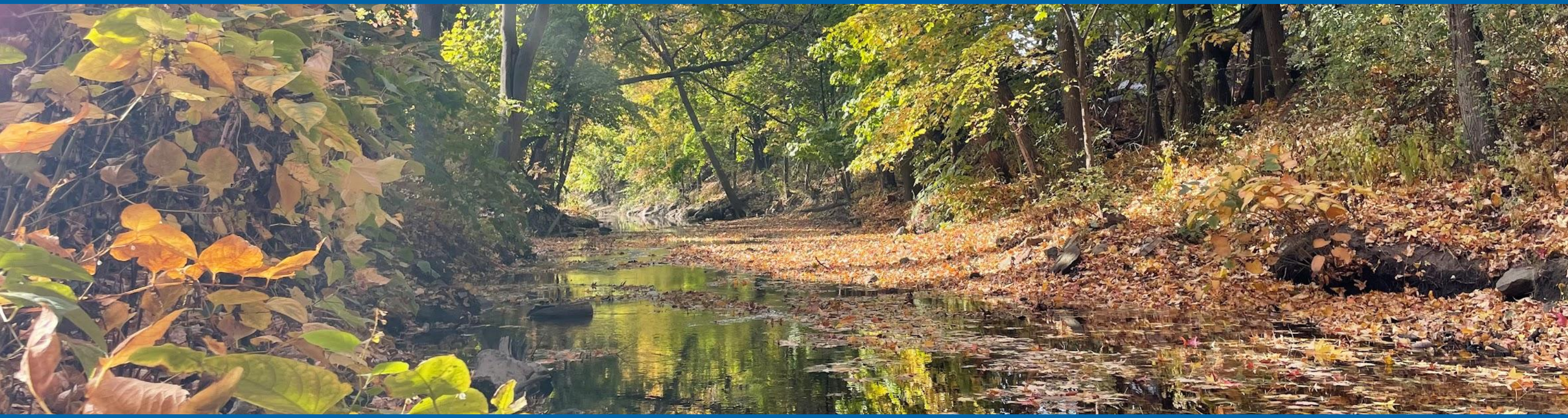
LONG ISLAND SOUND PARTNERSHIP

Sea Grant CONNECTICUT

Sea Grant NEW YORK



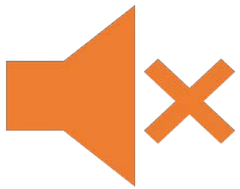
Long Island Sound Resilience Planning Support Program:
New Round Available + Showcase of Completed Projects

Long Island Sound Sustainable & Resilient Communities 4th Annual Workshop

Friday, December 5, 2025

Welcome

Workshop Etiquette



Please keep your microphones muted. Keep your camera off too!

Workshop will be recorded and made available afterward

We will be using interactive polls to gather feedback

Use the chat for questions for speakers or for help with technical issues

Plan for this Session

Overview of LIS Partnership & SRC Team

Details on available LIS Resilience Assistance Programs

Hear from 1st Round Planning Support Program Awardees:

- **Kate Dehais**, Chair, Village of Mamaroneck, NY Committee for the Environment
- **Erin Mannix**, AICP, CAZEO, Town Planner, Town of Madison, CT
- **Theresa Mohan**, Supervisor-Elect, Town of Pelham

Long Island Sound Partnership

WHO WE ARE

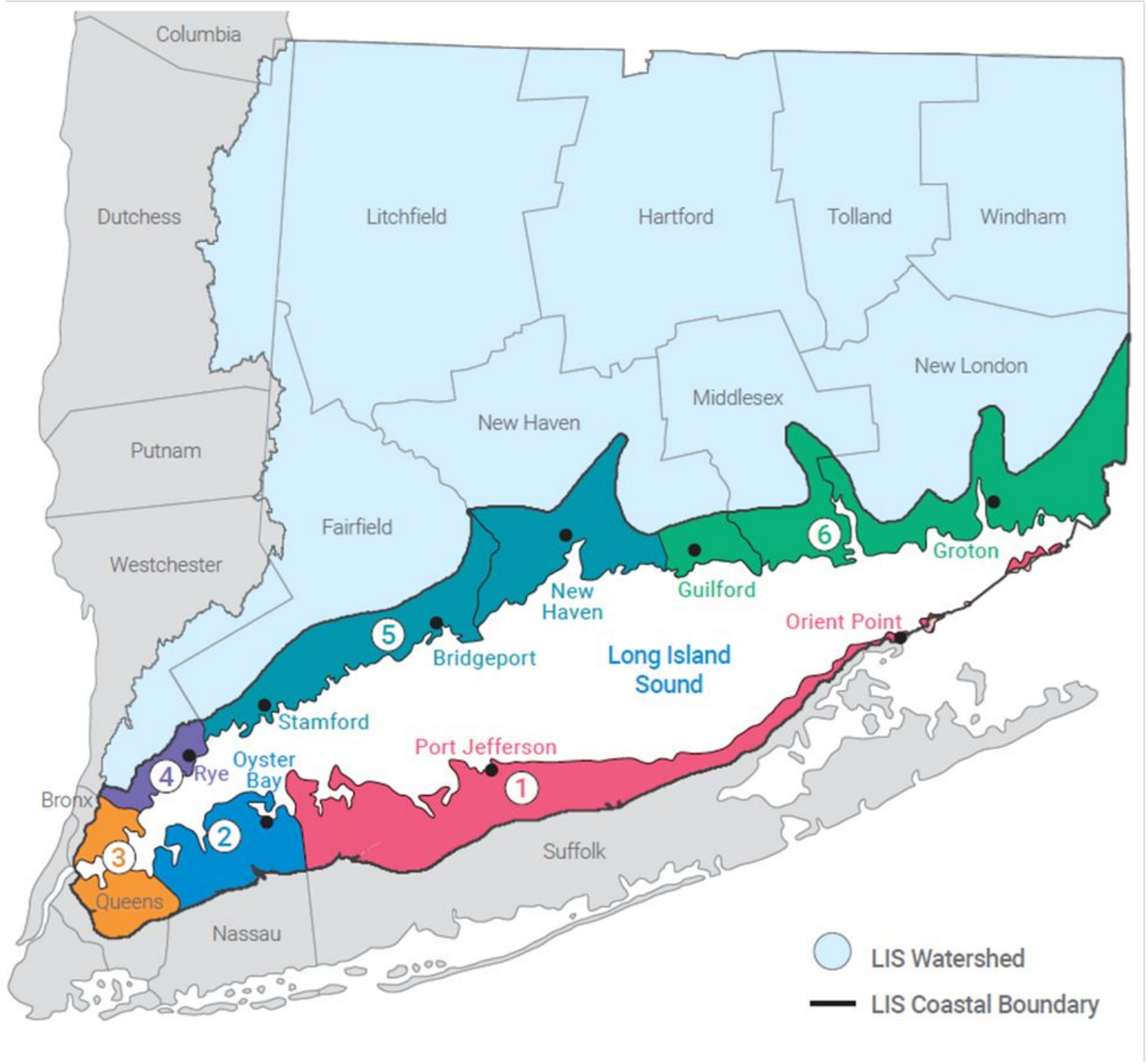
The Long Island Sound Partnership is a group of organizations, agencies, scientists, and community members working together to protect and restore Long Island Sound. We support clean waters, healthy habitats, thriving wildlife, resilient coasts, and an engaged public.

LIS Partnership updated its CCMP in 2025

The Plan addresses:

- Clean water and healthy watersheds
- Thriving habitat and abundant wildlife
- Informed and engaged public
- Sustainable and resilient communities

The SRC Extension Professionals Team



1 **Suffolk County**
Elizabeth Hornstein

2 **Nassau County**
Sarah Schaefer-Brown

3 **NYC - Bronx & Queens**
Ben Goldberg

4 **Westchester County**
Sara Powell

5 **Western CT**
Deb Visco Abibou

6 **Eastern CT**
Sarah Schechter

SRC Objectives in 2025 CCMP

LONG ISLAND SOUND PARTNERSHIP

Goal:

Empower Long Island Sound communities to plan for and respond to environmental challenges in ways that prioritize well-being for all.

Informed Decision-Makers

Grow the number of government, practitioner, and community leaders receiving training and support to increase their capacity to adapt to environmental challenges.

Community-Driven Resilience Planning

Increase the number of municipalities that identify key resilience priorities through local or regional community-driven planning processes.

Resilience Initiative Implementation

Implement initiatives to improve community resilience to flooding and other environmental challenges.

Poll Instructions

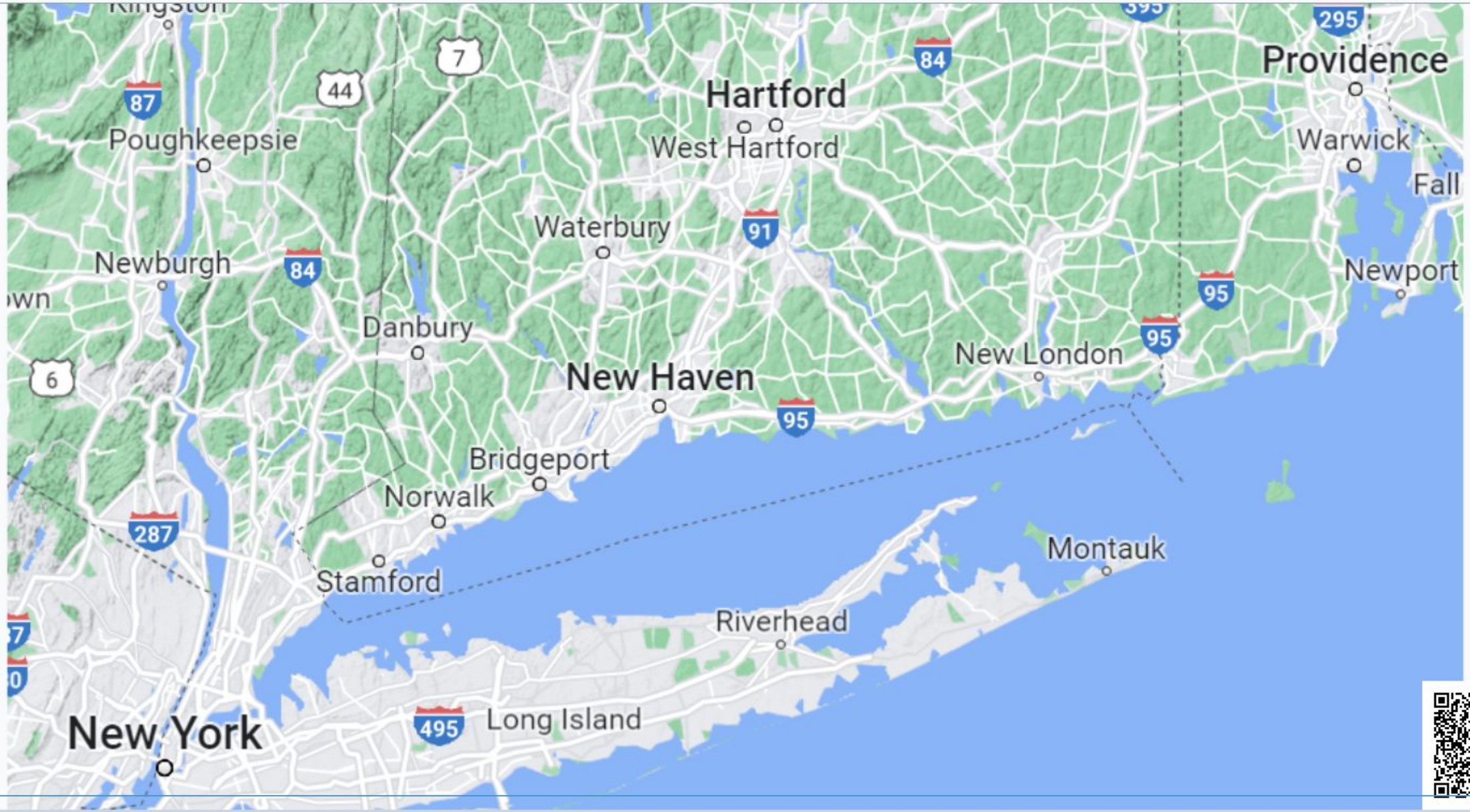
Via the web: at pollev.com/lisres

Via text message: text LISRES to 22333 to join the session. Once you receive confirmation you've joined the session, you can text the letter that corresponds with your answer.

Please note that the map only works via the web!

Where are you joining us from today?

0



Please indicate the sector that best represents you:

0

Federal or state government	0
Indigenous Nation or community	0
Local government	0
Nonprofit/NGO	0
Watershed organization	0
Community group	0
Consultant	0
Academia	
Interested individual	

How familiar are you with the LIS Resilience Planning Support Program?

0

Very familiar; I have either applied in the past or am an Awardee!

0

Somewhat familiar; I have heard of the Program and have applied before or am interested in applying to the 3rd round.

0

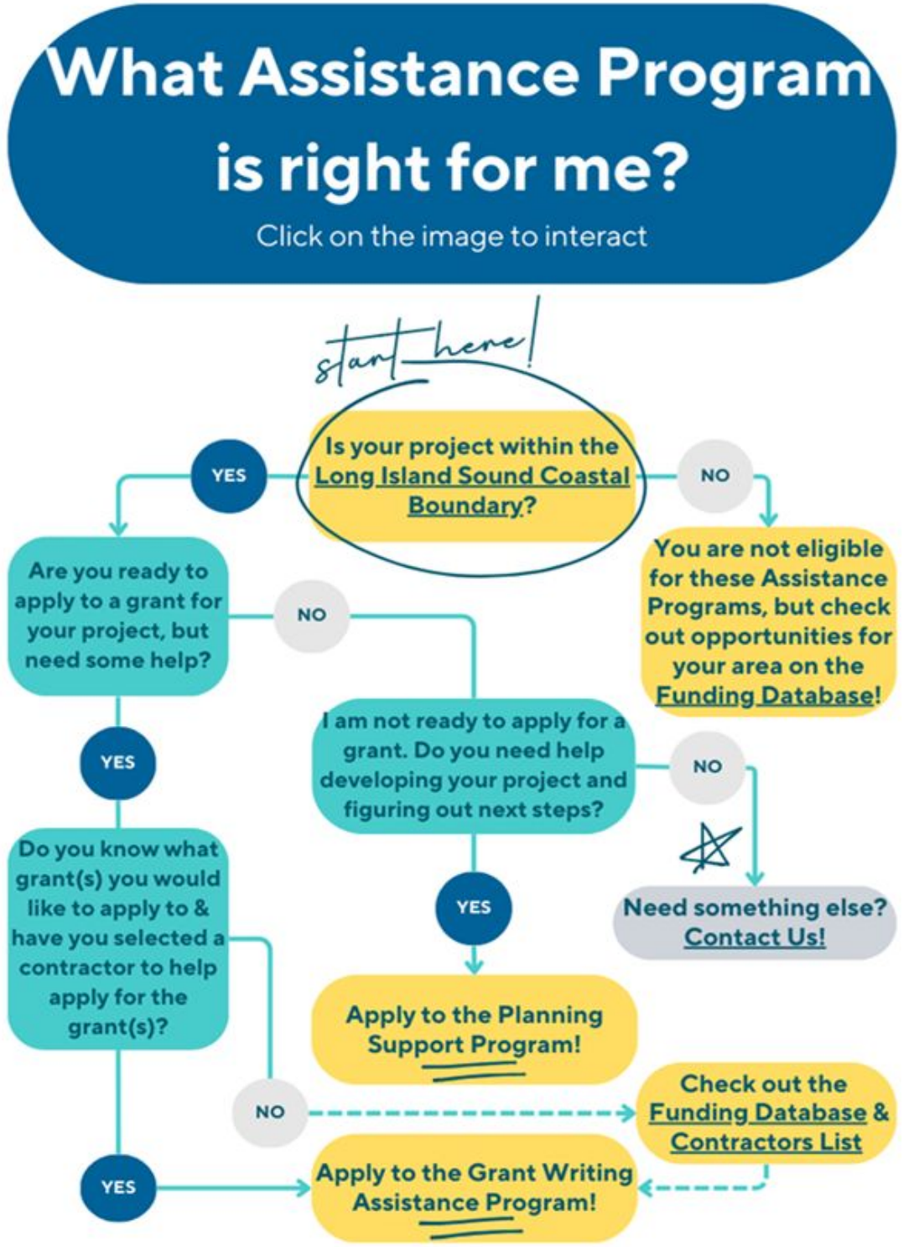
Not very familiar; I am here today to learn more.

0

LONG ISLAND SOUND PARTNERSHIP

Long Island Sound Resilience Assistance Programs

Assist with the development of sustainability and resilience-focused projects that will **impact a community or communities within or partially within the Long Island Sound coastal boundary**.



LONG ISLAND SOUND PARTNERSHIP

LIS Resilience Grant Writing Assistance Program

Goal: To secure funding for sustainable and resilience-focused projects

Type of Technical Assistance:
Grant Preparation and Writing Support

Launched November 15th, 2022
Updated annually each October

Award Amount: up to $9,950 per application directly to contractor

Match: None required

Eligible Applicants: Municipalities, Nonprofits, Community Groups, etc.

Open on a rolling basis.

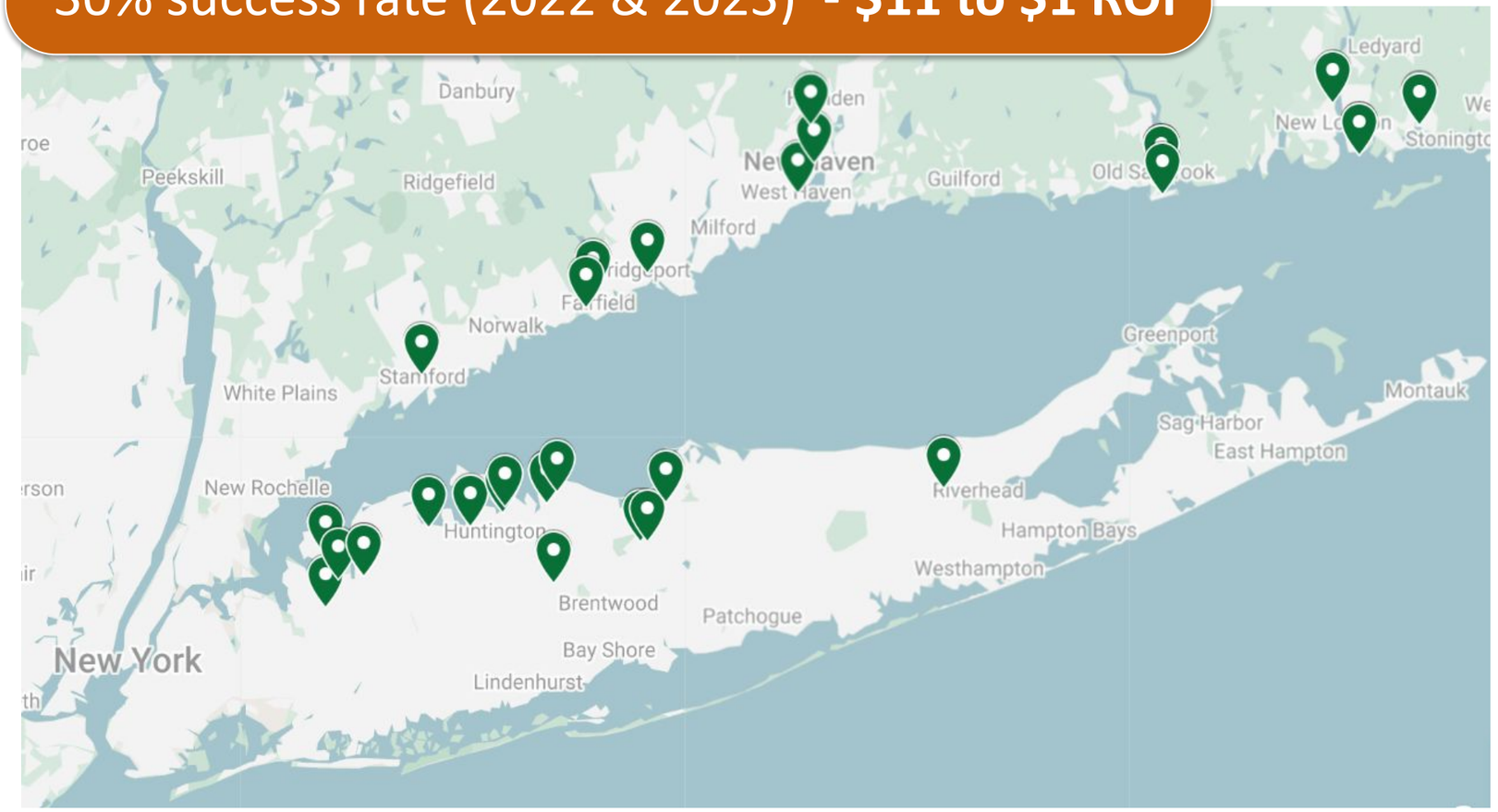
Applications are due 6 weeks in advance of the opportunity due date.

