



# Nassau County Soil & Water Conservation District



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## MEET THE TEAM

### NCSWCD Staff

- Derek Betts ..... District Manager
- Olivia Cunningham.. Conservation Technician
- Sean Rooney..... Conservation Technician
- Yoan Carrillo..... Bookkeeper

### NCSWCD Board of Directors

- Tara Schneider ..... Board Chair
- Meagan Fastuca .....Vice Chair
- Eric Swenson ..... Treasurer
- Patricia Aitken ..... Secretary
- Reese Michaels ..... Board Member
- Mary Studdert ..... Board Member
- Lou Imbroto ..... Board Member

## A Message from the District Manager

As the District Manager for the Nassau County Soil and Water Conservation District (the District), I am proud to present the 2024 District Newsletter. Not only does this document highlight the success of the District and the dedication of our project partners over the last calendar year, but it also showcases the devotion, knowledge, and commitment of our incredible District staff. From the triumph of the 2024 Long Island Regional Envirothon to the success of Nassau County's S.E.P.T.I.C. Program, the District is proud of the work we have accomplished to help safeguard Nassau County's unique landscapes and resources. We look forward to continued collaborations in 2025 and offer our thanks and congratulations to everyone who made 2024 such a success! -Derek Betts





# NASSAU COUNTY S.E.P.T.I.C. REPLACEMENT PROGRAM



The Nassau County Septic Environmental Program to Improve Cleanliness program aims to reduce nitrogen pollution by helping LI homeowners replace their conventional cesspools and septic systems with nitrogen-reducing septic systems. By providing up to \$20,000 in grant funding per property, this program has successfully installed over 115 Innovative Advanced nitrogen-reducing septic systems throughout Nassau County. Antiquated wastewater technology is one of the greatest threats to clean water on Long Island.



Find out if you are eligible →

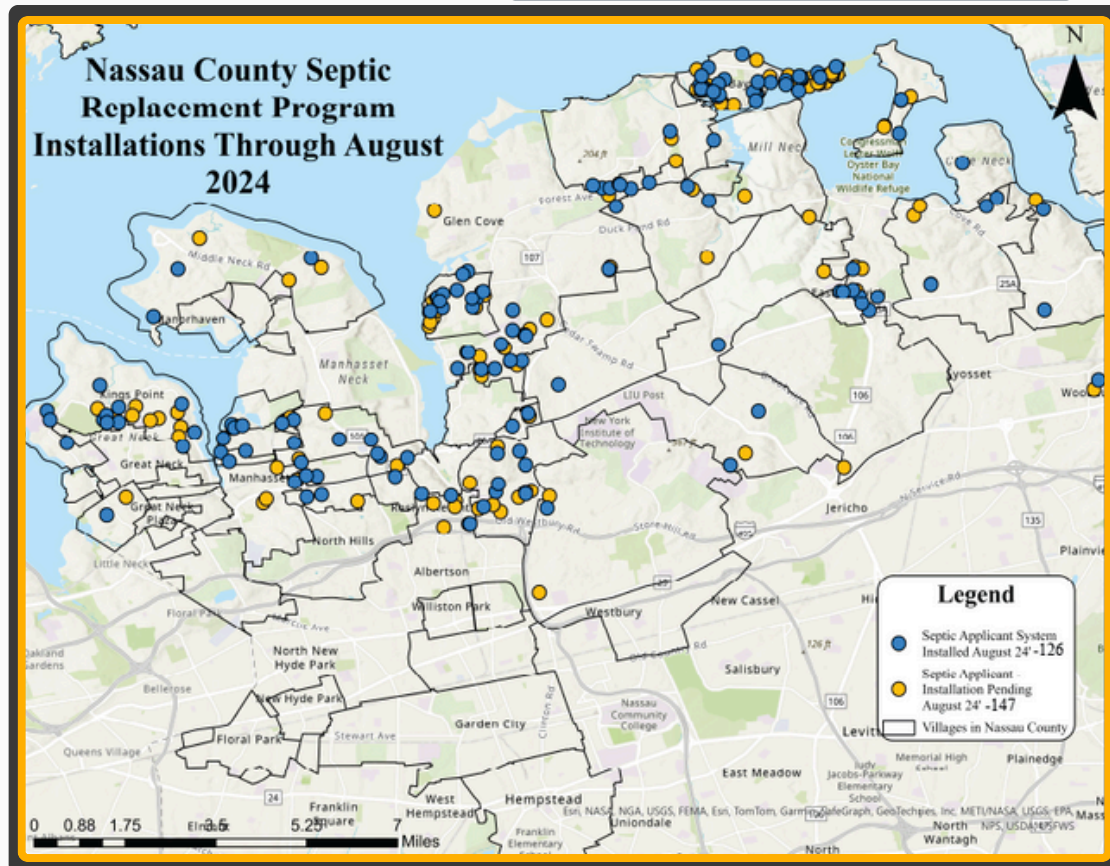
[www.nassauswcd.org/SEPTIC](http://www.nassauswcd.org/SEPTIC)  
1 (516) 364 - 5860



