LONG ISLAND SOUND PARTNERSHIP

Sea Grant CONNECTICUT

Sea Grant NEW YORK

Resilience 101: Helpful Tools & Strategies for Building Community Resilience

Long Island Sound Sustainable & Resilient Communities 4th Annual Workshop

Thursday, December 4, 2025 10 AM – 12 PM

Workshop Etiquette

Please keep your phones and audio on mute. Keep your camera off too!

Workshop will be recorded and made available to attendees afterward

We will be using interactive polls to gather feedback

Please use the chat for questions for speakers or technical issues

Poll Instructions

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Via the web: at pollev.com/lisres

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

Please note that the map only works via the web!

Poll Everywhere

Where are you joining us from today?

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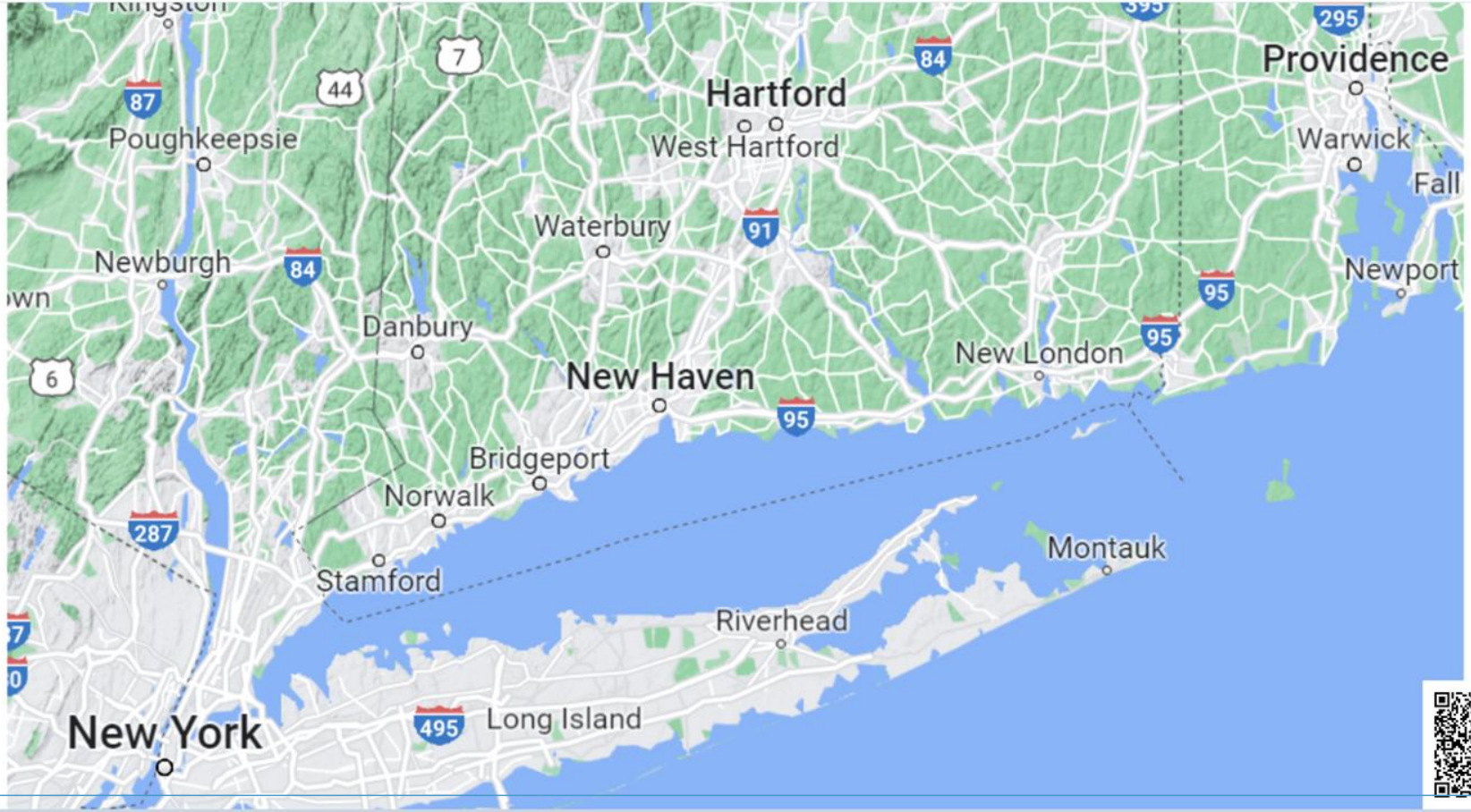

Start the presentation to see live content. For screen share software, share the entire screen. Get help at **pollev.com/app**

Please indicate the sector that best represents you:

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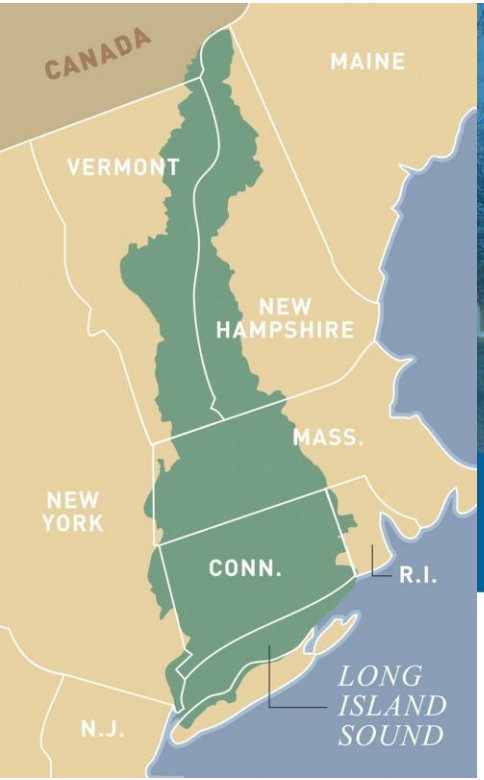
Federal or state government	0
Indigenous Nation or community	0
Local government	0
Nonprofit/NGO	0
Watershed organization	0
Community group	0
Consultant	0
Academia	
Interested individual	

Start the presentation to see live content. For screen share software, share the entire screen. Get help at **pollev.com/app**

