LONG ISLAND SOUND PARTNERSHIP

Sea Grant NEW YORK

View of Sound from Sands Point Preserve. Credit: Sarah Schaefer-Brown

Long Island Sound Coastal Resilience Forum

Nassau County

Sands Point Preserve Conservancy

Thursday, October 9, 2025 9:30 AM – 3:30 PM

LONG ISLAND SOUND PARTNERSHIP

Sea Grant NEW YORK

Save the Date

Long Island Sound Coastal Resilience Forums

Suffolk County Forum

Wednesday, October 8, 2025

Port Jefferson Village Center, Port Jefferson, NY

Nassau County Forum

Thursday, October 9, 2025

Sands Point Preserve Conservancy, Sands Point, NY

These forums will bring together state and local decision makers, municipal staff, and other interested parties working to address flooding, shoreline erosion and other coastal issues. The goal is to share information on best practices, discuss challenges, identify opportunities to increase resilience, and enhance coordination across communities.

Each Forum will end in a field trip to explore local resilience projects.

Learn more and register here!

Check out other events happening this October during Long Island Sound Coastal Resilience Month

SANDS POINT PRESERVE CONSERVANCY

NASSAU COUNTY SOIL & WATER CONSERVATION DISTRIC

INCORPORATED VILLAGE OF PORT JEFFERSON

SUFFOLK COUNTY SOIL AND WATER CONSERVATION DISTRICT

Agenda

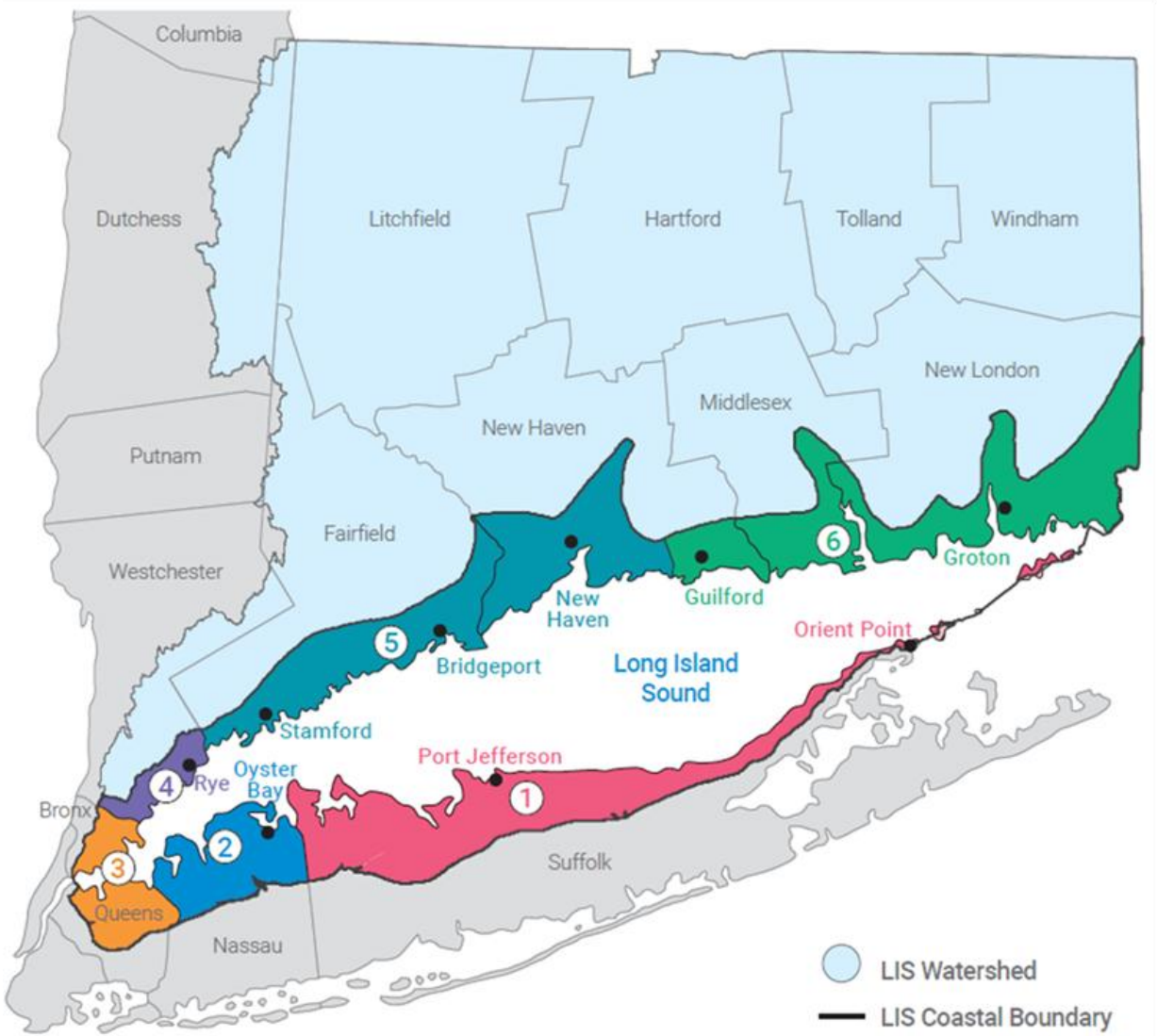
9:45 AM	**Welcome**
10:00 AM	**State & Regional Updates**
11:15 AM	**Resilience Tools & Resources**
12:15 PM	**Nassau County Soil & Water Conservation District Project Updates**
12:45 PM	**Lunch** (Bluff Sign Raffle)
1:45 PM	**Field Trip - Bluff Stabilization Project at Sands Point Preserve**
3:30 PM	**Return from Field Trip/Depart**

Long Island Sound Partnership Management Plan

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.

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

LONG ISLAND SOUND PARTNERSHIP

Sustainable & Resilient Communities 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 municipal, nonprofit, and community leaders receiving training and support to increase capacity for adaptation to environmental challenges.

Community-Driven Resilience Planning

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

Resilience Initiative Implementation

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

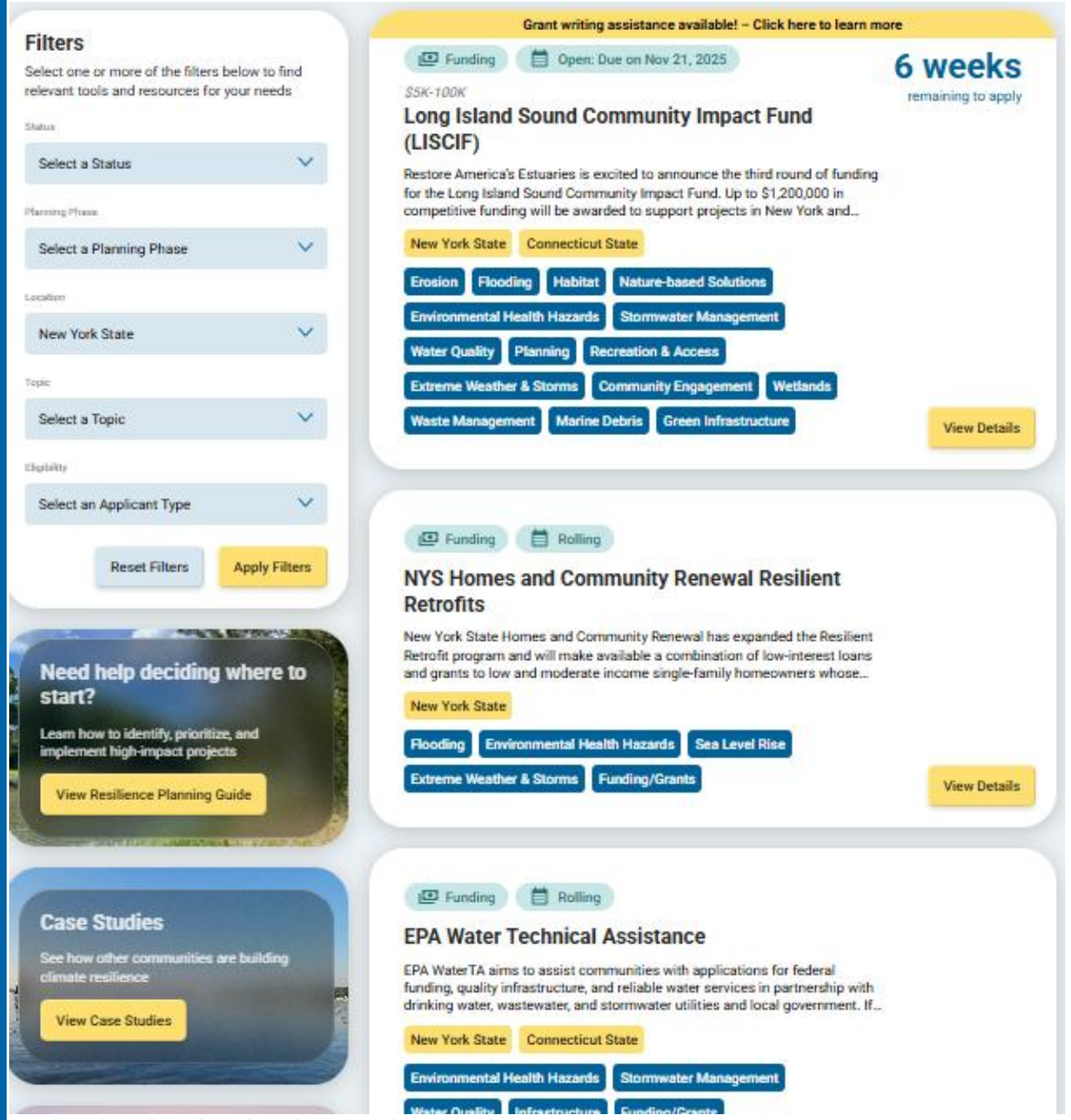
LONG ISLAND SOUND PARTNERSHIP

Long Island Sound Resilience Resource Hub

www.lisresilience.org

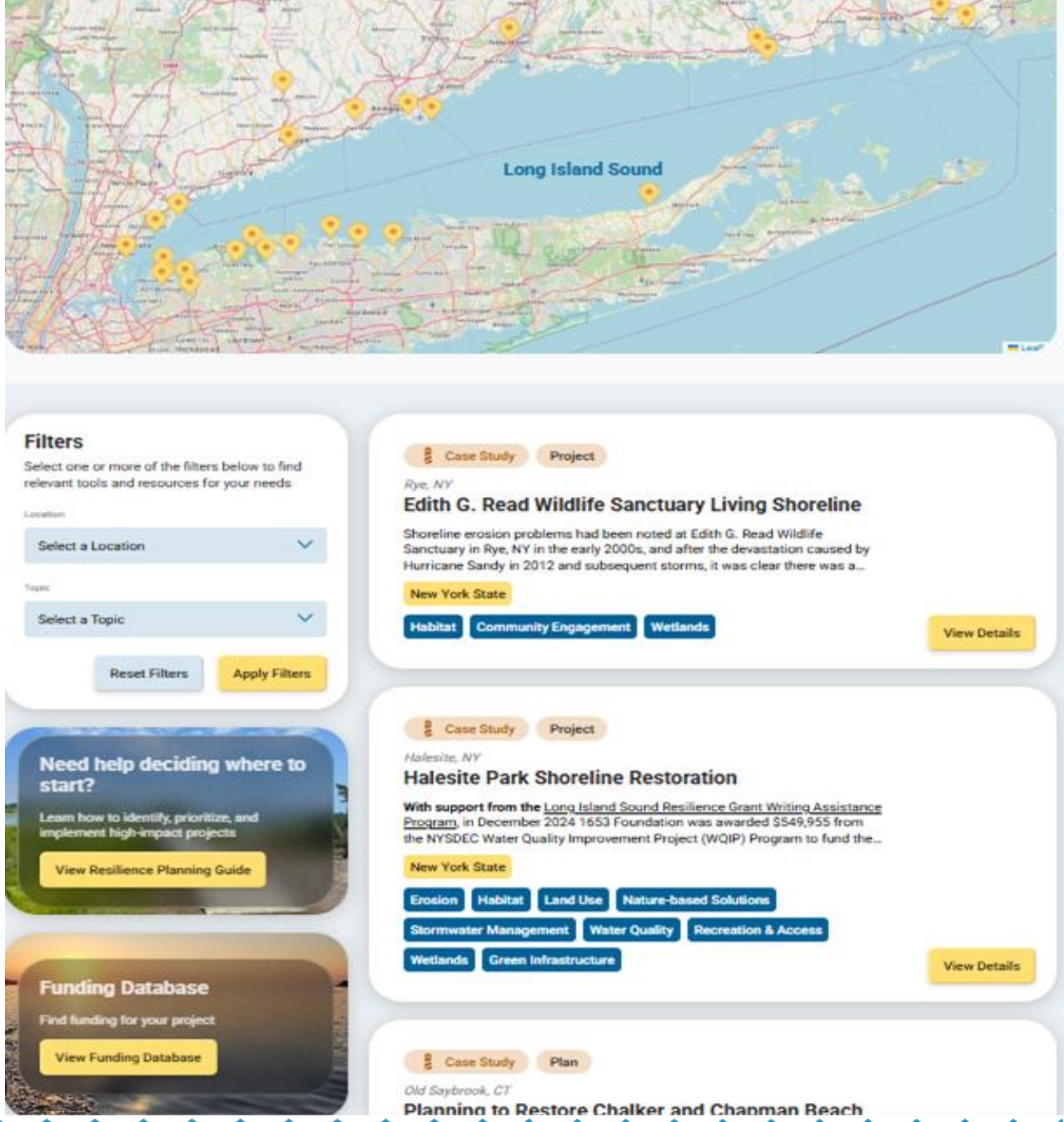
LONG ISLAND SOUND PARTNERSHIP

Funding Database



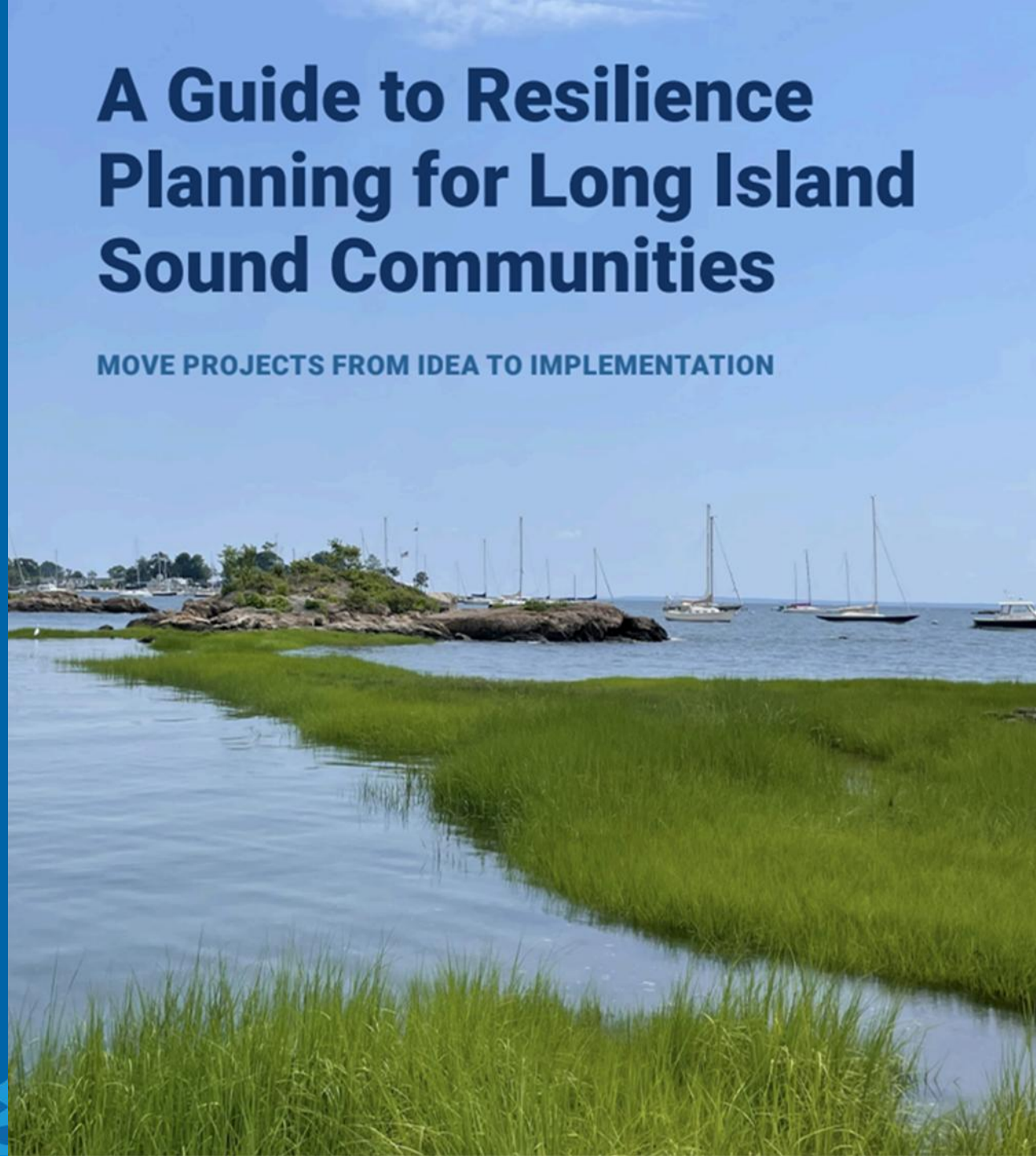
LONG ISLAND SOUND PARTNERSHIP

Case Studies



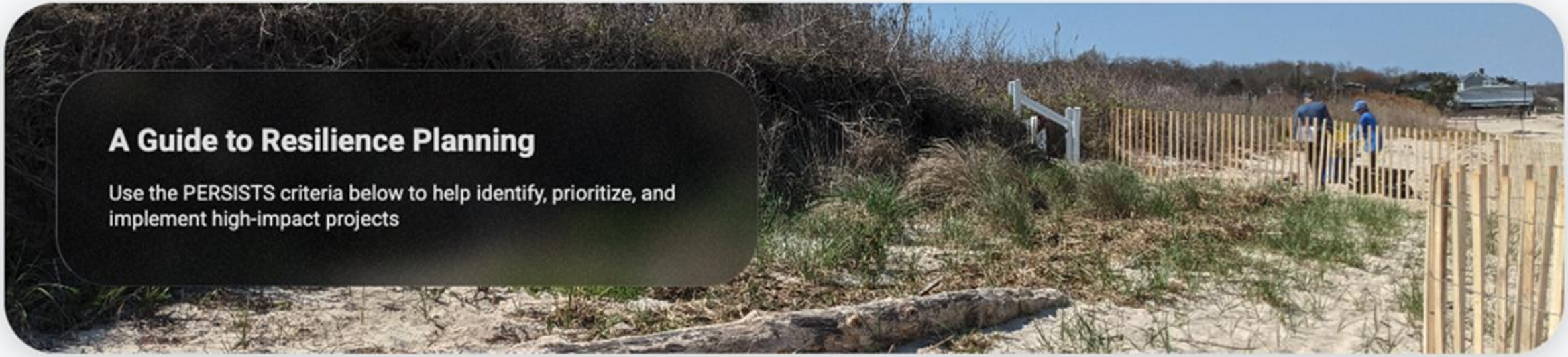
LONG ISLAND SOUND PARTNERSHIP

Resilience Planning Guide



Resilience Planning Steps & Strategies

LONG ISLAND SOUND PARTNERSHIP



PERSISTS Framework adapted and adopted from Connecticut Institute for Resilience and Climate Adaptation. (2020). Resilient Connecticut Planning Framework.

P	E	R	S	I	S	T	S
Permittable	Engaged	Realistic	Safe	Innovative	Scientific	Transferable	Sustainable

LONG ISLAND SOUND PARTNERSHIP

SRC Resilience Assistance Programs

Credit: Residents Forward

What Program is right for me?

LIS Resilience Grant Writing Assistance Program

Focus: **Grant Preparation and Writing**

No Match!

Eligible Applicants: Municipalities, Nonprofits, Community Organizations

Rolling: Open until all available funding has been allocated

LIS Resilience Planning Support Program

Focus: **Planning, Preliminary Design, and Project Scoping**

No Match!

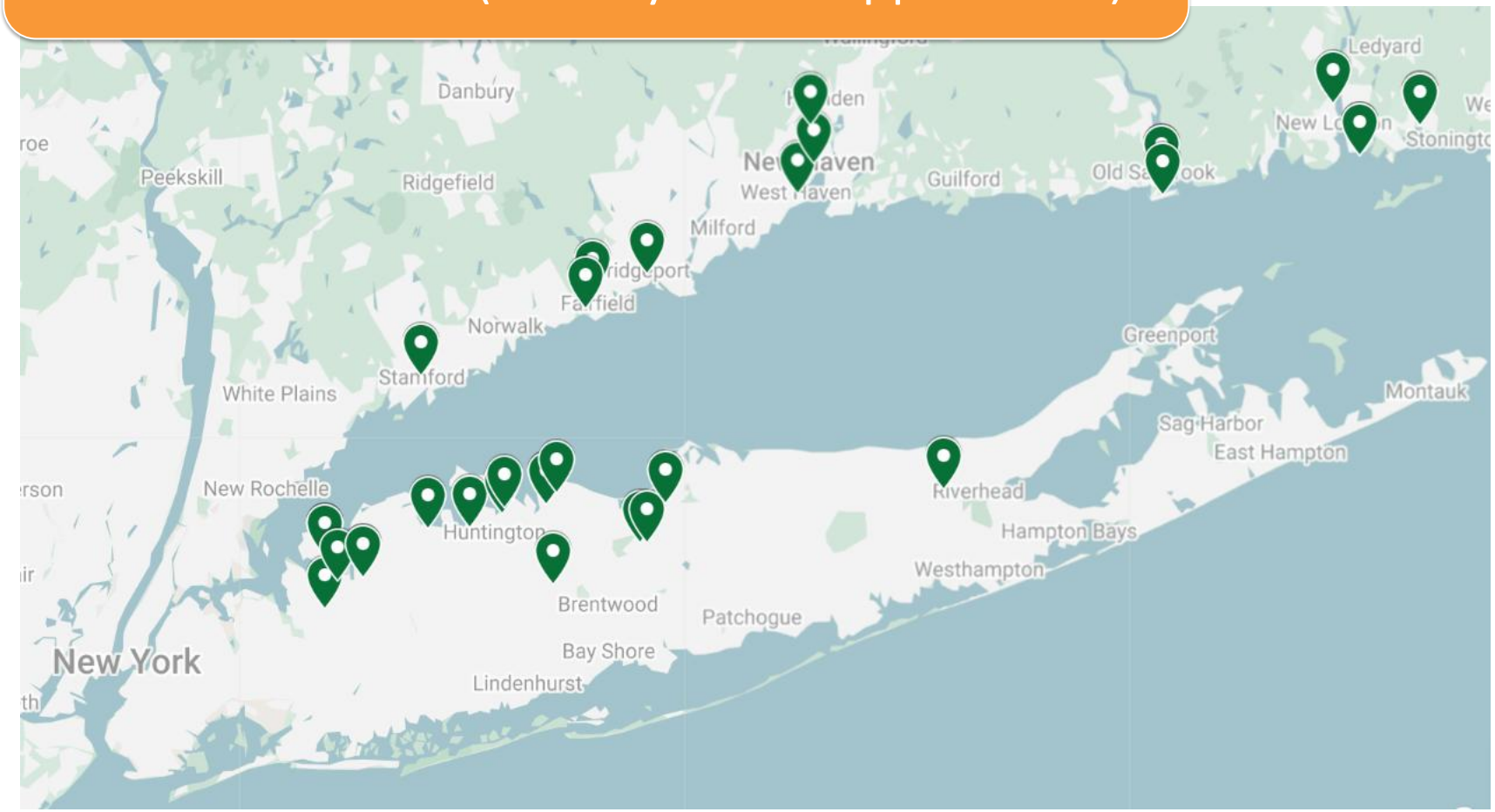
Eligible Applicants: Municipalities, Nonprofits, Community Organizations

Next round will be released early December 2025

Grant Writing Assistance Program

33 Applicants, 38 Grant Proposals Supported

30% success rate (First 2 years of applications)



Project Types

- Watershed Plans
- Feasibility and engineering studies for beach, wetland, and living shoreline projects
- Implementation of green infrastructure, habitat restoration, public access improvements
- Community outreach engagement, education, and participatory science projects
- Shell recycling and oyster gardening programs

LIS Resilience Planning Support Program

LONG ISLAND SOUND PARTNERSHIP

Round 1

Projects are nearing completion

Awarded nearly $1.1M to 15 Communities

5 in CT and 10 in NY

Round 2

Projects starting this Fall

Awarding approx. $1 Million

Round 3

To be released in December 2025

Up to $1.5 Million available

LONG ISLAND SOUND PARTNERSHIP

Trainings & Workshops

LONG ISLAND SOUND PARTNERSHIP

Sea Grant NEW YORK

Beekman Beach, Oyster Bay. Credit: Sarah Schaefer-Brown

State & Regional Updates

NEW YORK STATE | Department of Environmental Conservation

New York State Climate Change Adaptation & Resilience

Long Island Sound Coastal Resilience Forum – Nassau County
October 9, 2025

Leo Bachinger, Climate Policy Analyst
Lauren Steinberg, Climate Policy Analyst
DEC Office of Climate Change

Adaptation and Resilience Plan

New York State Adaptation and Resilience Plan

October 2025 Update

NYS Adaptation and Resilience Plan (NYSARP)

NEW YORK STATE | Department of Environmental Conservation

NEW YORK STATE | NYSERDA

NEW YORK STATE | Department of State

NEW YORK STATE | Homeland Security and Emergency Services

Press Release: https://www.governor.ny.gov/news/during-earth-week-governor-hochul-announces-launch-statewide-climate-adaptation-and-resilience

Climate Resilience & Adaptation Planning in NYS

This multi-agency plan will establish a unified vision to adapt and prepare New York communities for extreme weather

Climate Impacts Assessment (NYSERDA)	Scoping Plan Adaptation & Resilience Chapter (Multi-agency)	Extreme Heat Action Plan (NYSERDA & DEC)	State Hazard Mitigation Plan (DHSES)
Community Risk and Resiliency Act (Statewide)	NYS Coastal Management Program (DOS)	Climate Smart Communities Program and Grants (Multi-agency; DEC)	Smart Growth Countywide Resiliency Planning (DOS)
Resilient NY (DEC)	DOS Resilience Principles (DOS)	State Energy Plan – Resilience Chapter (NYSERDA)	And more…

Precedent Examples

California

- Unifies existing adaptation efforts under common framework

Colorado

- Regional approach to adaptation planning

Massachusetts

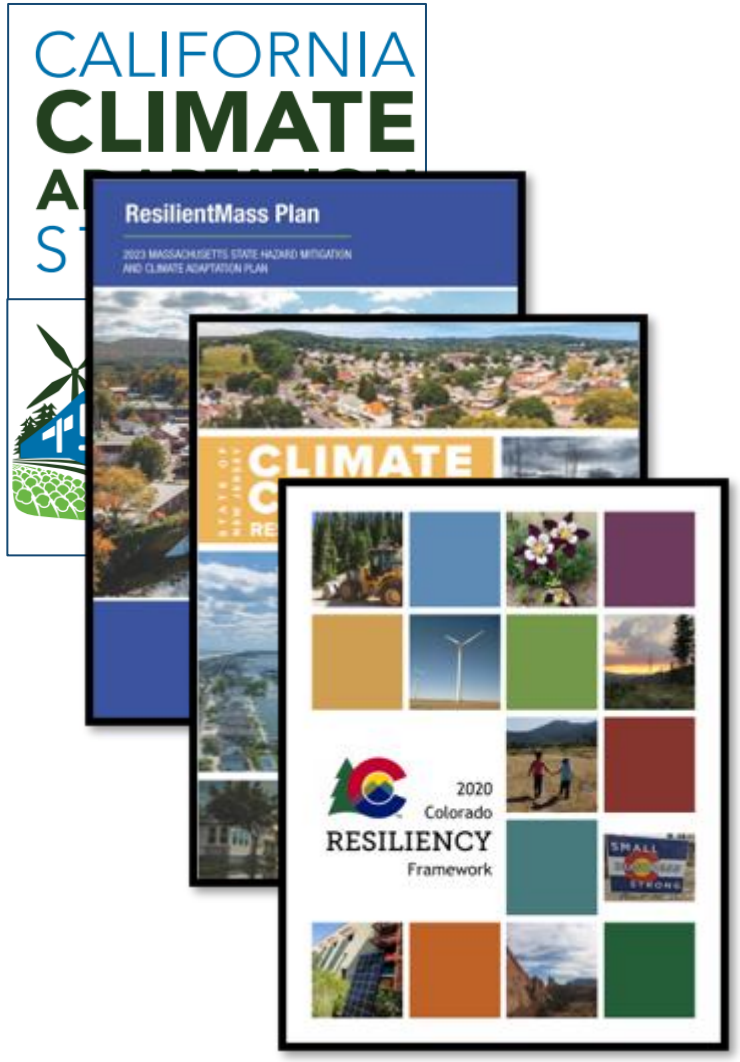
- Layers onto existing hazard mitigation planning process

New Jersey

- Planning under a common framework and governance

European Union

- Coordinates and standardizes resources for local adaptation



Precedent Example - California

CALIFORNIA
CLIMATE
ADAPTATION
STRATEGY

*"The California Climate Adaptation Strategy… **links together the state's existing and planned climate adaptation efforts**, showing how they fit together to achieve California's six climate resilience priorities."*

Aligns Planning Efforts Across Common Framework

- Statewide climate action plans
- Regionally focused strategies
- Sector-based strategies
- State stewardship plans

NYSARP Process and Development

Phased approach to develop a comprehensive **New York State Adaptation and Resilience Plan (NYSARP)**.

Foundational Phase

April 2025 – Summer 2026

- Establish baseline understanding of NYS adaptation and resilience planning initiatives, identify potential gaps and opportunities to fill these gaps.
- Engage with key audiences to solicit input and develop draft Framework.
- Publish the **NYSARP Framework, including key state actions,** and look ahead to implementation phase.
  - *Framework elements are discussed on the next slide.*

Implementation Phase

Starting Summer 2026

- Implement actions identified in the Framework in collaboration with NYS agencies and partners.
- Develop resources in alignment with opportunities identified and the Framework developed in the Foundational Phase.

NEW YORK STATE | Department of Environmental Conservation

NEW YORK STATE | NYSERDA

NEW YORK STATE | Department of State

NEW YORK STATE | Homeland Security and Emergency Services

NYSARP Framework

A clearly articulated, unifying **vision** for New York State adaptation and resilience efforts.

A set of **principles** that reinforce a comprehensive and equitable approach and ground current and future efforts.

Available **resources** that enhance existing and advance future initiatives (at the state or local level) and **supportive guidance** on how to use the vision and principles to advance adaptation and resilience work.

Early, high-impact actions the State can take to address climate vulnerabilities and build a foundation for collaboration at the local level.

Audiences Engaged in NYSARP Framework Development



NYS State Agencies

- Develop Framework elements
- Evaluate planning efforts to strengthen collaboration and identify new opportunities
- Share immediately available resources

Local Governments; Partners; CBOs

- Inform Framework elements
- Help identify needs and opportunities of local and community partners
- Help raise awareness about NYSARP and the Framework development process

New Yorkers

- Provide feedback on Framework elements

- Participate in engagement webinars as interested

Adaptation Advisory Panels

NYS has developed two AAPs to solicit perspectives and insight that can inform the development of the Framework.

Climate Equity: Providing context for how specific adaptation and resilience planning initiatives are utilized by **community-based organizations and partners** to **advance benefits for disadvantaged communities and vulnerable populations**.

Local Partners: Providing context for how specific State adaptation and resilience planning initiatives are utilized by **local governments and partners** to **advance benefits for NYS' diverse communities**.

NYSARP Public Engagement

NYSARP Webpage

NYSARP Website:

➢ NYSARP Input Form

NYSARP Summer Webinar Series

Led by DEC, NYSERDA, DOS, and DHSES

- NYSARP overview and future opportunities to provide input
- Agency-specific resources showcase for local and regional adaptation support
- Recordings posted on NYSARP webpage

DEC Delivers e-Newsletter

NYSARP Updates:

Check the box for "Climate Adaptation and Resilience Plan"

NYSARP Engagement Approach

Adaptation Advisory Panels	Two advisory groups made up of key stakeholders who will inform the development of Framework elements through a series of meetings and provide verbal and written feedback
Targeted Focus Groups/ Interviews	Sector-specific focus groups and interviews to provide targeted input based on expertise and identified gaps
Core Agency Working Group	Group of NYS staff who share context from their work, ideas to inform the NYSARP process, and feedback on draft project deliverables through a series of meetings and provide written feedback
Messaging Materials	Up to five materials with consistent language about NYSARP for use in engagement activities including a slide deck, talking points, and one-pager
Summer Webinars	A series of webinars held by State agencies during Summer 2025 to overview and promote the Framework development
Public Comment Period	A one-month period for the general public to review the draft Framework and submit public comments through an online platform
Public Comment Webinars	Two webinars over the public comment period to encourage submissions
Webpage	Content about the NYSARP process, virtual resources showcase webinars, opportunities to get involved, and interim updates will be shared.

Foundational Phase Engagement Milestones

The NYSARP development process will be informed by State agencies, local governments, community advocates, adaptation and resilience experts, and the public. Please note that this timeline is tentative and subject to change.

April 2025: Project Kickoff

New York State agencies met to formally begin the Framework development process.

Summer 2025: Public Webinars

State agencies hold a series of public webinars showcasing currently available adaptation & resilience resources.

Winter 2025/2026: Public Comment

The State will make the draft Framework available for public comment and hold additional virtual engagement opportunities.

Summer 2026: Framework Publication

The NYSARP Framework is released to the public, initiating Phase 2 (Implementation).

Ongoing targeted engagement will include two advisory panels (focused on Climate Equity, and Local Partners) and focus groups to solicit input from key constituencies

Stay Up to Date!

To stay up to date with NYSARP progress, please subscribe to the NYSDEC mailing list, or check the Plan's website.

NYSARP Updates:

Sign up for NYSARP email updates: https://public.govdelivery.com/accounts/NYSDEC/subscriber/topics
(*check the box for "Climate Adaptation and Resilience Plan"*)

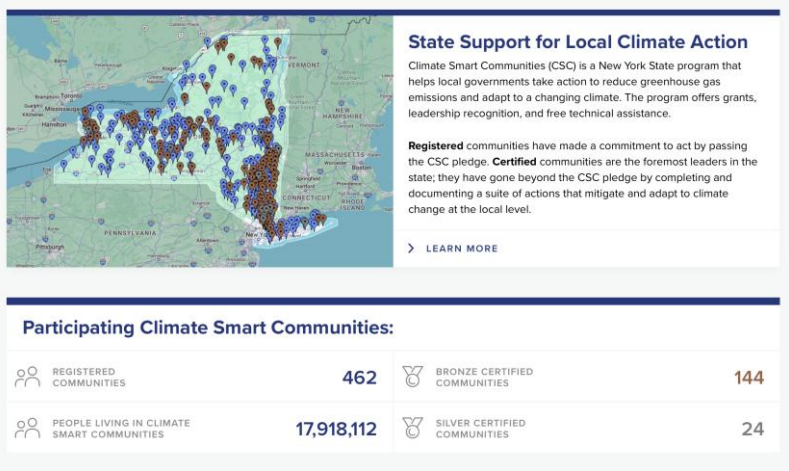
Contact: **NYSAdaptPlan@dec.ny.gov**

NYSARP Website:

Adaptation and Resilience Resources

CLIMATE SMART COMMUNITIES

NEW YORK STATE | Climate Smart Communities



CERTIFICATION PROGRAM

TECHNICAL ASSISTANCE

State Support for Local Climate Action

Local governments can receive financial and technical support from New York State agencies for taking action to mitigate and adapt to climate change.

Grants

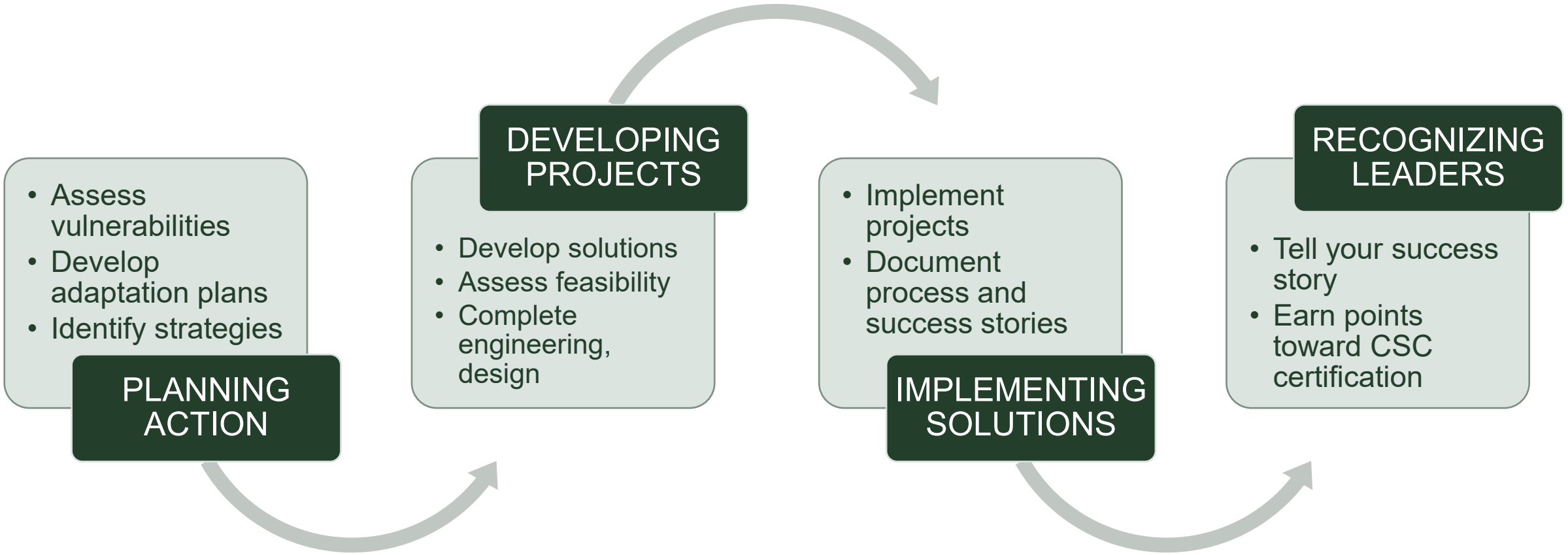
Several New York State agencies provide funding to support completion of Climate Smart Communities (CSC) certification actions, including the Department of Environmental Conservation (DEC), the Energy Research and Development Agency (NYSERDA), and the Department of State (DOS). The descriptions of the certification actions on this website include references to the specific funding programs relevant to each action.