Grant Writing Assistance Program

35 Applicants, 39 Grant Proposals Supported

Total allocated funds: $282,571

30% success rate (2022 & 2023) - **$11 to $1 ROI**



Example Project Types

- Watershed Plans
- Feasibility and engineering studies for beach, wetland, and living shoreline projects
- Implementation of green infrastructure, habitat restoration, public access improvements

Successful GWA Project Examples


Credit: NYSG

Alliance for the Mystic River Watershed (LISFF): Mystic River Watershed Resilience Action Plan


Credit: Mill River Wetland Committee

Mill River Wetland Committee (LISCIF): River-Lab programs in Bridgeport, CT


Credit: Residents Forward

CCE of Nassau County (LISFF): Oyster gardening in Manhasset Bay, NY


Credit: Sarah Schaefer-Brown

North Shore Land Alliance (NYSDEC WQIP): Implementation of green infrastructure at Shore Road Sanctuary, Cold Spring Harbor, NY

LONG ISLAND SOUND PARTNERSHIP

LIS Resilience Planning Support Program

Goal: To advance sustainable and resilience-focused projects to a design or implementation grant-ready stage

Type of Technical Assistance:
Project Scoping and Planning

Launched October 2023
3rd round opened December 1, 2025

Award Amount: Typically between $35K - $115K per project.

Match: None required; no funds are given to applicants, funds are reimbursed directly to contractors.

Eligible Applicants: Municipalities, Nonprofits, Community Groups, etc.

Open on an annual basis.

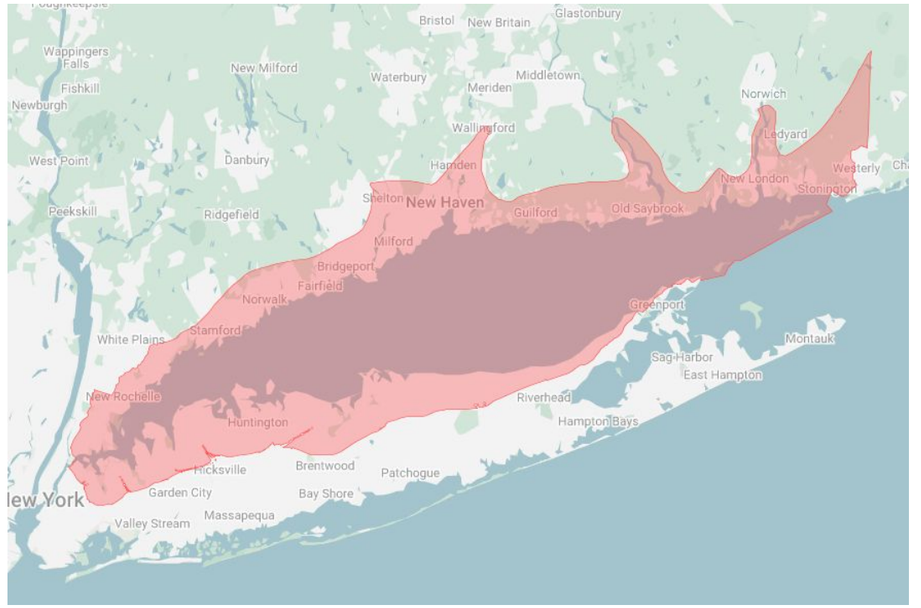
1st round projects are either completed or ongoing.
2nd round projects began Fall 2025.

LIS Resilience Planning Support Program - 3rd Round Now Open

$1.5 Million Available!

The Program provides planning support to advance sustainability and resilience-focused projects by matching communities within the Long Island Sound (LIS) coastal boundary across New York and Connecticut with qualified contractors to assist with assessing local environmental risks, conceptualizing project ideas, and conducting preliminary planning efforts.

The support is provided at no cost to the communities and no match is required!



LIS Resilience Planning Support Program - Program Priorities

All projects must align with SRC Objective 2 and/or 3 and one or more of the following actions:

SRC Objective 2: Community-Driven Resilience Planning
Increase the number of municipalities that identify key resilience priorities through local or regional community-driven planning processes. ***Measure of Success:*** *All 135 municipalities within the Partnership coastal boundary identify key resilience priorities.*
SRC 2-1: Develop climate resilience plans and strategies, into existing municipal, regional, and watershed plans.
SRC 2-2: Coordinate across municipal boundaries to advance collective resilience priorities.
SRC 2-3: Empower and increase engagement of community members and groups in local and regional resilience planning and decision-making.

LIS Resilience Planning Support Program - Program Priorities

SRC Objective 3: Resilience Initiative Implementation
Implement initiatives to improve community resilience to flooding and other environmental challenges. ***Measure of Success:*** *Communities in the New York and Connecticut portions of the Long Island Sound watershed implement 200 resilience initiatives.*
SRC 3-1: Increase community capacity to implement and manage sustainable and resilient initiatives.
SRC 3-2: Support the development and adoption of regulations, codes, and ordinances that increase community resilience.
SRC 3-3: Implement nature-based solutions to address flooding and other climate impacts while providing multiple benefits.
SRC 3-4: Implement priority infrastructure projects that increase community sustainability and resilience to flooding and other climate impacts.

LIS Resilience Planning Support Program - Application Process

Two-step application process:

1) **Request for Expression of Interest (RFEI)**

   Submit an Expressions of Interest through the RFEI Google Form and book a time to talk through the project with the regional SRC EP.

   The deadline for Expressions of Interest is 5:00 PM on January 30, 2026.

   **If you do not schedule a meeting, your RFEI will not be considered.*

2) **Invited Detailed Application**

   Expressions of Interest that meet the Request for Expression of Interest (RFEI) Alignment Criteria will be invited to submit a Detailed Application.

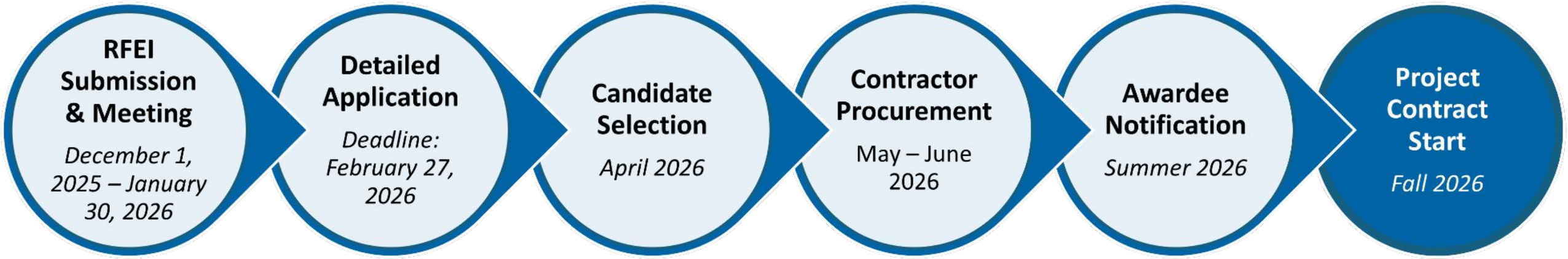
   The deadline for Detailed Applications is 11:59 PM on February 27, 2026.

LIS Resilience Planning Support Program - Timeline

Spring 2026: Application review & Candidate selection

Spring/Summer 2026: Contractor procurement and Awardee notification

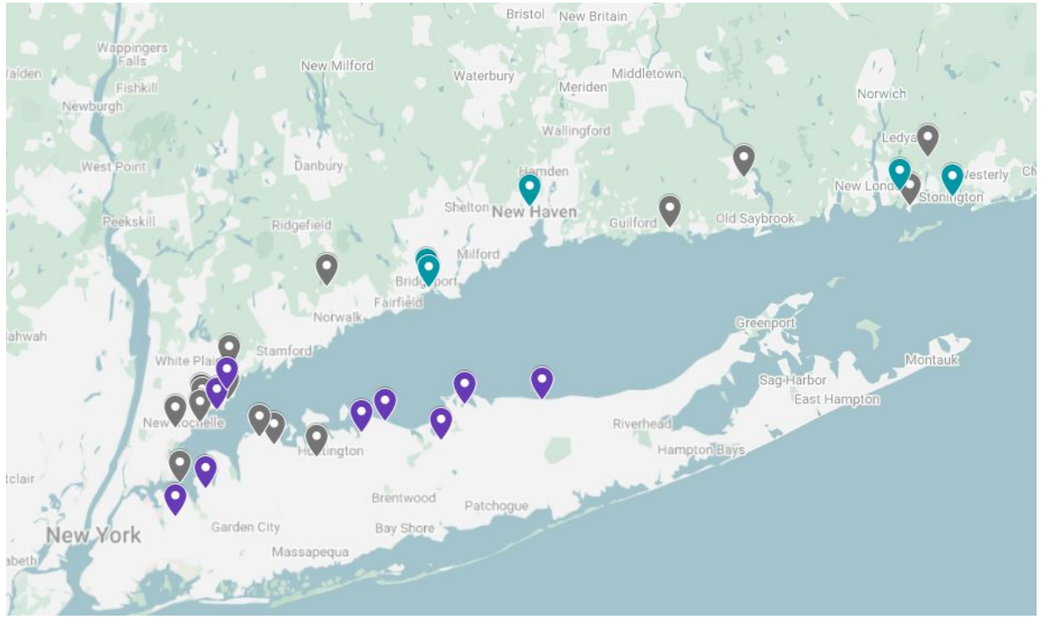
Fall 2026: Round 3 Projects begin



LIS Resilience Planning Support Program Projects

Project types to date include:

- **8** Vulnerability Assessments/Resilience Plans
- **3** Flood Studies
- **2** Watershed Plans
- **3** Natural Resource Inventories
- **3** Community Engagement/Strategic Plans
- **10** Conceptual Design Plans for stormwater management, green infrastructure, shoreline adaptation, public access greenways, and stream restoration projects

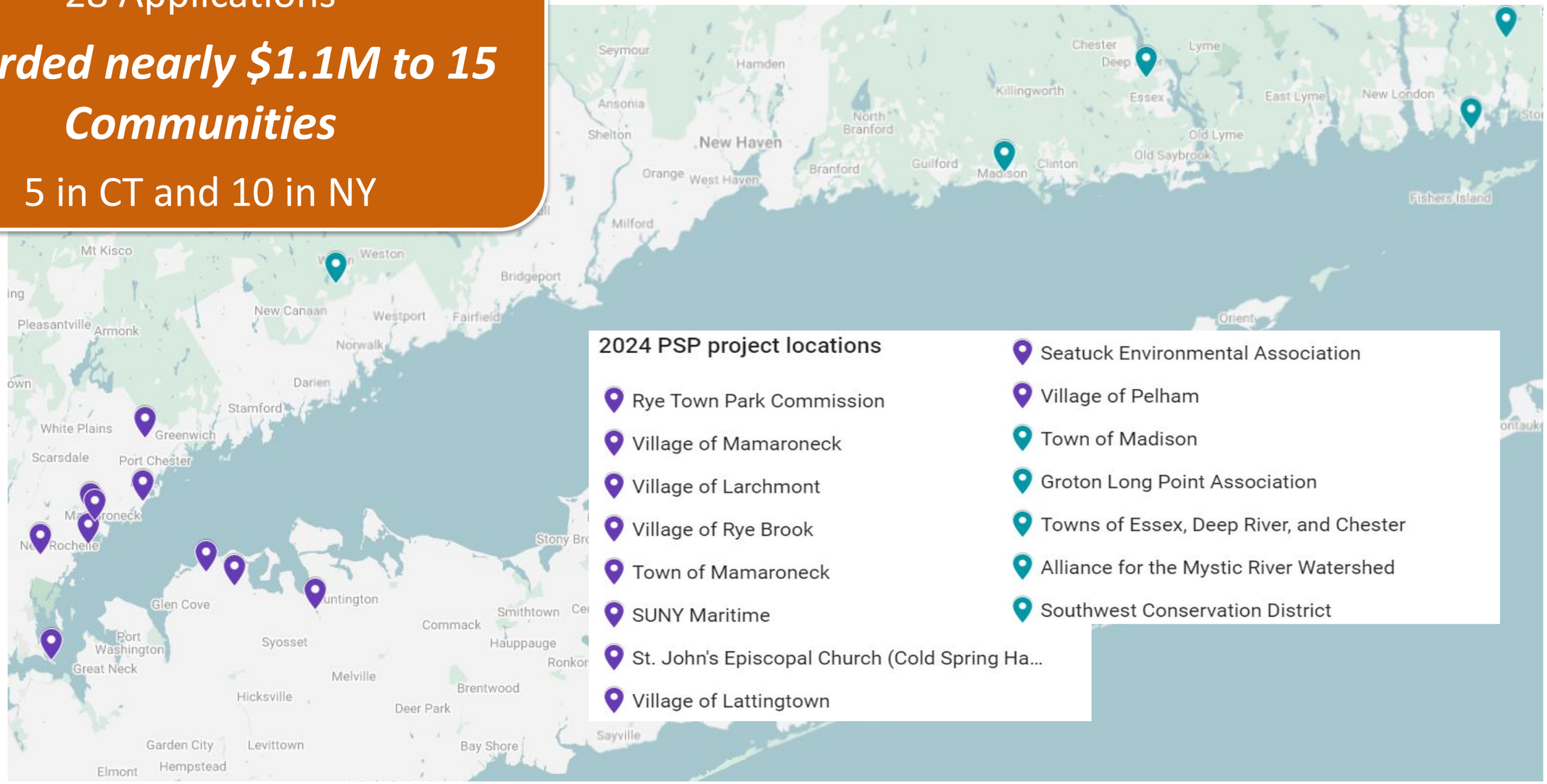


LIS Resilience Planning Support Program - 1st Round Awards

28 Applications

Awarded nearly $1.1M to 15 Communities

5 in CT and 10 in NY



LIS Resilience Planning Support Program - 2nd Round Awards

41 Applications

Awarded more than $900k to 14 Communities

5 in CT and 9 in NY

2025 PSP Project Locations

- Great Neck Village Officials Association
- Hen Island Nature Society, Inc.
- Kissena Synergy
- Rye Sustainability Foundation
- Salonga Wetland Advocates Network
- Setauket Harbor Task Force
- Village of Head of the Harbor
- Village of Northport
- Village of Shoreham
- City of Bridgeport
- Neighborhood Housing Services of New Haven
- PT Partners
- Town of Groton
- Town of Stonington

LONG ISLAND SOUND PARTNERSHIP

Frequently Asked Questions

Planning Support Program FAQ

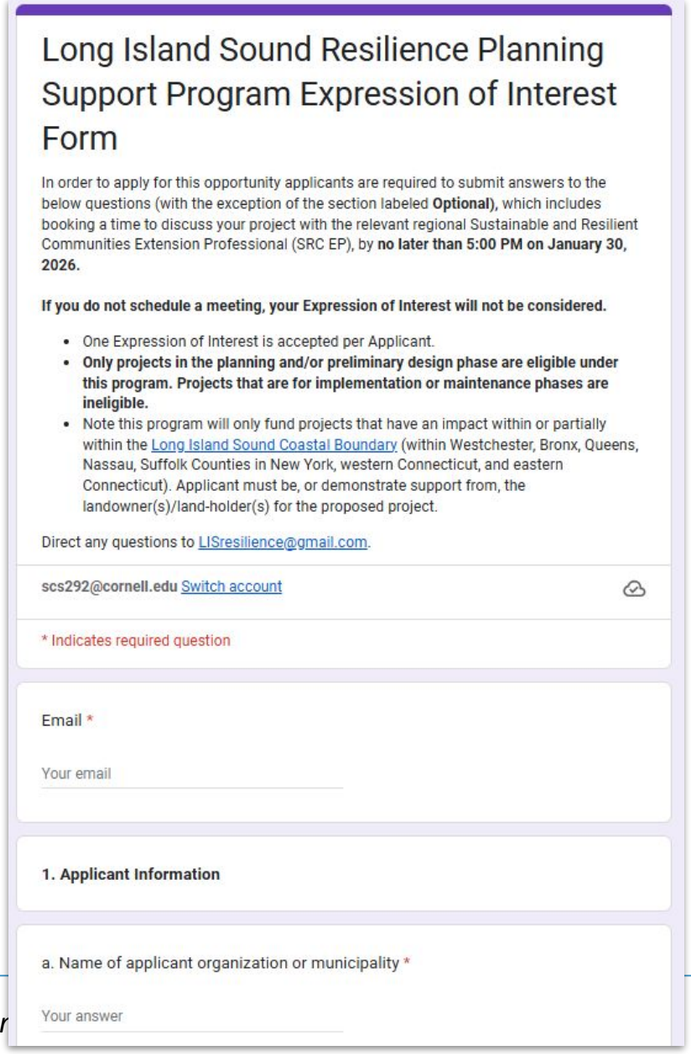
Q: How do you apply to the LIS Resilience Planning Support Program?

A: To apply, you fill out and submit an Expression of Interest Google Form.

New this year, you must schedule a time to talk through the project with the regional SRC EP.

If you do not schedule a meeting, your RFEI will not be considered.

The deadline for Expressions of Interest is 5:00 PM on January 30, 2026



Long Island Sound Resilience Planning Support Program Expression of Interest Form

In order to apply for this opportunity applicants are required to submit answers to the below questions (with the exception of the section labeled **Optional**), which includes booking a time to discuss your project with the relevant regional Sustainable and Resilient Communities Extension Professional (SRC EP), by **no later than 5:00 PM on January 30, 2026.**

If you do not schedule a meeting, your Expression of Interest will not be considered.

