



Long Island Sound Coastal Resilience Forum

Suffolk County

Port Jefferson, NY

Wednesday, October 8, 2025 9:30 AM – 3:30 PM





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](#)



SOIL & WATER
CONSERVATION DISTRICT



9:50 AM

Welcome

10:05 AM

New York State Updates

11:10 AM

Resilience Tools & Resources

12:35 PM

Lunch (Bluff Sign Raffle)

1:35 PM

Village of Port Jefferson Resilience Issues & Overview of Initiatives

3:30 PM

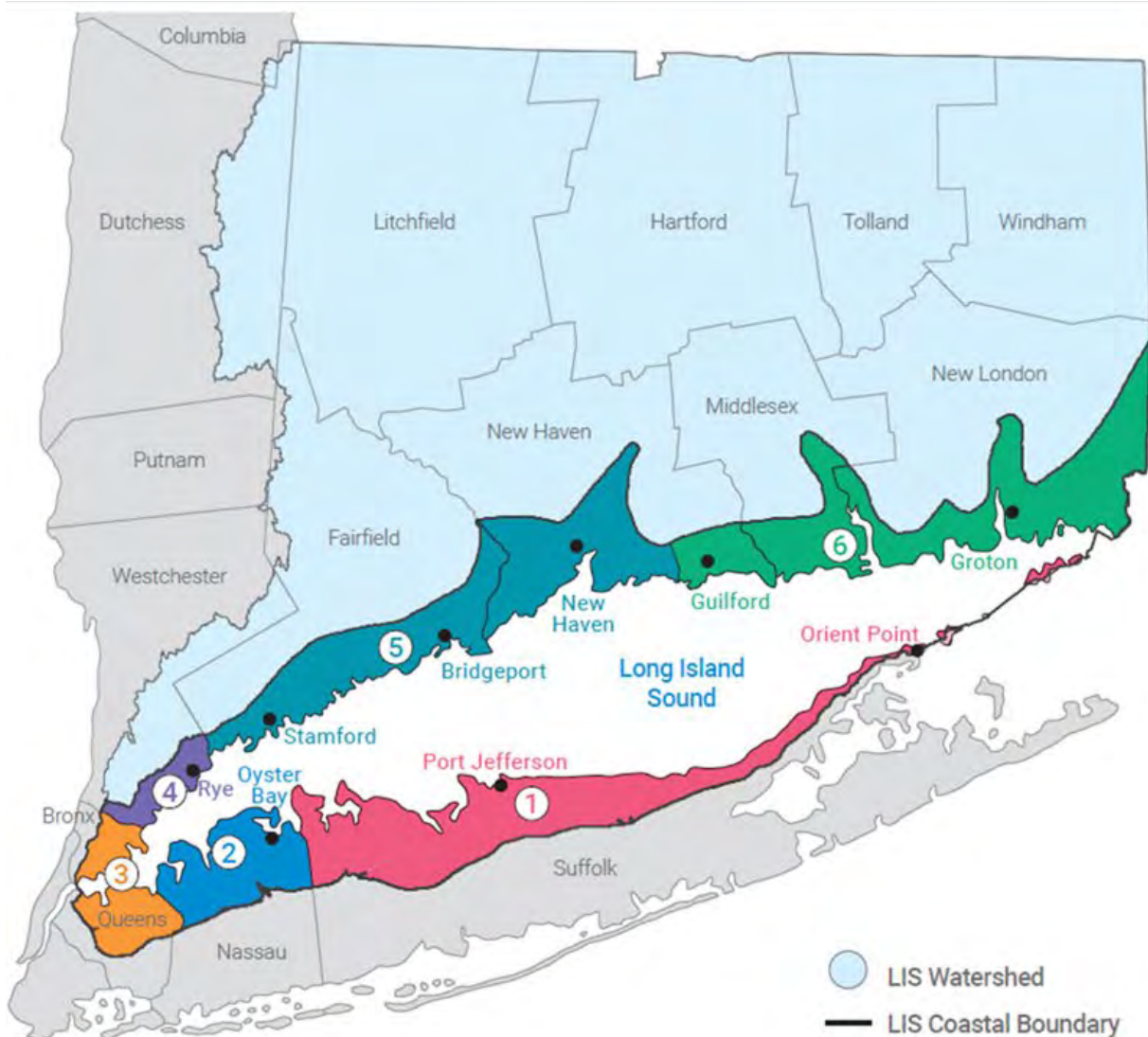
Walking Tour of Port Jefferson



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**

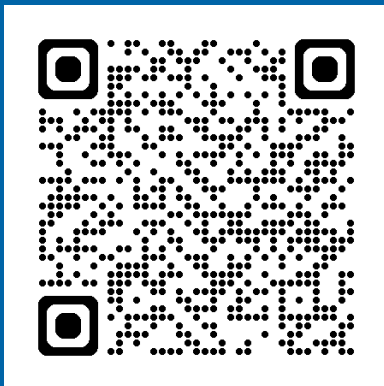
Implement initiatives to improve community resilience to flooding and other environmental challenges.



LONG ISLAND SOUND
PARTNERSHIP

Long Island Sound Resilience Resource Hub

www.lisresilience.org



Finding climate
resources just
got easier

Your hub for Long
Island Sound Resilience
Resources is here!

LISRESILIENCE.ORG

Funding Database

Filters

Select one or more of the filters below to find relevant tools and resources for your needs

Status

Select a Status

Planning Phase

Select a Planning Phase

Location

New York State

Topic

Select a Topic

Eligibility

Select an Applicant Type

Reset Filters

Apply Filters

Need help deciding where to start?

Learn how to identify, prioritize, and implement high-impact projects

[View Resilience Planning Guide](#)

Case Studies

See how other communities are building climate resilience

[View Case Studies](#)

Grant writing assistance available! – [Click here to learn more](#)

Funding

Open: Due on Nov 21, 2025

7 weeks
remaining to apply

\$5K-100K

Long Island Sound Community Impact Fund (LISCIF)

Restore America's Estuaries is excited to announce the third round of funding for the Long Island Sound Community Impact Fund. Up to \$1,200,000 in competitive funding will be awarded to support projects in New York and...

New York State

Connecticut State

Erosion

Flooding

Habitat

Nature-based Solutions

Environmental Health Hazards

Stormwater Management

Water Quality

Planning

Recreation & Access

Extreme Weather & Storms

Community Engagement

Wetlands

Waste Management

Marine Debris

Green Infrastructure

[View Details](#)

Funding

Rolling

NYS Homes and Community Renewal Resilient Retrofits

New York State Homes and Community Renewal has expanded the Resilient Retrofit program and will make available a combination of low-interest loans and grants to low and moderate income single-family homeowners whose...

New York State

Flooding

Environmental Health Hazards

Sea Level Rise

Extreme Weather & Storms

Funding/Grants

[View Details](#)

Funding

Rolling

EPA Water Technical Assistance

EPA WaterTA aims to assist communities with applications for federal funding, quality infrastructure, and reliable water services in partnership with drinking water, wastewater, and stormwater utilities and local government. If...

New York State

Connecticut State



LONG ISLAND SOUND
PARTNERSHIP

Case Studies



Filters

Select one or more of the filters below to find relevant tools and resources for your needs

Location

Select a Location

Topic

Select a Topic

Reset Filters

Apply Filters

Need help deciding where to start?

Learn how to identify, prioritize, and implement high-impact projects

[View Resilience Planning Guide](#)

Funding Database

Find funding for your project

[View Funding Database](#)



Case Study

Project

Rye, NY

Edith G. Read Wildlife Sanctuary Living Shoreline

Shoreline erosion problems had been noted at Edith G. Read Wildlife Sanctuary in Rye, NY in the early 2000s, and after the devastation caused by Hurricane Sandy in 2012 and subsequent storms, it was clear there was a...

New York State

Habitat

Community Engagement

Wetlands

[View Details](#)



Case Study

Project

Halesite, NY

Halesite Park Shoreline Restoration

With support from the Long Island Sound Resilience Grant Writing Assistance Program, in December 2024 1653 Foundation was awarded \$549,955 from the NYSDEC Water Quality Improvement Project (WQIP) Program to fund the...

New York State

Erosion

Habitat

Land Use

Nature-based Solutions

Stormwater Management

Water Quality

Recreation & Access

Wetlands

Green Infrastructure

[View Details](#)



Case Study

Plan

Old Saybrook, CT

Planning to Restore Chalker and Chanman Beach

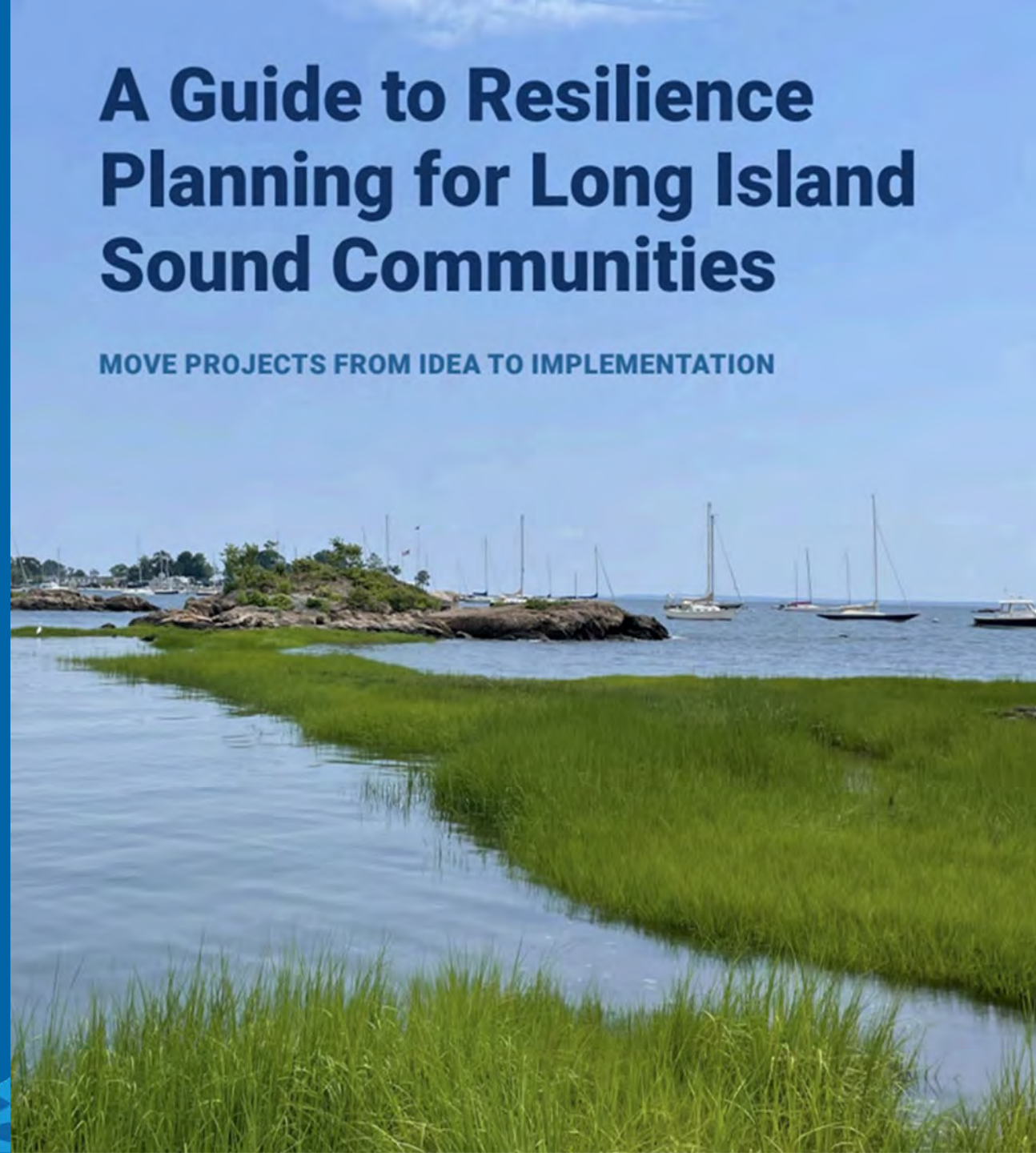


LONG ISLAND SOUND
PARTNERSHIP

Resilience Planning Guide

A Guide to Resilience Planning for Long Island Sound Communities

MOVE PROJECTS FROM IDEA TO IMPLEMENTATION



A Guide to Resilience Planning

Use the PERSISTS criteria below to help identify, prioritize, and implement high-impact projects

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

P

Permittable

E

Engaged

R

Realistic

S

Safe

I

Innovative

S

Scientific

T

Transferable

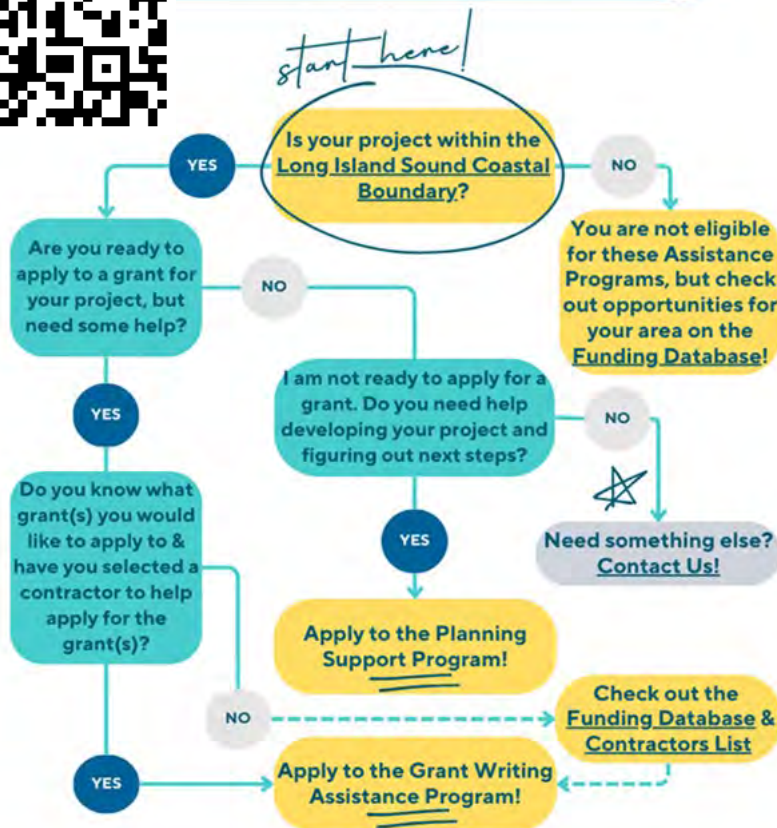
S

Sustainable

SRC Resilience Assistance Programs

What Assistance Program is right for me?

Click on the image to interact



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



LONG ISLAND SOUND
PARTNERSHIP

Trainings & Workshops

Save the Date!

**December 4-5
2025**

**4th Annual Long Island Sound
Sustainable & Resilient Communities
Virtual Workshop**

More details coming soon!



LONG ISLAND SOUND
PARTNERSHIP





New York State Updates





Department of
Environmental
Conservation

New York State Climate Change Adaptation & Resilience

Long Island Sound Coastal Resilience Forum - Suffolk County
October 8, 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)



Department of
Environmental
Conservation



NYSERDA



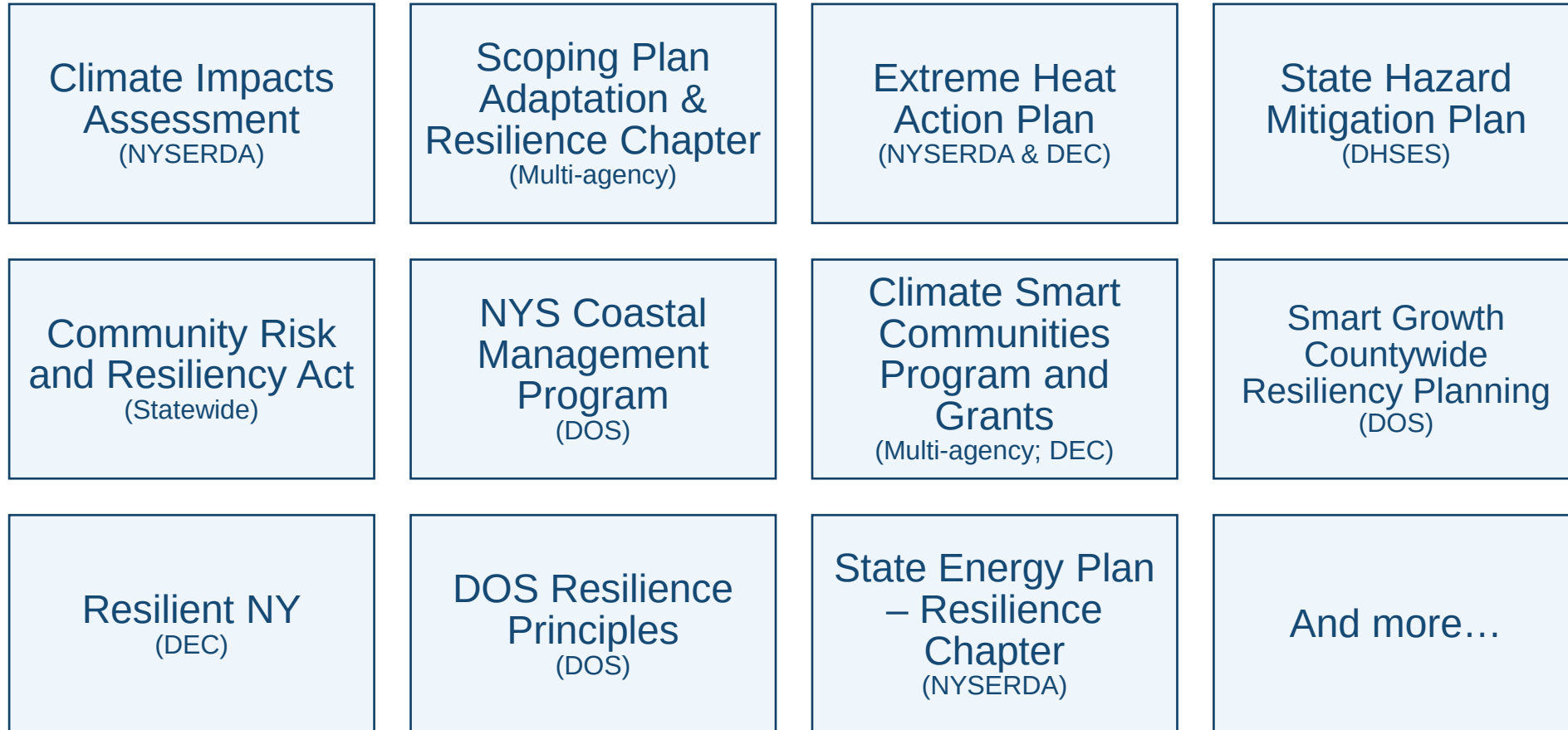
Department
of State



Homeland Security
and Emergency Services

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



Precedent Examples

California

- Unifies existing adaptation efforts under common framework

Colorado

- Regional approach to adaptation planning

Massachusetts

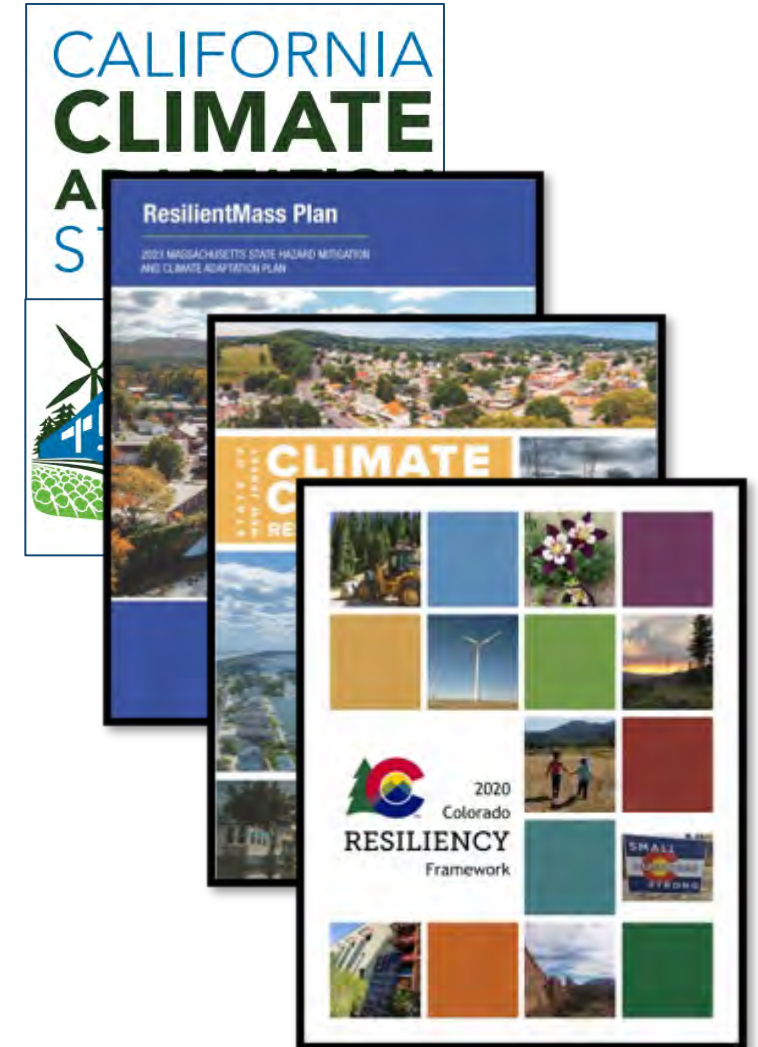
- Layers onto existing hazard mitigation planning process

New Jersey

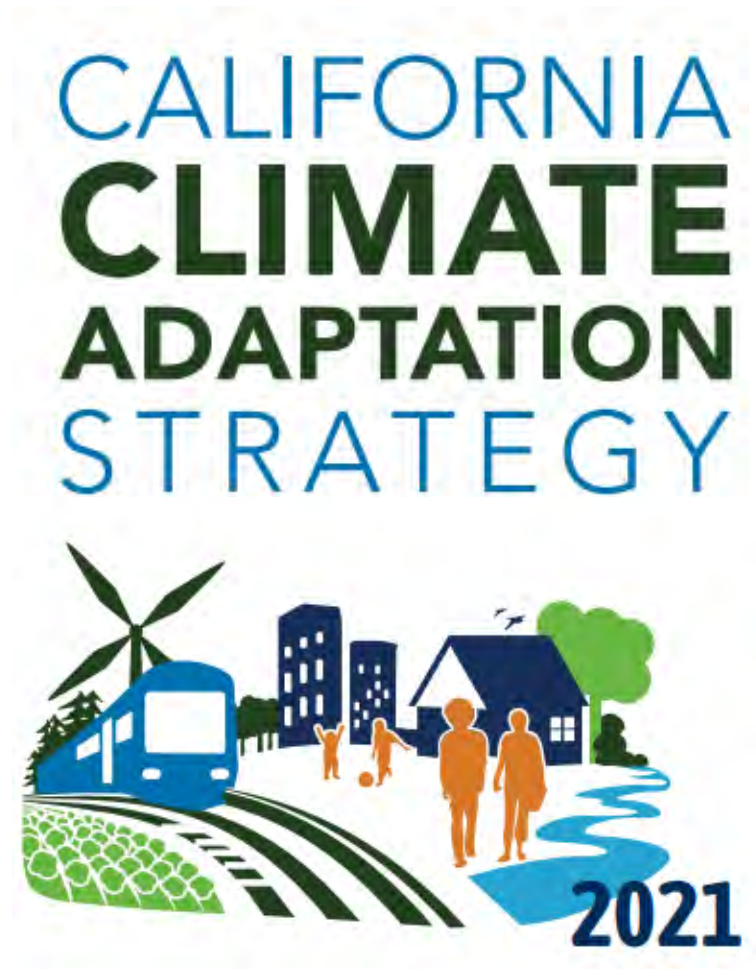
- Planning under a common framework and governance

European Union

- Coordinates and standardizes resources for local adaptation

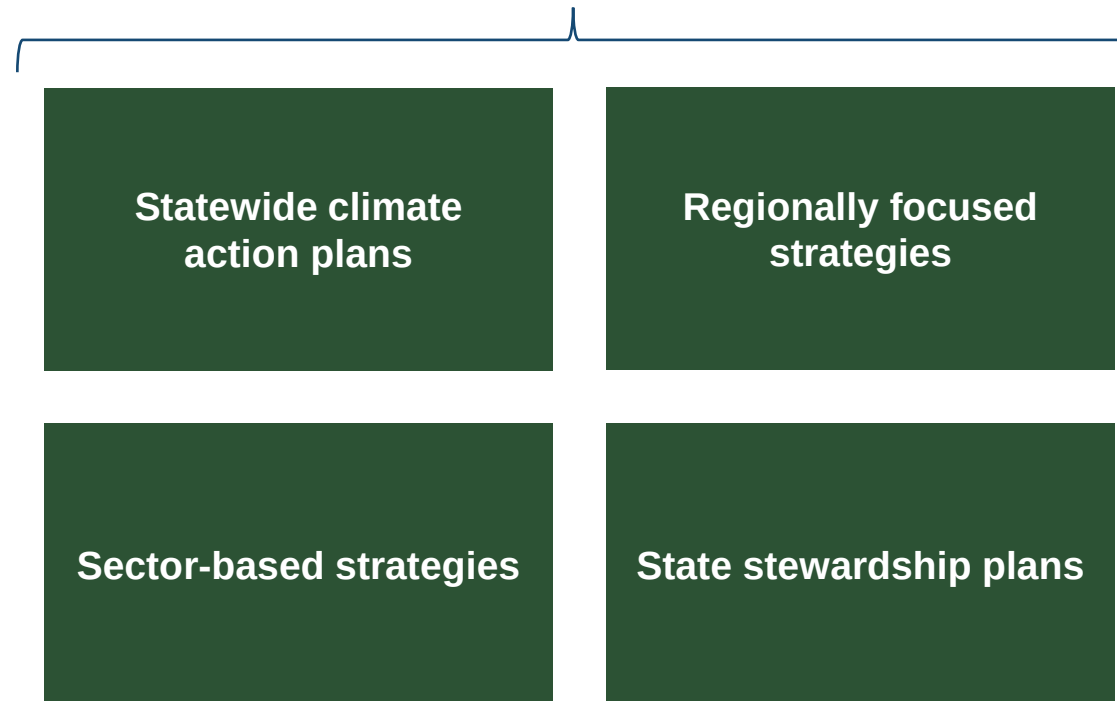


Precedent Example - California



*“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



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.