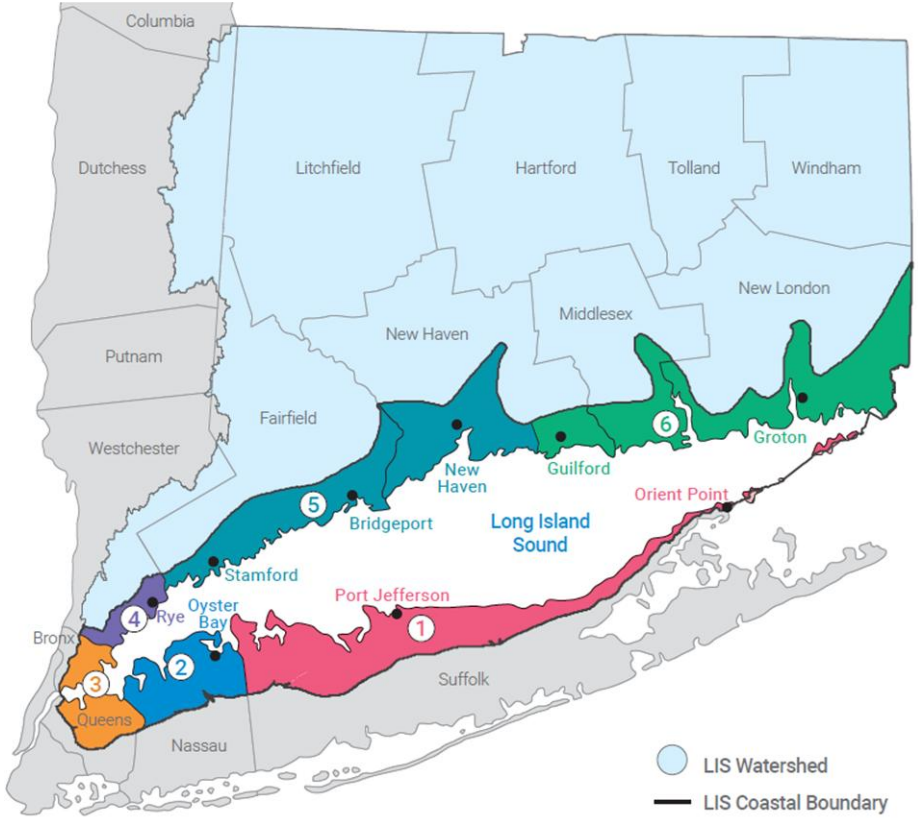
Long Island Sound Partnership



WHO WE ARE

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

The SRC Extension Professionals Team



1 Suffolk County
Elizabeth Hornstein

2 Nassau County
Sarah Schaefer-Brown

3 NYC - Bronx & Queens
Ben Goldberg

4 Westchester County
Sara Powell

5 Western CT
Deb Visco Abibou

6 Eastern CT
Sarah Schechter

SRC Goal & Objectives in the 2025 CCMP

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Goal:

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

Informed Decision-Makers

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

Community-Driven Resilience Planning

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

Resilience Initiative Implementation

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

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Long Island Sound Resilience Resource Hub

www.lisresilience.or

Goals for today's workshop session

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Learn

Access tools to understand environmental risks in your region

Plan

Share resilience planning and adaptation strategies

Implement

Guidance through state climate certification programs

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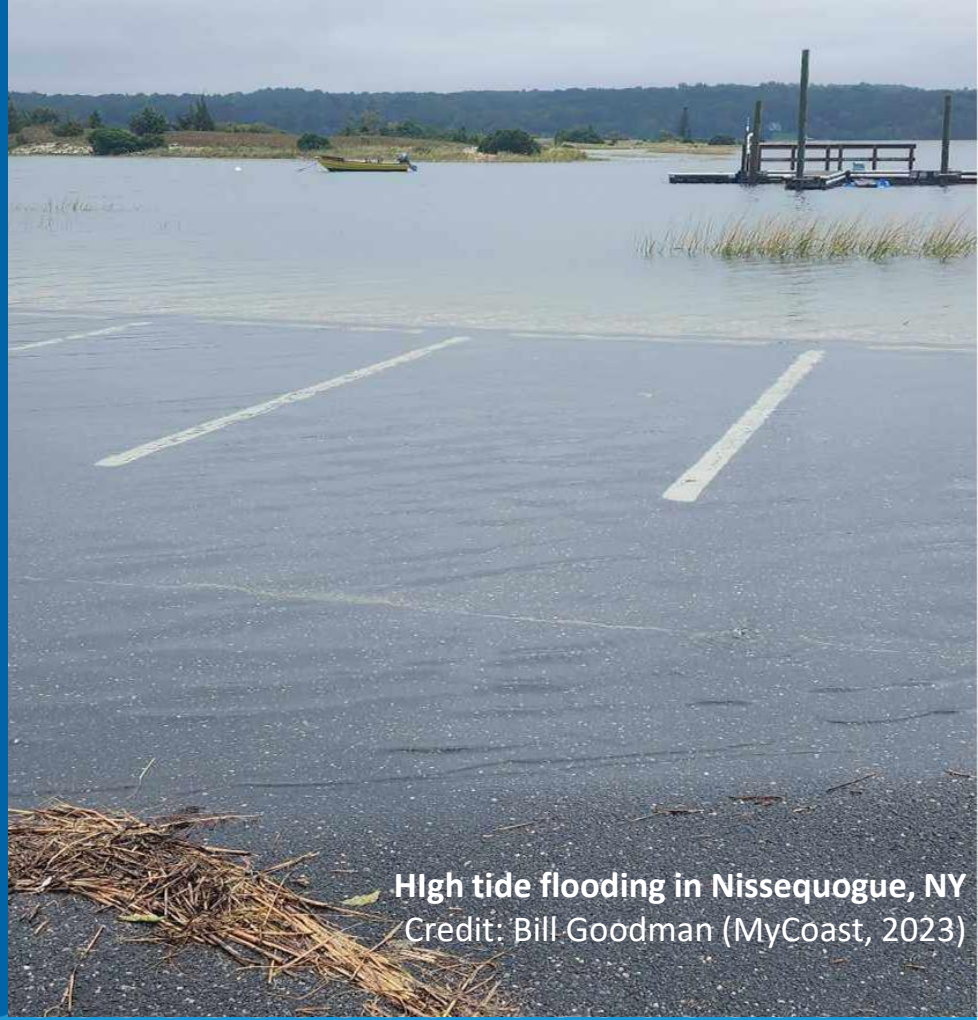
Long Island Sound Environmental Challenges & Climate Impacts



HIgh tide flooding in Nissequogue, NY
Credit: Bill Goodman (MyCoast, 2023)

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Community Resilience Planning

LEARN

Identify Risks

PLAN

Identify Strategies to Reduce Vulnerability

IMPLEMENT

Secure Funding to Implement Strategies

SUSTAIN

Maintain, Evaluate, and Adapt

Major Impacts in Long Island Sound Region

- Increased temperature and extreme heat
- Sea level rise
- Increased frequency and intensity of extreme weather
- Increased and extreme precipitation
- Drought
- Flooding (multiple forms)
- Erosion

Coastal flooding in CT during Hurricane Sandy (October 30, 2012)

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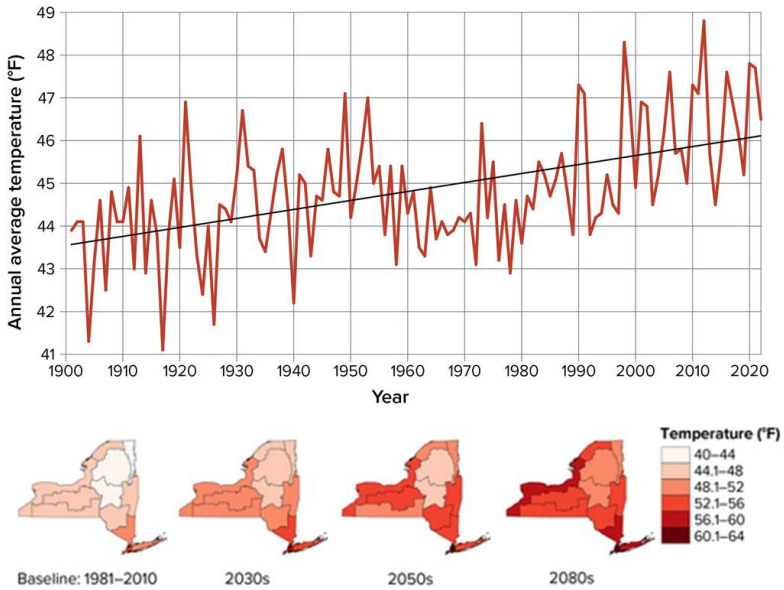
Average temperatures and extreme heat are increasing

