



Modernizing and Redefining Public Health: From Reactive to Proactive

November 13-15, 2024

MassMutual Center - Springfield, MA

LESSONS LEARNED

**FROM IMPLEMENTING
CLEAN-WATER SEPTIC
SYSTEM MANAGEMENT AND
FINANCIAL INCENTIVE
PROGRAMS ON LONG
ISLAND, NY**

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Background & Bio

Justin Jobin is an environmental scientist with over two decades of decentralized wastewater experience which started at the New England Onsite Wastewater Training Program at the University of Rhode Island, where he co-authored many publications and assisted in industry training. He also served 15 years as the Wastewater Management Specialist and GIS Coordinator for the Town of Jamestown, RI. Mr. Jobin recently served over six years as the Environmental Projects Coordinator for the Suffolk County NY, Department of Health Services and currently serves as the Technical Consultant for Nassau County's SEPTIC Upgrade and Financial Incentive Program.

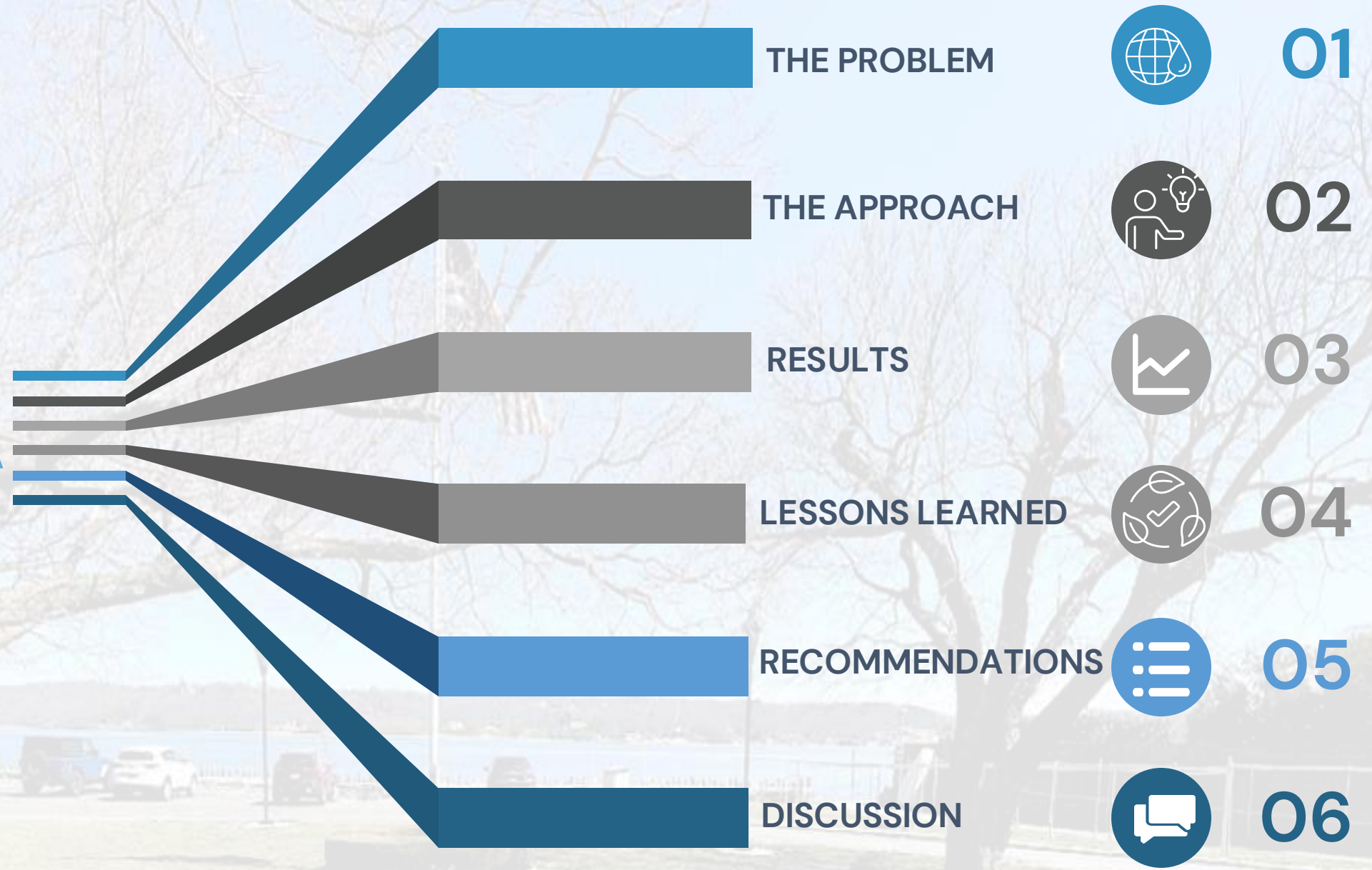
Same Goal, Different Role



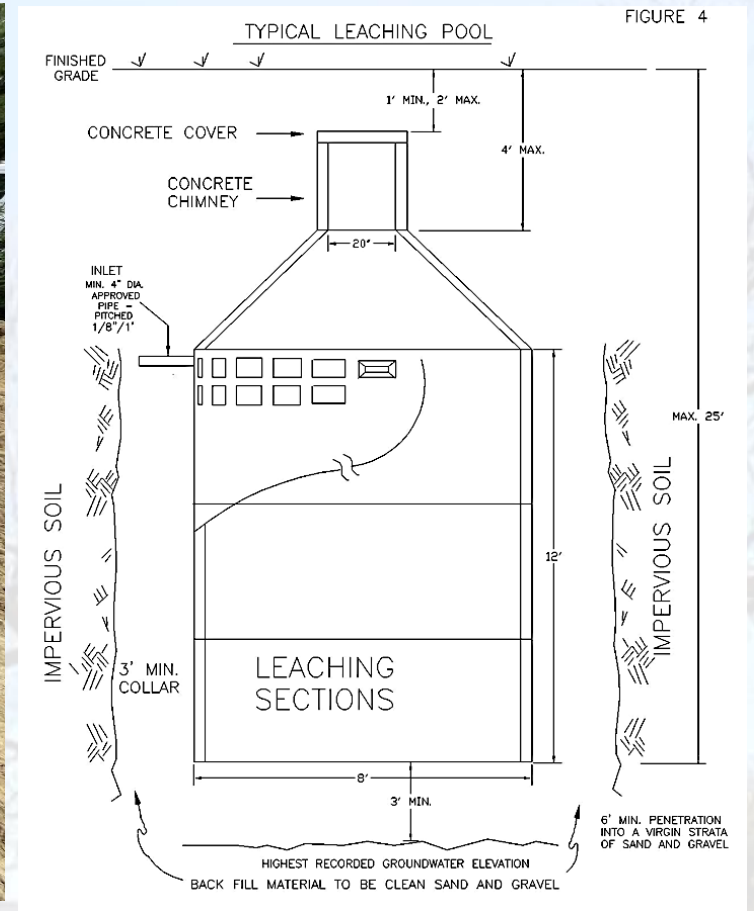
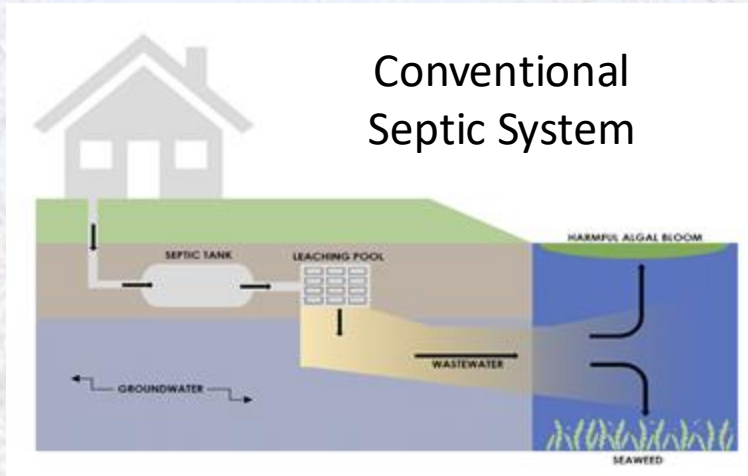
*Justin Jobin at first grant funded (SIP) IA Installation in Suffolk County, NY
9/7/2017*