Grant applications for state funds from Registered and Certified Climate Smart Communities earn higher scores for some programs, including DEC's CSC Grant Program.

GRANTS PROGRAM

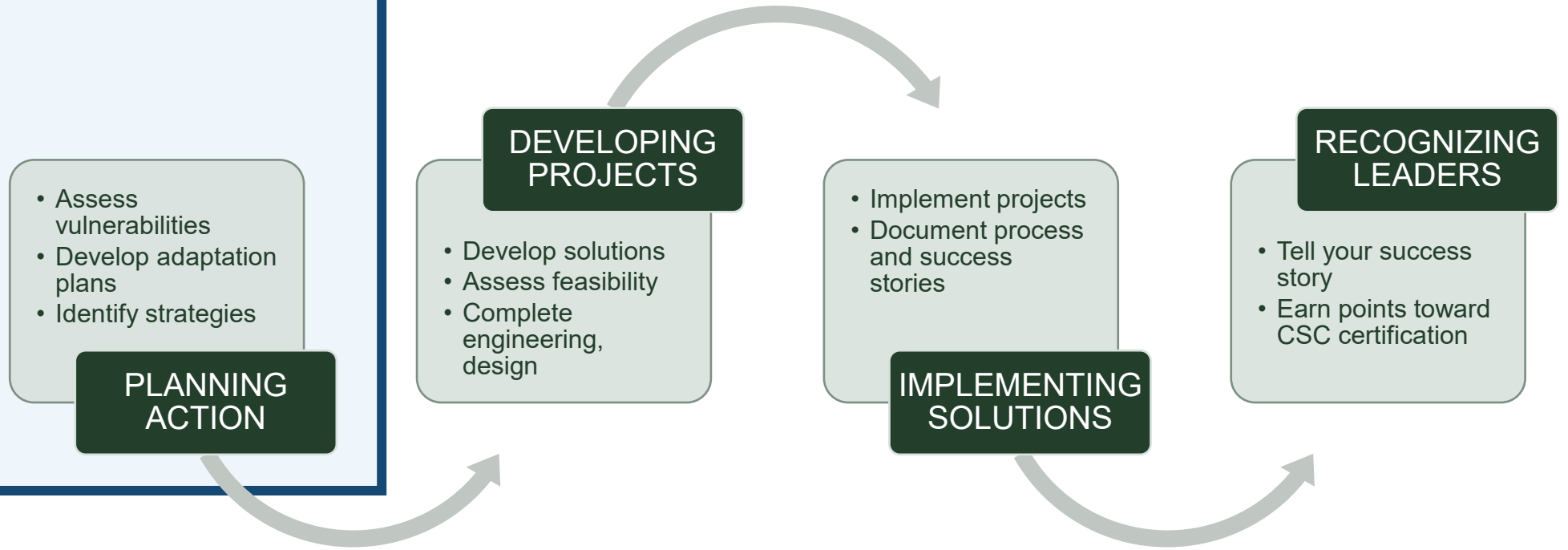
NEW YORK STATE | Climate Smart Communities

SUPPORTING CLIMATE SMART ACTION:
FROM PLANNING TO IMPLEMENTATION



NEW YORK STATE | Climate Smart Communities

CERTIFICATION ACTIONS



7. Enhance community resilience to climate change.

PE7 Action: Climate Vulnerability Assessment

4 Points

Bronze Priority Silver Priority

• THIS ACTION HAS VARIABLE POINTS: 4, 8, 16 • COMPETITIVE FUNDING AVAILABLE

PE7 Action: Evaluate Policies for Climate Resilience

6 Points

Bronze Priority Silver Priority

• COMPETITIVE FUNDING AVAILABLE

PE7 Action: Climate Adaptation Plan

3 Points

Bronze Priority Silver Priority

• THIS ACTION HAS VARIABLE POINTS: 3 — 15 • COMPETITIVE FUNDING AVAILABLE

PE7 Action: Climate-resilient Hazard Mitigation Plan

4 Points

PE7 Action: Heat Emergency Plan

6 Points

• COMPETITIVE FUNDING AVAILABLE

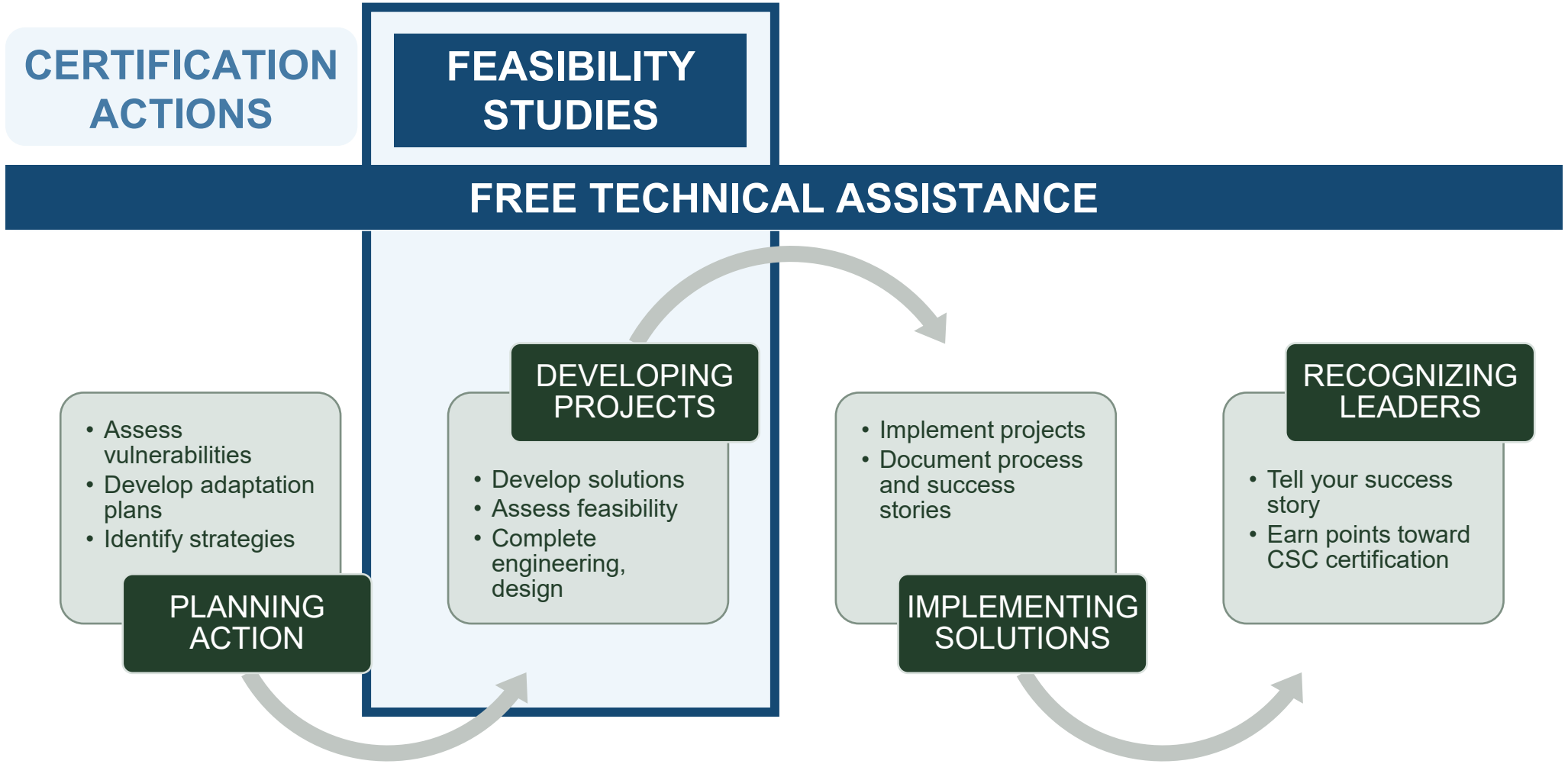
PE7 Action: Shade Structures Policy

CSC PE 7 - GUIDING LOCAL ADAPTATION

Offers a range of certification actions with resources to help communities

- identify and assess impacts and vulnerabilities;
- develop plans for strategic action, and incorporate resilience considerations across existing plans;
- explore and advance specific solutions and best practices.

NEW YORK STATE | Climate Smart Communities



Climate Smart Communities: Regional Coordinators

- **Free guidance, technical assistance** for local governments and their partners. Coordinators conduct outreach, planning, education, and capacity building.
- Contact climatesmart@dec.ny.gov.

Coordinator website

FEASIBILITY STUDIES

- Study feasibility of solutions specific to an impacted area (including assessing the impacts and developing / sizing designs)
- Complete 20% / 30% engineering and design
- Levee recertification studies consistent with FEMA requirements
- Engineering and design for certain HVAC/R replacements

TOOLS, GUIDANCE SUPPORT PLANNING AND ACTION

- NYS Climate Impacts Assessment
- Extreme Heat Action Plan and & extreme heat tools
- Climate adaptation, resilience planning tools
- Community Risk and Resilience Act guidance documents

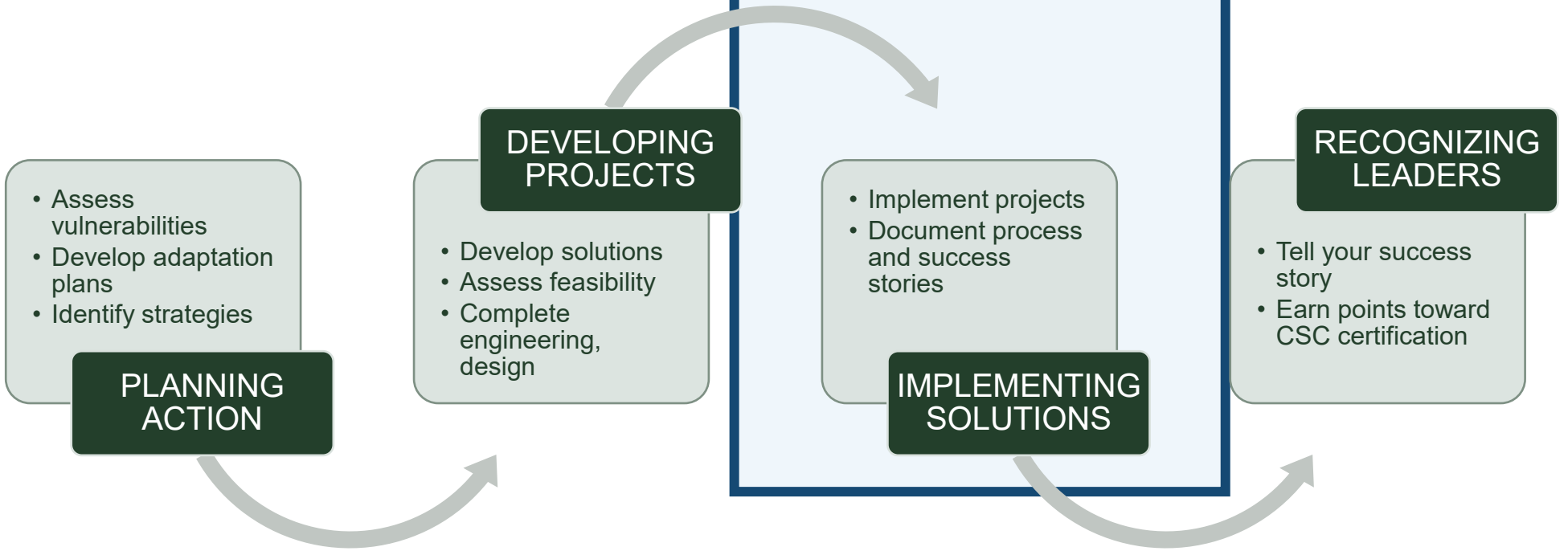
NEW YORK STATE | Climate Smart Communities

CERTIFICATION ACTIONS

FEASIBILITY STUDIES

IMPLEMENTATION GRANTS

FREE TECHNI



Grant Program

- **Climate Smart Community Certification Actions**
  - Planning, assessments, inventories that align with CSC certification actions
  - Maximum award $200,000
- **Implementation Projects - Adaptation and Mitigation**
  - Alternative transportation, refrigerant management, composting facilities
  - Natural resilience projects, relocation of critical facilities
  - Maximum award $2,000,000
- **Engineering feasibility studies**
  - Study impacts on specific areas (e.g., flooding, extreme heat)
  - Complete engineering design of adaptation projects
  - Also includes dam repair, levee recertification, HVAC/R system replacement
- About $87M awarded to date for >200 projects

CSC grant website

PART 492 – PROPOSED REGULATORY REVISIONS

- To align regulations with statutory changes, expand eligible applicants, and make the program more adaptable to future conditions.
  - Restructure the rule to simplify and clarify the three separate programs (ZEV rebate, ZEV infrastructure, CSC grant programs).
  - Expand number of entities eligible (Certain local public authorities, Indian Nations)
- Proposed Rulemaking and public comment period
- Public comment period: October 1, 2025, to December 9, 2025
- Virtual public comment hearing on Tuesday, December 2, 2025, at 2pm

Visit DEC's website for more information.

Funding Programs Supported by Bond Act Funds

Coastal Rehabilitation and Resilience Projects

Implement coastal rehabilitation and resiliency projects inspired by nature or natural processes within New York State Coastal areas

Inland Waterways and the Local Waterfront Revitalization Program Implementation Projects

Implement restoration and flood risk reduction projects improving waterfront and watershed resiliency and reducing climate impacts.

Green Resiliency Grants to Flood Prone Communities

$60 million of Environmental Bond Act funding is available to support flood-prone communities.

Municipal Parks and Recreation Grant Program (MPR)

A new grant program to fund the development and improvement of municipal parks and recreation sites.

Climate Smart Communities Grant Program

Funding available to help municipalities take action to address climate change.

Water Quality Improvement Project (WQIP) Grant Program

Funding available for projects that directly improve water quality or habitat, promote flood risk reduction...

Resilient Watersheds Grant (RWG) Program

At least $45 million of Environmental Bond Act funding is available for implementation of flood mitigation projects across New York State.

Electric School Bus Infrastructure

Governor Hochul announced funding for electric school bus charging infrastructure under the New York School Bus Incentive Program.

Website


ENVIRONMENTAL BOND ACT
FUNDING
PROJECTS
PRIORITIES
RESOURCES
NEWS
Clean Water, Clean Air and Green Jobs Environmental Bond Act
Investing $4.2 Billion in New York's Environment and Communities
FUND A PROJECT
RESOURCES FOR RESILIENCE
Stay Updated
Sign up to receive updates on the Bond Act programs and news.
SIGN UP

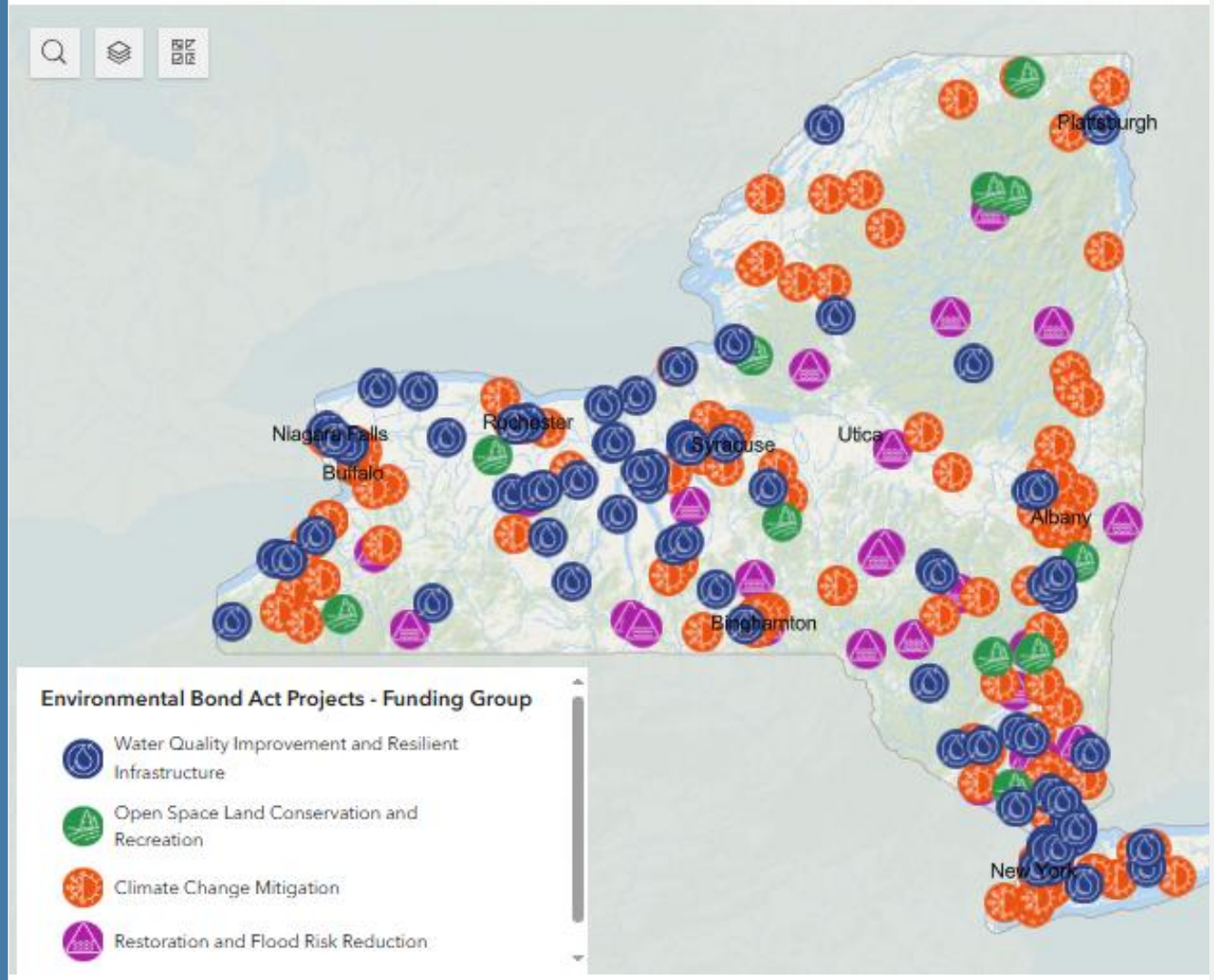
Comments Received for Eligibility Guidelines

Read the Environmental Notice Bulletin	Public Comment Deadline
Eligibility Guidelines for Habitat Restoration and Enhancement on Public Lands	10/3/2025

Archived Eligibility Guidelines

Agency	Title	Publish Date	Comment Period Close Date
DEC and OPRHP	Eligibility Guidelines for Restoring and Expanding Forests through Reforestation and Afforestation Practices	5/21/2025	6/20/2025
AGM	Eligibility Guidelines for Farmland Protection Through Farmland Protection Implementation Grants through the Department of Agriculture and Markets	2/26/2025	3/28/2025
DEC	Eligibility Guidelines for Funding by the DEC for Infrastructure Projects that Protect Drinking Water Supplies from the impacts of HABs	12/11/2024	1/10/2025
EFC and DEC	Statewide - Eligibility Guidelines for Restoration and Flood Risk Reduction Through the Resilient Watersheds Grant Program - NYSDEC	11/13/2024	12/13/2024
AGM and DEC	Statewide - Eligibility Guidelines for Grants for Eastern Finger Lakes Coalition of County Soil and Water Conservation Districts to implement water quality projects in the Eastern Finger Lakes Watersheds - NYSDEC	11/13/2024	12/13/2024
DOS	Statewide - Eligibility Guidelines for Inland Flooding and the Local Waterfront Revitalization Program Implementation Projects supported through the Clean Water, Clean Air and Green Jobs Environmental Bond Act of 2022	7/10/2024	8/2/2024

Website



Clean Water, Clean Air & Green Jobs Environmental Bond Act

Project Overview

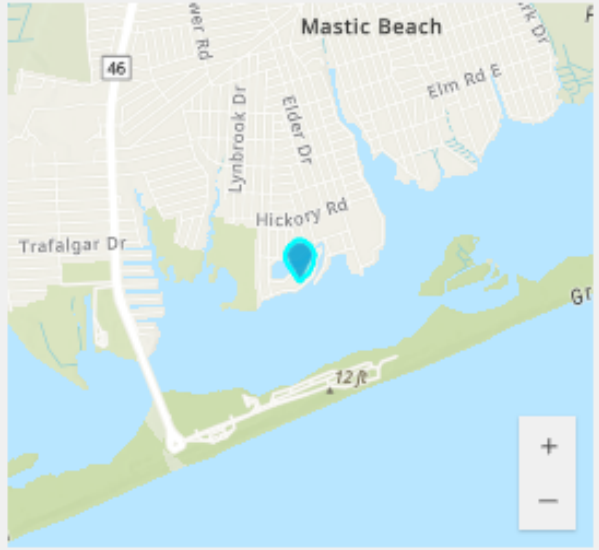
Saltmarsh Restoration at Sheepen Peninsula

FAST FACTS

Project Lead:
Town of Brookhaven
Grant Award Date:
9/26/2025
Grant Execution Date:

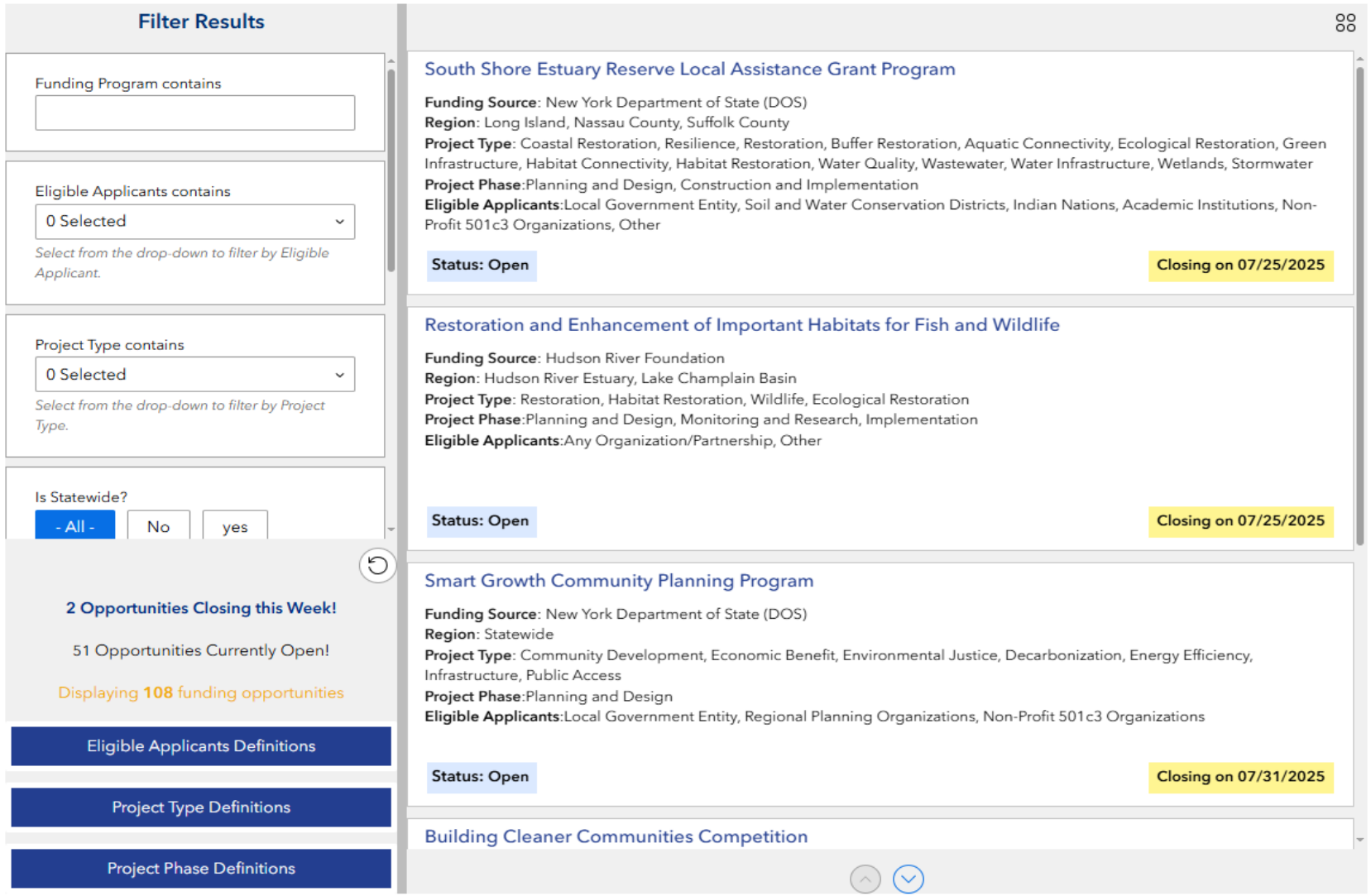
Project Start or Purchase Date:
4/1/2026
Completion Date:
3/31/2031
Current Status:
Pending
Funding Provided Through:
DOS
Bond Act Funding:
$1,615,009

MASTIC BEACH | SUFFOLK COUNTY LONG ISLAND



Project Description:
The Town of Brookhaven will restore saltmarsh habitat on the Sheepen Peninsula, a low-lying area increasingly vulnerable to coastal flooding and sea level rise. The project will restore hydrology, remove invasive species, and plant native vegetation to reduce the severity of flooding and improve resilience to climate change while also restoring the native habitat.

Website


Funding Finder
Filter Results
Funding Program contains
Eligible Applicants contains
0 Selected
Select from the drop-down to filter by Eligible Applicant.
Project Type contains
0 Selected
Select from the drop-down to filter by Project Type.
Is Statewide?
- All -
No
yes
2 Opportunities Closing this Week!
51 Opportunities Currently Open!
Displaying 108 funding opportunities
Eligible Applicants Definitions
Project Type Definitions
Project Phase Definitions
South Shore Estuary Reserve Local Assistance Grant Program
Funding Source: New York Department of State (DOS)
Region: Long Island, Nassau County, Suffolk County
Project Type: Coastal Restoration, Resilience, Restoration, Buffer Restoration, Aquatic Connectivity, Ecological Restoration, Green Infrastructure, Habitat Connectivity, Habitat Restoration, Water Quality, Wastewater, Water Infrastructure, Wetlands, Stormwater
Project Phase:Planning and Design, Construction and Implementation
Eligible Applicants:Local Government Entity, Soil and Water Conservation Districts, Indian Nations, Academic Institutions, Non-Profit 501c3 Organizations, Other
Status: Open
Closing on 07/25/2025
Restoration and Enhancement of Important Habitats for Fish and Wildlife
Funding Source: Hudson River Foundation
Region: Hudson River Estuary, Lake Champlain Basin
Project Type: Restoration, Habitat Restoration, Wildlife, Ecological Restoration
Project Phase:Planning and Design, Monitoring and Research, Implementation
Eligible Applicants:Any Organization/Partnership, Other
Status: Open
Closing on 07/25/2025
Smart Growth Community Planning Program
Funding Source: New York Department of State (DOS)
Region: Statewide
Project Type: Community Development, Economic Benefit, Environmental Justice, Decarbonization, Energy Efficiency, Infrastructure, Public Access
Project Phase:Planning and Design
Eligible Applicants:Local Government Entity, Regional Planning Organizations, Non-Profit 501c3 Organizations
Status: Open
Closing on 07/31/2025
Building Cleaner Communities Competition

NEXT STEPS: IMPLEMENT & UPDATE

Interagency workgroup implementing delivery of funds

Release of eligibility guidelines for public comment

Bond Act entities launch grant opportunities

Stay Updated:
environmentalbondact.ny.gov
BondAct@dec.ny.gov

NEW YORK STATE | Climate Smart Communities

FROM FORMULATING STRATEGIES TO IMPLEMENTING SOLUTIONS

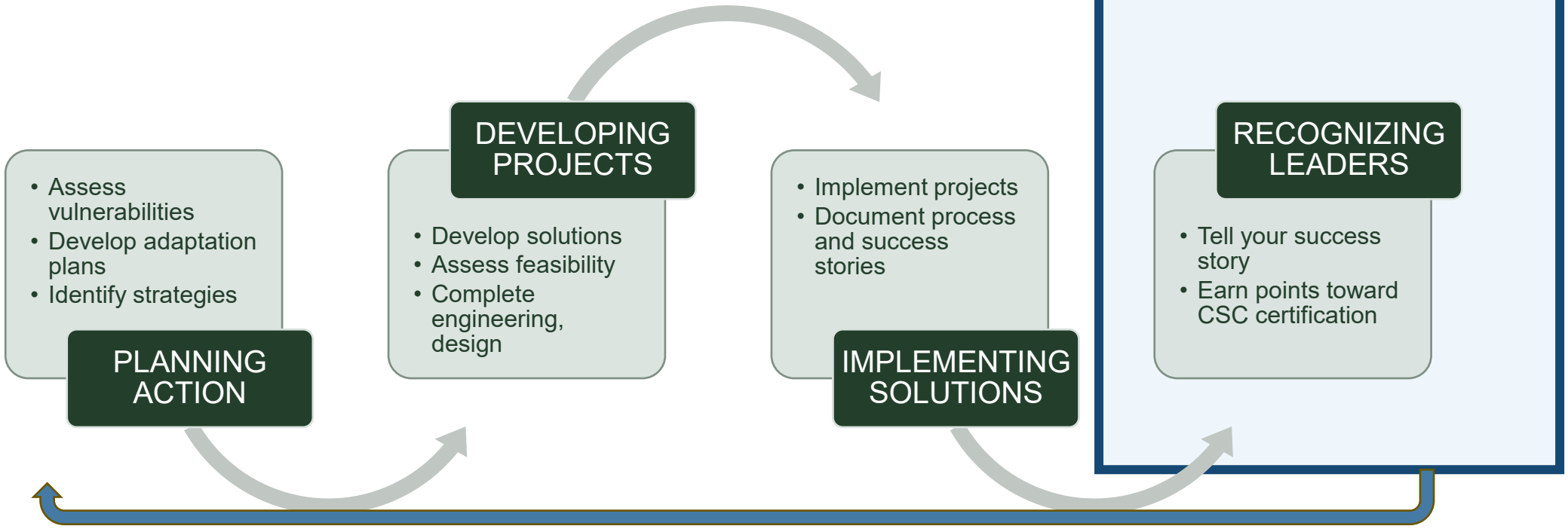
CERTIFICATION ACTIONS

FEASIBILITY STUDIES

IMPLEMENTATION GRANTS

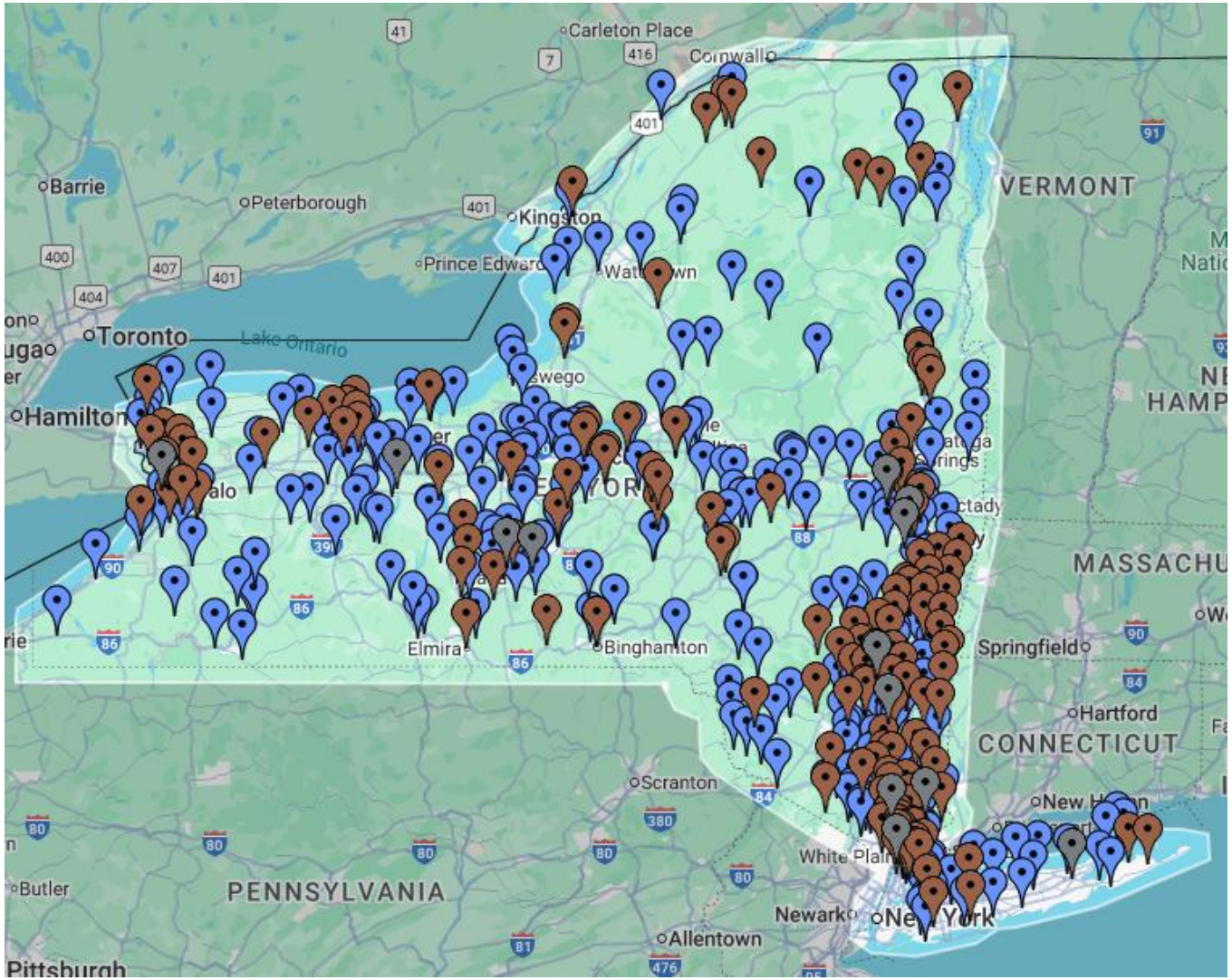
BRONZE, SILVER CERTIFICATION

FREE TECHNICAL ASSISTANCE



NEW YORK STATE | Climate Smart Communities

Certification Program



- **Registered**
  - 462 local governments have taken the CSC pledge (blue pins on map)
  - 92% of NYS population (17.9 million people)
- **Certified**
  - Leaders who have documented progress

CSC website

  - 168 communities certified; thousands of actions taken

Lauren Steinberg
New York State DEC
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NEW YORK STATE

Department of Environmental Conservation

Visit **dec.ny.gov** to learn more about DEC's work across the state.

Scan the QR code to visit the NYSARP webpage.

Questions about NYSARP: NYSAdaptPlan@dec.ny.gov

Cornell University
Cooperative Extension
Nassau County

IMEG

ICLEI
Local Governments
for Sustainability

Climate Change Adaptation and Resilience Planning Cohort

About Climate Change Adaptation and Resilience Plans

A Climate Change Adaptation and Resilience Plan (CCARP) helps communities identify climate change risks and implement measures to adapt. These plans reduce economic, environmental, and social risks, mitigate losses, and create opportunities to thrive under changing conditions.

Benefits of Creating a Climate Change Adaptation & Resilience Plan

- **Strengthen Local Planning**
  Integrate community and climate data into municipal plans, zoning, and capital projects for smarter long-term decisions.
- **Unlock Funding & Support**
  Gain access to state and federal grants, technical assistance, and professional guidance.
- **Earn Recognition**
  Advance Climate Smart Communities certification and enhance your municipality's leadership profile.

About the Long Island CCARP Cohort Program

The Long Island CCARP Cohort supports local communities through group trainings, workshops, templates, and one-on-one support.

Participants work closely with technical experts from Cornell Cooperative Extension Nassau County and ICLEI USA to complete their CCARPs.