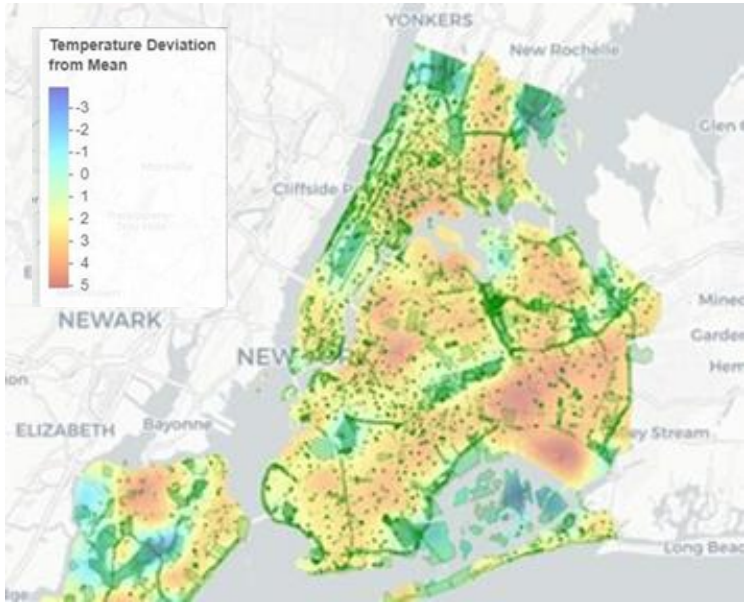
Observed & projected temperature increases in NYS



Source: NYS Climate Impacts Assessment (2024)

- Heatwaves more frequent and lasting longer
- By 2050s, days with heat index values >**100°F** increase threefold
- In NYS, 5-9 heatwaves per year by 2050s and 6-10 by 2080s, lasting 5-8 days

Extreme Heat and Urban Heat Island Effect



Land Surface Temperature Differences in NYC.
Image Source: USGS (2019)

- **Urban heat island effect:** concrete, asphalt, and buildings trap and absorb heat
- Temperature differences due to amount of impervious surface and lack of green space

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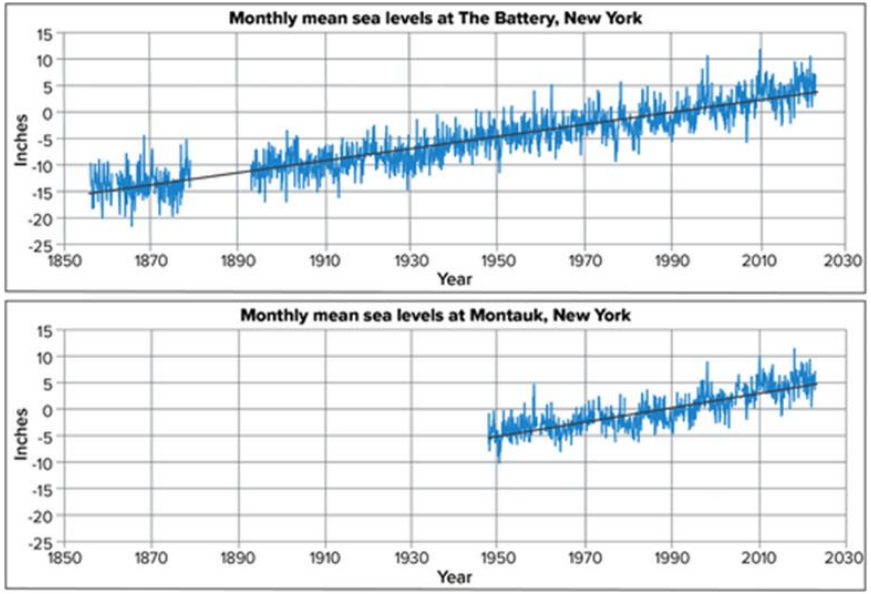
Sea levels are rising



Relative SLR at The Battery, NYC and Montauk, NY (Source: NYS Climate Impacts Assessment)

- In NYC, sea level increased by about **1 foot** in last century
- Rate of sea level rise (SLR) accelerating in recent years
- Rate of SLR in LIS region is roughly **double** the global average

Environmental Challenges in the LIS Region

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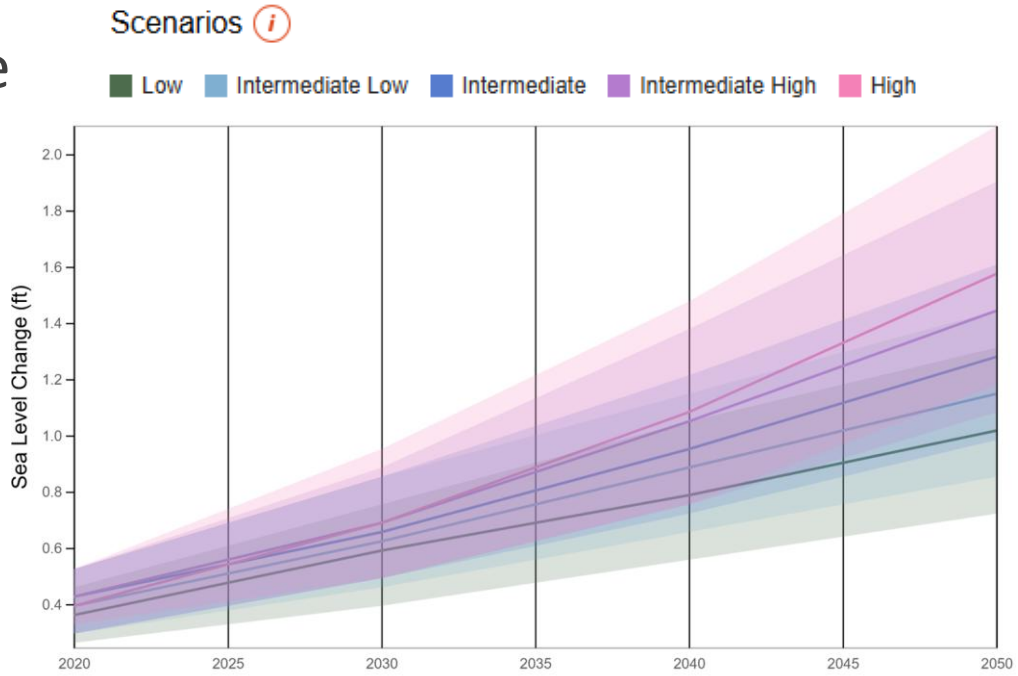
Sea level will continue to rise

- Sea level is expected to rise by **another 10-11 inches** by 2050
- SLR will continue, reaching ~4 feet by 2100
- Regular **tidal flooding** to become more frequent



Sea Level Rise for Bridgeport from 2020 - 2050 (Source: National Sea Level Explorer, 2022 Interagency Technical Report)