Assisting Regulatory Jurisdictions in the Management of Innovative and Alternative Onsite Wastewater Treatment Systems (I/A OWTS) for over Twenty Years!

AGENDA



Typical Conventional Septic Systems Found on Long Island



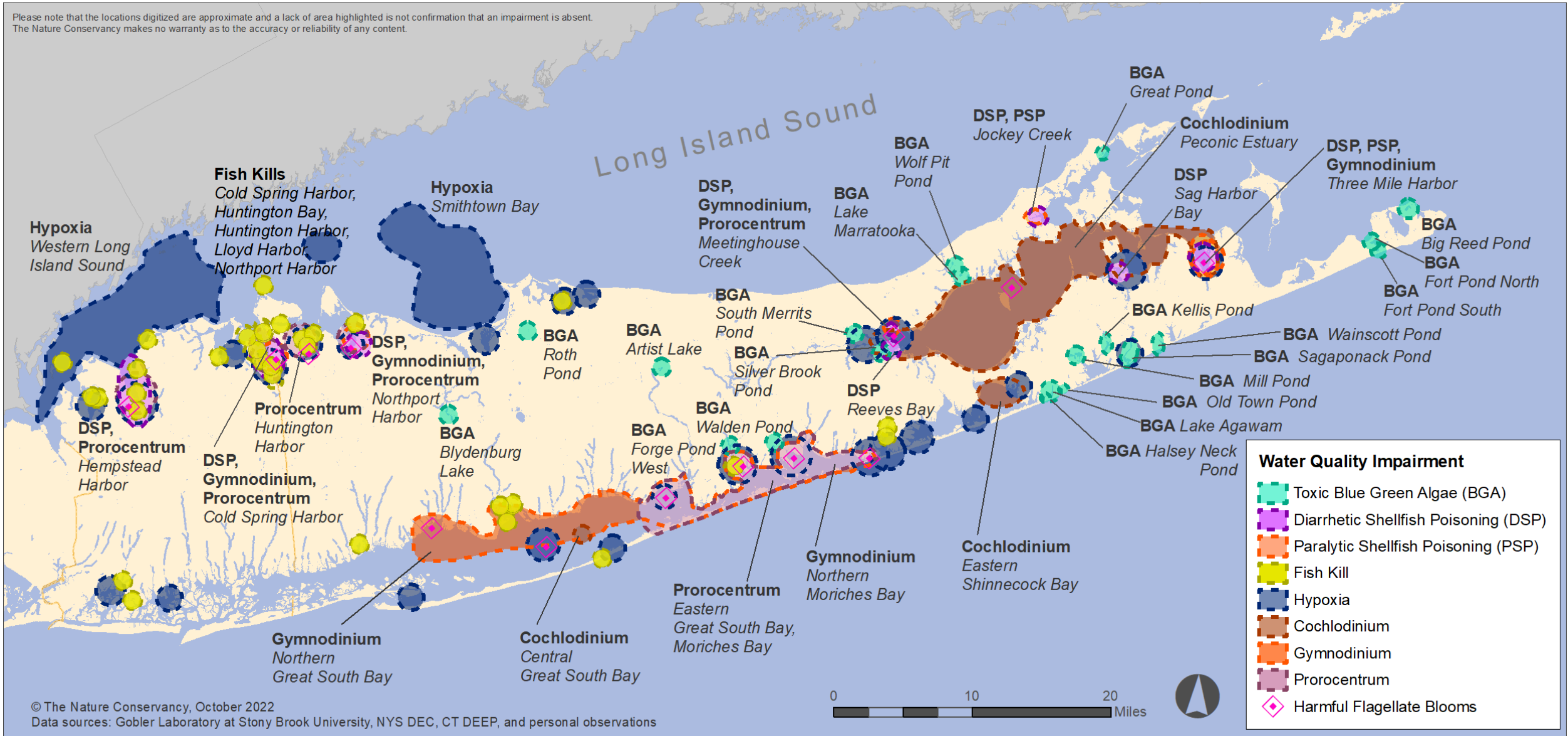
- Over 425,000 On-Site Systems on LI, Hundreds of thousands of cesspools
- 74% of Suffolk County is unsewered, 90 % of Nassau's North Shore is Unsewered
- HAB's, Shellfishing Impacts, Coastal Resiliency, Public Bathing Beaches

Effects of Excess Nutrients on the Environment

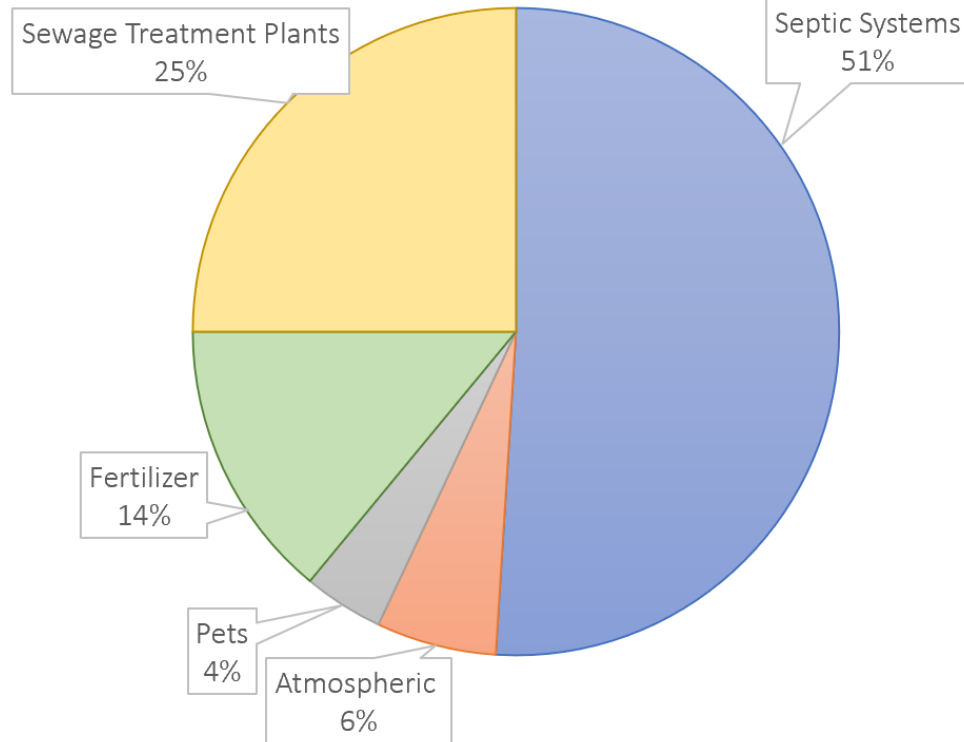
- Fish Kills
- Too much nitrogen and phosphorus in the water causes algae to grow faster than ecosystems can handle causing Harmful Algae Blooms (HAB)
- Invasive Seaweed
- Paralytic Shellfish Poisoning (PSP)
- Danger to people and pets