Program Goals and Outcomes

- Build knowledge and skills around local climate hazards and adaptation strategies
- Foster collaboration across departments and communities
- Identify vulnerabilities and match them with solutions
- Complete a Climate Change Adaptation and Resilience Plan (CCARP)

Program Logistics

- Cost: Free – only your time is required
- Project Teams: At least two members (one municipal staff recommended)
- Duration: 9–12 months
- Commitment: 10–15 hours per month, including one public engagement event
- Format: Hybrid – mix of in-person workshops and virtual sessions

Partners and Funding

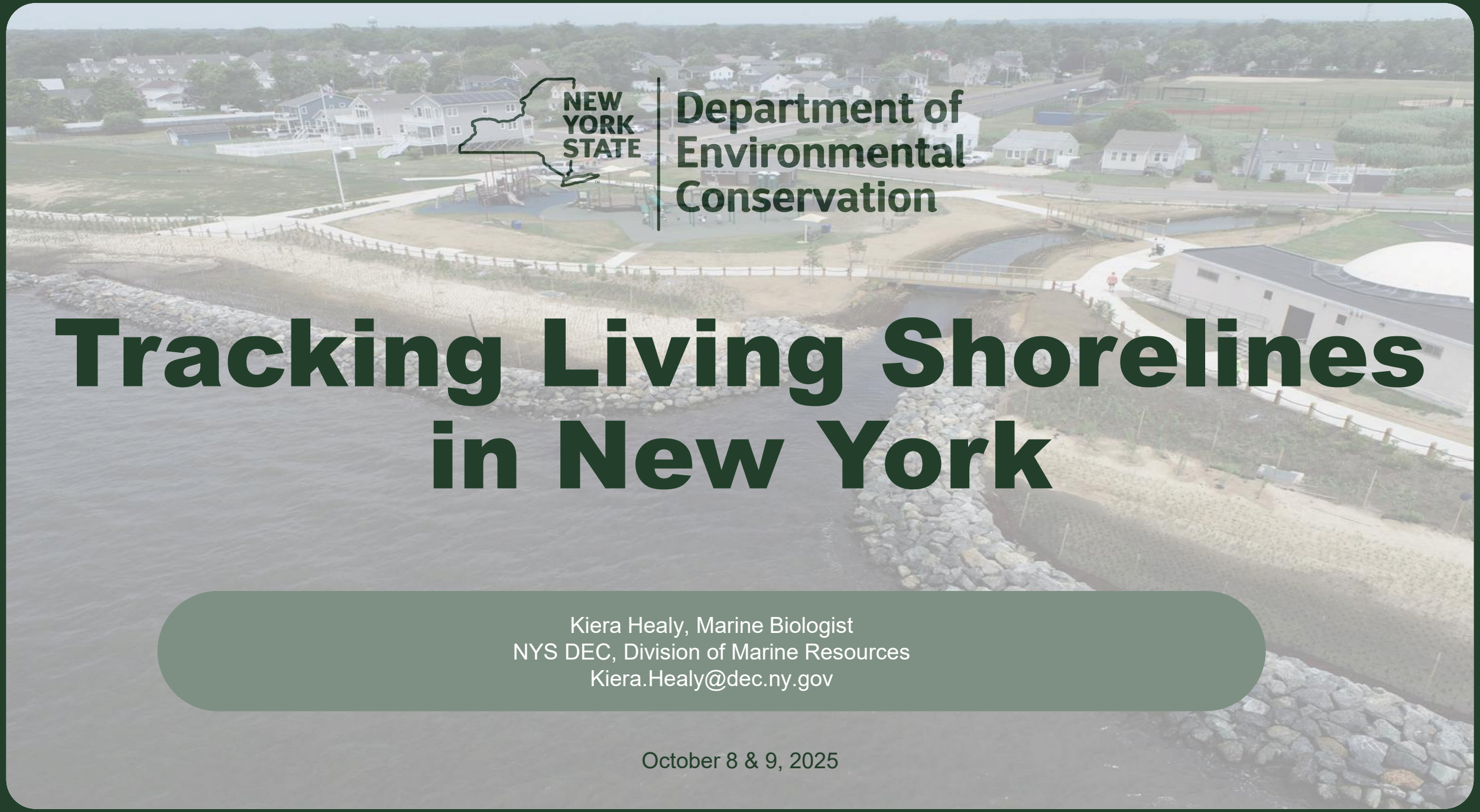
This program is funded by the New York State Environmental Protection Fund and administered by the Department of Environmental Conservation.

Partners include:

- IMEG Consultants Corp
- Cornell Cooperative Extension Nassau County
- ICLEI – Local Governments for Sustainability USA

Join the Long Island CCARP Cohort

- Contact: Mike Fiorentino
- Natural Resources Team Leader, Cornell Cooperative Extension Nassau County
- Email: mf628@cornell.edu



NEW YORK STATE | Department of Environmental Conservation

Tracking Living Shorelines in New York

Kiera Healy, Marine Biologist
NYS DEC, Division of Marine Resources
Kiera.Healy@dec.ny.gov

October 8 & 9, 2025

Why Living Shorelines?

Atlantic Killifish

Common Eastern Bumble Bee

Green Heron

Horseshoe Crab

Benefits

- Stabilize shorelines and reduce erosion
- Improve/maintain connectivity between the upland and water habitats
- Provide critical habitat for coastal species
- Protect upland areas from flooding and storm surge
- Enhance resilience
- Improve water quality
- Increase public access
- Boost aesthetics

New Living Shorelines Policy

2023 ECL Amendment
Living shorelines must be considered for shoreline stabilization

Ferry Point Park, Bronx, NY

Living Shorelines Definition

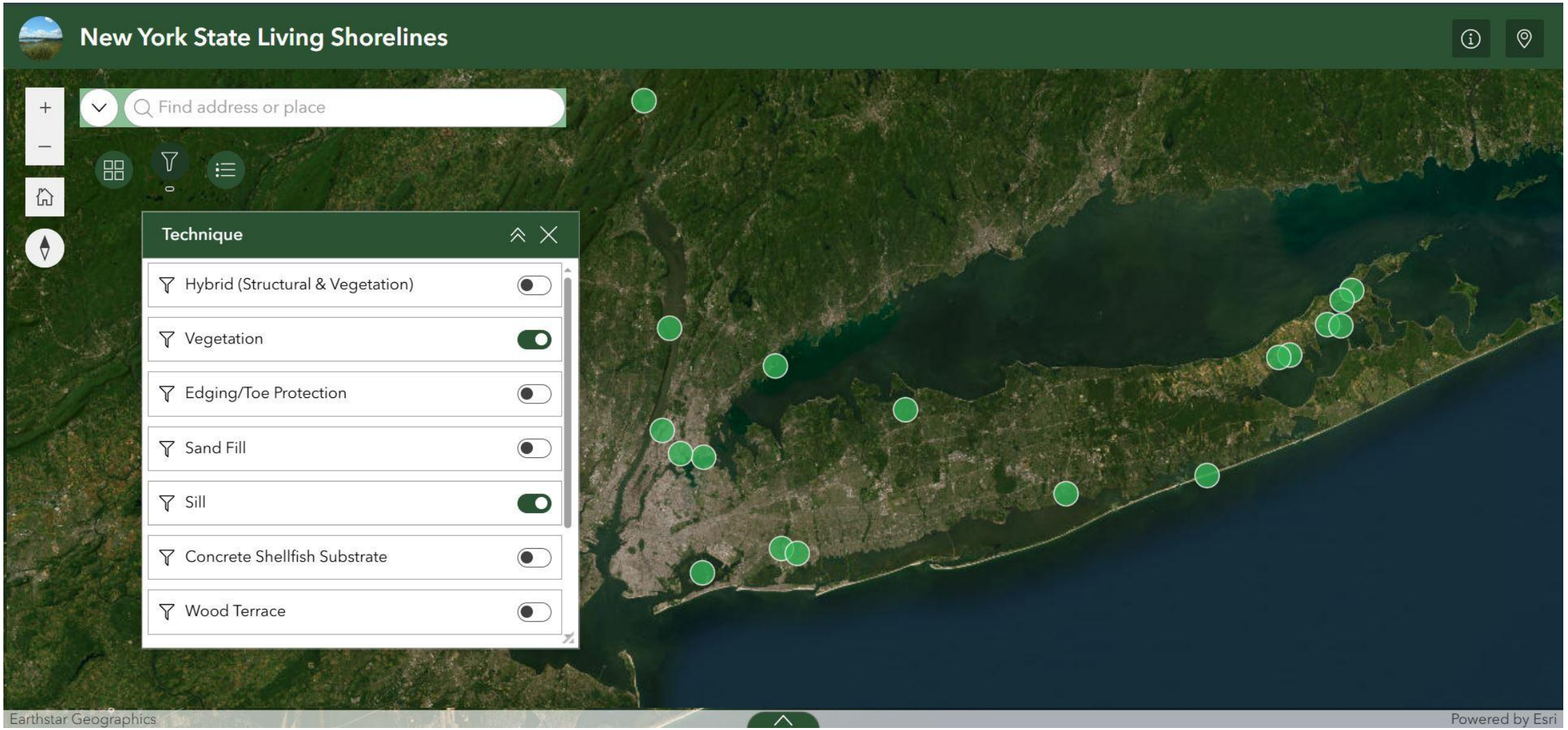
Shoreline techniques using natural features (ie. native plants) alone or with structures (rock, wood, fiber rolls, shell, etc.).

NYS Living Shorelines Database

Sherman Creek Park, Manhattan, NY

- Internal DEC database
- Completed, In-Progress, and Proposed projects
- Includes: permit data, project plans, monitoring reports, photos, etc.
- Supports staff in permitting, planning, and policy analysis

NYS Living Shorelines Map



Insights and Trends

Total Completed Projects: 19

Long Island: 11

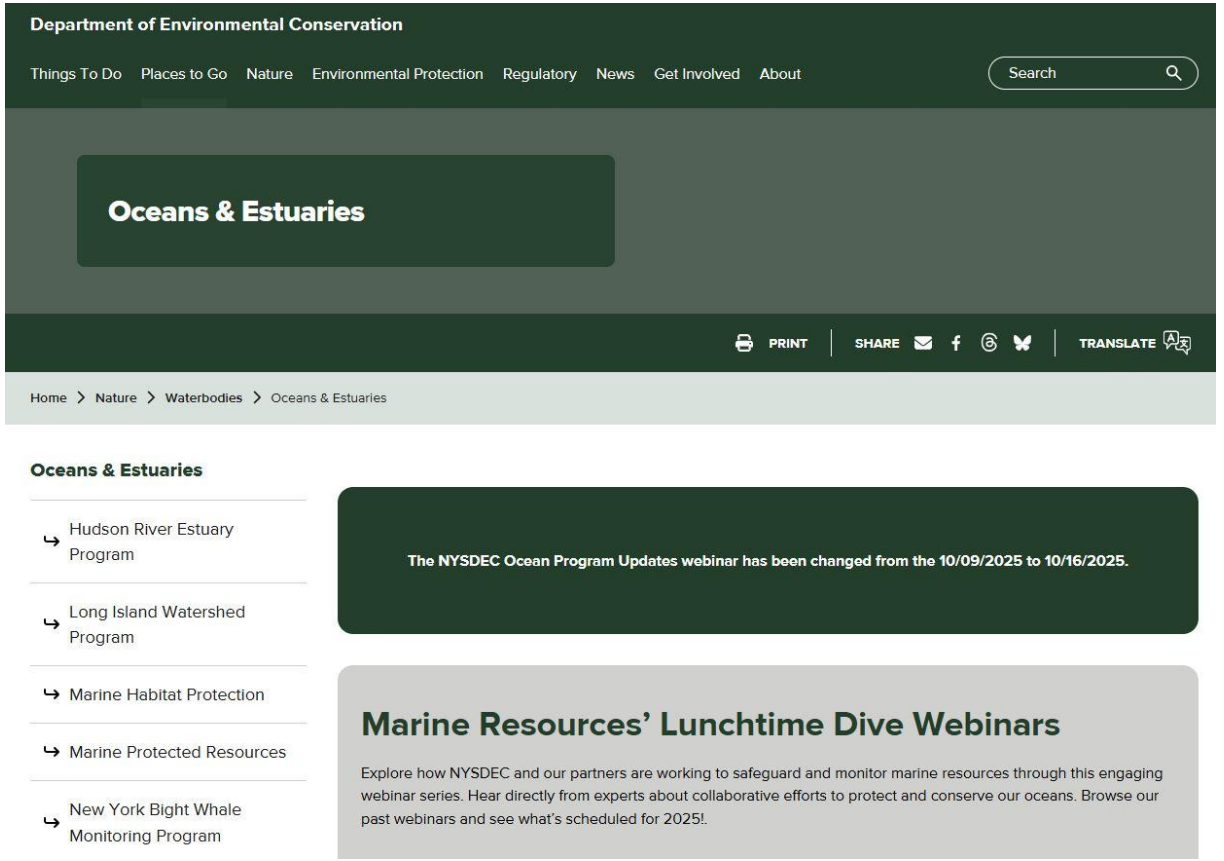
NYC: 4

Hudson River: 4

Next Steps

- Keep database and map updated
- Living Shorelines Webpage

Shorefront Park, Patchogue, NY



Thank you!

Kiera Healy, Marine Biologist
NYS DEC, Division of Marine Resources
Kiera.Healy@dec.ny.gov

October 8 & 9, 2025

LONG ISLAND SOUND PARTNERSHIP

Join by Web

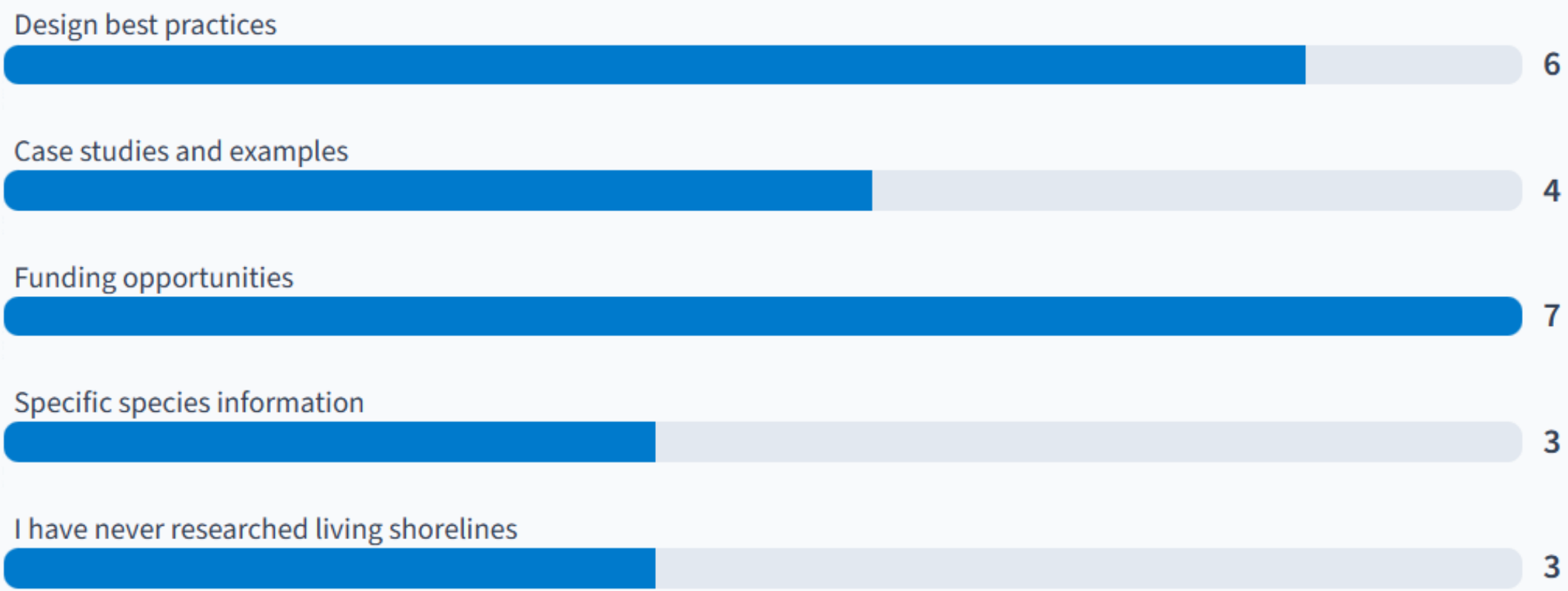
PollEv.com/nassauforum

Join by QR code

Scan with your camera app

LONG ISLAND SOUND PARTNERSHIP

What type of information do you most often look for when researching living shorelines?



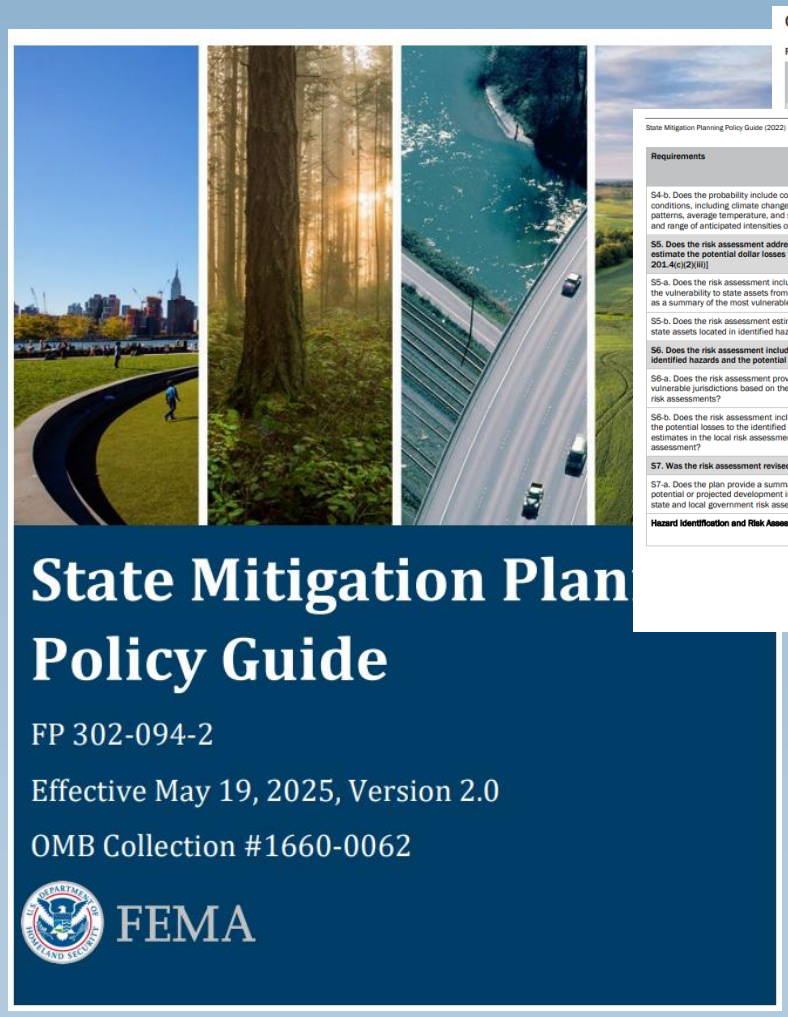
NEW YORK STATE | MitigateNY

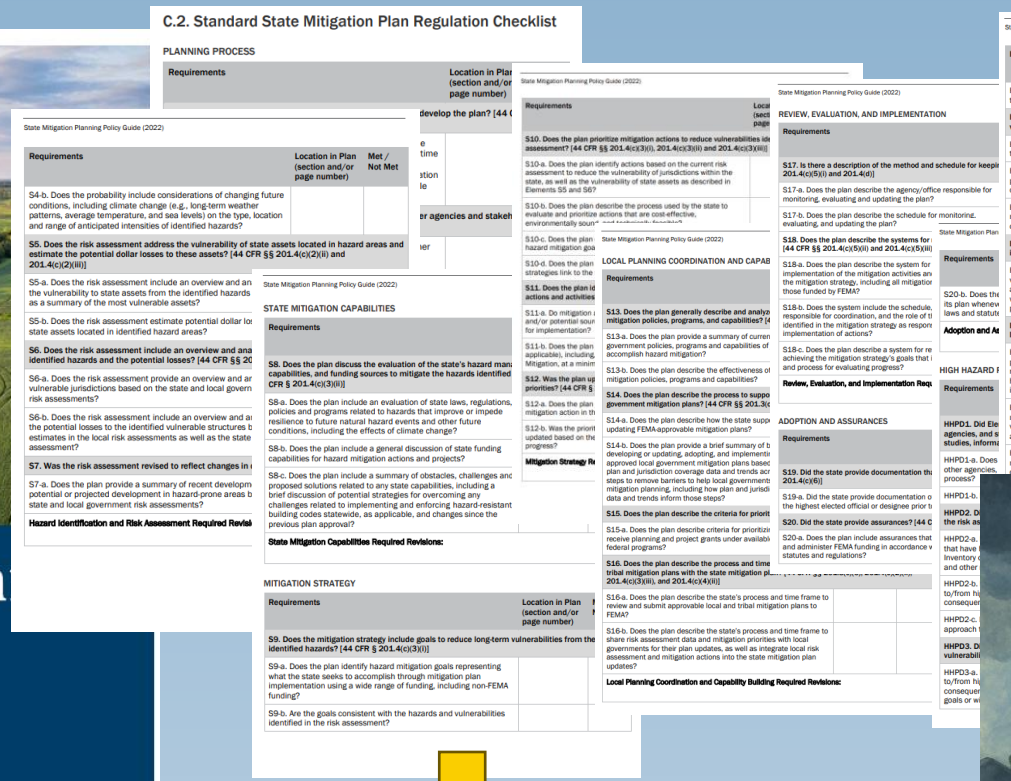
Support for Data-driven Hazard Mitigation Planning

The New York State Division of Homeland Security and Emergency Services

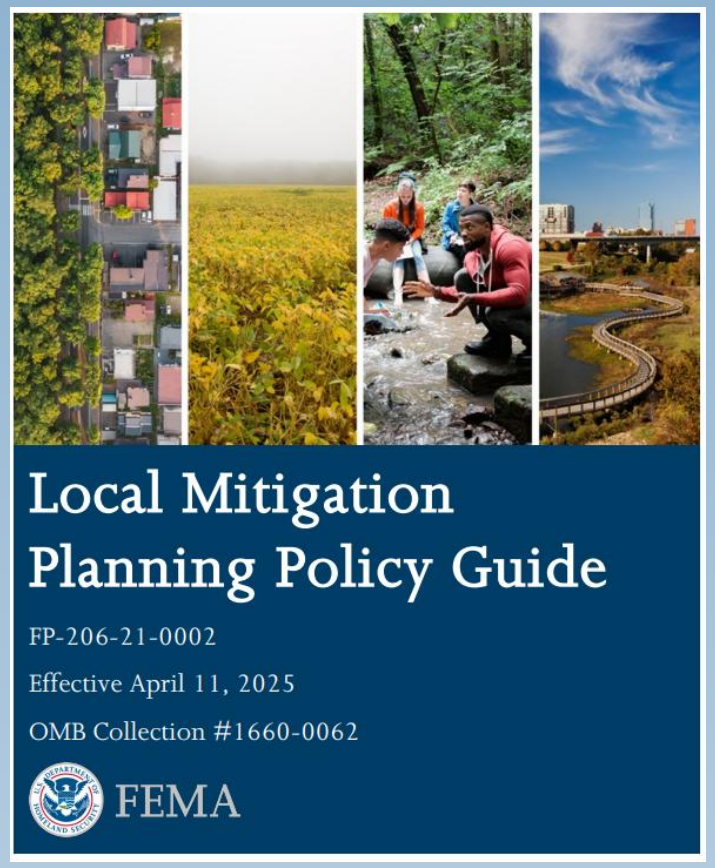
Hazard Mitigation Plans: Federal Mandate

Authorized under the **Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act)**, amended by the **Disaster Mitigation Act of 2000 (DMA 2000)** and outlined in the **44 CFR Part 201**.





Hazard Mitigation Plans: Federal Mandate



Regulatory Checklist

4.1 Planning Process

4.2 Risk Assessment

4.3 Mitigation Strategy

4.4 Keeping the Plan Current

4.5 Plan Updates – must assess recent changes

4.6 Plan Adoption

Review existing plans, studies, and reports; explain how information was incorporated.
Describe the potential impact of each hazard; summarize by jurisdiction in problem statements
Capability Assessment – describe authority's, policies, resources, etc. available to implement plan.
Describe risk implications of recent development / anticipated development.
Each jurisdiction must adopt the plan (required before FEMA will approve the plan)

Hazard Mitigation Plans: Common Misconceptions

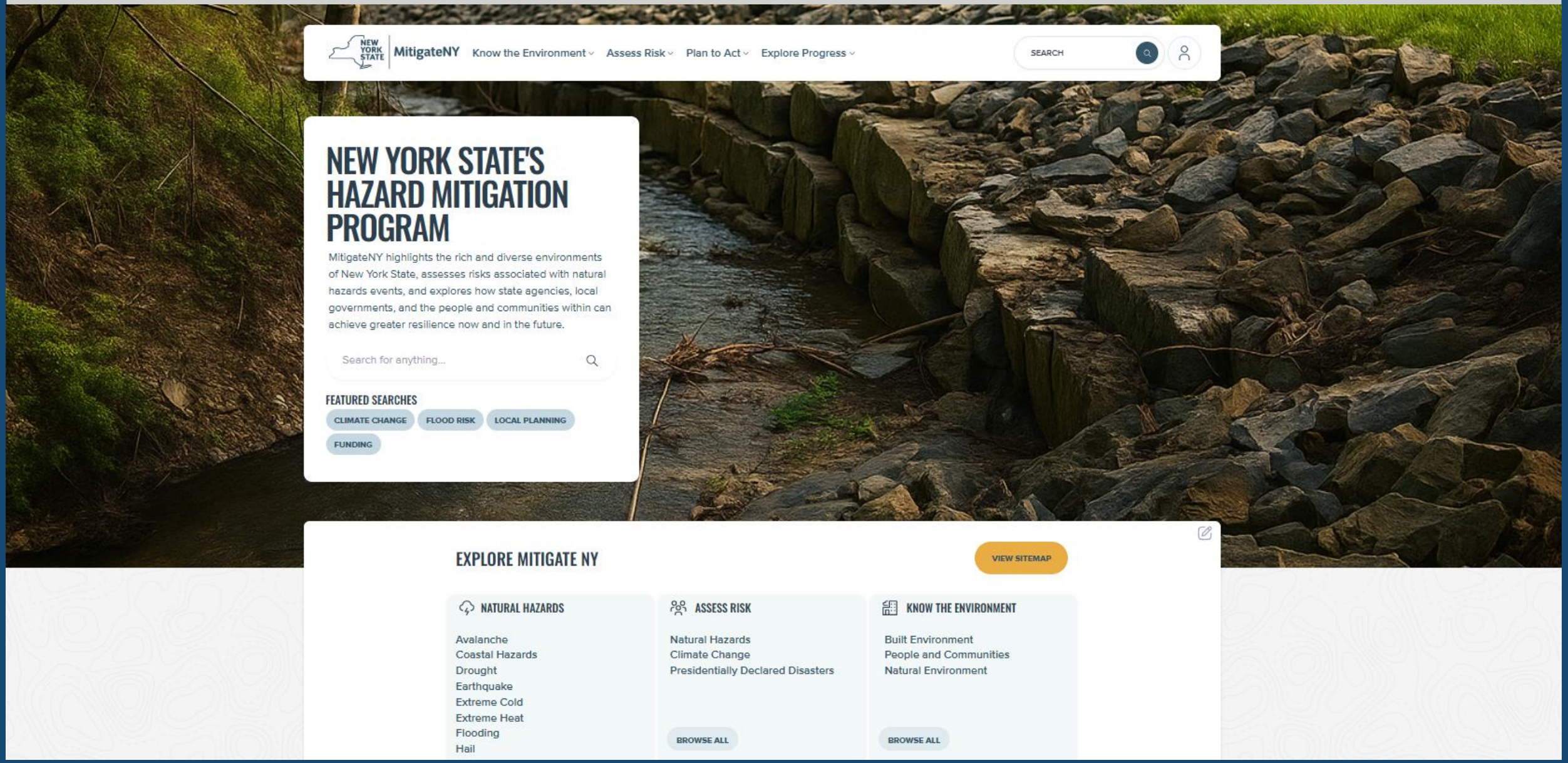
Mitigation Plans are short-term plans (5 years) - False

- Plans must consider future conditions – its vision is long-term.
- Plans must be updated at least every 5 years to reflect evolving risks and changing priorities
  - Changes in the Climate (future conditions) – Sea Level Rise and More frequent, intense, and/or longer lasting weather hazards
  - Changes in Land Use, Population, Demographics, Recent Mitigation (e.g. new building codes)

Mitigation Plans must be stand-alone plans - False

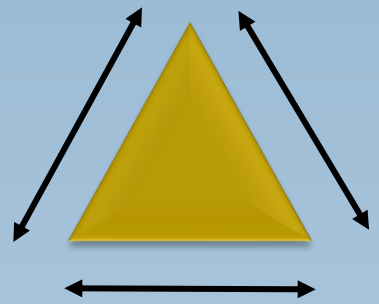
- Mitigation Plans that meet requirements ideally should be integrated into a comprehensive plan, climate smart community plans, economic development plans and other local plans.

2025 MitigateNY: New York State's Hazard Mitigation Planning Platform



MitigateNY: Three Distinct Components

Central Data Repository (CenRep)



Local Hazard Mitigation Plans (LHMPs)

State Hazard Mitigation Plan (SHMP)

MitigateNY: State Hazard Mitigation Plan – Know the Environment

What's at Risk

KNOW THE ENVIRONMENT

The State of New York consists of over 20 million people, 7 million buildings, an intricate and sprawling infrastructure network, and hundreds of thousands of acres of farms and other open space, all of which stand at risk to potential devastation from natural disasters.

BUILT ENVIRONMENT

- Buildings
- Water Infrastructure
- Transportation
- Energy
- Communications Infrastructure

LEARN MORE

PEOPLE AND COMMUNITIES

- Population and Demographics
- Social Vulnerability
- Economy and Development

LEARN MORE

NATURAL ENVIRONMENT

- Open Space
- Water and Air
- Wildlife

LEARN MORE

> Natural hazards and climate change put the life, property, and natural resources of New York State at risk. **These risks must be identified and mitigated.**

WHAT IS RISK?

Risk is the potential for damage, loss, or other impacts created by the interaction of natural hazards with community assets. Risk assessment requires precise consideration of a variety of terms and concepts. For purposes of hazard mitigation planning, New York State uses the following definitions:

State Hazard Mitigation Plan: Embedding Expertise into the Plan

CAPABILITIES CATALOGUE

The MitigateNY Capabilities Catalogue is a product of the 2018 SHMP and has been improved for usability and value in this update. The Catalogue is a collection of programs, plans/guidance, tools, and funding sources that provide support to natural hazard risk reduction and climate adaptation efforts at the state and local level in New York State. It is intended to be an interactive resource guide for local communities.

A community can filter by hazard, domain (buildings, infrastructure, natural environment), or phase of need (risk assessment, study, engineering, construction) to view a list of resources available in New York State. Additional detail is included about the administering agency and how each resource might be used meaningfully in the planning or implementation of mitigation efforts.

CAPABILITIES CATALOGUE

Administering Agency

Administering Agency Type (Fed, State, Local, Non-Profit)

Hazards

coastal hazards ×

CAPABILITY NAME	ADMINISTERING AGENCY	ADMINISTERIN
Intermunicipal Grant program (IMG) (For CW and DW Projects)	EFC	State
Clean Water State Revolving Fund	EFC	State
Water Infrastructure Improvement Program (WIIA) (For CW and DW Projects)	EFC	State
New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant (EPG) Program	EFC	State
Water Grants	EPA	Federal
NY Rising Housing Recovery Program	RHC	State
NY Rising Infrastructure Program	RHC	State

Plan to Act › Develop Strategies › Land Use Regulation

LAND USE REGULATION

Land use planning bodies play a pivotal role in shaping the physical and social landscapes of our communities, cities, and regions.

CLIMATE CHANGE

As the world continues to warm exponentially faster than usual, the magnitude of weather events increases and weather patterns shift, ultimately affecting the risk and vulnerability of the built and natural environments

HISTORIC PROPERTIES

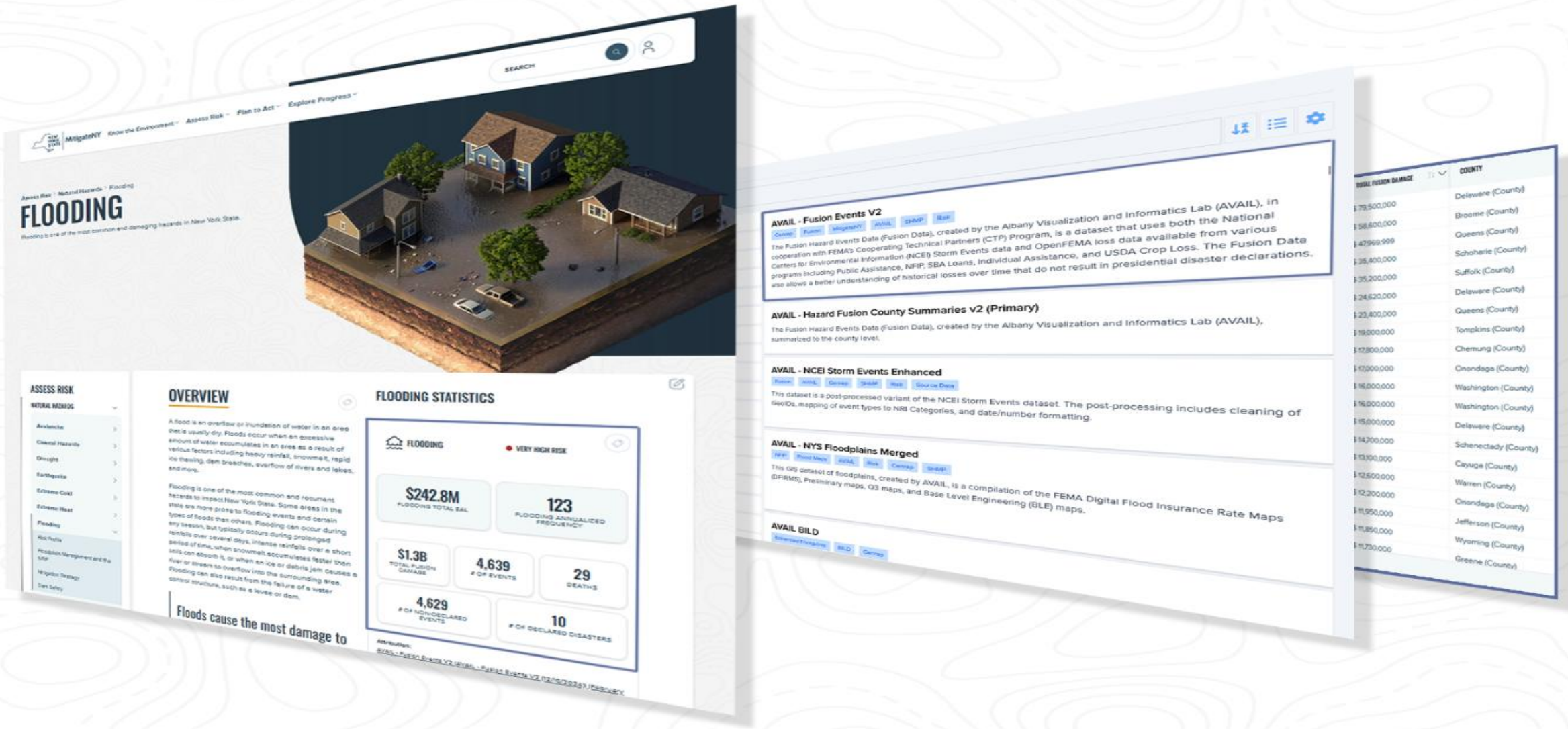
There are cultural resources in every county of New York State, many referred to as historic due to their age or ties to person in the community's development. A g or collection of buildings in a district may be amples of particular types of architecture. tions may have been the site of a major event istory, such as a famous battle, or could provide of past life through archaeological research.

er to these structures and locales as landmarks t stand out in the public view and memory—ngible or buried links to our history and mmunity identity. But to officially designate a oric" requires meeting a set of standards and a ess. In doing so, these properties become ertain protections and funds for their

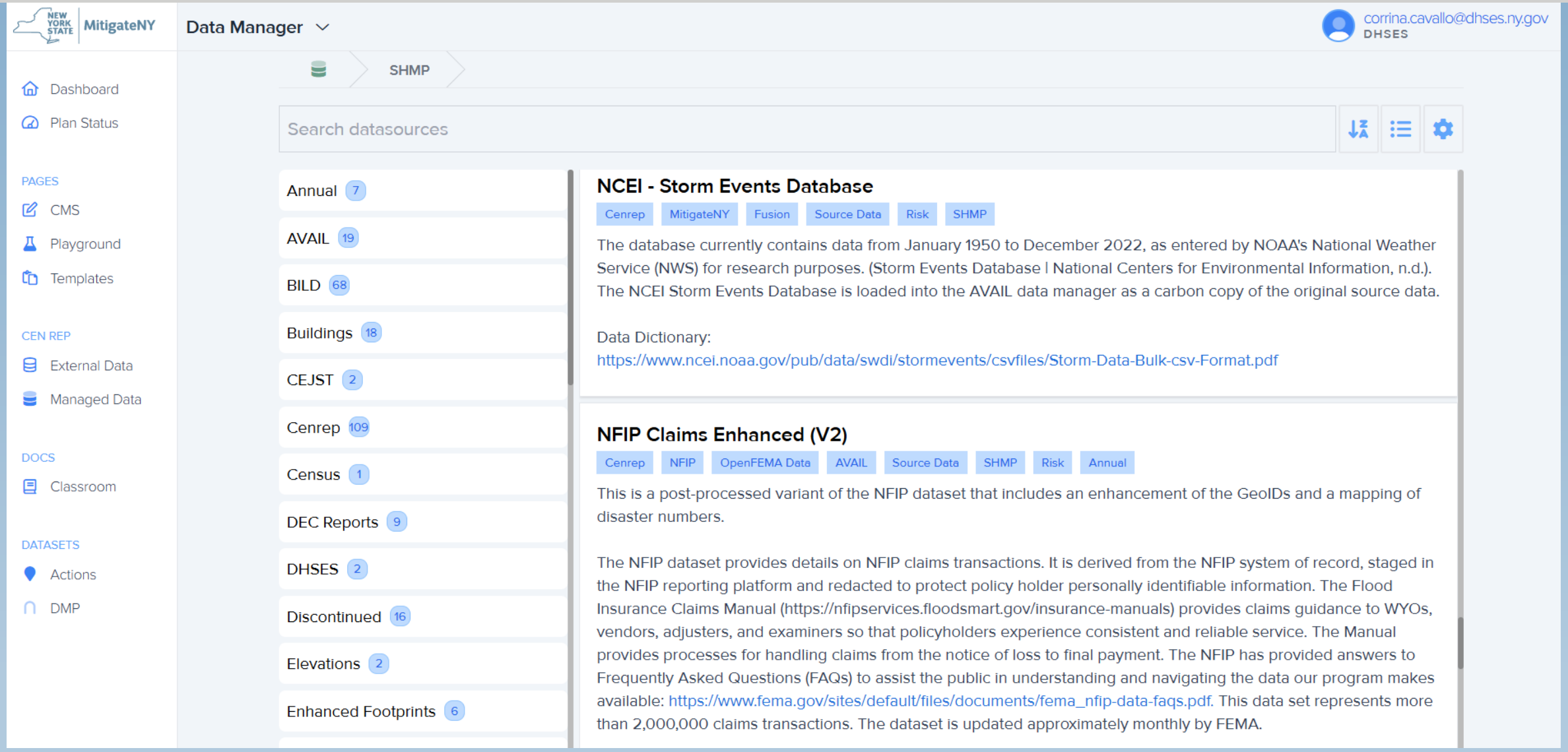
HARMFUL ALGAL BLOOMS

A **Harmful Algal Bloom (HAB)** occurs when algae or algae-like organisms grow rapidly to form dense blooms that are visible on the surface or in the water column of the affected waterbody. Algae are plant-like organisms that form the basis of the aquatic food chain or "web," but some algae can produce toxins. Other organisms that may form HABs have

State Hazard Mitigation Plan: Central Data Repository (CenRep)



MitigateNY: CenRep – External Data



MitigateNY: CenRep – External Data

Cenrep › NCEI - Storm Events Database

Overview | Stats | Table | Admin

NCEI - Storm Events Database

The database currently contains data from January 1950 to December 2022, as entered by NOAA's National Weather Service (NWS) for research purposes. (Storm Events Database | National Centers for Environmental Information, n.d.). The NCEI Storm Events Database is loaded into the AVAIL data manager as a carbon copy of the original source data.