**172**  
**IA Septic Systems installed**



**Over 3.4 million in Program funds reimbursed**



# LONG ISLAND REGIONAL ENVIROTHON

Event Hosted on April 26th, 2024 [longislandenvirothon.org](http://longislandenvirothon.org)

The Long Island Regional Envirothon is organized jointly by the Nassau and Suffolk County Soil and Water Conservation Districts, but our success can be attributed to the countless volunteers who donate their time annually to help. Special thanks to participating environmental professionals that help keep the spirit of the Envirothon alive by inspiring students. We're looking forward to our next Envirothon to be held on **April 23rd, 2025!**



The winners of the 2024 Long Island Regional Envirothon were the Chaminade High School "Black Skimmers" and the Garden City High School "Opossums. Congratulations to the winning teams!

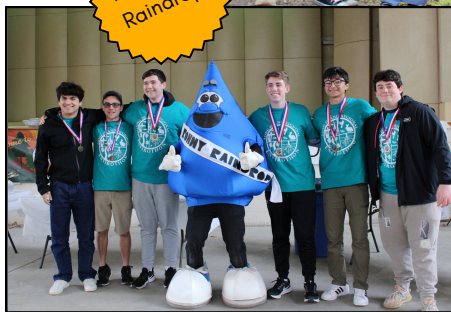
Teams are given thematic names based on local wildlife

## Participating Schools

- Center Moriches High School
- Chaminade High School
- Commack High School
- Division Ave High School
- Farmingdale High School
- Garden City High School
- Gen Douglas MacArthur HS
- Great Neck HS North
- Great Neck HS South
- Half Hollow Hills East HS
- Harborfields High School
- Long Beach High School
- Valley Stream Central HS
- West Babylon Senior HS
- Wyandanch High School



Ronny the Raindrop!



If you're interested in making a contribution to future Envirothon Events, please reach out to us at (516) 364-5860 or email [info@nassauswcd.org](mailto:info@nassauswcd.org)

## Thank You to our 2024 Event Sponsors



Science Museum of Long Island

M.B. Mansouri, Architect, P.C.



## A DAY IN THE LIFE OF AN ESTUARY

*A Day in the Life* is a program organized by the South Shore Estuary Reserve that focuses on environmental education, community engagement, and water-quality monitoring. Geared towards students from local middle and high schools, the main goal of the project is to run single-day field trips to sites around Long Island's South Shore where students are given the opportunity to collect water quality samples, learn about ecosystem services, monitor the tides, and engage with local flora & fauna.



Special thanks to staff members from TOH Dept. of Conservation and Waterways and Educators from NYS parks for helping with the event.

Learn more at: [nassauswcd.org/A-Day-In-The-Life](https://nassauswcd.org/A-Day-In-The-Life)

## Town of Oyster Bay Dune Day

In collaboration with community volunteers, the Town of Oyster Bay has hosted several American Beach Grass planting events along Northshore beaches to combat shoreline erosion, and stabilize and protect the coastal environment. With District funding, the Town was able to purchase over 450 bundles of Dune Grass for a 2024 restoration project. Replanting dune grass is an essential step toward stabilizing the dunes, which act as natural barriers against wave energy and protect nearby infrastructure against storm surges. The long-term benefits of replanting dune grass include supporting coastal ecosystems and improving biodiversity by creating habitats for various wildlife species, including such federally threatened species as the Piping Plover. These small shorebirds depend on sandy beach habitats for nesting and foraging, making the preservation and restoration of dunes critical to their survival. Additionally, healthy dune ecosystems contribute to coastal resiliency in the face of an increasing climate crisis.