Long Island Water Quality Impairments Summer 2022

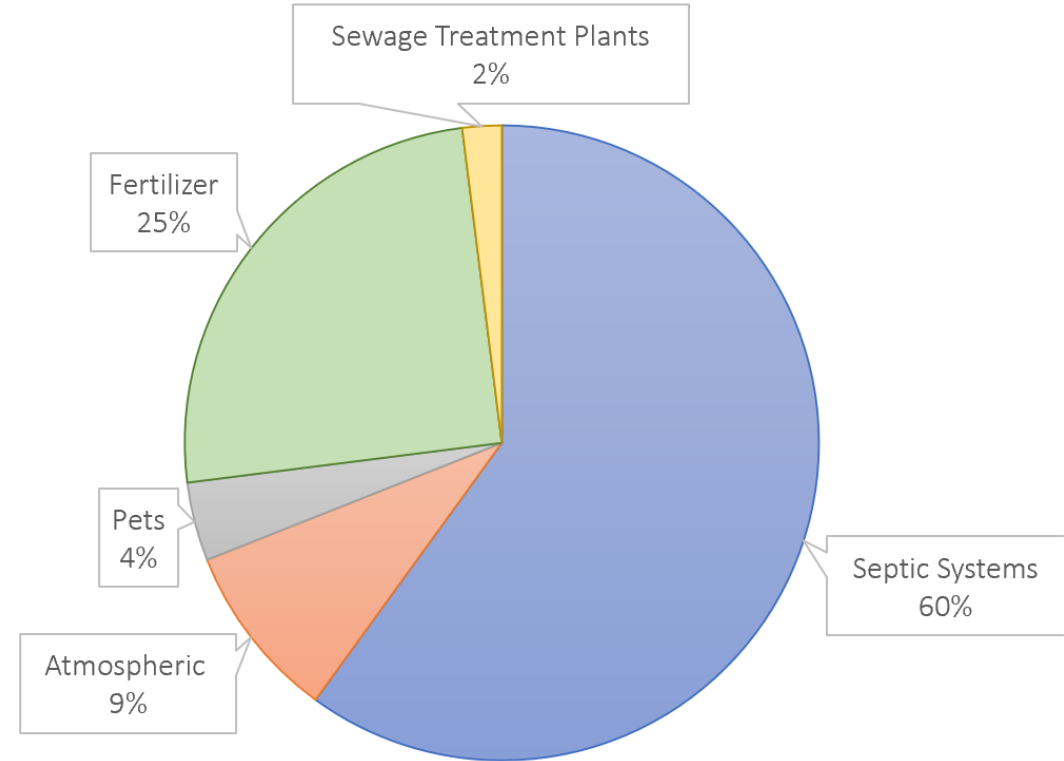
Please note that the locations digitized are approximate and a lack of area highlighted is not confirmation that an impairment is absent. The Nature Conservancy makes no warranty as to the accuracy or reliability of any content.



Distribution of Nitrogen to North Shore of Long Island



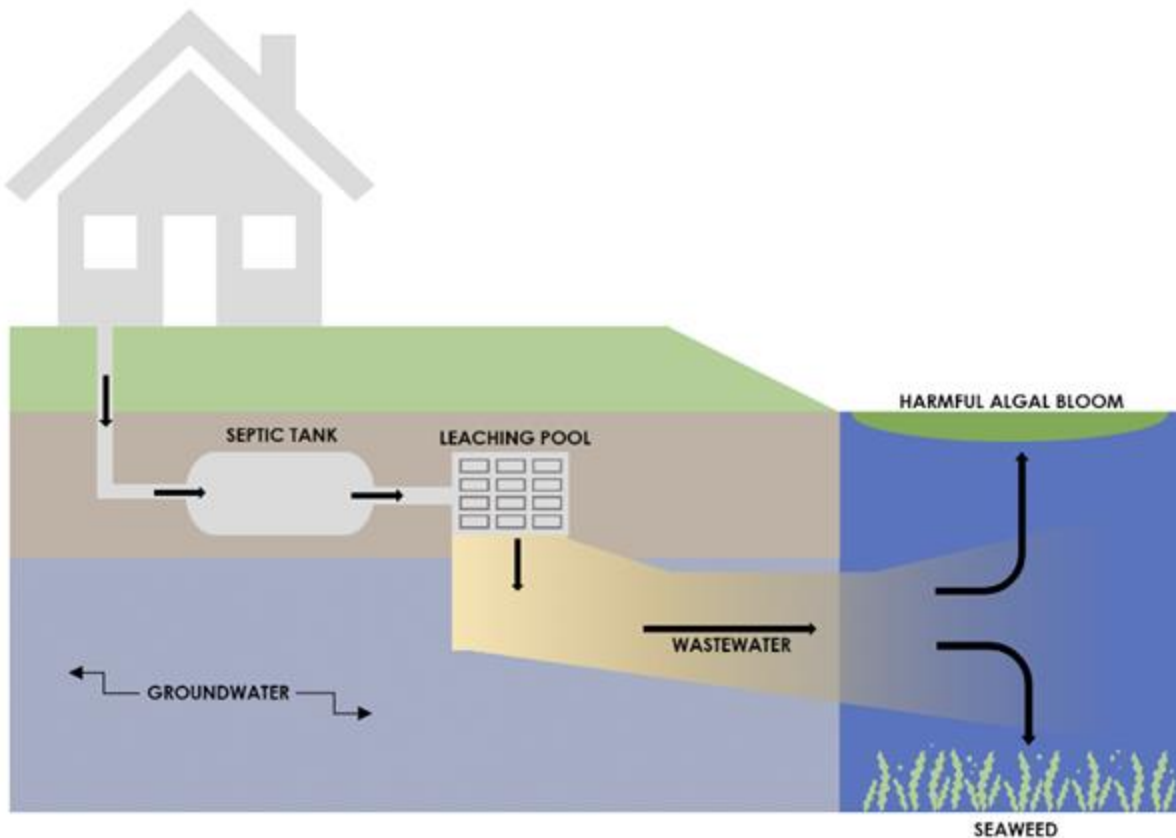
*Hempstead Harbor, Manhasset Bay,
and Little Neck Bay*