Data Dictionary:
https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/Storm-Data-Bulk-csv-Format.pdf

Source Url **https://www.ncdc.noaa.gov/stormevents/**

Publisher **NOAA National Centers for Environmental Information (NCEI)**

Created
November 26, 2022 at 5:12 AM

Updated
September 13, 2024 at 1:25 PM

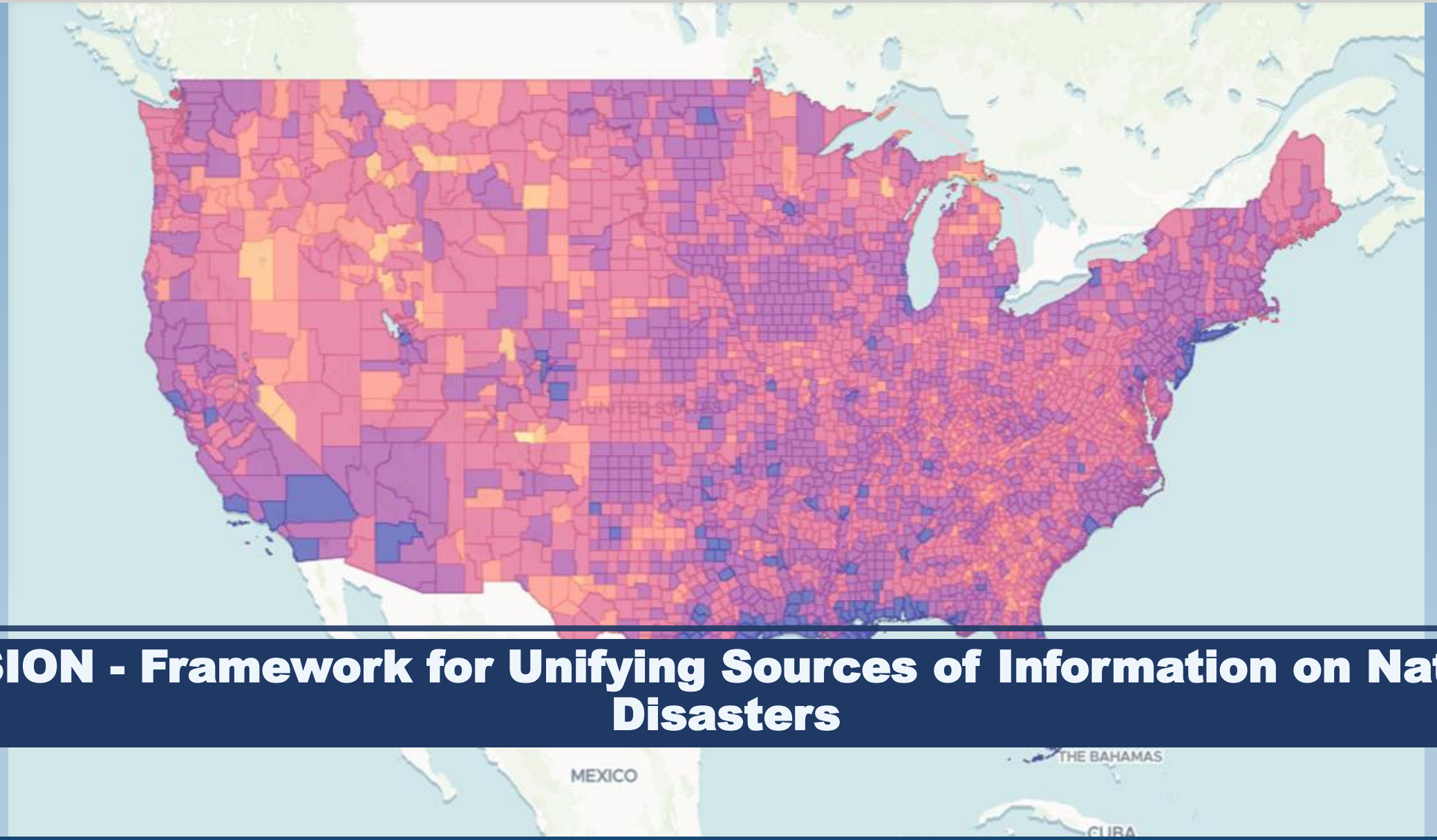
Categories
- Cenrep
- MitigateNY
- Fusion
- Source Data
- Risk
- SHMP

Type	Update Interval
NCEI_STORM_EVE...	ANNUAL

Columns 61

COLUMN	DESCRIPTION
Begin Year and Month *(integer)*	The year and month that the event began
Begin Date *(integer)*	The day of the month that the event began
Event Type *(string)*	The only events permitted in Storm Data are listed in Table 1 of Section 2.1.1 of NWS Directive 10-1605 at http://www.nws.noaa.gov/directives/sym/pd01016005curr.pdf. The chosen event name should be the one that most accurately describes the meteorological event leading to fatalities, injuries, damage, etc. However, significant events, such as tornadoes, having no impact or causing no damage, should also be included in Storm Data.
begin_time *(integer)*	The time of day that the event began
end_yearmonth *(integer)*	The year and month that the event ended
end_day *(integer)*	The day of the month that the event ended
end_time *(integer)*	The time of day that the event ended
episode_id *(integer)*	ID assigned by NWS to denote the storm episode; Episodes may contain multiple Events. The occurrence of storms and other significant weather phenomena having sufficient intensity to cause loss of life, injuries, significant property damage, and/or disruption to commerce.

MitigateNY: CenRep – FUSION Hazard Data



FUSION - Framework for Unifying Sources of Information on Natural Disasters

MitigateNY: State Hazard Mitigation Plan – Modular

FEDERALLY DECLARED DISASTERS

Disaster Name & Number

YEAR	DISASTER NAME & NUMBER	DISASTER CATEGORY
2024	SEVERE STORM, TORNADOES, AND FLOODING (4814)	Flooding
2023	SEVERE STORMS AND FLOODING (4723)	Hurricane
2023	SEVERE STORM AND FLOODING (4755)	Flooding
2022	SEVERE WINTER STORM AND	
2021	REMNANTS OF TROPICAL ST	
2021	REMNANTS OF HURRICANE	
2020	TROPICAL STORM ISAIAS (45	
2019	SEVERE STORMS, STRAIGHT-	

54
OF DECLARED DISASTERS

$33.0B
$ OF DECLARED DISASTERS

45,033
OF NON-DECLARED DISASTERS

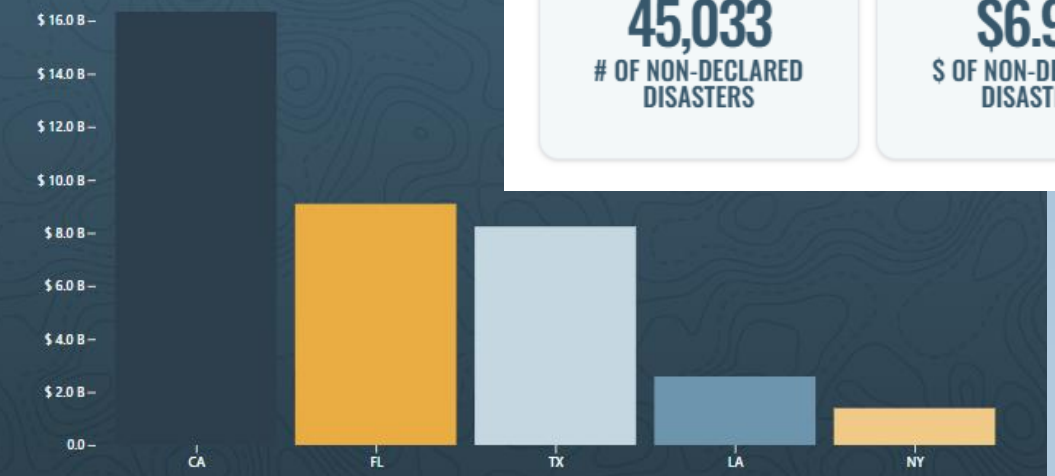
$6.9B
$ OF NON-DECLARED DISASTERS

NATURAL HAZARDS IN NEW YORK STATE

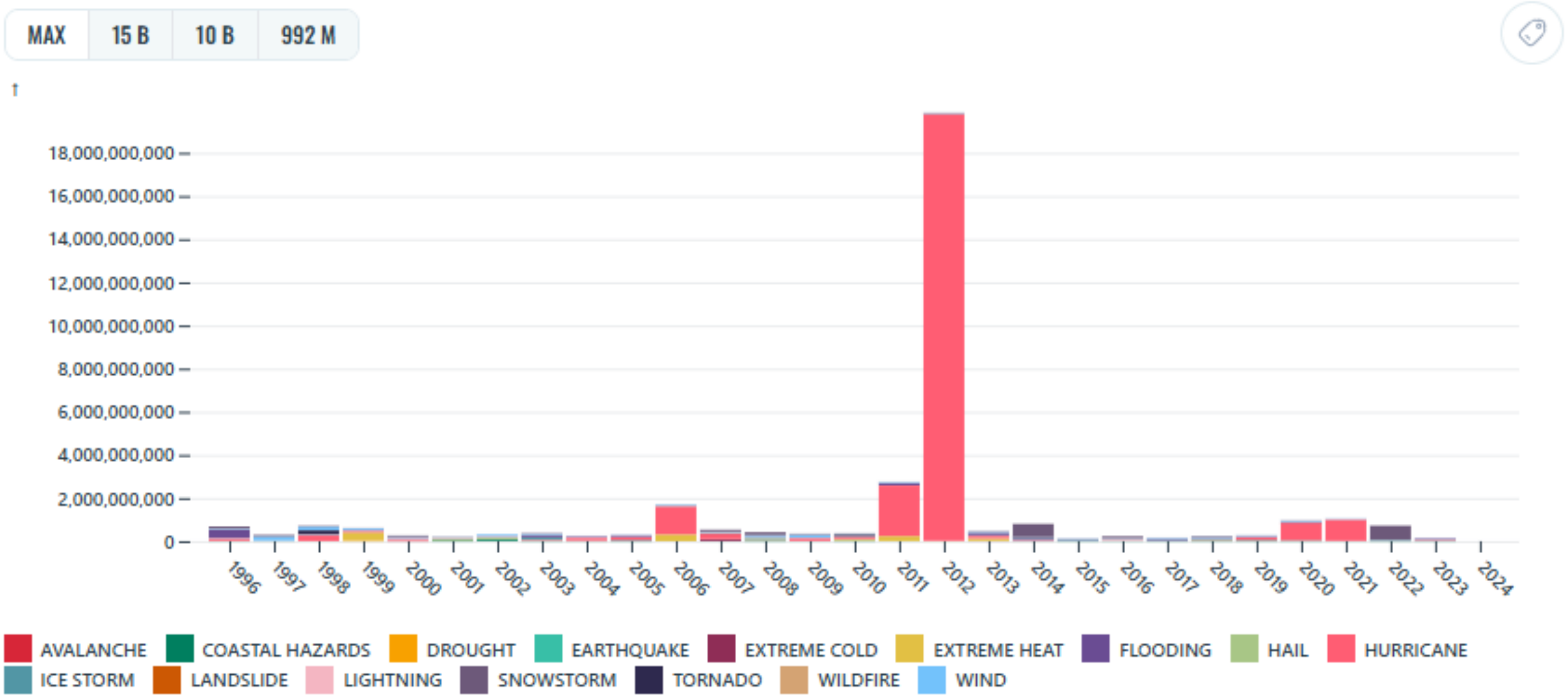
$1.39B
in Expected Annual Hazard Loss

New York State has a total Expected Annual Loss (EAL) of $1.39 billion dollars. This means that on average the state should expect to experience approximately $1.39B in hazard related damages per year. Hurricane and flooding contribute the most to New York's total $1.39B Expected Annual Loss.

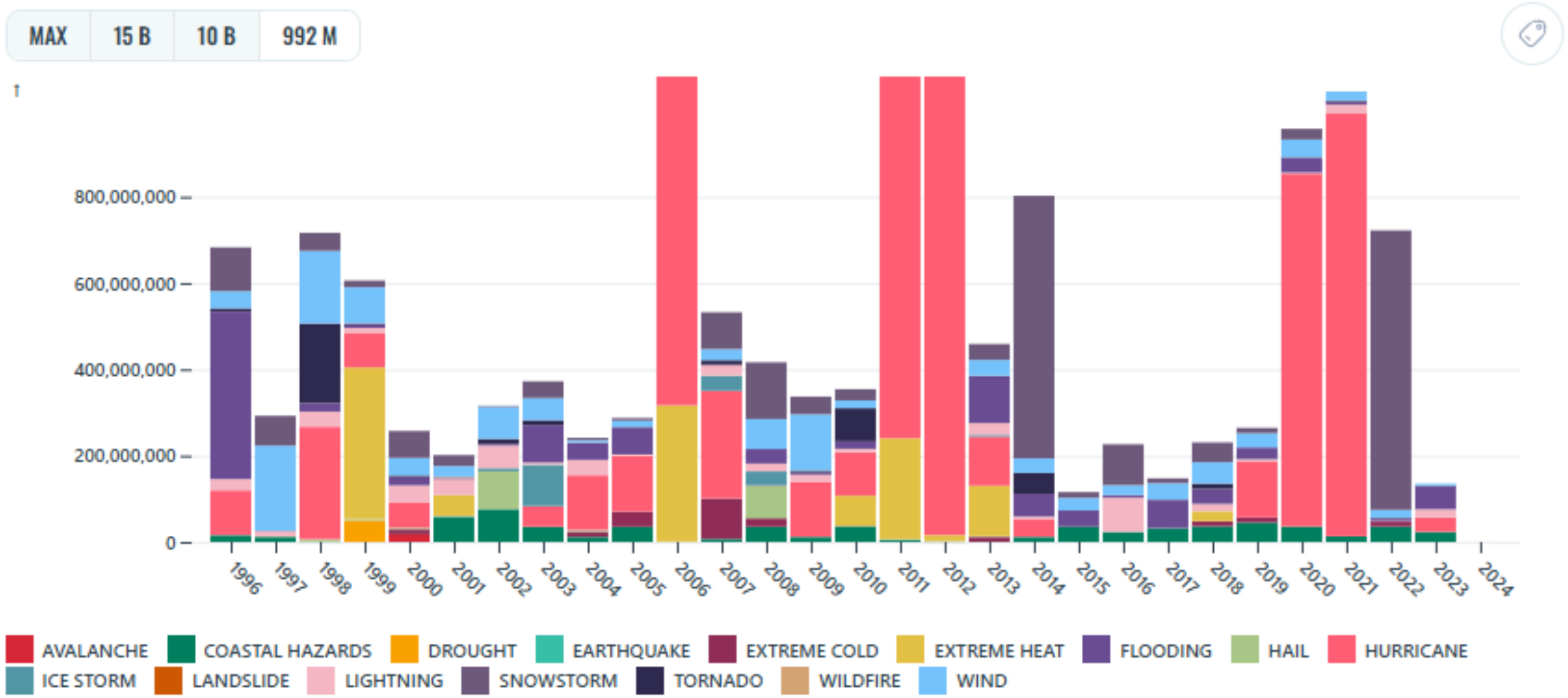
EXPLORE HAZARDS



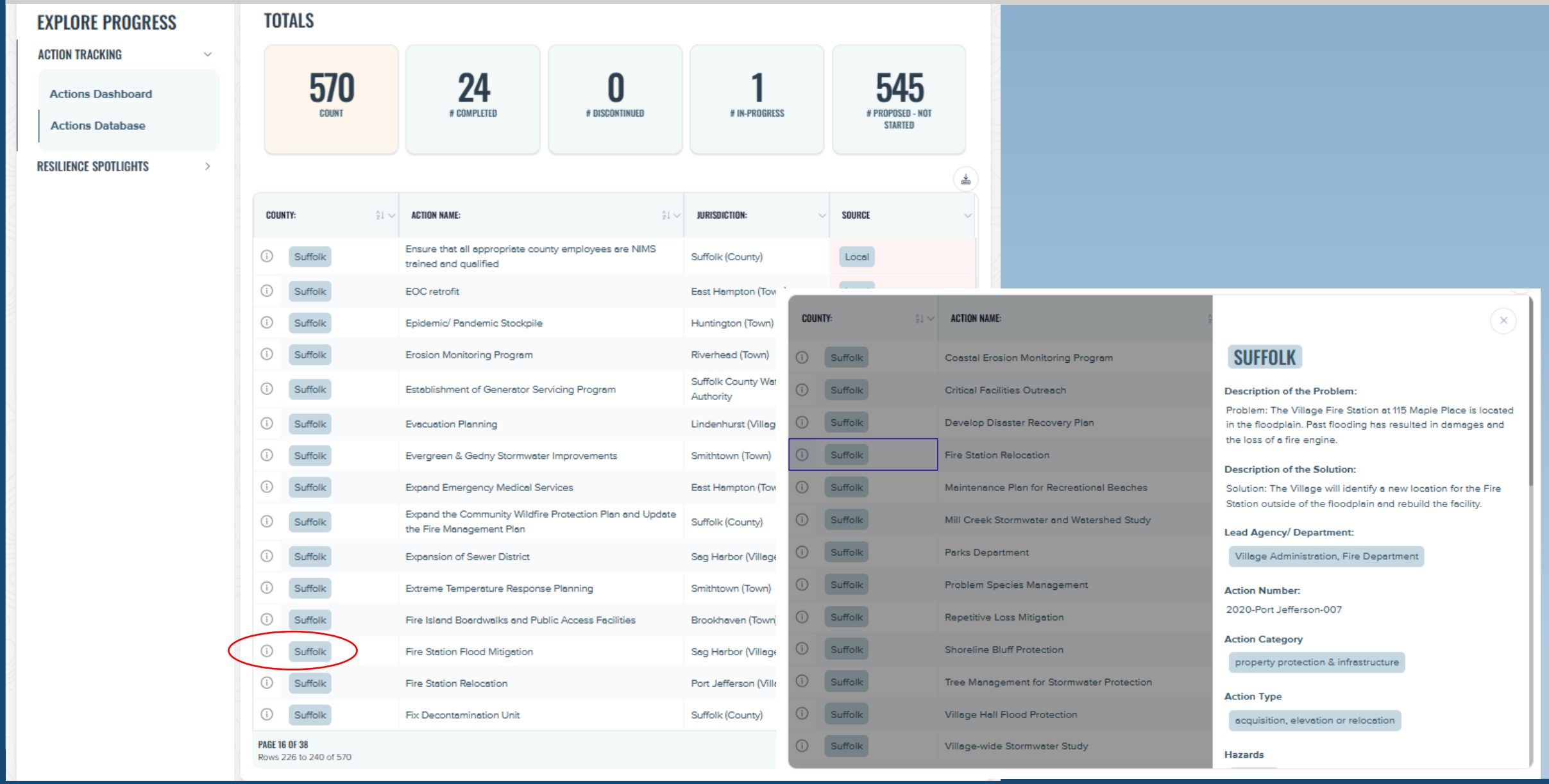
MitigateNY: State Hazard Mitigation Plan – Hazard Visualizations



MitigateNY: State Hazard Mitigation Plan – Hazard Visualizations



MitigateNY: CenRep – Internal Data



MitigateNY: CenRep – Internal Data

EXPLORE PROGRESS

ACTION TRACKING

- Actions Dashboard
- Actions Database

RESILIENCE SPOTLIGHTS

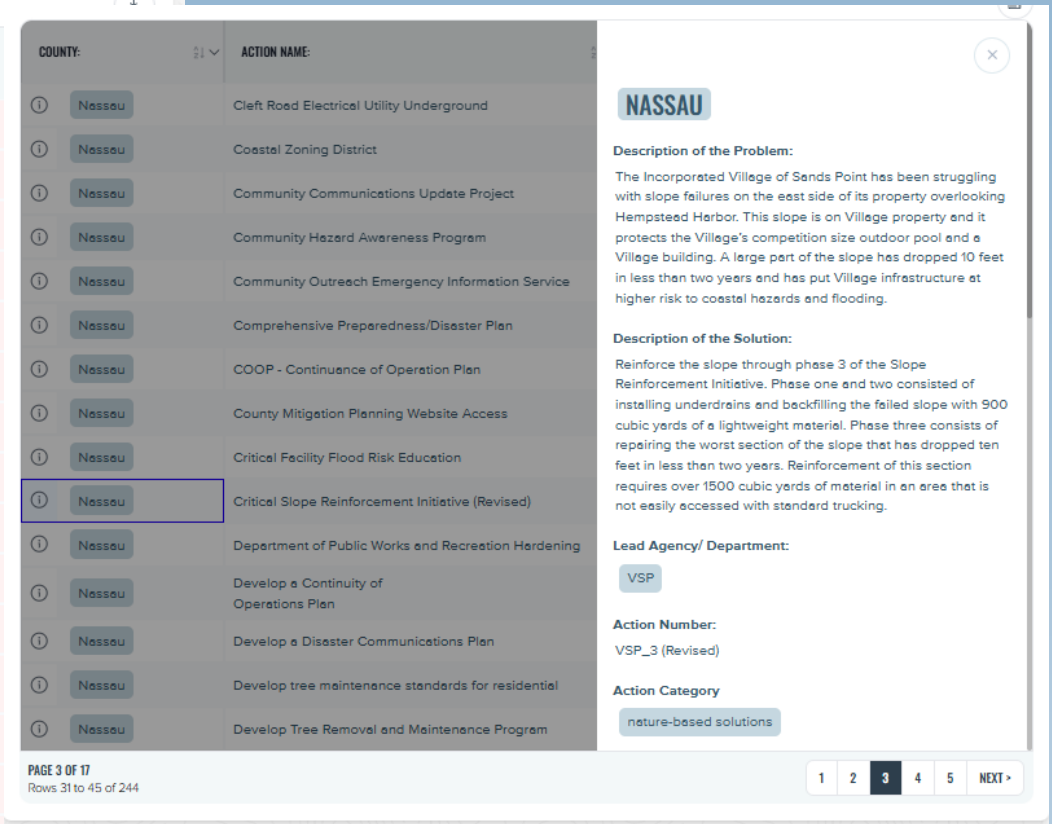
TOTALS

244	4	0	1	239
COUNT	# COMPLETED	# DISCONTINUED	# IN-PROGRESS	# PROPOSED - NOT STARTED

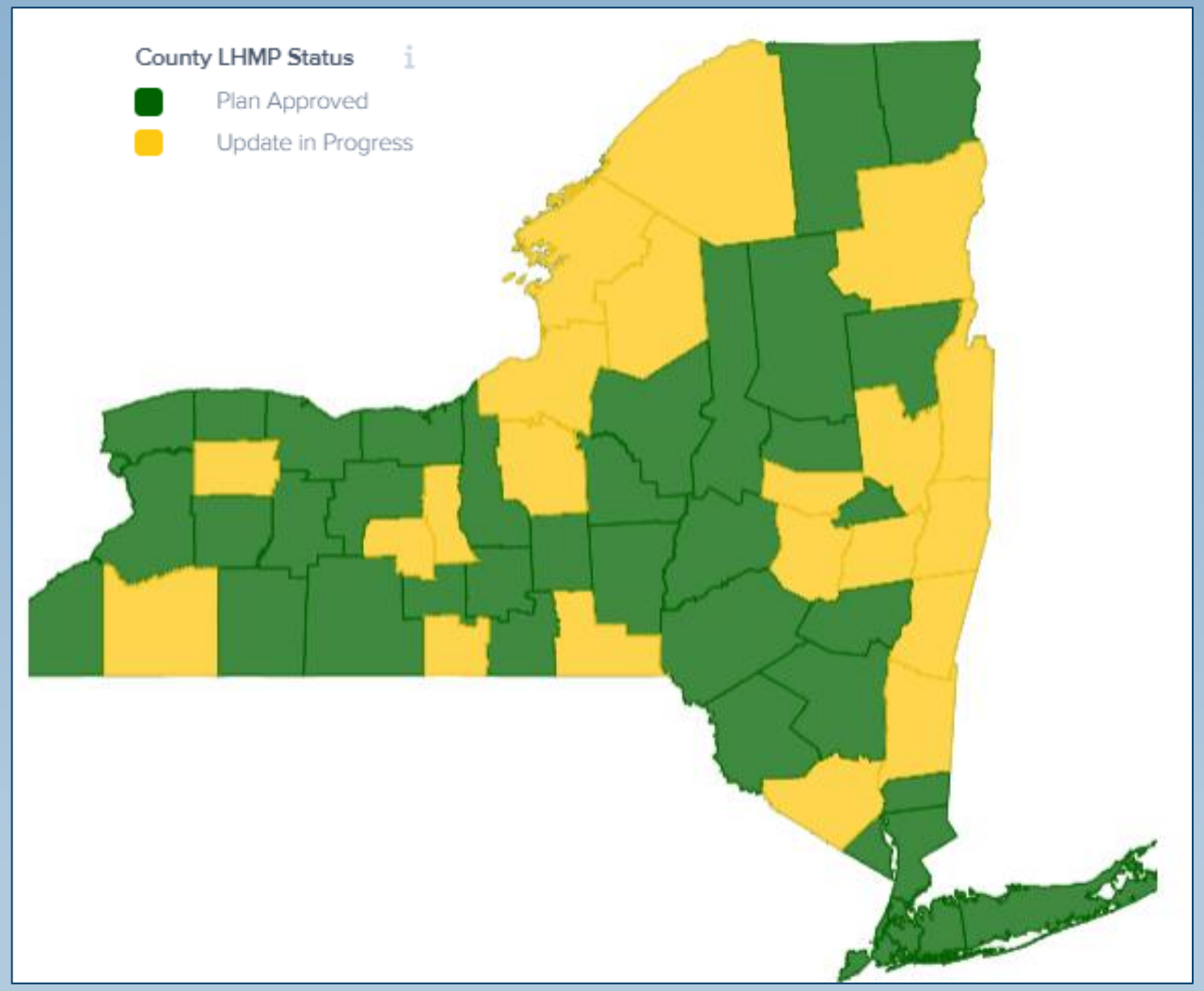
COUNTY:	ACTION NAME:	JURISDICTION:	SOURCE
Nassau	Cleft Road Electrical Utility Underground	Mill Neck (Village)	Local
Nassau	Coastal Zoning District	Woodsburgh (Village)	Local
Nassau	Community Communications Update Project	Roslyn Harbor (Village)	Local
Nassau	Community Hazard Awareness Program	Laurel Hollow (Village)	Local
Nassau	Community Outreach Emergency Information Service	Russell Gardens (Village)	Local
Nassau	Comprehensive Preparedness/Disaster Plan	South Floral Park (Village)	Local
Nassau	COOP - Continuance of Operation Plan	Stewart Manor (Village)	Local
Nassau	County Mitigation Planning Website Access	Rockville Center (Village)	Local
Nassau	Critical Facility Flood Risk Education	Nassau (County)	Local
Nassau	Critical Slope Reinforcement Initiative (Revised)	Sands Point (Village)	Local
Nassau	Department of Public Works and Recreation Hardening	East Rockaway (Village)	Local
Nassau	Develop a Continuity of Operations Plan	Plandome Heights (Village)	Local
Nassau	Develop a Disaster Communications Plan	South Floral Park (Village)	Local
Nassau	Develop tree maintenance standards for residential	Lynbrook (Village)	Local
Nassau	Develop Tree Removal and Maintenance Program	South Floral Park (Village)	Local

PAGE 3 OF 17
Rows 31 to 45 of 244

1 2 3 4 5 NEXT ›



MitigateNY: Local Hazard Mitigation Plans



Every county in New York State has a multi-jurisdictional hazard mitigation plan.

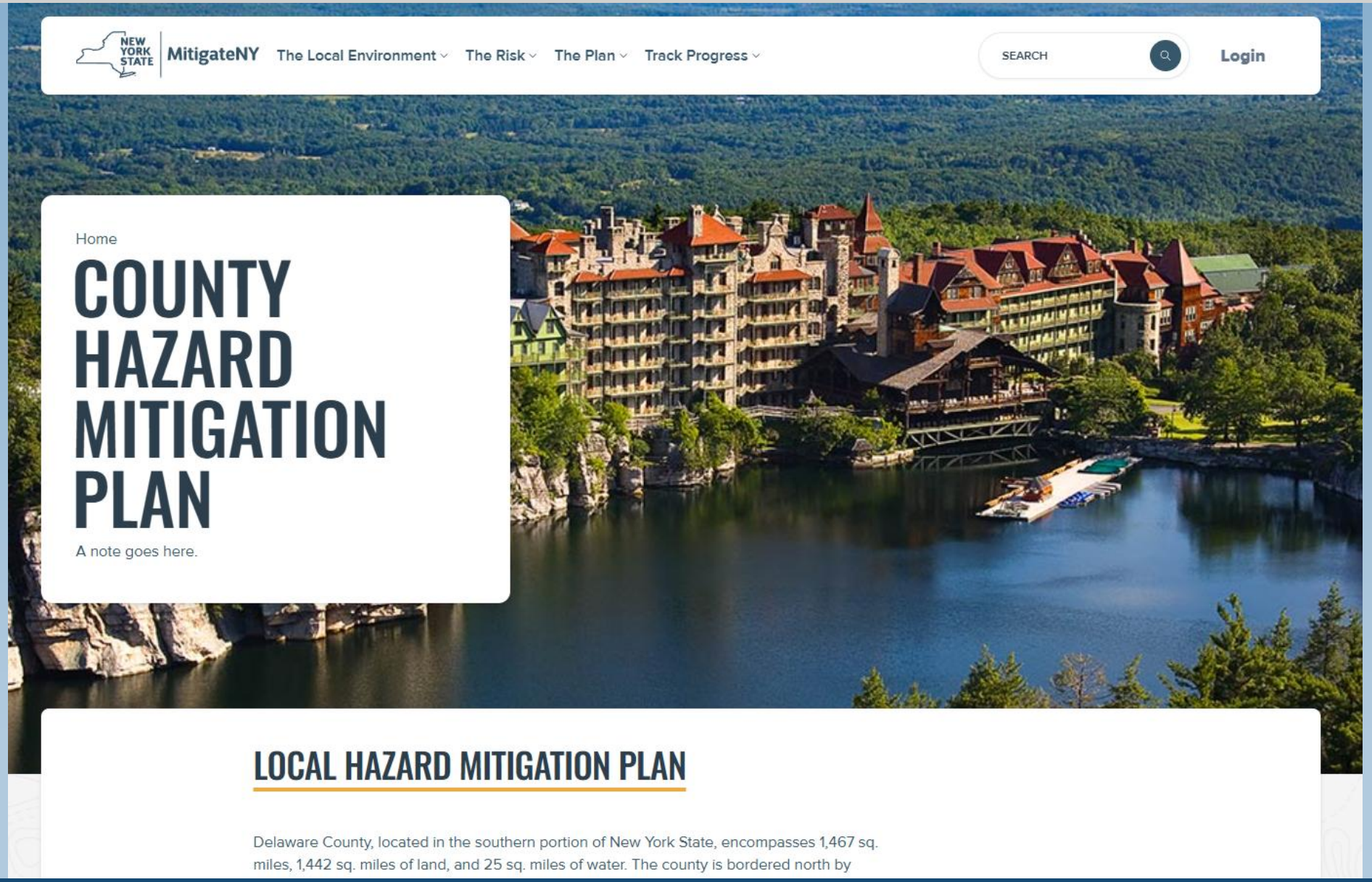
- Funded
- Mandated
- Maintained & Updated

County led – community focused.

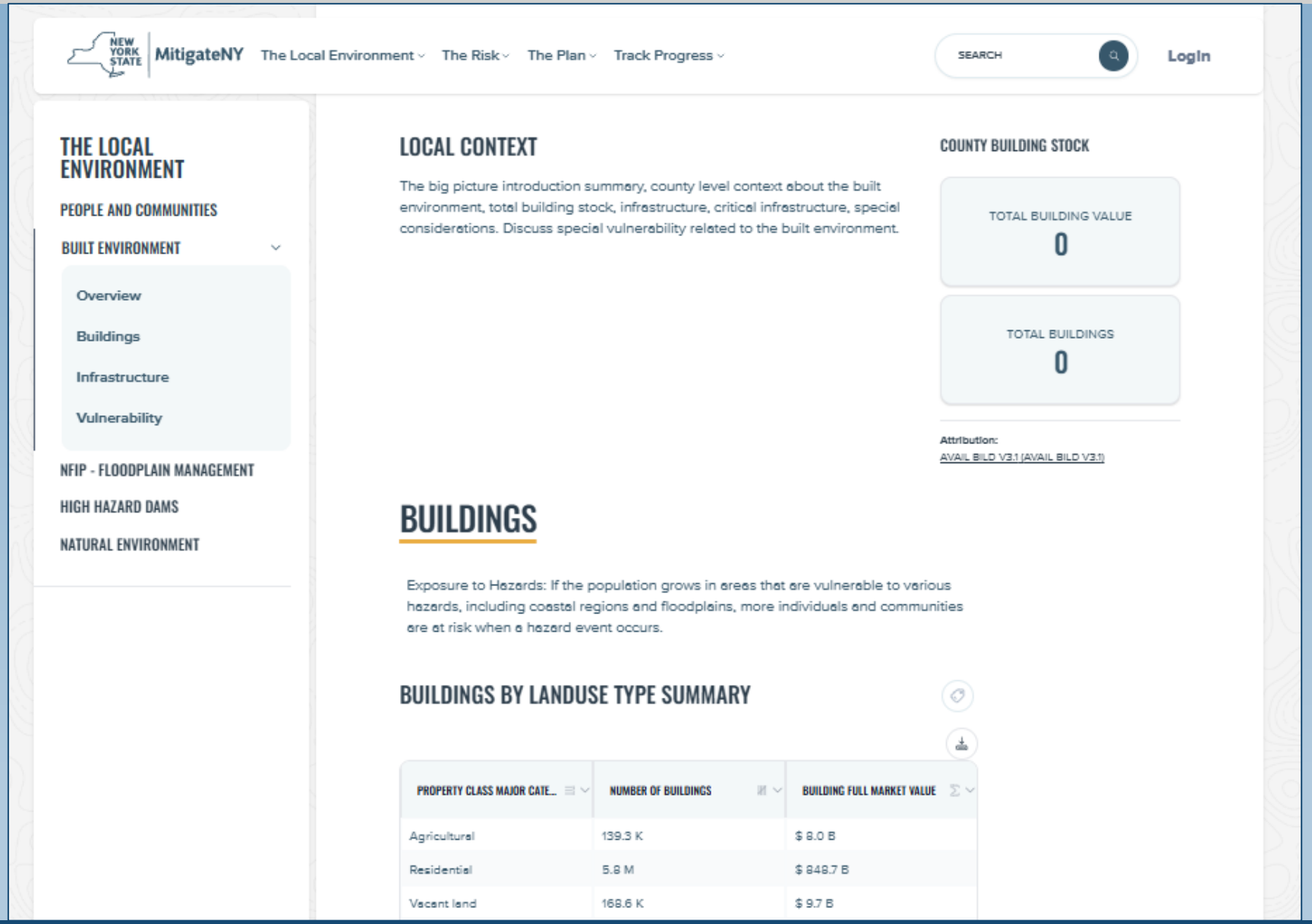
Engages nearly all jurisdictions and municipal government officials across all NYS counties

Planning process **identifies hazards, assess risks and vulnerabilities,** and **develop mitigation strategies** that can be funded using a wide range of resources.

