approximately 300 linear feet along the eastern edge of the property. Assuming 75% nitrate load reduction, this installation could remove up to 911 lbs of nitrogen per year according to current estimates (Table 1). This approach offers several advantages, including reduced excavation compared to more traditional methods and a lower volume of PRB media, leading to cost savings. Furthermore, we may incorporate a unique blend of woodchips and additional amendments, such as EPA-approved vegetable oil emulsion, to enhance the PRB's effectiveness.

The feasibility of this project is high, as the site is agricultural and lacks above ground structures, providing unobstructed access for machinery. Electric and communication utilities are

buried along the western edge of the road, and the PRB will be installed at a sufficient distance from these utilities to avoid any interference. Prior to commencing installation activities, we will communicate with the Town and the property owner to secure any necessary permits and approvals. Given that the proposed PRB location is situated over 400 feet inland from the shoreline wetland, we do not anticipate needing to obtain a DEC wetland permit.

In addition to the PRB installation, further site characterization will be conducted on a property along the western shoreline such as at 99 Highland Terrace. This characterization will evaluate nitrogen plume dimensions, soil properties, and the hydrology north of Bridge Lane which is a high priority area according to recent results collected by Coastline Evaluation Inc (Fig. 2).

PRBs are subsurface barriers designed to intercept and provide passive remediation of groundwater. The installation of a PRB involves introducing a carbon source, such as woodchips or vegetable oil emulsion, which facilitates oxygen depletion by aerobic microbes and supports nitrate reduction by denitrifying microbes (Robertson and Cherry, 1995; Robertson et al., 2008). During denitrification, nitrate dissolved in groundwater is converted into nitrogen gas, which is then released into the atmosphere. The atmosphere is already composed of approximately 78% nitrogen gas and the gas is harmless. PRBs have been extensively used in the Midwest United States and Canada to treat agricultural and septic-derived nitrate plumes (Robertson et al., 2000; Schipper et al., 2010; Christianson et al., 2020) and have more recently been installed near impaired waterbodies in Suffolk County and Cape Cod to mitigate surface water nitrogen pollution. By treating nitrogen-rich groundwater before it enters coastal waterbodies, PRBs can significantly reduce nitrogen loading (Graffam et al., 2020; Hiller et al., 2015). These barriers require minimal maintenance and have been shown to remain effective for decades, with one of the longest PRB studies demonstrating that 80% of the carbon in woodchips remained after 15 years, or less than 1.5% annual carbon usage (Robertson et al., 2008). Assuming that half of the carbon is available to microbes, the PRB's functional lifespan would exceed 30 years without maintenance.

Sagaponack Pond is an ideal waterbody for use of PRBs due to its characteristics as a narrow-shaped water body with high shoreline footage to pond volume ratio and shallow water levels. Elevated groundwater nitrate concentrations were measured 10 and 40 feet below grade, which is a depth range that the PRB installation equipment (Geoprobe) can easily reach. Additionally, PRBs can treat nitrates from all sources and offer rapid reduction in nitrogen as they begin to work immediately. According to the Suffolk County Subwatershed Plan (SCSWP, pg. 2-186), 52% of nitrogen inputs to the Sagaponack Pond and Poxabogue Pond subwatershed are derived from septic systems, while 48% originate from fertilizers, atmospheric deposition, and pet waste. PRBs can reduce all of these sources of nitrogen which are impacting the watershed, not just septic.

In addition to the technical design and installation of the nitrogen remediation system, education and outreach is a major tenet of this project (Fig. 4). This initiative is expected to provide valuable data to the ToSH, contributing to the existing repository of PRB performance data and water quality information for Sagaponack Pond. Furthermore, PLT and CCE will use this project to engage and connect with residents. The data and insights will be shared publicly via email, and through an annual "Water Matters" presentation, and will be accessible on the PLT and CCE websites.

*PRB Maintenance, Monitoring, and Additional Research (not budgeted in this proposal)*

To the extent possible, PLT will seek private funding and grants to cover maintenance and monitoring and additional research that CPF funds cannot cover over subsequent years. The Town's commitment to support this effort will provide leverage for PLT to raise additional funds and is an opportunity for private-public-governmental partnership which will maximize the use of both public and private funds to benefit Sagg Pond. Performance monitoring wells will be accessible at the ground surface and no above ground structures will be present. After PRB installation, nitrogen reduction will be calculated by sampling upgradient (pre-treatment), and downgradient (post-treatment) to determine percent N removed and the pounds of nitrogen removed per year. Water quality samples will be analyzed

by an ELAP certified laboratory for the nitrogen series (nitrate, nitrite, ammonium, TKN). Additional sampling may include organic carbon, metal analysis, and hydrogen sulfide. Field parameters will be measured including temperature, conductivity, total dissolved solids (TDS), pH, and oxidation reduction potential (ORP).



**Figure 4:** Photo from 2024 outreach event held at Sagaponack Pond residence. Community members were invited to hear a presentation from PLT and CCE and to see the recently installed pilot PRB.