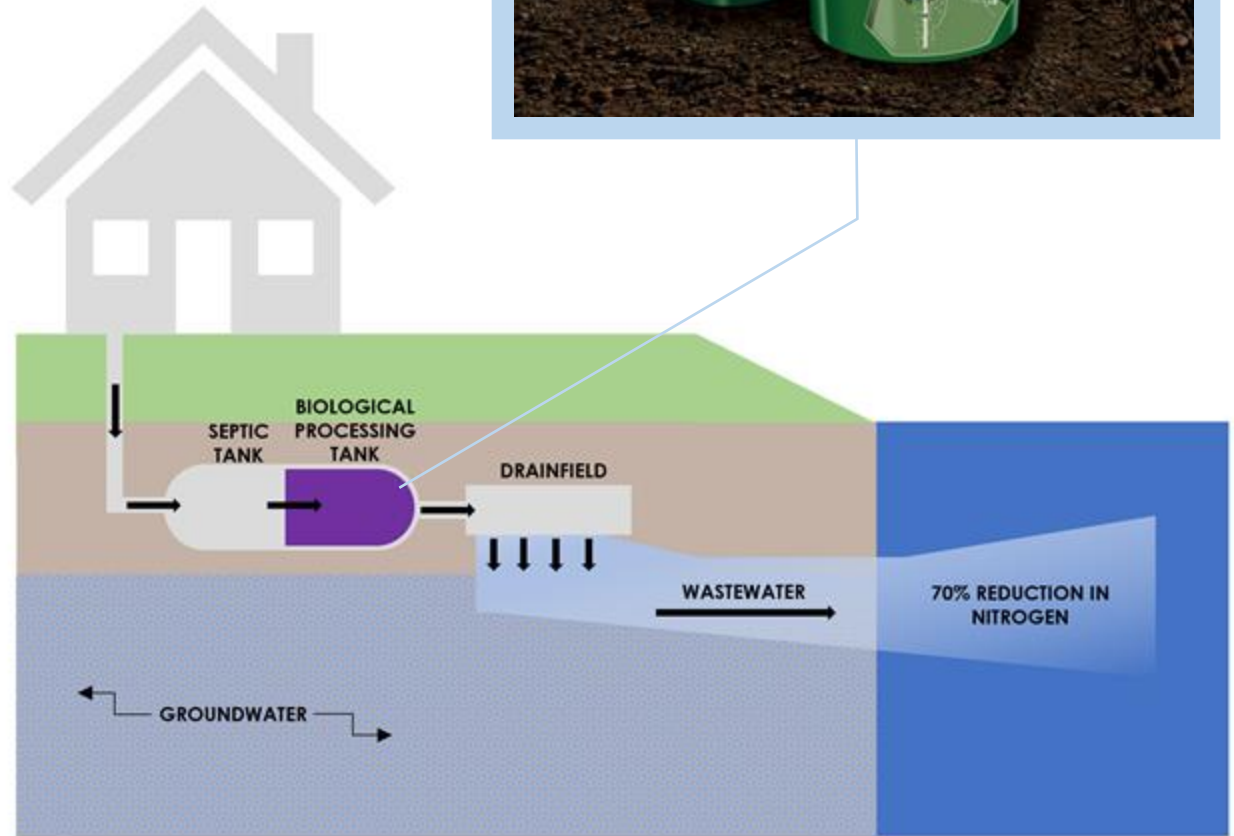
*Cold Spring Harbor, Oyster Bay,
and Long Island Sound*

Data from Stony Brook University's Nitrogen-Loading Modeling for Nassau County Subwatersheds.

“Innovative Advanced (I/A) OWTS” can reduce nitrogen outputs into groundwater by up to 70%.



CONVENTIONAL SEPTIC TANK



NITROGEN-REDUCING IA SEPTIC TANK

5-PRONGED APPROACH

to the Evolution to IA Septic Systems, as outlined in 9 Element Plan

1. Develop Capacity to Evaluate, Approve, Permit, and Regulate Technologies
2. Train, Inform, and Prepare the Industry and Public on Nutrient Reducing Technologies
3. Update Outdated Regulations (Code, Ordinances, Guidance Documents and Memos)
4. Promote Implementation of Advanced Treatment in Priority Areas
5. Public Funding to Incentivize Large Number of Installation & Eventually the Development of Long-Term Funding Sources

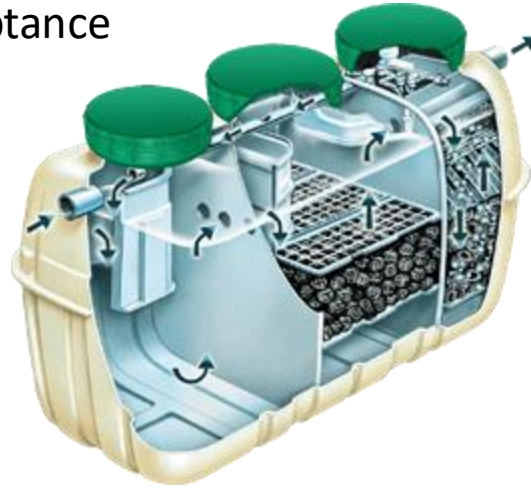


Nassau's S.E.P.T.I.C. Program – Accepted Technologies

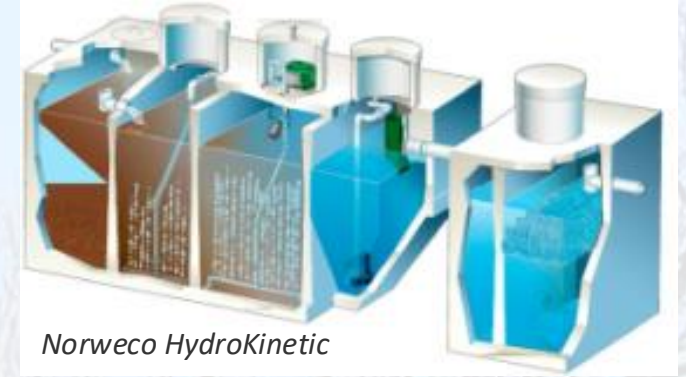
General Use Acceptance



Hydro-Action AN Series



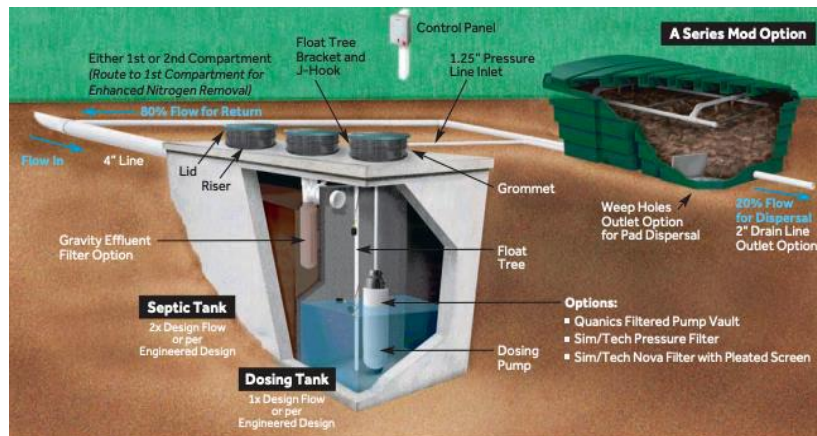
Fuji Clean CEN Series



Norweco HydroKinetic



SeptiTech STAAR



Anua - BioCoir Coconut Fiber Biofilter (A Series & IM Series)