Department of
Environmental
Conservation



NYSERDA



Department
of 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 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



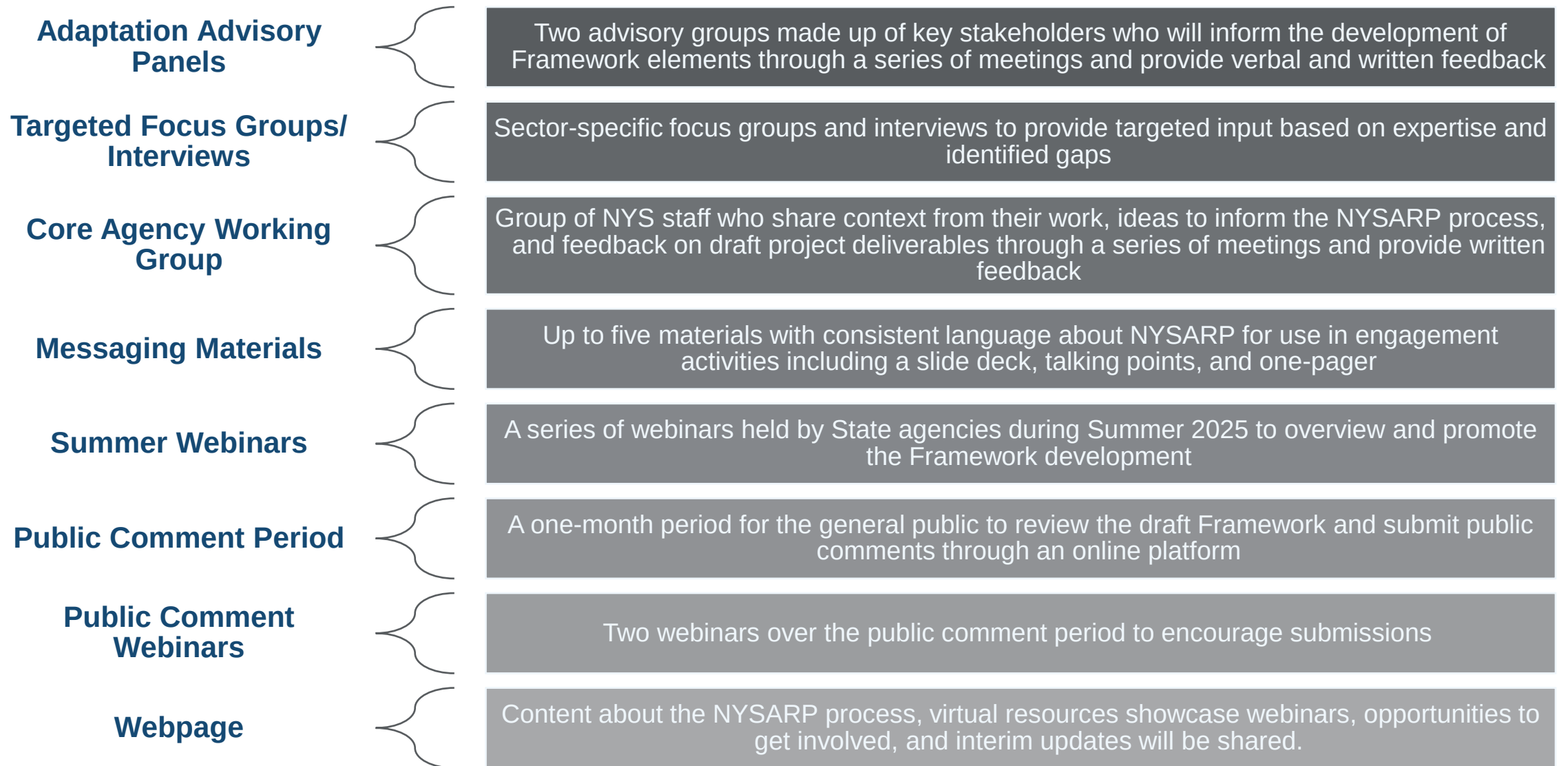
DEC Delivers e-Newsletter

NYSARP Updates:



Check the box for "Climate Adaptation and Resilience Plan"

NYSARP Engagement Approach



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.



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



CERTIFICATION PROGRAM

A screenshot of the Climate Smart Communities website. The header is dark blue with the title "Climate Smart Communities" and navigation links for "About", "Actions & Certification", "Support", and a "SIGN IN" button. The main content area is white. On the left, there is a sidebar with links for "About", "Actions & Certification", "Support", "CSC Coordinators", "CSC Scorecard", "Regional Greenhouse Gas Inventories in NYS", and "Webinar Presentation Archive". The main content area features a section titled "Find a Coordinator in Your Region" with a map of New York State divided into 10 regions: North Country, Capital District, Mohawk Valley, Mid-Hudson, Long Island, and New York City. Below the map is a photo of five people standing in front of solar panels. At the bottom of the screenshot, there is a dark blue banner with the text "TECHNICAL ASSISTANCE" in white capital letters.

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.

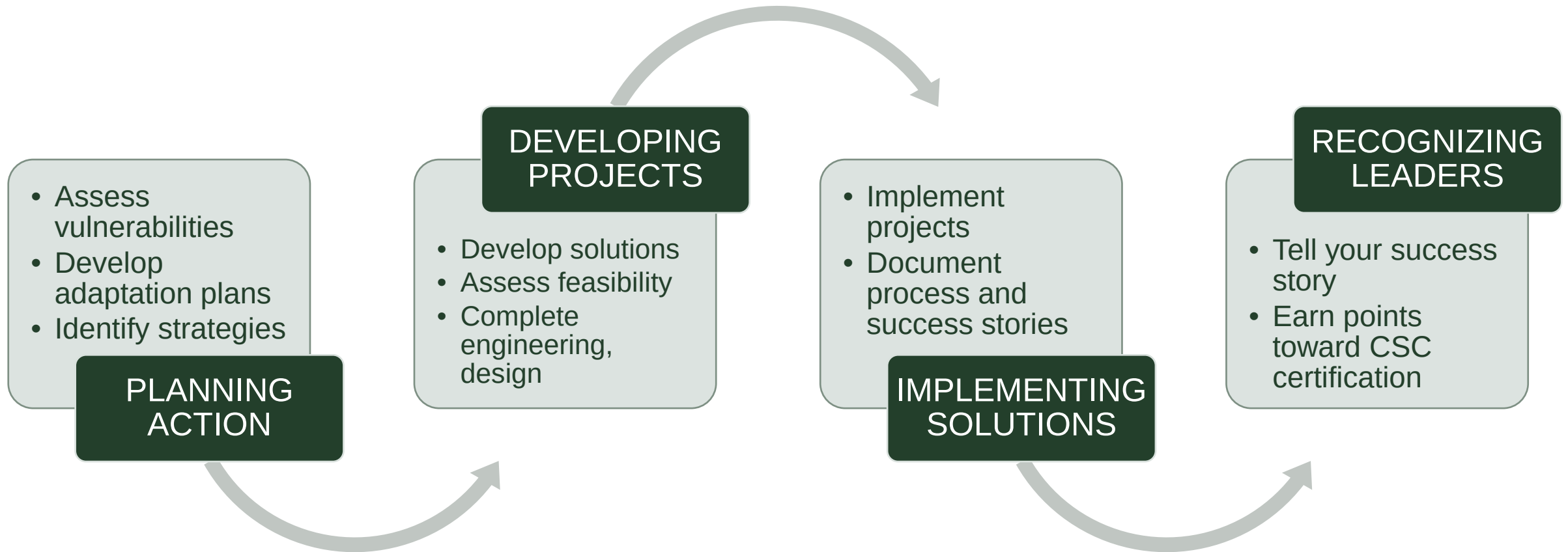
Grant applications for state funds from Registered and Certified Climate Smart Communities earn higher scores for some programs, including [DEC's CSC Grant Program](#).

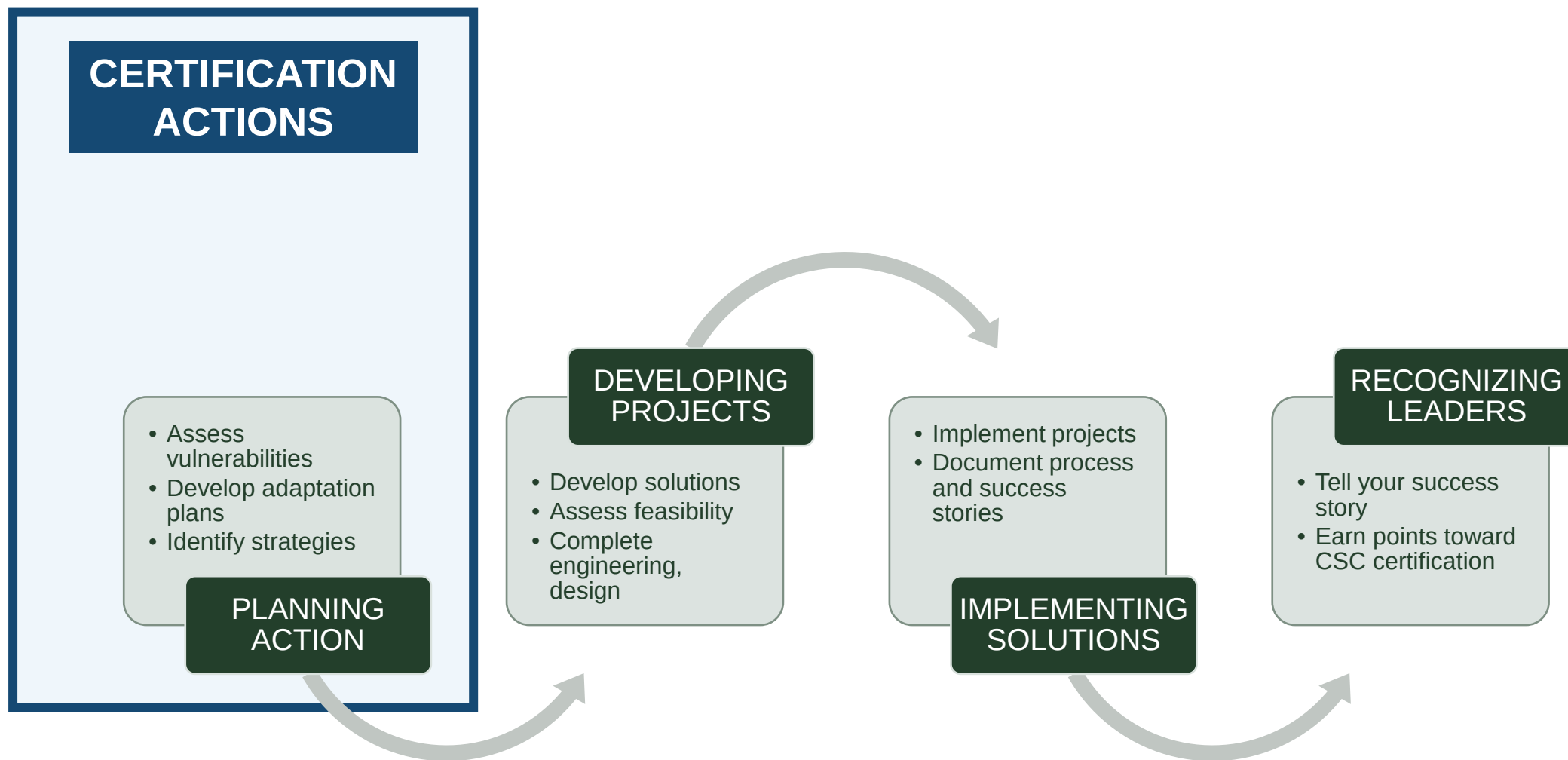
GRANTS PROGRAM



**Climate Smart
Communities**

SUPPORTING CLIMATE SMART ACTION: FROM PLANNING TO IMPLEMENTATION





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

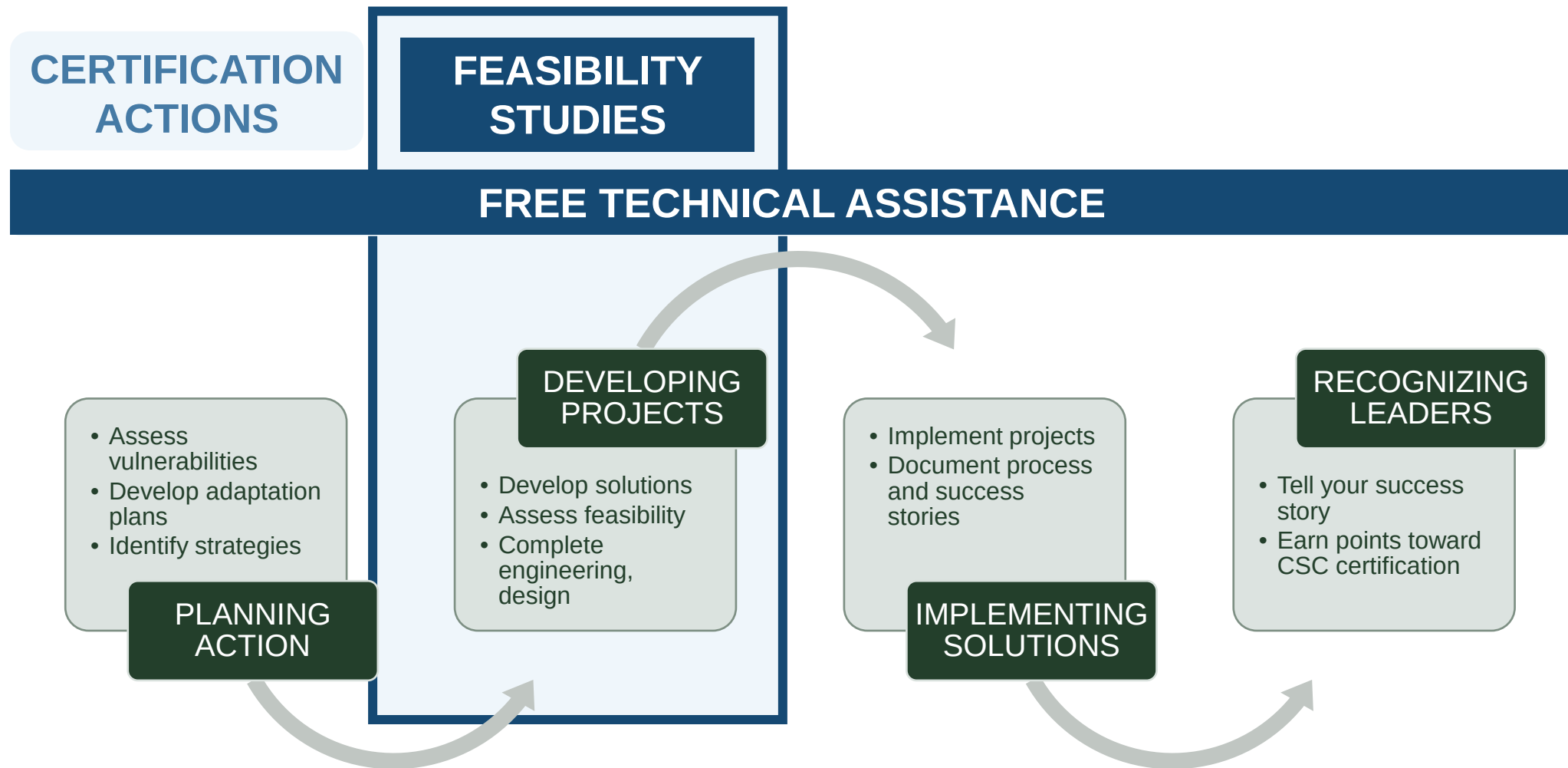
• COMPETITIVE FUNDING AVAILABLE

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.



Climate Smart Communities: Regional Coordinators

Climate Smart Communities

AboutActions & CertificationSupportSIGN IN

About

Actions & Certification

Support

CSC Coordinators

CSC Scorecard

Regional Greenhouse Gas Inventories in NYS

Webinar Presentation Archive

Find a Coordinator in Your Region

Climate Smart Communities Coordinators are available to provide free technical assistance to communities across all 10 regions of New York State. Coordinators facilitate local action to reduce greenhouse gas emissions and adapt to climate change through outreach, planning, education, and capacity building.

CAPITAL REGION

- **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**



**CERTIFICATION
ACTIONS**

**FEASIBILITY
STUDIES**

**IMPLEMENTATION
GRANTS**

FREE TECHNICAL ASSISTANCE

- Assess vulnerabilities
- Develop adaptation plans
- Identify strategies

**PLANNING
ACTION**

**DEVELOPING
PROJECTS**

- Develop solutions
- Assess feasibility
- Complete engineering, design

- Implement projects
- Document process and success stories

**IMPLEMENTING
SOLUTIONS**

**RECOGNIZING
LEADERS**

- Tell your success story
- Earn points toward CSC certification





- **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.

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](#)

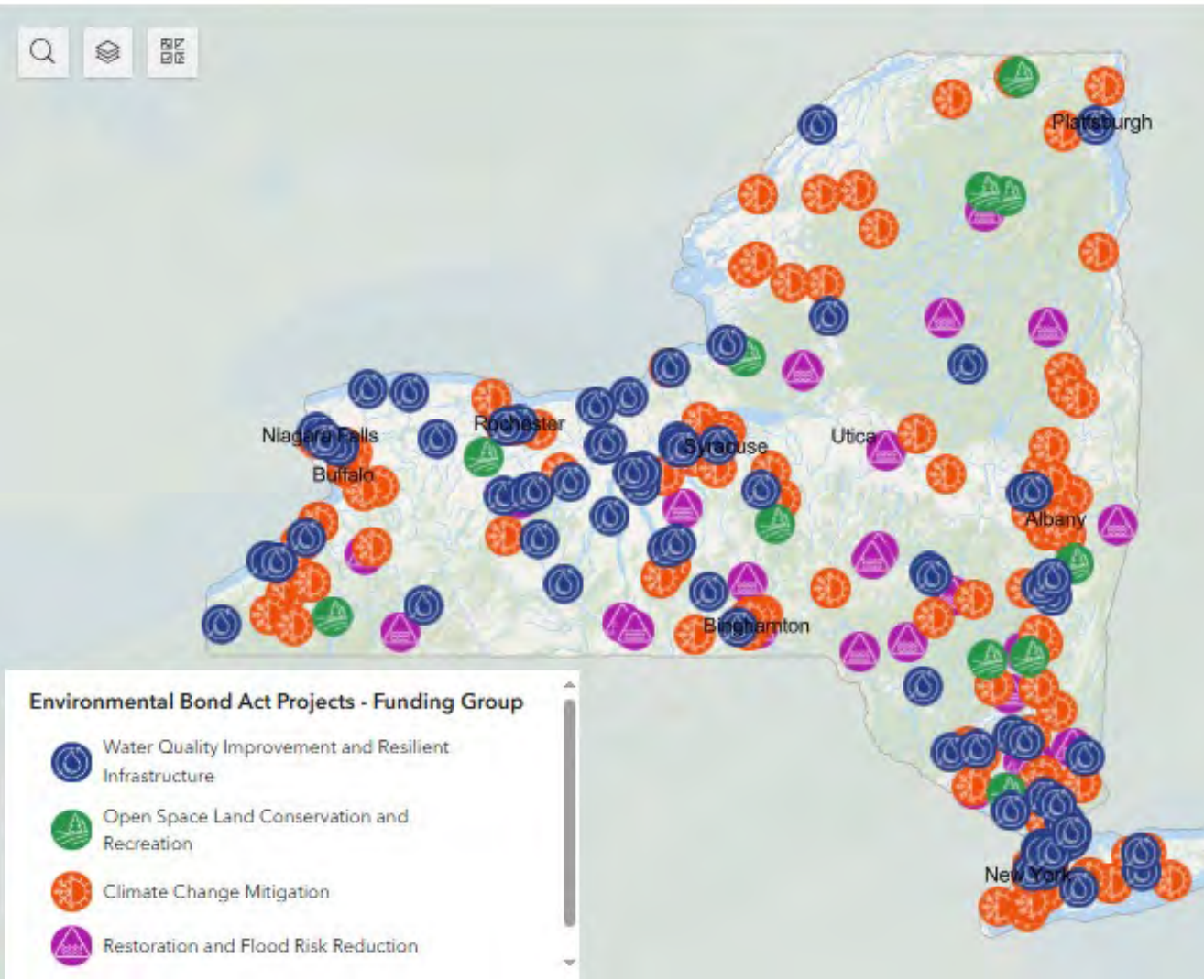
Comments Received for Eligibility Guidelines

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.

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

NYSDEC 45

NEXT STEPS: IMPLEMENT & UPDATE

Interagency workgroup implementing delivery of funds

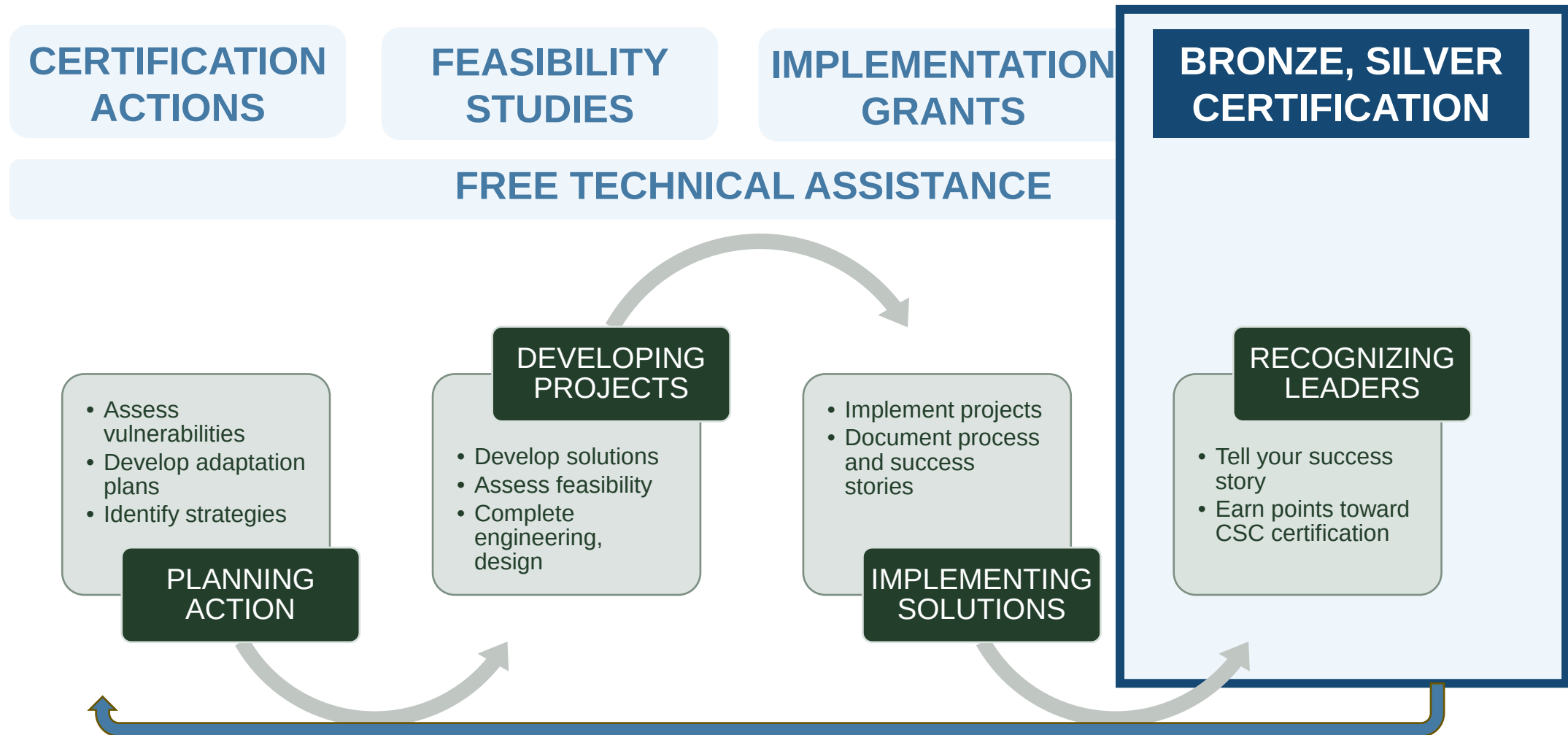
Release of eligibility guidelines for public comment

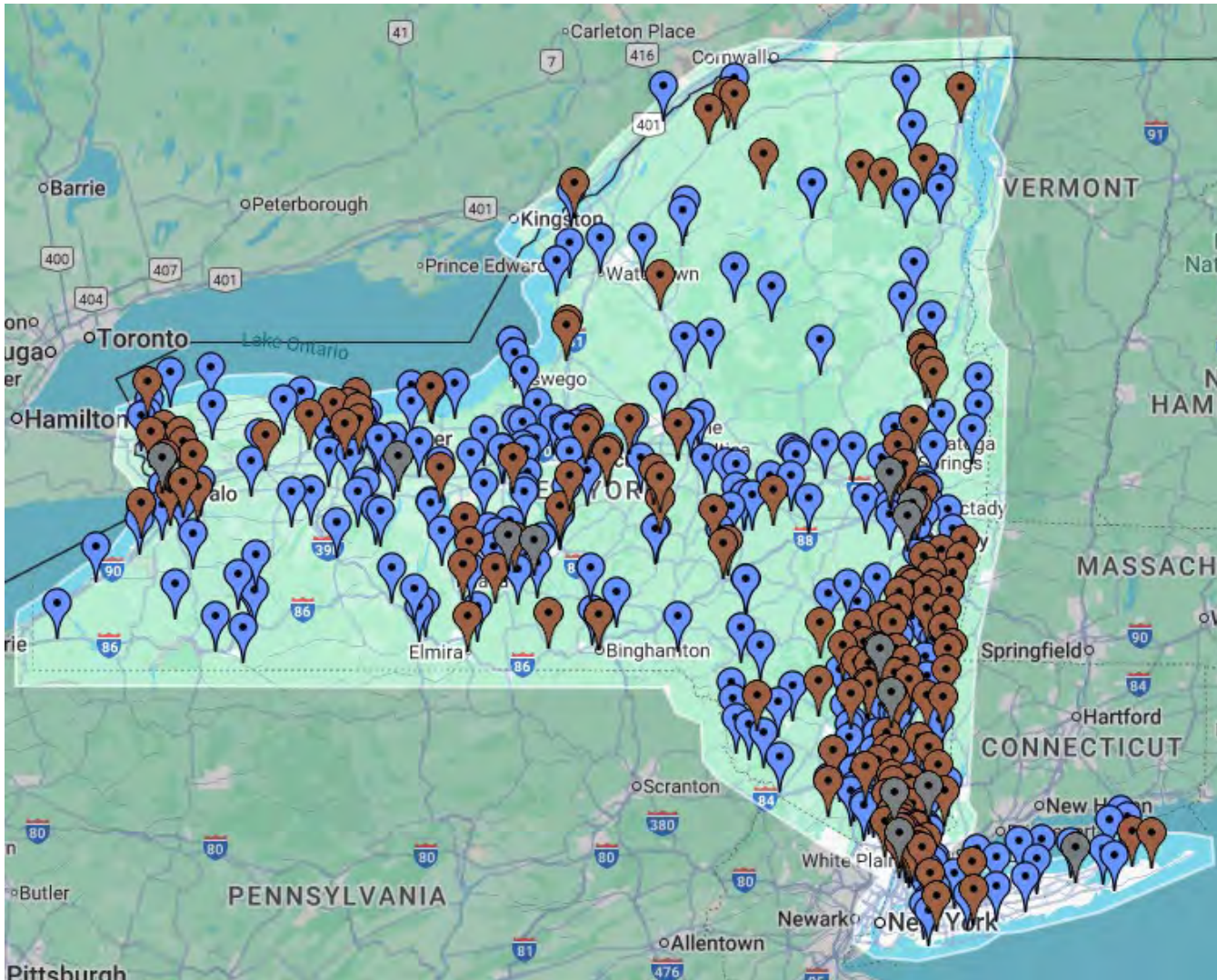
Bond Act entities launch grant opportunities

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



FROM FORMULATING STRATEGIES TO IMPLEMENTING SOLUTIONS





- **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
- 168 communities certified; thousands of actions taken

CSC
website



Lauren Steinberg

New York State DEC
Office of Climate Change

Lauren.Steinberg@dec.ny.gov

Leo Matteo Bachinger

New York State DEC
Office of Climate Change

Leo.Bachinger@dec.ny.gov



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



Climate Change Adaptation and Resilience Planning Cohort

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 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
- 
- A solid blue triangle is positioned in the bottom right corner of the slide, pointing towards the top right.