### **3c. Technology Efficacy in Similar Settings**

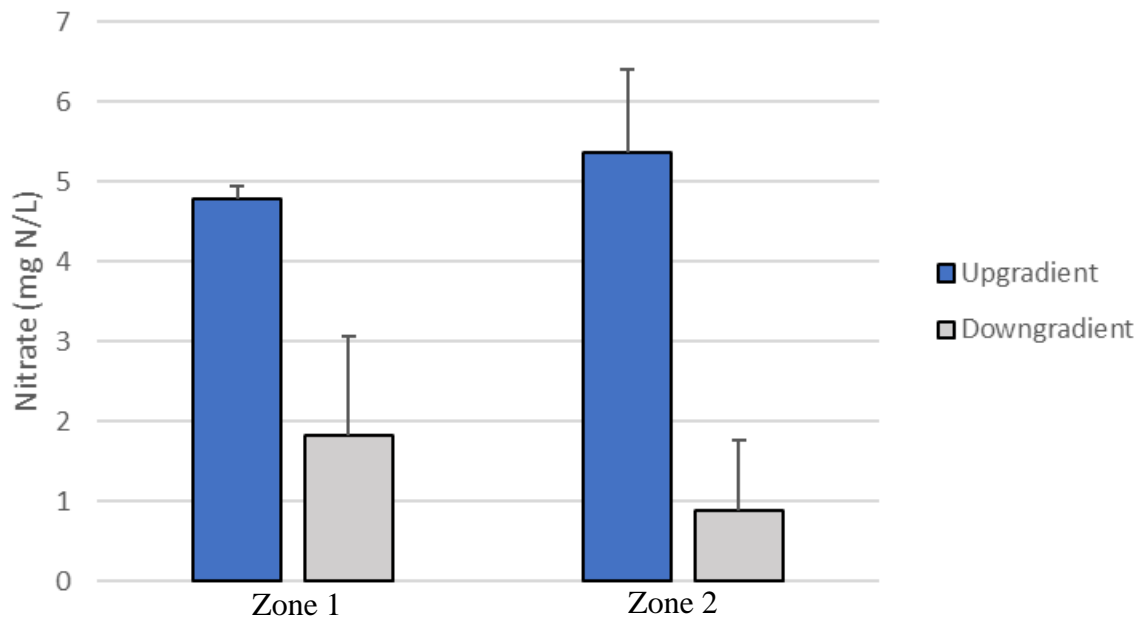
#### ***Hampton Bays Bulkhead PRB***

PRBs have been used locally in Hampton Bays, Sagaponack, and East Hampton and in other places with sole source aquifers like Cape Cod (Graffam et al. 2020, Hiller et al. 2016). PRB technology efficacy was recently shown in Hampton Bays where a 100 ft PRB was installed behind a bulkhead to prevent nitrate from entering Shinnecock Bay. In 2018 the Hampton Hills Association received a CPF grant from the ToSH. CCE was contracted to lead the effort in collaboration with Coastline Evaluation Inc., Stony Brook and Tidewater Dock Building Co. Results from several years of monitoring are currently being included in a manuscript to be submitted for peer review by a scientific journal (Lin et al. 2025 (in preparation)). Nitrogen removal was monitored over 4 years in 12 PRB test cells installed behind the bulkhead including continuous trench PRBs (C-PRBs) and discontinuous woodchip column arrays (D-PRB). In April 2021 groundwater entering the barrier had nitrate concentrations ranging from <1 to 19 mg N/L and treated water had nitrate ranging from below detection up to 3 mg N/L. Over multiple seasons the control areas where no woodchips were present had little to no nitrate removal. D-PRB test cells demonstrated comparable performance per volume of reactive media.

#### ***Pilot PRB at Sagaponack Residential Property***

The first Sagg Pond pilot PRB was installed in Oct. 2023 using privately raised funds from PLT. In completing this preliminary pilot, CCE gained valuable insights into the installation process, realized we need less structural materials than initially anticipated, and refined the method so we can provide information to future contractors who will install full-scale systems. At the pilot there are 2 zones of PRB with each zone being 10 ft wide x 30 ft deep and with 10 PRB columns staggered in 2 rows in each zone. Each PRB column is approx. 1 ft diameter with 1-2 ft spacing between each column. There are six upgradient and six downgradient monitoring wells for performance monitoring. CCE measured the highest nitrate removal in the center well pair of each zone, where nitrate was reduced from approximately 5 to <2 mg N/L on average (Fig. 5). At the edges of each zone, untreated groundwater from around the PRB was mixing with treated water so we observed edge effects at the pilot but with the

longer full-scale barriers, such as a 200 ft long (to be installed at 334 Bridge Lane) and 300 ft long barrier (proposed for 281 Highland Terrace), edge effects will be minimal.



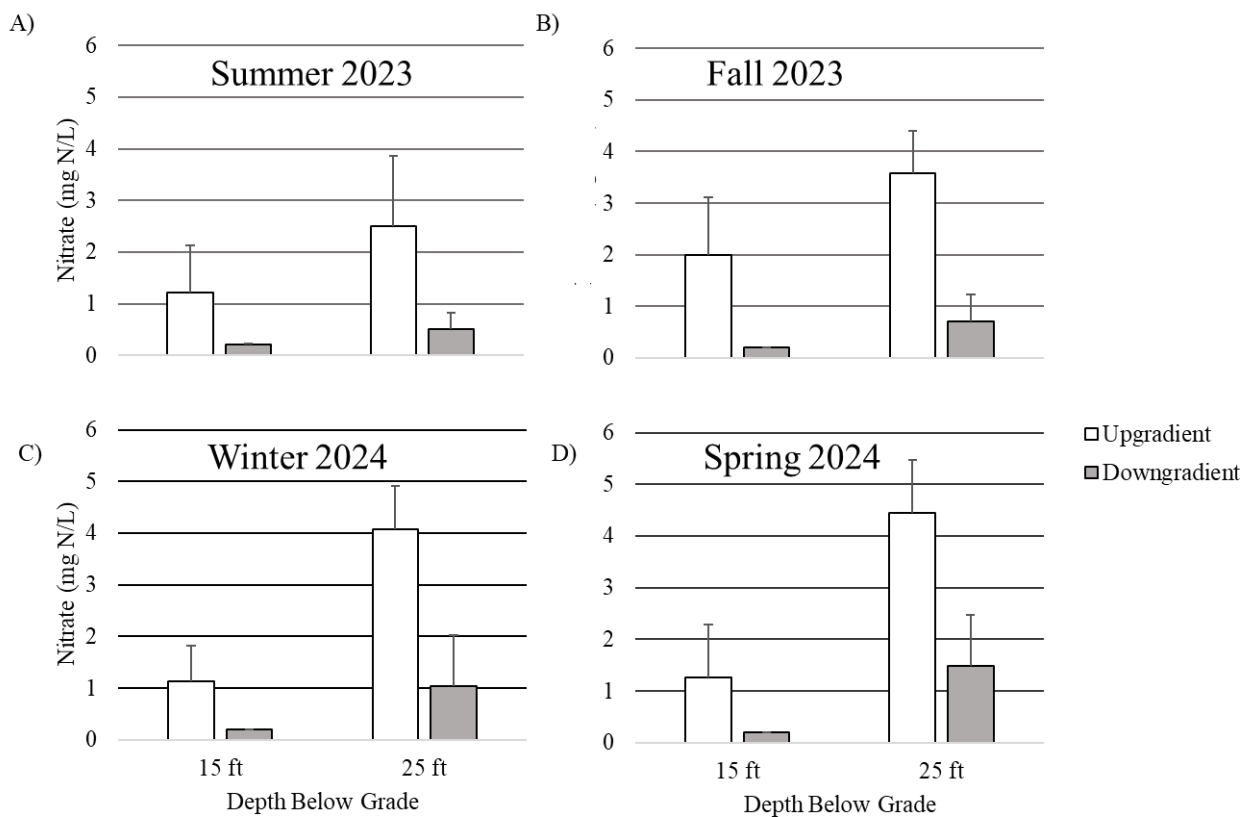
**Figure 5:** Results from Sagg Pond pilot PRB monitoring wells centered in each PRB zone. Graph shows average nitrate  $\pm$  standard deviation of 4 sampling events from January to July 2024.