Environmental Challenges in the LIS Region

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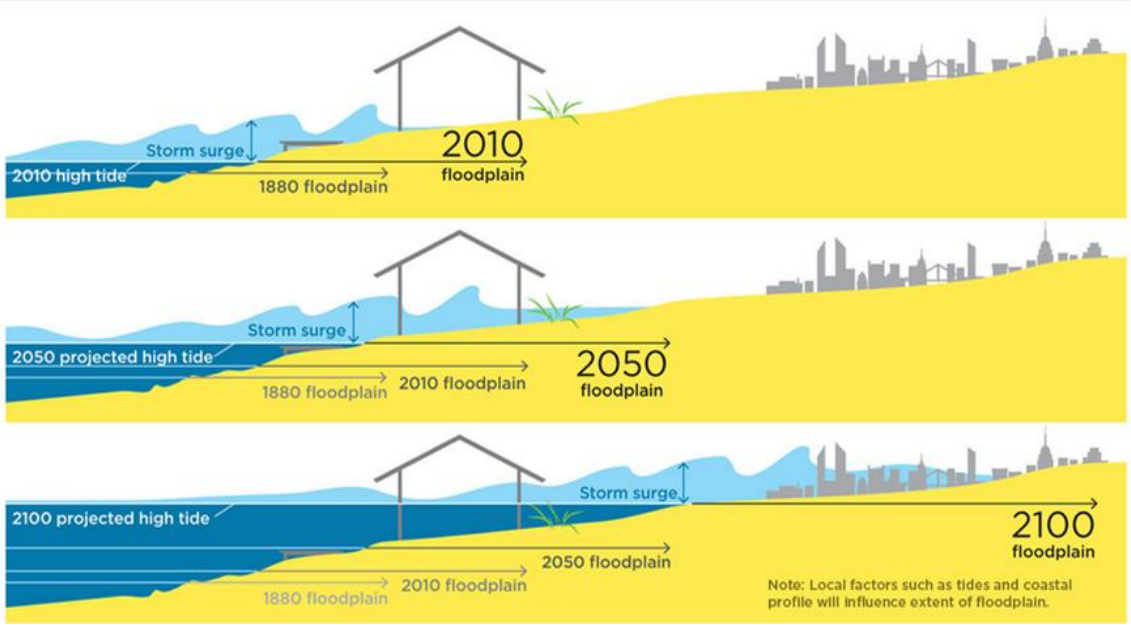
Extreme weather events are becoming more frequent and severe

In the 1980s, the U.S. experienced (on average) one [inflation-adjusted] billion-dollar weather disaster every four months. ***Now there is one every three weeks.***

Source: USGCRP, 2023

Environmental Challenges in the LIS Region

SLR amplifies storm surge risk



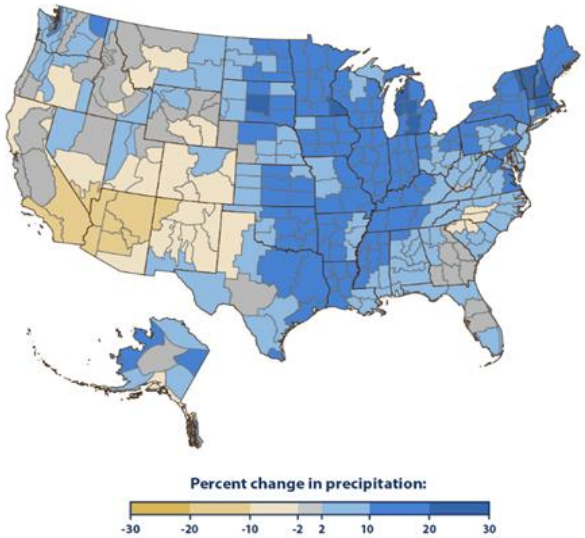
Storm surge and high tides magnify the risks of local sea level rise.

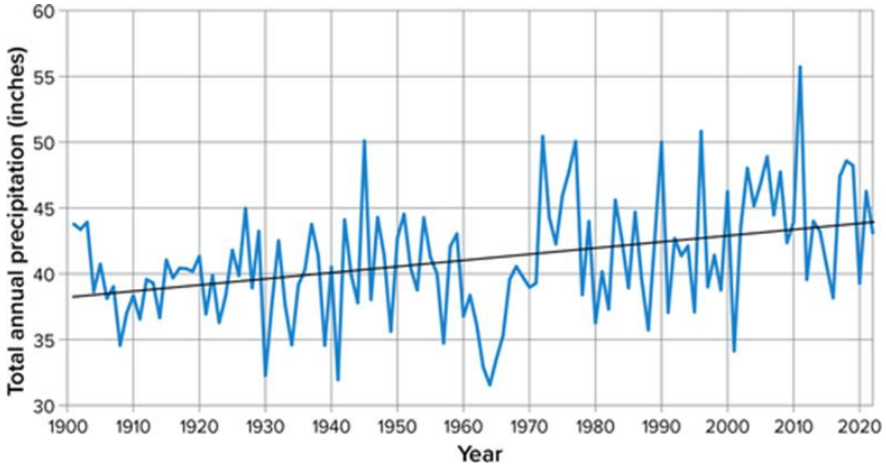
Source: Union of Concerned Scientists, 2013

- Storm surge and **coastal flooding** to become more severe
- The greatest damage from hurricanes comes from **storm surge**
- A higher baseline sea level means that storm surge will **penetrate farther inland**

Total amount of precipitation is increasing in Northeast

Change in total annual precipitation in US, 1901–2023 (Source: EPA)





Increase in total annual precipitation in NYS, 1901–2022, +0.47 inches per decade (Source: NYS Climate Impacts Assessment)

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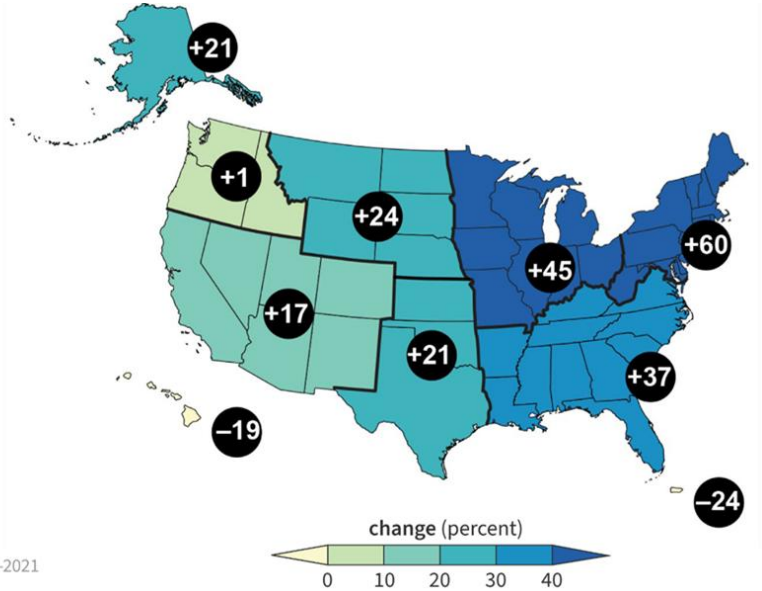
Number and intensity of extreme rainfall events are increasing



Change in total precipitation on heaviest 1% of events, 1958-2021 (NCA5, NOAA)

In NYC, the four storms with the **highest hourly rainfall rates** in last 50 years have occurred since **2021**:

- September 1, 2021 (Hurricane Ida): **3.47”**
- July 14, 2025: **2.08”**
- September 29, 2023: **1.87”**
- August 21, 2021 (Hurricane Henri): **1.84”**

Sources: NOAA, NYC DEP

Stormwater infrastructure often cannot handle intense rainfall

Older stormwater systems were not designed to handle today's storms and become overloaded quickly