Join the Long Island CCARP Cohort

Contact:

Mike Fiorentino

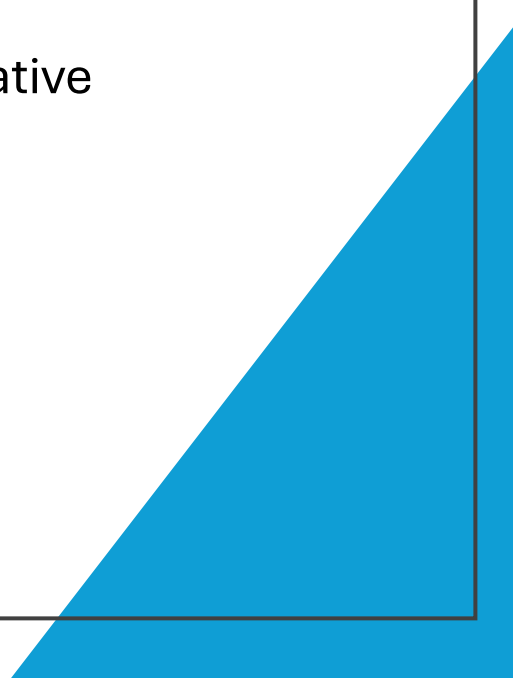
Natural Resources Team Leader, Cornell Cooperative
Extension Nassau County

Email: mf628@cornell.edu

Sarah Oral

IMEG/Downstate CSC Coordinator

Email: Sarah.I.Oral@imegcorp.com





**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

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.).

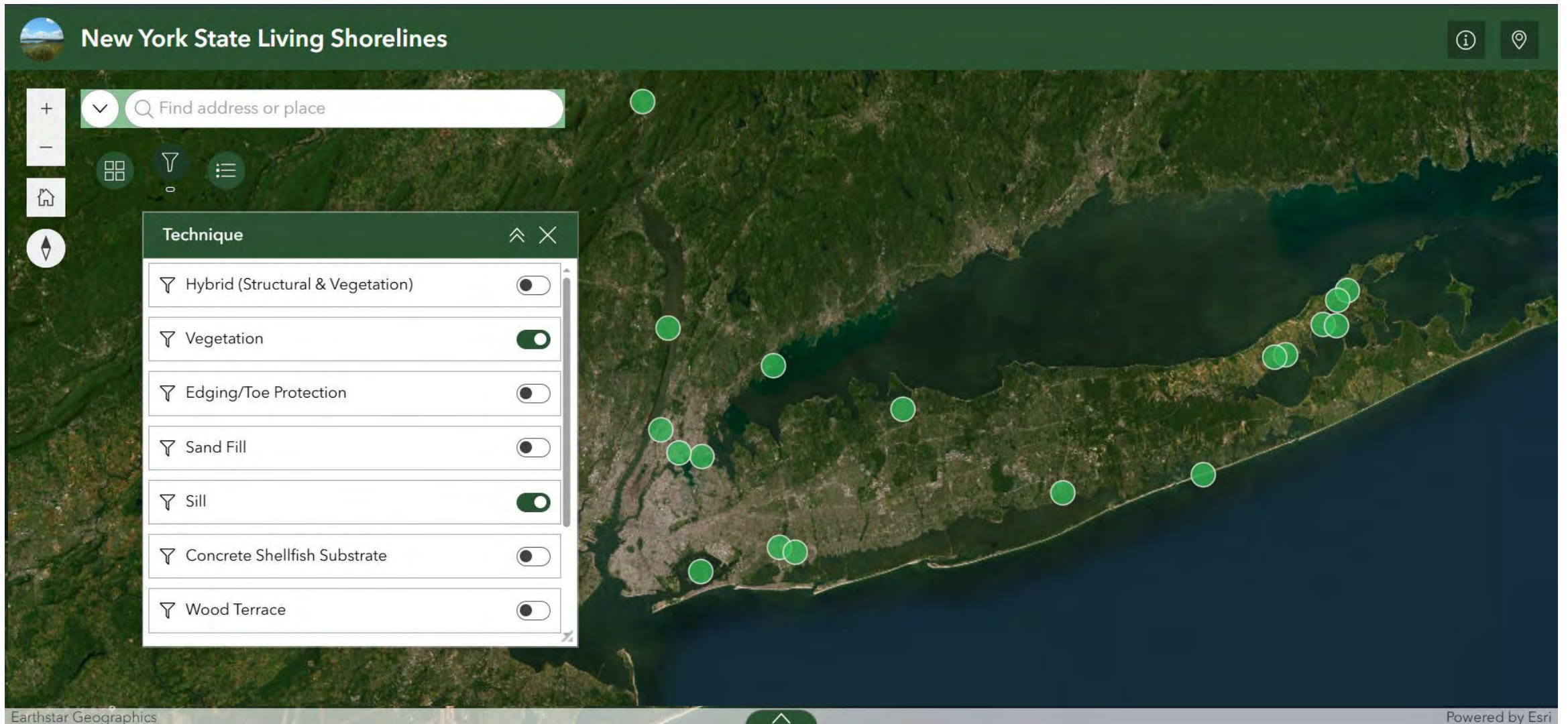
NYS Living Shorelines Database



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

Department of Environmental Conservation

Things To Do Places to Go Nature Environmental Protection Regulatory News Get Involved About

Search

Oceans & Estuaries

PRINT SHARE TRANSLATE

Home > Nature > Waterbodies > Oceans & Estuaries

Oceans & Estuaries

- ↳ Hudson River Estuary Program
- ↳ Long Island Watershed Program
- ↳ Marine Habitat Protection
- ↳ Marine Protected Resources
- ↳ New York Bight Whale Monitoring Program

The NYSDEC Ocean Program Updates webinar has been changed from the 10/09/2025 to 10/16/2025.

Marine Resources' Lunchtime Dive Webinars

Explore how NYSDEC and our partners are working to safeguard and monitor marine resources through this engaging webinar series. Hear directly from experts about collaborative efforts to protect and conserve our oceans. Browse our past webinars and see what's scheduled for 2025!



**Department of
Environmental
Conservation**

Thank you!

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

October 8 & 9, 2025

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

41





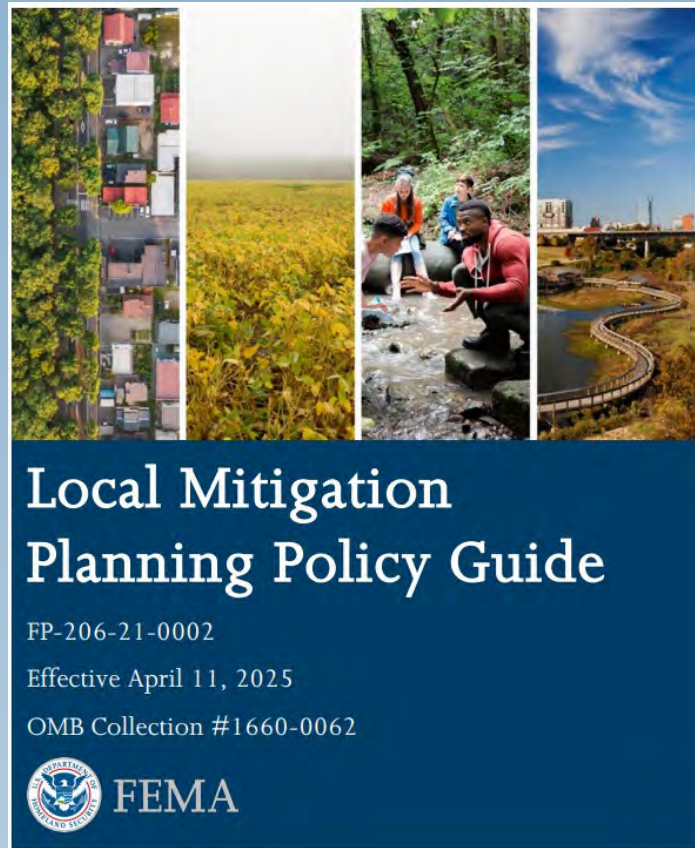
MitigateNY



Support for Data-driven Hazard Mitigation Planning

The New York State Division of Homeland Security and Emergency Services

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

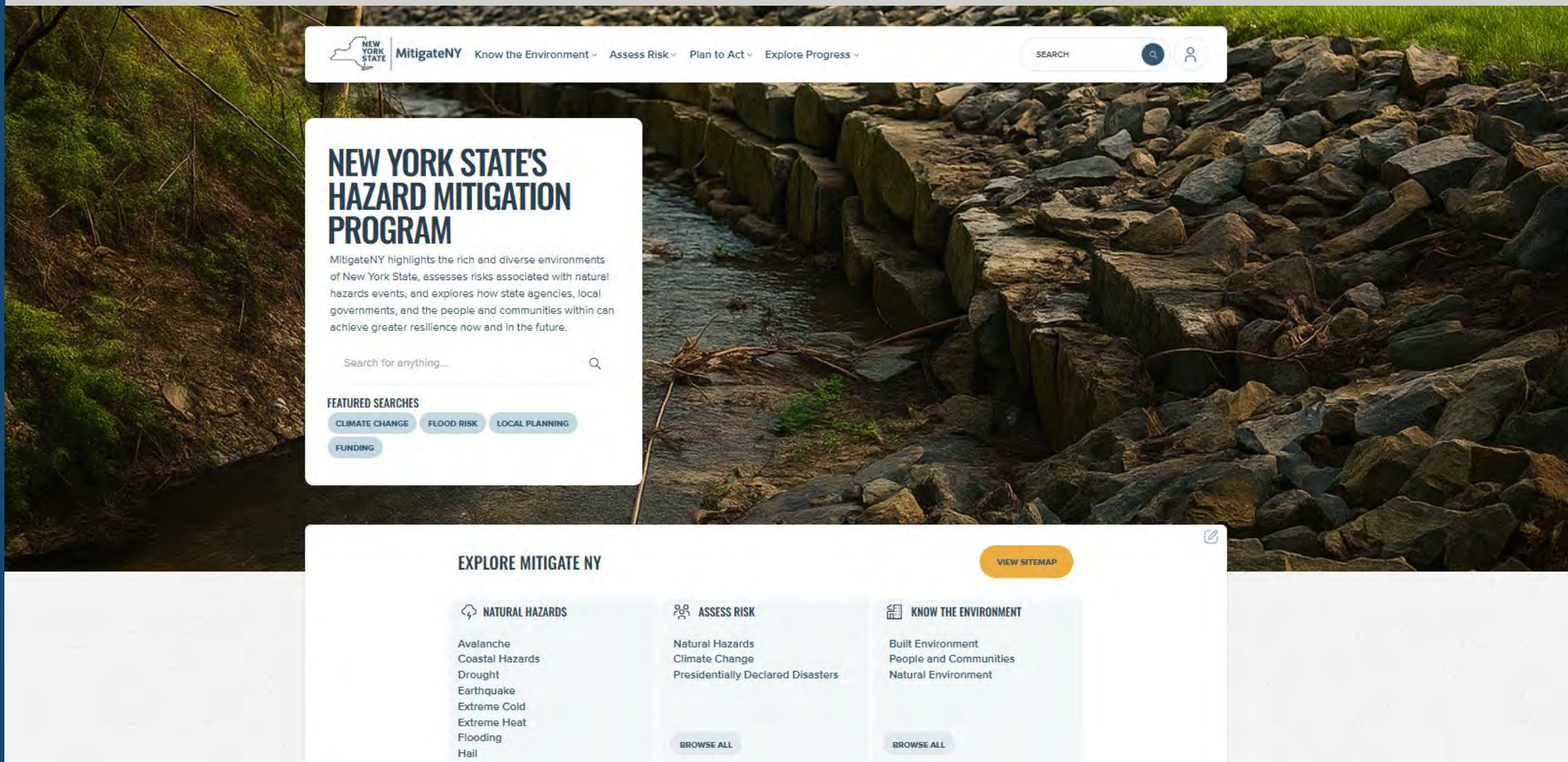
Mitigation Plans are short-term plans (5 years) - False

- 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

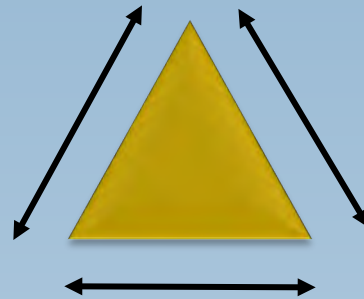
- Mitigation Plans that meet requirements ideally should be integrated into a comprehensive plan, climate smart community plans, economic development plans and other local plans.

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	ADMINISTERING AGENCY TYPE
① Intermunicipal Grant program (IMG) (For CW and DW Projects)	EFC	State
① Clean Water State Revolving Fund	EFC	State
① Water Infrastructure Improvement Program (WIIA) (For CW and DW Projects)	EFC	State
① New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant (EPG) Program	EFC	State
① Water Grants	EPA	Federal
① NY Rising Housing Recovery Program	RHC	State
① 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 group or collection of buildings in a district may be examples of particular types of architecture. Locations may have been the site of a major event in history, such as a famous battle, or could provide a window into past life through archaeological research.

Refer to these structures and locales as landmarks that stand out in the public view and memory—recognizable or buried links to our history and community identity. But to officially designate a property as a "historic" requires meeting a set of standards and a process. In doing so, these properties become eligible for certain protections and funds for their

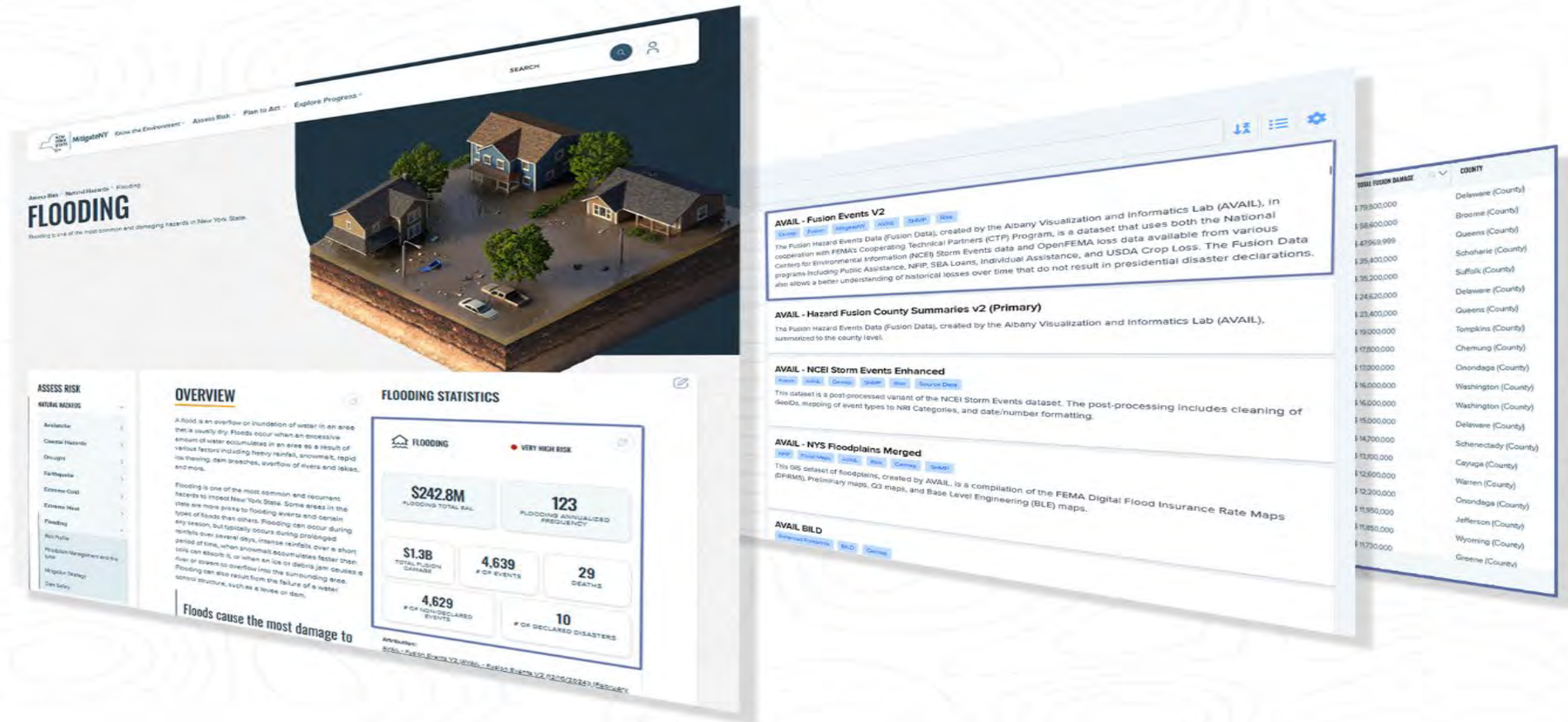


HARMFUL ALGAL BLOOMS



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

Data Manager

corrina.cavallo@dhses.ny.gov
DHSes

Dashboard
Plan Status

PAGES
CMS
Playground
Templates
CEN REP
External Data
Managed Data
DOCS
Classroom
DATASETS
Actions
DMP

SHMP

Search datasources

Download
List
Settings

Annual 7

AVAIL 19

BILD 68

Buildings 18

CEJST 2

Cenrep 109

Census 1

DEC Reports 9

DHSES 2

Discontinued 16

Elevations 2

Enhanced Footprints 6

NCEI - Storm Events Database

Cenrep
MitigateNY
Fusion
Source Data
Risk
SHMP

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>

NFIP Claims Enhanced (V2)

Cenrep
NFIP
OpenFEMA Data
AVAIL
Source Data
SHMP
Risk
Annual

This is a post-processed variant of the NFIP dataset that includes an enhancement of the GeoIDs and a mapping of disaster numbers.

The NFIP dataset provides details on NFIP claims transactions. It is derived from the NFIP system of record, staged in the NFIP reporting platform and redacted to protect policy holder personally identifiable information. The Flood Insurance Claims Manual (<https://nfipservices.floodsmart.gov/insurance-manuals>) provides claims guidance to WYOs, vendors, adjusters, and examiners so that policyholders experience consistent and reliable service. The Manual provides processes for handling claims from the notice of loss to final payment. The NFIP has provided answers to Frequently Asked Questions (FAQs) to assist the public in understanding and navigating the data our program makes available: https://www.fema.gov/sites/default/files/documents/fema_nfip-data-faqs.pdf. This data set represents more than 2,000,000 claims transactions. The dataset is updated approximately monthly by FEMA.

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

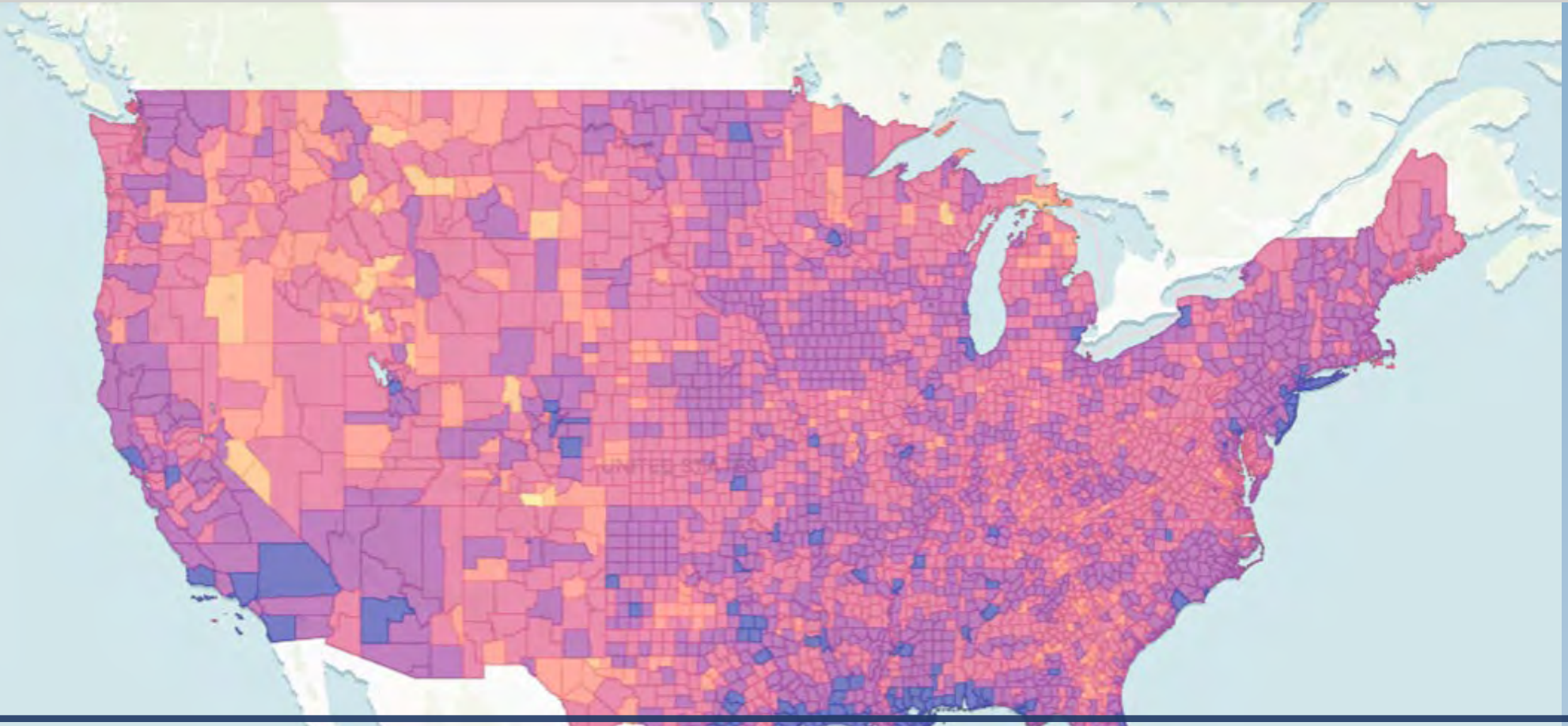
Update Interval

NCEI_STORM_EVE... ANNUAL

Columns 61

COLUMN	DESCRIPTION
Begin Year and Month <i>(integer)</i>	The year and month that the event began
Begin Date <i>(integer)</i>	The day of the month that the event began
Event Type <i>(string)</i>	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 <i>(integer)</i>	The time of day that the event began
end_yearmonth <i>(integer)</i>	The year and month that the event ended
end_day <i>(integer)</i>	The day of the month that the event ended
end_time <i>(integer)</i>	The time of day that the event ended
episode_id <i>(integer)</i>	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 SNOWSTORM (4684)	Snowstorm
2021	REMNANTS OF TROPICAL STORM IAN (4591)	Hurricane
2021	REMNANTS OF HURRICANE IAN (4591)	Hurricane
2020	TROPICAL STORM ISAIAS (4501)	Hurricane
2019	SEVERE STORMS, STRAIGHT-LINE WIND, AND FLOODING (4401)	Hurricane