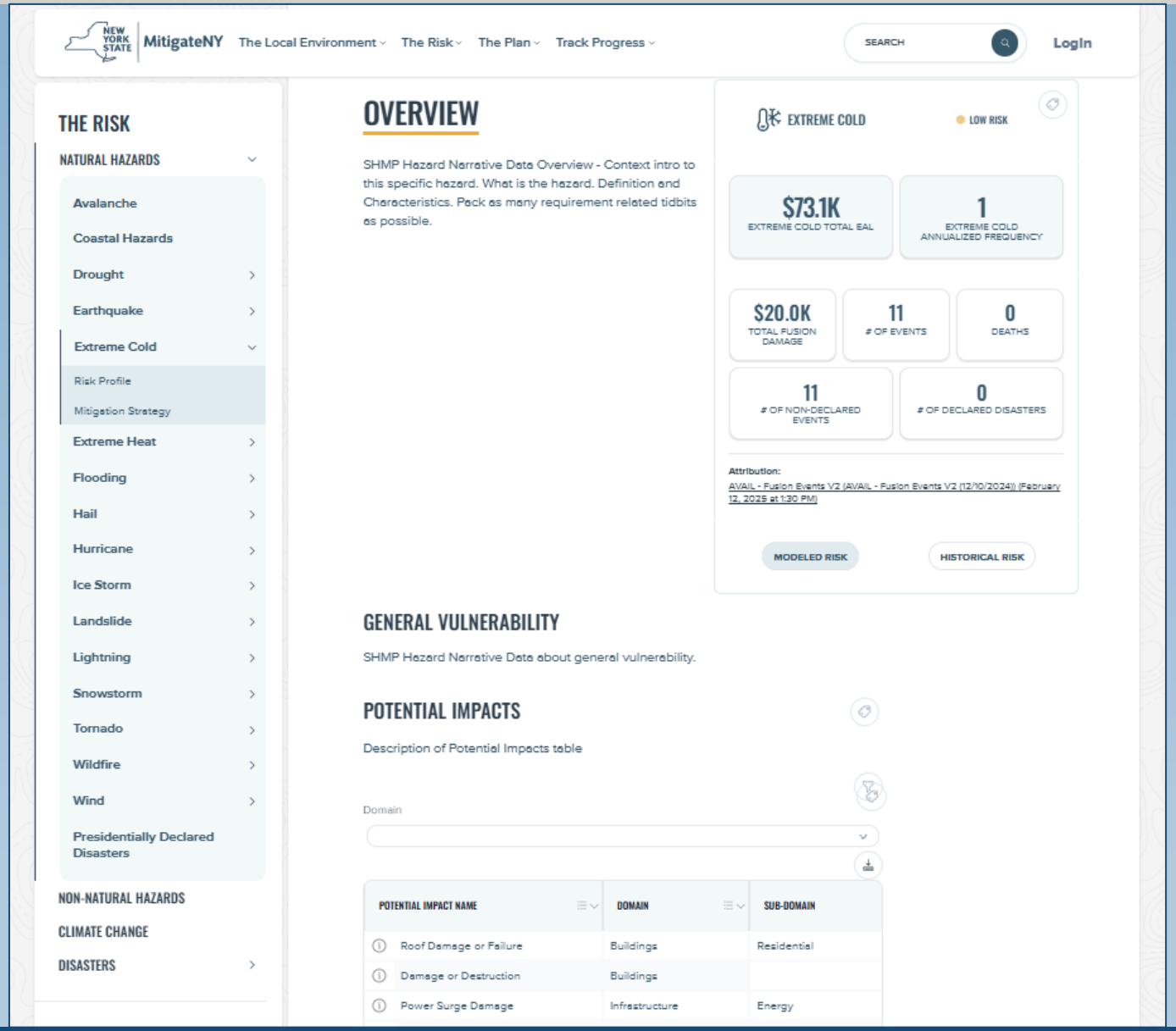
MitigateNY: Local Hazard Mitigation Plans



MitigateNY: Local Hazard Mitigation Plans



MitigateNY: Local Hazard Mitigation Plans



MitigateNY: CenRep - BILD

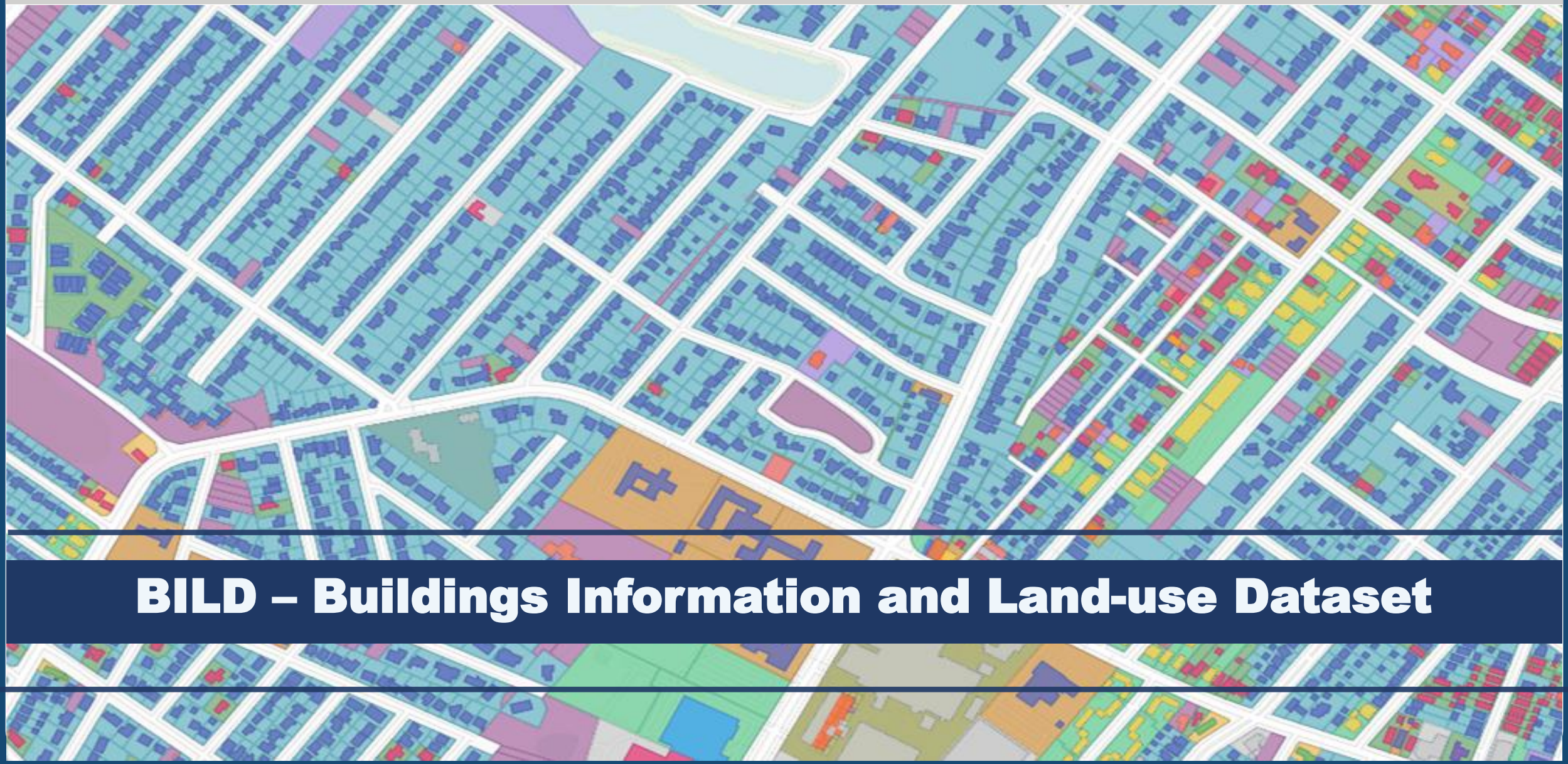


BILD – Buildings Information and Land-use Dataset

Questions & Contact Info

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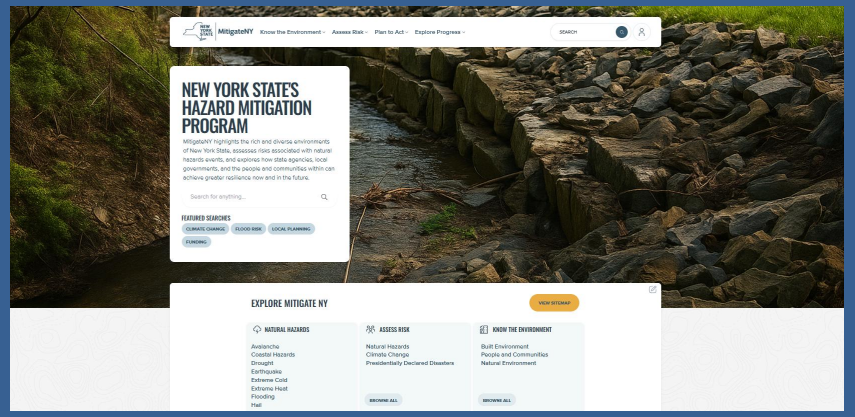
Deputy Chief of Mitigation Programs
corrina.cavallo@dhses.ny.gov

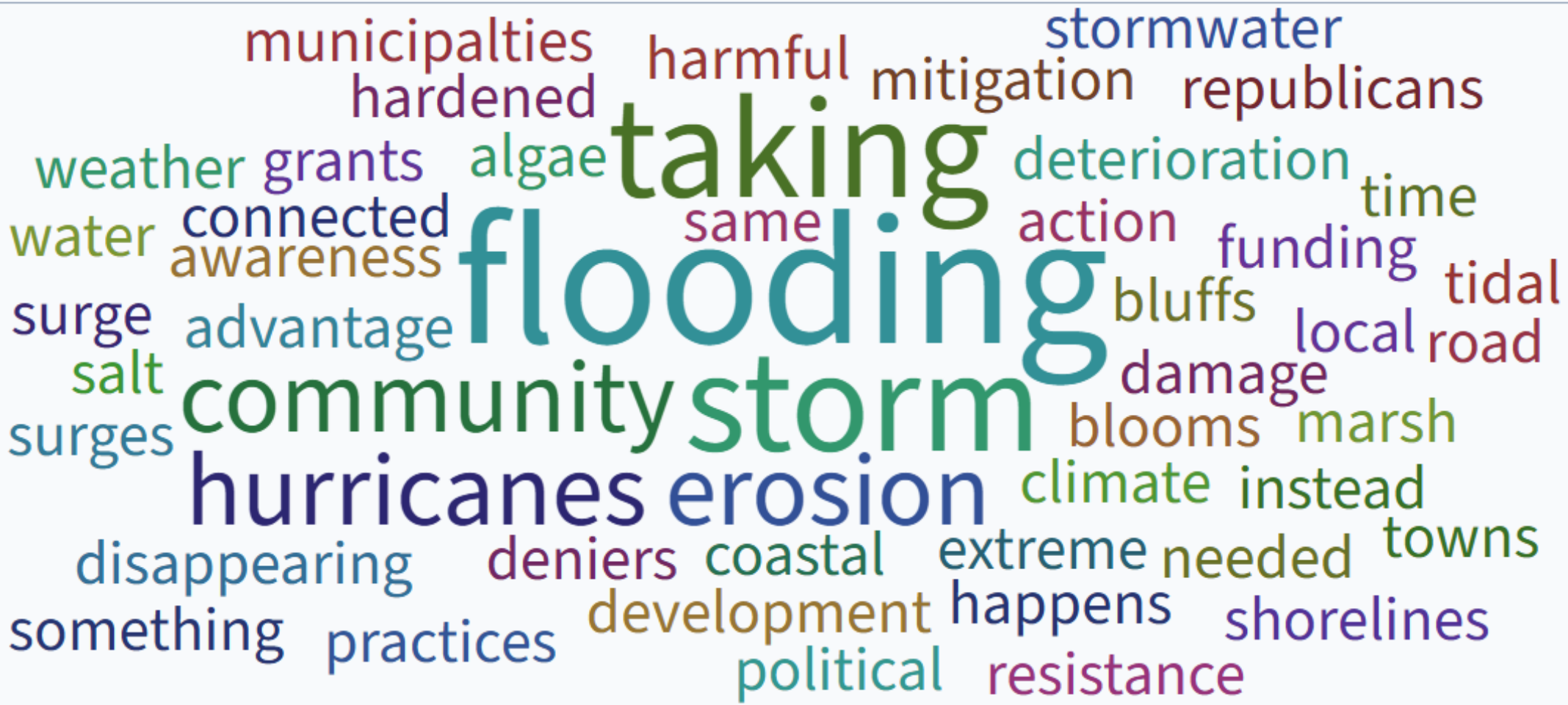
Kevin Clapp
Local Hazard Mitigation Planning Supervisor
Kevin.clapp@dhses.ny.gov

mitigateny@dhses.ny.gov



https://hazardmitigation.ny.gov/

What do you think is the biggest coastal resilience issue facing Long Island Sound communities in Nassau County?



LONG ISLAND SOUND PARTNERSHIP

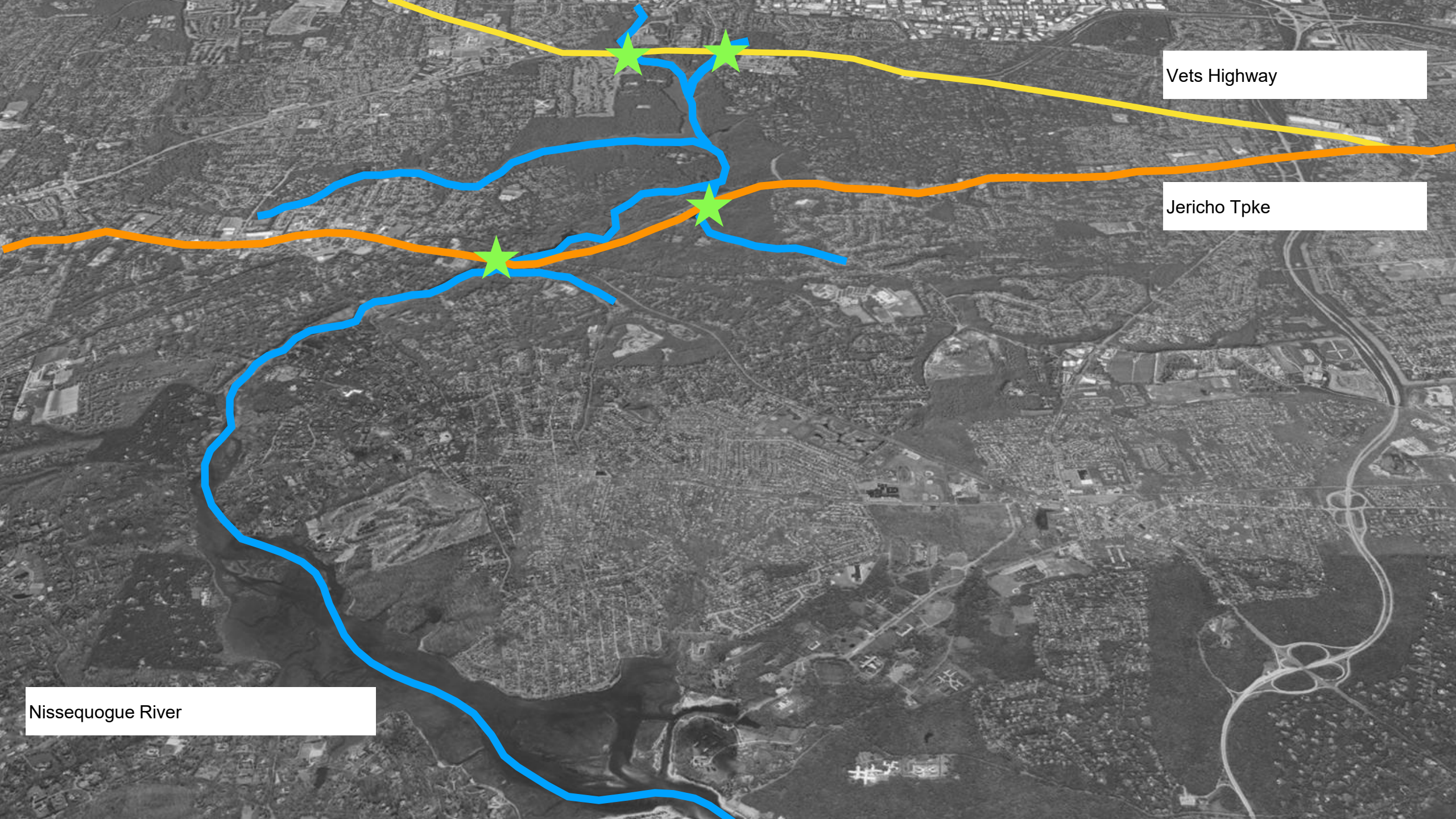
Sea Grant NEW YORK

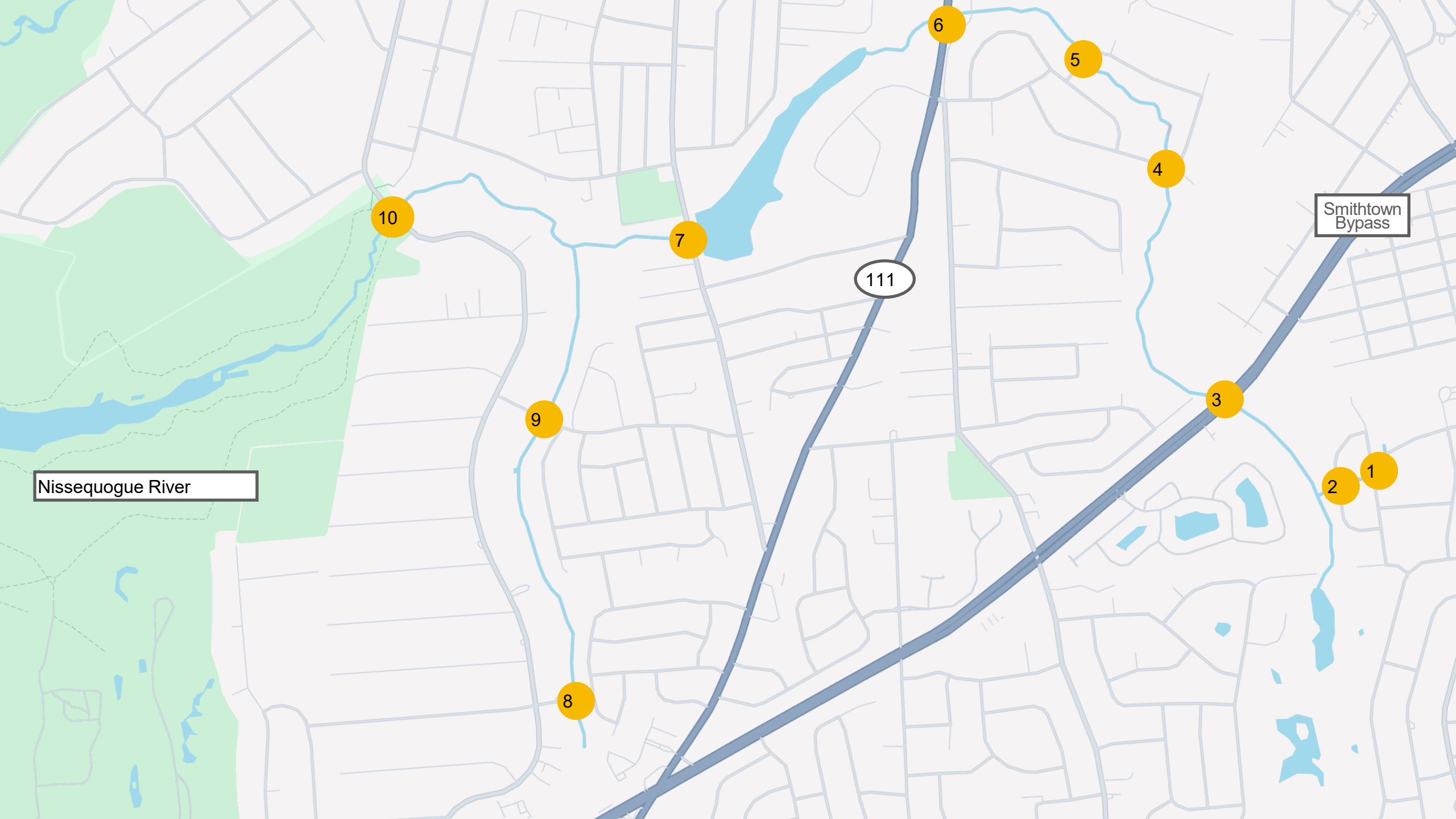
Beaver Brook, Mill Neck. Credit: Sarah Schaefer-Brown

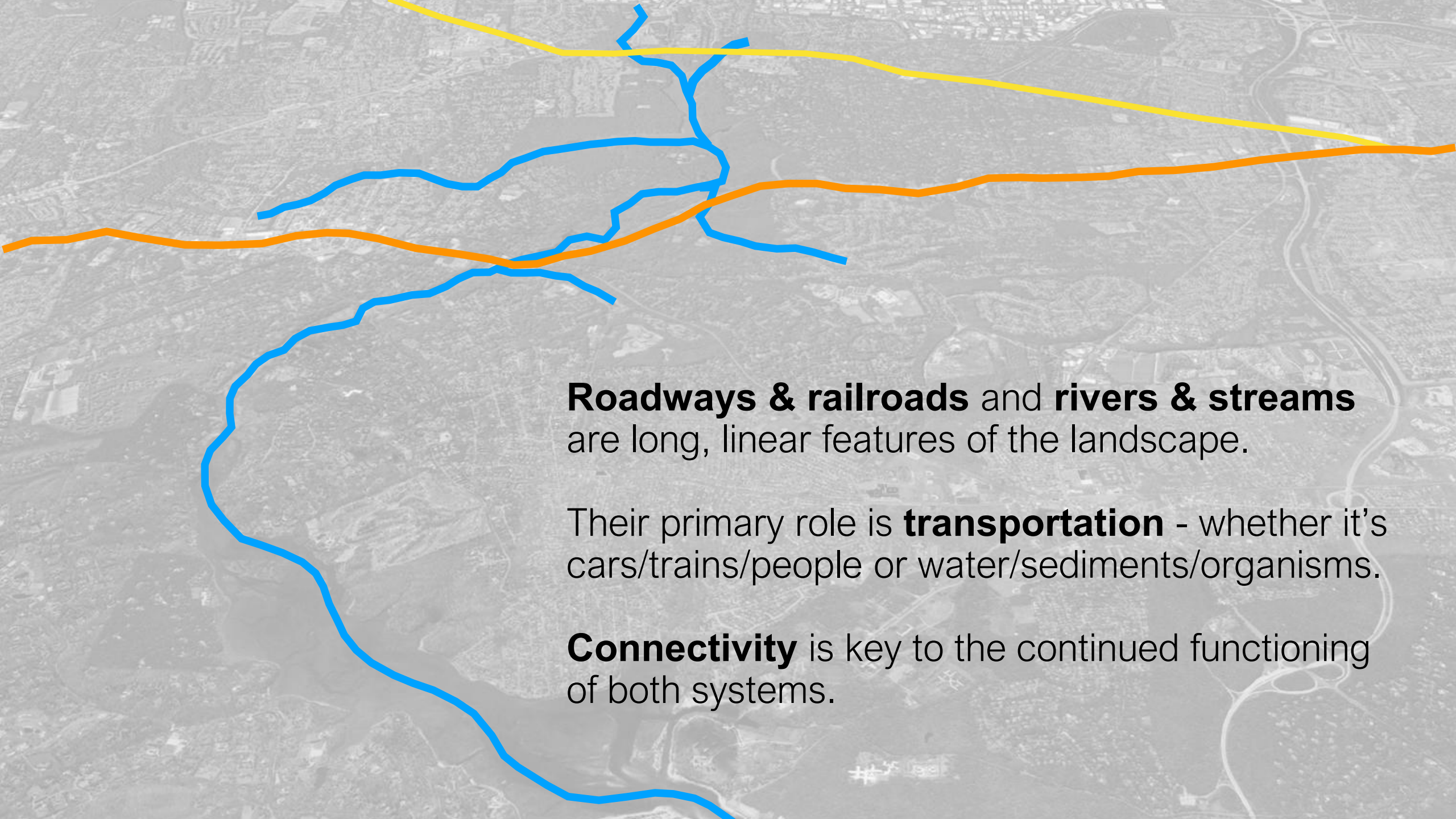
Resilience Resources & Tools

Stream/Tidal Crossing Prioritization Tool

Enrico Nardone, Executive Director
Seatuck Environmental Association


Vets Highway
Jericho Tpke
Nissequogue River


6
5
4
10
7
111
Smithtown
Bypass
9
3
2
1
Nissequogue River
8



Roadways & railroads and **rivers & streams** are long, linear features of the landscape.

Their primary role is **transportation** - whether it's cars/trains/people or water/sediments/organisms.

Connectivity is key to the continued functioning of both systems.

Road-Stream Crossings:
Where the Water Meets the Road

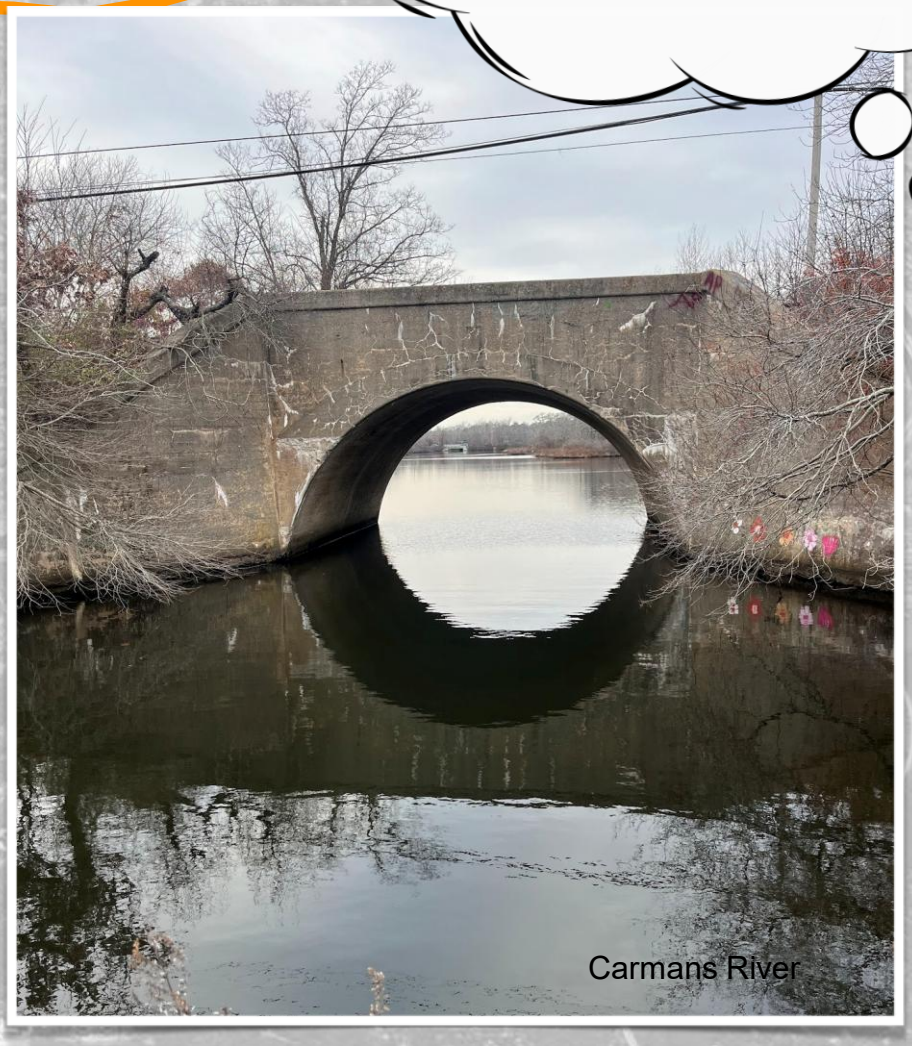
Culverts and **bridges** allow roads to pass over rivers, streams, tidal creeks and wetlands.

Undersized, poorly designed, or failing infrastructure at these crossings restricts water flow and can lead to flooding, road closures, property damage, degraded natural systems and impaired water quality.

Road-Stream Crossings:
Where the Water Meets the Road

Culvert or Bridge?

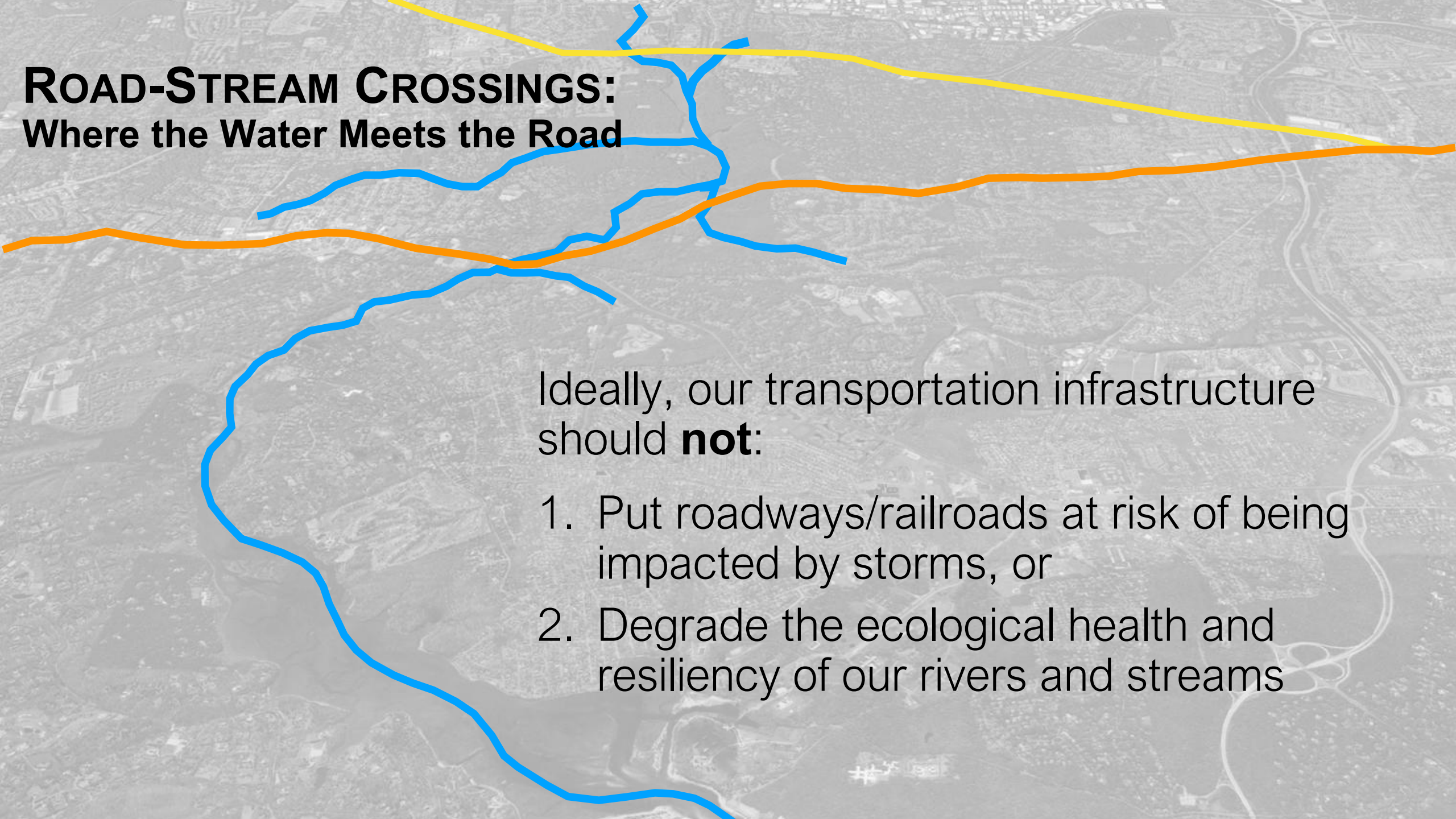
Beaver Brook



Carmans River

Road-Stream Crossings:
Where the Water Meets the Road

ROAD-STREAM CROSSINGS:
Where the Water Meets the Road



Ideally, our transportation infrastructure should **not**:

1. Put roadways/railroads at risk of being impacted by storms, or
2. Degrade the ecological health and resiliency of our rivers and streams

Transportation Vulnerability

Ecological Impacts:

- Perched culverts with excess drop at the outlet
- Undersized culverts create high water velocity, turbulence & outlet scour
- Undersized culverts can impound water and accumulate debris at the culvert inlet
- Oversized culverts can create inadequate water depths

Ecological Impacts:

- Disconnect rivers & streams
- Fragment wildlife habitat
- Disrupt sediment/nutrient transport
- Block wildlife movement (aquatic, semi-aquatic and terrestrial)

The Solution?

Right-Sizing!