Flooding in Mamaroneck, NY

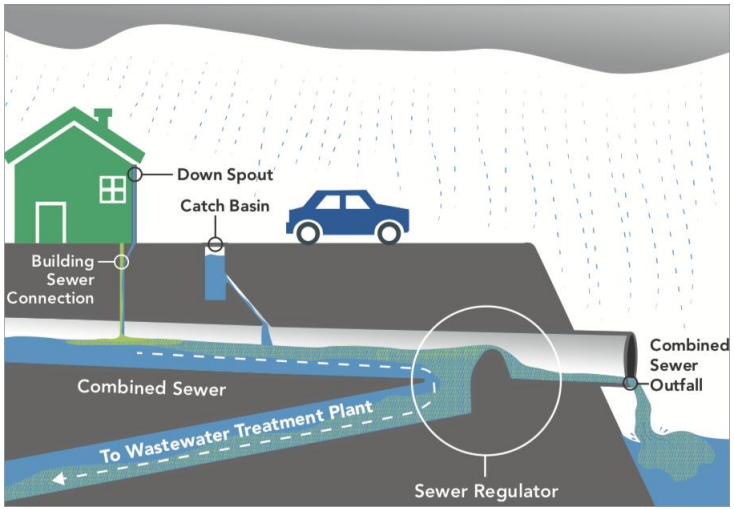
Source: MyCoast

Combined sewer overflow in West Haven, CT

Credit: Christopher Zurcher

Environmental Challenges in the LIS Region

Extreme rainfall can negatively impact water quality



Combined sewer overflow (CSO) when heavy rainfalls exceed sewer capacity
Source: NYC DEP

Runoff from heavy rains in Connecticut River post-Hurricane Irene, 2011
Source: USGS

Data sources on climate impacts

NEW YORK STATE CLIMATE IMPACTS ASSESSMENT

NOAA NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION

STATE CLIMATE SUMMARIES 2022

CIRCA

Connecticut Institute for Resilience and Climate Adaptation

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Tools for Assessing Your Community's Risks and Vulnerabilities

Credit: Sarah Schechter

Environmental Challenges in the LIS Region

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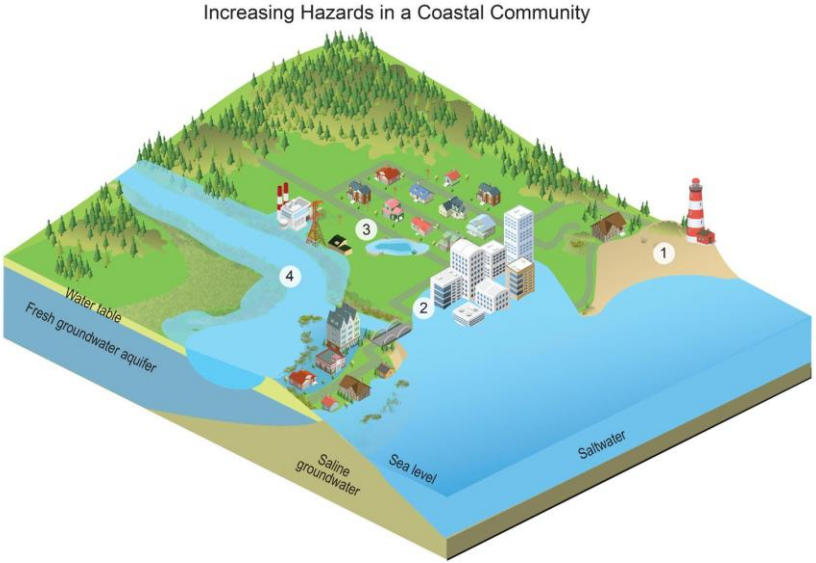
Existing Conditions