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

\$16.0B
\$14.0B
\$12.0B
\$10.0B
\$8.0B
\$6.0B
\$4.0B
\$2.0B
0.0B

CA

FL

TX

LA

NY

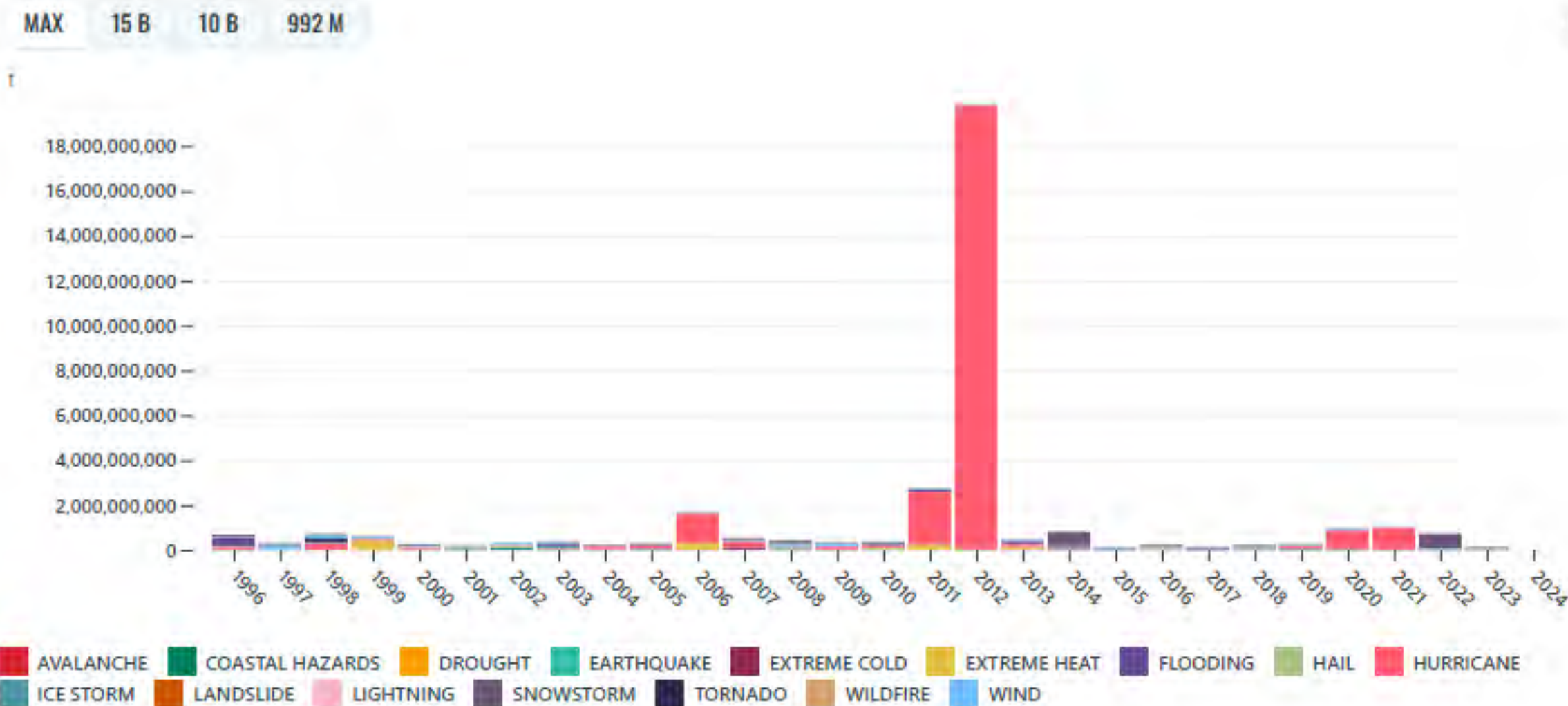
54
OF DECLARED
DISASTERS

\$33.0B
\$ OF DECLARED
DISASTERS

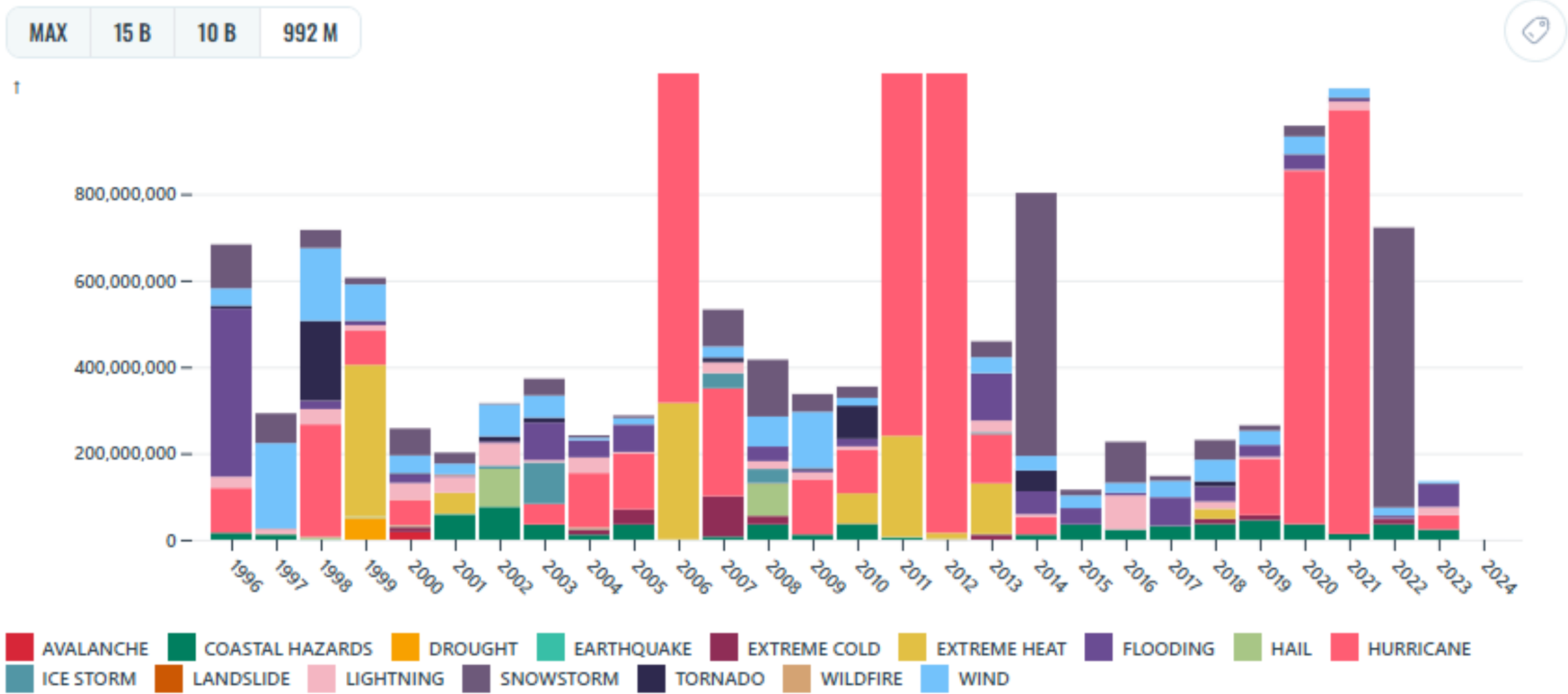
45,033
OF NON-DECLARED
DISASTERS

\$6.9B
\$ OF NON-DECLARED
DISASTERS

MitigateNY: State Hazard Mitigation Plan – Hazard Visualizations



MitigateNY: State Hazard Mitigation Plan – Hazard Visualizations



MitigateNY: CenRep – Internal Data

EXPLORE PROGRESS

ACTION TRACKING

Actions Dashboard
Actions Database

RESILIENCE SPOTLIGHTS

TOTALS

570

COUNT

24

COMPLETED

0

DISCONTINUED

1

IN-PROGRESS

545

PROPOSED - NOT
STARTED

COUNTY:	ACTION NAME:	JURISDICTION:	SOURCE
Suffolk	Ensure that all appropriate county employees are NIMS trained and qualified	Suffolk (County)	Local
Suffolk	EOC retrofit	East Hampton (Town)	
Suffolk	Epidemic/ Pandemic Stockpile	Huntington (Town)	
Suffolk	Erosion Monitoring Program	Riverhead (Town)	
Suffolk	Establishment of Generator Servicing Program	Suffolk County Water Authority	
Suffolk	Evacuation Planning	Lindenhurst (Village)	
Suffolk	Evergreen & Gedny Stormwater Improvements	Smithtown (Town)	
Suffolk	Expand Emergency Medical Services	East Hampton (Town)	
Suffolk	Expand the Community Wildfire Protection Plan and Update the Fire Management Plan	Suffolk (County)	
Suffolk	Expansion of Sewer District	Seg Harbor (Village)	
Suffolk	Extreme Temperature Response Planning	Smithtown (Town)	
Suffolk	Fire Island Boardwalks and Public Access Facilities	Brookhaven (Town)	
Suffolk	Fire Station Flood Mitigation	Seg Harbor (Village)	
Suffolk	Fire Station Relocation	Port Jefferson (Village)	
Suffolk	Fix Decontamination Unit	Suffolk (County)	

PAGE 16 OF 38
Rows 226 to 240 of 570

COUNTY:	ACTION NAME:
Suffolk	Coastal Erosion Monitoring Program
Suffolk	Critical Facilities Outreach
Suffolk	Develop Disaster Recovery Plan
Suffolk	Fire Station Relocation
Suffolk	Maintenance Plan for Recreational Beaches
Suffolk	Mill Creek Stormwater and Watershed Study
Suffolk	Perks Department
Suffolk	Problem Species Management
Suffolk	Repetitive Loss Mitigation
Suffolk	Shoreline Bluff Protection
Suffolk	Tree Management for Stormwater Protection
Suffolk	Village Hall Flood Protection
Suffolk	Village-wide Stormwater Study

SUFFOLK

Description of the Problem:

Problem: The Village Fire Station at 115 Maple Place is located in the floodplain. Past flooding has resulted in damages and the loss of a fire engine.

Description of the Solution:

Solution: The Village will identify a new location for the Fire Station outside of the floodplain and rebuild the facility.

Lead Agency/ Department:

Village Administration, Fire Department

Action Number:

2020-Port Jefferson-007

Action Category

property protection & infrastructure

Action Type

acquisition, elevation or relocation

Hazards

MitigateNY: CenRep – Internal Data

EXPLORE PROGRESS

ACTION TRACKING

Actions Dashboard

Actions Database

RESILIENCE SPOTLIGHTS

TOTALS

244

COUNT

4

COMPLETED

0

DISCONTINUED

1

IN-PROGRESS

239

PROPOSED - NOT
STARTED

COUNTY:	ACTION NAME:	JURISDICTION:	SOURCE
① Nassau	Cleft Road Electrical Utility Underground	Mill Neck (Village)	Local
① Nassau	Coastal Zoning District	Woodsburgh (Village)	Local
① Nassau	Community Communications Update Project	Roslyn Harbor (Village)	Local
① Nassau	Community Hazard Awareness Program	Laurel Hollow (Village)	Local
① Nassau	Community Outreach Emergency Information Service	Russell Gardens (Village)	Local
① Nassau	Comprehensive Preparedness/Disaster Plan	South Floral Park (Village)	Local
① Nassau	COOP - Continuation of Operation Plan	Stewart Manor (Village)	Local
① Nassau	County Mitigation Planning Website Access	Rockville Center (Village)	Local
① Nassau	Critical Facility Flood Risk Education	Nassau (County)	Local
① Nassau	Critical Slope Reinforcement Initiative (Revised)	Sands Point (Village)	Local
① Nassau	Department of Public Works and Recreation Hardening	East Rockaway (Village)	Local
① Nassau	Develop a Continuity of Operations Plan	Plandome Heights (Village)	Local
① Nassau	Develop a Disaster Communications Plan	South Floral Park (Village)	Local
① Nassau	Develop tree maintenance standards for residential	Lynbrook (Village)	Local
① Nassau	Develop Tree Removal and Maintenance Program	South Floral Park (Village)	Local

PAGE 3 OF 17
Rows 31 to 45 of 244

COUNTY:	ACTION NAME:
① Nassau	Cleft Road Electrical Utility Underground
① Nassau	Coastal Zoning District
① Nassau	Community Communications Update Project
① Nassau	Community Hazard Awareness Program
① Nassau	Community Outreach Emergency Information Service
① Nassau	Comprehensive Preparedness/Disaster Plan
① Nassau	COOP - Continuation of Operation Plan
① Nassau	County Mitigation Planning Website Access
① Nassau	Critical Facility Flood Risk Education
① Nassau	Critical Slope Reinforcement Initiative (Revised)
① Nassau	Department of Public Works and Recreation Hardening
① Nassau	Develop a Continuity of Operations Plan
① Nassau	Develop a Disaster Communications Plan
① Nassau	Develop tree maintenance standards for residential
① Nassau	Develop Tree Removal and Maintenance Program

PAGE 3 OF 17
Rows 31 to 45 of 244

NASSAU

Description of the Problem:

The Incorporated Village of Sands Point has been struggling with slope failures on the east side of its property overlooking Hempstead Harbor. This slope is on Village property and it protects the Village's competition size outdoor pool and a Village building. A large part of the slope has dropped 10 feet in less than two years and has put Village infrastructure at higher risk to coastal hazards and flooding.

Description of the Solution:

Reinforce the slope through phase 3 of the Slope Reinforcement Initiative. Phase one and two consisted of installing underdrains and backfilling the failed slope with 900 cubic yards of a lightweight material. Phase three consists of repairing the worst section of the slope that has dropped ten feet in less than two years. Reinforcement of this section requires over 1500 cubic yards of material in an area that is not easily accessed with standard trucking.

Lead Agency/ Department:

VSP

Action Number:

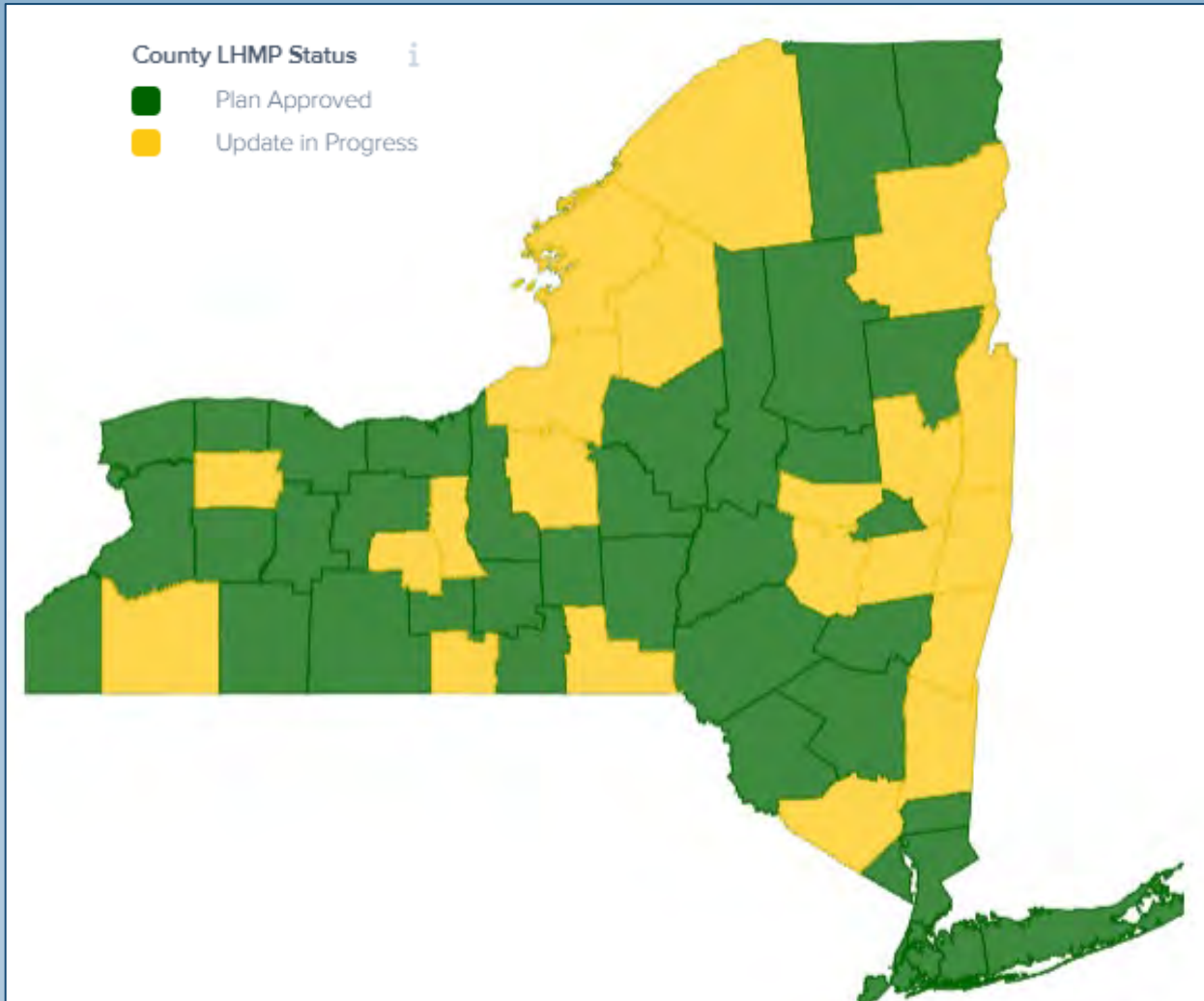
VSP_3 (Revised)

Action Category

nature-based solutions

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

The screenshot displays the MitigateNY web application. At the top, a navigation bar includes the New York State logo, the MitigateNY title, and links for 'The Local Environment', 'The Risk', 'The Plan', and 'Track Progress'. A search bar and a 'Login' button are also present. The main content area features a large background image of a historic resort building with red roofs and stone walls, situated on a rocky shore next to a calm lake. Overlaid on the left is a white card with the text 'Home', 'COUNTY HAZARD MITIGATION PLAN', and 'A note goes here.' At the bottom, another white card contains the title 'LOCAL HAZARD MITIGATION PLAN' followed by a paragraph of text about Delaware County.

NEW YORK STATE | MitigateNY The Local Environment ▾ The Risk ▾ The Plan ▾ Track Progress ▾

SEARCH Login

Home

COUNTY HAZARD MITIGATION PLAN

A note goes here.

LOCAL HAZARD MITIGATION PLAN

Delaware County, located in the southern portion of New York State, encompasses 1,467 sq. miles, 1,442 sq. miles of land, and 25 sq. miles of water. The county is bordered north by

MitigateNY: Local Hazard Mitigation Plans



MitigateNY

The Local Environment

The Risk

The Plan

Track Progress

SEARCH

q

Login

THE LOCAL ENVIRONMENT

PEOPLE AND COMMUNITIES

BUILT ENVIRONMENT

Overview

Buildings

Infrastructure

Vulnerability

NFIP - FLOODPLAIN MANAGEMENT

HIGH HAZARD DAMS

NATURAL ENVIRONMENT

LOCAL CONTEXT

The big picture introduction summary, county level context about the built environment, total building stock, infrastructure, critical infrastructure, special considerations. Discuss special vulnerability related to the built environment.

BUILDINGS

Exposure to Hazards: If the population grows in areas that are vulnerable to various hazards, including coastal regions and floodplains, more individuals and communities are at risk when a hazard event occurs.

BUILDINGS BY LANDUSE TYPE SUMMARY

PROPERTY CLASS MAJOR CATE.

NUMBER OF BUILDINGS

BUILDING FULL MARKET VALUE

Agricultural	139.3 K	\$ 8.0 B
Residential	5.8 M	\$ 848.7 B
Vacant land	168.6 K	\$ 9.7 B

COUNTY BUILDING STOCK

TOTAL BUILDING VALUE

0

TOTAL BUILDINGS

0

Attribution:
AVAIL BILD V3.1 (AVAIL BILD V2.1)

MitigateNY: Local Hazard Mitigation Plans

**MitigateNY**

The Local Environment

The Risk

The Plan

Track Progress

SEARCH

0

Login

THE RISK

NATURAL HAZARDS

Avalanche

Coastal Hazards

Drought

Earthquake

Extreme Cold

Risk Profile

Mitigation Strategy

Extreme Heat

Flooding

Hail

Hurricane

Ice Storm

Landslide

Lightning

Snowstorm

Tornado

Wildfire

Wind

Presidentially Declared Disasters

NON-NATURAL HAZARDS

CLIMATE CHANGE

DISASTERS

OVERVIEW

SHMP Hazard Narrative Data Overview - Context intro to this specific hazard. What is the hazard, Definition and Characteristics. Pack as many requirement related tidbits as possible.

EXTREME COLD

LOW RISK

\$73.1K

EXTREME COLD TOTAL EAL

1

EXTREME COLD ANNUALIZED FREQUENCY

\$20.0K

TOTAL FUSION DAMAGE

11

OF EVENTS

0

DEATHS

11

OF NON-DECLARED EVENTS

0

OF DECLARED DISASTERS

Attribution:

AVAIL - Fusion Events V2 (AVAIL - Fusion Events V2 (12/10/2024)) (February 12, 2025 at 1:30 PM)

MODELED RISK

HISTORICAL RISK

GENERAL VULNERABILITY

SHMP Hazard Narrative Data about general vulnerability.

POTENTIAL IMPACTS

Description of Potential Impacts table

Domain

POTENTIAL IMPACT NAME	DOMAIN	SUB-DOMAIN
Roof Damage or Failure	Buildings	Residential
Damage or Destruction	Buildings	
Power Surge Damage	Infrastructure	Energy

85



BILD – Buildings Information and Land-use Dataset



Questions & Contact Info



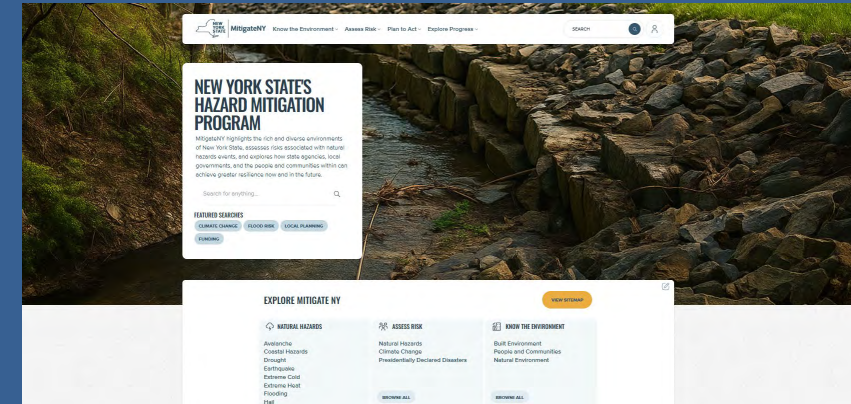
Corrina Cavallo
Deputy Chief of Mitigation Programs
corrina.cavallo@dhses.ny.gov



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



mitigateny@dhses.ny.gov



<https://hazardmitigation.ny.gov/>



Homeland Security
and Emergency Services

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





LONG ISLAND SOUND
PARTNERSHIP



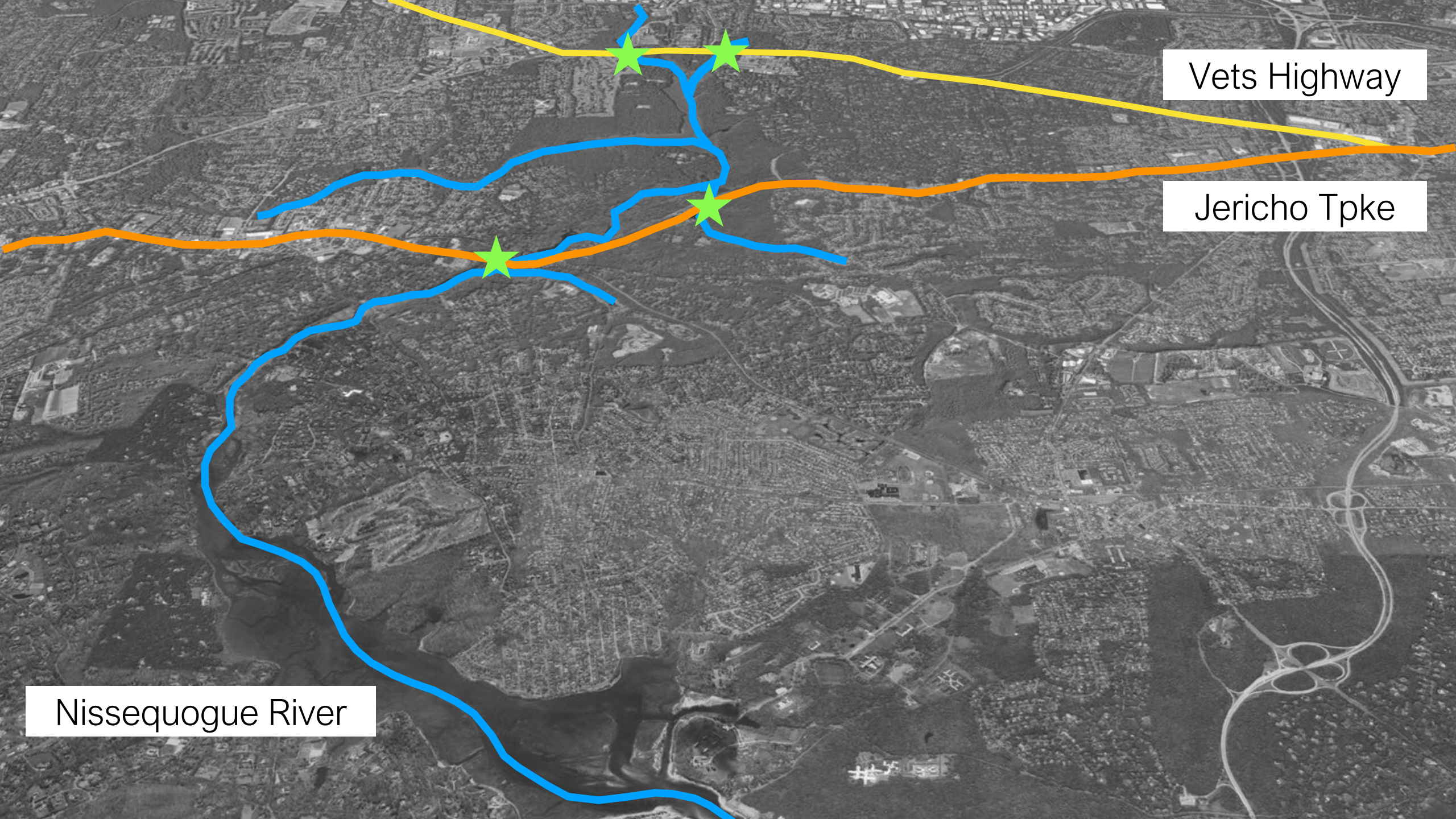
Resilience Resources & Tools



STREAM/TIDAL CROSSING PRIORITIZATION TOOL



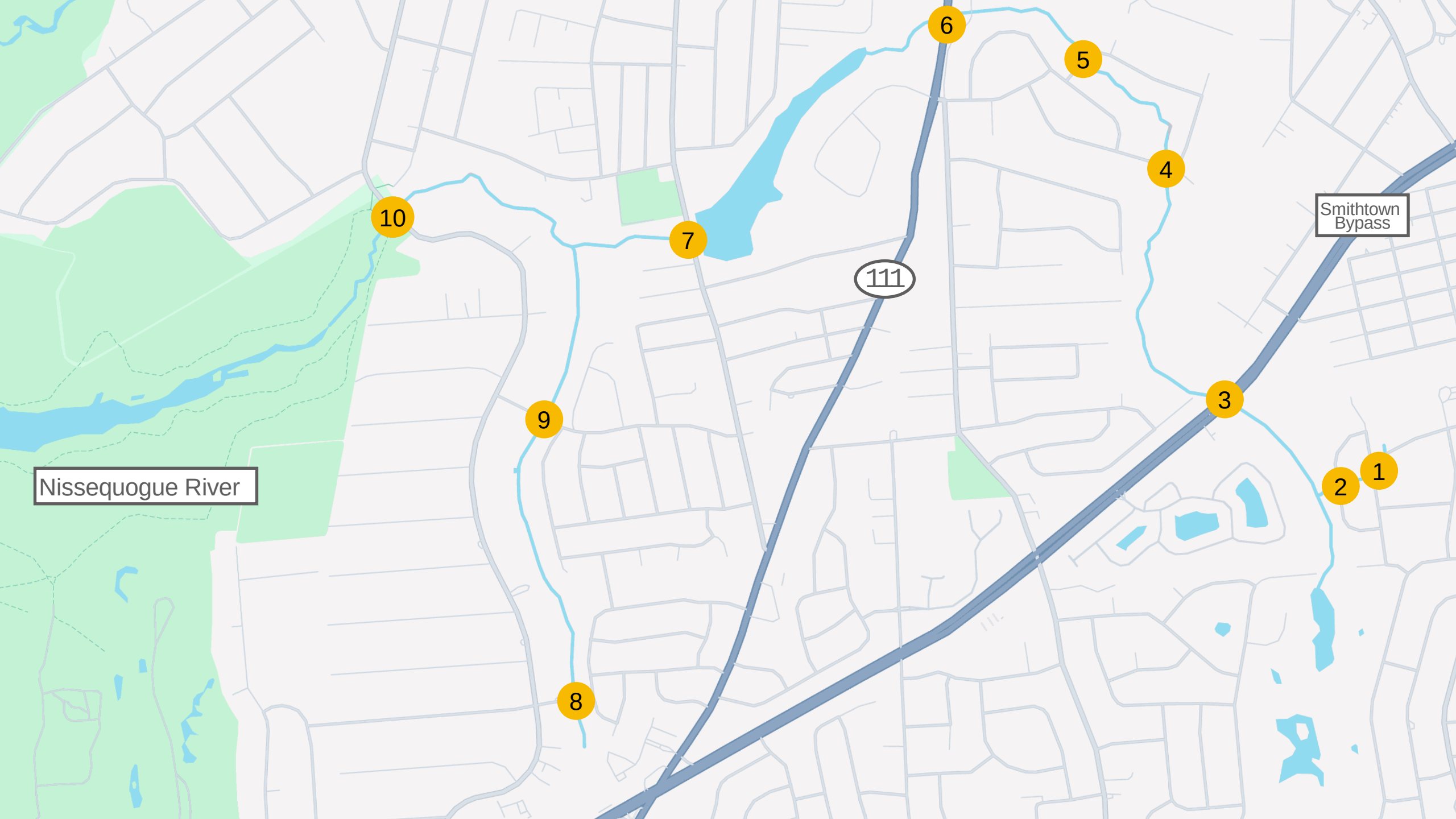
Enrico Nardone, Executive Director
Seatuck Environmental Association