### East Hampton Tanbark Creek PRB

Injection of a vegetable oil emulsion is also being considered as a potential PRB amendment for the Sagg Pond PRB. The injection of a carbon emulsion to form a PRB has been used primarily for organic contaminant removal and the application of using it to treat nitrate is a more recent development. This type of installation is promising due to the small environmental footprint associated with injection compared to trenching woodchips. Vegetable oil is also a bioavailable form of carbon which means it is more easily used by microbes and can potentially supplement other forms of carbon which degrade more slowly. PLT is currently funding CCE to do laboratory column tests to determine the most appropriate vegetable oil emulsion

concentration for a PRB using Sagg Pond soil. The premise of this research is that using a higher concentration of vegetable oil may reduce installation time (which provides cost-savings) and more nitrate removal in the short term (due to higher bioavailability) but may reduce the soil permeability and cause flow diversion around the PRB which would defeat the purpose of the approach.

With funds from Peconic Estuary Partnership and Town of East Hampton CPF, CCE has been monitoring a vegetable oil injection style pilot PRB in East Hampton adjacent to Three Mile Harbor Tanbark Creek. The pilot PRB design includes 6 injection well clusters consisting of three 2-inch diameter wells per cluster (shallow, intermediate, and deep) screened at 5-15, 15-25, and 25-35 ft below grade. CCE completed the first year of quarterly monitoring from 2023-2024. Upgradient of the pilot PRB, untreated groundwater nitrate was moderately elevated with up to 5.3 mg N/L during the monitoring period (Fig. 6). On average the pilot PRB achieved 83%



**Figure 6:** Tanbark Creek injection PRB quarterly monitoring results from 2023-2024. Each bar represents an average  $\pm$  standard deviation of 4 samples.

nitrate removal corresponding to 40-105 lbs N/yr of nitrate removed before it could enter Tanbark Creek.

### **3d. How the Project Supports Goals/Policies**

PLT's mission integrates conservation, water quality, agriculture, and stewardship, positioning the organization as an ideal leader for the remediation initiatives at Sagaponack Pond, a region with strong agricultural roots. Additionally, CCE is an established leader in applied research and the implementation of cutting-edge technologies in both agricultural and marine environments, aimed at reducing nitrogen and phosphorus loads. These efforts include the utilization of permeable reactive barriers (PRBs), bio-swales, bio-extraction techniques, the application of biochar, adoption of controlled-release fertilizers, and promotion of soil health-enhancing practices.

This project not only supports the objectives of PLT and CCE but also aligns with regional water quality improvement targets. By reducing the nitrogen load entering the shallow coastal pond, the project will help mitigate elevated surface water nitrogen concentrations, suppress excessive algal growth, and reduce biological oxygen demand. Moreover, the initiative is in alignment with goals aimed at enhancing natural spaces for recreational purposes. It strives to protect economic, environmental, and aesthetic values by improving water clarity and fostering a healthier habitat for aquatic species. Specifically, this project aligns with the following key goals and policies vital to both New York State and the Town of Southampton:

a) [Long Island Nitrogen Action Plan Scope \(ny.gov\)](#)

- Goal #1: Assess nitrogen pollution in Long Island waters (pg. 7)
- Goal #2: Identify sources of nitrogen to impaired and non-impaired water bodies (pg. 7)
- Goal #3: Develop an implementation plan to achieve reductions including action plans which contain near term actions that will reduce nitrogen pollution to groundwater and surface waters (pg. 7)

b) Town of Southampton

- [Vision Goals for Natural Resources](#) Goal #3: Improve the quality of surface and bay waters by reducing nutrient loading, toxins and sedimentation (pg. 5)

- [Southampton 400 + Sustainability Goal](#): Restore and protect the Town's ground and surface waters to ensure their ability to support public health and the maritime, recreational and resort activities that underpin Southampton's way of life and economy (pg. 42)
- [Water Protection Plan](#)
  - Policy 5.1 Reduce nutrients to levels necessary to support a healthy ecosystem; one that allows for harvestable, sustainable fish and shellfish populations, healthy submerged aquatic vegetation, and traditional human uses in the Town's waters.
    - a. Reduce the input of nutrients from all sources including human waste, pet waste, storm water, and fertilizers.
    - b. Employ effective means to reduce nutrients such as permeable reactive barriers etc. (pg. 71)
  - Implementation Thought Projects #2 and #8 (pg. 74)

## 5. Cost Factors

	<b>Cost</b>
<b>Salary (includes U/I and W/C)</b>	
CCE Principle Investigators	\$25,200
CCE Technicians	\$20,472
<b>Equipment and supplies</b>	
PRB media and supplies	\$18,300
ELAP laboratory analytical costs	\$8,250
PRB related equipment rental	\$25,000
Site characterization equipment rental	\$10,000
CCE Travel	\$3,500
<b>Contractor costs</b>	
ISOTEC engineer design support	\$5,016
Land surveyor	\$3,000
PRB installation	\$398,400
<b>Indirect administrative costs</b>	
10% Cornell Cooperative Extension admin fee	\$51,714
<b>Current CPF Funding Request</b>	<b>\$568,852</b>
<b>Currently committed matching funds by PLT since 2023</b>	<b>\$543,248</b>

The current request of \$568,852 is for the completion of the design and installation of a approximately 300 ft long by 40 ft deep PRB at 281 Highland Terrace Bridgehampton and additional site characterization just north of Bridge Lane on the western shoreline (likely at 99 Highland Terrace, Bridgehampton). The proposed PRB on 281 Highland Terrace is about 100 ft longer and 10 ft deeper than the planned PRB for 334 Bridge Lane due to wider and deeper groundwater nitrogen plume dimensions found during site characterization. The 281 Highland Terrace PRB proposed dimensions (300 ft x 40 ft; \$398.4k) are approximately 1.7 times the square area and only 1.5 times the cost of the 334 Bridge Lane PRB (200 ft x 35 ft, \$273k). The cost of installation typically increases with the scale of remediation, but in this case, we aim to enhance cost-efficiency by optimizing the design to achieve a longer and deeper barrier without proportionally increasing expenses.

PLT matching funds committed since 2023	
CCE pilot PRB and lab research	\$168,590
Coastline Evaluation Inc pilot PRB, western shoreline investigation, Sagg Pond monitoring	\$49,658
CCWT I/A watershed manager	\$225,000
Perfect Earth homeowner education	\$100,000
Total	\$543,248

PLT continues to work with residents and supporters to bring the PLT contribution to 50% of the total funds spent. Since 2023 PLT committed to \$543,248 in privately raised funds for water quality improvements to various partner organizations and contractors to support the health of the watershed. Part of the funding is being directed towards laboratory work to support research and development of future PRB designs and long term monitoring of water quality in the Sagaponack watershed and we anticipate funding future PRB monitoring at 334 Bridge Lane. It's our understanding that CPF funds are not able to support laboratory research or general water quality monitoring, thus we're committed to covering PRB research, maintenance, and monitoring costs. We think this is an appropriate use of funds that the privately raised money support work which is heavily research/monitoring focused and CPF funds go directly to remediation site characterization, design and installation.