- One Expression of Interest is accepted per Applicant.
- **Only projects in the planning and/or preliminary design phase are eligible under this program. Projects that are for implementation or maintenance phases are ineligible.**
- Note this program will only fund projects that have an impact within or partially within the Long Island Sound Coastal Boundary (within Westchester, Bronx, Queens, Nassau, Suffolk Counties in New York, western Connecticut, and eastern Connecticut). Applicant must be, or demonstrate support from, the landowner(s)/land-holder(s) for the proposed project.

Direct any questions to LISresilience@gmail.com.

scs292@cornell.edu Switch account

* Indicates required question

Email *

Your email

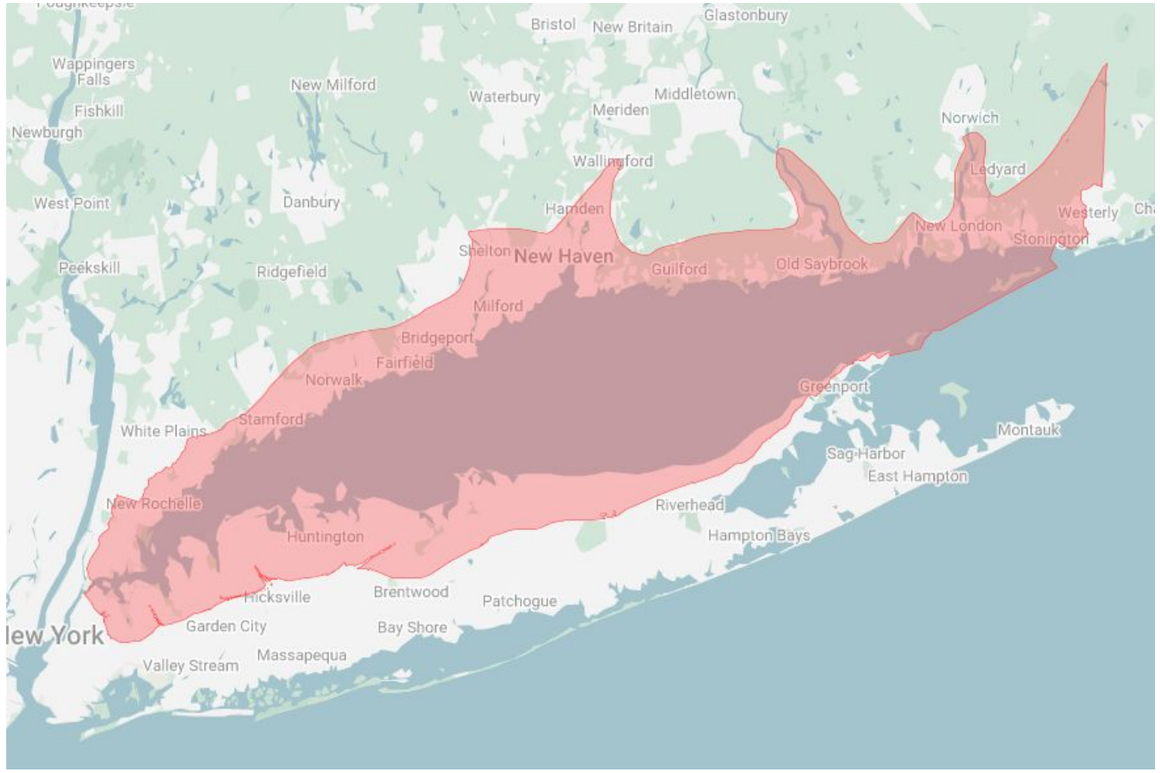
1. Applicant Information

a. Name of applicant organization or municipality *

Your answer

Q: Are groups outside of the LIS Coastal Boundary able to apply?

A: The project must impact a community (or communities) that are within or partially within the LIS Coastal Boundary. An entity could apply who is outside of this area, but the project would need to benefit a coastal community (or communities) as described above.



Westchester, Bronx, Queens, Nassau, Suffolk Counties, western Connecticut, and eastern Connecticut

Q: How many Expressions of Interest can I submit?

A: One Expression of Interest is accepted per Applicant.

Please note that the Applicant must be, or demonstrate support from, the landowner(s)/land-holder(s) for the proposed project.

Priority will be given to applicants who have not previously received support through the Planning Support Program. **Current Awardees of the Long Island Sound Resilience Planning Support Program are not eligible.**

Q: Can you tell me more about the Detailed Application process?

A: You can read through the Detailed Application in the RFEI! You will find it in the 'Application Instructions' section.

Even though we are calling it a Detailed Application, it is still a simple Word document. In addition to alignment with our objectives, we want to understand how the support you are seeking will help set up your community/organization for future success, the societal, ecological, and regional impact of the proposed project, and the overall impetus behind and support for the project.

Please note that you must also include a map image of the project area when you submit your Detailed Application. We also accept any other additional relevant supporting information you think will be helpful to us (e.g., a cost estimate if you have one; any other relevant documents or links).

Planning Support Program FAQ

Q: How large of a planning project will the Program support?

A: In the past two rounds the program funded projects ranging from $35,000 - $115,000.

Project scopes will be discussed during the mandatory RFEI meeting with your regional SRC EP. For the 3rd round, the maximum project duration is 18 months once the contract is executed, and all projects must be complete by August 2028.

Q: Who actually receives the funds awarded?

A: All funds go directly to the selected contractors. No funds will be dispersed to or pass through the Awardees. We handle all of the contracting and invoicing processes!

Q: Can we pick the contractor we want to work with?

A: No, Candidates cannot pick their preferred contractor. The SRC EPs in consultation with Cornell University/University of Connecticut will put out a Request for Proposals (RFP) to competitively hire the most suitable contractors for each Candidate project.

Candidates will be able to opt out/decline to work with the contractor selected for their project prior to contracting, but will not be provided with a second choice.

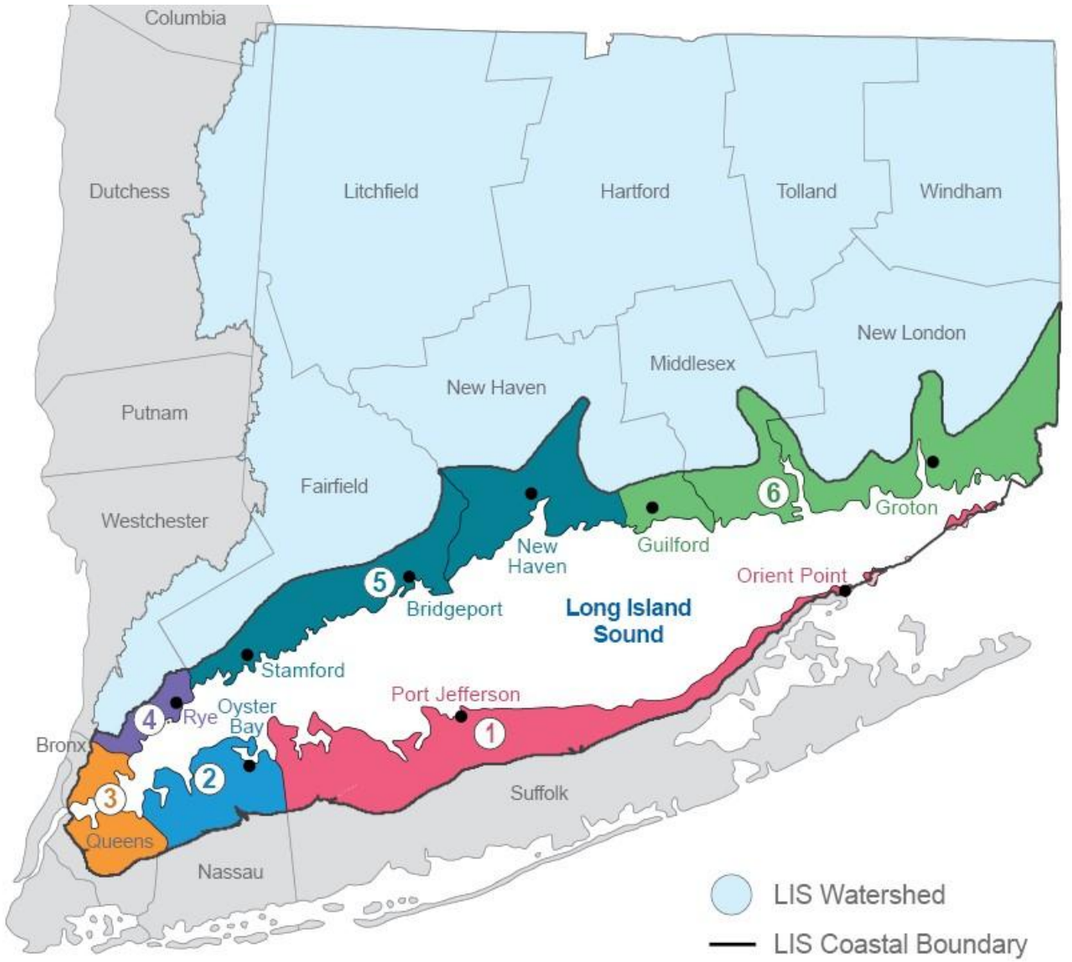
If you know of contractors that may want to bid on the RFPs, you can share their information with us and we will ensure they receive the appropriate information.

Planning Support Program FAQ

Q: Who should I reach out to if I have questions about applying?

A: Please reach out to LISresilience@gmail.com or your regional SRC EP.

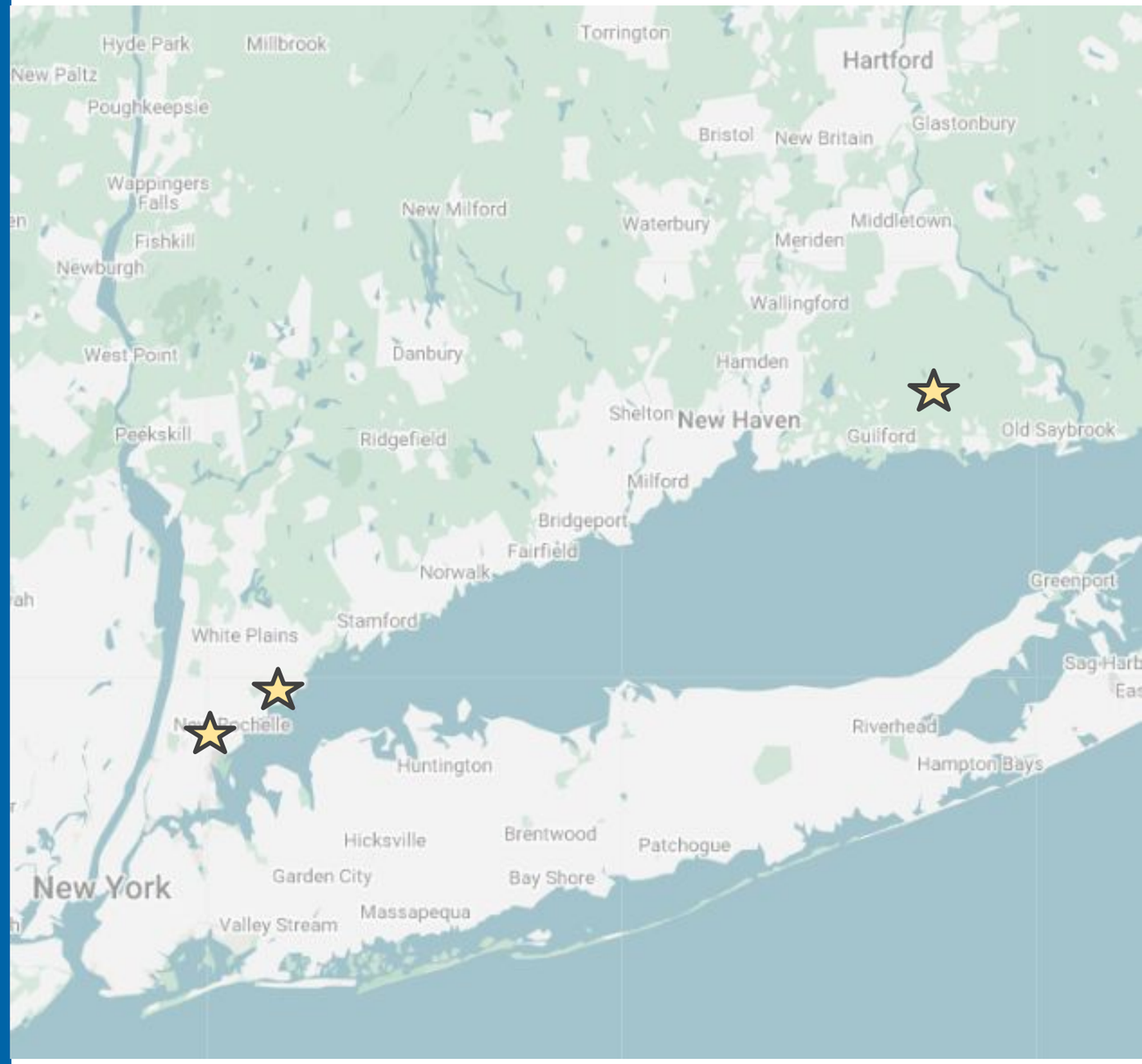
You can find contact information for your regional SRC EP on our contact page.



LONG ISLAND SOUND PARTNERSHIP

Remarks from 1st Round Awardees

Three communities have recently wrapped up their PSP projects and are here to share about their experiences & planned next steps



LONG ISLAND SOUND PARTNERSHIP

Kate Dehais

Village of Mamaroneck, NY

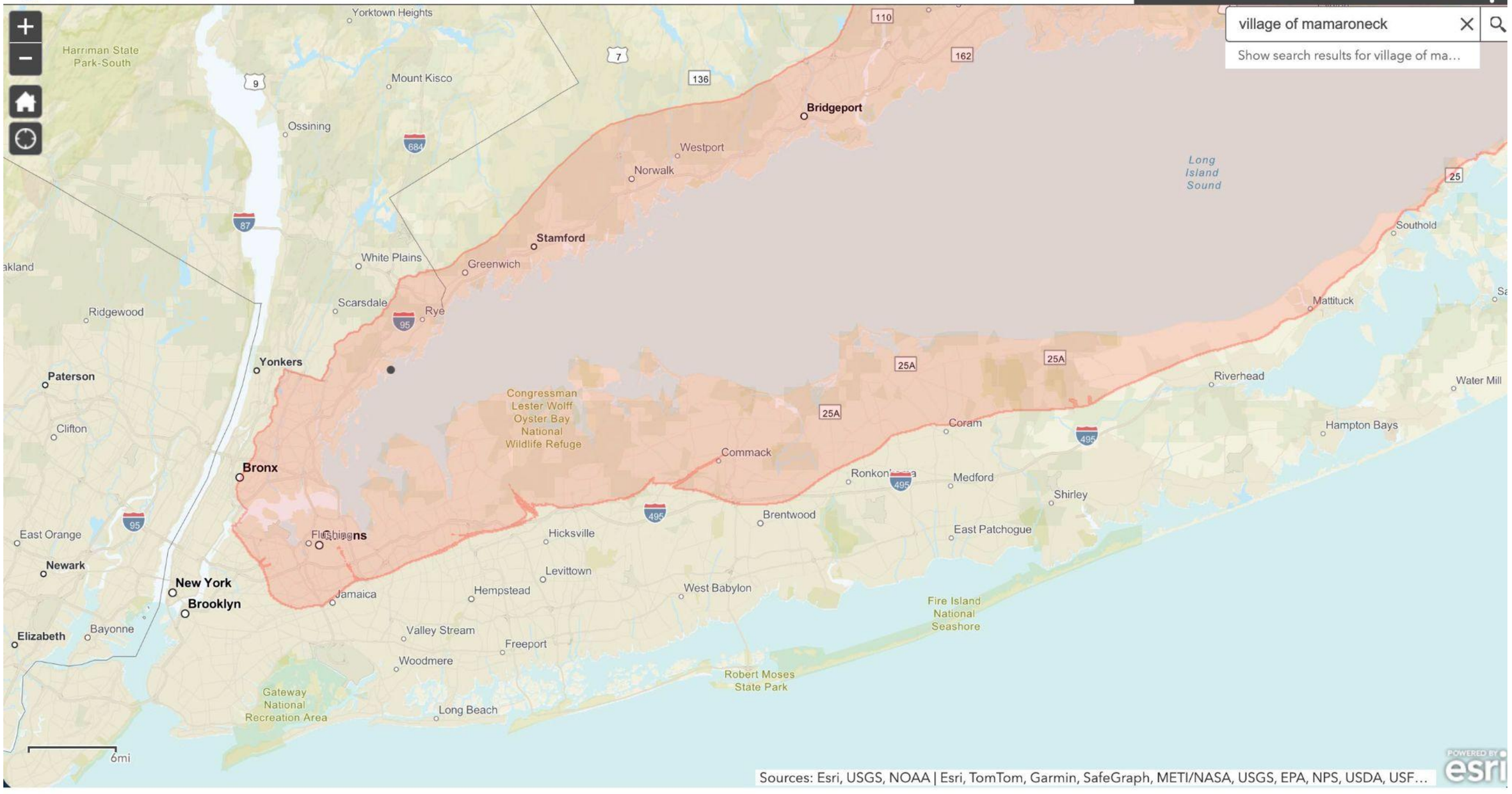
Chair, Committee for the Environment

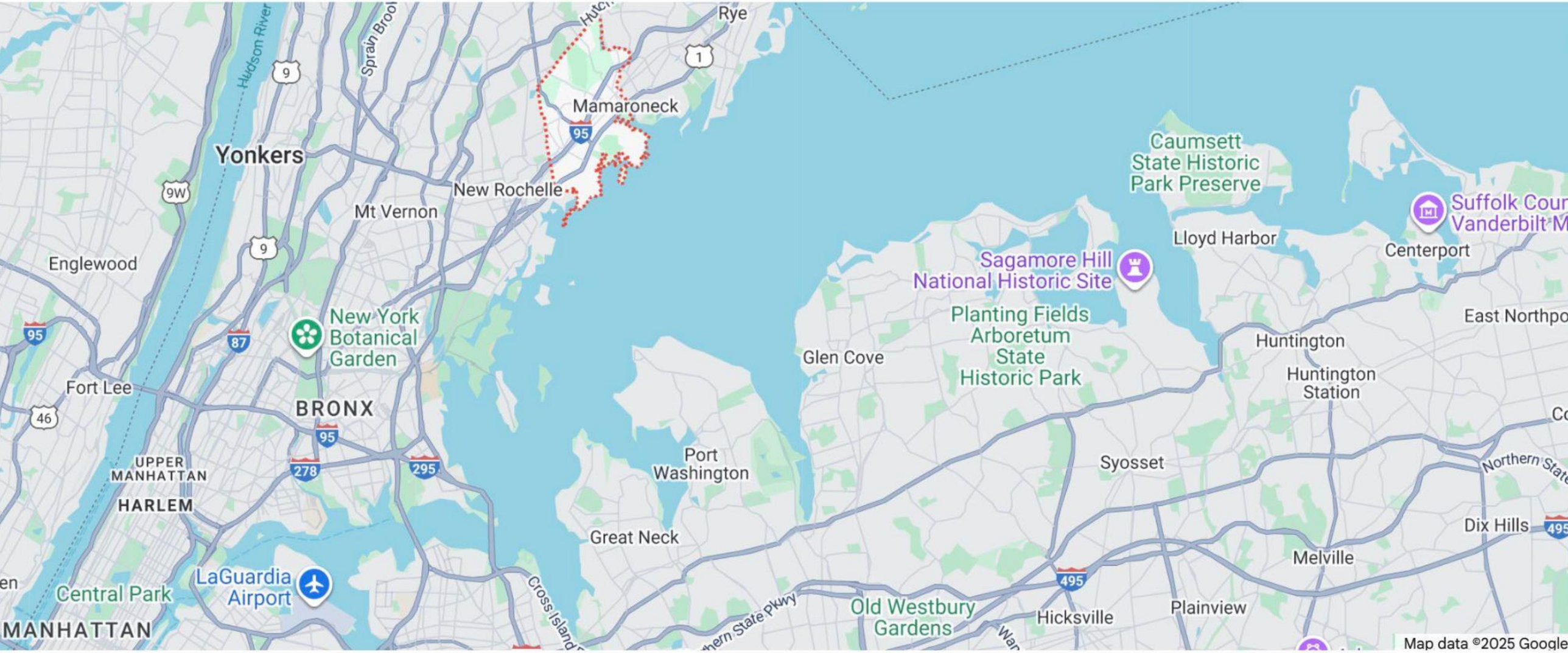
PSP Project: Develop a Landscape Design Plan for a segment of a proposed Village-wide greenway along the Mamaroneck & Sheldrake Rivers