A Series



IM Series

Piloting Acceptance

Limited to 12 Installations with Restrictions



Orenco Advantex AX-20

Provisional Use Acceptance

INDUSTRY LICENSING AND TRAINING PROGRAMS



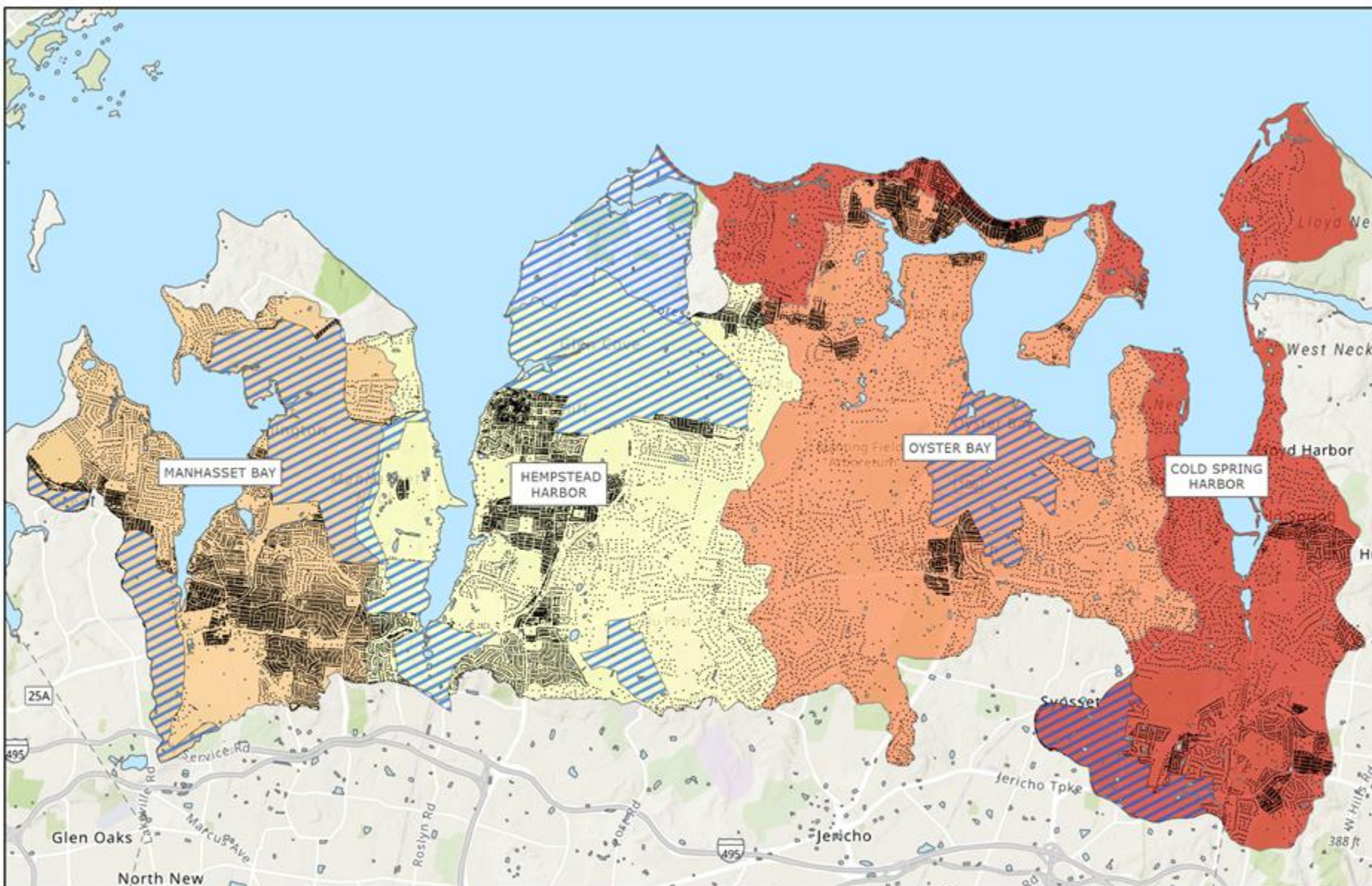
Agenda

- Introduction (Peter Scully)
- August 12, 2021 Action Item Status (Ken Zegel)
 - Meeting Recap
 - Action Items Status
- Septic Improvement Program Update (Julia Priolo)
 - Current Program Statistics
 - Revisions to Rules and Regulations
 - Solicitation of Quotations
- I/A OWTS Update (Jennifer Freese)
 - I/A OWTS OWM Permit Trends
 - General Use Approval
- Article 19 Standards Revisions (Ken Zegel)
 - O&M/Registration Requirements
 - Quality Control Sampling Plan
- Department Contacts, Wrap-up & Next Steps (Walter Dawydiak)





• EDITORIAL CARTOONIST MATT DAVIES' opinions are his own. They can't see those of his.

Reclaim our Water



**NORTH SHORE OF LONG ISLAND
WATERSHED NITROGEN-REDUCTION
TARGETS**

- LEGEND:**
- APPROXIMATE SEPTIC TANK LOCATION
 - ▨ SEWAGE SERVICE AREA WITHIN WATERSHED BOUNDARY
 - WATERSHED BOUNDARY AND % NITROGEN REDUCTION TARGET
 - 19.5% HEMPSTEAD HARBOR
 - 42.2% MANHASSET BAY
 - 48.7% OYSTER BAY
 - 63.3% COLD SPRING HARBOR

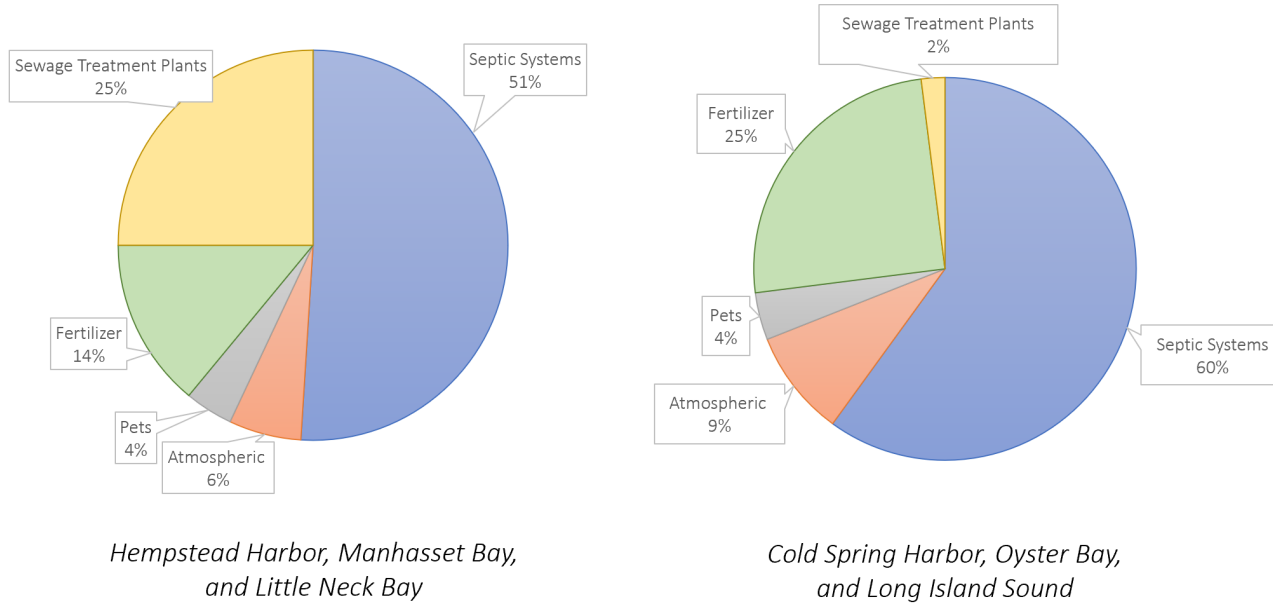



Data Sources:
 Nassau County GIS
 Nitrogen Loading Modeling for Nassau County Watersheds prepared by Stony Brook University, School of Marine and Atmospheric Sciences (2020)
 National Hydrography Dataset



LINAP & 9 Element Plan

Distribution of Nitrogen to North Shore of Long Island



Data from Stony Brook University's Nitrogen-Loading Modeling for Nassau County Subwatersheds.