While there are substantial upfront costs due to site characterization, design, and installation of PRBs, there are significant cost savings because the treatment requires minimal maintenance. Additionally, the cost effectiveness of PRBs is similar to other nitrogen removing technologies (See Table 1, Schipper et al. 2010, SCSWP pg. 2-117, Fig. 2-54). We currently estimate up to 911 lbs of N removed yearly which equates to an average cost of \$57.40 per kg N removed over a 20-year lifetime of the PRB while other estimates are \$93 and \$220 per kg N (Table 1).

The current budget is appropriate and reasonable as it is based on updated quotes, equipment use fees, PRB media, analytical and contractor costs as well as travel reimbursements. CCE and its contractors helped develop the budget for site characterization and installation of the Hampton Bays bulkhead PRB in addition to the site characterization and installation for the Tanbark Creek injection PRB in East Hampton. Therefore, they are experienced in properly budgeting for the work.

**Table 1:** Estimated PRB parameters and preliminary cost comparison

200	Estimated soil hydraulic conductivity (ft/day)
0.003	Estimated hydraulic gradient (ft/ft)
0.64	Darcy Flux (ft/day)
30	PRB vertical dimension (ft) (10-40ft)
300	PRB length (ft)
9000	Cross-sectional area (sq. ft)
5,751	Groundwater flux (cu. ft/day)
43,016	Groundwater flux (gal/day)
162,815	Groundwater flux (L/day)
9.3	Ave. groundwater nitrate (mg N/L) from 10-40ft
1514	Nitrogen load (g N/day)
3.3	Nitrogen load (lb N/day)
1,215	Nitrogen load (lb N/year)
911	Nitrogen load removed assuming 75% reduction (lb N/year)
\$475,900	est. PRB installation cost at 281 Highland Terrace
18,238	Nitrogen load (lb N) over 20 yr lifetime (max est.)
\$26.10	cost per lb of nitrogen over 20 yr lifetime
414.5	Nitrogen load (kg/yr (max est.)
8,290	Nitrogen load (kg N) over 20 yr lifetime (max est.)

\$57.40	ave. cost per kg N estimated for 281 Highland Terrace over 20 yr lifetime
\$220	ave. cost per kg N over 20 yr PRB lifetime (Suffolk County Subwatershed Plan)
\$93	ave. cost per kg N removed by passive N removal technique (Hazen and Sawyer 2015)

## 8. Anticipated Project Timeline

The anticipated timelines are provided to show that PLT in consultation with CCE and its are highly motivated perform the work in a timely manner upon securing funds. Timelines are contingent upon contract execution, funding dispersal, permit approvals if necessary, and working around the farmer’s schedule and thus need to be flexible. Town contract execution is assumed to be December 2025 following the March 2025 CPF proposal submission. PLT in consultation with CCE will be responsible for maintaining the project to ensure the function of the nitrogen remediation is sustained. Once installed, PRB performance monitoring will be performed quarterly in year 1, and then bi-annually in subsequent years.

Description	Spring 2026	Summer 2026	Fall/Winter 2026/2027
PRB site characterization on western shoreline north of Bridge Lane (Likely 99 Highland Terrace)	x		
Site characterization report and possible submission to CPF March 2026	x		
PRB design at 281 Highland Terrace		x	
PRB installation at 281 Highland Terrace			x

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OFFICE OF THE COUNTY LEGISLATURE  
COUNTY OF SUFFOLK

**Ann E. Welker**  
Second Legislative District

**Committee Member**  
Environment, Parks & Agriculture  
Health  
Public Works, Transportation & Energy  
Veterans  
Ways & Means



**Member, Gabreski Community Advisory  
& Review Board**  
**Member, Tick Control Advisory Committee**

March 14, 2025

Town of Southampton  
Water Quality Advisory Committee  
116 Hampton Road  
Southampton NY 11968

Dear Water Quality Advisory Committee,

As Suffolk County Legislator of the Second District, I am writing to express my strong support for the project titled *"Reducing Groundwater Nitrogen Input to Sagaponack Pond's Western Shoreline"*, which seeks funding from the Town of Southampton Community Preservation Fund Water Quality Improvement Program to install a Permeable Reactive Barrier (PRB) at 281 Highland Terrace, Bridgehampton. This initiative is spearheaded by the Peconic Land Trust in partnership with Cornell Cooperative Extension of Suffolk County.

The proposed PRB installation addresses a critical environmental issue: the influx of nitrate-rich groundwater from legacy nitrogen inputs in the subwatershed. Given the area's soil characteristics and groundwater flow patterns, the property at 281 Highland Terrace is particularly well-suited for this approach, which could provide substantial improvements to the water quality of the pond by reducing nitrogen inputs from the western shoreline of Sagaponack Pond.

The Peconic Land Trust has long been a leader in preserving agricultural lands and safeguarding water quality in the region. Their dedication to protecting Sagaponack Pond and its watershed is evident in their comprehensive approach to protecting water quality as they've collaborated with Cornell Cooperative Extension to monitor groundwater, the Center for Clean Water Technology to address septic system upgrades, and Perfect Earth to encourage sustainable landscaping. I am confident that their expertise, combined with Cornell Cooperative Extension's research-driven methods, will ensure the success of this effort.

For these reasons, I strongly urge the committee to continue to support this important project by allocating the necessary funding to help protect and preserve the water quality of Sagaponack Pond.

Yours truly,

Ann E. Welker

AEW/car

71 Hill Street, Suite F-1, Southampton, NY 11968  
Phone: (631) 852-8400 Fax: (631) 852-8404  
Ann.Welker@suffolkcountyny.gov

# Long Island Analytical Laboratories, Inc.

110 Colin Drive  
Holbrook, NY 11741

Phone: 631-472-3400

E-mail: [lial@lialinc.com](mailto:lial@lialinc.com)

# Estimate

Date	Estimate #
3/13/2025	1709A

Customer Name / Address
Cornell Cooperative Extension of Suffolk Molly Graffam 423 Griffing Ave Suite 100 Riverhead, NY 11901

Project Location

Customer E-mail	Customer Phone	Terms
<a href="mailto:meg372@cornell.edu">meg372@cornell.edu</a>	631-727-7850	Net 30

Description	Qty	Rate	Total
Total Nitrogen Series Analysis Includes: Ammonia Nitrate, Nitrite TKN	1	72.00	72.00
Soil Permeability Analysis	1	75.00	75.00
Grain Size Analysis	1	125.00	125.00
Please note that the above pricing includes bottle-ware and a NYSDOH ELAP certified report within 5-7 business days of sample receipt by the laboratory. Any payments made via credit card will incur a 4% service fee.			
<b>Customer Signature:</b>	<b>Total</b>		<b>\$272.00</b>