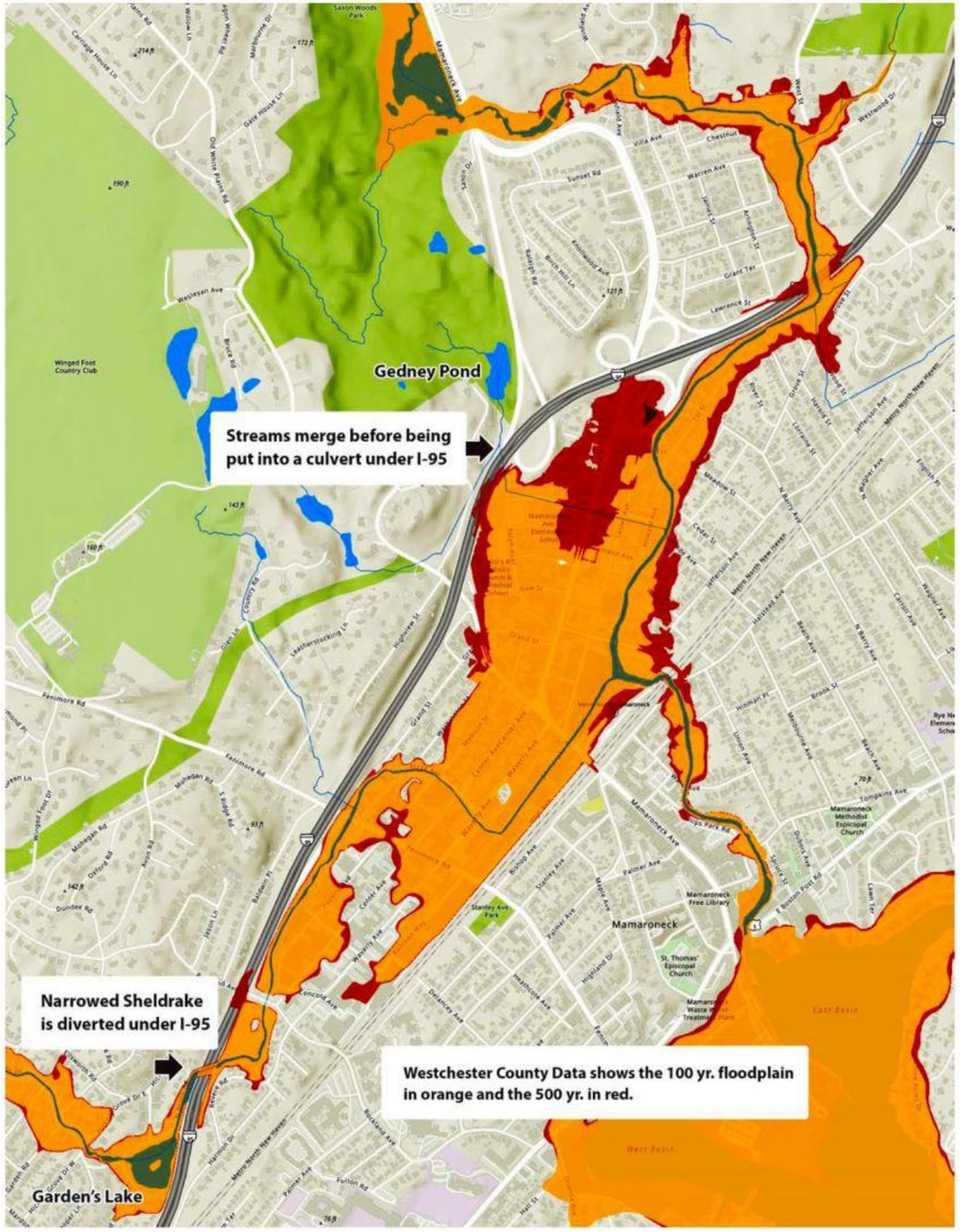
Contractor: Assemblage Landscape Architecture

Award Amount: $49,925

NFWF LISFF 2022 RFP Interactive Map




Rye
Hudson River
Sprain Brook
Mamaroneck
Yonkers
New Rochelle
Mt Vernon
Englewood
Caumsett
State Historic
Park Preserve
Lloyd Harbor
Sagamore Hill
National Historic Site
Centerport
Planting Fields
Arboretum
State
Historic Park
Glen Cove
Huntington
Huntington
Station
New York
Botanical
Garden
Fort Lee
BRONX
UPPER
MANHATTAN
HARLEM
Port
Washington
Syosset
Great Neck
Dix Hills
Melville
Central Park
LaGuardia
Airport
MANHATTAN
Old Westbury
Gardens
Hicksville
Plainview
Map data ©2025 Google

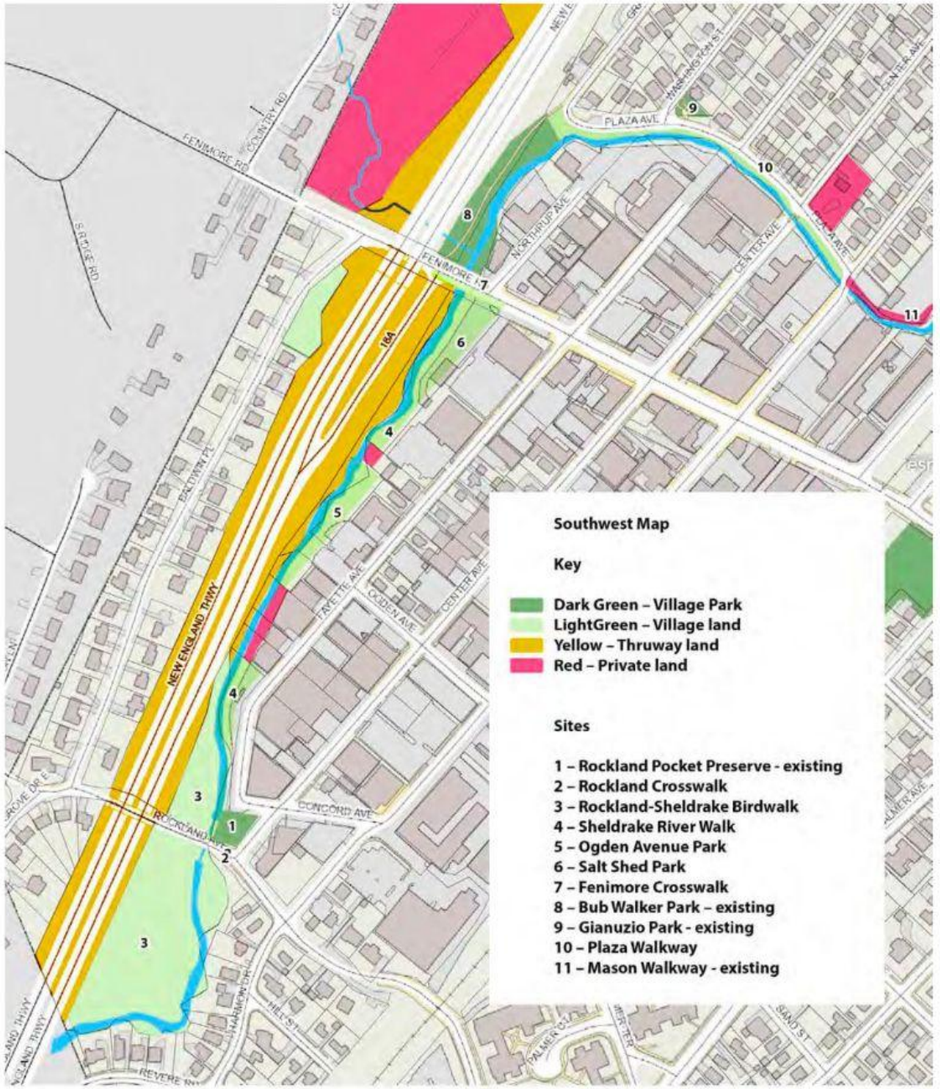

Gedney Pond
Streams merge before being put into a culvert under I-95
Narrowed Sheldrake is diverted under I-95
Garden's Lake
Mamaroneck
Westchester County Data shows the 100 yr. floodplain in orange and the 500 yr. in red.

Floodwater markers at Fenimore and Waverly show the increasing severity of the problem. What is I-95's contribution to Mamaroneck flooding and what can be done about it?

Mamaroneck Greenway Paths

Southwest Map

In 2024, Mamaroneck received planning support and design grants from Long Island Sound Study and New York State Parks, currently being used for a professional design of the Greenway segment from Fenimore Rd. to the Town of Mamaroneck border, including a crosswalk at Fenimore Rd. and another at Rockland Ave.



Village of Mamaroneck Greenway Phase 1 Concept Design Report

Prepared for: Village of Mamaroneck
Prepared by: Assemblage Landscape Architecture
September 12, 2025

Assemblage
eDESIGN DYNAMICS
MAMARONECK NEW YORK
LONG ISLAND SOUND PARTNERSHIP

GREENWAY PRIORITY SITES

Greenway Breakdown

Phase 1 of this Greenway concept design spans from Fenimore Rd. south to the Bird Walk parcel just south of Rockland Ave. This 0.5 mile stretch of Greenway is the first of the over 3 mile long proposed Greenway to receive a concept design study.

Priority Sites

Along this half mile stretch of trail, there are three key areas with significant open space identified as Priority Sites. These sites are unique to the Greenway in that there is a large amount of Village owned land to utilize for public amenity, ecological restoration, and flood mitigation.

The northern most Priority Site is Salt Shed Park. This parcel is located at Fenimore Rd. and is currently used by the Department of Public Works as a working municipal lot. South of Salt Shed Park, the next Priority Site is the Ogden Avenue Park. This site is a large collection of Village owned parcels accessible from the Ogden Ave. street end. Finally, the farthest south Priority Site is the Rockland Bird Walk. The Rockland Bird Walk is located just south of Rockland Ave. and is a forested open space along the river.

Each of these Priority Sites have their own unique opportunities and challenges. These sites are crucial to activate the Greenway and were studied in detail. Later chapters of this report discuss their site analysis and concept design.

Connecting Sites

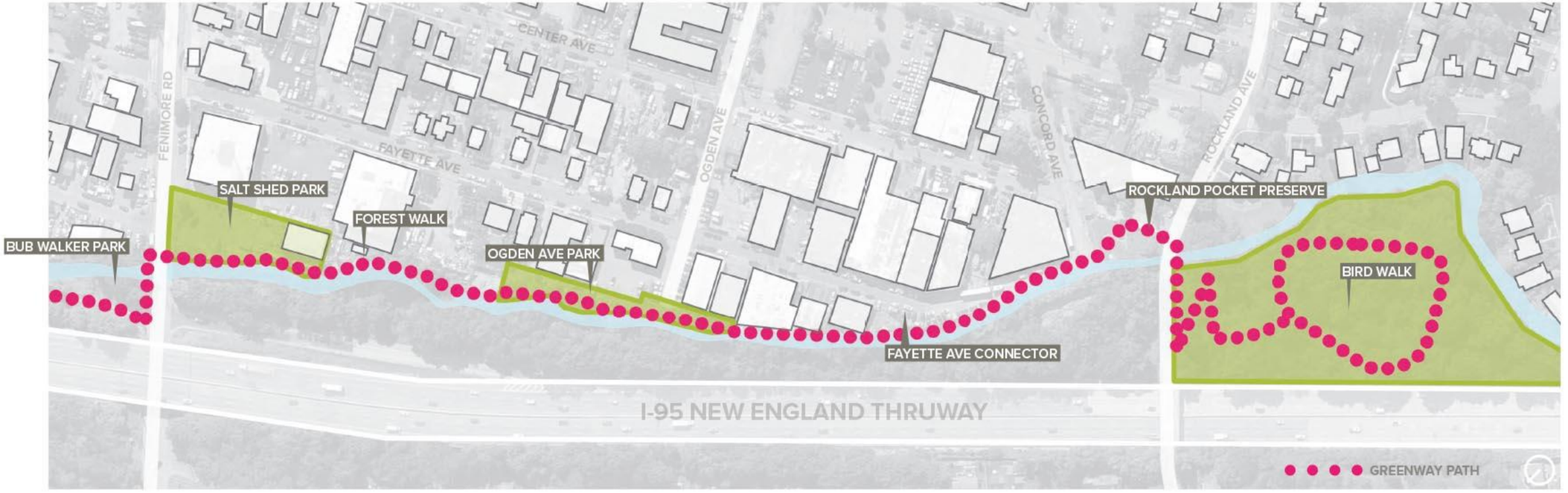
Along the Greenway, there are additional spaces that already exist or have been identified to support a complete concept design.

Just to the north of the Greenway is Bub Walker Park. This existing linear park connects residents from the Washingtonville neighborhood south to the eventual Greenway. This existing park will eventually be incorporated into future phases of the Greenway. Bub Walker Park is a key connector along the Greenway. It will be discussed later in the report, especially in the Fenimore Rd. street crossing chapter.

To the south of the Salt Shed Park priority site, is the Forest Walk. This site is an important threshold of the Greenway. The path goes from the exposed and roadside Salt Shed Park site into a shady and quiet portion of the Greenway via the Forest Walk. This portion of the path is immersive and eventually connects visitors to the second Priority Site: Ogden Ave. Park.

Between the Ogden Ave. Park and the Rockland Pocket Preserve is the Fayette Ave. Connector. While not a Priority Site, this unique space is unlike the rest of the Greenway. It emerges from behind the buildings along Fayette and follows the Ave. to the Rockland Pocket Preserve. This unique condition was studied in more detail later in the report.

The Rockland Pocket Preserve is an already existing pocket park that was created by the Village of Mamaroneck's Committee for the Environment. This park has restored a corner of the Sheldrake by successfully removing invasive species, replanting the site with native plants and trees, and providing a shady place to observe the Sheldrake. It is the first built location along the Greenway.



EXISTING CONDITIONS: SALT SHED

CURRENT USES

Maintenance & Operations Yard

The northern most priority site of the Greenway is the Salt Shed. Owned by the Village and operated by the Department of Public Works, this maintenance and operations yard is used to store bulk materials and machinery like snow plows and trailers. The Salt Shed is the only structure on the site and is used to store road salt. The Salt Shed suffered door damage during Hurricane Ida, and as a result, there is no physical barrier retaining the salt in the shed.

Between the salt shed and the Sheldrake River, the narrow raised portion of land us used for trailer storage. The Department of Public Works stores an old fire department trailer on site.

The municipal lot is planned to stay fully operational during and after the construction of the Greenway.

North Commuter Lot

The northern portion of the Salt Shed site is a commuter parking lot. There are approximately 12 permitted parking spots for local workers. Across the street from the parking lot is the entrance to the Bub Walker park. This is a small linear park that connects the Washingtonville neighborhood to the Greenway via a walking path along the west bank of the Sheldrake River.

Forest Walk

South of the Salt Shed, pedestrians can make their way along the steep bank behind the shed. Here is a large cell phone tower with generators and additional infrastructure. This is blocked off by a chain link fence, making the path of the Greenway narrow. This space will remain operational before, during, and after the construction of the Greenway.

Walking south from the cell phone tower, the Greenway crosses a threshold into a shady forest walk. Overhead mature trees give the Greenway path a sense of enclosure. This continues along the river until reaching the next priority site: Ogden Ave. Street End Park.

ENVIRONMENTAL CONCERNS

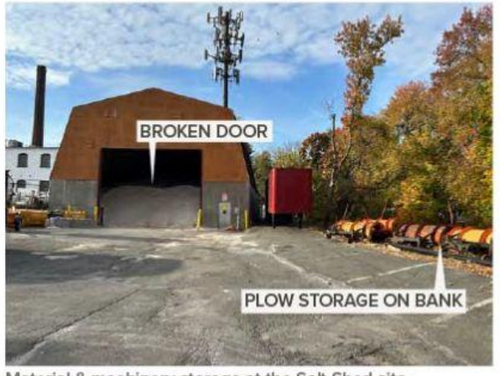
Runoff & Pollution

At the Salt Shed, the largest environmental concern is the water quality of the runoff entering the Sheldrake River. With no barrier or filtration system, whatever street pollutants, salts, or loose material that flows from the street or large, continuous parking lots that slope towards the Sheldrake and down the bank finds its way into the river and eventually, the Long Island Sound. The Salt Shed's broken door is a primary point source of pollution to the Sheldrake.

Erosion

The Salt Shed site, like the rest of the Greenway, experiences intense flooding. While this is a result of many compounding factors, the bank along the Salt Shed is steep and compacted. This reduces the bank's ability to act as a healthy floodplain and provide essential filtration, absorption, and riparian habitat services.

This intense overland flow to the river has caused bank erosion, significantly at the site's low point and a pipe outlet point. The outlet point is currently overgrown with invasive plants and both areas are being eroded away by the intense sheet flow coming across the impervious upland area. This space should be restored to a more functional flood plain to absorb runoff and provide more storage capacity for the Sheldrake floodwater.



Material & machinery storage at the Salt Shed site

No physical barrier keeping road salt in the Salt Shed. During flood events, water reached the shed & leaches salt

Discoloration across the site show how mobile salt flow is

Storm outfall areas are grown over & blocked

GREEN INFRASTRUCTURE TARGETS

Designing Across Scales

Although the Greenway, even when completed, will not resolve Mamaroneck's larger flooding challenges, which require improvements across the entire watershed, the Village can still take meaningful steps to strengthen the Greenway's resilience, helping protect public spaces and support community well-being while working toward larger-scale improvements.

DESIGNING IN A FLOODPLAIN: WATERSHED SCALE

Flood Mitigation

Effective flood mitigation takes place at the watershed scale, with hydrological and ecological strategies working in tandem. A key approach involves reconnecting the river to its floodplain, which restores the river's ability to absorb and slow floodwater. This is often achieved through floodplain benching, a technique that carves flat terraces alongside the river channel increasing conveyance, reducing flood elevations, and offering additional storage during storm events.