- Nassau County's Nine Key Element Watershed Plan for Nitrogen sets a goal of providing financial incentives of \$20,000 to upgrade 2,000 eligible properties by 12/31/2032.
- The Program has received \$14 million of the required \$40 million to date.
- In 2023 the District will publish a 10-year implementation plan that will allow us to leverage existing funds and pursue additional funding sources to achieve this aggressive but achievable goal.

Funding

- The NY Clean Water Infrastructure Act of 2017 established the “State Septic System Replacement Fund” and allocated \$75 million to support a multi-year program
- Suffolk County Provides Grants of up to \$30,000
- Nassau County Provides Grants of up to \$20,000



IRS Says Septic Rebates Will Not Be Taxed; Refunds Coming for Some Who Paid Taxes

Taxability of Grants on L.I.

- U.S. Senator Chuck Schumer announced Nov. 22 that **the U.S. Department of Agriculture had ruled that Suffolk County taxpayers should not receive 1099s**
- Per IRS announcement 2022-26, **Nitrogen-reducing septic system grants payments do not have to be included in the gross income** of the payment recipients for Federal income tax purposes



TIMELINE OF THE EVOLUTION TO NITROGEN-REDUCING SEPTIC SYSTEMS ON LONG ISLAND

2014 – 2015

SUFFOLK COUNTY & NYS DEC BEGIN LINAP & THE RECLAIM OUR WATER INITIATIVE

2017

BEGIN DEVELOPMENT OF ADDITIONAL POLICIES & FINANCIAL PROGRAMS

2019

MANDATES IN PLACE FOR CESSPOOL PHASE-OUT- RELEASE OF SCDHS SUBWATERSHEDS PLAN

2021

NASSAU COUNTY LAUNCHES SEPTIC GRANT PROGRAM

2024

SUFFOLK COUNTY ESTABLISHES REOCCURRING REVENUE STREAM WITH 71% VOTER APPROVAL

2016

EVALUATE TECHNOLOGIES, ESTABLISH TRAINING & CHANGE SANITARY CODE

2018

ESTABLISHMENT OF NYS SEPTIC SYSTEM REPLACEMENT GRANT PROGRAM

2020

MANDATES FOR IA OWTS FOR NEW CONSTRUCTION PROJECTS

2022

NASSAU VILLAGES BEGIN IA MANDATES FOR NEW CONSTRUCTION

Suffolk County's SUCCESS

- Leadership from the top down with significant State, County, and Town investments
- Accelerated program development
- Reignited IA innovation in the US
- Bipartisan Legislative Support
- Excellent public education and outreach
- Most stringent technical evaluation and approval process
- Meets the NY's definition of RME
- Fantastic online permitting program
- Clear delineation of subwatersheds and nitrogen load reduction goals
- Training and industry support
- Robust grant program
- Thousands of systems installed

“People understand just what this issue means, they understand the importance of reversing the decades of decline that we have seen in our water quality and what it means to our future here in Suffolk County and across Long Island.”



Nassau's S.E.P.T.I.C. Program Successes

- Environmental Benefits Align with LINAP & County's Accepted 9E Plan implementation goals
- Increase Public Awareness of Nitrogen pollution
- Jump Start the Transition to Nitrogen-Removing Septic Systems and Promote this New Approach to Managing Septic Waste in Nassau County
- Local Industry and Economic Development by contributing to LI's blue economy
- Nitrogen-Reducing Septic Systems have been linked to up to 16% increase in property values



Results to Date

SUFFOLK COUNTY

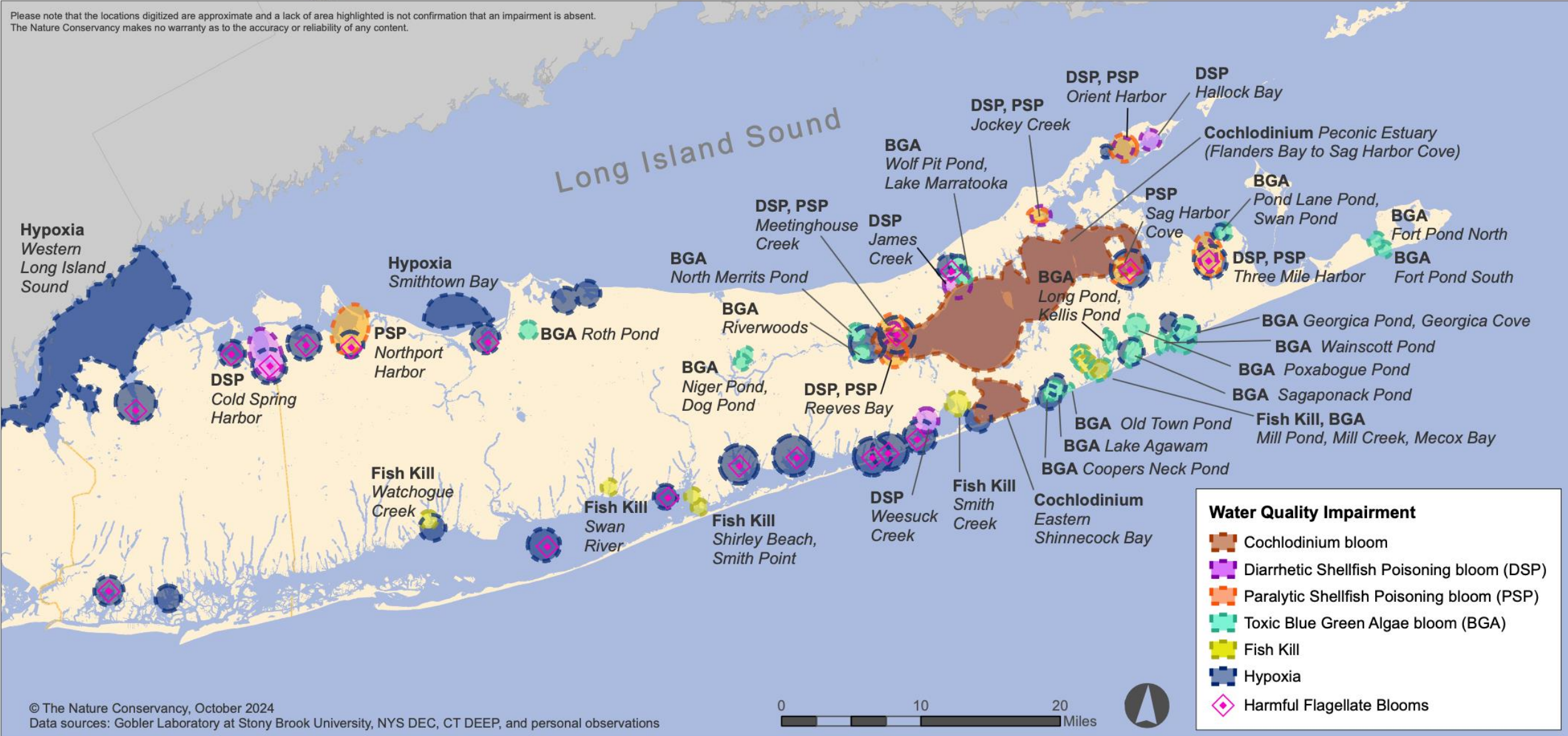
- **Reoccurring Revenue Stream Established in 2024**
- Subwatersheds Nitrogen Load Reduction Goals Adopted
- Changed Construction Standards and Sanitary Code to Allow Management and Use of IA Technologies
- Mandates for New Construction Projects
- Phased-Out In-Kind Replacement of Cesspools
- Robust Training & Licensing Program
- Robust Grant Program
- Streamlined Permitting and RME Tracking Database
- ~ 6,000 systems installed