Vets Highway

Jericho Tpke

Nissequogue River



Nissequogue River

Smithtown Bypass

111

10

7

9

8

6

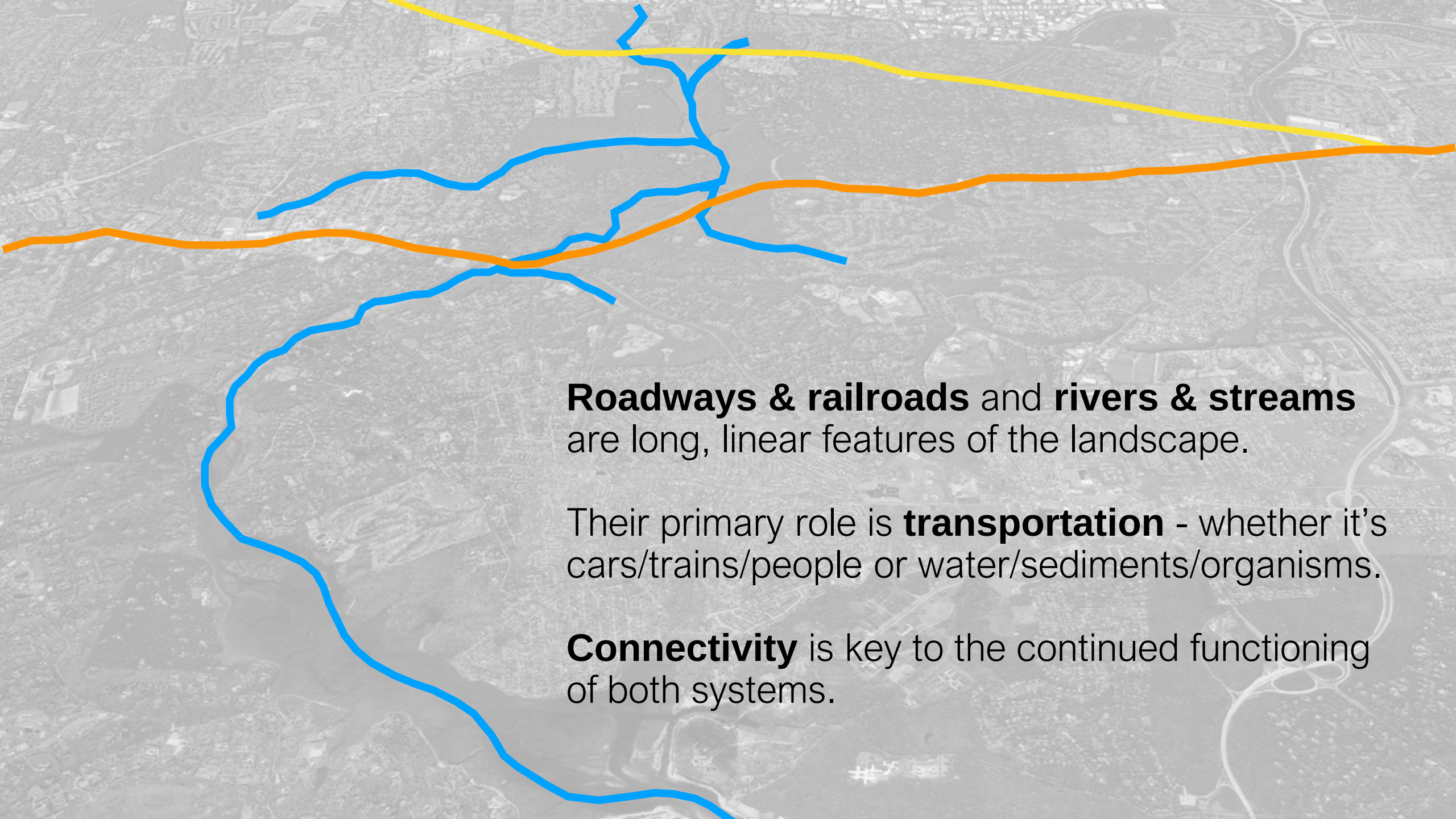
5

4

3

2

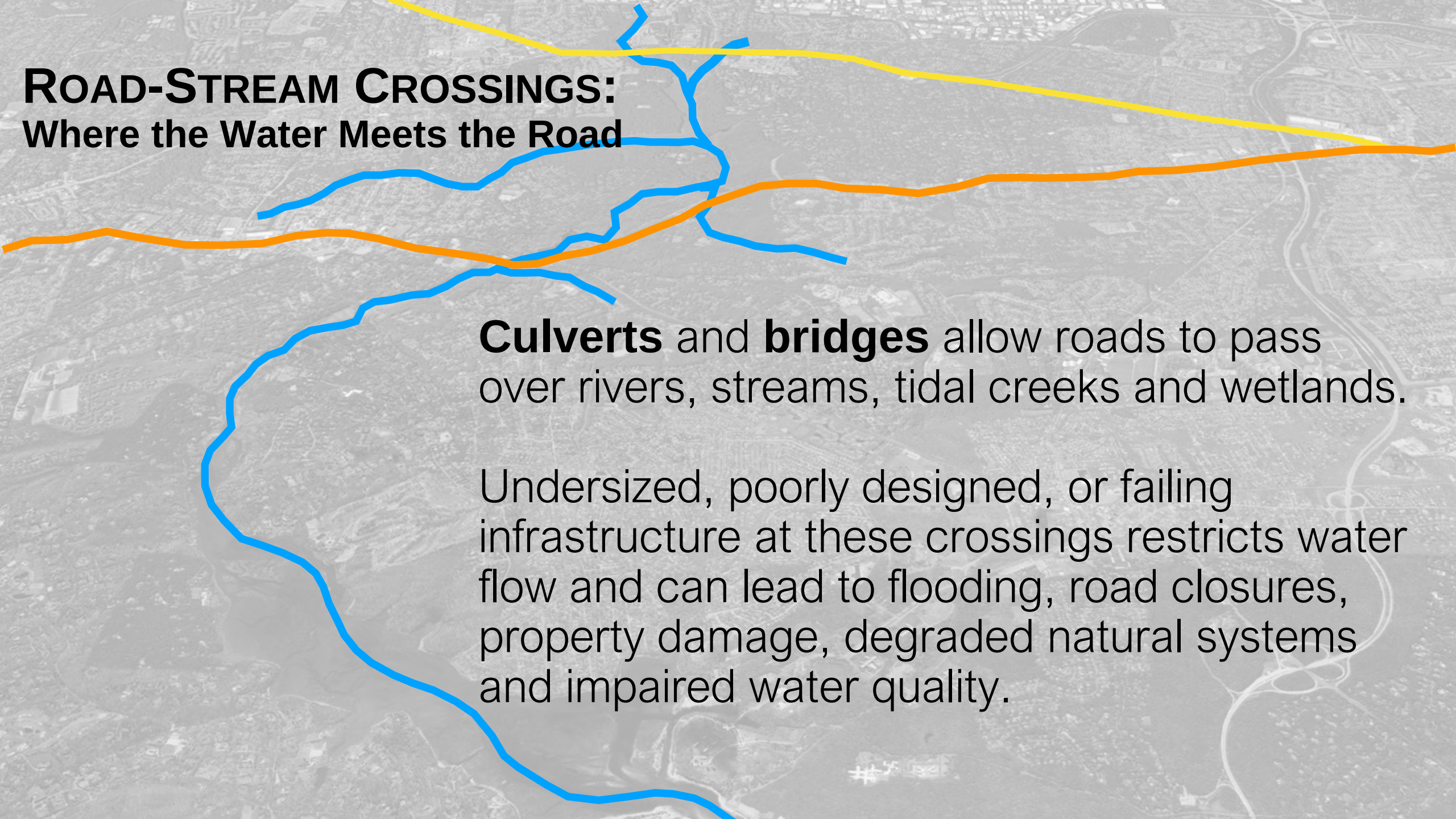
1

An aerial photograph of a landscape with various features. Overlaid on the image are several thick, colored lines: a yellow line at the top, an orange line below it, and a blue line that branches out from the orange line and extends towards the bottom left. These lines represent linear features like roadways, railroads, rivers, and streams.

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.

An aerial photograph of a landscape with a network of roads and water bodies. A blue line traces a winding path through the landscape, representing a stream or river. Several orange lines cross this blue path at various points, representing roads. The background is a grayscale aerial view showing fields, forests, and some buildings.

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

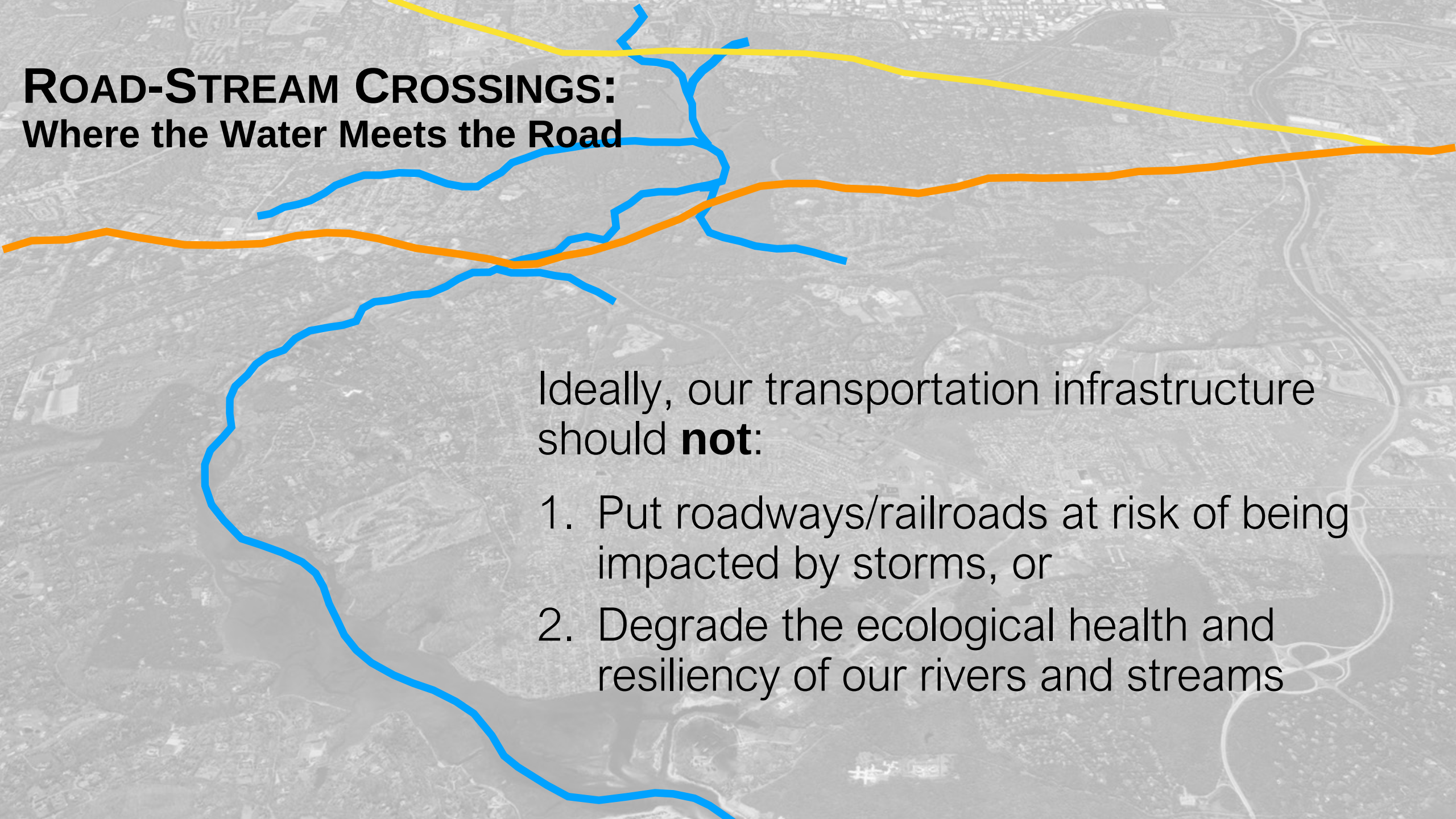
ROAD-STREAM CROSSINGS: Where the Water Meets the Road

Beaver Brook



Connetquot River



An aerial photograph of a landscape with a road network and a stream system. A yellow line represents a major road running diagonally from the top left towards the right. An orange line represents another road running horizontally across the middle. A blue line represents a stream network, starting from the top left, flowing right, then turning south and then west, eventually merging into a larger body of water at the bottom. The stream crosses the orange road multiple times.

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:

- Risk of failure
- Criticality
- Climate resilience





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)

An aerial photograph of a landscape with a river and roads. A yellow line follows a road from the top left towards the right. An orange line follows a road from the left towards the right, crossing the river. A blue line follows the course of the river, starting from the top center and flowing down towards the bottom left. The text 'THE SOLUTION? Right-Sizing!' is in the top left, and a list of road-stream crossing goals is on the right.

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

AUSABLE
Freshwater Center



New Bridge Brook, Wilmington, NY

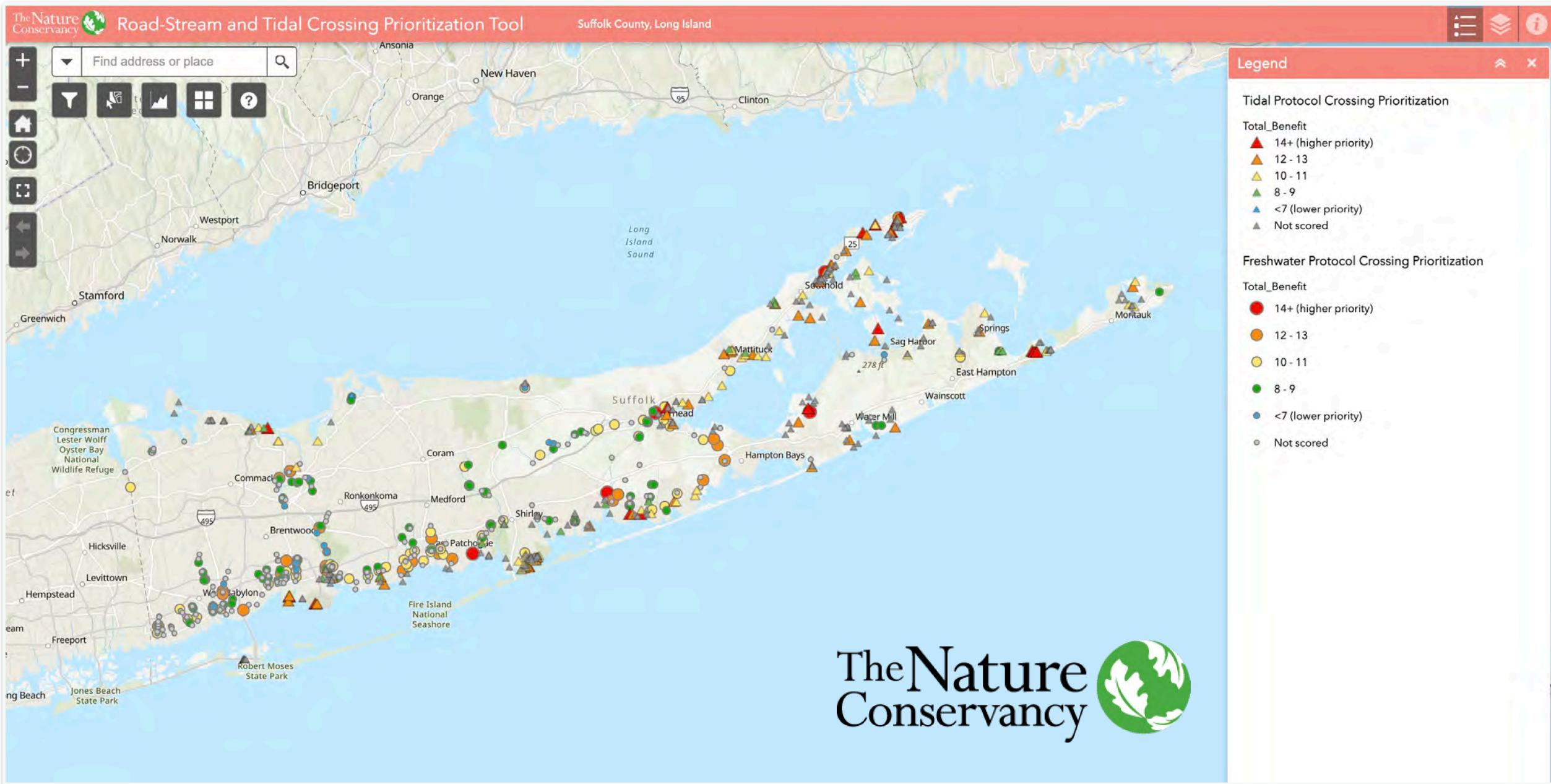


Pete Topping - Peconic Baykeeper

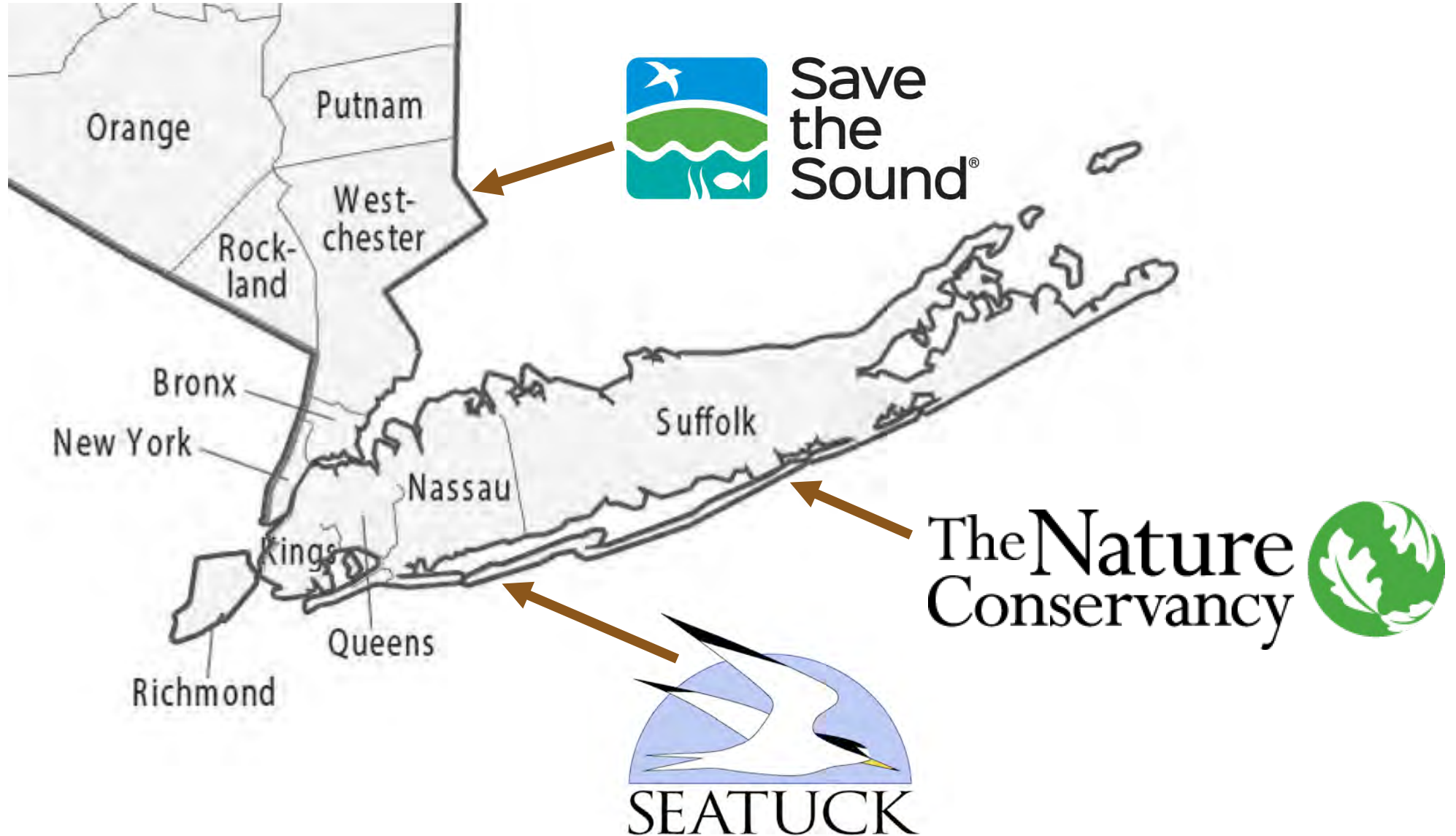


Pete Topping - Peconic Baykeeper

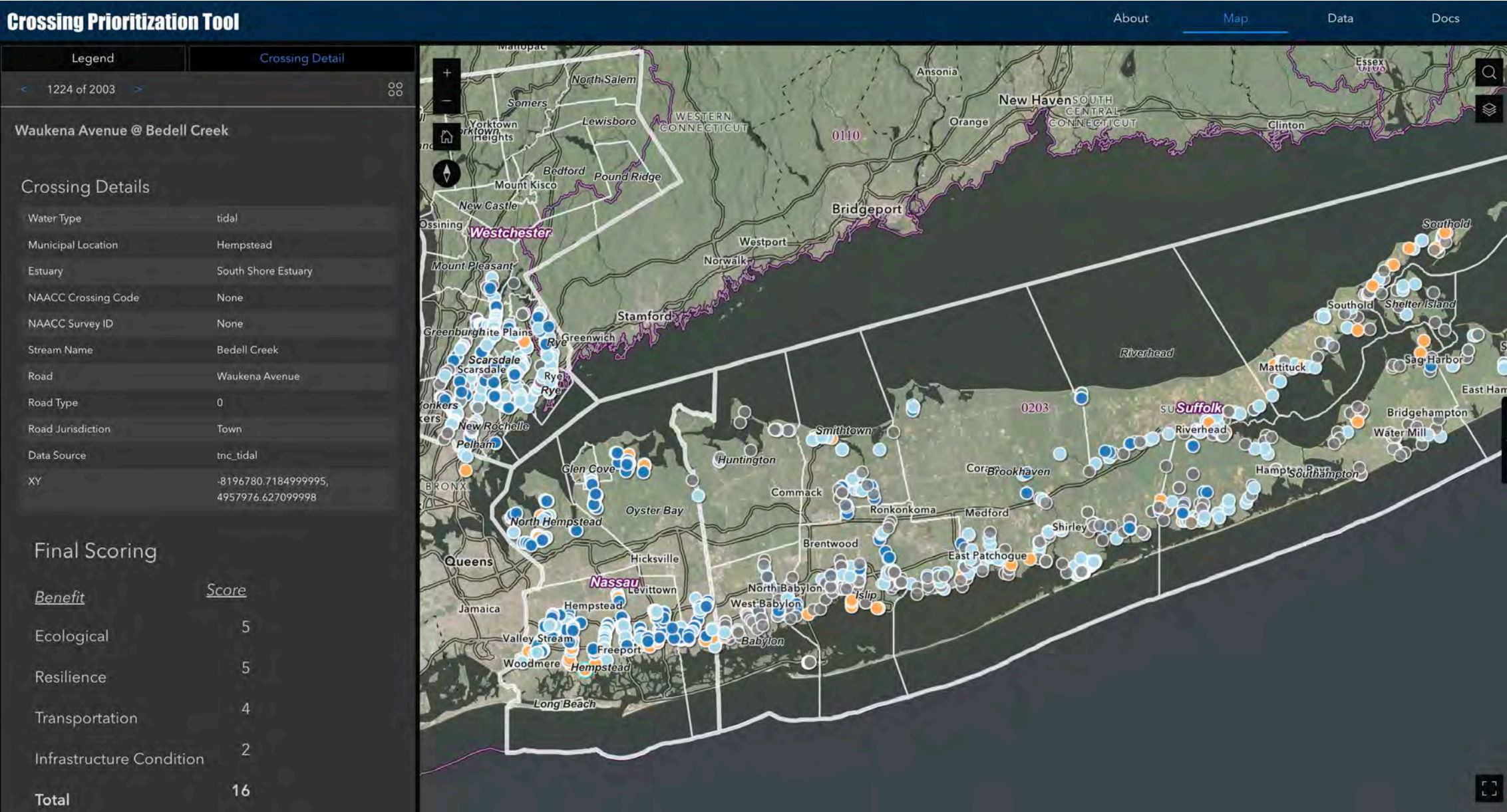
ROAD-STREAM CROSSING & TIDAL CROSSING PRIORITIZATION TOOL



ROAD-STREAM CROSSING & TIDAL CROSSING PRIORITIZATION TOOL



ROAD-STREAM CROSSING & TIDAL CROSSING PRIORITIZATION TOOL



STREAM/TIDAL CROSSING PRIORITIZATION TOOL



Enrico Nardone, Executive Director
Seatuck Environmental Association

Which types of flooding are you most concerned about in your community? (select all that apply)