By spreading out flood waters, these interventions also reduce peak flows and reduce velocities, lowering downstream flood risk. This is particularly important in heavily urbanized sections where past modifications have created narrow, incised channels with limited flood capacity.

Restored Ecology

Ecological restoration further supports watershed resilience. Restoring riparian buffers with native trees, shrubs, and herbaceous plants improves bank stability, filters pollutants, and shades the water, supporting aquatic life. Where feasible, reintroducing channel meanders helps attenuate energy and slows water movement through the system similar to natural hydrologic patterns.

In-stream habitat enhancements are another layer of intervention. Tools such as boulder weirs, J-hooks, and large woody debris are used to steer flows, create habitat complexity, and reduce erosion. These structures help form riffle-pool-run sequences, promoting oxygenation and diverse aquatic habitats. Maintaining or deepening a defined thalweg (the deepest part of the channel) is also crucial for guiding baseflows and supporting aquatic life, especially during dry periods.

DESIGNING IN A FLOODPLAIN: GREENWAY SCALE

Flood Mitigation

Within the context of the Greenway, project-scale strategies are essential where urban encroachment limits broader interventions. Channel and bank modifications, such as widening and softening riverbank slopes where possible, expand the active floodplain and allow water to spread out during storm events. Areas for these improvements should be evaluated thoroughly and be conscious of preserving mature trees which help absorb stormwater.

The Sheldrake is especially vulnerable to sedimentation. As materials build up in the bottom of the stream, there is less space available for the river. This build up over time can lead to intense flooding. Removing sediment from the river and preventing it in the first place with effective bank erosion control are two crucial strategies to mitigate floods in the Sheldrake River.

Bank stabilization can be achieved through bioengineering techniques. These include the use of live stakes, brush mats, and fascines, which integrate living plant material into engineered solutions. These methods reduce erosion while simultaneously enhancing habitat and establishing native vegetation over time.

Restored Ecology

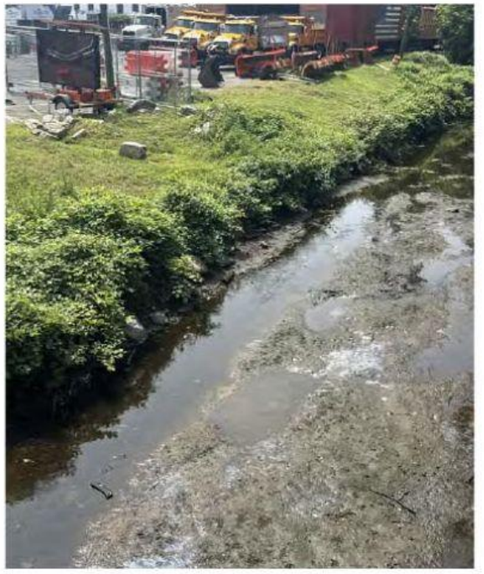
The Greenway also presents opportunities for targeted ecological enhancement. A top priority is the removal of invasive species which have formed monocultures along many stream banks and threaten native biodiversity. Restoring the stream bank with native plantings not only improves biodiversity but also enhances floodplain function and aesthetic value.

In areas where space allows, floodplain habitat creation, such as constructing wet woods, can provide critical seasonal water storage, wildlife habitat, and groundwater recharge. These moist, forested systems are resilient to flooding and offer high ecological value. Together, these measures enhance biodiversity, climate resilience, and long-term ecosystem function.

Water Quality Improvements

In developed watersheds with high impervious cover, water quality management is a high priority, especially within the more industrial areas along the Greenway. Green infrastructure offers a solution to manage stormwater at its source. Rain gardens, permeable pavers, and constructed filter gardens help capture runoff, filter pollutants, and promote infiltration before water reaches the river.

Additionally, engineered structures can be integrated into flood mitigation designs. Stone scours dissipate flow energy and reduce erosion in key zones, while forebays trap sediment before it enters sensitive habitats. These features improve both hydrologic function and ecological health, ensuring that mitigation efforts deliver multiple benefits to the watershed and its communities.



Sediment build up in the Sheldrake adjacent to the Salt Shed

2023 flood event shows extents of flooding at Salt Shed

EXISTING CONDITIONS: OGDEN AVENUE PARK

CURRENT USES

Parking

Surrounded by industrial and commercial spaces, the Ogden Ave. Park is an opening along the built up eastern riverbank. While there is ample open space for recreation or engagement with the river, disorganized parking dominates the site leaving most of it underutilized. There was evidence of trash storage and dumping near the site, making the site not very welcoming to people curious about the river. Although there is a unique break in buildings at this site, the river is still obscured by overgrown invasive plants and a steep bank.

Open Space

Behind the buildings along the Ogden Street End Park, there is open space, however, these areas show a lack of stewardship from property owners with trash and material storage dominating the spaces. Some of these open space areas are vegetated, often with invasive plants. Growing conditions are poor with building material evident in some of the soil.

There are also areas where business owners are encroaching onto Village land to store materials or park vehicles. This encroachment is discussed in detail later in the report.

ENVIRONMENTAL CONCERNS

Runoff & Pollution

The Ogden Ave. Park is a local low point. Runoff from Fayette Ave., both from the north and south, and runoff from eastern Ogden Ave. all lead to this street end point. This is evident from field observations of the site's topography and the intense erosion of the asphalt road on site. This site is managing stormwater from a large area.

This street runoff is also carrying road pollutants that are making their way directly into the Sheldrake. Because there are no measures to divert or filter this runoff, oils, heavy metals, and particulate matter is flowing directly into the river. This pollution is remaining in the Sheldrake until the confluence where it will enter the Mamaroneck River, and eventually, be carried all the way to the Long Island Sound.

Erosion

Ogden Ave. Park is a localized low point. Stormwater from Fayette Ave., both from the north and south, make their way down to Ogden Street. Because it is all paved, runoff is traveling at a high velocity and the bank is vulnerable to erosion. With no measures to slow or absorb the water, the bank at the end of Ogden Ave. is already severely eroded, and an outlet pipe is exposed. Stabilizing this bank was a top priority of the site.

Riverine Habitat

Like many other parts of the Greenway, the banks are dominated by invasive species. Vines are choking out mature trees and the plants that have established offer less habitat and ecological value than species native to the region. Thriving vegetation is crucial to flood management as they help stabilize banks, absorb large amounts of stormwater, and support biodiversity that improves the overall health of the river.

Degraded condition of asphalt show evidence of high stormwater flows

Irregular parking, some directly on riverbank, worsen erosion into the Sheldrake

Dumped gravel, woodchips, & other materials erode into the river & increase flood hazard

Area shows degraded environmental condition & evidence of pollution draining directly into the Sheldrake

EXISTING CONDITIONS: BIRD WALK

CURRENT USES

The farthest point south on the Greenway, the Bird Walk is a unique low-lying, wetland area. Located south of Rockland Ave. and down an embankment, is a heavily wooded area. Unlike any other part of the Greenway, the Bird Walk feels much more removed from the adjacent commercial and industrial area. Large mature trees tower overhead and wildlife such as blue heron, egrets, osprey, wild turkeys, foxes, and white tailed deer have been spotted in the area. Very few, if any, people visit this area leaving it feeling natural and untouched.

To the west are large I-95 walls. While cars are not visible, the noise from I-95 can be heard. Since the expressway was built on top of the river, the Sheldrake River crosses under I-95 through a small channel.

To the east of the Bird Walk are residential homes with lawns that angle down to the river. The bank on both sides is steep with erosion issues. There is evidence of flood waters reaching the homes across the Sheldrake as residents have constructed and repaired stone walls at the water's edge.

ENVIRONMENTAL CONCERNS

Flooding

The Bird Walk is topographically much lower than surrounding areas. During storm events, this water overtops the banks and floods the Bird Walk area. Because there are no structures, flooding in this area is not a problem, but part of the natural ecology of the area. In fact, the Bird Walk is one of the only areas with room for the river to flood into. Vegetation in this area is resilient to the floods, and contribute to the absorption of stormwater.

Vegetation

The vegetation in the Bird Walk is one of the site's greatest assets. With so much open space, there is a large opportunity for restoration. The first steps in restoring the vegetation in the Bird Walk would be a removal of invasive species. Currently, there are overgrown vines that are threatening the lives of the site's largest trees. The trees in the Bird Walk help store stormwater and stabilize the soil, including stabilizing streambanks to prevent erosion. These mature trees are also significant to the site's habitat value, with many species relying on them. In addition, incursions of Japanese Knotweed and multiflora rose will have to be removed and replaces with appropriate wetland shrubs and plants. Management of invasive plants will be a significant factor in the Bird Walk's overall resilience.

In addition to the invasive species, the Bird Walk trees are also vulnerable to river undercutting. Because the river has been modified, the bank is susceptible to erosion. The trees closest to the bank slowly have their soil washed away from under them and are at risk of falling. While this is a challenging condition to restore, there are methods to address the vulnerable trees and prolong their lives. These streambank trees provide enormous flood mitigation value along the entirety of the Greenway, all of which should be aggressively protected.

Outcroppings of Manhattan schist add to the beauty of the site

Located down Rockland embankment, the Bird Walks feels quiet & remote

Fallen trees support insect & bird habitat

High velocity water due to channelization & narrowing of the river has led to erosion & undercutting of trees

GREEN INFRASTRUCTURE METHODS

MATERIALS

The following Green Infrastructure methods utilize a range of techniques to store, slow, and absorb water. To understand the capabilities of each, it is important to discuss the materials that make them up. Below is a brief description of material's role and capacities in Green Infrastructure practices.

Bio-Engineered Soil

Green Infrastructure relies on softening the landscape. That can be done through removing hardscaping like asphalt and concrete or restoring existing landscape to be more absorbent. A primary actor in succeeding to soften the landscape is the soil, however, not all soil is created equal in the eyes of Green Infrastructure. In a site like the Village of Mamaroneck's Greenway, while largely unpaved, the soil along the path is compacted, filled with gravel and other in-organics, and in need of restoration. Bio-engineered soil can be incorporated into practices, making them overall more absorbent.

Bio-engineered soil is a sandy or sand-loam mix of soil with more void space between particles. These voids can be filled to retain flood water. It is estimated that 25% of the overall volume of Bio-engineered soil is available void space for water storage. This estimate takes into account that the soil will have "unavailable void space", or void space that is already storing water prior to a flood event.

Stone

A range of Green Infrastructure practices utilize stone. In the Greenway concept design, stone is most often used in a scour garden, an area with high runoff velocities where soil might get washed away. Scour gardens, sometimes referred to as forebays, are often excavated areas of the landscape that are filled with bioretention soil and stone on top. Often, the scour garden remains a depression in the landscape allowing water storage to occur. Similar to Bio-engineered Soil, stone scour gardens can hold water in void space. It is estimated that the void space in a typical scour garden is 40% of the overall volume.

Plant Material

Plant material plays a large role in Green Infrastructure as they are natural sponges, absorbing gallons of water daily. Plants help stabilize soil with their root systems, and shade soil which improves overall soil biome health. In a site like the Greenway, with slopes and high runoff, plant roots are crucial to keeping soil in place and reducing sedimentation into the Sheldrake. Additionally, native plant species provide food and habitat for regional wildlife. Plant's role in successful Green Infrastructure is crucial for the overall success of the landscape.

PRACTICES

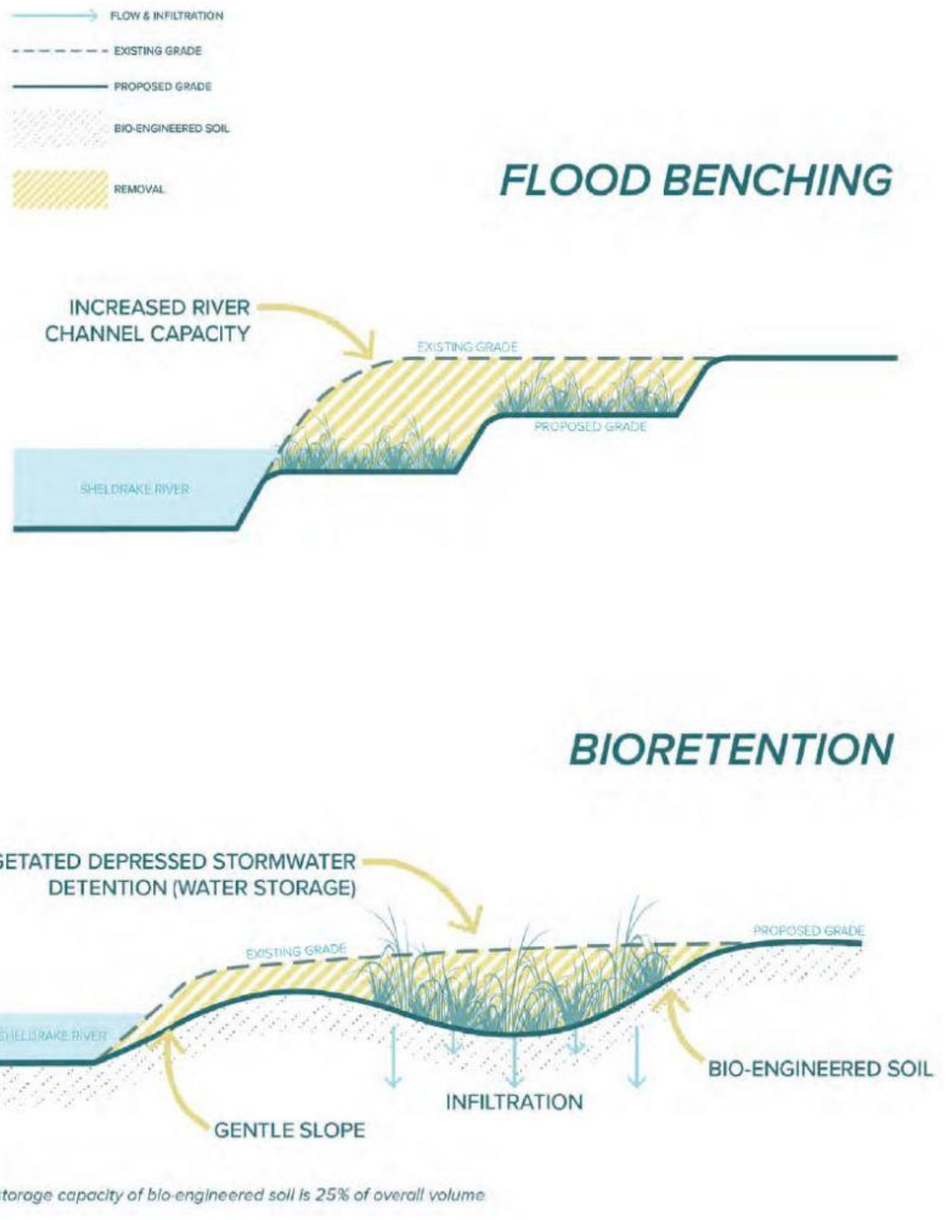
Flood Benching

The Sheldrake was once a naturally flowing stream. It had a meandering form with a wide floodplain that acted as a natural sponge during floods. Over time, the Sheldrake was realigned and channelized and the floodplain was developed. The river is now forced into a narrower channel, shrinking its volume capacity. The shape of the Sheldrake was straightened which makes the velocity faster and exacerbates erosion and sedimentation. Development on the floodplain reduces permeable areas and increases the amount of runoff entering the river. These drastic modifications span across the watershed and create large scale flooding issues.

One strategy to improve the conditions along the Sheldrake and restore some of those natural qualities of the stream is Flood Benching. Flood Benching is cutting into the bank to give the river more horizontal space. This improves volume capacity and reduces steep bank slopes. Often in a terrace form, Flood Benched areas can be re-planted with native floodplain species that are resilient to frequent inundation. Flood Benching usually occurs on a larger scale and is discussed further in this report.

Bioretention

In areas where space allows, bioretention systems can be implemented as stormwater detention. These systems can be placed along the river or higher upland, and are comprised of a vegetated, gently sloped depressed area. After excavating down to the desired depth, typically 12-24", the bioretention system's soil is enhanced with bio-engineered soil and is planted with water loving plants. The bio-engineered soil can absorb and store water better than typical soil, and the plants absorb water that flows into the system. Given Mamaroneck's high deer population



GREEN INFRASTRUCTURE METHODS

and need for maximum stormwater storage, woody plant species were selected for these bioretention areas. Woody species are less vulnerable to deer browse and can absorb large amounts of stormwater.

In areas where the Bioretention Wet Woods is along the Sheldrake, the system can be used to transform steep slopes into a more absorbent riparian edge. Bioretention Wet Woods are designed to be moist, so they are resilient during storm events, and will quickly recover during flood events. During smaller precipitation events, runoff is directed to these systems where water gets absorbed by plants or slowly release into the soil.

Stone Scour

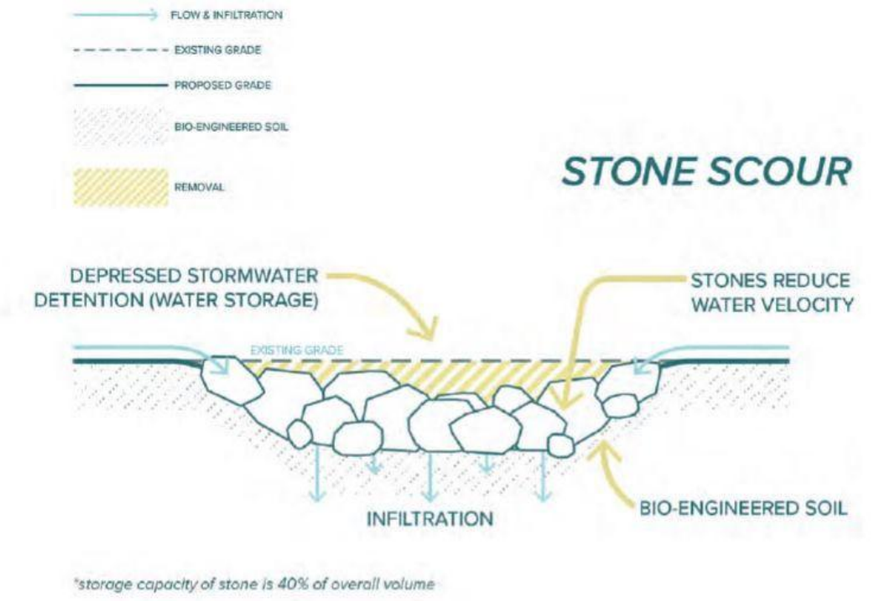
In areas with concentrated runoff, like natural low points or immediately adjacent to paved areas, runoff velocity can be high. This causes wash out and erosion of soil. That material eventually ends up in the Sheldrake and builds up over time, reducing the channel capacity. Stone scour strips can be used to catch that runoff, dissipate the energy of the water, and store the stormwater before slowly infiltrating into the soil.