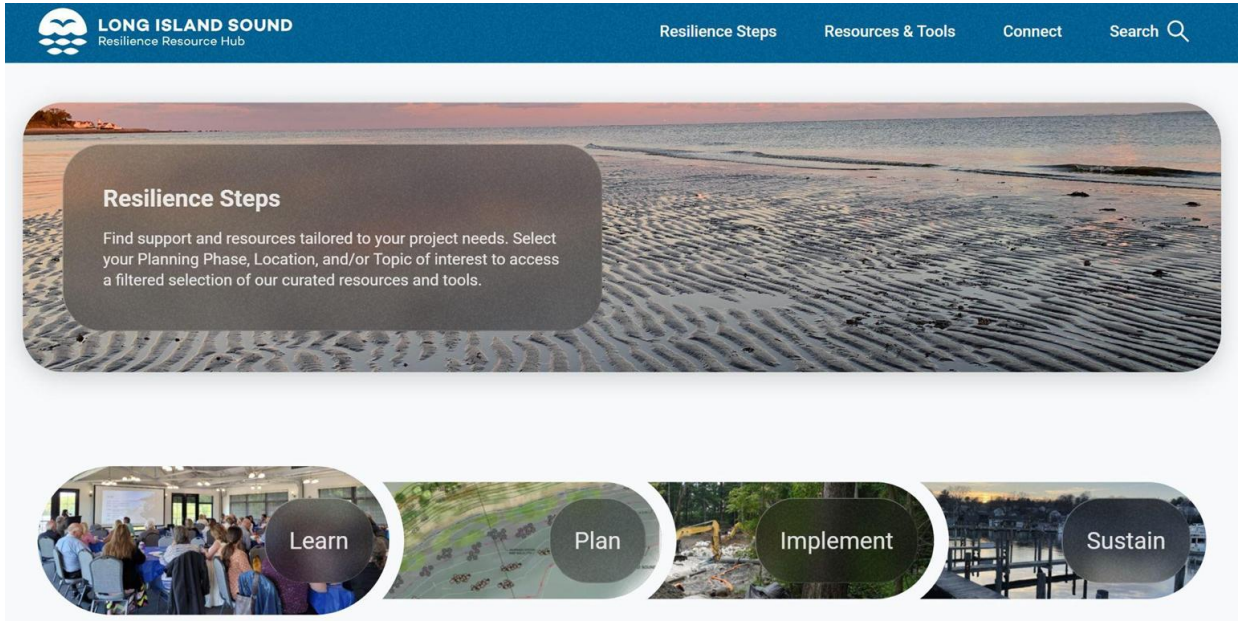
Increasing Hazards

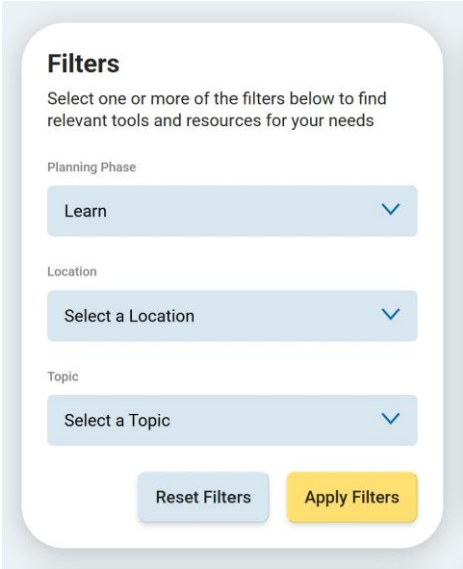


Source: Fifth National Climate Assessment

Tools for Risk & Vulnerability Assessment

LIS Resilience Resource Hub





www.lisresilience.org

Tools for Risk & Vulnerability Assessment

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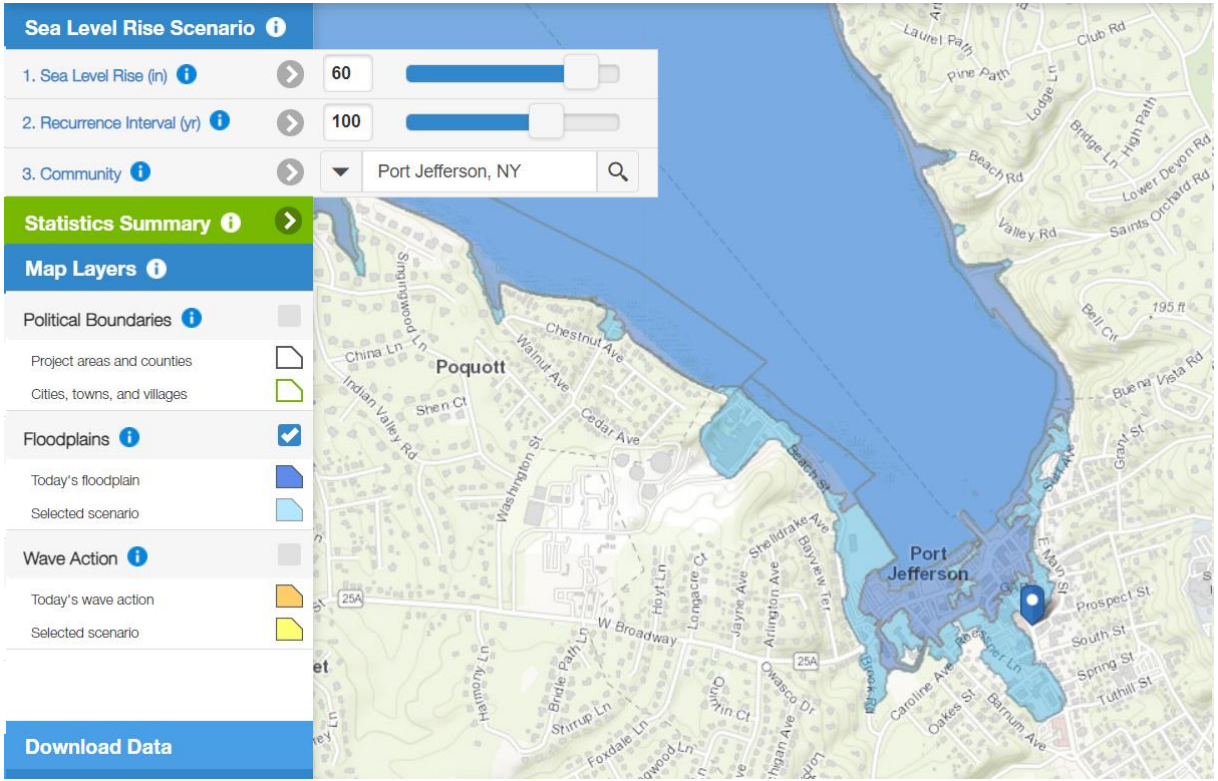
New York State Sea Level Rise Viewer – Port Jefferson, NY



Tools for Risk & Vulnerability Assessment

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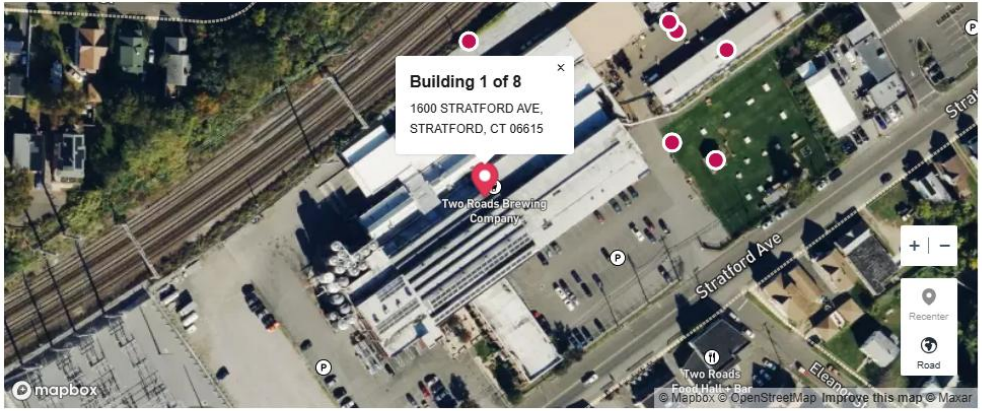
Climate Risk Mapping Tool for Connecticut Residents – Stratford, CT

1600 STRATFORD AVE, STRATFORD, CT 06615
BUILDING 1 OF 8

Edit Building Details | Save as PDF | Share | Map View



6/10 Flood Factor 1/10 Fire Factor 6/10 Wind Factor 4/10 Air Factor

6/10 Heat Factor

Key Insights for This Property

- 3 historic floods have been recorded in this area.
- This property has significant **flood insurance considerations.**

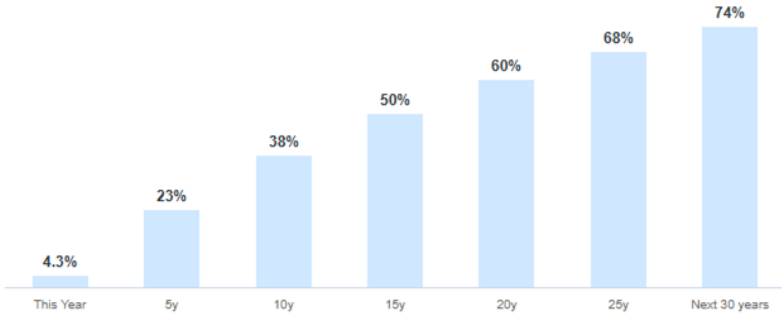
Climate Risk Report

You're able to access this complete climate risk report as part of your subscription.