Road-Stream Crossings that:

1. Make roadways/railroads resilient to storm impacts
2. Allow waterways to act naturally; promote healthy & resilient rivers and streams

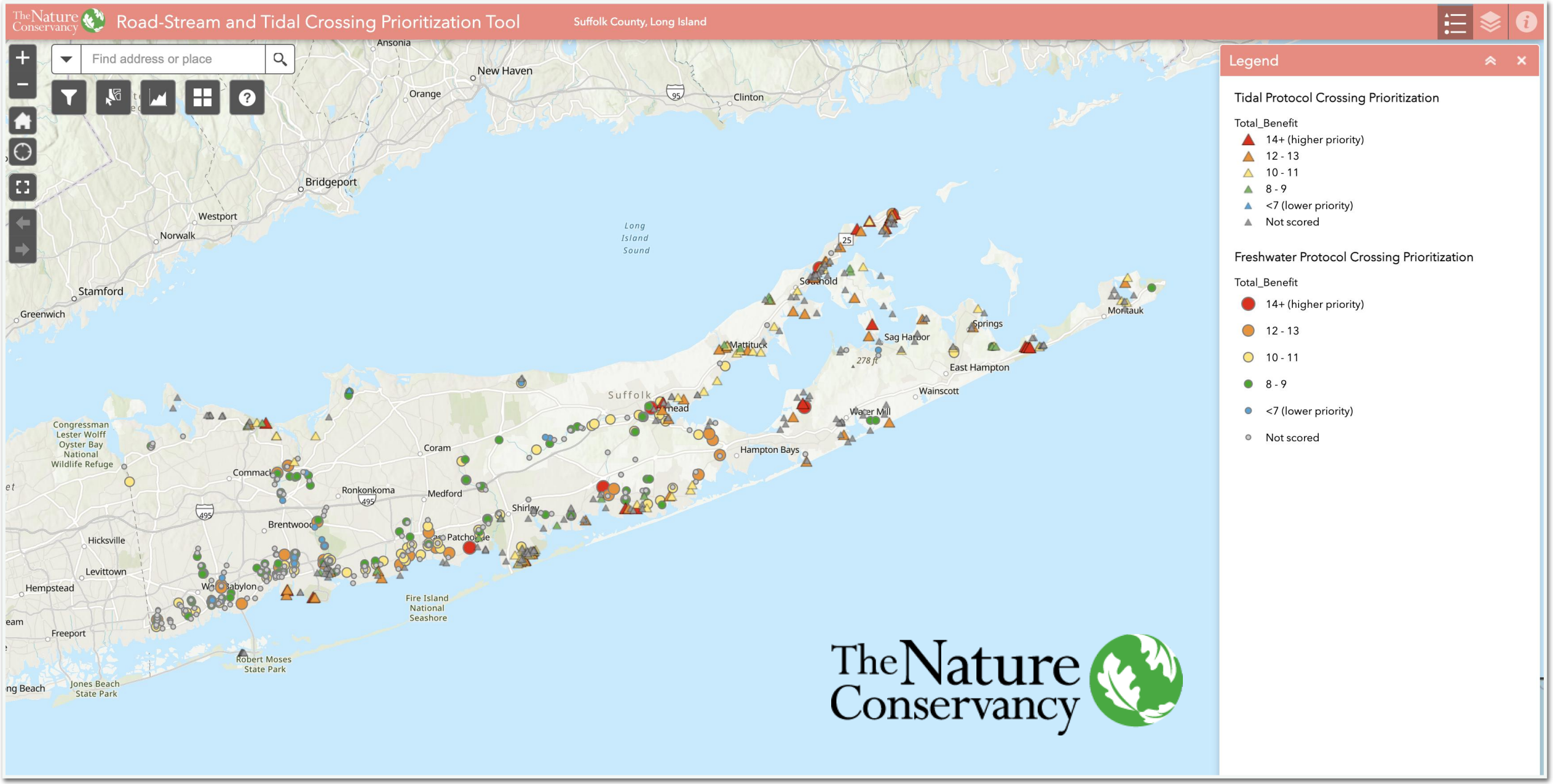
Potash Brook, Wilmington, NY

New Bridge Brook, Wilmington, NY

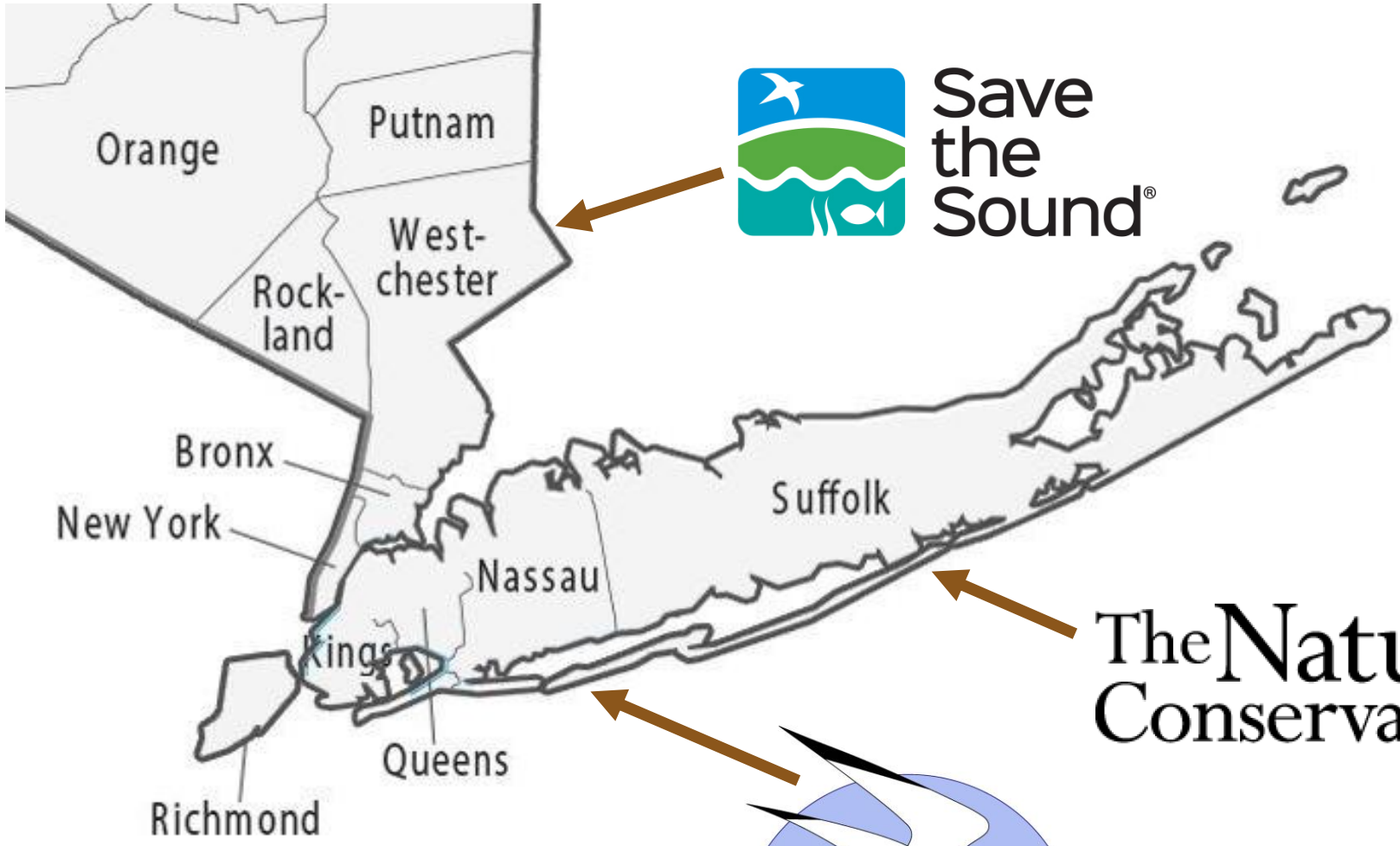

Pete Topping - Peconic Baykeeper
Pete Topping - Peconic Baykeeper

- Established in 2015
- Coordinated by University of Massachusetts Amherst
- Developed a unified protocol for assessing aquatic passability at road-stream crossings
- Develop a programmatic infrastructure (the NAACC) to support crossing assessments throughout the 13-state North Atlantic region

Road-Stream & Tidal Crossing Prioritization Tool



Road-Stream & Tidal Crossing Prioritization Tool

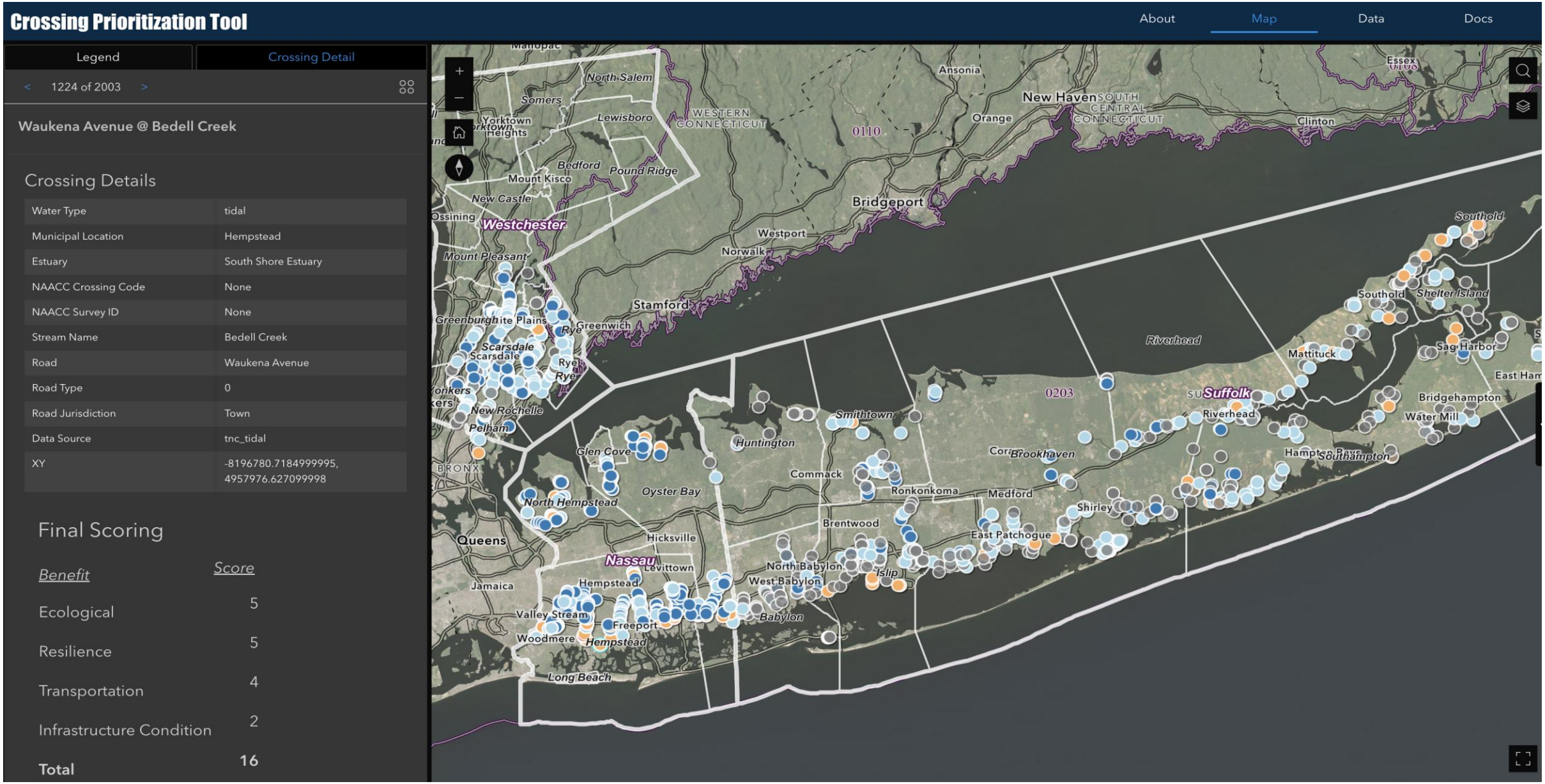


Save the Sound®

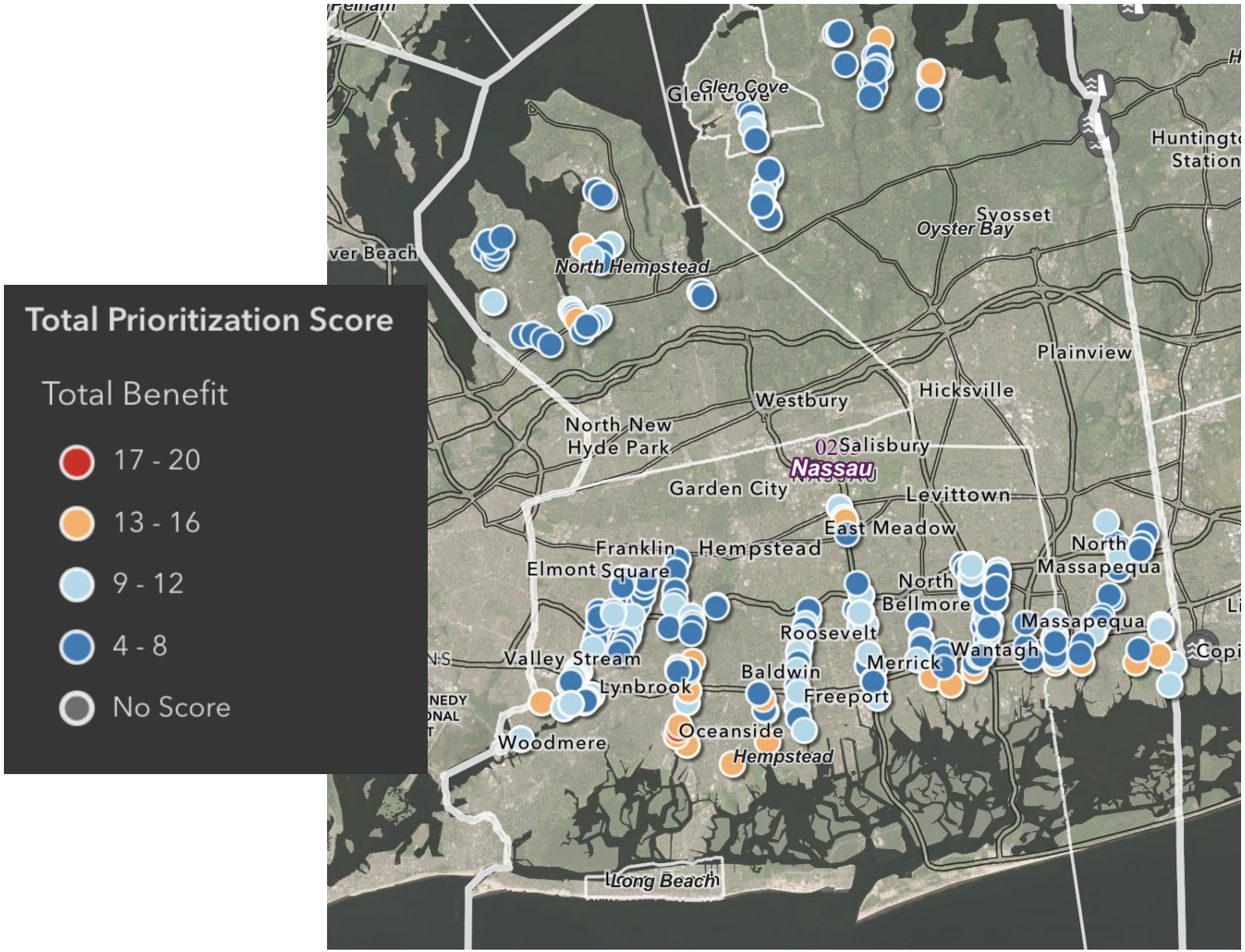
The Nature Conservancy

SEATUCK

Road-Stream & Tidal Crossing Prioritization Tool



Road-Stream & Tidal Crossing Prioritization Tool



Four categories of benefits:

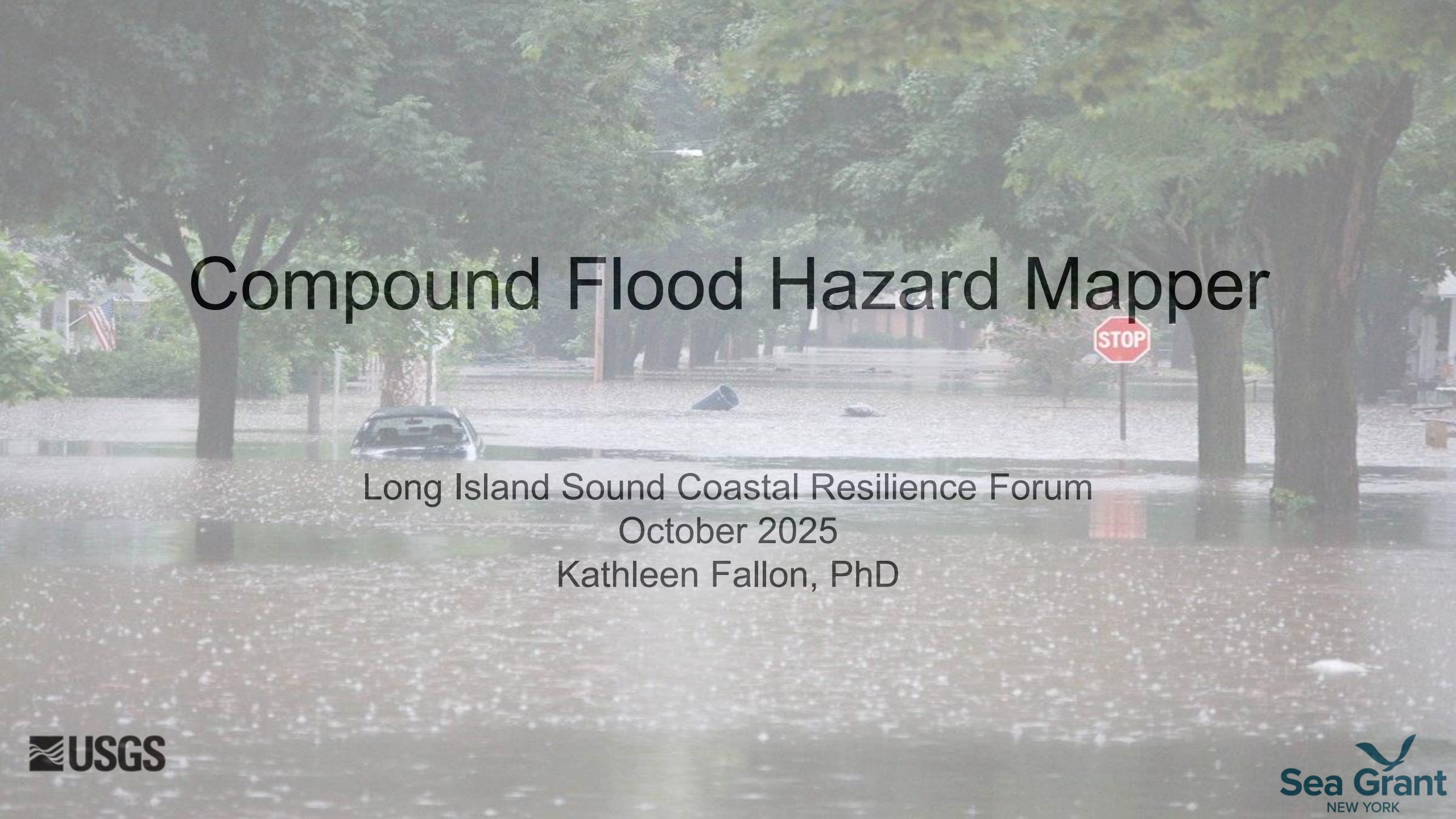
- Ecological
- Resilience
- Transportation
- Infrastructure

Stream/Tidal Crossing Prioritization Tool

Enrico Nardone, Executive Director
Seatuck Environmental Association
egnardone@seatuck.org

LONG ISLAND SOUND PARTNERSHIP

Which types of flooding are you most concerned about (check all that apply)?



Compound Flood Hazard Mapper

Long Island Sound Coastal Resilience Forum
October 2025
Kathleen Fallon, PhD

USGS

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NEW YORK

An Update…

- Part 1: USGS is working to finalize and make mapper publicly available
  - Were aiming for mid-November
  - However, government shutdown 10/1/2025
  - Will delay release, but hopefully only slightly

- Part 2: NYSG will be leading outreach about mapper
  - Upcoming workshops
  - Assessment of mapper
  - Development and release of Toolkit

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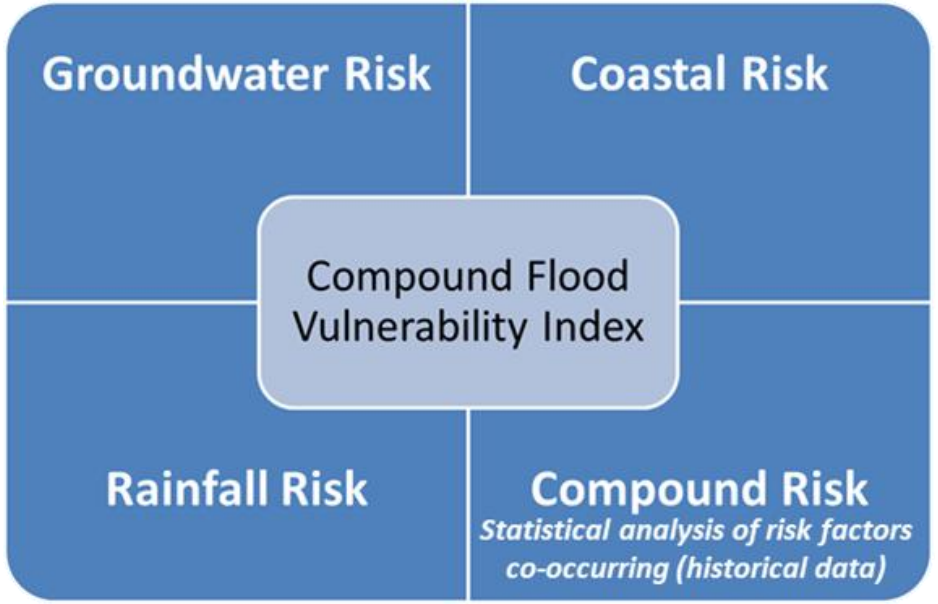
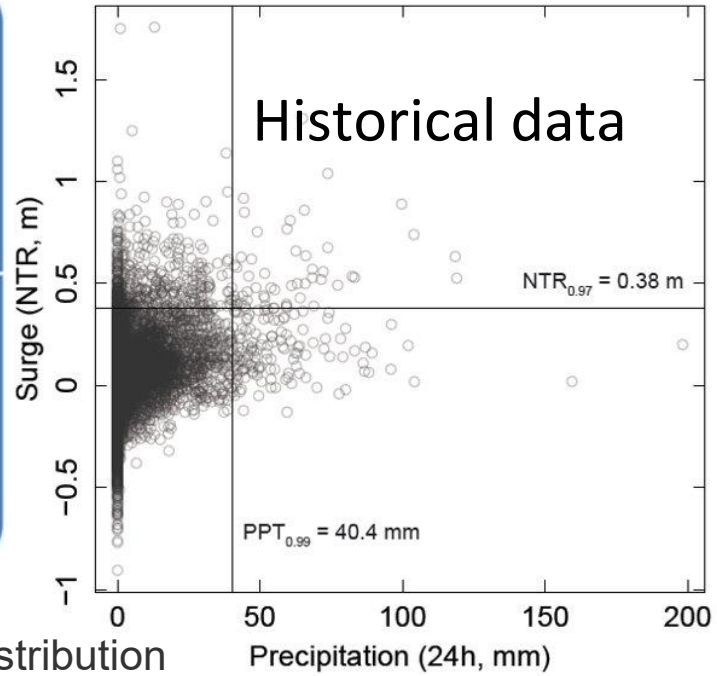
Compound Flooding-

the co-occurrence of multiple flood drivers





USGS

Goal of project(s)

- Mapper
  - Develop a tool that will help decision-makers understand areas within a community that are vulnerable to compound flooding
  - Communicate compound flood hazards
- Outreach
  - Promote the use of the mapper
  - Assess the mappers useability
  - Develop a toolkit to assist decision-makers

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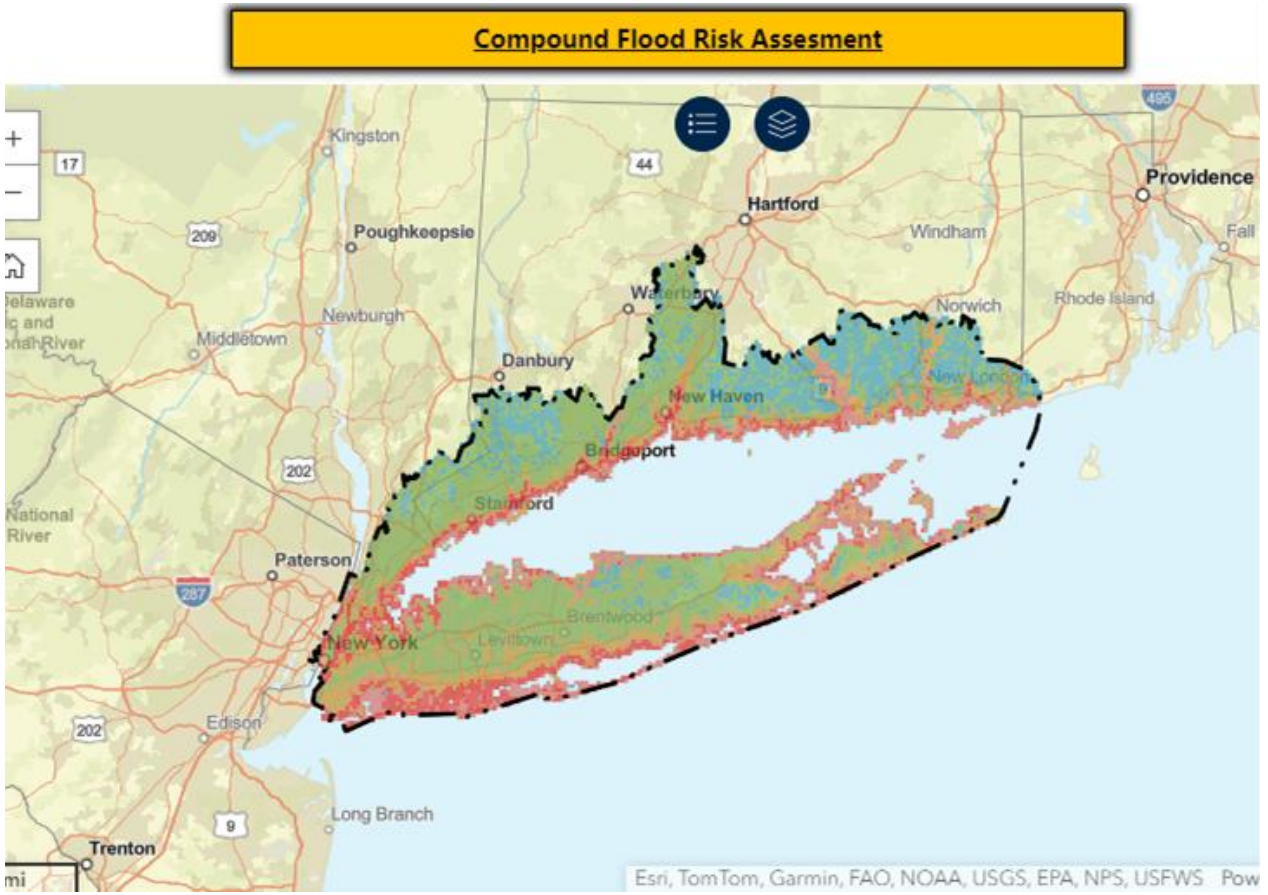
Overview of mapper tool

- Mapper includes all of Long Island, and coastal contributing areas to LIS in southern CT
- Click on any grid cell to view the susceptibility to:
  - coastal flooding
  - flash flooding
  - groundwater flooding
  - compound effects
- Supplemental maps include sea level rise scenarios



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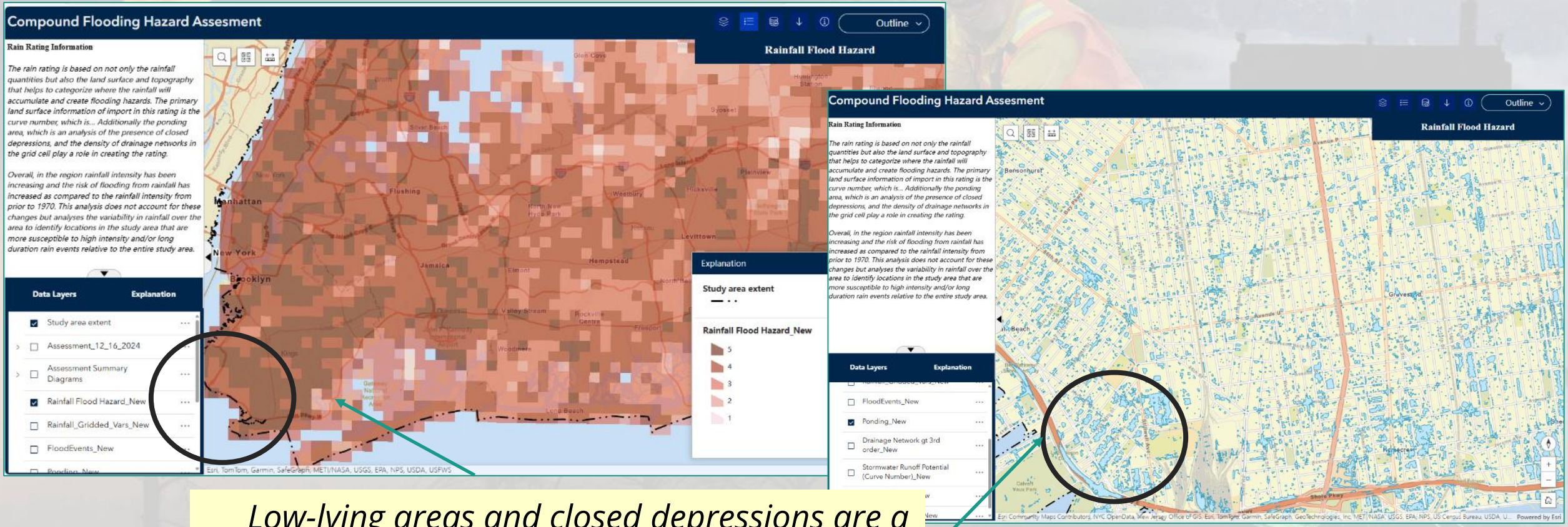
Coastal Flood Hazard

- Sea Level Rise is main driver of inundation extent

Rainfall/Pluvial Flood Hazard

- Runoff potential is most important contributing factor



Low-lying areas and closed depressions are a contributing factor to high rainfall flood hazard ranks

USGS

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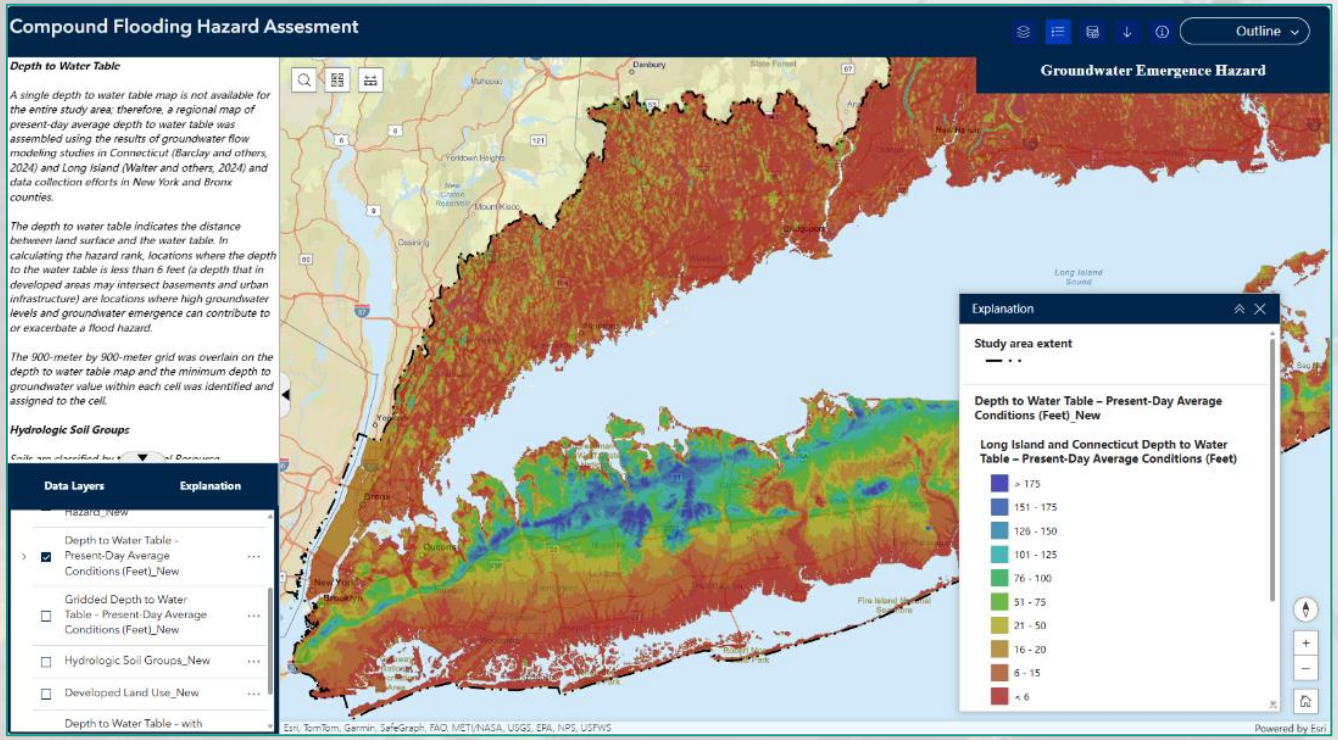
Groundwater Emergence Flood Hazard

- Groundwater emergence flood hazard driven by depth to water table
  - SLR case (results for Long Island only) similar to average condition case
  - Many locations with high groundwater emergence flood hazard rank are heavily developed



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Welcome to the USGS Long Island Sound Study Compound Flood Risk Mapper.

The Long Island Sound Study Compound Flood Risk Mapper presents individual and combined flood risk from rainfall, coastal storm surge and shallow or emerging groundwater on a 900-meter by 900-meter grid for existing conditions. Supplemental maps, at a higher resolution, are also available by selecting Coastal Flood Risk, Rainfall Accumulation Flood Risk or Groundwater Emergence Risk buttons. These supplemental maps present existing conditions and sea level rise scenarios. The Mapper can help communities visualize potential risk associated with individual and combined flood drivers, identify areas and resources that may be at risk, and provide a basis for enhancing their local response effort during a flooding event.

Study Overview

The Long Island Sound Study (LISS), created in 1985, is a partnership of federal, state, and local government agencies, private organizations and educational institutions working together to restore and protect the Sound. The United States Geological Survey (USGS) New England and New York Water Science Centers are partners in the Long Island Sound Study (LISS). The Sustainable and Resilient Communities Work Group (SRC) was established to help advance progress on select objectives and implementation actions of the LISS Comprehensive Conservation and Management Pan (CCMP).

The USGS is assisting the SRC work group with its assessment of compound flood risk from the combined effects of sea level rise on storm surge, tidal and groundwater flooding, and stormwater. The study area for the LISS compound flood risk study, and a concurrent study supported by Hurricane Ida supplemental FEMA funding, includes Coastal Connecticut, New York City and Long Island Counties of Bronx, New York, Kings, Queens, Nassau, and Suffolk.

This information is preliminary and is subject to revision. It is being provided to meet the need for timely best science. The information is provided on the condition that neither the U.S. Geological Survey nor the U.S. Government shall be held liable for any damages resulting from the authorized or unauthorized use of the information. October 2023

The USGS is conducting an assessment of compound flood risk from the combined effects of sea level rise on storm surge, tidal and groundwater flooding, and stormwater. The study area for the LISS compound flood vulnerability study, and a concurrent study supported by Hurricane Ida supplemental FEMA funding, includes Coastal Connecticut, New York City and Long Island Counties of Bronx, New York, Kings, Queens, Nassau, and Suffolk.

Launch Interactive Mapper

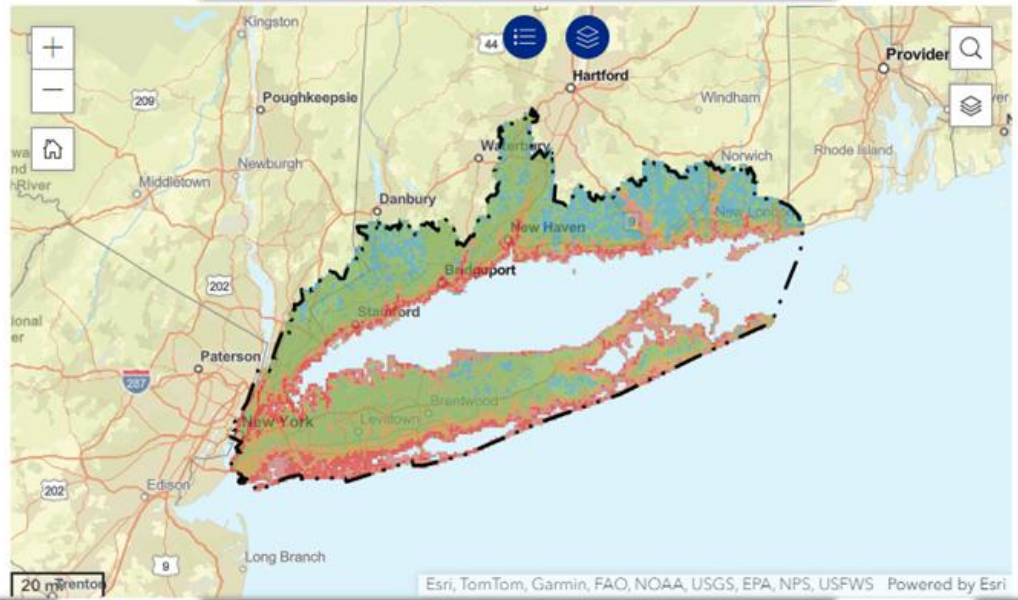
USGS Compound Flooding Risk Assesment

Preliminary Information Subject to Revision. Not for Citation or Distribution.

Outline

Compound Flood Risk Assesment

Zoom in or out within the Compound Flood Risk Assessment map area or enter an address using the search tool. Click on cell within the Compound Flood Risk Assessment map area. Click on the center of one grid cell to select a single model grid cell. Once a single cell is selected, the information for that selected cell will populate this dialog area. Independent Risk Rankings bar chart can be view by clicking on the black arrow on the right side of this page.



Overall Assesment

Compound Flood Information

Compound flood risk is based on an analysis of historical data that uses the occurrence of past compound events to determine the relationship between the different flood drivers of coastal water levels, rainfall amount and groundwater emergence.
The entire study area shows some level of compounding of flood drivers. The "Overall Flood Risk Category" indicates the strength of that compounding. It is determined by the frequency of past events that co-occurred, as compared with individual flood drivers that did not co-occur with other drivers and as such are considered to be independent events.

Coastal Flood Risk

Rainfall Flood Risk

Groundwater Emergence Risk

USGS Compound Flooding Risk Assesment

Preliminary Information Subject to Revision. Not for Citation or Distribution.