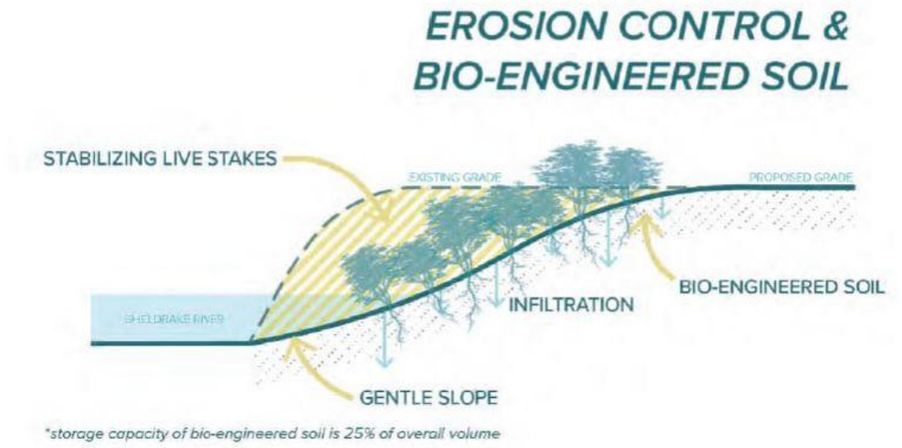
Stone scours are constructed by excavating an area down 12-24", installing bio-engineered soil, and filling the low point with stone. The top of stone will be at or just below the adjacent grade. Stone scours are similar to the bioretention practice, but does not include plants. This is done so that sediment collected over time in the stone scour can be easily removed by a maintenance team.

Erosion Control & Bio-Engineering Soil

There are areas along the Sheldrake where the banks is very steep. During precipitation events or flood events, these steep banks are susceptible to erosion. Additional support is needed to prevent wash out and sediment from entering the Sheldrake. In areas where the erosion is most intense and there is a suitable amount of space, erosion control and bio-engineered methods will be implemented.

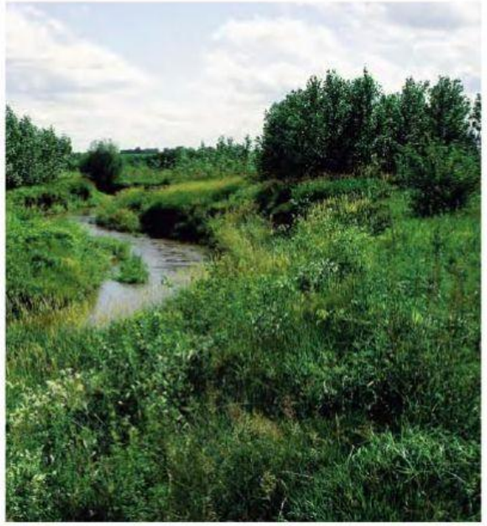
Like in Flood Benching, relaxing the grades of the bank is a crucial first step in reducing erosion. Bio-engineered soil will restore the soil along the edge of the bank, and finally, live stakes will be planted into the bank. These are live cuttings of riparian woody plants that grow quickly and have deep roots. As they grow, their roots will stabilize the bank soil. Eventually, the vegetation from the live stakes will also help slow any runoff coming over the bank. These measures will help protect the soil from eroding and keep sediment out of the Sheldrake.





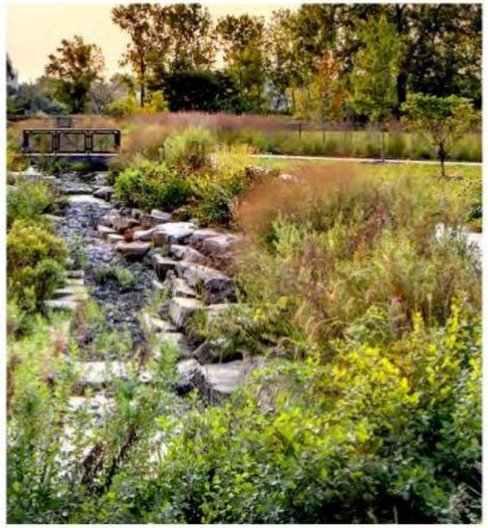
PLANT PALETTE BREAKDOWN

RIPARIAN BUFFER



Amelanchier alnifolia, serviceberry
Betula nigra, river birch
Sassafras albidum, sassafras
Rhus glabra, smooth sumac
Rosa carolina, pasture rose
Juncus tenuis, path rush
Symphyotrichum novae-angliae, New England aster
Coreopsis lanceolata, lanceleaf tickseed
Carex vulpinoidea, fox sedge
Schizachyrium scoparium, little bluestem

BIORETENTION/WET WOODS



Acer rubrum, red maple
Quercus bicolor, swamp white oak
Cephalanthus occidentalis, buttonbush
Carex lurida, lurid sedge
Carex vulpinoidea, fox sedge
Iris versicolor, flag iris
Panicum virgatum, switchgrass
Juncus effusus, blue soft rush
Eupatorium serotinum, late boneset
Symphyotrichum novae-angliae, New England aster
Solidago sempervirens, seaside goldenrod

FOREST RESTORATION

Acer rubrum, red maple
Asimina triloba, pawpaw
Betula nigra, river birch
Ilex opaca, American holly
Juglans nigra, black walnut
Prunus serotina, black cherry
Quercus bicolor, swamp white oak
Amelanchier alnifolia, serviceberry
Clethra alnifolia, summersweet

GREEN INFRASTRUCTURE PLAN OVERVIEW

Greenway Implementation

The Greenway concept design looks to incorporate Green Infrastructure best management practices wherever possible. Improving the upland area's capacity to slow, filter, and store stormwater is a foundation goal of the Greenway. Priority Sites with ample open space are key areas to implement Green Infrastructure.

Before describing the locations of the Green Infrastructure, it is important to note that these design suggestions were done at a concept level. The areas below were calculated without a survey, and additional investigations into the existing topography and soil composition will be required to fully design this infrastructure.

Salt Shed

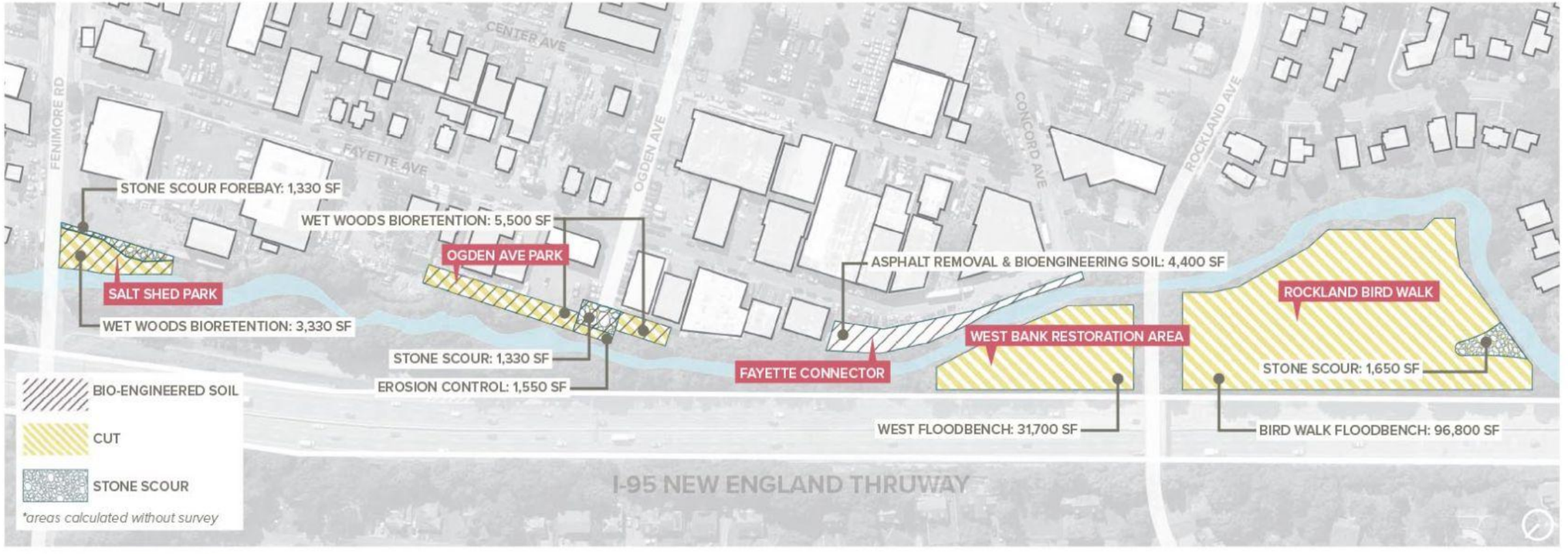
At the Salt Shed, there is an estimated 3,330 square feet available for a wet woods bioretention system. This infrastructure will be downhill from a 1,330 square foot stone scour forebay. This forebay runs the length of the municipal lot and is centered on the site's lowest point. Together, these practices will reduce erosion, improve water quality, store water on site, and improve channel capacity of the Sheldrake.

Ogden Ave. Street End Park

The Ogden Ave. Street End Park is a large portion of the Greenway with ample space for Green Infrastructure. Upland, on the banks, an estimated 5,500 square feet are available for a wet woods bioretention system. These are connected to a 1,330 square foot stone scour area to help capture the large amounts of runoff that enter the park from Ogden Ave. and Fayette Ave. Additionally, 1,550 square feet of bank erosion control measures will help stabilize the currently eroding edge of the bank at the end of Ogden Ave.

Rockland Ave Bird Walk

Due to the Bird Walk area's naturally low topography, it is a prime portion of the Greenway to utilize Green Infrastructure. A 1,650 square foot stone scour area will allow water to enter the low forested Bird Walk. The upland 96,800 square feet area is similar to a natural floodplain and will be able to hold large amounts of water during a storm event.



SALT SHED PARK CONCEPT DESIGN

Site Goals

To address the primary concerns of water quality and flood resiliency, the Salt Shed design needed to create an absorbent landscape. Transforming the riverbank into the first line of defense, nature based solutions that filter, absorb, and divert pollutant from the Sheldrake were implemented.

In addition to addressing the environmental concerns, the Salt Shed will also serve as the front door to the Greenway. Its visibility from street and proximity to an I-95 off-ramp offers a unique opportunity to draw visitors in to the 0.5 mile stretch of linear park.

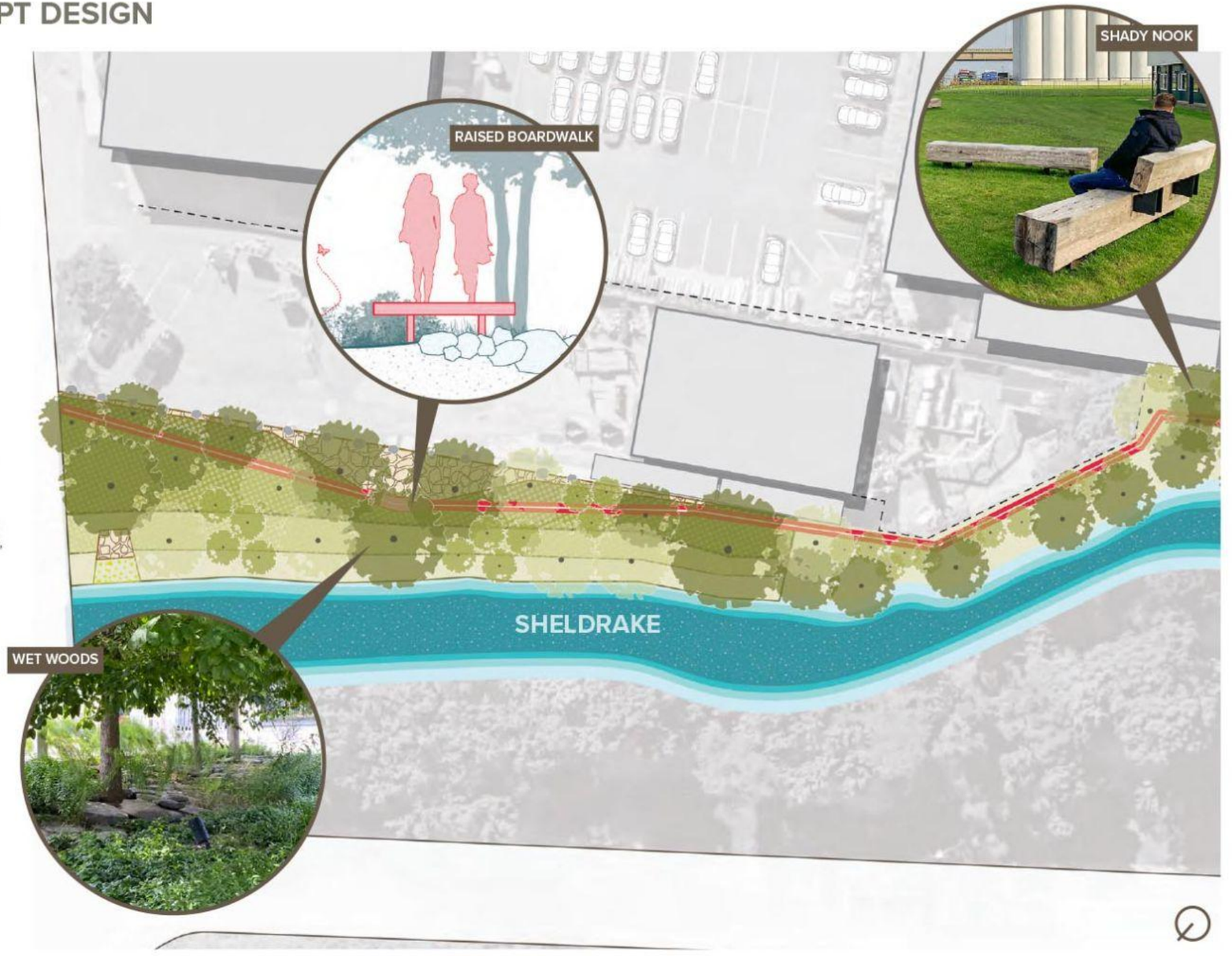
GREEN INFRASTRUCTURE AT SALT SHED PARK

Wet Woods

15,000 square feet of asphalt pavement, 3,000 square feet of roof of the Salt Shed, and the adjacent Fenimore Rd. runoff all generate large amounts of runoff that flow through the Salt Shed Park site. As a way to improve water quality and mitigate surface flooding in this area, a Wet Woods and forebay system will be used. At the Salt Shed Park's Wet Wood system, upland edge of the maintenance lot down to the Sheldrake River will be regraded to a more gentle slope, replacing the steep bank that is there now. The regraded bank will incorporate the Wet Woods bioretention system, planted with woody species that tolerate wet conditions and help absorb runoff and flood waters. These woody plants help stabilize the slope and store water in their roots, stems, and wood.

Forebay System

To manage the runoff, and protect the Sheldrake from erosion and pollution, a forebay system will be used. The forebay system is a graded low point that is filled with stone. Stone is a preferred material as it is more resilient to frequent flooding than a planted edge would be. Good for areas with high volumes of runoff, this low point is designed to catch water and temporarily hold it. This brief period of water detention allows particulate material to settle out of the water. Once particles have been settled out, the cleaned water will sheet flow down wet wood system and into the Sheldrake.



VILLAGE OF MAMARONECK GREENWAY
September 12, 2025

SALT SHED PARK CONCEPT DESIGN

The wet wood system requires maintenance. The sediment and particulate matter that settles out will need to be removed from the forebay. The frequency of maintenance depends on the storms and floods that occur per year, but on average routine sediment removal occurs once or twice a year.

Expanded Floodplain

The riverbank of the Salt Shed plays a crucial role in making the site more resilient to floods. In combination with the wet woods planting strategy, relaxing the bank grade will give the river more room during flood events. This "expansion" of the floodplain also slows water velocity and can lead to more water absorption.

Riparian Buffer Habitat

These strategies all contribute to reconnecting the river and floodplain systems. While addressing flooding issues is a key goal of the Greenway, so too is restoring the Sheldrake's native ecology. By introducing a planting strategy that restores riparian edge species, the riverbank can once again become a healthy ecosystem. Currently, the riverbank at the Salt Shed Park is steep and mostly grass that is being colonized by invasive planes. Creating a planted area that utilizes a layered planting approach will help bring back life to the river's edge. Seasonal plants that bloom during all seasons support local pollinator and bird species, while groundcover and canopy layers provide habitat for a range of species. It is possible to restore the Sheldrake, and nature based solutions like the Wet Woods forebay are one component to that goal.

Erosion Control

At the northern portion of the Salt Shed Park, there is an outlet pipe. At this point, there is evidence of erosion. In order to better stabilize the this outlet point, stone and live stakes will be used. The stone will help stabilize the edge and be resilient over time, while the live stakes will grow into the bank's soil and stabilize it that way. Erosion anywhere along the Sheldrake is a concern as this process can lead to sedimentation. As material is deposited into the river, its capacity to carry a volume of water is reduced which can lead to downstream flooding issues.

DESIGN ELEMENTS

Raised Boardwalk

In order to not interrupt the green infrastructure at the Salt Shed Park, the Greenway will need to be lifted over the forebay so water can flow beneath it. This protects the path from frequent sheet flow and potential erosion. The forebay will be graded to a low point to for water to flow out of the system. At this point, the Greenway will transition from path to boardwalk in order to gross over the low point. Consolidating the outlet of the forebay will help reduce the amount of boardwalk required for the Greenway path, keeping cost down.

Boulder Edge

While the Salt Shed Park will transform the site, the adjacent Public Works lot will remain fully functional. To provide a clear delineation between the spaces, a simple boulder edge will be utilized along the Park's eastern most edge. This will ensure Greenway visitors respect the Department of Public Work's maintenance lot and also protects from accidental vehicles entering the plant bed.

OGDEN AVE. PARK CONCEPT DESIGN

Site Goals

The Ogden Ave. Park end park is of the largest open spaces within Phase 1 of the Greenway comprising of 0.6 acres of Village land along the Sheldrake. To capitalize on such an opportunity, the site looks to deploy Green Infrastructure to capture stormwater, improve water quality issues and to create an open and welcoming riverside park for visitors.

The park's location is in the Industrial Area, which despite its name and primary use, is home to many families who have experience multiple stressors for years. Prior to the creation of the Rockland Pocket Preserve, just to the south of Ogden Ave. Park, area residents and workers has no park or greenspace at all. This riverside park and Phase 1 of the Greenway is an important step to bring access to nature and recreational opportunities to all residents of Mamaroneck.