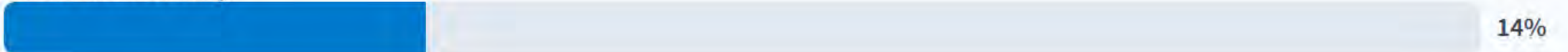
Coastal Flooding



Stormwater Flooding



Groundwater Flooding



Compound Flood Hazard Mapper

Long Island Sound Coastal Resilience Forum

October 2025

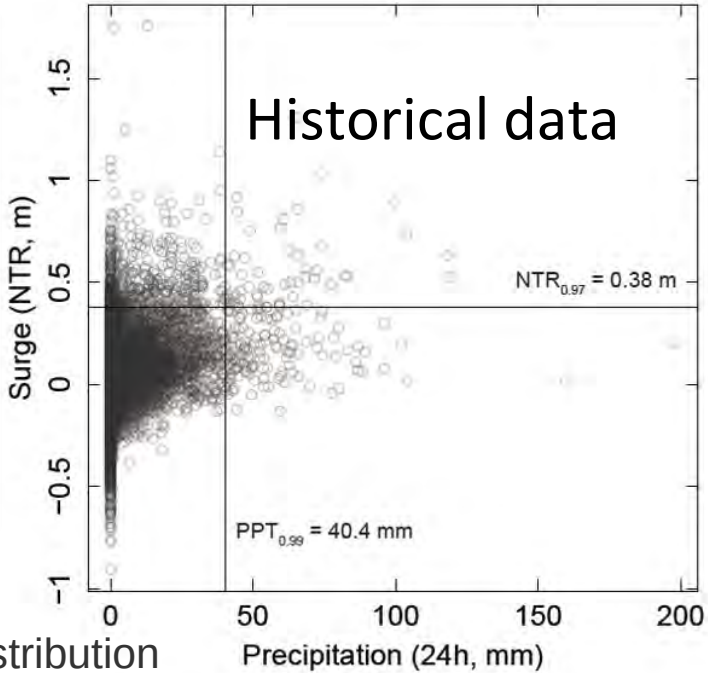
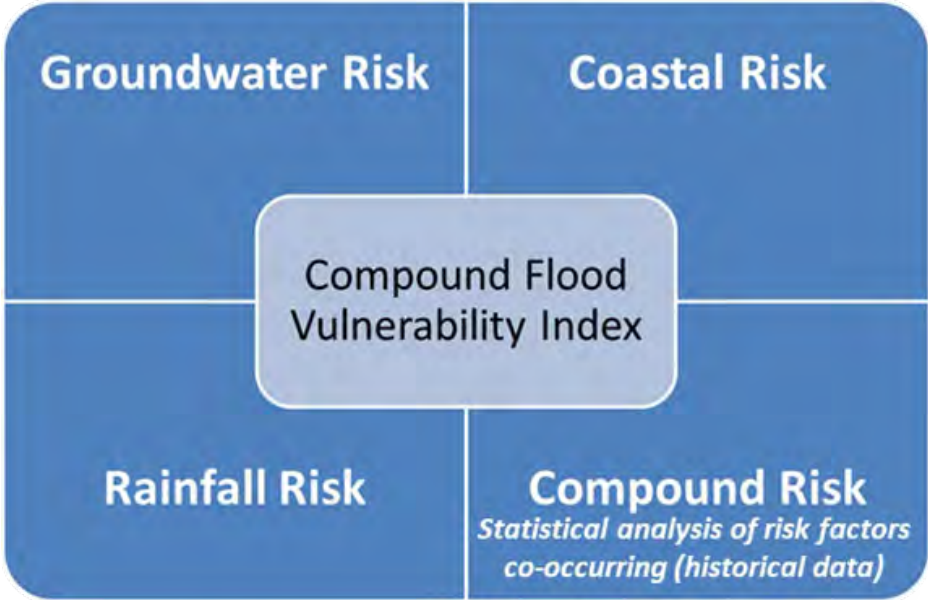
Kathleen Fallon, PhD

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

Compound Flooding-

the co-occurrence of multiple flood drivers

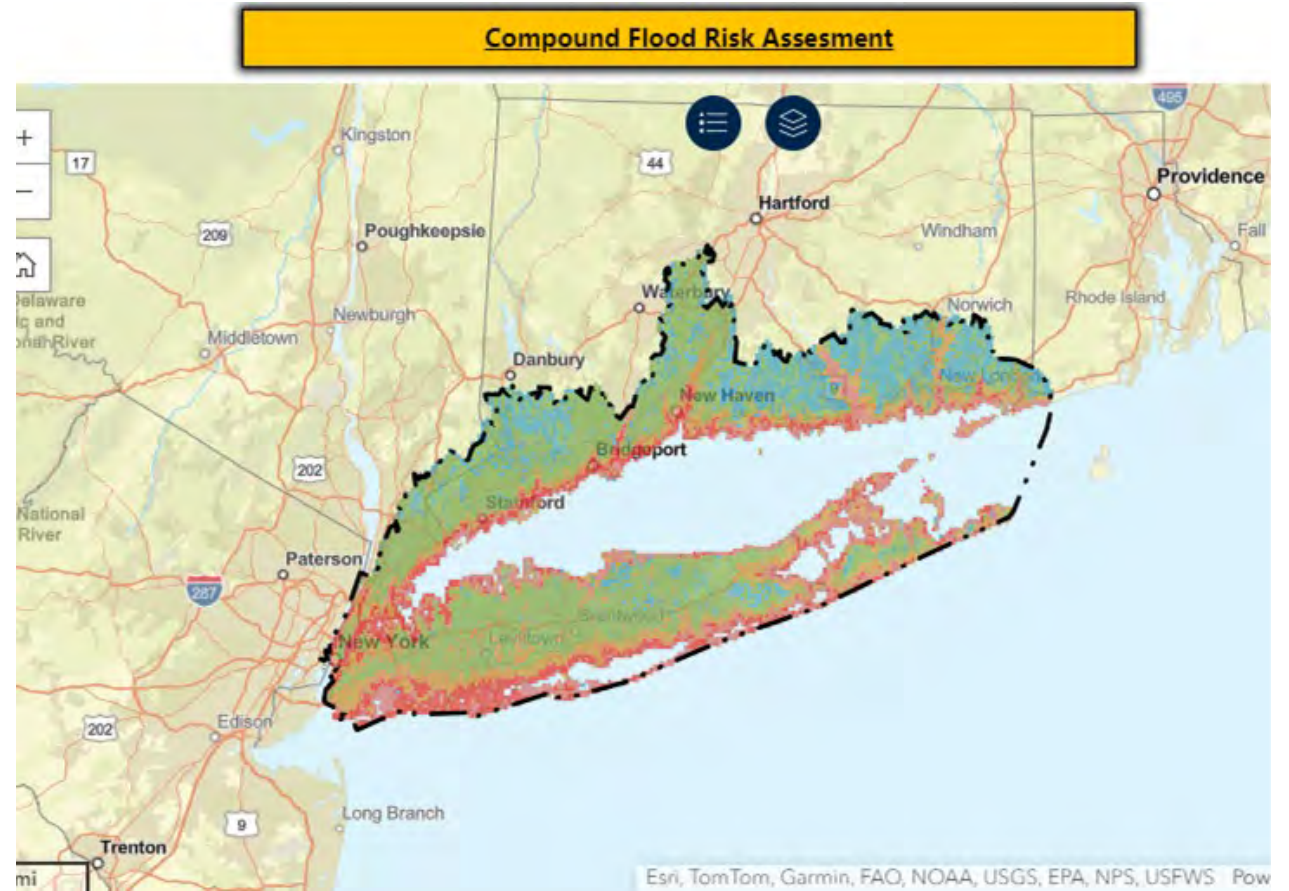


Goal of project(s)

- 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

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



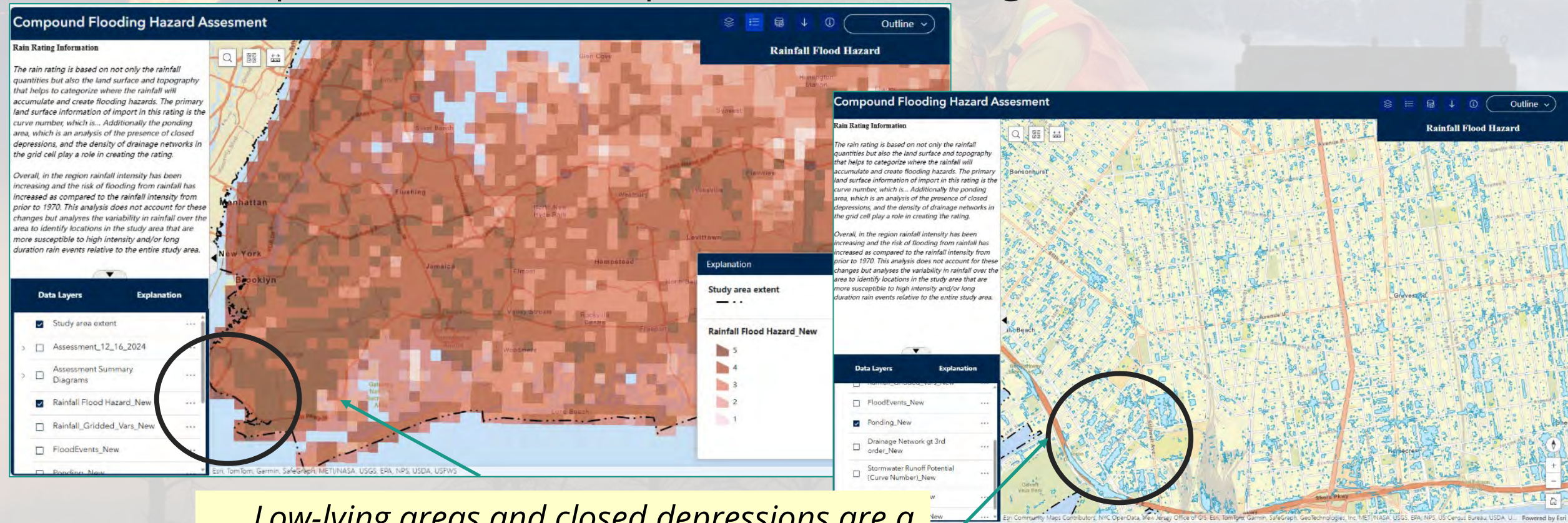
Coastal Flood Hazard

- Sea Level Rise is main driver of inundation extent



Rainfall/Pluvial Flood Hazard

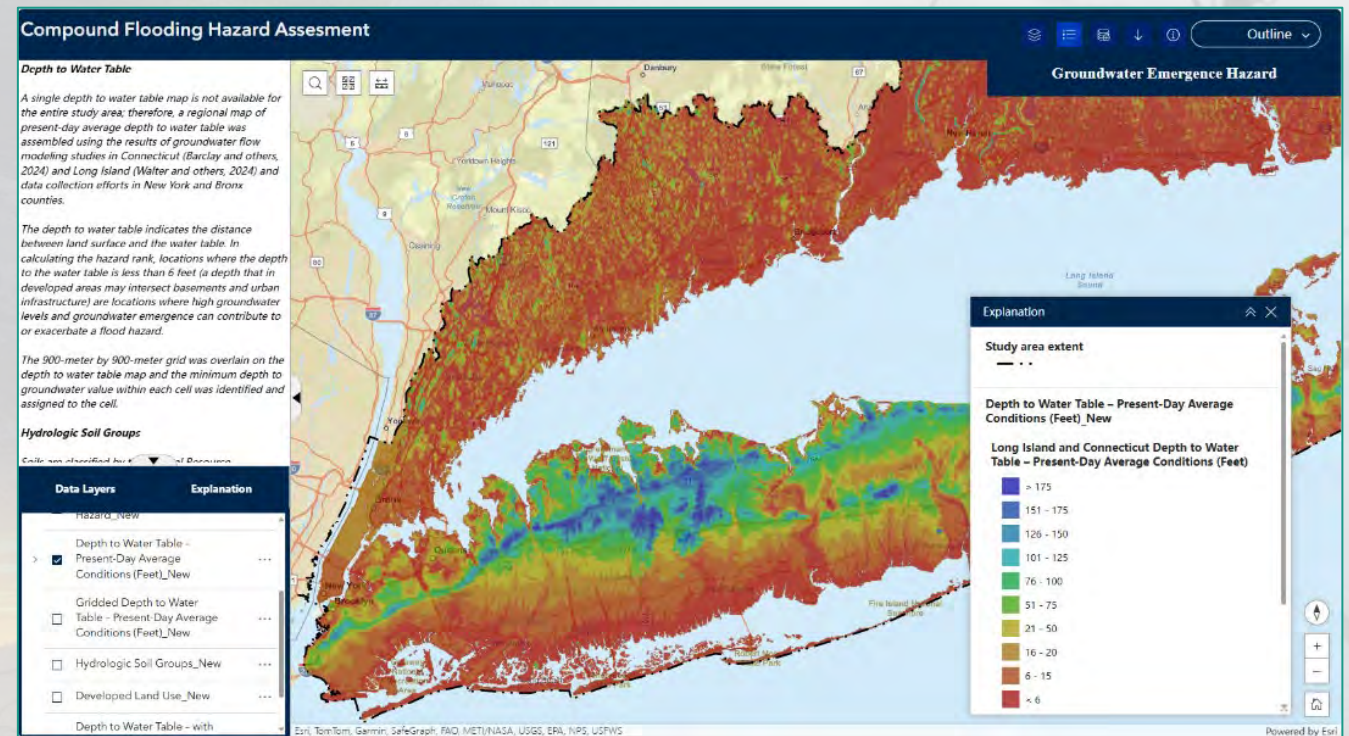
Runoff potential is most important contributing factor



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

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





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 Plan (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](#)





Compound Flooding Risk Assessment

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

Outline ▾

Compound Flood Risk Assessment

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 Assessment

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





Compound Flooding Risk Assessment

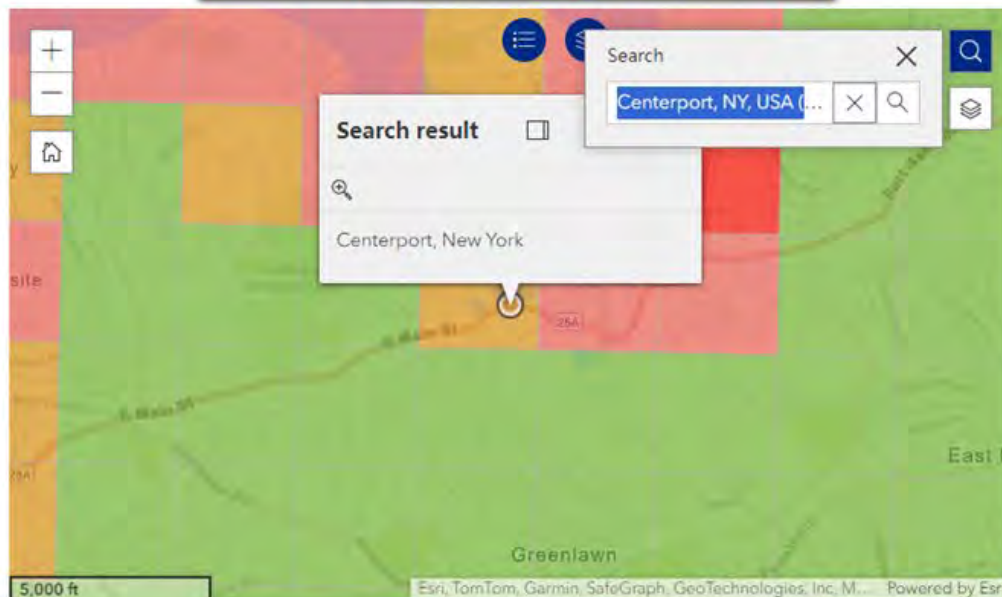
Preliminary Information Subject to Revision. Not for Citation or Distribution.

Outline ▾

Overall Assessment

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.

Compound Flood Risk Assessment

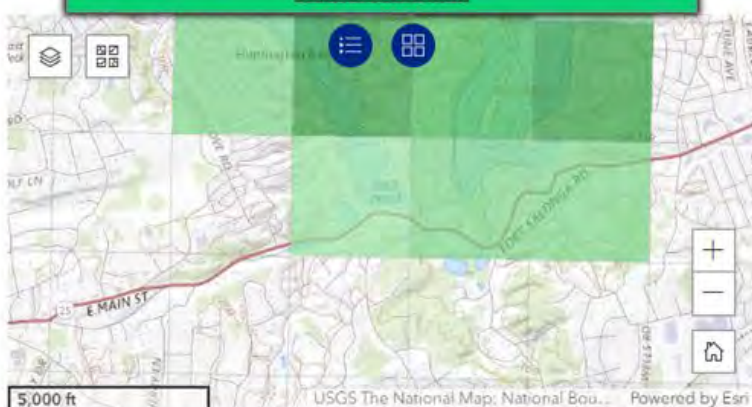


Compound Flood Information

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





Compound Flooding Risk Assessment

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:

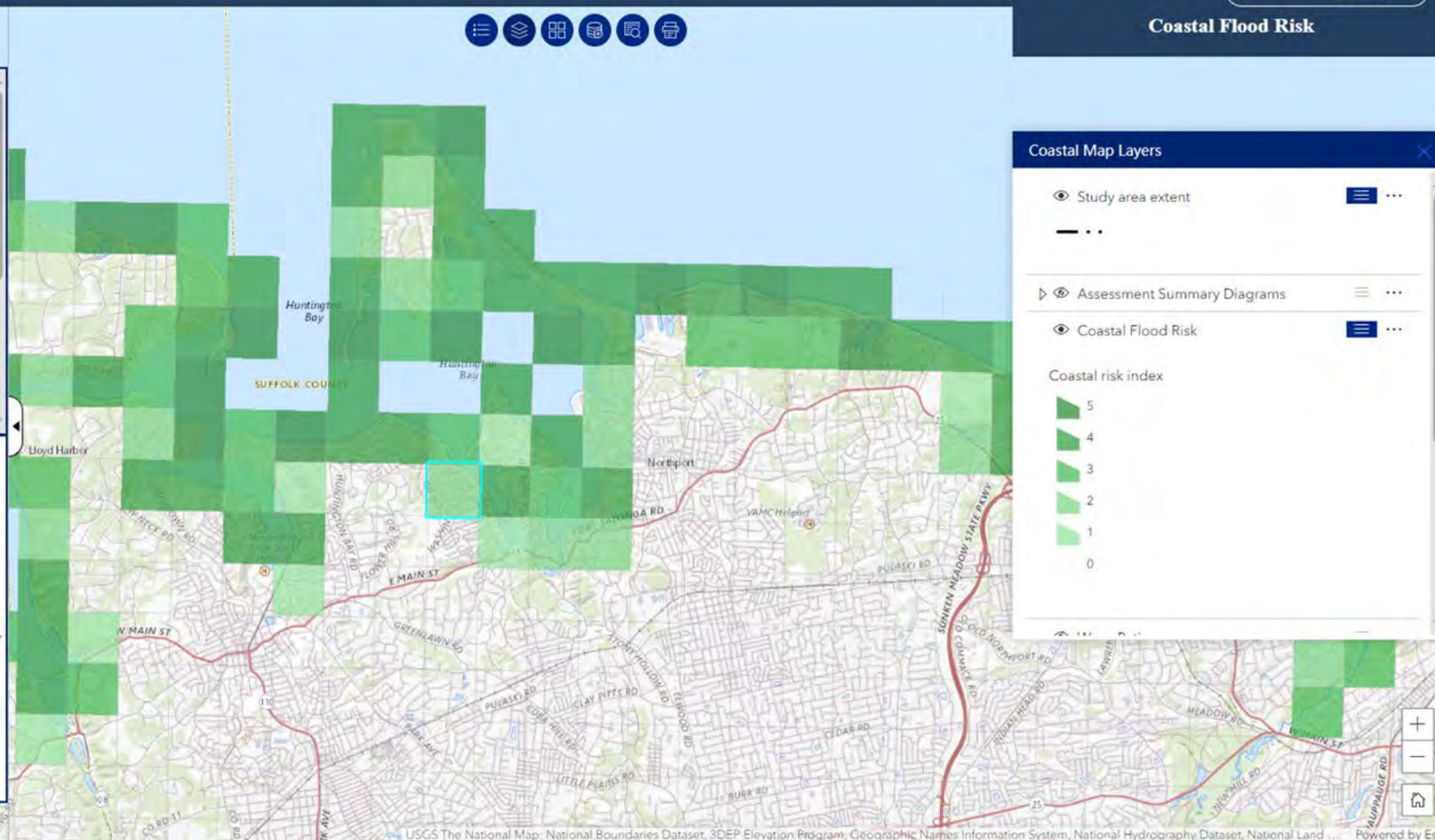
- Coastal Flood Risk: Relatively Low **2 out of 5**
- Rainfall Flood Risk: Relatively Moderate **3 out of 5**
- Groundwater Emergence Risk: Relatively High **4 out of 5**

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 **Wave 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



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land ... Powered by Esri

How might this information be applied?

Compound Flood Indicator

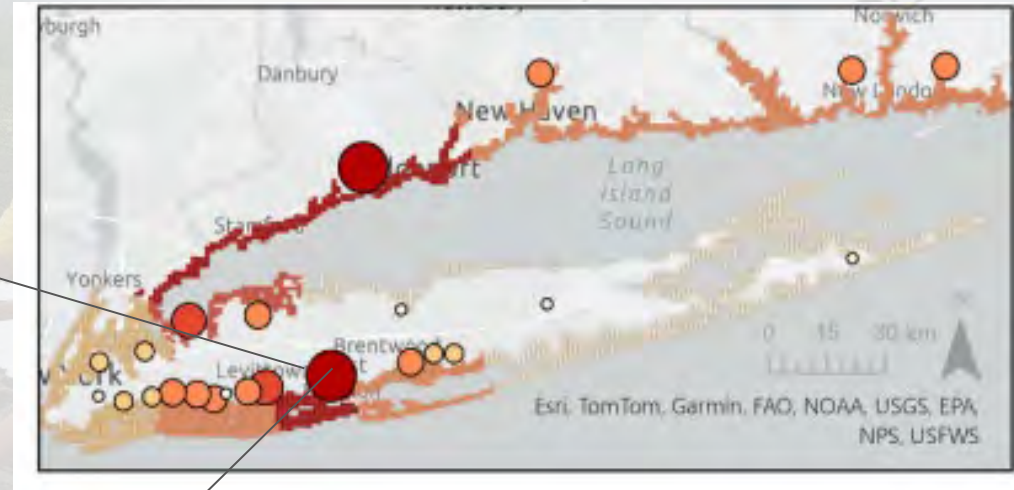
Zoom to

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:

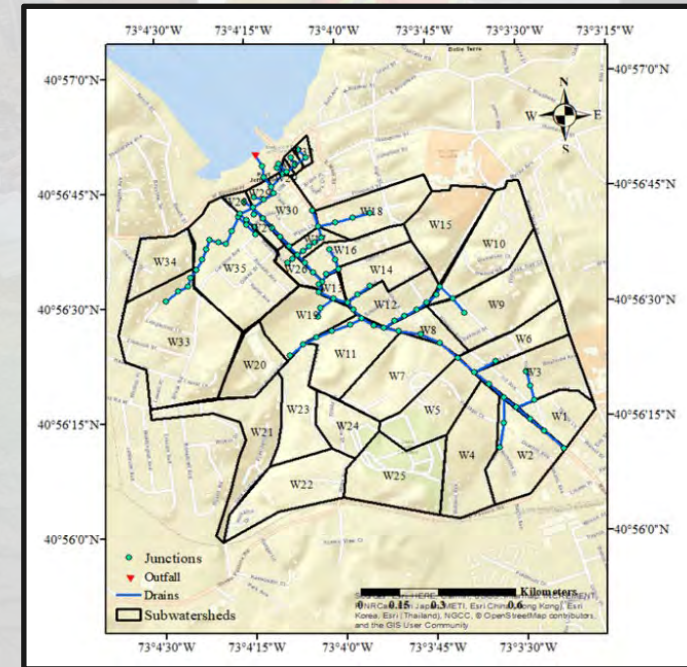
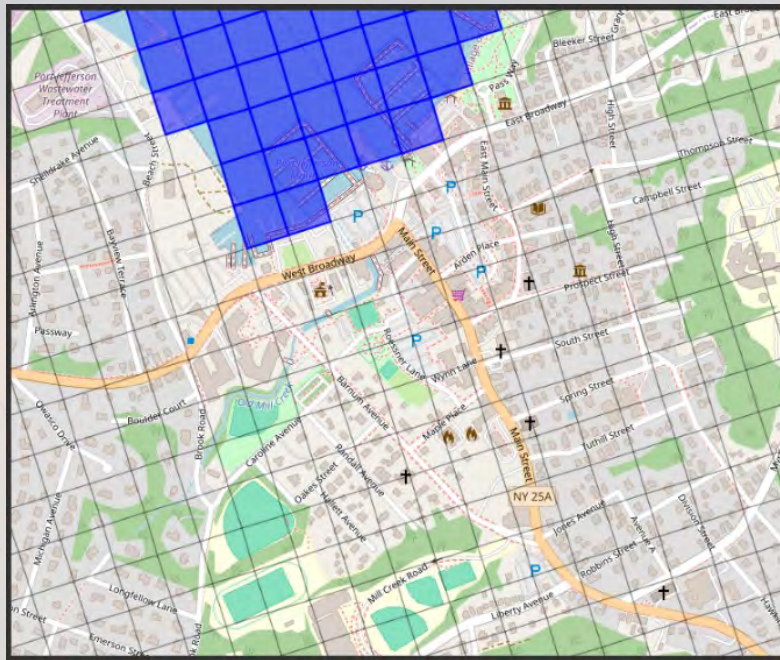
- Coastal Flood Hazard: 1 out of 5
- Rainfall Flood Hazard: 5 out of 5
- Groundwater Emergence Hazard: 4 out of 5



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.