Understand this property's risk

- Provide property report access to others

Cumulative risk of 1 in of flooding reaching the building



Flood Damage Forecast

Flood Insurance & FEMA Zone

Flood Damage Preventions

Elevating a Building

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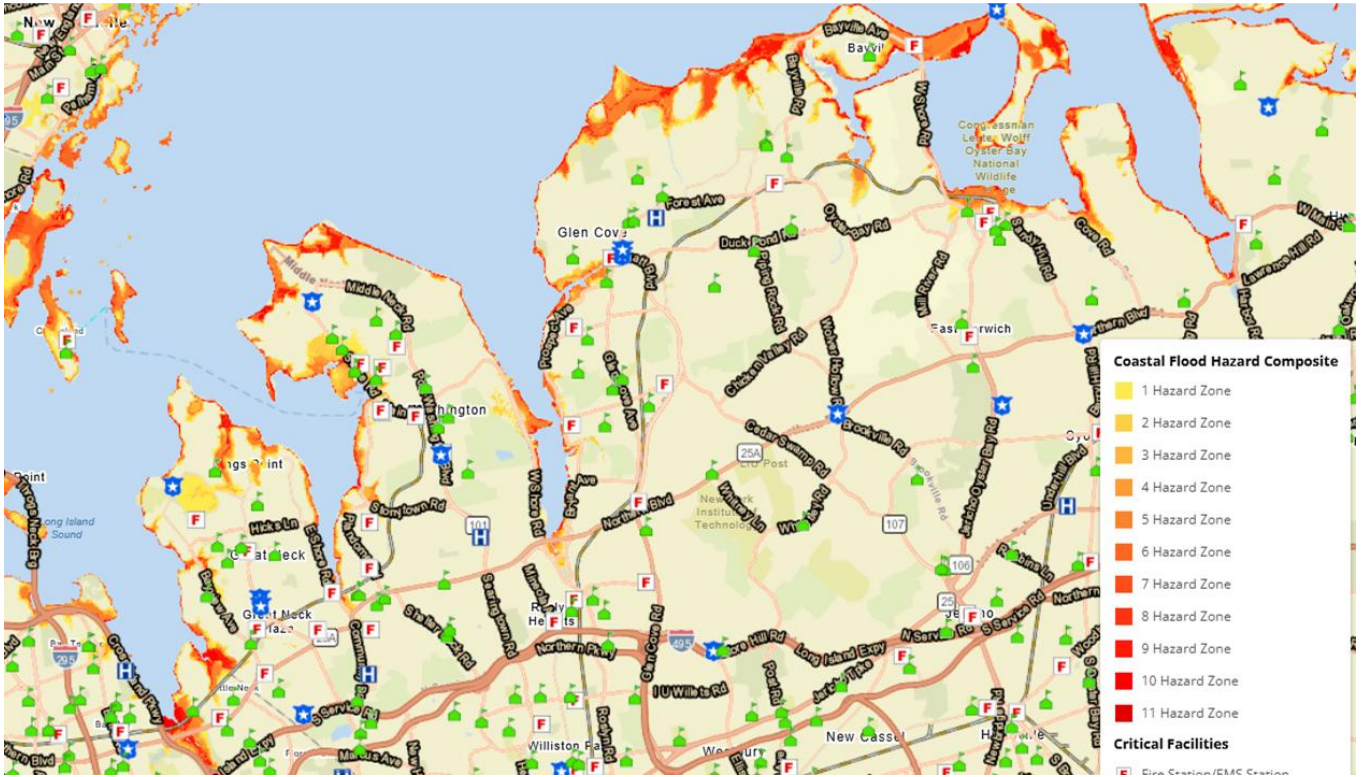
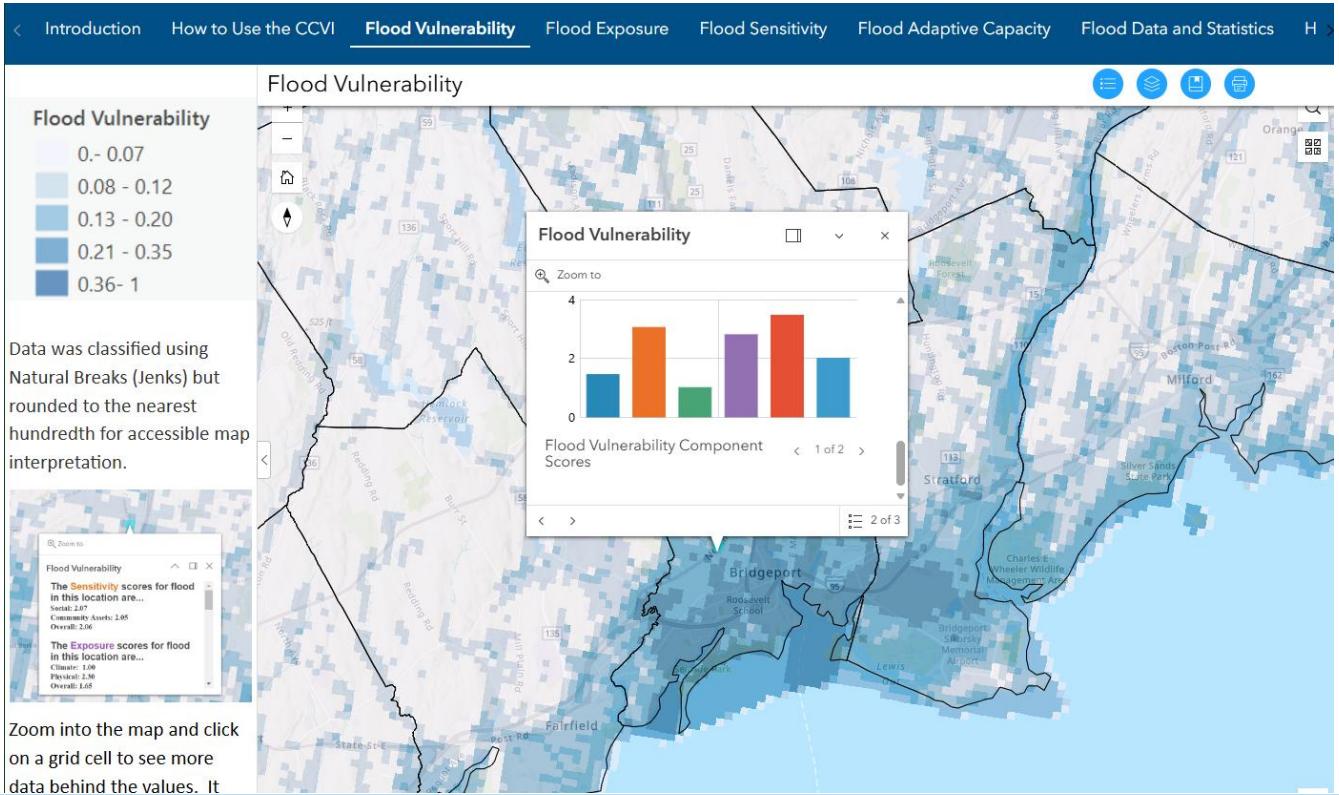
NOAA Coastal Flood Exposure Mapper – Nassau County, NY



Tools for Risk & Vulnerability Assessment

CIRCA Climate Change Vulnerability Index – Bridgeport, CT



Tools for Risk & Vulnerability Assessment

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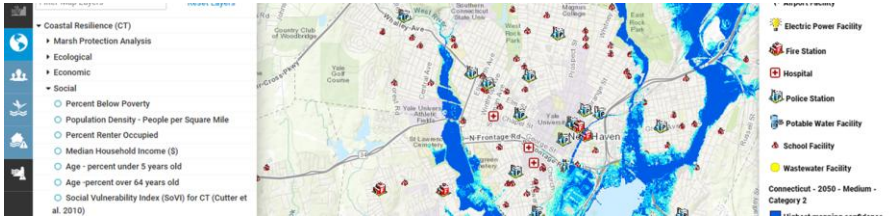
NYC Flood Hazard Mapper