**Permeable Reactive Barrier Design Support**  
**281 Highland Terrace, Bridgehampton, NY**

**February 2025**



Item (description)	Qty	Unit	Unit Cost	Cost
<b>PRB Design Support</b> <ul style="list-style-type: none"> <li>• Assessment of hydrogeology, contaminant concentrations</li> <li>• Develop dimensions for PRB and treatment reagent quantities</li> <li>• Prepare Permeable Reactive Barrier Design Plan with PRB map, construction details, and PRB cross sections</li> <li>• Calculation of nitrogen removal</li> <li>• Technical meetings with Cornell Cooperative Extension (virtual).</li> </ul>				
<b>ISOTEC Senior Engineer [Paul Dombrowski, P.E. (MA, CT, NH)]</b>	<b>12</b>	<b>Hour</b>	<b>\$172</b>	<b>\$2,064</b>
<b>ISOTEC Junior Engineer / CAD Drafter</b>	<b>22</b>	<b>Hour</b>	<b>\$135</b>	<b>\$2,970</b>
<b>ISOTEC TOTAL COST</b>				<b>\$5,016</b>

Notes

1. Cost estimate assumes non-prevailing, non-union wage rates.
2. Cost is based on site information currently available and provided to ISOTEC.



chris@deltawell.com

To: Molly E Graffam



Reply



Reply all



Forward



Fri 3/14/2025 9:41 AM

You replied on Fri 3/14/2025 11:17 AM

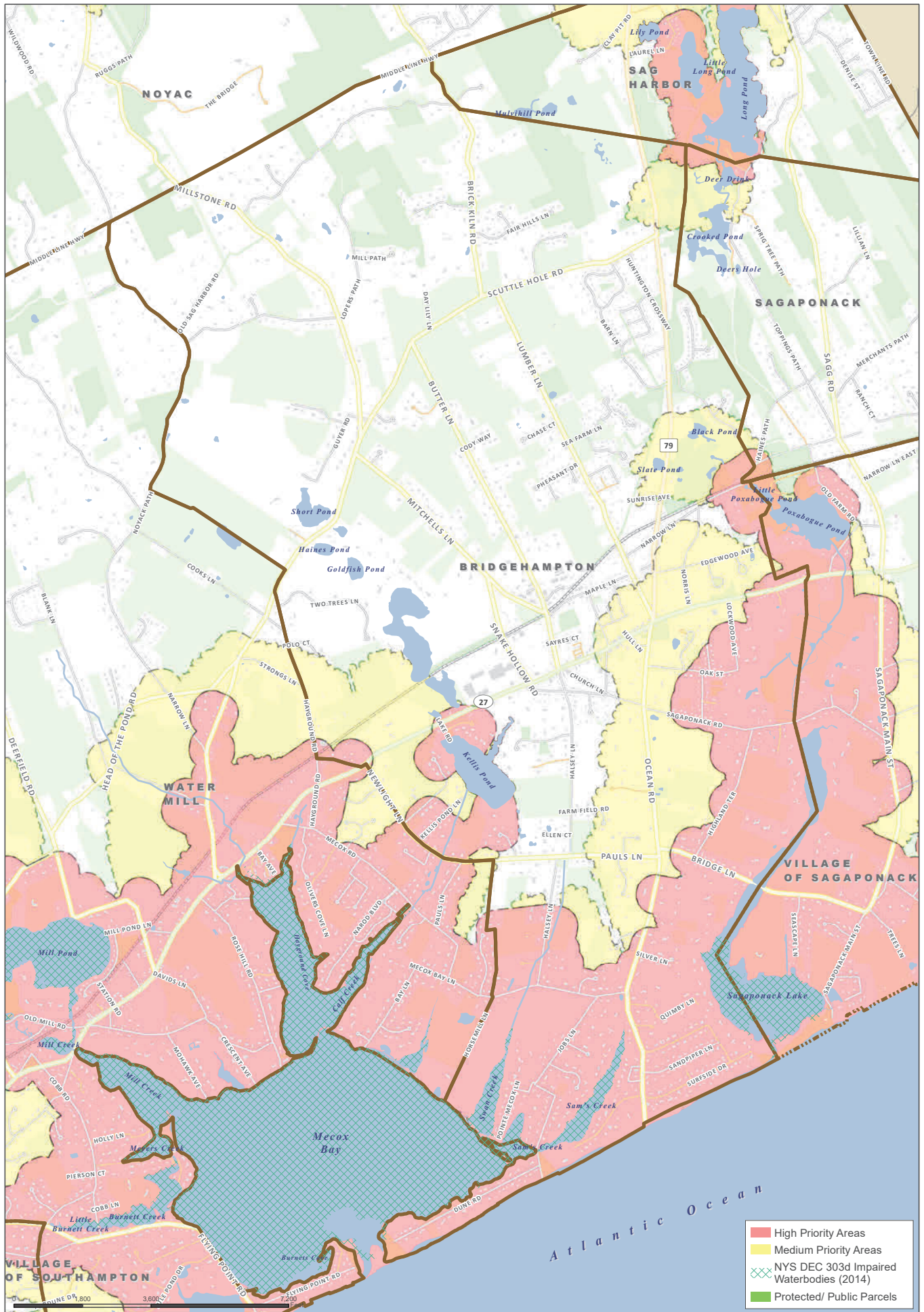
Hi! Use the below and we would do whatever we needed to do to have a rig available.

Project mobilization and demobilization.....\$3,400.00 lump sum

Drilling and installation to 40'....\$1,475 each – total for 200.....295,000.00

Total estimated project cost.....\$298,400.00

Chris



# Town of Southampton CPF Water Quality Improvement Project Plan

## BRIDGEHAMPTON

Suffolk County Real Property Tax Service  
 COPYRIGHT 2016, COUNTY OF SUFFOLK, N.Y.  
 Real Property Taxmap parcel linework used with permission of  
 Suffolk County Real Property Tax Service Agency (R.P.T.S.A.)