GREEN INFRASTRUCTURE

Scour Garden

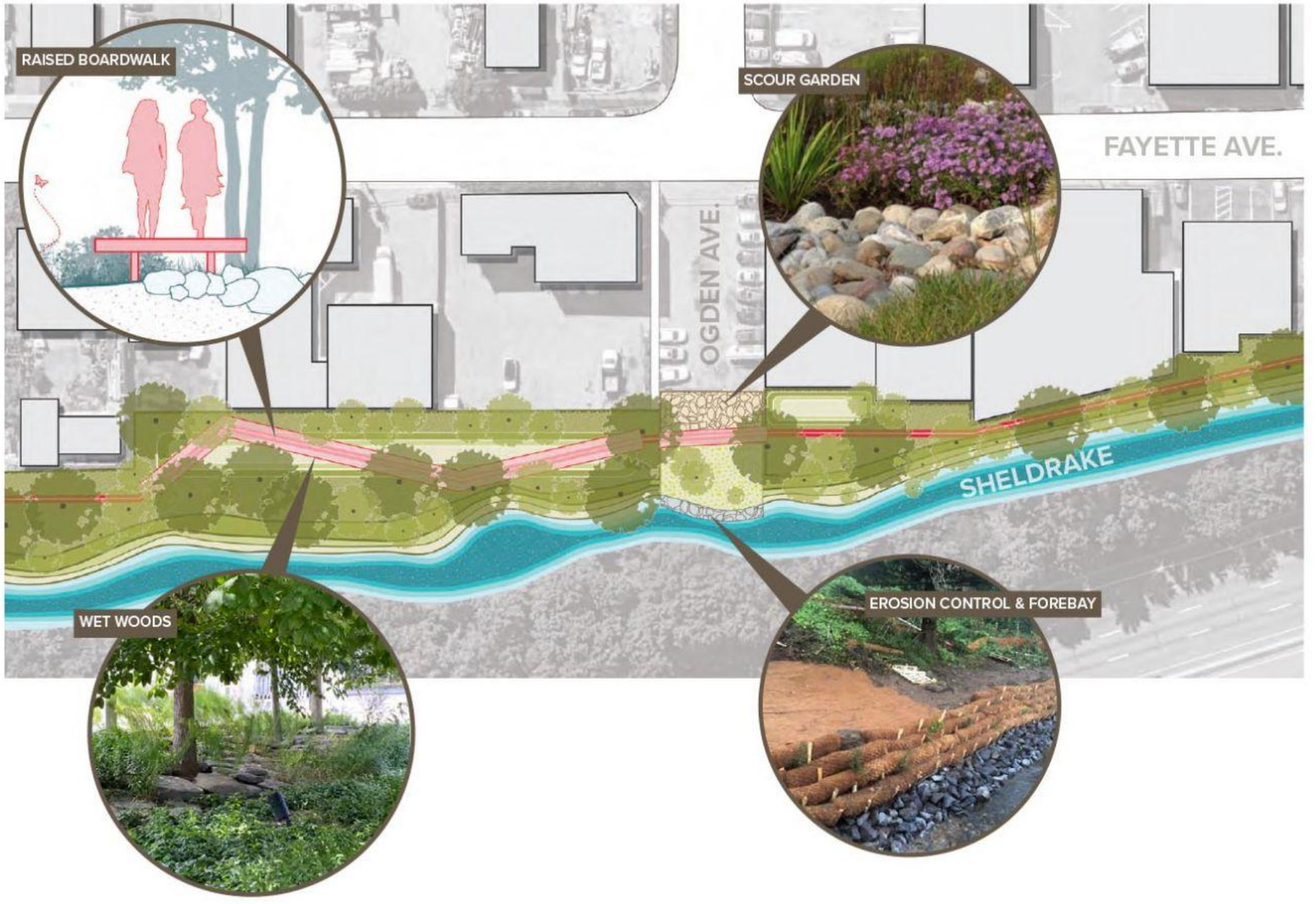
Due to the site's natural topography, and the volume of stormwater the street end must manage, water velocity is a key challenge to address. A scour rock garden will assist in this process.

This area will be comprised of a slightly depressed area that is filled with stone. The stone will be resilient over time and require little maintenance. In combination with the depression and rough material, water coming through the site will be slowed as it flows into the scour garden and eventually, down the riverbank.

Bioengineering Techniques

Just beyond the scour garden and at the steep bank, bioengineering techniques will be applied to help stabilize the bank edge. This area is currently being eroded away quickly and exposing an outlet pipe. Preserving the edge not only protects the pipe infrastructure, but ensures that additional sediment is not entering the Sheldrake. The bioengineering tool kit will utilize three distinct methods.

First, live stakes will be planted along the edge. Live



OGDEN STREET END PARK CONCEPT DESIGN

stakes are live cuttings from a woody species that are then directly planted into the riverbank. As the cutting establishes, roots grow into the soil and help stabilize the bank. Overtime, the plants continue to grow and the foliage assists in slowing down sheet flow. Live stakes are a popular methodology of riverine restoration for stability and habitat value.

In addition to the live stakes, brush mattresses will be utilized. Brush mattresses are layered branches on the riverbank slope that create a living ground cover. This technique acts as a natural sediment trap as the branches establish. Similar to live stakes, brush mattresses will stabilize the bank and eventually sprout foliage creating a green edge along the bank.

The final bioengineering technique used at Odgen Street End Park is the fascine. The fascine is a bundled collection of live cuttings. It is situated into a small trench at the edge of the river bank. Over time, the fascine will act as a natural sediment trap, and the more is establishes, the more it will catch. Similar to the previous two methods of bioengineering, the fascine also helps stabilize the bank soil.

Outlet Stabilization

While the bioengineering strategies discussed will support upland stabilization, the bank has already been eroded to a steep drop off. At the bottom, additional stabilization will be needed. Currently, the existing vegetation's roots are the only form of support the earth has. Additional stone around the outlet pipe will be more resilient during floods and prevent future erosion from occurring.

Upland Planting

In addition to the bioengineering strategies for runoff control, the Odgen Ave. Park river bank will be transformed into a lush and diverse riparian habitat. After clearing invasive plants and restoring the site's soil, native trees, shrubs, and herbaceous material will be used to plant the upland portions of the park. This planting will provide much needed riparian edge habitat and plant diversity to the site.

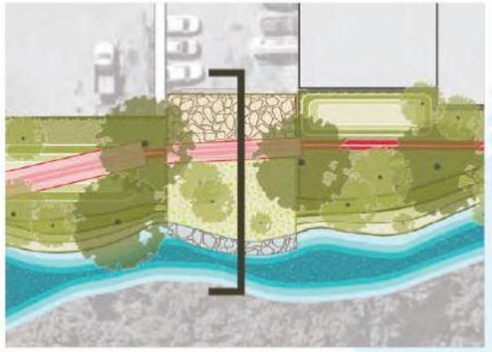
DESIGN ELEMENTS

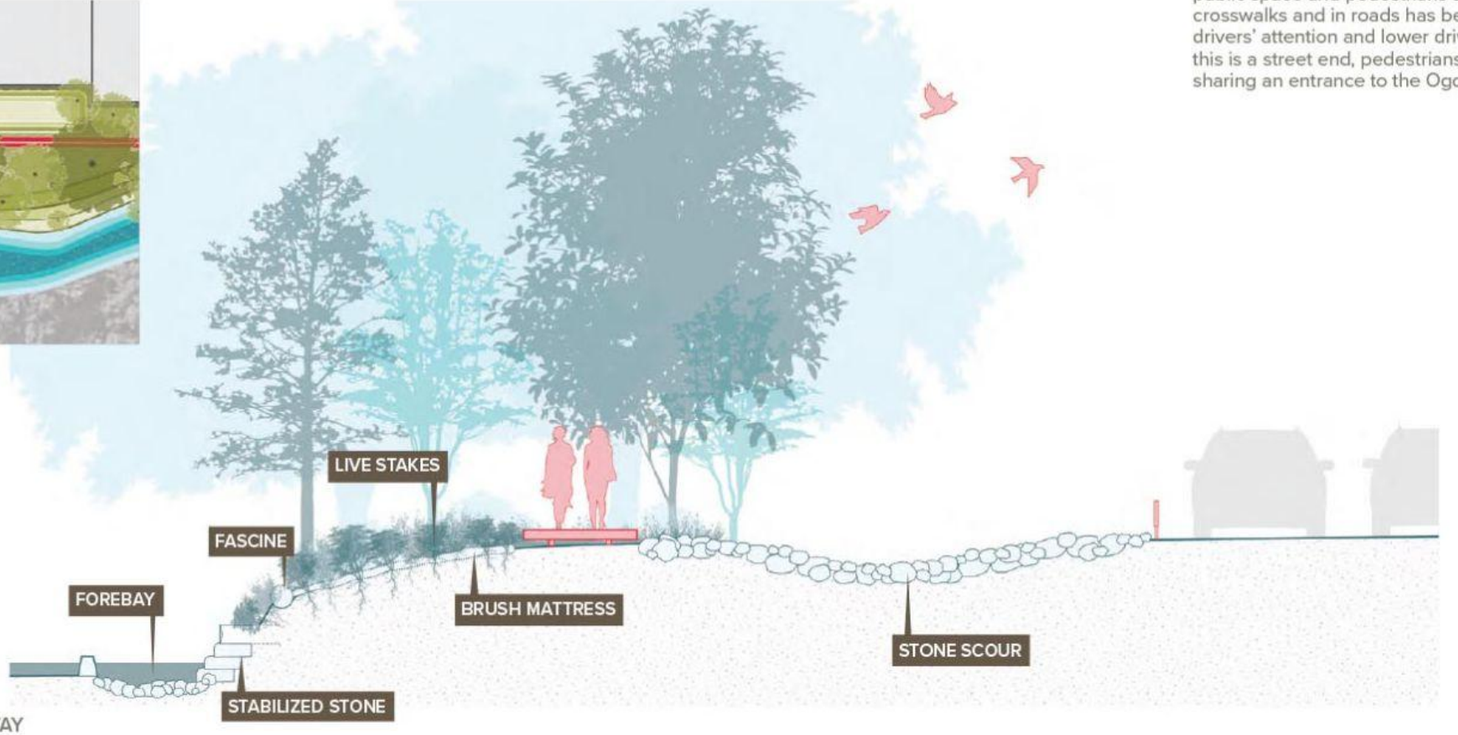
Raised Boardwalk

Managing stormwater at the priority sites poses unique challenges. At the Ogden Street Park, the site's naturally low topography directs large amounts of runoff towards the river. Designing a path through this concentrated flow puts the Greenway at risk of erosion or washout. To avoid this, the Greenway will convert into a raised boardwalk suspended above the scour garden. This will allow water to flow continuously beneath the path. The raised boardwalk will only be utilized in portions that cross over areas with concentrated runoff.

Road Repair

Due to the concentrated flow of runoff Ogden experiences, the asphalt at the street end park has been greatly degraded. Since this is a key entrance to the Greenway, this concept plan proposes refinishing the road and painting it with a horizontal mural. Permeable pavers proposed as they allow water to infiltrate where it lands. Painting the roadway signals to cars that this is a public space and pedestrians are nearby. Paint on crosswalks and in roads has been shown to catch drivers' attention and lower driving speeds. Because this is a street end, pedestrians and cars will be sharing an entrance to the Ogden Street end park.





ROCKLAND BIRD WALK CONCEPT DESIGN

Site Goals

The Bird Walk is unlike the rest of the Greenway. Tucked away down an embankment, the Bird Walk is a large forested open space. Because it is lower than Rockland Ave., it is quiet and secluded. The concept design for this site looks to enhance those natural qualities while improving downstream flood conditions.

GREEN INFRASTRUCTURE

Floodplain Reconnection Point

Since the Bird Walk is in a naturally low area with no development, it is the closest condition to a natural floodplain along the Greenway. Because floodplains are so invaluable to managing floodwaters, the concept design includes a Floodplain Reconnection Point to activate the Bird Walk as a flood plain, similar to a flood plain bench. At this reconnection point, the grade will be lowered to invite the water in. While the site naturally floods, by lowering the bank the Bird Walk can help manage water for less intense flood events that may not overtop the banks now. Any amount of stormwater diversion and storage helps the downstream sites, and since the Bird Walk is the farthest upstream site in the Greenway, this is a prime opportunity to utilize the open space as stormwater management.

Invasive Plant Management

While the Bird Walk is a beautiful natural area, it is also overrun with invasive plants that degrade the surrounding ecosystem. Invasive species like knotweed, multi-flora rose, and aggressive vines are choking out mature trees. Those mature trees are invaluable in a setting like the Bird Walk. Each mature tree can absorb approximately 100 gallons of water a day, stabilize the soil, and provide critical habitat for the native species. Protecting those mature trees and creating an environment for future native trees to thrive is a key management goal.

In the Bird Walk there is minimal understory or groundcover due to of deer browse. Deer browse is when young or low growing plants are eaten by deer. This leads to an underdeveloped understory layer of forest. Since there is a large local population of deer that will make restoration

For further information, please contact CFTE@vomny.org. https://www.villageofmamaroneckny.gov/committee-environment-cfte

LONG ISLAND SOUND PARTNERSHIP

Erin Mannix

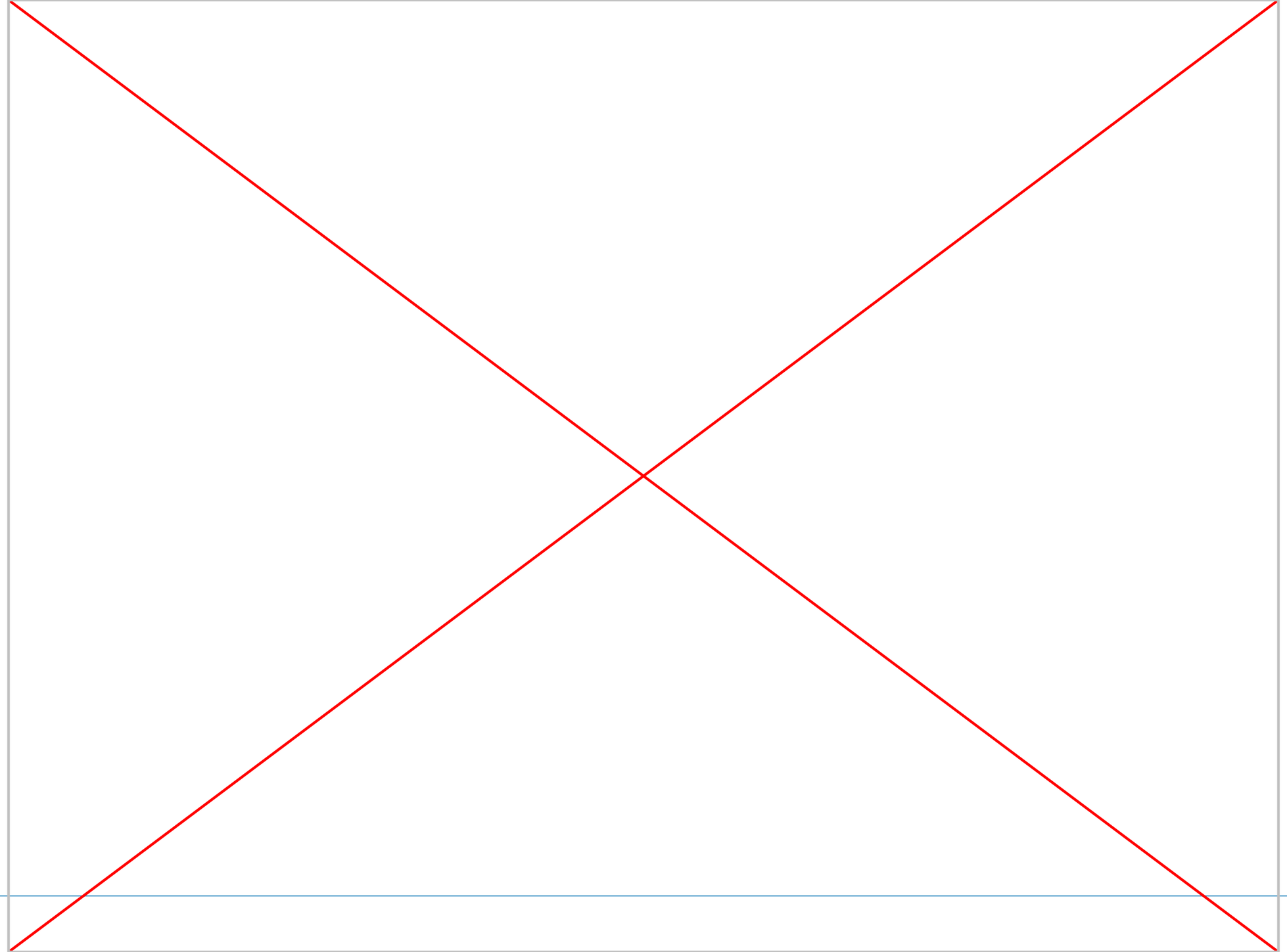
Town of Madison, CT

Town Planner

PSP Project: Develop a Climate Resilience Plan for the Town of Madison, building off of the 2016 Town Coastal Resilience Plan

Contractor: FHI Studio

Award Amount: $49,845



LONG ISLAND SOUND PARTNERSHIP

Theresa Mohan

Village of Pelham, NY

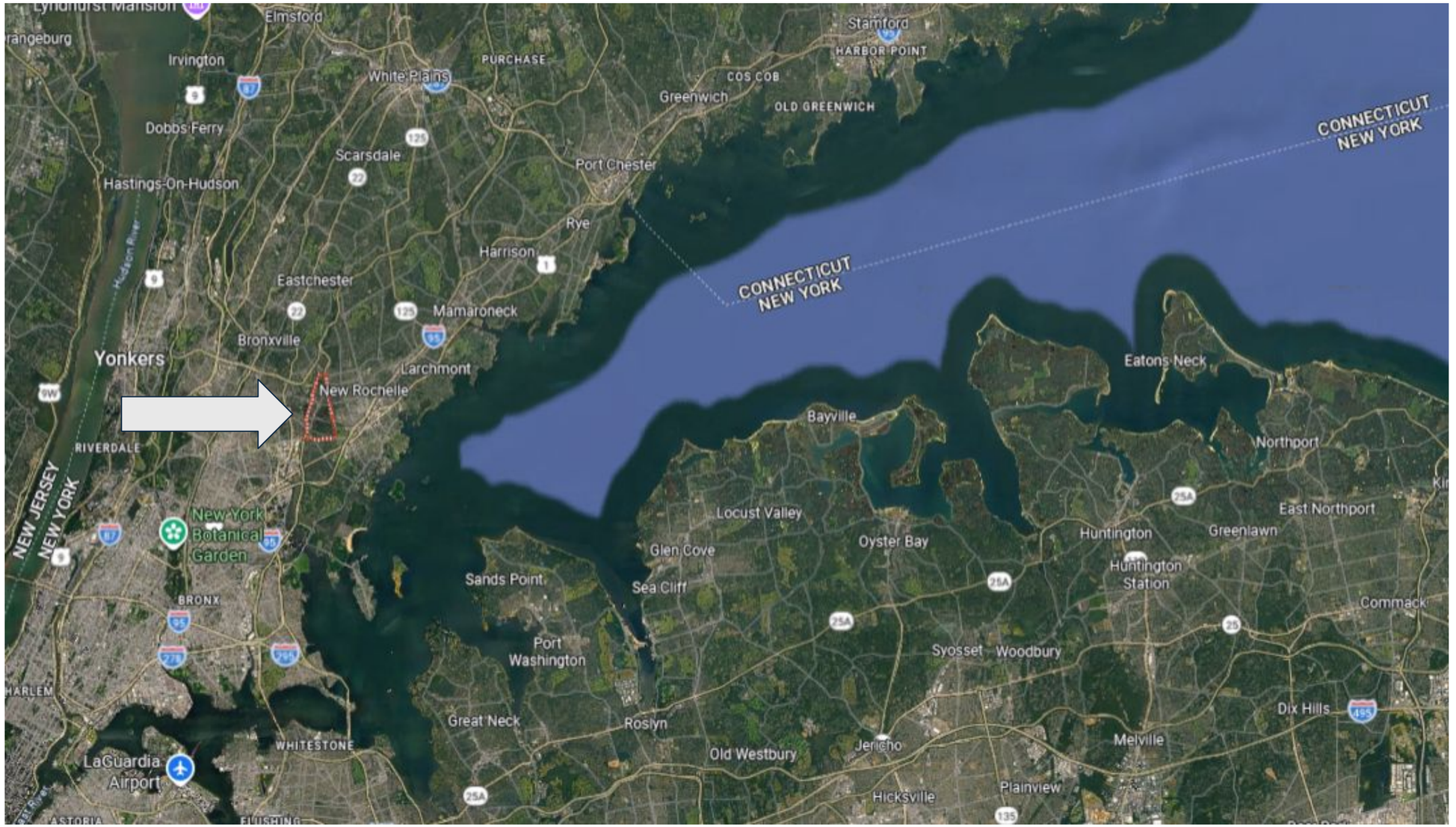
Trustee & Supervisor-Elect (Town of Pelham)