Outline

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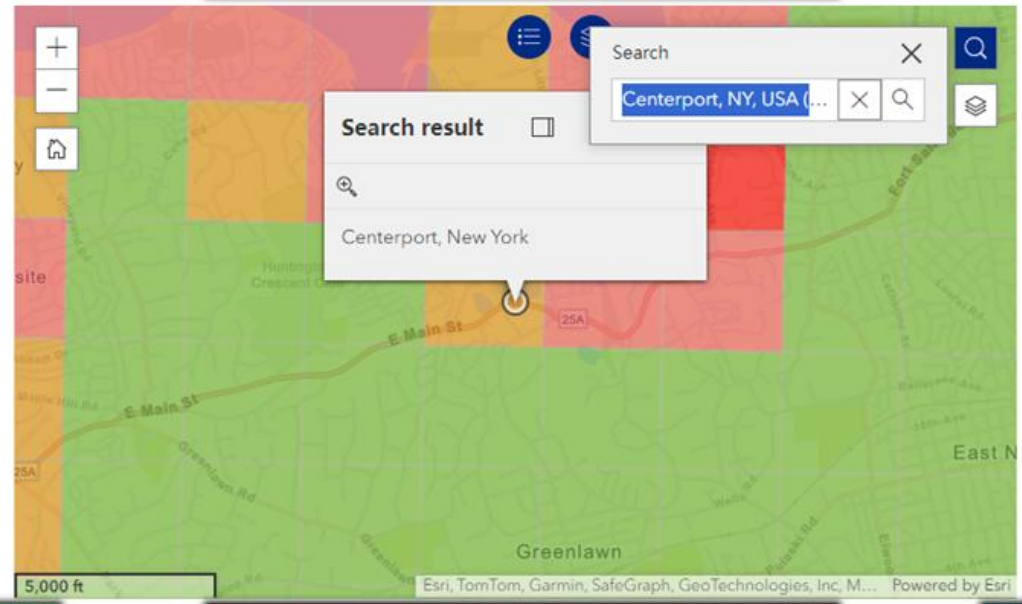

Overall Assesment

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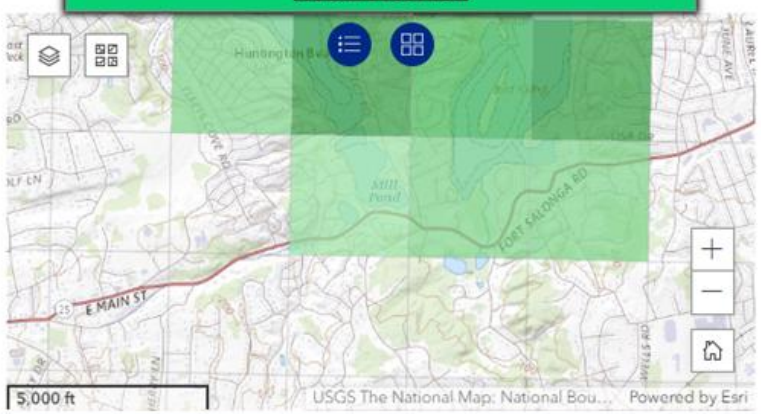
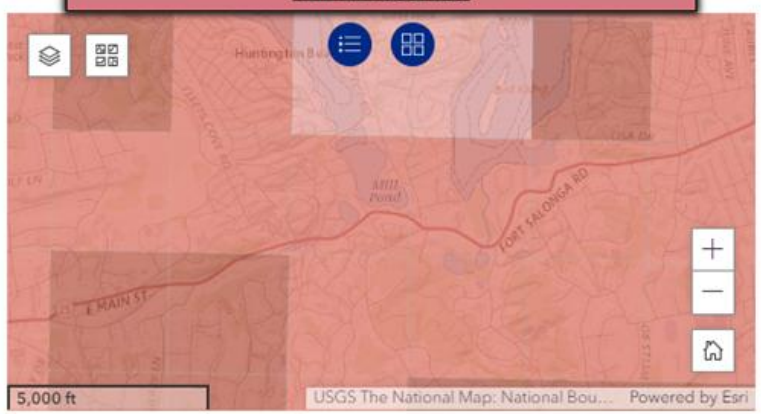
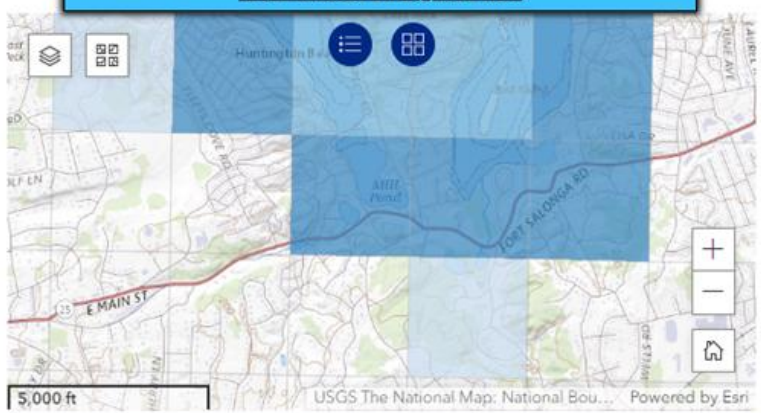
Coastal Flood Risk

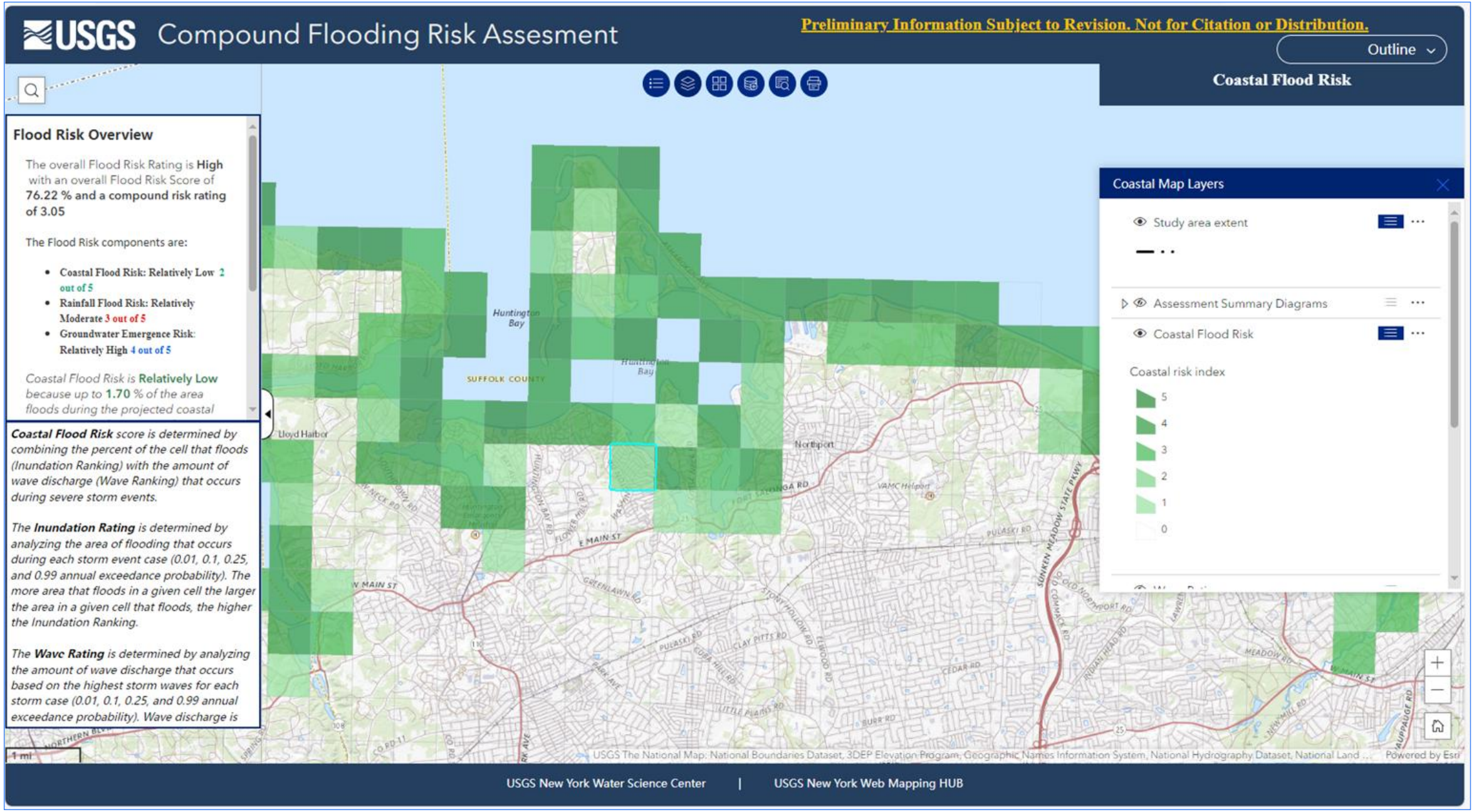


Rainfall Flood Risk



Groundwater Emergence Risk




USGS Compound Flooding Risk Assesment
Preliminary Information Subject to Revision. Not for Citation or Distribution.
Outline
Coastal Flood Risk
Flood Risk Overview
The overall Flood Risk Rating is High with an overall Flood Risk Score of 76.22 % and a compound risk rating of 3.05
The Flood Risk components are:
Coastal Flood Risk: Relatively Low 2 out of 5
Rainfall Flood Risk: Relatively Moderate 3 out of 5
Groundwater Emergence Risk: Relatively High 4 out of 5
Coastal Flood Risk is Relatively Low because up to 1.70 % of the area floods during the projected coastal
Coastal Flood Risk score is determined by combining the percent of the cell that floods (Inundation Ranking) with the amount of wave discharge (Wave Ranking) that occurs during severe storm events.
The Inundation Rating is determined by analyzing the area of flooding that occurs during each storm event case (0.01, 0.1, 0.25, and 0.99 annual exceedance probability). The more area that floods in a given cell the larger the area in a given cell that floods, the higher the Inundation Ranking.
The Wavc Rating is determined by analyzing the amount of wave discharge that occurs based on the highest storm waves for each storm case (0.01, 0.1, 0.25, and 0.99 annual exceedance probability). Wave discharge is
Coastal Map Layers
Study area extent
Assessment Summary Diagrams
Coastal Flood Risk
Coastal risk index
5
4
3
2
1
0
Huntington Bay
SUFFOLK COUNTY
Lloyd Harbor
Northport
E MAIN ST
W MAIN ST
PULASKI RD
GREENLAWN RD
CLAY PITTS RD
ELWOOD RD
CEDAR RD
SUNKEN MEADOW STATE PKWY
VAMC Heliport
1 mi
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land ...
Powered by Esri
USGS New York Water Science Center | USGS New York Web Mapping HUB

How might this information be applied?

Compound Flood Indicator

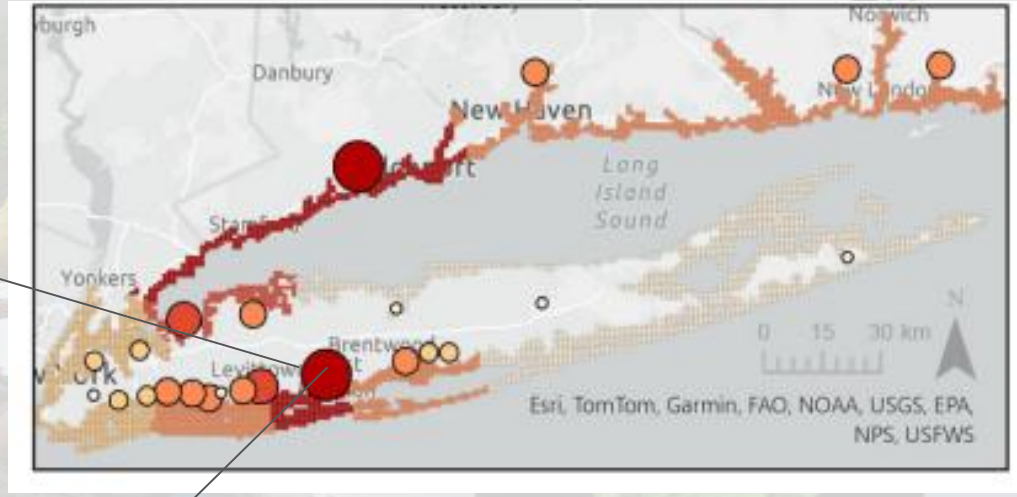
Zoom to

The selected cell is in Town of Oyster Bay in Nassau County.

The Compound Flood Hazard Rank is 5 out of 5.

Calculated hazard ranks from individual flood drivers are:

- **Coastal Flood Hazard: 1 out of 5**
- **Rainfall Flood Hazard: 5 out of 5**
- **Groundwater Emergence Hazard: 4 out of 5**



***Don't be fooled by the low surge score**: when combined with intense rain and high groundwater, all three hazards can contribute to serious flooding.*

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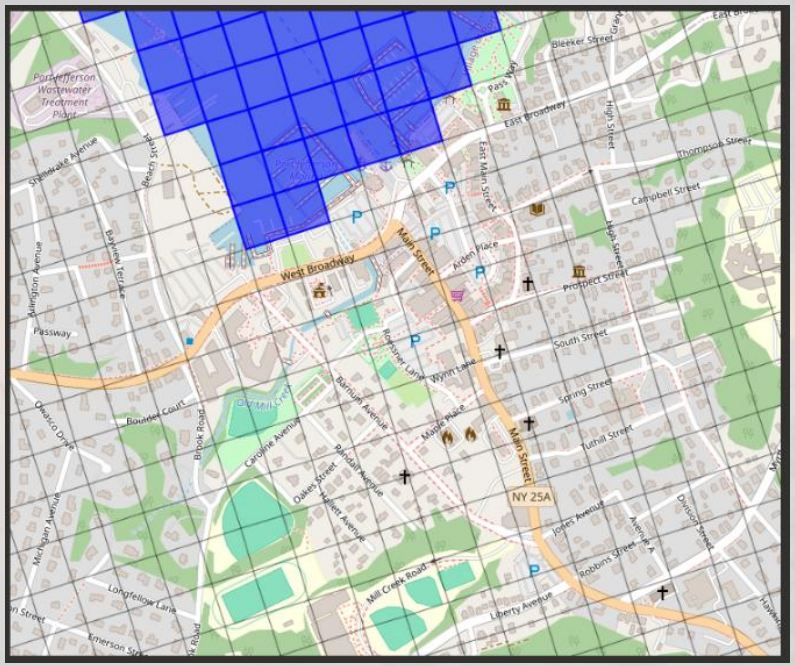
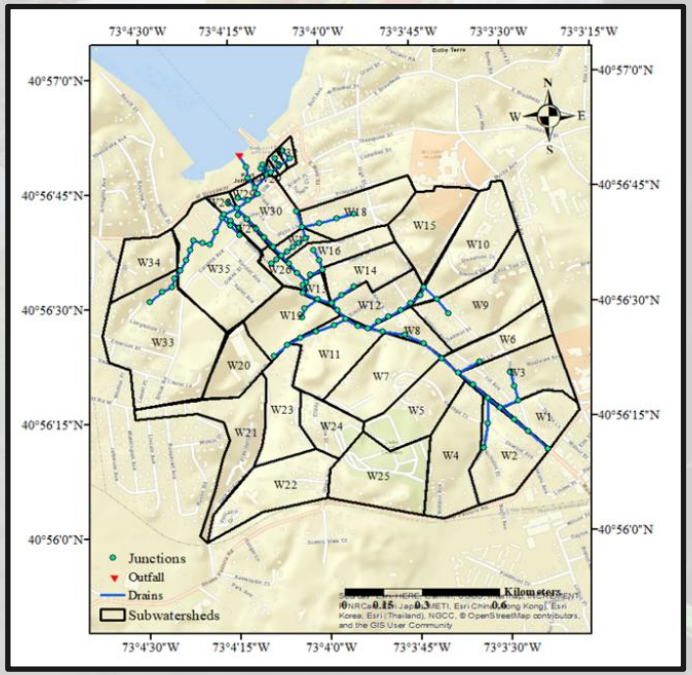
Port Jefferson Phase 2

- “Stitching” together coastal, groundwater, and stormwater models for Port Jefferson
- Exploring hydraulic connections between coastal creeks and groundwater
- Confirming models capture observed water levels and flooding response
- Discussion of scenarios





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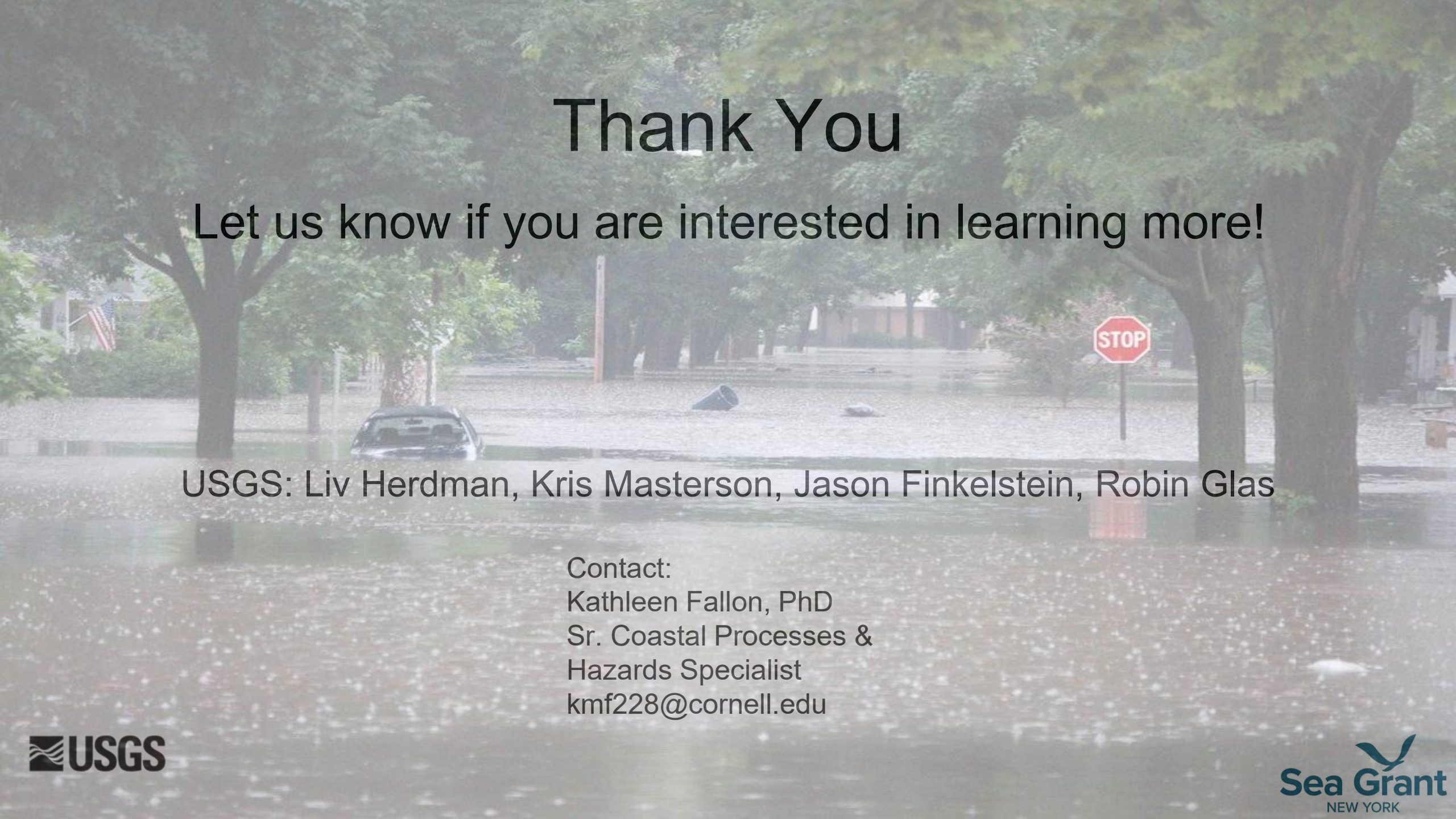
Thank You

Let us know if you are interested in learning more!



USGS: Liv Herdman, Kris Masterson, Jason Finkelstein, Robin Glas

Contact:
Kathleen Fallon, PhD
Sr. Coastal Processes &
Hazards Specialist
kmf228@cornell.edu

USGS

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PROVIDING RESOURCES TO LOCAL OFFICIALS ABOUT COASTAL FLOODING AND EROSION

Long Island Sound Coastal Resilience Forum

October 2025

Kathleen Fallon, Ph.D.

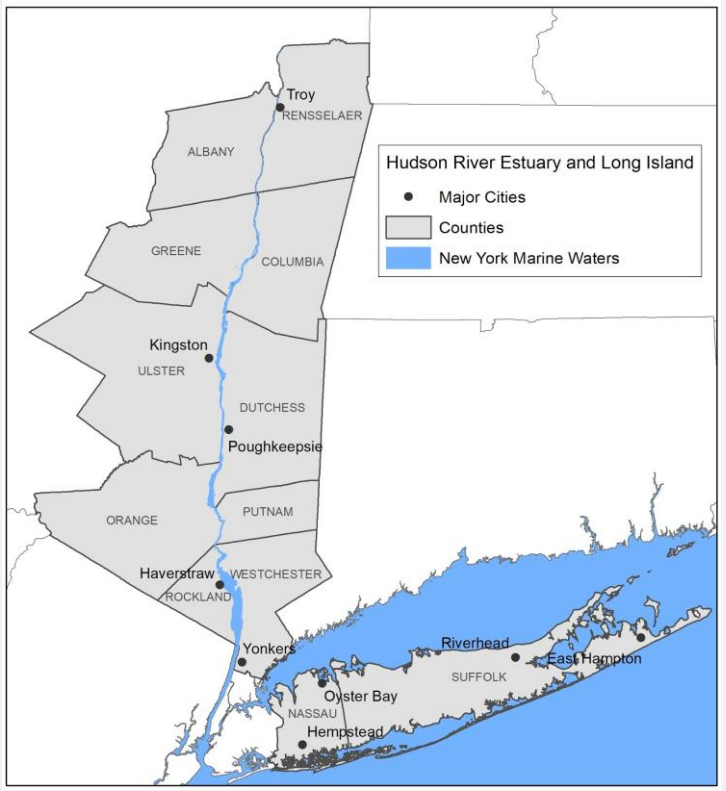
Sea Grant NEW YORK

FEMA

CTP COOPERATING TECHNICAL PARTNERS

PROJECT BACKGROUND

- In 2020, NYSG entered a CTP with FEMA Region 2
- Identified a need for outreach and education of shoreline decision-makers
  - Lack of general education of natural shoreline and watershed processes
  - Leads to decisions that exacerbate flooding and erosion issues
- Goal: provide resources to stakeholders making and influencing decisions about the shoreline



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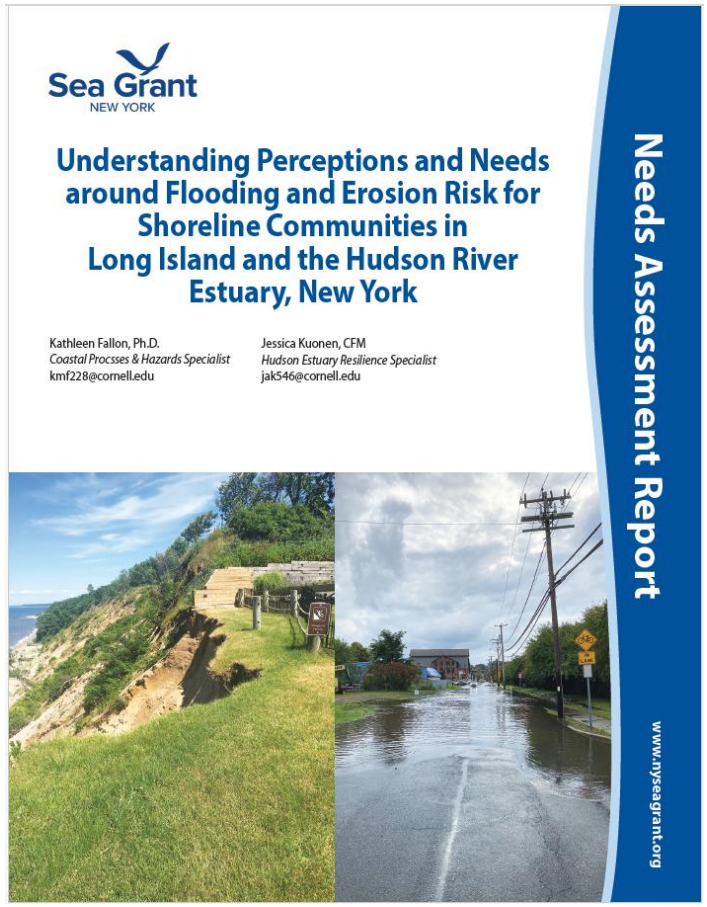
NEEDS ASSESSMENT

- Chance to hear from target audience in 2020-2021
  - 12 officials, 10 consultants, 9 residents, 3 marinas
- Open ended, semi-structured questions about risks and hazards of living and working along the shorelines
- KEY FINDINGS
  - Need for a collection of educational resources
  - More clarity is needed around regulations
  - Uncertainty exists around the effectiveness of nature-based solutions which prevent implementation
  - Preservation and revitalization of public recreational access to the shoreline is important
  - Concerns exist about the risks to water quality from flooding and erosion hazards
  - Decision-makers play an important role in shoreline resilience



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DYNAMIC SHORELINES: LONG ISLAND
ARCGIS STORY MAP COLLECTION

- Easily accessible resource for shoreline decision-makers
- Present information in an engaging way
- COLLECTION
  1. LI's Dynamic History: how shorelines were shaped
  2. LI's Coastal Processes: intro to features
  3. Living with LI's Dynamic Shorelines: risks, impacts, adapt, mitigate
  4. The Future of LI: sea level rise and others
  5. The Community Risk and Resiliency Act
  6. Resources for LI Shoreline Decision-makers

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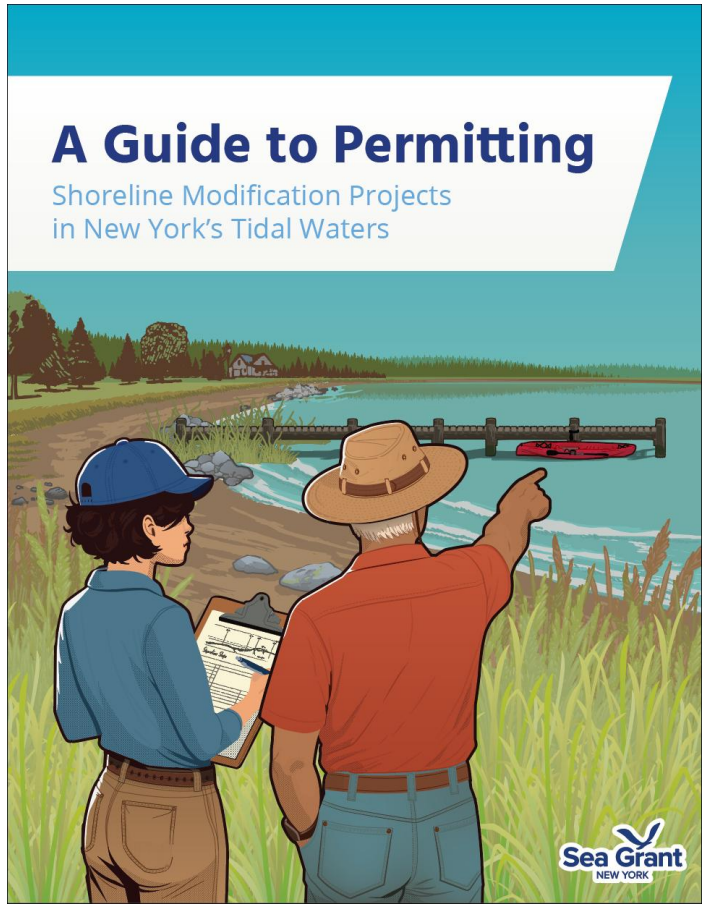

- NYS permitting process is complex and can be confusing
- For any applicant using the NYS Joint Application for permitting of a shoreline modification project

Table of Contents

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How to Use This Guidance Document

Step 1: Understand the process, agencies, and typical shoreline modification projects

Step 2: Learn about what permits may be required

Step 3: Review relevant permit application requirements

Step 4: Complete application

Appendix

- Helps applicant use online mapping tools to think through what permits are needed
- Helps ensure application is complete prior to submission

Guide Disclaimer

- *For educational and informational purposes only; information should not be used as substitution for regulatory advice*
- *Encourage to consult with all appropriate agencies during the permitting process, including local municipalities*

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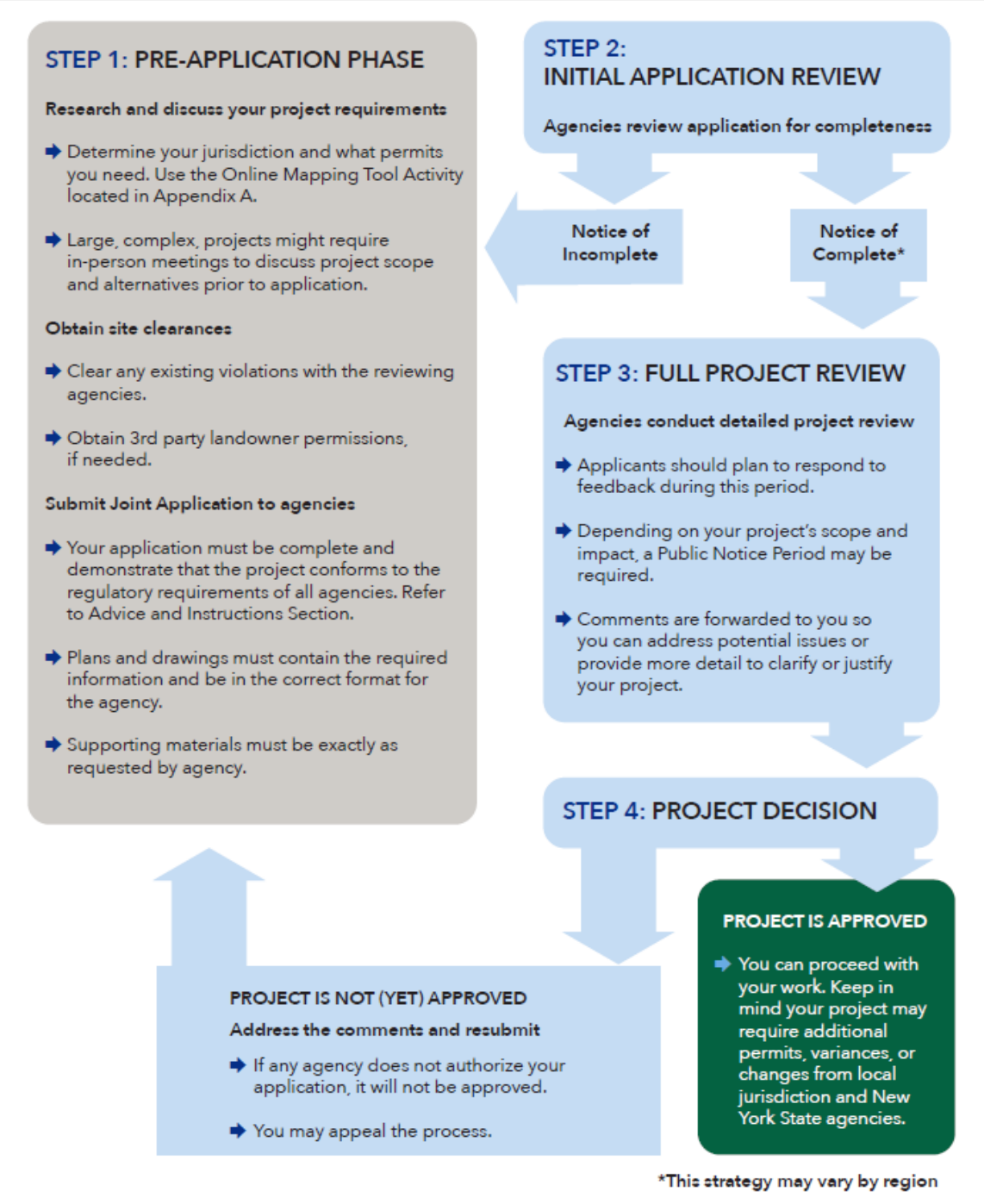

A START GUIDE FOR ADDRESSING FLOODING AND EROSION IN LONG ISLAND COASTAL COMMUNITIES

- A compilation of resources that provide foundational information and additional resources; includes an activity that assists in navigating the guide and applying the concepts
- For local municipal officials, staff, and volunteers that regularly make or contribute to decisions
- Can be used when starting projects, creating educational campaigns, writing grants, reviewing development proposals, or training new decision-makers

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Guided Question Activity

Section 1: Flooding and Erosion Basics

An overview of flood and erosion along the coastline

Section 2: Adapting to Flood and Erosion Risk

The steps communities can take to adapt and different adaptation strategies

Section 3: The Community Risk and Resiliency Act: Enhancing local flood laws

State-level policy implications, guidance documents, and model local laws

Section 4: Floodplain Management

Floodplain management basics, how to read a Flood Insurance Map and its limitations, and training and resources for floodplain administrators

Section 5: Flood Insurance

Common questions, answers, and misconceptions

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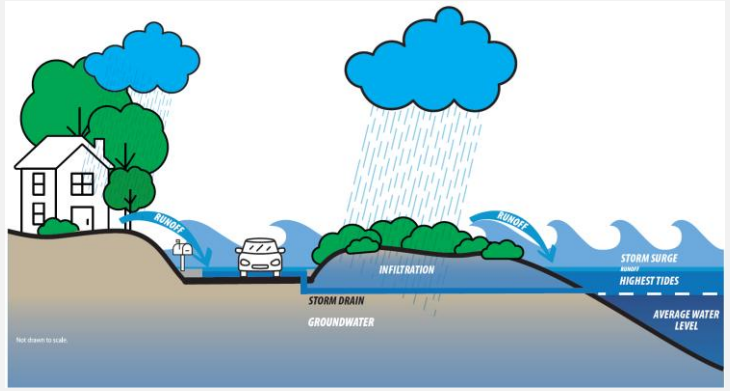

- Section 6: Flood Safety: Emergency management terms and resources
  - Flood terminology, how to stay informed, and communication tips
- Section 7: Education and Outreach
  - The importance of educating the public and communication tips
- CASE STUDY: Town of East Hampton Coastal Assessment and Resiliency Plan
- PUBLICATION: A Guide to Permitting Shoreline Modification Projects in New York's Tidal Waters

How to use this Guide:

Step 1: Record where flooding and erosion occur in your community

Step 2: Identify where your community is in the process of increasing resilience and/or implementing adaptation strategies

Step 3: Review state-level guidance and determine how your community can apply

Step 4: Review your community's Flood Insurance Rate Maps and floodplain administration program

Step 5: Assess emergency communication procedures

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Long Island Flooding and Erosion Quick Guide
(bit.ly)

Flood Safety: Emergency Management Tips and Terms

National Weather Service Flood Forecast

The National Weather Service uses terms to describe levels of flood risk and flooding so residents can respond appropriately. Emergency managers can use the following terms and messages to communicate flood risk with community members.

Take Precautions! Flood Advisory: Issued when flooding is not expected to be severe enough to issue a flood warning, but it may cause significant inconvenience if caution is not exercised.

Get Prepared! Flood Watch: Issued when conditions are favorable for flooding. It does not mean flooding will definitely occur, but it is possible.

Take Action! Flood Warning: Issued when a flood event is imminent or occurring. A flash flood warning may be issued if a flash flood is imminent or occurring, this is a sudden event that can occur where it is not directly raining. If you are in a flood-prone area, move to higher ground.

National Weather Service Coastal Flood Thresholds

Inundation: *water covering normally dry land*

Minor, Coastal Flood Advisory: Issued when 1-2 feet of inundation may occur along the shoreline and in vulnerable areas. There is a low threat of property damage and no direct threat to life.

Moderate, Coastal Flood Warning: Issued when 2-3 feet of inundation may occur along the shoreline and in vulnerable areas. There is an elevated threat of property damage and a risk to life, if one places themselves in unnecessary danger.

Major, Coastal Flood Warning: Issued when 3-5+ feet of inundation may occur along the shoreline and in vulnerable areas. There is a significant threat to life and property.

Are you interested in learning more?

- In-depth presentation
- Walk through Guided Question Activity
- Trainings and Workshops (potentially upcoming)

THANK YOU

Acknowledgements:

- Jessica Kuonen
- FEMA Region 2
- Project steering committee
- Focus group participants
- Various reviewers

Contact:

Kathleen Fallon

Sr. Coastal Processes & Hazards Specialist

kmf228@cornell.edu

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NEW YORK

LONG ISLAND SOUND PARTNERSHIP

Would you be interested in participating in a community-of-practice around shoreline resilience and advancing natural and nature-based solutions?