**Legend**

- Semi-permanent monitoring well cluster
- Temporary profile well

HT 8

HT 7

HT 6

HT 5

HT 4

HT 3

HT 2

HT 1

HT 9

Highland Terrace

Highland Terrace









## Evaluating Pollutant Load

### PLET

This project is aimed at remediating nitrogen at 281 Highland Terrace, Bridgehampton. Currently the data available to input into the EPA Spreadsheet Tool for Evaluating Pollutant Load is limited but upon completion of the project, more data will be available to better characterize the site conditions. The following nutrient load calculation was generated with the inputs and assumptions identified below:

#### 281 Highland Terrace

- Bridgehampton Weather Station
- Custom Watershed
- 13.8 acres designated as “user defined”
- Number of agricultural animals and septic inputs are zero
- Soil hydraulic group B – 2<sup>nd</sup> highest infiltration
- Nutrient Concentration in Shallow Groundwater = 9.3 mg N/L
- Groundwater load calculation checked

<b>Property</b>	<b>N Load (no BMP)</b>	<b>P Load (no BMP)</b>	<b>BOD Load (no BMP)</b>	<b>Sediment Load (no BMP)</b>
	lb/year	lb/year	lb/year	t/year
281 Highland Terrace	126.9	48.9	253.8	39.7

Nitrogen reductions associated with PRB implementation are highly dependent on site-specific conditions such as groundwater flow rate, nitrate concentration and plume dimensions which will be finalized during the site characterization and design work. The PRB at 281 Highland Terrace is expected to removed up to 911 lbs of N per year.

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## Division of Fish and Wildlife, New York Heritage Program

625 Broadway, Fifth Floor, Albany, NY 12233-4757

Phone: (518) 402-8935 | Fax: (518) 402-8925

[www.dec.ny.gov](http://www.dec.ny.gov)

**03/14/2025**

The attached report from the Environmental Resource Mapper includes information from the New York Natural Heritage Program database with respect to the location indicated on the map below. This letter, together with the attached report from the Environmental Resource Mapper, is equivalent to, and carries the same validity, as a letter from the New York Natural Heritage Program, including for projects where a Natural Heritage letter is required.

If your location of interest does not fall within an area covered by the Rare Plants and Rare Animals layer or in the Significant Natural Communities layer, then New York Natural Heritage has no records to report in the vicinity of your project site. Submitting a project screening request to NY Natural Heritage is not necessary.

If the attached report lists that your location of interest is in the vicinity of state-listed animals, including state-listed bats, please consult the [EAF Mapper](#) to obtain a list of the species involved. (You do not have to be filling out an Environmental Assessment Form in order to use the EAF Mapper). Then consult the appropriate [NYSDEC Regional Office](#) for information on any project requirements or permit conditions.

If the attached report lists unlisted animals, rare plants, or significant natural communities, and if you would like more information on these, please submit a project screening request to [New York Natural Heritage](#). For more information, please see the DEC webpage [Request Natural Heritage Information for Project Screening](#).

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, NYNHP files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. NYNHP cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources from a proposed project.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the NYNHP database.

## New York Natural Heritage Program

<https://www.nynhp.org/>.

# Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18

Easting: 728157.009730645

Northing: 4534177.548593047

Longitude/Latitude

Longitude: -72.29026209515781

Latitude: 40.9269031928066

The approximate address of the point you clicked on is:

281 Highland Ter, Bridgehampton, New York, 11932

**County:** Suffolk

**Town:** Southampton

**USGS Quad:** SAG HARBOR

## [Rare Plants and Rare Animals](#)

This location is in the vicinity of Bats Listed as Endangered or Threatened -- Contact NYSDEC Regional Office

## [Base Flood Elevation Plus 72/75 Inches Sea-level Rise](#)

This area is projected to be inundated during a 100-year flood with 72/75 inches of sea-level rise.

## [Limit to Moderate Wave Action](#)

This area is projected to have potential for breaking wave heights over 1.5 feet during a 100-year flood with 72/75 inches of sea-level rise.

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

**Disclaimer:** If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Print Preview

# 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.

<b>Part 1 – Project and Sponsor Information</b>			
Name of Action or Project: Reducing Groundwater Nitrogen Input to Sagaponack Pond's Western Shoreline			
Project Location (describe, and attach a location map): 281 Highland Terrace, Bridgehampton			
Brief Description of Proposed Action: install a permeable reactive barrier on the eastern edge of the property			
Name of Applicant or Sponsor: Peconic Land Trust		Telephone: E-Mail: mswain@peconiclandtrust.org	
Address: 296 Hampton Rd; Southampton, NY 11968			
City/PO:		State:	Zip Code:
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.			NO <input type="checkbox"/>
			YES <input type="checkbox"/>
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:			NO <input type="checkbox"/>
			YES <input type="checkbox"/>
3. a. Total acreage of the site of the proposed action?		13.8 acres	
b. Total acreage to be physically disturbed?		<0.15 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		13.8 acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
<input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban)			
<input type="checkbox"/> Forest <input checked="" type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other(Specify):			
<input type="checkbox"/> Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
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 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	YES <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
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: not applicable	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ not applicable	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ not applicable	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	
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 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	YES <input type="checkbox"/> <input type="checkbox"/>	
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: _____ _____ _____	NO <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	YES <input type="checkbox"/> <input type="checkbox"/>	



CERTIFICATE OF INCORPORATION

of

Peconic Land Trust, Incorporated

under section 402 of the Not-for-Profit  
Corporation Law

IT IS HEREBY CERTIFIED THAT:

- (1) The name of this corporation shall be the Peconic Land Trust, Incorporated.
- (2) The corporation is a corporation as defined in subparagraph (a)(5) of section 102 (Definitions) of the Not-for-Profit Corporation Law.
- (3) The purposes for which the corporation is formed are:
  - a. To promote for the benefit of the inhabitants of Suffolk County on Eastern Long Island: (1) the conservation of natural resources including land, water, wetlands, barrier beaches, woodland, farmland, and open spaces, and the plant and animal life therein, (2) the maintenance of the unique scenic and historic sites as well as open space, and (3) the protection of the Ronkonkoma and Harbor Hill Moraines on Eastern Long Island;
  - b. To acquire, by gifts, purchase, or otherwise, real or personal property of all kinds, and the rights to property including easements, and to use such property and rights in such a manner as the Board of Directors shall deem appropriate to carry out the purposes set forth herein and subject to the limitations set forth herein;
  - c. To provide guidance to individual Suffolk County land-owners on Eastern Long Island who need assistance in determining the future use, ownership, and management of their property; to this end, the corporation will not engage in any profession required to be licensed by Title VIII of the New York State Education Law;
  - d. To use all property held or controlled by the corporation and net earnings thereof within the United States of America for the benefit of the inhabitants of Suffolk County on Eastern Long Island, and exclusively for the charitable and conservationist purposes set forth herein;
  - e. To exercise its powers through its officers, directors, members, employees, and agents, and to join with other organizations in activities designed to achieve the objectives of the corporation;

- f. In general, and subject to such limitations and conditions as are or may be prescribed by law, to exercise such other powers which now are or hereafter may be conferred by law upon a corporation organized for the purposes herein set forth, or necessary or incidental to the powers so conferred, conducive to the attainment of the purposes of the corporation, subject to the furtherance of the tax exempt purposes of the corporation and as may be exercised by an organization exempt under Section 501(c)(3) of the Internal Revenue Code and its Regulations, as they now exist or may hereafter be amended, and by an organization, contributions to which are deductible under Section 170(c)(2) of such Code and Regulations, as they now exist or may hereafter be amended.
- g. To do any act or thing incidental to or connected with the foregoing purposes of the corporation or in the advancement thereof, but not for the pecuniary profit or financial gain of its members, directors, officers, or other private persons, except that the corporation shall be authorized and empowered to pay reasonable compensation for services rendered to or for the corporation affecting one or more of its purposes. No substantial part of the activities of the corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the corporation shall not participate in, or intervene in, any political campaign on behalf of any candidate for political office.