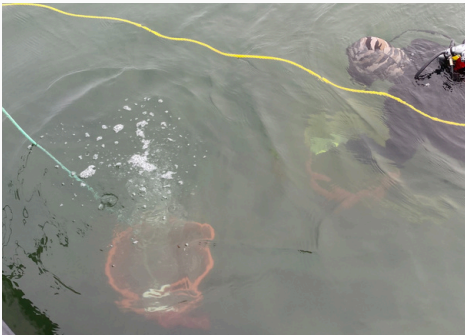
This project aligns with the District's mission to conserve and improve natural resources, prevent soil erosion, and control water pollution. Supporting this initiative will have a positive impact on the local environment and community by preserving the natural conditions and beauty of the coastline.





## TOH Conservation & Waterways survey Hempstead Bay

Hempstead Bay is an important resource for marine life and the local economy. After a significant decline of the hard shell clam population following the opening of harvesting in 1978, The Town of Hempstead Department of Conservation and Waterways has been running a successful shellfish restoration program for over 40 years. This recovery was shown in a 2022 shellfish population inventory showing an abundant variety of flora and fauna. The project's long-term monitoring will help ensure sustainable management and inform future conservation strategies. This benefits not only commercial shellfisheries but also the entire ecosystem of Hempstead Bay.



To accomplish this goal, Town conservation staff equipped a vessel with sampling and diving gear. For each surveying event, 300 samples will be collected from 100 stations throughout Hempstead Bay. Data collection will be repeated every three years as part of a long-term monitoring program.

This project aims to continually monitor the population of shellfish and seagrass as long-term environmental changes are expected to result from the planned 2025 completion of the Bay Park Sewage Conveyance and unknown changes resulting from climate change and ocean acidification.

### Organisms to be Surveyed

- Hard Shell Clam
- Eastern Oyster
- Bay Scallop
- Blue Mussel
- Long-Clawed Hermit Crab
- Mud Dog Whelk
- Mud Crab
- Soft Shell Clam
- Awning Clam
- Crepidula
- Blue Crab
- Atlantic Oyster Drill
- Shrimp
- Channeled Whelk
- Razor Clam
- False Quaug
- New England Dog Whelk
- Common Spider Crab
- Sea Grape
- False Angel Wing
- Duck Clam
- Oyster Drill Thick-lip
- Surf Clam
- Glassy Bubble Snail
- Blood Ark
- Jingle Shell
- Calico Crab
- Blunt Razor Clam
- Rock Crab
- Lobed Moonsnail
- Horseshoe Crab
- Gem Clam
- Green Crab
- Flat-clawed Hermit Crab
- Ribbed Mussel
- Eel Grass
- Sea Lettuce
- Gracilaria
- Widgeon Grass
- Green Sea Fingers

## Hydrodynamic Modeling in Hempstead Harbor

The Hempstead Harbor Protection Committee is an intermunicipal committee of nine local governments focused on water quality. In 2021 they began a shellfish seeding program for all of the north shore bays in Nassau County. Over the next three years, Cornell Cooperative Extension of Suffolk County will be growing 6 million “spat-on-shell” oysters for this program, of which 2 million will be placed in Hempstead Harbor. This program will work with, and complement, a successful oyster gardening project being carried out by the Coalition to Save Hempstead Harbor.



Oysters are known as a “keystone species” helping form the basis for an entire marine ecosystem that would not exist or be fundamentally different without them. Oyster reefs provide food and habitat and protect shorelines from storm damage and erosion. They also improve water quality by filtering nutrients such as nitrogen. A single adult oyster can filter up to 50 gallons a day. At that rate, 2 million oysters will filter 100 million gallons a day once they reach full size.

To build a sustainable population of oysters they need to be placed on suitable underwater lands that consist of at least 20% gravel and shell and less than 25% silt and mud. Oysters must also be placed in areas where larvae will settle in favorable conditions (such as shells) upon which to attach and grow.

A Shellfish Density Survey of the harbor was conducted in 2021 to determine the number of existing shellfish and characteristics of the underwater beds. This also helped determine the ideal locations for planting oysters.

To complement the surveying work, a hydrodynamic modeling of the Hempstead Harbor was conducted. This modeling is necessary because once oysters spawn, their larvae (spat) are carried by the currents for a week or two before settling to the bottom. If they are carried into the Long Island Sound, they will not help populate our harbor, or if they settle in muddy areas, they will most likely not survive.

Hydrodynamic modeling looks at tidal cycles, water current velocity, water current direction, underwater land composition, and several 24-hour water quality parameters such as dissolved oxygen levels. The result of these tests helped determine suitable habitat for planting oysters in the harbor.