NASSAU COUNTY

- Funding for 200 systems per year through 2026
- Subwatersheds Nitrogen Load Reduction Goals Adopted
- Adopted Guidelines for the Acceptance, Use, Management, & Construction of IA Systems
- Villages began adopting IA mandates for New Construction Projects
- Robust & Streamlined Grant Program
- Working to Overcome O&M and Permitting Obstacles
- ~ 200 systems installed

Long Island Water Quality Impairments Summer 2024

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Suffolk County's STRUGGLES & Lessons Learned

- Expensive to develop and implement
 - benefited from generous state funding
 - Difficult to reproduce without state funding
- High staffing demand
 - Local Government is good at taking money from residents, but slow at sending money to them
- Minor short-term stumbles from moving too quickly
- Still allow the deep leaching structures that were partially responsible for creating the nitrogen pollution issues
- **Lack of focus of soil-based treatment, focus on dispersal through sand and gravel**
- **Establishing a reoccurring revenue stream may be difficult in today's climate**
- Can be replicated but other counties don't have the resources Suffolk county has which creates the need to adapt and learn from the Suffolk program and streamline the process and scope for other NY counties

Key Lessons Learned

**Top-Down
Leadership is
Needed**

**Don't Give Up!
Nothing is
Impossible**

**Need Common
Sense Solutions &
Streamlined
Processes**

**Start Something
and Improve
Through Adaptive
Management**

Key Lessons Learned

Top-Down
Leadership is
Needed

“POLITICAL

Need Common
SUPPORT
Sense Solutions &
Streamlined
Processes

Don't Give Up!
ANYTHING IS
POSSIBLE

Start Something
and Improve
Through Adaptive
Management

Don't Give Up! ANYTHING IS POSSIBLE



WHAT WE DO ▾

ABOUT US ▾

GET INVOLVED ▾

MEMBERSHIP & GIVING ▾



RENEW

DONATE

English | Español



NEWSROOM

Clean Water Transcends Politics: Voters Approve \$6 Billion to Protect Clean Water and Revitalize Long Island's Coasts

Clean Water Transcends Politics: Voters Approve \$6 Billion to Protect Clean Water and Revitalize Long Island's Coasts

November 05, 2024 | Suffolk County, NY

Nassau County's STRUGGLES & Lessons Learned

- County is not equipped to run a grant program or RME
- County Health Department Jurisdiction vs City, Town, and Village Jurisdiction
 - 40 different permitting jurisdictions
 - Lack of acceptance at local health department
 - Confusing to know which rules should be followed
- Still allow the deep leaching structures that were partially responsible for creating the nitrogen pollution issues
 - Emphasizes need for Technical Assistance and Training
- Still allow the deep leaching structures that were partially responsible for creating the nitrogen pollution issues
 - Emphasizes need for Technical Assistance and Training
- **Establishing a reoccurring revenue stream may be difficult in today's climate**
- **Was able to benefit from the work done in Suffolk County**

Program Administration



- County identified additional funding sources & partnered with the Soil and Water Conservation District for easier implementation
- Streamlined online application process with electronic signatures and one agreement for multiple sources of funding.
- Allow two-party authorization so grant can be paid directly to the contractor on behalf of the homeowner
- Scaled Suffolk's overall IA Acceptance, Use, and Management approach to

Technical Assistance & Training

- Update industry on advantages and best applications for new technologies.
- Troubleshooting and technical assistance for tough sites.
- Targeted training to industry and individual Towns and Villages.
- Technical Assistance on IA mandates and upgrade triggers.

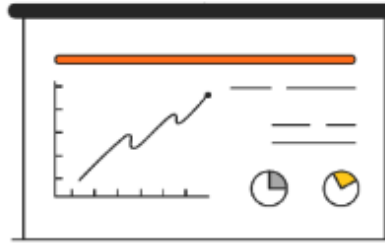


Targeted Outreach (It take a village!)

- Establish Relationships with Town and Village Leadership
- Provide Consultation to 40+ Individual Permitting Jurisdictions in Nassau County
- Focus Areas Based on Priority Areas & Existing