PSP Project: Conduct a Natural Resource Inventory for the Village

Contractor: Biohabitats

Award Amount: $75,240

Village of Pelham



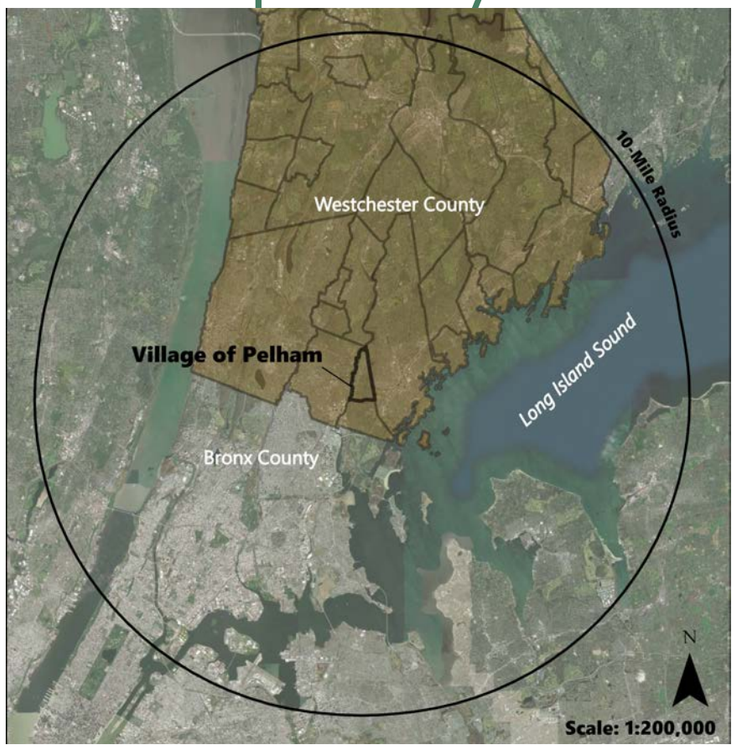
Biohabitats

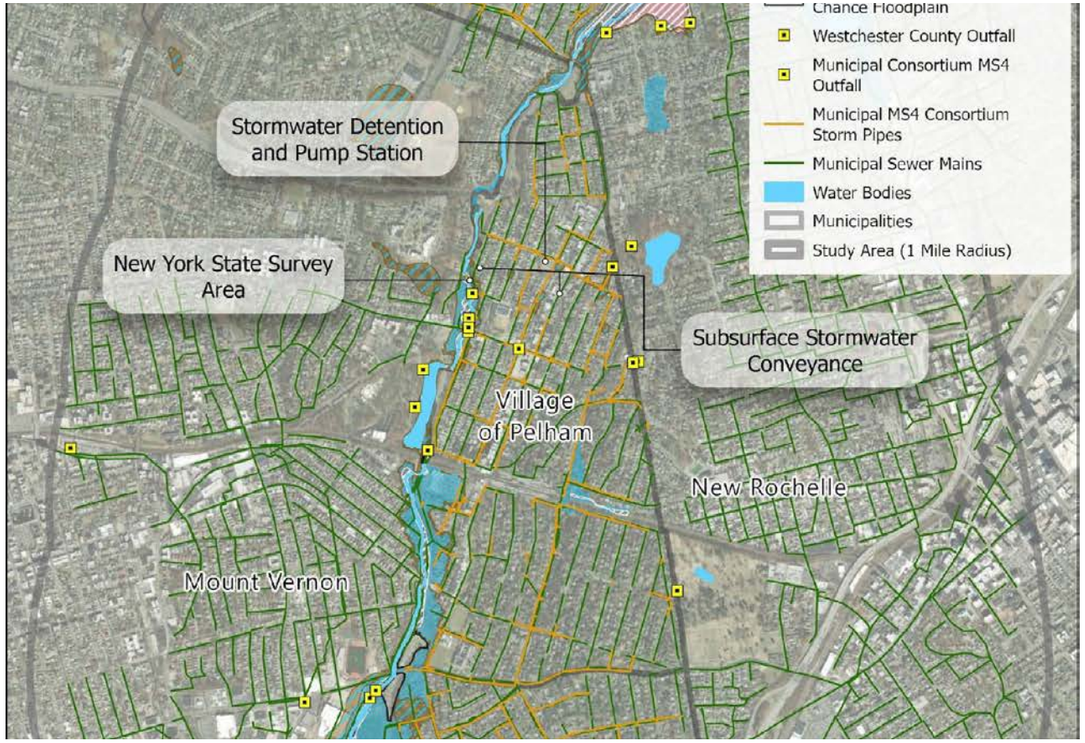
Pelham Natural Resource Inventory

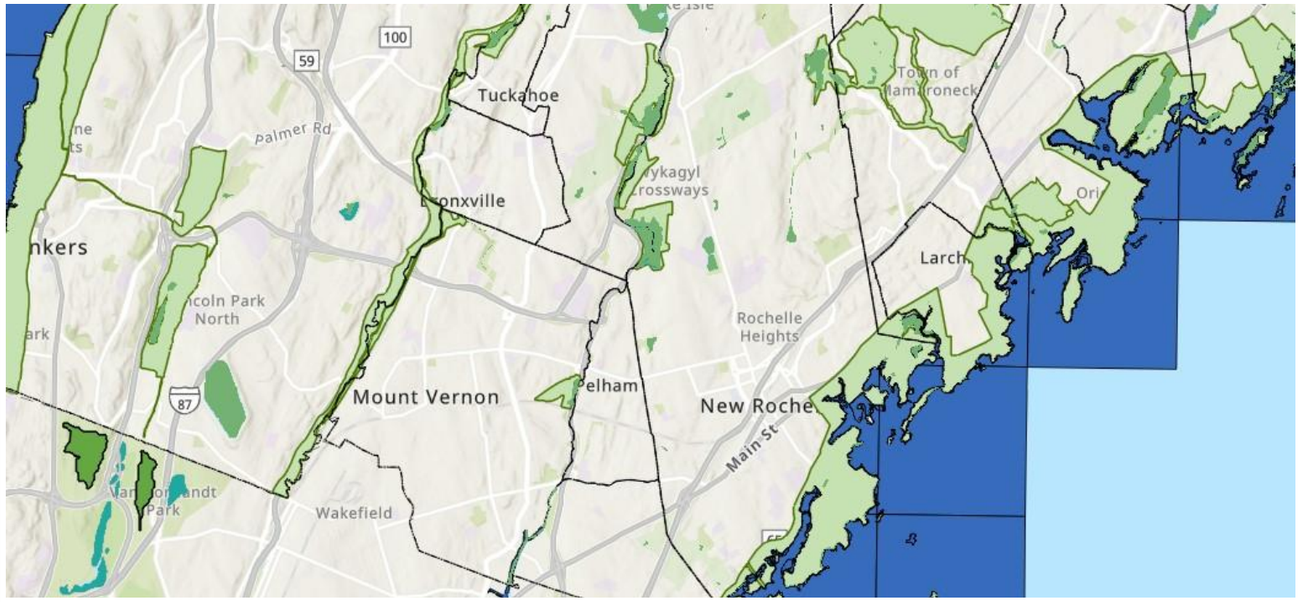
Collaborative effort between Biohabitats, Cornell University Sea Grant, LIS Partnership, and Village of Pelham.

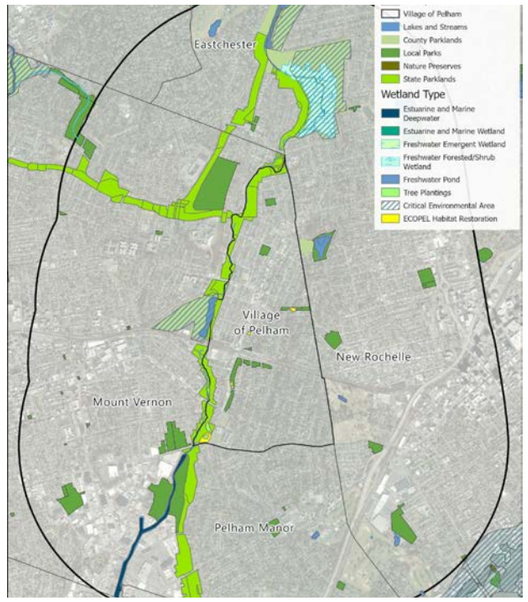
Effort to document existing natural resources within the Village, and recommendations for strategic ecological enhancements

Desktop Analysis





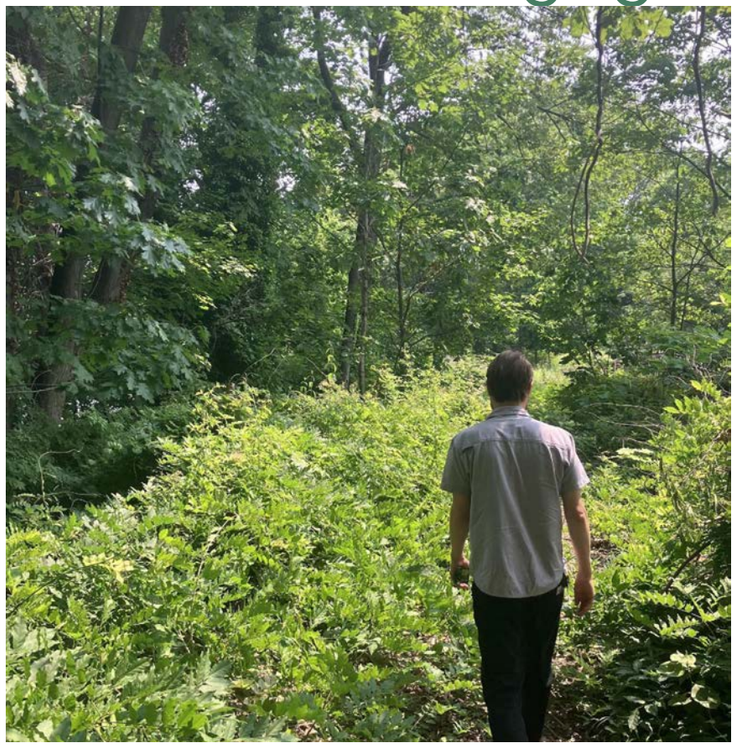




- Climate Conditions
- Bedrock & Surficial Geology
- Topography
- Soils & Drainage
- Land Use & Land Cover
- Public Recreation & Open Space
- Watershed
- Streams & Waterbodies
- Groundwater & Aquifers
- Stormwater
- Ecologic Features
- Urban Habitat
- Species Observations
- Shifting Weather Patterns
- Pest, Disease, & Invasives

Field Investigation: March 30, 2025

Stakeholder Engagement & Feedback Integration



Attendees

EcoPel

Junior League of Pelham

Pelham Tree Conservancy

Save the Sound

Village of Pelham

Vine Squad

Westchester County

Recommendations: Individual Scale

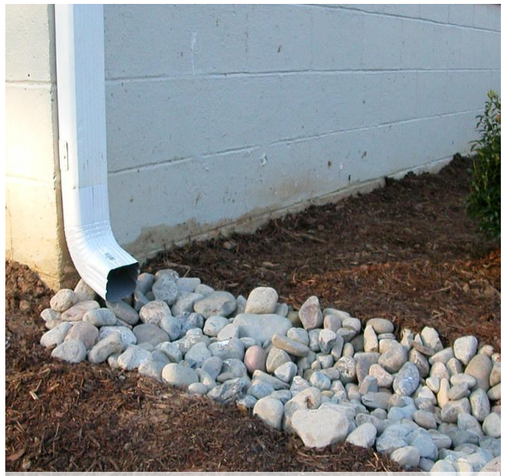
Residential Tree Planting

Lawn Conversion

On-Site Water Management

Lawn Conversion

Rain Barrel



Downspout Disconnect

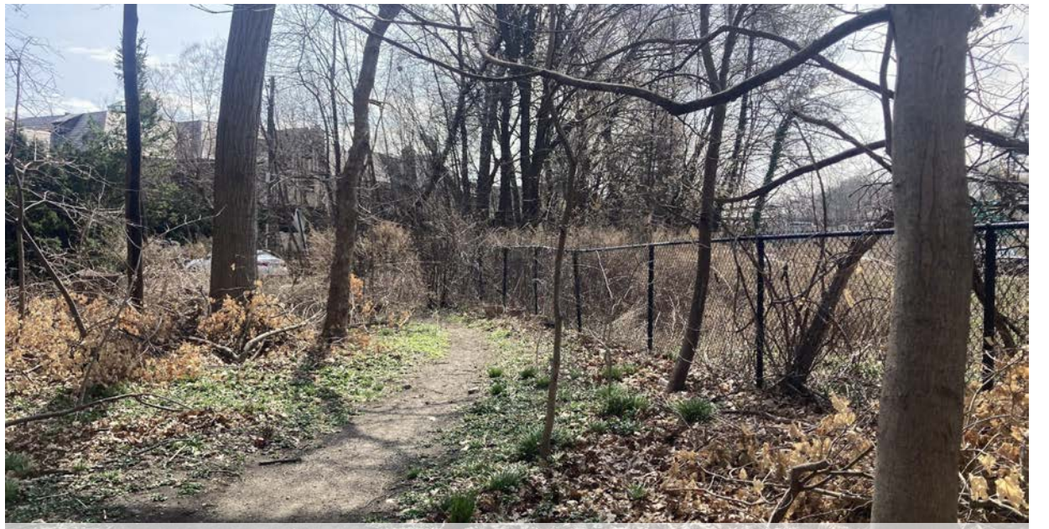
Recommendations: Village Scale

Tree Ordinance

Street & Park Tree Master Plan

Canopy Assessment

Non-Native Management Plan



Community Forest Management Strategy

Recommendations: Village Scale

Permeable Surfaces

Regenerative Stormwater Conveyance

Flood Management & Resiliency Plan

Green Stormwater Infrastructure: Bioswale (left) Bioretention (right)

Recommendations: Regional Scale

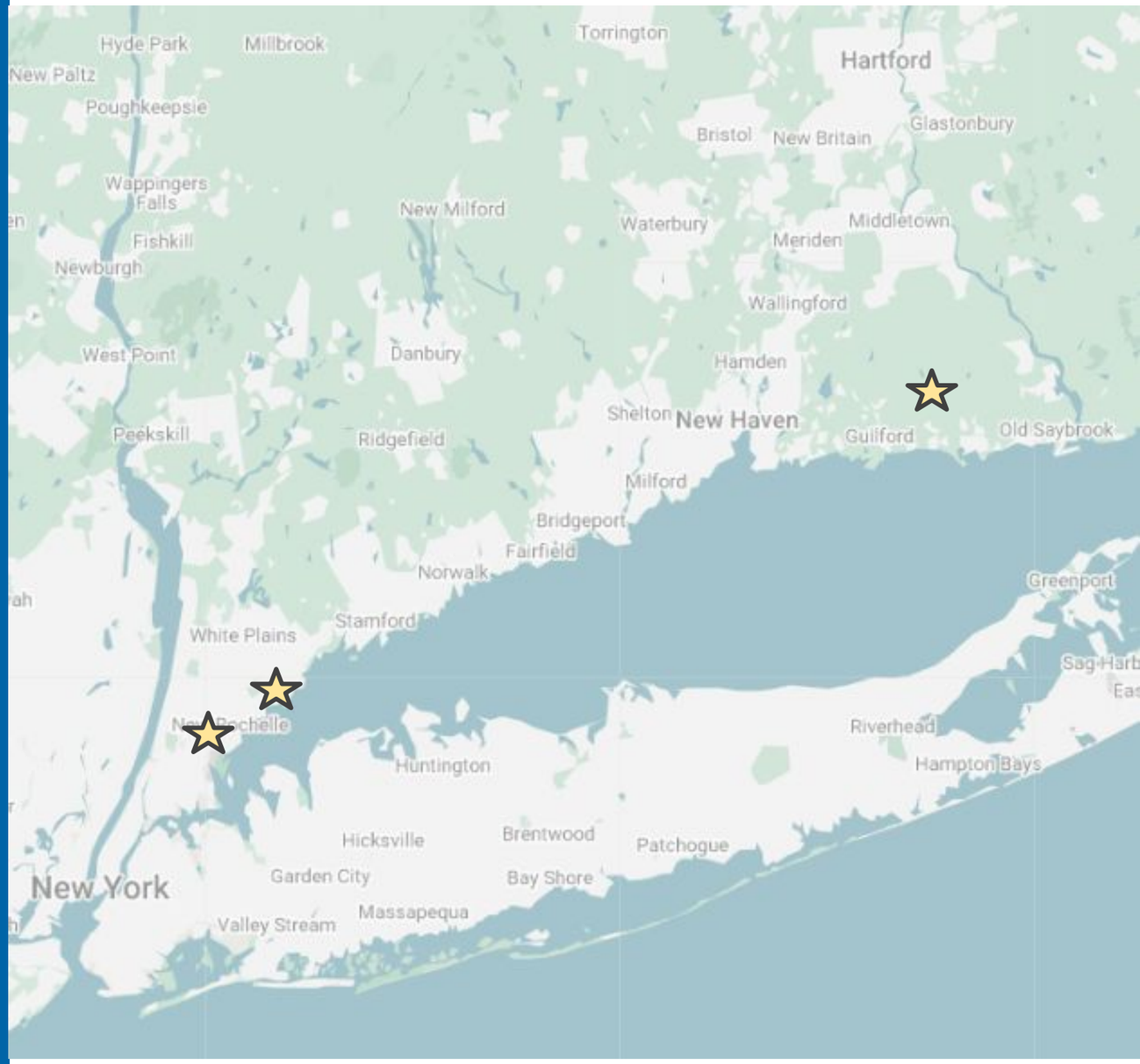
Hutchinson River Pathway Master Plan

Regional Collaboration

- Town of Pelham
- Village of Pelham Manor
- City of New Rochelle
- City of Mount Vernon
- Westchester County
- NYSDOT
- NYSDEC
- MetroNorth
- Save the Sound
- Groundwork Hudson Valley
- Hudson Valley Stream Conservancy
- Hutchinson River Restoration Project

LONG ISLAND SOUND PARTNERSHIP

Questions?



LONG ISLAND SOUND PARTNERSHIP

Thank you!

Please share feedback on today's session:

https://s.zoom.us/m/bZlnx2vsp