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



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

PROVIDING RESOURCES TO LOCAL OFFICIALS ABOUT COASTAL FLOODING AND EROSION

Long Island Sound Coastal Resilience Forum

October 2025

Kathleen Fallon, Ph.D.



FEMA



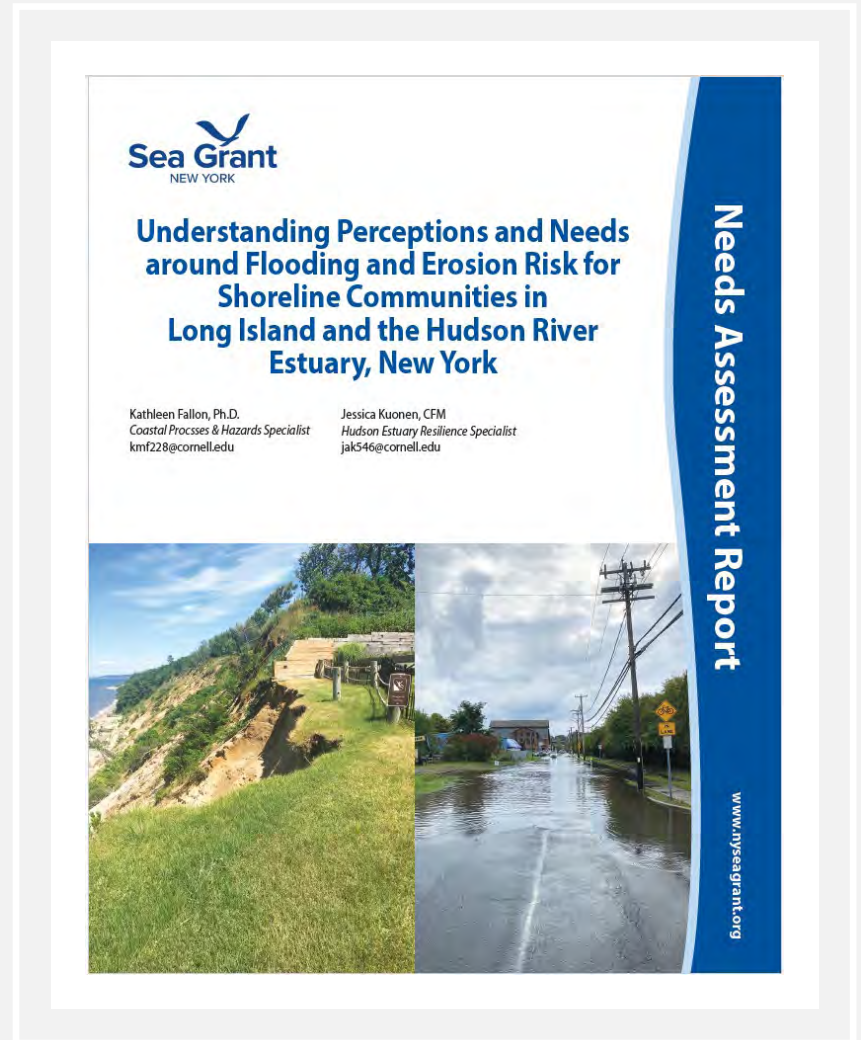
PROJECT BACKGROUND

- 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



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





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



A Guide to Permitting

Shoreline Modification Projects
in New York's Tidal Waters



- 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

How to Use this Guidance Document

1. Introduction
2. General Steps in the Permitting Process
3. Permit Programs
4. Advice and Instructions
5. Application Tips
6. Typical Projects
7. Contacts and Resources

Appendices include: Mapping Activity, Checklist, and Links

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

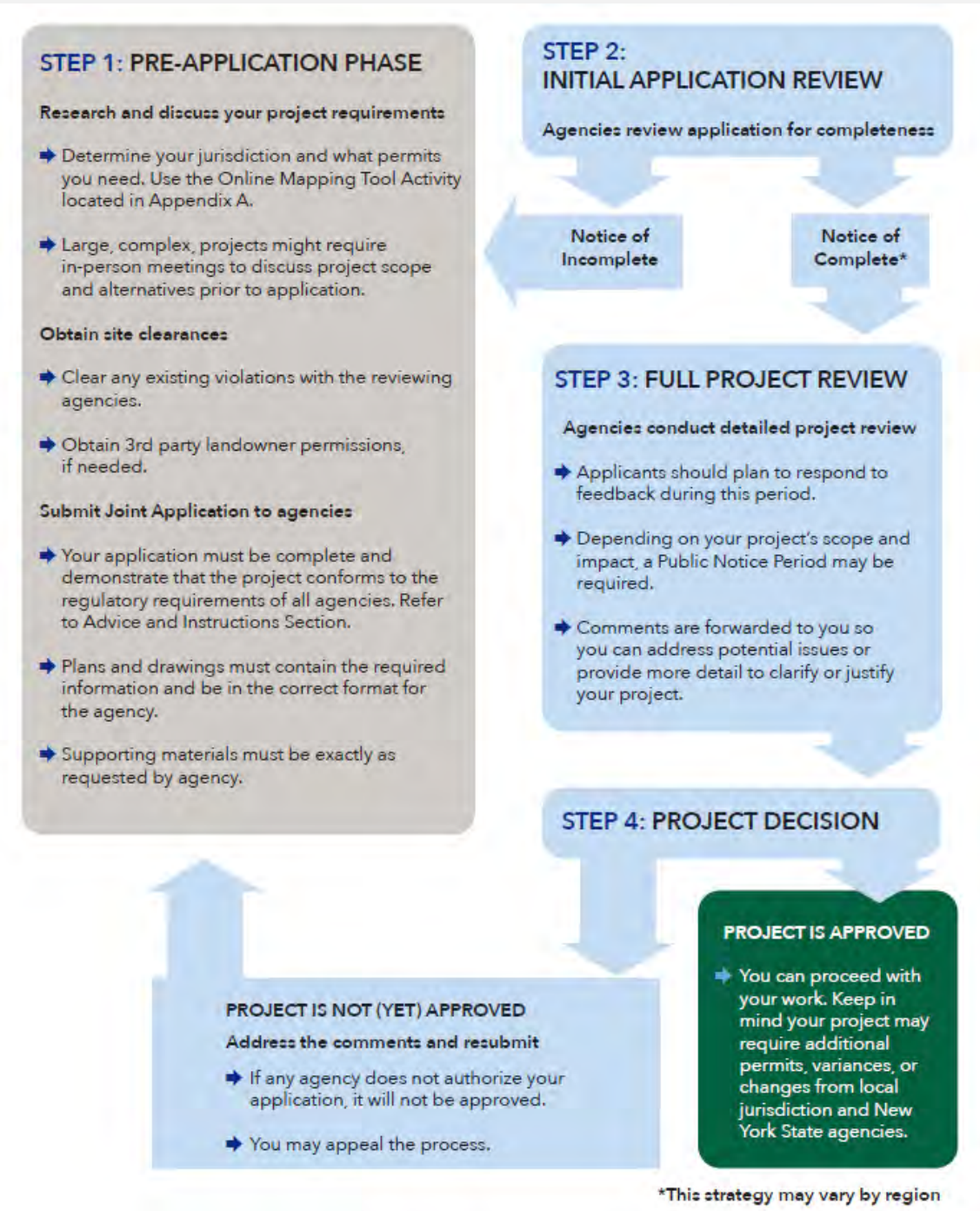
Step 4: Complete application

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*



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

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



- 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





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



Suffolk County Soil & Water Conservation District



Corey Humphrey C.P.E.S.C.

District Manager

Office Hours: Monday through Thursday 7:30 a.m. - 4:00 p.m. Friday 7:30 a.m. - 3:00 p.m.

What is a Conservation District?

Suffolk County SWCD is a public funded government office that is committed to the protection, preservation, restoration and enhancement of our natural resources by providing education, and technical assistance for all land users.

The mission of the district is to conserve the natural resources of Suffolk County through planning, design, and implementation of conservation practices that control and prevent soil erosion, sedimentation, flooding and non-point source pollution, assisting in the irrigation and drainage of agricultural lands, preserve wildlife, and protect public lands.



Bringing stakeholders together to solve complex environmental problems

When was SWCD formed?

1937 In response to the Dust Bowl F.D.R. called for the “Standard Soil Conservation Districts Law” allowing each state to organize conservation districts.

1940 NYS Passed Law providing framework for local districts.

1964 Suffolk County SWCD established – County Resolution 245, 1964

Today, the US has nearly 3,000 conservation districts!



SWCD Responsibilities

1. Water Quality and Nitrogen Reduction
2. Erosion and Sediment Control
3. Nonpoint Source Pollution Control
4. Irrigation Design
5. Drainage and Flood Control
6. Natural resource Protection
7. Invasive Species Control



Facts about Suffolk SWCD

- Established in 1964, under NYS Department of Agriculture and Markets Law 260.22
- Beatlemania



Facts about Suffolk SWCD

1/58 Conservation Districts in NYS
Funds from Suffolk Co., NYSSWCC,
Grants

Public **and** Private land

Technical assistance

“On the ground” conservation projects

Suffolk SWCD is unique in NYS.

Why?



What else does the SWCD do?

“Conserve and protect Suffolk County’s natural resources through technical and financial stewardship programs and projects”

- Soil Health
- Erosion Control Planning and Training
- Watershed Protection
- Native Landscape Restoration
- Water QUALITY & QUANTITY
- Outreach and Education
- Youth Agricultural Education
- Green Infrastructure Design
- Municipal Consultation

For a full list of our services, please visit us at www.SuffolkSWCD.org

Bluffs and You

*A conservation guide to erosion and sedimentation
of Long Island's North Shore Communities*

Have you seen this in your community?

What do you mean this is an issue?



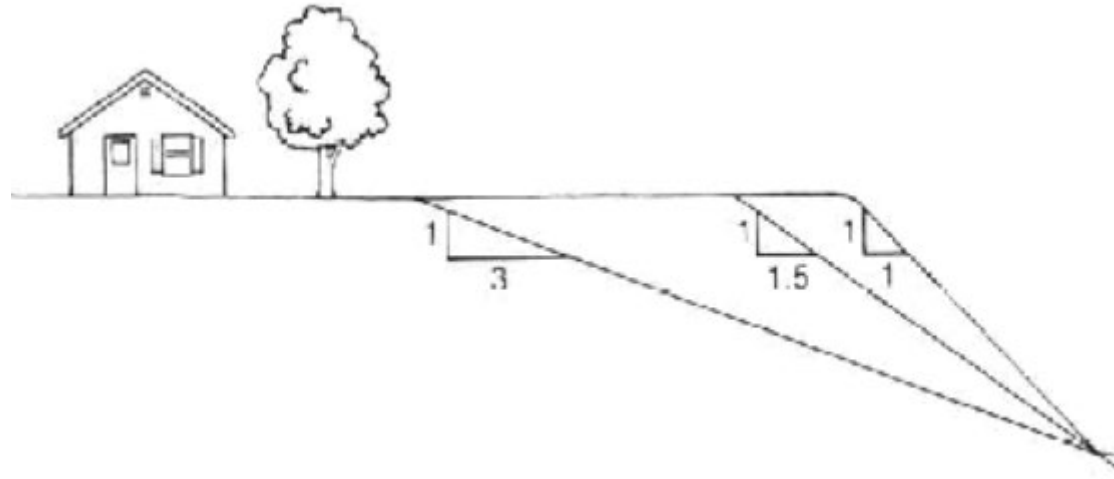
Bluffs ON Long Island



I think he's bluffing...



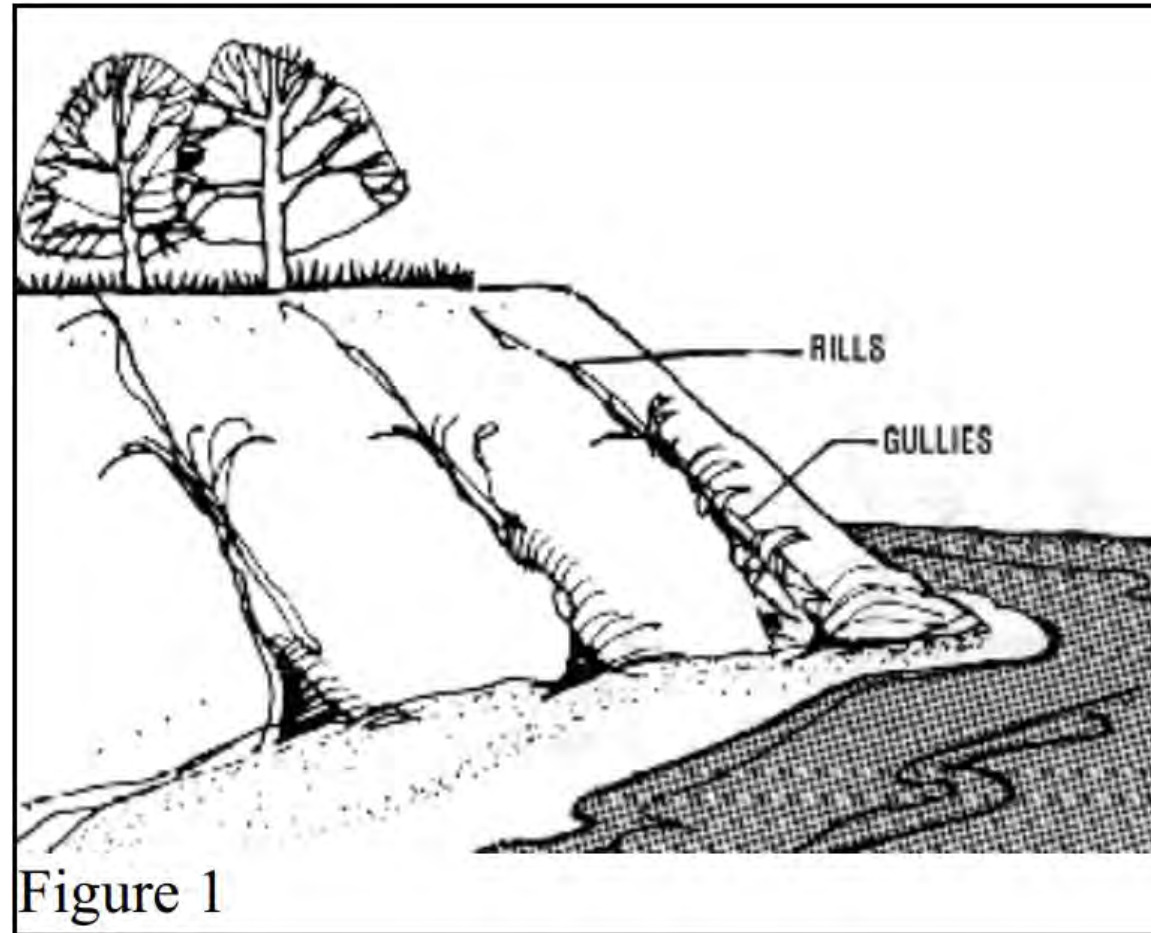
Angle of Repose



CONTROLLING COASTAL BLUFF GROUNDWATER – NY SEAGRANT <https://seagrant.sunysb.edu/glcoastal/pdfs/BluffGroundwater.pdf>

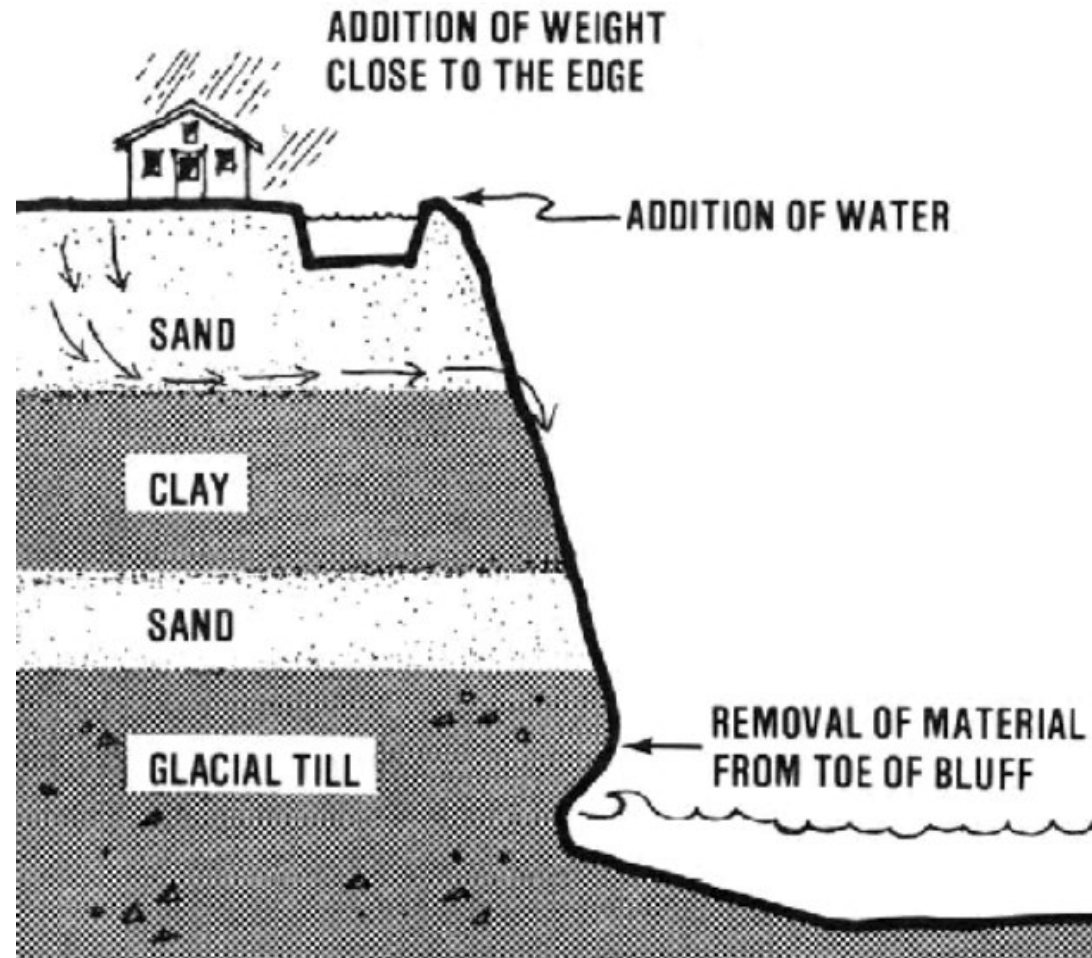
- Sediment composition determines optimum angle
- 1:3 is ideal for sandy bluffs and allows for vegetation to grow
- As erosion continues over time, an angle that was once acceptable or protected by vegetation may no longer be stable

Is this a problem for me?



CONTROLLING COASTAL BLUFF GROUNDWATER – NY SEAGRANT <https://seagrant.sunysb.edu/glcoastal/pdfs/BluffGroundwater.pdf>

Signs that we have an issue



CONTROLLING COASTAL BLUFF GROUNDWATER – NY SEAGRANT <https://seagrant.sunysb.edu/glcoastal/pdfs/BluffGroundwater.pdf>

3 Types of Mitigation

1. **Avoidance** – what are some appropriate and practicable alternatives with a consideration on impact of our actions
2. **Minimization** – managing the severity of the impact an action will have on the site.
3. **Compensatory** – managing impact by replacing or providing substitute resources for impacts that remain after avoidance and minimization measures have been applied. Appropriate and practicable actions to restore, establish, enhance, and/or preservation resource function.

The 9 “*easy*” steps to Mitigation

~a protocol for decision making~

I have a resource concern, but what should I do?

1. Identify Problems and Opportunities
2. Determine Objectives
3. Inventory Resources
4. Evaluate Resource Data
5. Formulate Alternatives
6. Evaluate Alternatives
7. Make Decisions
8. Implement the Plan
9. Evaluate the Plan and make changes

The 9 “*easy*” steps to Mitigation

~a protocol for decision making~

1. Identify Problems and Opportunities

- Admit that there is a problem and commit to exploring all options
- Look towards neighboring properties for similar problems – Your property is not the only one impacted, strength in numbers
- Educate yourself on the natural processes and ask questions!

The 9 “*easy*” steps to Mitigation

~a protocol for decision making~

2. Determine Objectives

- Set reasonable expectations and timeline of objectives
- Write a mission statement to keep yourself on target with your objective
- Consult with experts to see if your objective is realistic or too lofty of a goal
- Dedicate a notebook specific to the project to help your project progress

The 9 “*easy*” steps to Mitigation

~a protocol for decision making~

3. Inventory Resources

- Use your eyes, many resource concerns are obvious.
- Photos Photos Photos, document as much as you can to track changes over time
- Do not hyper focus on a problem, step back and take a “30,000 ft view”
- Wildlife needs to be considered as a resource as well as the soils

The 9 “*easy*” steps to Mitigation

~a protocol for decision making~

4. Evaluate Resource Concerns

- If I were water where would I go?
- Areas of concentrated impacts
- Most resources are impacted by poor management aka- we did this to ourselves
- Are there things I can do today to slow the erosion?

Considerations for Inventory and Evaluation

- Soil texture(s) on the site
- Existing vegetation types
- Turf grass or crab grass?
- Aerial Mapping/CEHA Maps/ Property surveys
- Impervious Areas
- Natural drainage and topography
- Gutters, roofs and discharges
- Irrigation and septic
- Bluff Top/Bluff Face/Bluff Toe
- Impacts from Neighboring Parcels
- Wave/Wind/Fetch
- Nor Easter/ predominate wind direction during storms
- Location of utilities and other underground infrastructure
- Local ordinances and local permits

Bluff Erosion: Water Erosion

What are the two main factors deteriorating bluffs on NS?

Seepage: groundwater infiltrates landward of the bluff, but discharges through a bluff face degrading stability

Runoff: surface water erodes sediment from the top and/or face of the bluff transporting sediments towards the toe

Bluff Erosion: Tops and Toes

BMPs to limit Seepage and Runoff impacts on coastal properties:

Convey runoff from of impervious surfaces away from bluff

Infiltrate runoff as far away from the bluff as feasible to avoid Seepage

Evaluate irrigation needs and limit damaging excess irrigation

Winterize irrigation systems to avoid leaks and broken pipes

Utilize smart irrigation controllers and rain sensors

Update zoning laws and enforce damaging actions such as non-permitted construction

Bluff Erosion: Tops and Toes

BMPs to limit Seepage and Runoff impacts on coastal properties:

Regrade surfaces landward, away from bluff

Utilize native flora species that do not require irrigation

Swap turf grasses for bunching grasses and rhizome plants

Plant diverse vegetation for stabilization, avoid new trees!!!

Control weeds and maintain dense vegetation

Incentivize conservation easement opportunities

Bluff Stabilization: Erosion Control

Rolled Erosion Control Products aka “RECP”, is a man-made product that blankets well groomed soil and provides:

- Soil stability
- Reduced temperature fluctuations
- A medium for new plants
- Protects against weatherization of bluff face
- Biodegradable long-term degradation
- Limits wildlife trespassing
- Provides good seed to soil contact
- Holds moisture
- Relatively inexpensive
- Jute, coconut, hemp, synthetic materials

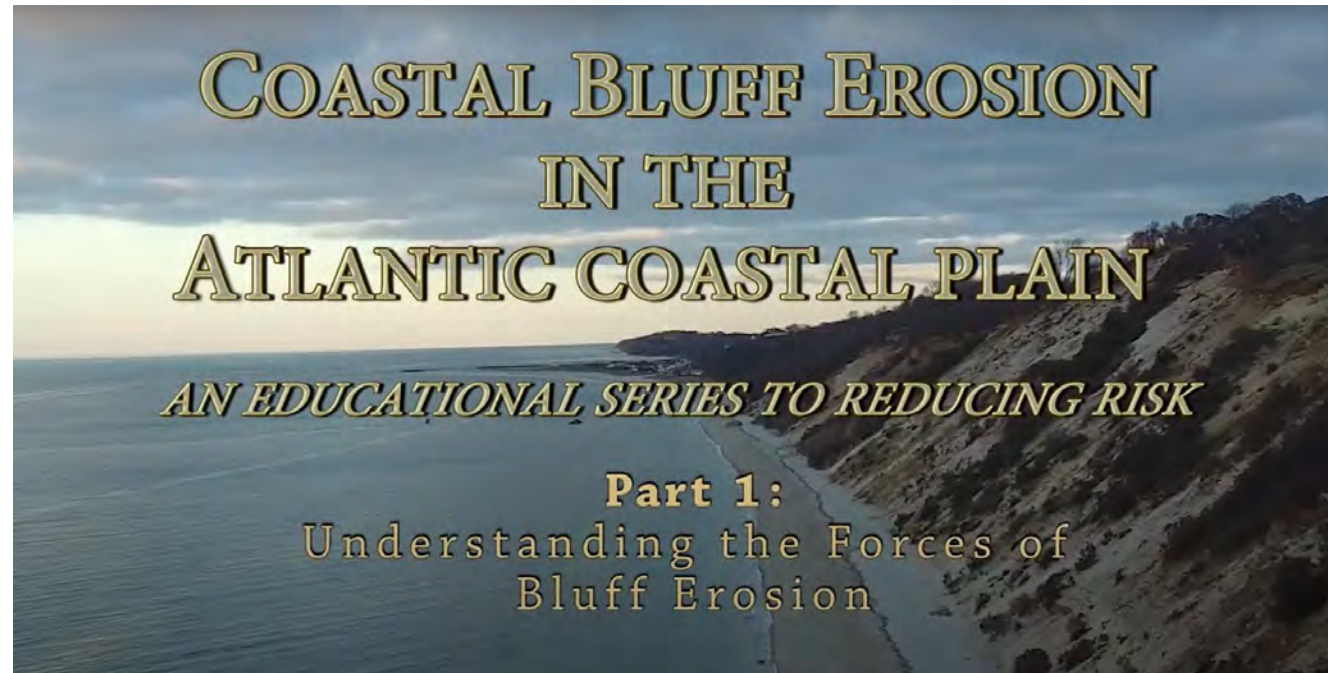


Bluff Stabilization: Vegetative Control

Just a few of the recommended plants that can be helpful to stabilize bluffs on NS properties

- American Beachgrass
- Big Bluestem
- Partridge Pea
- Sheep Fescue
- Coastal Panicgrass
- Cordgrass
- Northern Bayberry
- Beach Plum
- Prickly Pear
- Evening Primrose
- Seaside Goldenrod
- Rudbeckia

Want more information?