(4) The corporation shall be a Type B corporation pursuant to section 201 of the Not-for-Profit Corporation Law.

(5) The names and addresses of the initial directors are:

<u>NAME</u>	<u>ADDRESS</u>
- John van Heusen Halsey	Wickapogue Road Southampton, NY. 11968
- Roy L. Wines, Jr.	36 Halsey Street Southampton, NY. 11968
- Richard W. King	Noyac Road Southampton, NY. 11968
- Gilbert Flanagan	83 Jobs Lane, P.O. Box TT Southampton, NY 11968
- Terry Stubelek	P.O. Box 969 Southampton, NY. 11968

(6) The office of the corporation is to be located in the Town of Southampton, County of Suffolk, State of New York.

- (7) The territory in which the activities of the corporation are principally to be located is Suffolk County on Eastern Long Island;
- (8) The Secretary of State, pursuant to Section 402(a)(7) is hereby designated as agent of the corporation upon whom process against it may be served. The post office address to which the Secretary of State shall mail a copy of any process against the corporation served upon him is:
- Peconic Land Trust  
c/o Hugh Halsey, II  
Wickapogue Road  
Southampton, N.Y. 11968
- (9) Prior to delivery to the department of state for filing, all approvals and consents required by law will be endorsed upon or annexed to this certificate.
- (10) This corporation shall have perpetual existence; but in the event of dissolution of the corporation or the termination of its corporate existence, the Board of Directors shall, upon approval of a Justice of the New York State Supreme Court, dispose of all of the assets of the corporation exclusively for the purposes of the corporation in such manner, or to such organization or organizations organized and operated exclusively for charitable, educational, or scientific purposes in Suffolk County on Eastern Long Island as shall at the time qualify for an exempt organization or organizations under section 501(c)(3) of the Internal Revenue Code of 1954 and its Regulations as they now exist or as they may hereafter be amended. Any such assets not so disposed of shall be disposed of by said court exclusively for such purposes or to such organization or organizations as the court shall determine, which are organized and operated exclusively for such purposes.
- (11) This Certificate of Incorporation may not be amended to prevent the corporation from qualifying as exempt organization under section 501(c)(3) of the Internal Revenue Code, as it now exists or may hereafter be amended.
- (12) Nothing herein shall authorize this corporation, directly or indirectly, to engage in or include among its purposes, any of the activities mentioned in Not-For-Profit Corporation Law, Section 404(b-t).

IN WITNESS WHEREOF, the undersigned incorporator, or each of them if there are more than one, being at least nineteen years, have made, subscribed, and acknowledged this certificate this Tenth day of March, 1983.

..... John van Heusen Halsey .....  
Type name of incorporator

..... *John van Heusen Halsey* .....  
Signature

..... *Denise Maria Ruggeri* .....  
Signature

..... Wickapogue Road, Southampton, NY, 11968 .....  
Address



I, the undersigned Justice of the Supreme Court of the State of New York  
Judicial District, do hereby approve the foregoing Certificate of Incorporation of

TENTH

Dated APRIL 7<sup>th</sup> 1983  
RIVERHEAD N.Y.

*John J. Conley*  
-----  
J. S. C.

**Certificate of Incorporation**

of

Peconic Land Trust Incorporated

under Section 402 of the Not-for-Profit Corporation Law

Filed By: John van Heusen Halsey

Office and Post Office Address

Wickapogue Road  
Southampton, N. Y. 11968

RECEIVED  
APR 12 1983

*DR 4/12*

March 29, 1983

The undersigned has no objection  
to the granting of judicial  
approval herein and waives  
statutory notice.

ROBERT ABRAMS  
ATTORNEY GENERAL  
STATE OF NEW YORK

By *Robert R. Molik*

ROBERT R. MOLIK  
Assistant Attorney General

CERTIFICATE OF CHANGE  
OF  
PECONIC LAND TRUST, INCORPORATED  
UNDER SECTION 803-A OF THE NOT-FOR-PROFIT CORPORATION LAW

John Halsey and Terry Stubelek, the President and the Secretary respectively of the PECONIC LAND TRUST, INCORPORATED, hereby certify:

1. The name of the corporation is PECONIC LAND TRUST, INCORPORATED.
2. The Certificate of Incorporation was filed by the Department of State on August 1, 1983.
3. The Certificate of Incorporation is changed:
  - (a) To change the post office address to which the Secretary of State shall mail a copy of any process against the corporation served upon him to:

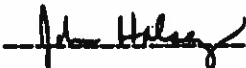
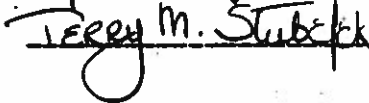
Peconic Land Trust, Incorporated  
P.O. Box 2088  
Southampton, NY 11968

4. The change has been approved by the Board of Directors.

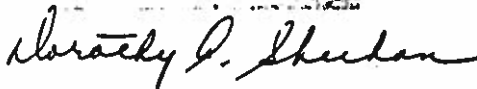
IN WITNESS WHEREOF, we have signed this certificate this 14th day of November, 1983.

John Halsey, President.

Terry Stubelek, Secretary.

  
\_\_\_\_\_  
  
\_\_\_\_\_  
Terry M. Stubelek

**DOROTHY A. SHEEHAN**  
Notary Public, State of New York  
No. 82-4804888  
Qualified in Suffolk County  
Commission Expires March 30, 1984





CERTIFICATE OF AMENDMENT  
OF THE  
CERTIFICATE OF INCORPORATION OF  
**PECONIC LAND TRUST, INCORPORATED**  
Under Section 803 of the Not-for-Profit Corporation Law

We, the undersigned, being the co-Chairs of the Board, the President, and the Secretary, in accordance with Sections 104(d)(2) and 803 of the Not-for-Profit Corporation Law of the State of New York, hereby certify:

- (1) The name of the corporation is Peconic Land Trust, Incorporated.
- (2) The certificate of incorporation of Peconic Land Trust, Incorporated was filed by the Department of State on August 1, 1983. The Corporation was formed under section 402 of the Not-for-Profit Corporation Law of the State of New York.
- (3) The Peconic Land Trust, Incorporated is a corporation as defined in subparagraph (a)(5) of Section 102 of the Not-for-Profit Corporation Law and is a Type B corporation under section 201 of that law. The corporation shall continue to be a Type B corporation under section 201 of the Not-for-Profit Corporation Law.
- (4) The certificate of incorporation of Peconic Land Trust, Incorporated is hereby amended in the following respects:
  - (a) Paragraphs 3a, 3c, and 3d of the certificate of incorporation of Peconic Land Trust, Incorporated, which set forth the purposes of the corporation, are hereby amended to read as follows:

“a. To promote for the benefit of the residents of New York State: (1) the conservation of natural resources including land, water, wetlands, barrier beaches, woodland, farmland and open spaces, and the plant and animal life therein; (2) the maintenance of the unique scenic and historic sites within the State as well as open space; and (3) the protection of glacial moraines throughout the State, particularly the Ronkonkoma and Harbor Hill Moraines on Eastern Long Island; . . .

c. To provide guidance to individual landowners throughout the State of New York who need assistance in determining the future use, ownership, and

management of their property; to this end, the corporation will not engage in any profession required to be licensed by Title VIII of the New York State Education Law;

d. To use all property held or controlled by the corporation and net earnings thereof within the United States of America for the benefit of the residents of New York State, and exclusively for the charitable and conservationist purposes set forth herein;"

(b) A new paragraph 3h is hereby added to said certificate of incorporation to read as follows:

"h. In furtherance of the foregoing purposes, the corporation shall have all of the general powers enumerated in Section 202 of the Not-for-Profit Corporation Law and such other powers as are now or hereafter permitted by law for a corporation organized for the foregoing purposes, including, ~~(without limitation)~~ the power to solicit grants and contributions for any corporate purpose and the power to maintain a fund or funds of real and/or personal property in furtherance of such purposes."

(c) Paragraph 7 of said certificate of incorporation, which sets forth the location of the principal activities of Peconic Land Trust, Incorporated is hereby eliminated.

(d) Paragraph 8 of said certificate of incorporation, as amended by a Certificate of Change executed on November 14, 1983, and which sets forth the address to which the Secretary of State shall mail service of process is hereby amended to read as follows:

"(8) The Secretary of State, pursuant to Section 402(a)(7) is hereby designated as agent of the corporation upon whom process against it may be served. The post office address to which the Secretary of State shall mail a copy of any process against the corporation served upon him is:

Peconic Land Trust, Incorporated  
P.O. Box 1776  
Southampton, NY 11969"

(e) Paragraph 10 of said certificate of incorporation, which sets forth the procedures in the event of dissolution of the corporation is hereby amended to read as follows:

"(10) This corporation shall have perpetual existence; but in the event of dissolution of the corporation or the termination of its corporate existence, the Board of Directors shall, upon approval of a Justice of the New York State Supreme Court,

dispose of all of the assets of the corporation exclusively for the purposes of the corporation in such manner, or to such organization or organizations organized and operated exclusively for charitable, educational, or scientific purposes in New York State as shall at the time qualify for an exempt organization or organizations under section 501(c)(3) of the internal Revenue Code of 1954 and its Regulations as they now exist or as they may hereafter be amended. Any such assets not so disposed of shall be disposed of by said court exclusively for such purposes or to such organization or organizations as the court shall determine, which are organized and operated exclusively for such purposes."

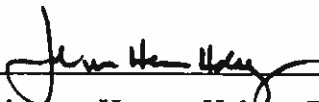
(5) This amendment to the certificate of incorporation of Peconic Land Trust, Incorporated was authorized by majority vote of the directors of the Corporation pursuant to § 708 and § 802 of the Not-for-Profit Corporation Law, prescribing the method of amendment authorization for a Corporation where there are no members entitled to vote thereon.

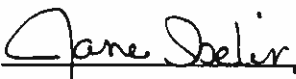
(6) The Secretary of State of the State of New York is hereby designated the agent of the corporation upon whom process against it may be served. The post office address to which the Secretary of State shall mail a copy of any process against the corporation served upon him as agent of the corporation is Peconic Land Trust, Incorporated, P.O. Box 1776, Southampton, New York, 11969.

IN WITNESS WHEREOF, the undersigned have signed this certificate and affirm the foregoing as true under penalties of perjury this 10<sup>th</sup> day of April, 2000.


  
\_\_\_\_\_  
Roger A. Smith, Co-Chair

  
\_\_\_\_\_  
Thomas B. Williams, Co-Chair

  
\_\_\_\_\_  
John van Heusen Halsey, President

  
\_\_\_\_\_  
Jane Iselin, Secretary

THE ATTORNEY GENERAL HAS NO OBJECTION TO THE GRANTING OF JUDICIAL APPROVAL HEREON, ACKNOWLEDGES RECEIPT OF STATUTORY NOTICE AND DEMANDS SERVICE OF THE FILED CERTIFICATE. SAID NO OBJECTION IS CONDITIONED ON SUBMISSION OF THE MATTER TO THE COURT WITHIN 30 DAYS HEREAFTER.


 6/26/00  
ASSISTANT ATTORNEY GENERAL DATE

APPROVAL BY SUPREME COURT JUSTICE  
OF THE  
CERTIFICATE OF AMENDMENT  
OF THE  
CERTIFICATE OF INCORPORATION OF  
PECONIC LAND TRUST, INCORPORATED

I, **HARRY E. SEDELL**, a Justice of the Supreme Court of the State of New York, Tenth Judicial District, do hereby approve the foregoing certificate of amendment of the certificate of incorporation of Peconic Land Trust, Incorporated pursuant to section 804(a)(ii) of the Not-for-Profit Corporation Law and consent that the same be filed.

Dated:

20 July, 2000  
Supreme Court of the State of New York  
Special Term, Part II  
Riverhead, New York

  
Justice of the Supreme Court  
Tenth Judicial District

4

F 000803000672

"BACKER"

CERTIFICATE OF AMENDMENT

OF

PECONIC LAND TRUST, INCORPORATED

Under Section 803 of the Not-for-Profit Corporation Law

*SAC*

*.1CC*

STATE OF NEW YORK  
DEPARTMENT OF STATE

FILED AUG 03 2000

TAX \$ \_\_\_\_\_  
BY: *SAC*

FILED BY:

SIVE PAGET & RIESEL, P.C.  
460 PARK AVENUE  
NEW YORK, NY 10022-1906

*Duffelle*

*5*

000803000691

*State of New York* }  
*Department of State* } SS:

*I hereby certify that the annexed copy has been compared with the original document in the custody of the Secretary of State and that the same is a true copy of said original.*

*Witness my hand and seal of the Department of State on*

**AUG 07 2000**



A handwritten signature in cursive script, appearing to read "J. Leub", followed by a horizontal line.

*Special Deputy Secretary of State*