## ANNUAL SAPLING GIVEAWAY

*Arbor Day event providing free tree saplings to community members*

Our annual sapling giveaway was hosted on Arbor Day, April 26th, 2024, and made possible through donations from Bartlett Tree Experts. Additionally, the Town of Hempstead Department of Conservation and Waterways were present, providing both free saplings to event participants, as well as educational material on proper plant selection and planting techniques!

This event was hosted at the East Meadow Farm by the Cornell Cooperative Extension of Nassau County. Special thanks to all that participated.



## TOWN OF NORTH HEMPSTEAD PLANT REBATE

*Part C Project run by NCSWCD Board Member Meagan Fastuca supporting native plantings in Town of North Hempstead* [www.northhempsteadny.gov/np](http://www.northhempsteadny.gov/np)

The NCSWCD provided reimbursement to Town of North Hempstead Residents who purchased native plants to create native plant gardens and raingardens. These native plants will provide food, shelter, and nesting resources for a variety of wildlife species, including birds, pollinators, and small mammals.

Native plants have a multitude of environmental benefits, including but not limited to extensive root systems that absorb polluted stormwater, carbon sequestration, reduced maintenance requirements, and a reduced need for fertilizer, mowing, and irrigation.



## CEDARMERE PRESERVE TREE TAGS [www.friendsofcedarmere.org](http://www.friendsofcedarmere.org)

Using District funds, The Friends of Cedarmere Preserve (home to a number of native cedar trees) labeled 300 trees on their property with identification tags, identifying over 50 unique species. This information was used to create a Tree Map to share with guests and daily visitors to the property. The tree tags were installed using stainless steel springs that do not damage the trees as they grow and expand.

The Tree Tags were marked with both common and scientific names, as well as a Native or Invasive distinction and region of origin information. These tree tags serve as a tool to convey information about importance of native species and the extent to which invasive species pose a serious environmental issue.

Some trees species found on the property include Holly, Black Cherry, Oak, Pine, Birch, Cedar, Willow, Walnut, Magnolia, Beech, Fir, Dogwood.



## RAIN GARDEN REVITALIZATION AT HEMPSTEAD PLAINS

Learn more at [www.hempsteadplains.org](http://www.hempsteadplains.org)

Rain gardens are areas planted with native species that are installed to capture, filter, and clean stormwater runoff. These gardens are designed to clean the first 1" of precipitation, which often contains the greatest number of pollutants, thus helping to improve stormwater quality before it enters the groundwater or surface water. Using 2024 Part C funds, the District completed work on a rain garden that was originally installed in 2022.

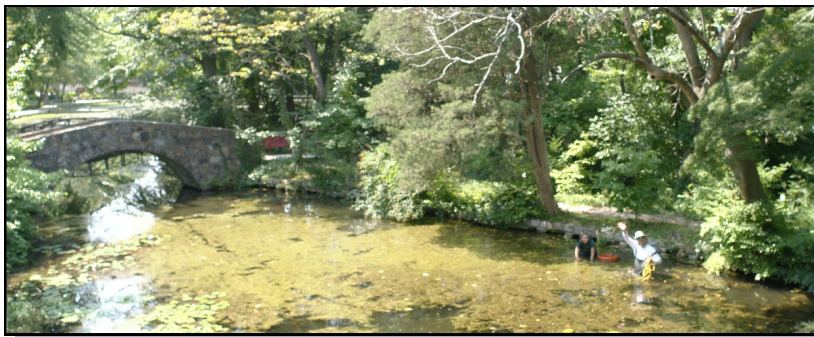
In 2024, 100 new native plants were added, including Big Bluestem, Common Milkweed, Seaside Goldenrod, Switch Grass, NY Aster, Butterfly Milkweed and Boneset. The project also involved managing invasive populations of Mugwort and Oriental Bittersweet. This project not only benefits the Hempstead Plains but also serves as an educational example of a successful, small-scale conservation effort that can be easily and affordably executed across Nassau County.





# AQUATIC INVASIVE SPECIES REMOVAL AT CEDARMERE

In collaboration with DEC Region 1, Long Island Invasive Species Management Area, and GEI Consultants, the District organized an event to survey and remove invasive aquatic vegetation from the lakes of Cedarmere Preserve, with particular attention paid to new emergent aquatic invasives such as Parrot Feather.



# VOLUNTEERING WITH THE DEC

In 2024, the NCSWCD assisted the DEC Region 1 office with aquatic invasive species removal from Massapequa Preserve lakes. Focused on the invasive water chestnut, this removal helped eradicate a species that shades out native aquatic plants that provide food and shelter to native fish, waterfowl, and insects. Drone certified conservation technician Sean Rooney helped provide aerial imagery of the removal, information that was then shared with the DEC Aquatic Invasive Species Coordinator Carlos Morantes-Ariza.