Check out the Suffolk SWCD's YouTube page for video

Suffolk County Soil & Water Conservation District

Corey Humphrey
Marina Kobasiuk
Kaitlyn Boyle
Jill Dietrich
Talia Haike
Susan Odell-Pepe

District Manager
Env. Planner
Env. Planner
Env. Planner
Env. Planner
Administrator I



Contact us anytime:
(631) 852-3285
423 Griffing Avenue Riverhead NY 11901
www.suffolkswcd.org

Office Hours: Monday through Thursday 7:30 a.m. - 4:00 p.m. Friday 7:30 a.m. - 3:00 p.m.

Thank You!



Corey Humphrey
SuffolkSWCD.org

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

Yes



No



Not sure



Protecting Coastal Bluffs of Long Island

Sign Raffle

Protecting Coastal Bluffs of Long Island



Visit bit.ly/coastalbluff
for more resources

DID YOU KNOW?

The bluffs along Long Island's shorelines were deposited by advancing and retreating glaciers during the last ice age over 18,000 years ago. Composed of loose sediments that range from very small clays to large boulders, the bluffs are vulnerable to erosive forces such as wind, waves, and other influences.

We must do our part to protect these unique bluffs!



CREATED BY



IN PARTNERSHIP WITH



Long Island Sound Study
A Partnership to Restore and Protect the Sound



LONG ISLAND SOUND
PARTNERSHIP

LUNCH

Please submit feedback on this event!



Coastal Resiliency Issues in the Village of Port Jefferson

**Long Island Sound Coastal Resilience Forum
October 8, 2025**

Hon. Lauren Sheprow, Mayor



History of the Port Jefferson Community

- Settled in the 17th century and remained a rural community until its development as an active shipbuilding center in the mid-19th century.
- Evolved into an industrial port in the 1900s but has since transitioned to a tourist-based economy.
- Originally called “Drowned Meadow” because most of what is now the downtown was a large tidal wetland.
- Village of Port Jefferson formed in 1963 to give residents more local control over decisions impacting the community
- Decisions made before that resulted in filling in of extensive tidal wetlands, lakes, ponds and tunneling of creeks underground.



Port Jeff – Challenging Geological Setting

- Lies in a steep-sloped valley created by glacial action and surrounded by severe slopes on three sides
- Many steep streets – including a state highway – have little or no stormwater infrastructure in place to control flooding
- All stormwater flows south by gravity to the base of the valley where the business district is located
- Sea level rise causes tidal flooding from the north
- Past filling of wetlands and surface waters was short-sighted
- LI Sound Frontage is Impacted by Coastal Erosion of Bluffs





- Crystal Lake
- Drowned Meadow
- Mill Creek
- Unnamed Ponds
- Salt Meadow Land
- Harbor Not Yet Filled

1917 Map Cropped to Show Natural Waters





1910 View of Drowned Meadow Wetland Area and Mill Creek





View Across Crystal Lake Towards Methodist Church





Filling Of Drowned Meadow Wetlands Salt Marsh

Culvert used to bury natural streams is visible at top center



THE INCORPORATED VILLAGE OF PORT JEFFERSON

Harbor Prior to Filling of Town Parking Lot Area



THE INCORPORATED VILLAGE OF PORT JEFFERSON

Historic Storms & Flooding



- 1938 Long Island Express
- 1944 Great Atlantic
- 1985 Gloria
- 2011 Irene
- 2020 Isaias
- 2021 IDA
- 2024 August 18th & 19th Severe Storm



Tidal Flooding of Downtown Business District



THE INCORPORATED VILLAGE OF PORT JEFFERSON

Tidal Flooding Damages Downtown Businesses



Tidal Flooding Across State Route 25A



THE INCORPORATED VILLAGE OF PORT JEFFERSON

Flooding Severely Impacts PJFD



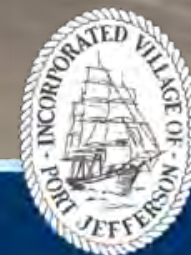


THE INCORPORATED VILLAGE OF PORT JEFFERSON

Flooding Severely Impacts Downtown Businesses



August 2024 Severe Storm Event



THE INCORPORATED VILLAGE OF PORT JEFFERSON

Old Post Road River at PJHS



THE INCORPORATED VILLAGE OF PORT JEFFERSON





Brookport Apartments Street Level

THE INCORPORATED VILLAGE OF PORT JEFFERSON



New Approach & Philosophy



Be more proactive in addressing problems



Work with partners to improve infrastructure to reduce flooding



Emphasize science-sustainability and long-term maintenance



Mitigate hazards and enhance public safety



Direct community and inform planning efforts and activities



Project coordination



Community input



A Proactive Approach: Multiple Initiatives Underway

- Climate Resilience Plan With a Focus on Flooding (DOS Grant)
- Flood Reduction Study (FEMA Grant)
- Mill Creek Restoration – Culvert & Invasives (Suffolk County Grant)
- Old Homestead Road Recharge IDA Damage Repair (FEMA Grant)
- Sands Lane Culvert 2024 Storm Damage Repair – (FEMA Grant)
- Water Reuse Planning Grant (Long Island Sound Partnership)
- Assessment of Compound Flood Hazard (USGS)
- East Beach Bluff Stabilization - (\$3.75 Million FEMA Grant)



Proactive Planning Efforts

NYSDOS - \$82,500 grant to prepare a **Climate Resiliency Plan with a Focus on Flooding**

- A volunteer Project Action Committee (PAC) has worked to create a plan that will:
 - Mitigate flooding and storm surge impacts in the downtown area by integrating sea-level rise predictions into proposed solution.
 - Provide a roadmap for transforming infrastructure and the use of nature-based solutions to enhance resiliency.
 - Status - approved by PAC last night and next to be reviewed by Village Board



Climate Resiliency Plan with a Focus on Flooding

Conceptual Rain Garden Design

Figure 77 Possible Rain Gardens at the Harbor Walk and Bulkhead - plan and section

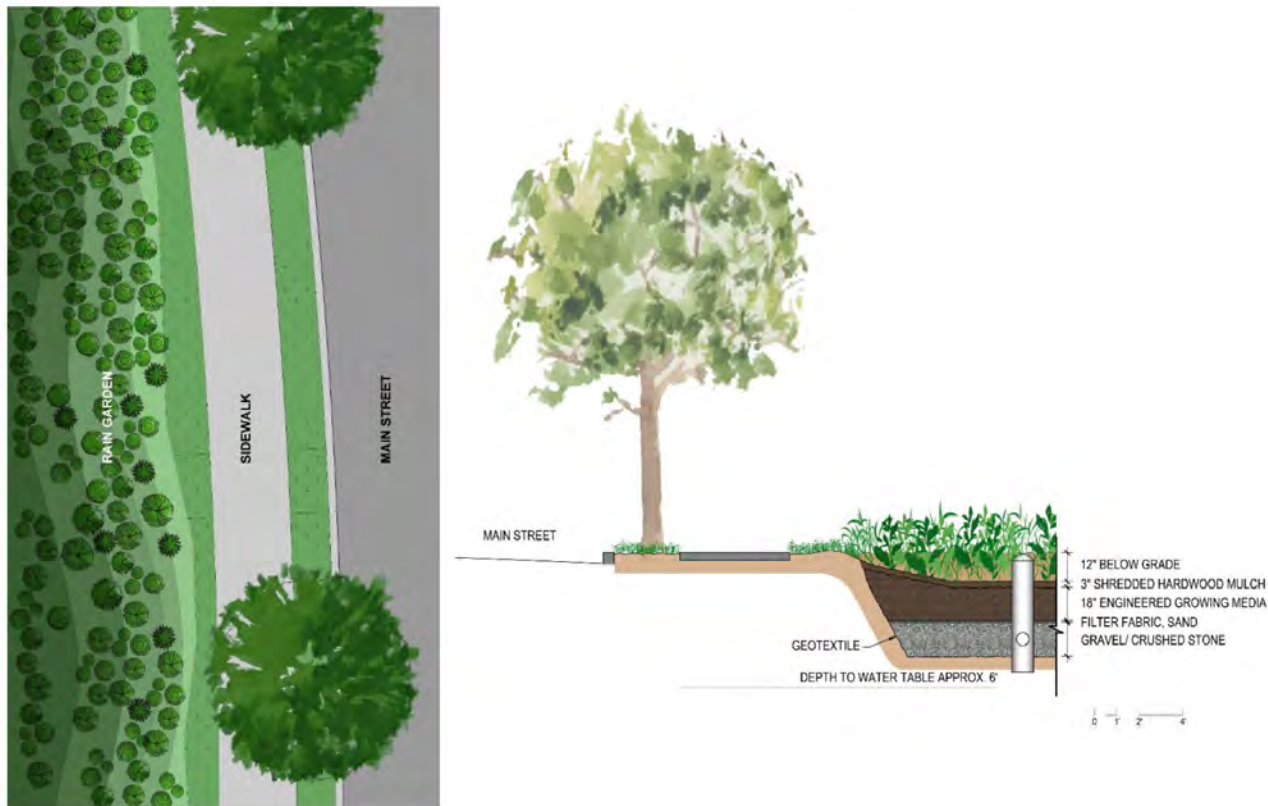
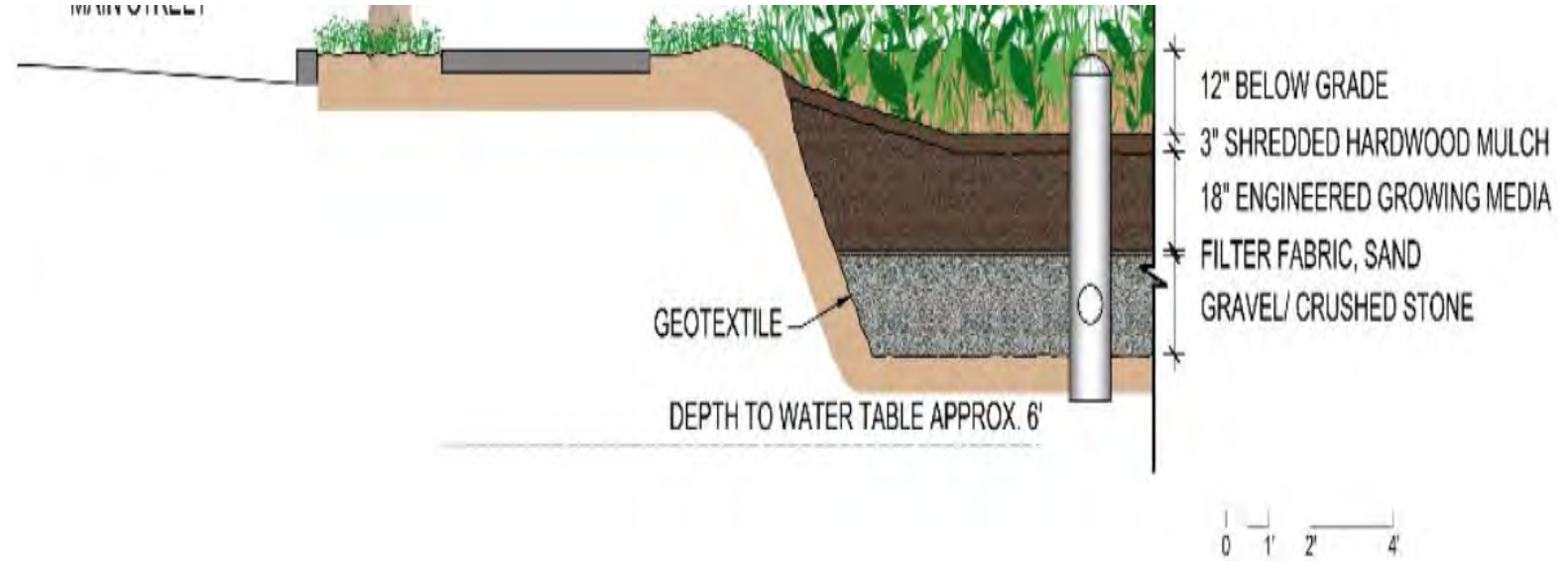
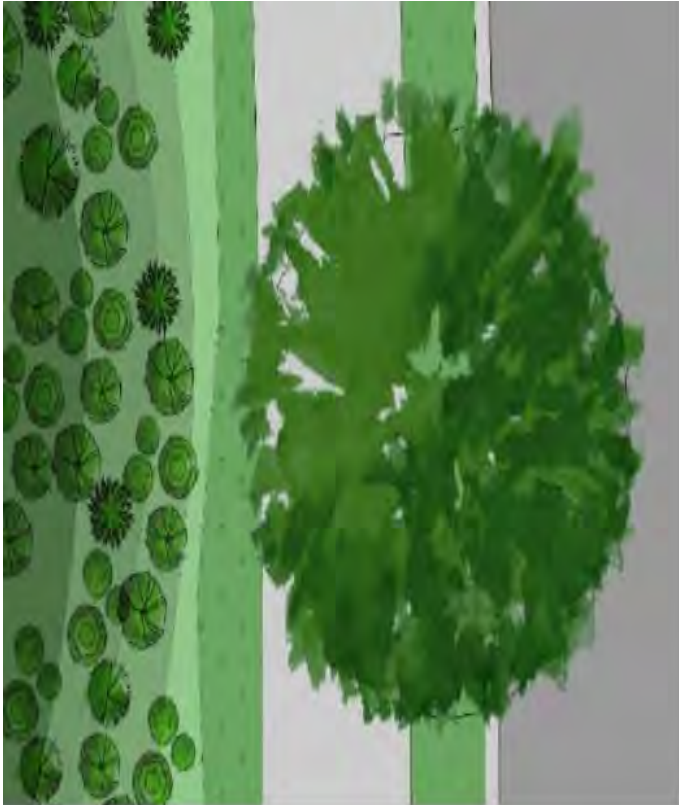


Figure 87 Possible Rain Garden – East Broadway at Bakers Alley parking and the Fifth Season restaurant - CASA



Stormwater relief through Bioretention Gardens



78 Possible Bio-retention Gardens at Main Street - plan and section



Hazard Mitigation Flood Study Grant

\$280,000 from FEMA through the NYS Department of Homeland Security (DSHES)

- Science-based study to identify and make specific recommendations for projects to reduce flood risks in the Village
- Analyzing vulnerabilities, assessing the effectiveness of current mitigation actions, and identifying specific areas or structures at risk of flooding.
- Based on that analysis, will make specific recommendations for projects to reduce flooding impacts in the Village.
- Status: Study now underway and will be completed in early 2026





Flood Reduction Study and Future Projects

Proposed limits of topographic
survey (yellow boundary)



Hazard Mitigation Implementation

Hurricane IDA Public Assistance Mitigation Grant for \$240,000
from FEMA through NYS Division of Homeland Security

- Mitigation to areas that received damage during 2021 Hurricane IDA
- Funding to protect public infrastructure and property from future disasters
- Area of Focus is **Old Homestead & Crystal Brook Hollow Recharge Basin**





Old Homestead Road Watershed Management Issues

Culverts were literally swept away and washed down toward Oakwood Road





Old Homestead Road Watershed Management Issues

Led to the Sands
Lane Culvert
Collapse in
August 2024





THE INCORPORATED VILLAGE OF PORT JEFFERSON



Past storm damage to Old Homestead Road recharge basin and Sands Lane Culvert are examples of what can be avoided with water reuse project





Project Coordination

2024 FEMA 4839 DR- NY August 18th & 19th Severe Storm Damage Grant

- Funding to repair and restore public infrastructure to pre-storm conditions.
- Provides additional funding to implement mitigation measures to the Sands Lane Culvert and Access Road.





Project Coordination

2024 FEMA 4839 DR- NY August 18th & 19th Severe Storm Damage Grant

- Funding to repair and restore public infrastructure to pre-storm conditions.
- Provides additional funding to implement mitigation measures to the Sands Lane Culvert and Access Road.



Suffolk County Jumpstart Grant

Mill Creek Restoration

- \$500,000 grant approved by Suffolk County for Mill Creek for culvert rehabilitation and removal of invasives from Mill Creek
- Builds on past efforts to assess and improve conditions in culvert that replaced surface streams and conveys groundwater and stormwater to Mill Creek
- Provides funding to revisit and resume removal of invasive plant species from Mill Creek
- Status: Culvert cleanout about to begin, planning for invasives removal project to be completed by early 2026



Suffolk County Jump Start Grant for Restoration of Mill Creek for \$500,000

- The Jump Start Program is designed to foster economic growth and revitalize communities, with a particular focus on downtown areas.
- Funding for planning, restoration, dredging, and daylighting efforts for the creek.
- Project goal is to revitalize the natural waterway.



Old Mill Creek Existing Plan

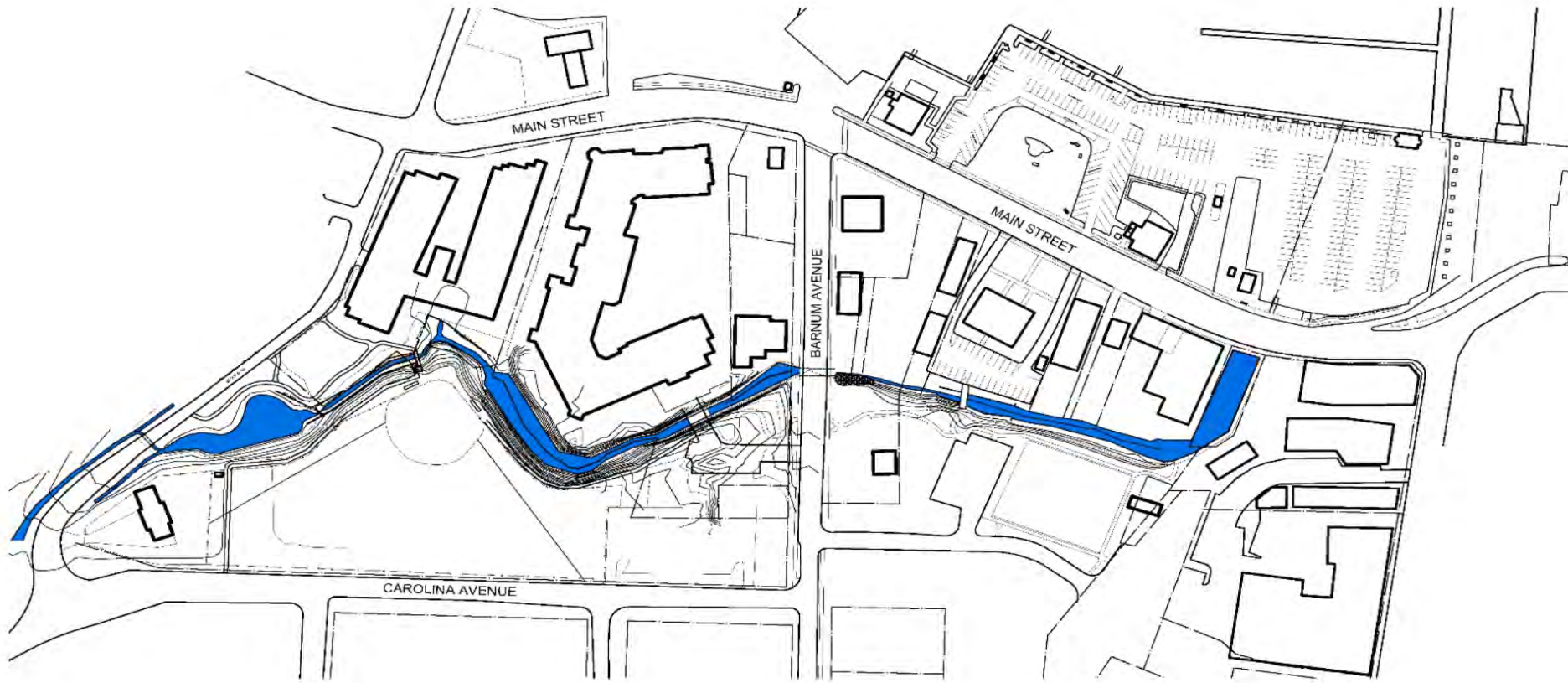


Figure 68 Old Mill Creek – existing plan. CASA





THE INCORPORATED VILLAGE OF PORT JEFFERSON

Invasive Plants – Ditch Reed & Others



Long Island Sound Partnership Water Reuse Planning Grant

- Village applied for a grant to study the feasibility of diverting stormwater for reuse to irrigate the golf course at PJCC
- Project could reduce stormwater discharge into Mount Sinai Harbor, consistent with Town of Brookhaven Harbor Management Plan, and protect against stormwater damage and flooding
- Reuse of stormwater for irrigation would reduce pumping of groundwater from aquifer to irrigate the golf course
- Status: recently advised that project was not funded in the current grant round, but should be submitted again in early 2026
- Remains a top priority





Old Homestead Watershed Cause and Effect

THE INCORPORATED VILLAGE OF PORT JEFFERSON





Old Homestead Watershed Cause and Effect

THE INCORPORATED VILLAGE OF PORT JEFFERSON



United States Geological Survey (*USGS*)

- Assessment of compound flood hazards from combined effects: coastal flooding, stormwater, and underground emergence.
- Part of a USGS assessment of the LI Sound Study area.
- Phase I is a vulnerability analysis with an interactive map showing flood-relevant factors.
- Phase II once complete will produce a compound flood modeling framework to simulate flooding under various scenarios and help with mitigation strategies.
- This work will help to inform mitigation strategies in the Village.



United States Geological Survey (USGS)



science for a changing world

Monitoring location

Old Mill Creek Culvert at Port Jefferson, NY - USGS-405605073041201

[WDFN Home](#) [WDFN tools and data](#) [Data Inventory](#) [Other water data resources](#) [Connect](#)

Urgent for you to know:

- Due to a lapse in government funding, the majority of USGS websites will not be updated except to provide important public safety information. Websites displaying real-time water data will be updated with limited support. For more information please see: www.doi.gov/shutdown.

IMPORTANT [Inventory Page](#)

No graph available - there are no continuous, daily, or field measurement data types available for this location.

Available data

Select data types to graph from categories based on the way the data were collected.

[Learn about the data collection categories](#)

Show all data types

Continuous data

0 data types available

Daily data

0 data types available

Questions or Comments



Phase I – Interactive Site Map

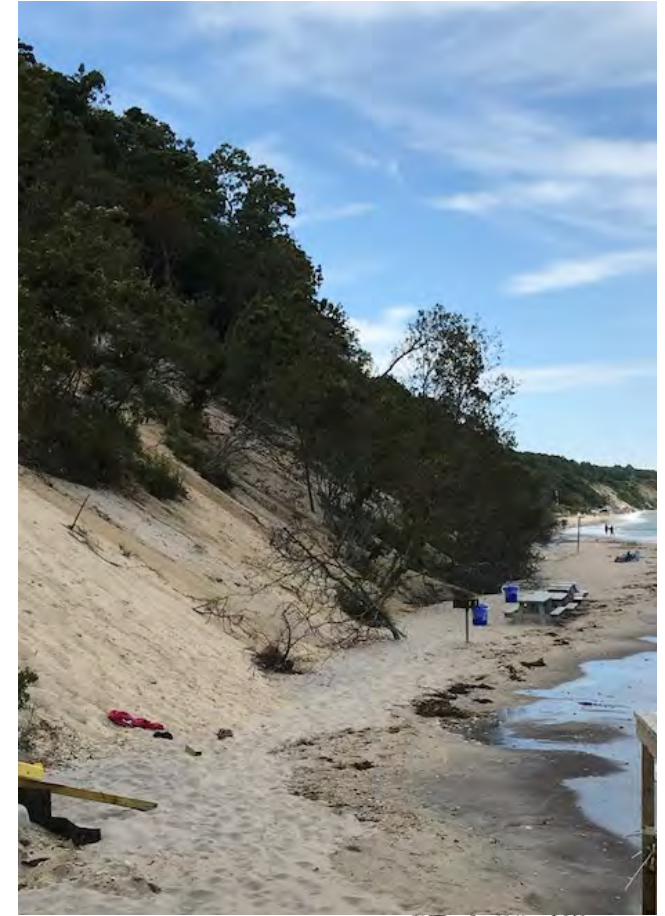
[NEW YORK WATER SCIENCE CENTER](#) | [SCIENCE](#)

Groundwater Flow Modeling - Long Island, New York ACTIVE

By [New York Water Science Center](#) August 20, 2024



Efforts to Combat Coastal Erosion: East Beach Bluff





Port Jefferson East Beach Bluff August 2022

THE INCORPORATED VILLAGE OF PORT JEFFERSON





Proximity of Bluff Failure – June 2022

THE INCORPORATED VILLAGE OF PORT JEFFERSON





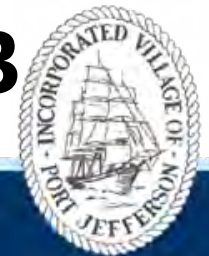
Bluff at Phase I Completion – Sept 2023

THE INCORPORATED VILLAGE OF PORT JEFFERSON





East Beach Bluff Phase I at Completion Sept. 2023



THE INCORPORATED VILLAGE OF PORT JEFFERSON

East Beach Bluff Phase I Project Current Condition





East Beach Bluff Phase I Project Current Condition



THE INCORPORATED VILLAGE OF PORT JEFFERSON

Community Engagement

- A Project Action Committee (PAC) has guided the process leading to the completion of the Village's Draft Climate Resilience Plan With A Focus on Flooding
- Mayor Sheprow issued a call for volunteers and established the Citizens Commission on Erosion created by the Village in 2024
- Community outreach and involvement in all issues related to flooding and coastal resiliency are a critically important part of the Village's planning process



Thank you!

Questions?