LONG ISLAND SOUND PARTNERSHIP

Sea Grant NEW YORK

Bluff at Sands Point Preserve. Credit: Sarah Schaefer-Brown

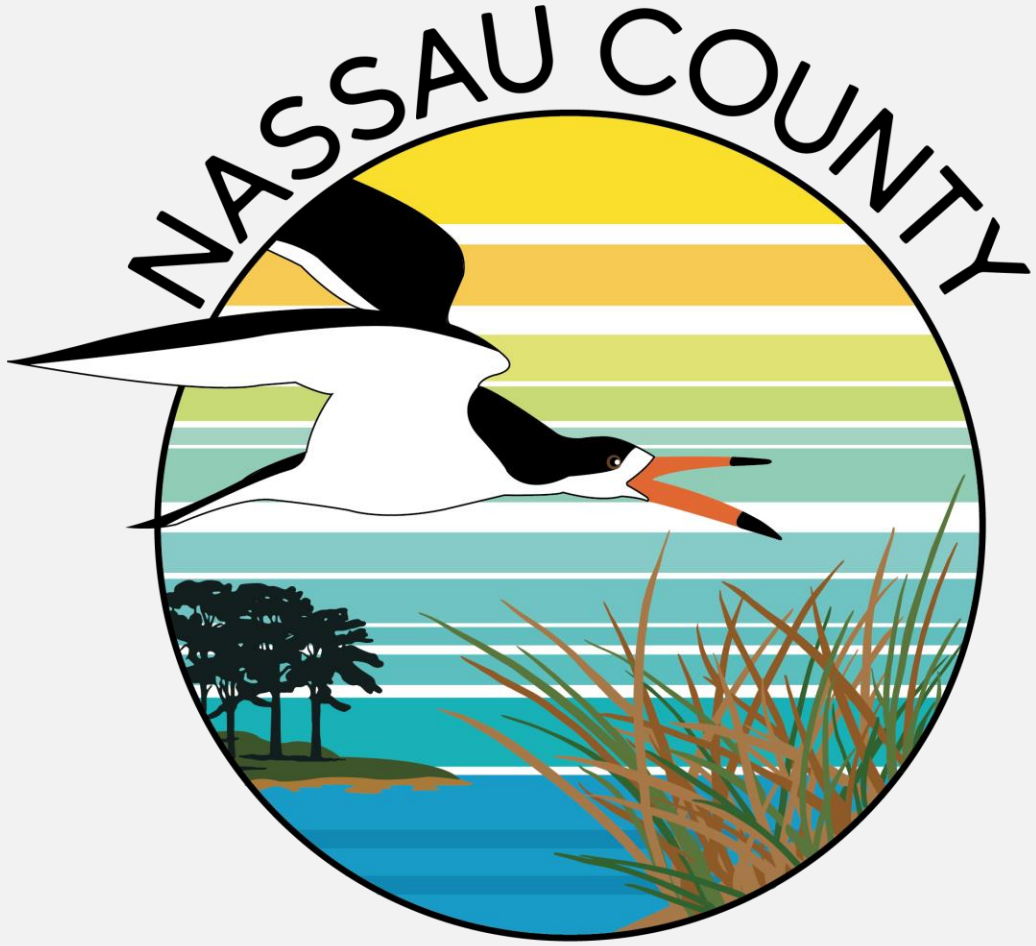
Nassau County Soil & Water Conservation District Updates

Long Island Sound

Nassau County

2025 Coastal

Resilience Forum



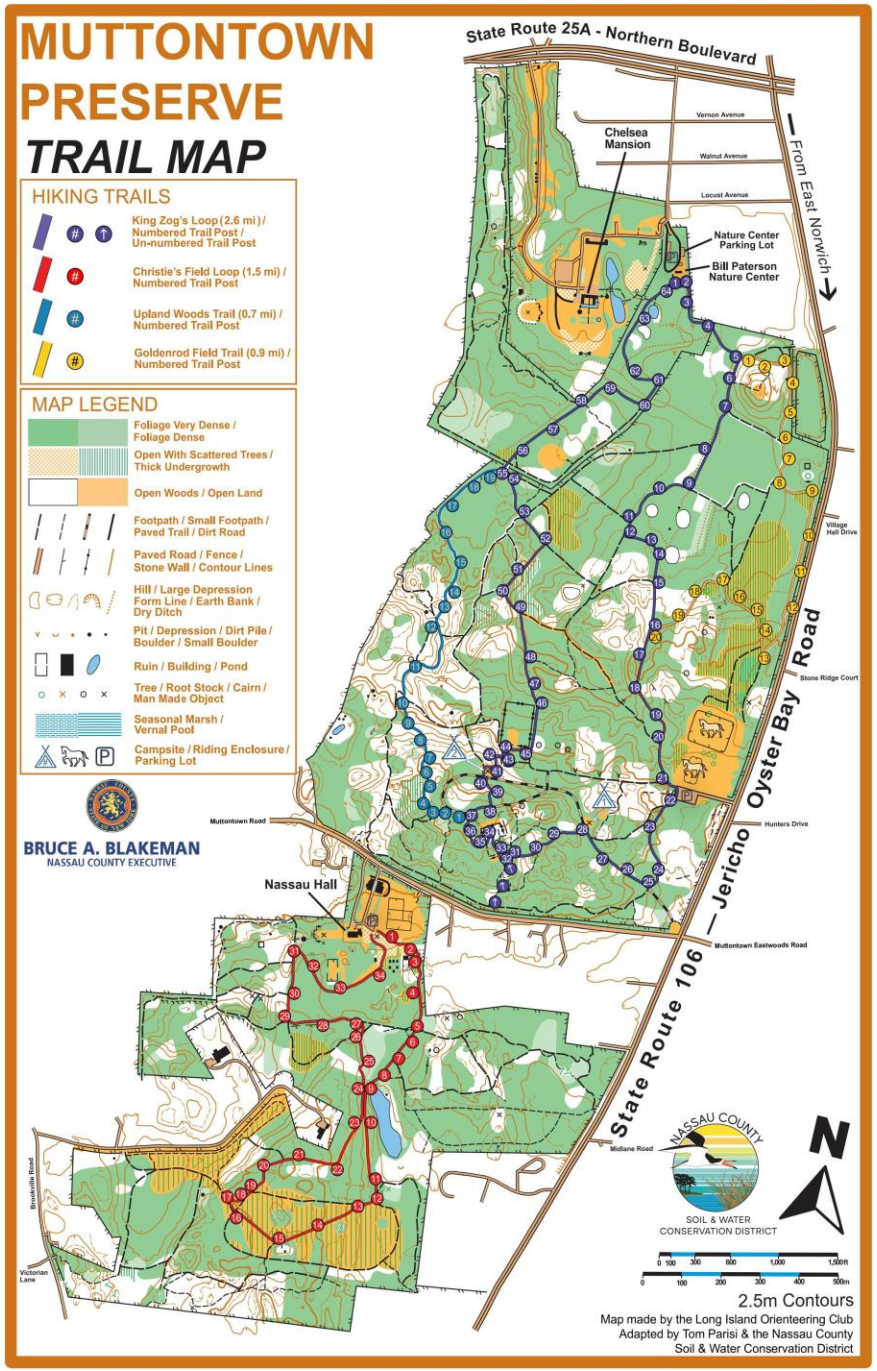
SOIL & WATER
CONSERVATION DISTRICT

Agenda

1. District Overview
2. Nassau County S.E.P.T.I.C.
3. Part C funding Opportunity
4. Questions

Nassau County Soil & Water Conservation District

- WHO WE ARE
  - Soil and Water Conservation districts are local units of government that develop, manage, and direct natural resource programs at the community level. The Nassau County Soil and Water Conservation District has been in existence since 1977, providing county residents with assistance, educational programs and services for over 45 years.
  - Our purpose is to protect, preserve, restore, and enhance natural resources through education and technical assistance, and provide programs and technical services to all Nassau County residents and municipalities.
  - Located at Nassau Hall in Muttontown Preserve, but provide County-wide conservation services


MUTTONTOWN PRESERVE
TRAIL MAP
HIKING TRAILS
King Zog's Loop (2.6 mi) / Numbered Trail Post / Un-numbered Trail Post
Christie's Field Loop (1.5 mi) / Numbered Trail Post
Upland Woods Trail (0.7 mi) / Numbered Trail Post
Goldenrod Field Trail (0.9 mi) / Numbered Trail Post
MAP LEGEND
Foliage Very Dense / Foliage Dense
Open With Scattered Trees / Thick Undergrowth
Open Woods / Open Land
Footpath / Small Footpath / Paved Trail / Dirt Road
Paved Road / Fence / Stone Wall / Contour Lines
Hill / Large Depression Form Line / Earth Bank / Dry Ditch
Pit / Depression / Dirt Pile / Boulder / Small Boulder
Ruin / Building / Pond
Tree / Root Stock / Cairn / Man Made Object
Seasonal Marsh / Vernal Pool
Campsite / Riding Enclosure / Parking Lot
BRUCE A. BLAKEMAN
NASSAU COUNTY EXECUTIVE
State Route 25A - Northern Boulevard
From East Norwich
Chelsea Mansion
Nature Center Parking Lot
Bill Paterson Nature Center
Vernon Avenue
Walnut Avenue
Locust Avenue
Village Hall Drive
Stone Ridge Court
Hunters Drive
Muttontown Road
Muttontown Eastwoods Road
Nassau Hall
State Route 106 — Jericho Oyster Bay Road
Midlane Road
Brookville Road
Victorian Lane
NASSAU COUNTY
SOIL & WATER CONSERVATION DISTRICT
N
2.5m Contours
Map made by the Long Island Orienteering Club
Adapted by Tom Parisi & the Nassau County Soil & Water Conservation District

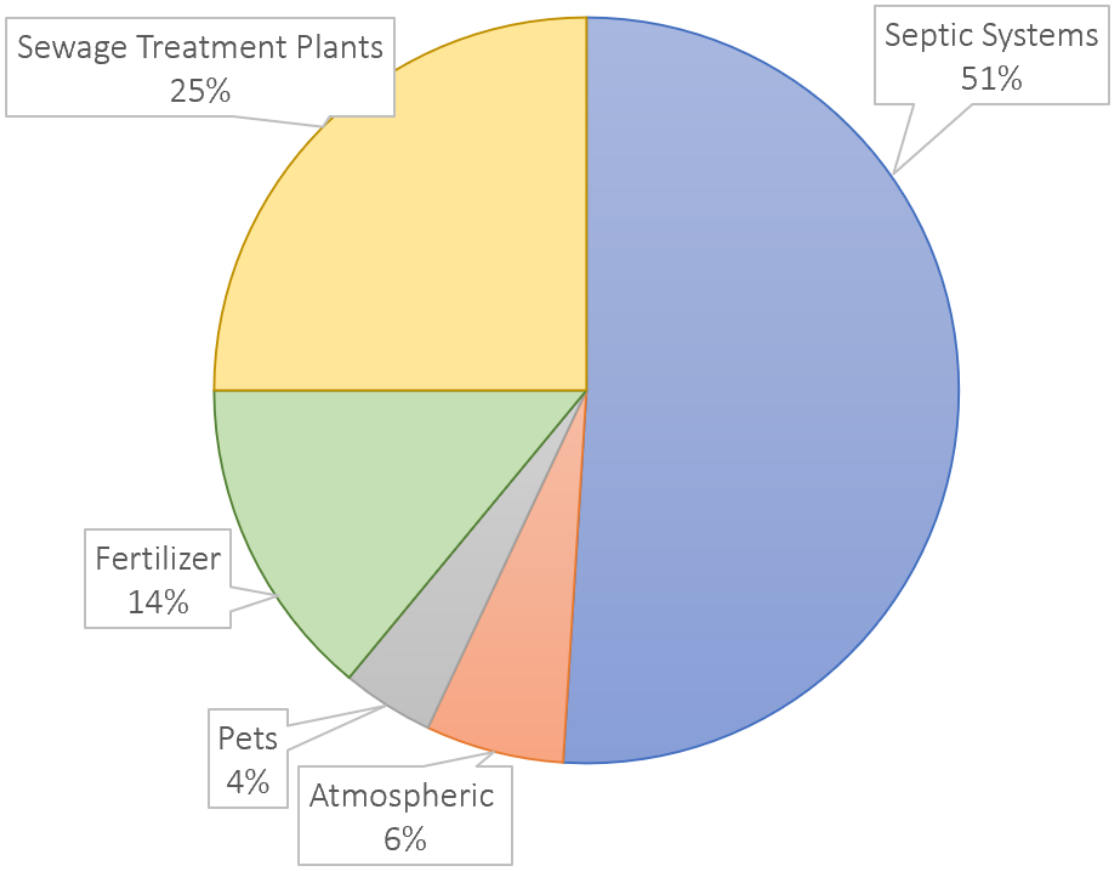

15
- MUTTONTOWN PRESERVE -

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

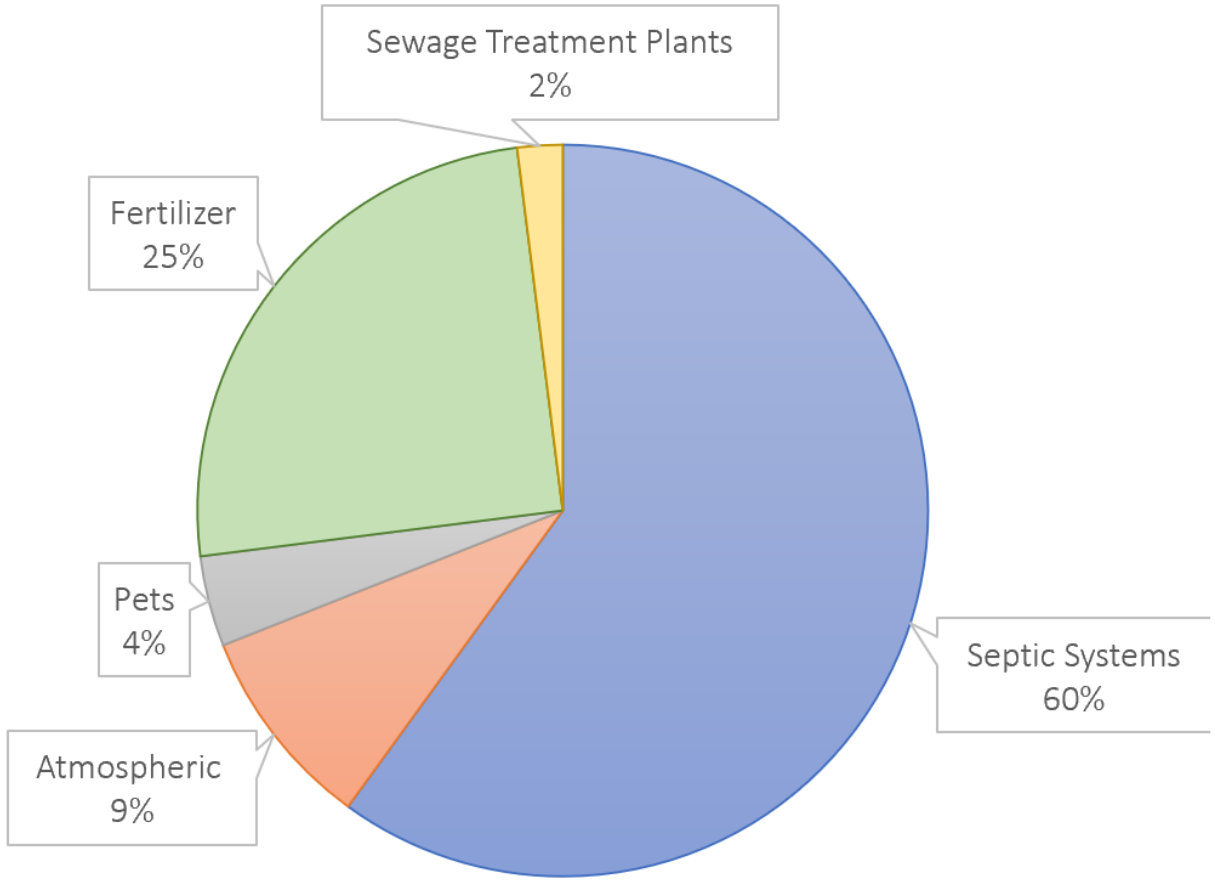
Nassau County
S.E.P.T.I.C. Program

- Administered by the District on behalf of Nassau County
- Provides State and County financial incentives of up to $20,000 to applicants looking to replace existing septic systems and cesspools with nitrogen-reducing technologies

Distribution of Nitrogen to North Shore of Long Island



Hempstead Harbor, Manhasset Bay, and Little Neck Bay

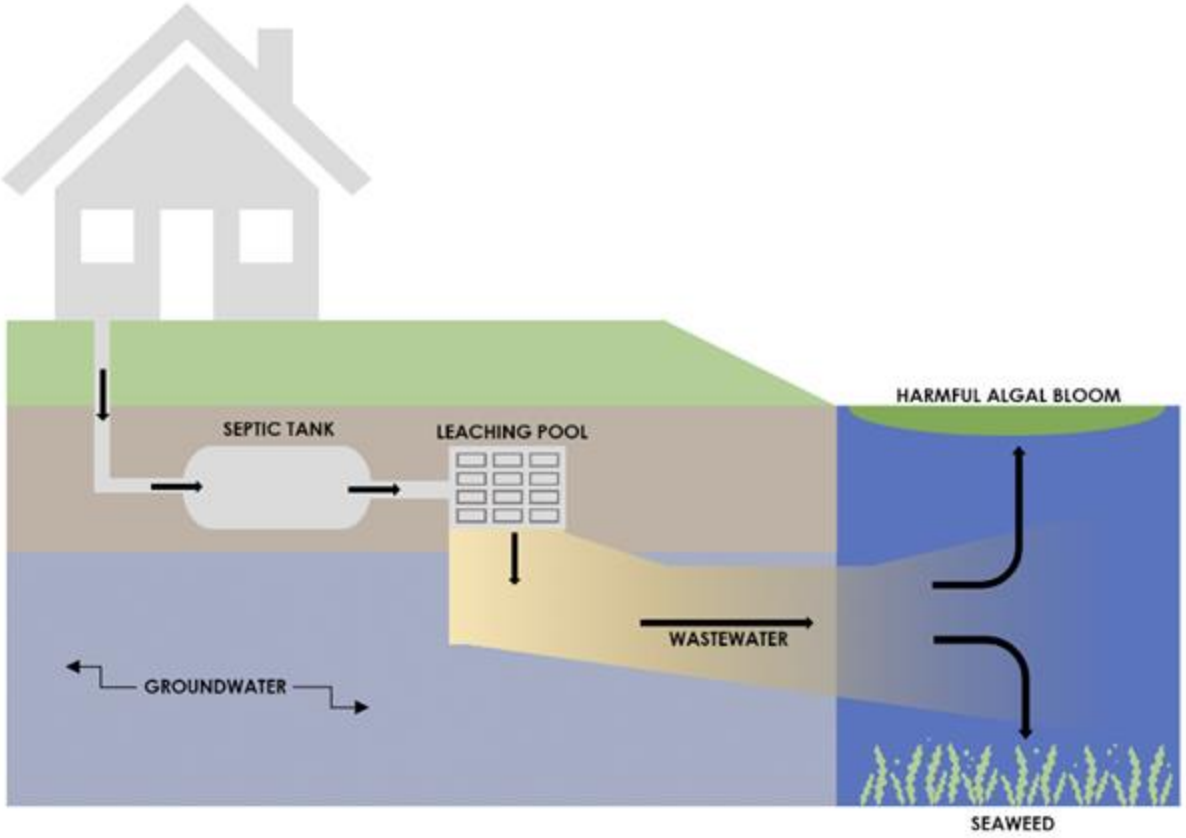


Cold Spring Harbor, Oyster Bay, and Long Island Sound

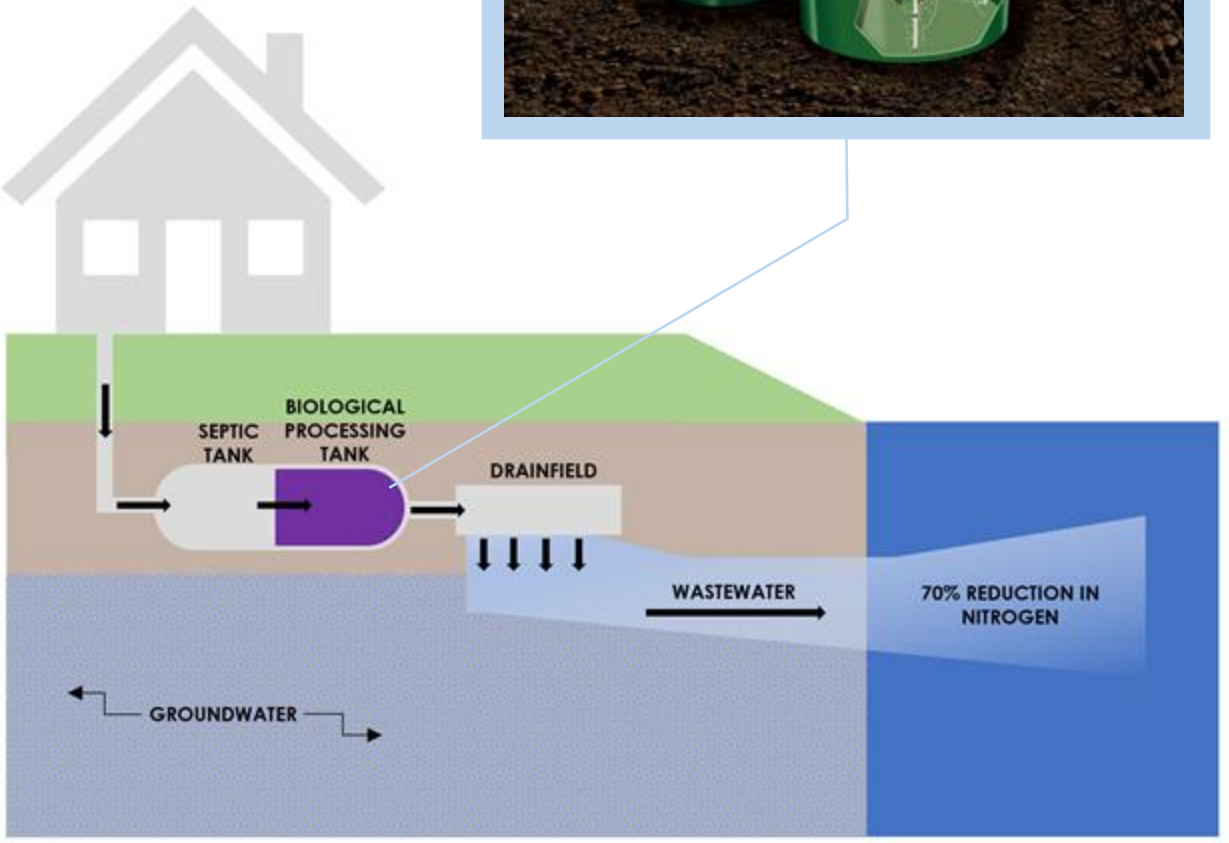
Effects of Excess Nitrogen on the Long Island Sound

- Fish Kills
- Harmful Algae Blooms (HAB)
  - Beach Closures
- Invasive Seaweed
- Paralytic Shellfish Poisoning (PSP)
- Beach Closures
- Reduced Resiliency of coastal wetlands
  - Degradation of coastal habitats
  - Reduction in Stormwater filtration
  - Increased risk of coastal erosion

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



CONVENTIONAL SEPTIC TANK

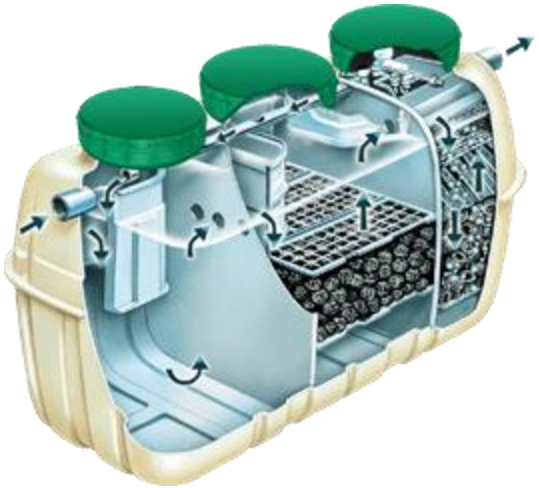


NITROGEN-REDUCING IA SEPTIC TANK

Nassau's S.E.P.T.I.C. Program – Technologies with General Use Acceptance

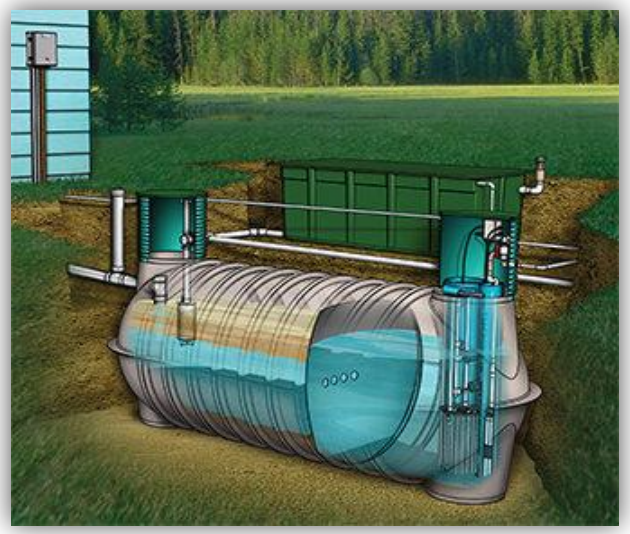
Hydro-Action AN Series

Joe Densieski
Wastewater Works Inc.
139 Reeves Avenue
Riverhead, NY 11901
www.wastewaterworksinc.com
wastewaterworks@gmail.com



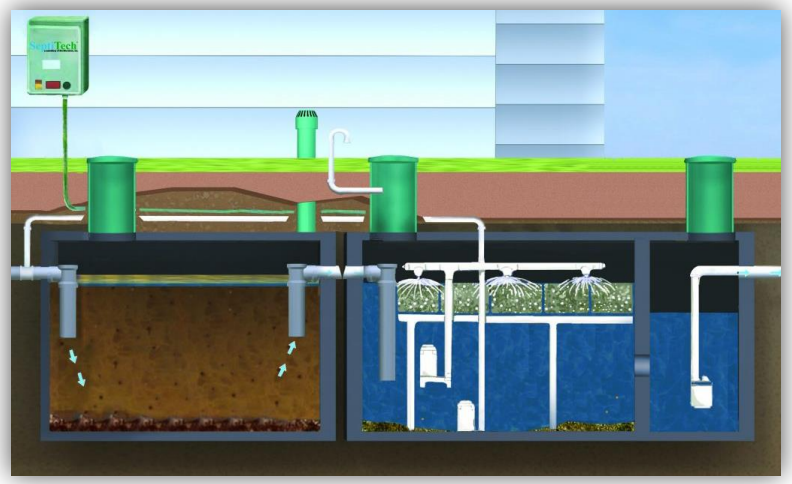
Fuji Clean CEN Series

Bryan McGowin
Advanced Wastewater Solutions, LLC
PO Box 1622 Southampton, NY 11969
(631) 259-3353
https://www.awsli.com
bmcgowin@gmail.com



Orenco Advantex AX-20

Lee Essay
Nugent & Potter
1557 County Road 39
Southampton, NY 11968
Lee@nugentpotter.com
http://nugentpotter.com
(631) 283-1103

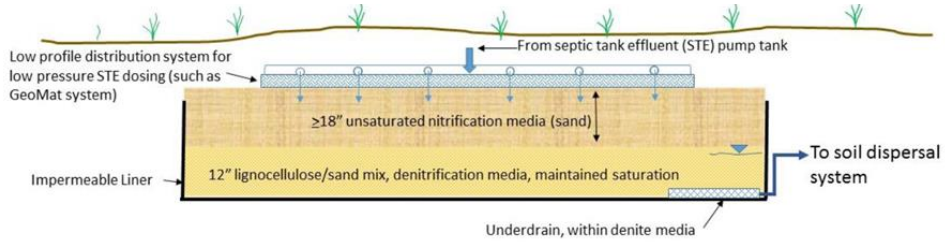


SeptiTech STAAR

John Lindahl
SeptiTech Long Island
27 Service Rd A
Calverton, NY 11933
(631-)284-9893
jlindahl@clearriver.us
https://septitechli.com

Nassau's S.E.P.T.I.C. Program – Technologies with General Use Acceptance

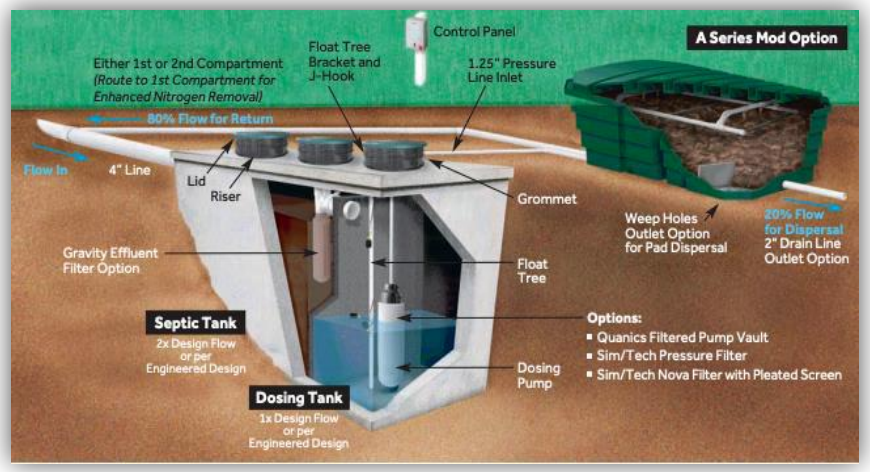
Provisional Acceptance (*can be installed with no limits or restrictions*)



Nitrogen Reducing Biofilter
Frank M. Russo, P.E.
Associate Director for Wastewater Initiatives
NYS Center for Clean Water Technology at Stony Brook University
https://www.stonybrook.edu/commcms/cleanwater

Norweco HydroKinetic
Norweco of New York
norwecony@gmail.com
(516) 710-7967

Technologies Piloting Use Acceptance (*Limited to 12 Installations)*



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

Colin Bishop, CEO
Anua
www.anua-us.org
T: 928.433.3220
colin.bishop@anua-us.com

Nassau's S.E.P.T.I.C. Program – Technologies with General Use Acceptance

Technologies Piloting Use Acceptance (*Limited to 12 Installations)*

ECOPOD-NX by Infiltrator Water Technologies

Utilizes a fully submerged moving bed biofilm reactor (MBBR) media housed in a specially designed reactor box and utilizes air-lift recirculation of nitrified effluent from the reactor tank to the pretreatment tank to augment denitrification effectiveness.

ECOPOD-Edge by Infiltrator Water Technologies

Utilizes fully submerged fixed film media housed in a specially designed reactor to treat wastewater. The system incorporates two compartments containing a total of four process unit operations within four distinct treatment zones to reduce effluent concentrations.

Long Island Distributor Information:
Lee Essay, Nugent & Potter
1557 County Road 39, Southampton, NY 11968
Lee@nugentpotter.com www.nugentpotter.com
(631) 283-1103

Average S.E.P.T.I.C. Installation Costs

Nassau County
S.E.P.T.I.C. Program

Average Cost - $30,713.50

NOTE:

- This reflects only eligible reimbursable costs
- Grants are meant to offset and incentivize IA systems over conventional systems and cesspools
- Applicant should expect out-of-pocket expenses
- Grant Award amount to increase in 2026

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

- Conventional septic system would have cost a minimum of $16,000.00
- The total Design, Material, and Installation costs of the FujiClean CEN Series Clean-Water septic system was $21,867.31.
- The Property Owner received $20,000 in combined grants from Nassau County and New York State
- 'out-of-pocket' cost to Property Owner was $1,867.31

NCSWCD – Part C Funding

NASSAU COUNTY SOIL & WATER CONSERVATION DISTRICT

- Projects must meet one or more of the follow criteria in Nassau County:
  - Conserve or improve soils
  - Improve water quality of our groundwater and/or surface water
  - Control and prevent soil erosion and/or prevent floodwater and sediment damages
  - Conservation, development, utilization, and disposal of water
  - Preserve, increase, or improve natural resources including trees and plants
  - Control or eliminate invasive plants or wildlife
  - Control and abate NPS water pollution
  - Preserve wildlife

Part C Funding

NASSAU COUNTY
SOIL & WATER
CONSERVATION DISTRICT

Partners

- School Groups
- Local Community Organizations
- Towns and Villages
- Local Municipalities

Awards Amounts

- Between $2K and $15K per project, depending on the year
- Awards are distributed on a reimbursement basis

Timeline

- RFP released in February, Proposals due in March, Awards announced in April
- Successful Projects have one calendar year for completion
- Quarterly and Final Reports Required

The Reintroduction of Fire at the Hempstead Plains

Long Island's last remaining Tallgrass Prairie, including over 200 plant species, 14 of which are considered rare species.

This project covered a 5-acre section of grassland dominated by little blue stem and goldenrods, and a 1-acre plot in which the globally endangered, fire-dependent Sandplain Gerardia grows.

A Day In The Life of an Estuary

This program focuses on environmental education, community engagement, and water-quality monitoring. Data collected is then shared around NYS.

Students will collect water samples, monitor tides, and use a seine net to capture and document native species.

Hydroseeding at Cedarmere Preserve

This Project covered a total area of 20,000 ft sq. Invasive species removal of hundreds of trees such as Norway maple, Tree of heaven, and Japanese maple.

Hydroseeding with native grasses and flowers was used to help control invasive ground cover plants such as English ivy.

Sands Point Preserve Conservancy Bluff Stabilization

This project involved the stabilization of 3,600 square feet of North Shore bluffs utilizing a new product from a local company, Coastal Technologies Corp. (CTC) called a “Cliff Stabilizer.”

District funding covered the costs of Cliff Stabilizers, native plant installation, and periodic bluff monitoring.

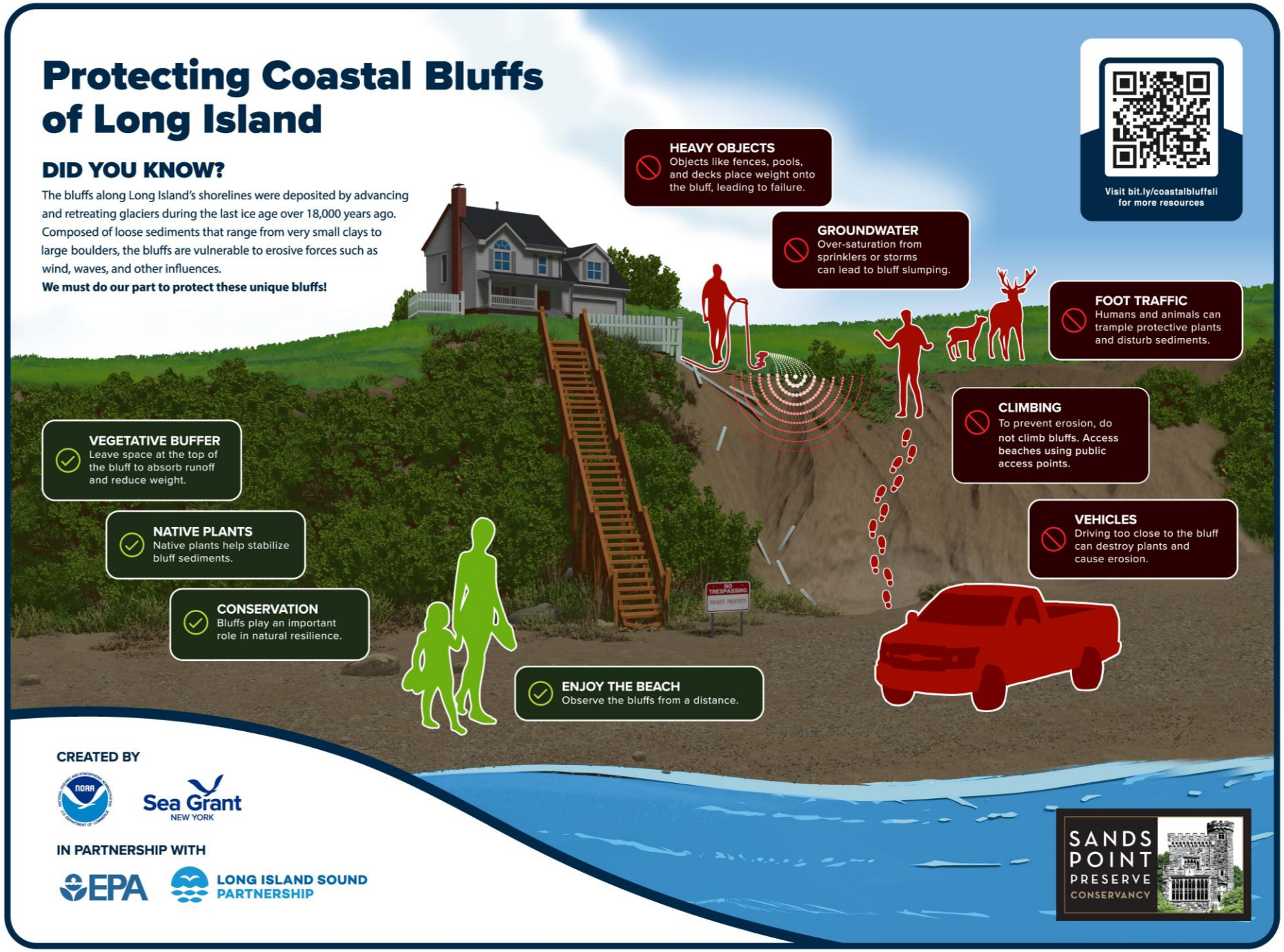
Questions?

NASSAU COUNTY

SOIL & WATER
CONSERVATION DISTRICT

LONG ISLAND SOUND PARTNERSHIP

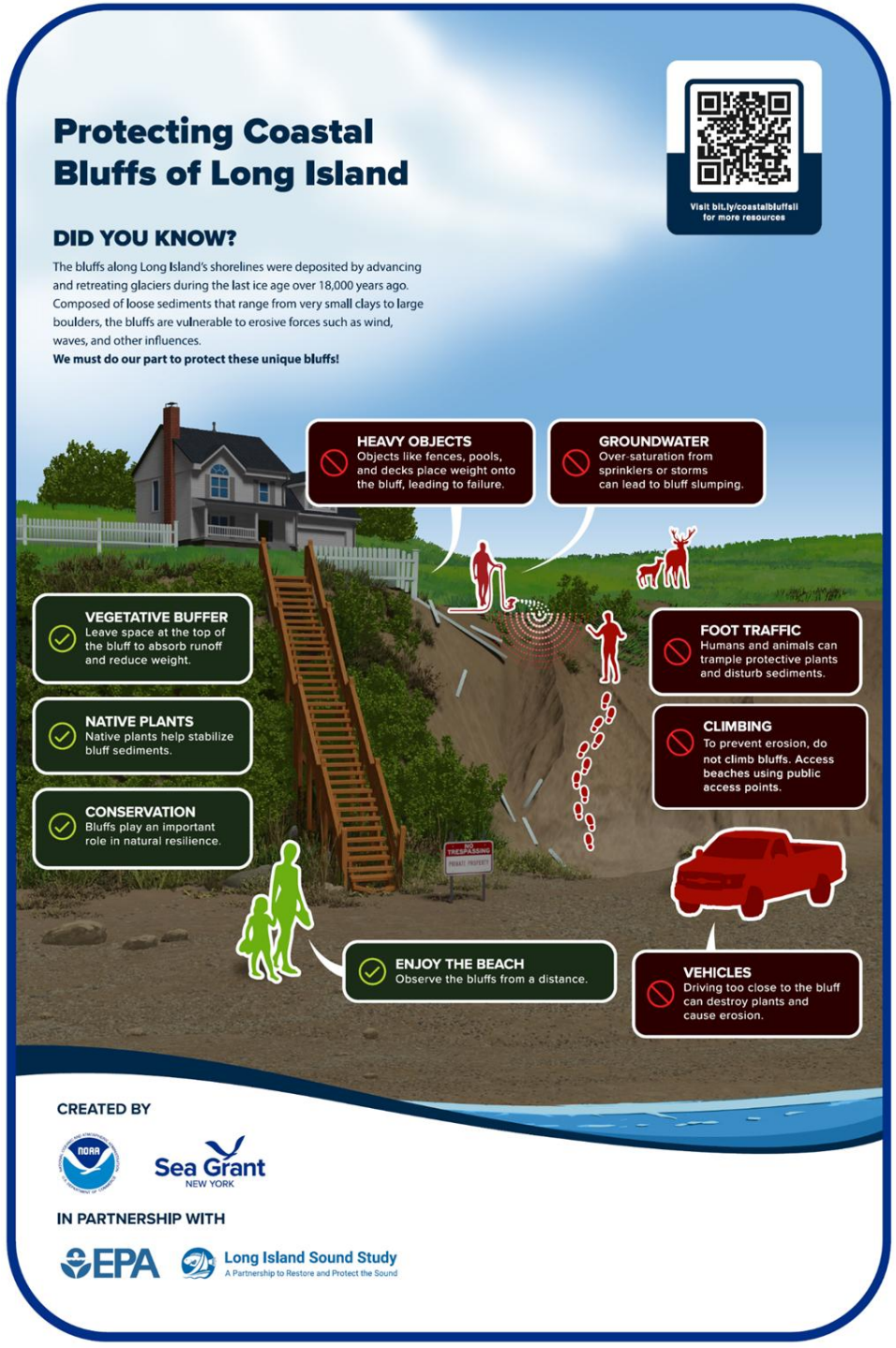
Protecting Coastal Bluffs of Long Island Sign



LONG ISLAND SOUND PARTNERSHIP

Protecting Coastal Bluffs of Long Island

Sign Raffle



LONG ISLAND SOUND PARTNERSHIP

LUNCH

Please submit feedback on this event!

We will begin our walking tour of the Sands Point Preserve in the Great Hall (here) at 1:45 pm.