Conservation Staff pictured with summer intern Julia Galante (left) Olivia Cunningham (middle) Sean Rooney (right)



## PHRAGMITES PULL AT WEST BROOK

The Nassau SWCD team worked with Seatuck Environmental and volunteers to remove invasive Phragmites from the wetland areas surrounding West Brook. This major tributary of the Connetquot river is an area of great ecological potential and this work contributes to creating a more ideal habitat for native wildlife.



Learn more at: [seatuck.org/west-brook](https://seatuck.org/west-brook)

## VOLUNTEER EVENT: KNOTWEED REMOVAL

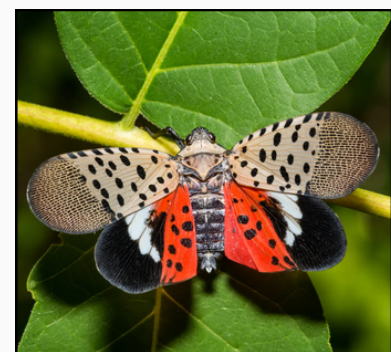


This year, the District began the careful management of Japanese / Bohemian Knotweed present in the Muttontown Preserve. Using a non-herbicide method requiring 3 cuts per year to weaken the plants, this method was chosen to protect the natural freshwater pool habitats present in the area, and which provide habitat to native spotted and tiger salamanders.

## SPOTTED LANTERNFLY EDUCATION

Conservation Technician Sean Rooney has been instrumental in providing guidance to Nassau County residents on Spotted Lanternfly management. The District has created an informative webpage, as well as installed an experimental spotted lanternfly trap in the Preserve using recycled materials. Encouraged by its success, the team plans to create more traps and guidance for county residents in 2025.

Learn more at: [www.nassauswcd.org/SLF](https://www.nassauswcd.org/SLF)





# COMMUNITY OUTREACH AND EDUCATION

## *Overview of Events / Volunteering / Meetings*

The NCSWCD participated in local and regional forums to assist with conservation education and outreach, and to provide a better understanding of current environmental conditions as they relate to Nassau County.

Conservation Technician Sean Rooney has provided free educational presentations and technical assistance to Nassau County Parks, residents, and members of non-profit groups. These events align with the district's mission to serve as an educational conduit for environmental literacy throughout the county. Below is a full list of events and presentations he has provided.

- Educational Presentation - Locust Valley Library Gardening Club
- Development of Invasive Species Management plan - Gerry Park, Roslyn
- Volunteer weeding and management strategies - Clark Botanical Gardens, Roslyn Heights
- Drone Imagery and Rain Garden planning - TOH Lido Beach
- Educational Presentation - Bryant Library, Roslyn

## STATEWIDE EVENTS



Derek Betts attended a regional forum for District Managers to discuss the success of Nassau County's SEPTIC Replacement program.

Conservation Technician Olivia Cunningham became the Division 8 representative for the CDEA this year.



# FULL LIST OF PART C FUNDED PROJECTS

*All Part C Projects completed in 2024*

- **Arboretum Tags and Installation at Cedarmere Preserve** - The Friends of Cedarmere
- **Hempstead Plains Raingarden Refurbishment** - Nassau County SWCD
- **Hydrodynamic Modeling in Hempstead Harbor** - Hempstead Harbor Protection Committee
- **Dune Grass plantings and Dune Day 2.0 Volunteer Event** - Town of Oyster Bay
- **Hempstead Bay Benthic Flora and Fauna Surveys** - Town of Hempstead Department of Conservation and Waterways
- **Town of North Hempstead Native Plant Residential Rebate Program 2024** - Town of North Hempstead
- **Hempstead Harbor Marine Debris Clean up** - Town of North Hempstead
- **A Day in the Life of an Estuary** - Nassau County SWCD

Learn more at [nassauswcd.org/projects](https://nassauswcd.org/projects)



James Reardon and Board Member Eric Swenson pulling aquatic vegetation at Cedarmere Preserve

## SAYING GOODBYE

The District Staff said goodbye to team member James Reardon this year. James spent his time with the district helping create maps in GIS, designing the new NCSWCD banner, leading the Hempstead plains restoration project and taking many excellent photos such as the heading banner of this year's newsletter. We wish him great success, happiness, and prosperity in the future.



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