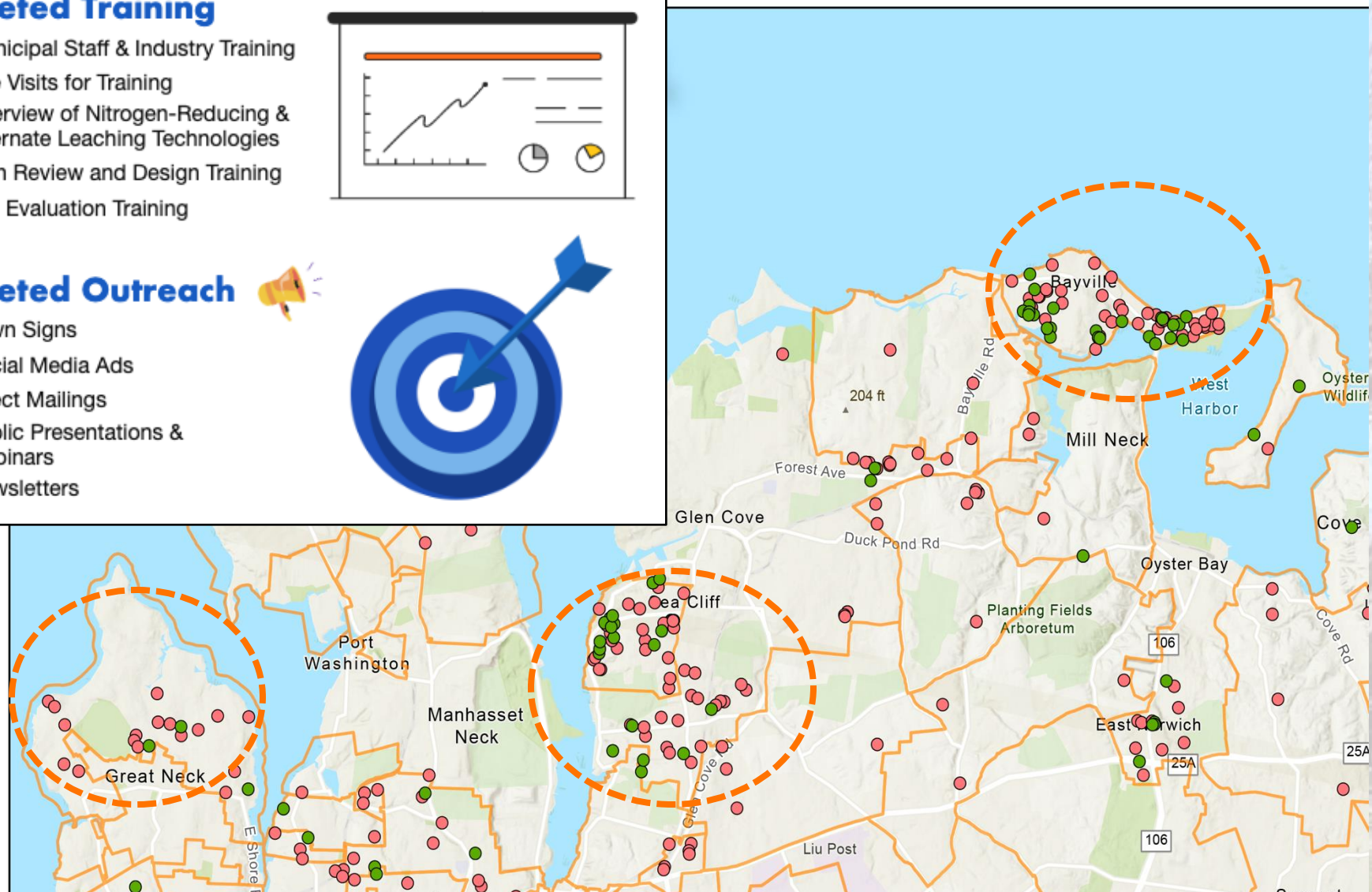
Targeted Training

- Municipal Staff & Industry Training
- Site Visits for Training
- Overview of Nitrogen-Reducing & Alternate Leaching Technologies
- Plan Review and Design Training
- Soil Evaluation Training



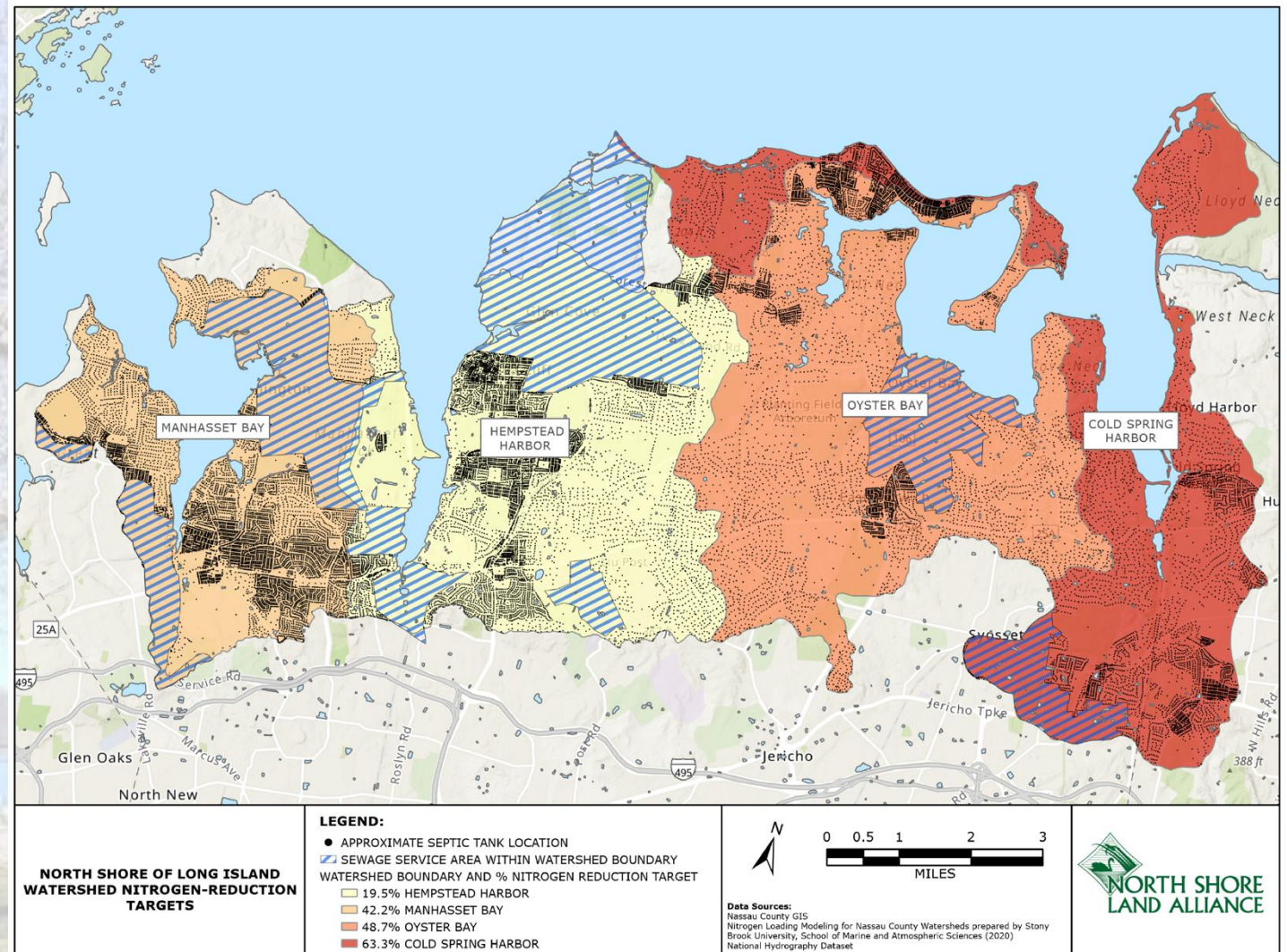
Targeted Outreach

- Lawn Signs
- Social Media Ads
- Direct Mailings
- Public Presentations & Webinars
- Newsletters



Priority Areas, LINAP, and 9 Element Plan

- Nassau County's Nine Key Element Watershed Plan for Nitrogen was published by Stony Brook University and Nassau County DPW in the fall of 2022.
- Identifies subwatershed nitrogen-reduction targets for Nassau County.
- Establishes a goal of providing financial incentives of \$20,000 to upgrade 2,000 eligible properties by 12/31/2032.
- The Program has received \$16





10- Year Implementation Plan

Objective 1:

- Provide Town, City, and Village education and outreach to bring Building Departments up to speed with IA systems.

Objective 2:

- Identify additional funding opportunities to increase incentives and fund the program through December 31, 2032.

Objective 3:

- Develop and implement an Industry Training Program for designers and installers.

Objective 4:

- Build the programmatic infrastructure for the District to serve as a Responsible Management Entity (RME) in accordance with NYSDOH Requirements for Enhanced Treatment Units





Advice for MA!

- Need to build and establish high-level political support
 - Wastewater treatment is wastewater treatment – blur lines between EIA and Municipal Sewers
- Regulations and red tape should not hamper progress.
 - Currently too expensive for innovative technologies to enter marketplace
 - MA killed efforts to regionalize process -> need to revisit
- Stop waiting for the perfect technology! Start Now and cast a wide net.
- Adaptive Management is Key
- Process needs to be seamless from Property Owner Perspective
- Drop the elitist mentality, you are not the only State experiencing this issue, learn from other Jurisdictions.



Questions?



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