TNC Coastal Resilience Tool

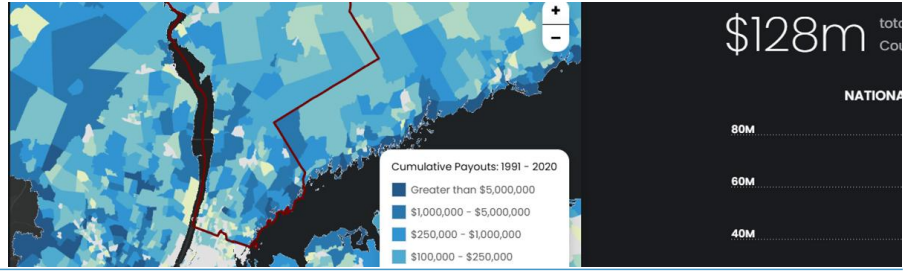


NYC Stormwater Flood Maps

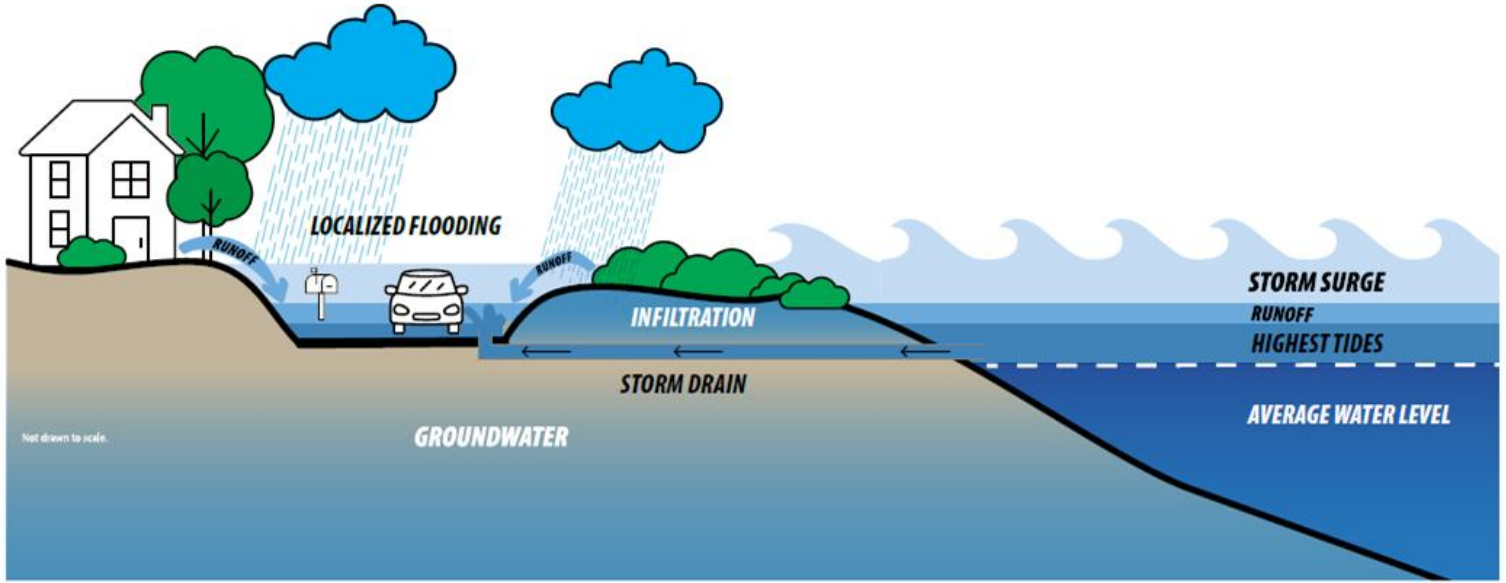
NOAA Sea Level Rise Viewer

CIRCA Sea Level Rise & Storm Surge Viewer

NOAA Coastal County Snapshots



Compound Flooding



Source: New York Sea Grant

Tools for Risk & Vulnerability Assessment

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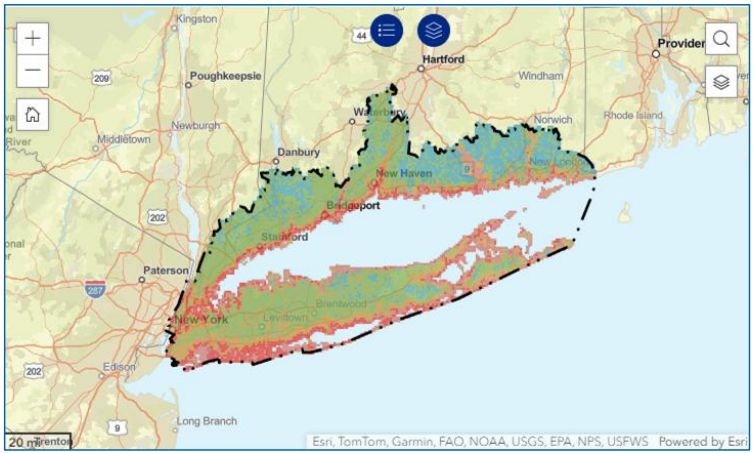
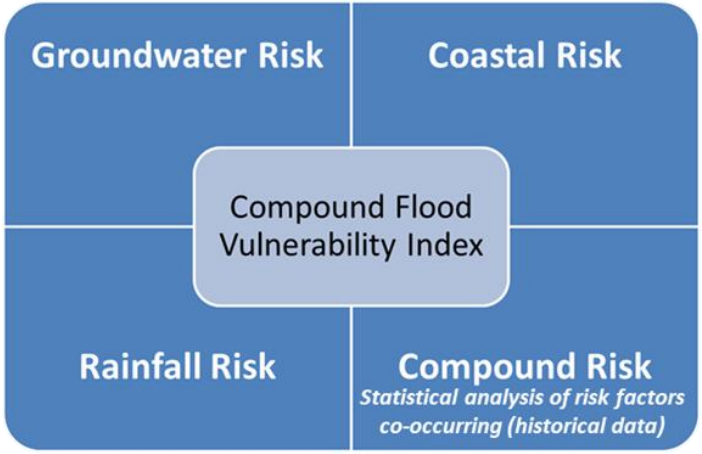
USGS Compound Flood Hazard Model

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





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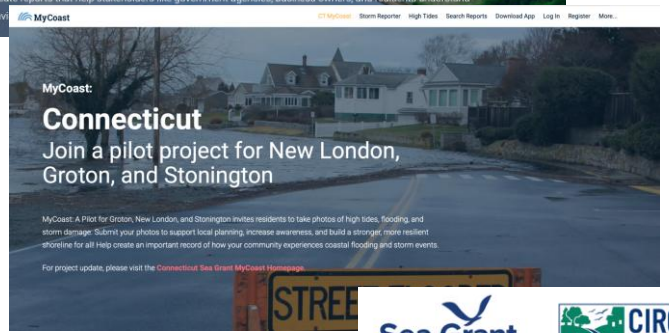
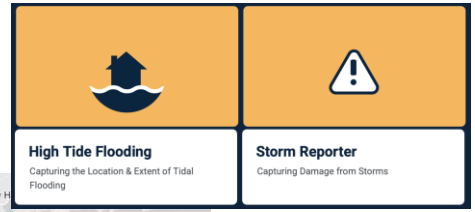
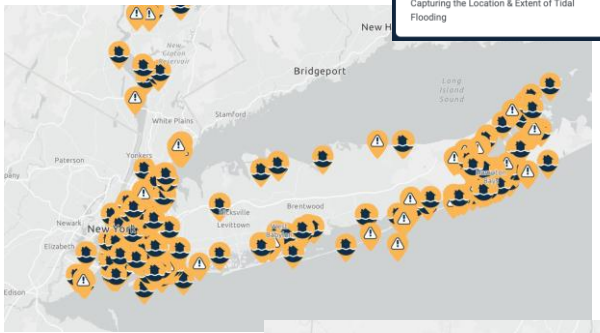
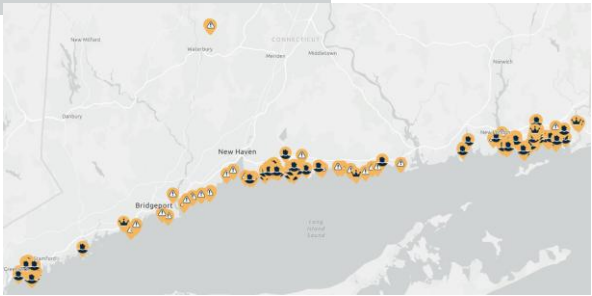
MyCoast CT & NY









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CIRCA Connecticut Institute for Resilience and Climate Adaptation

Connecticut NATIONAL ESTUARINE RESEARCH RESERVE

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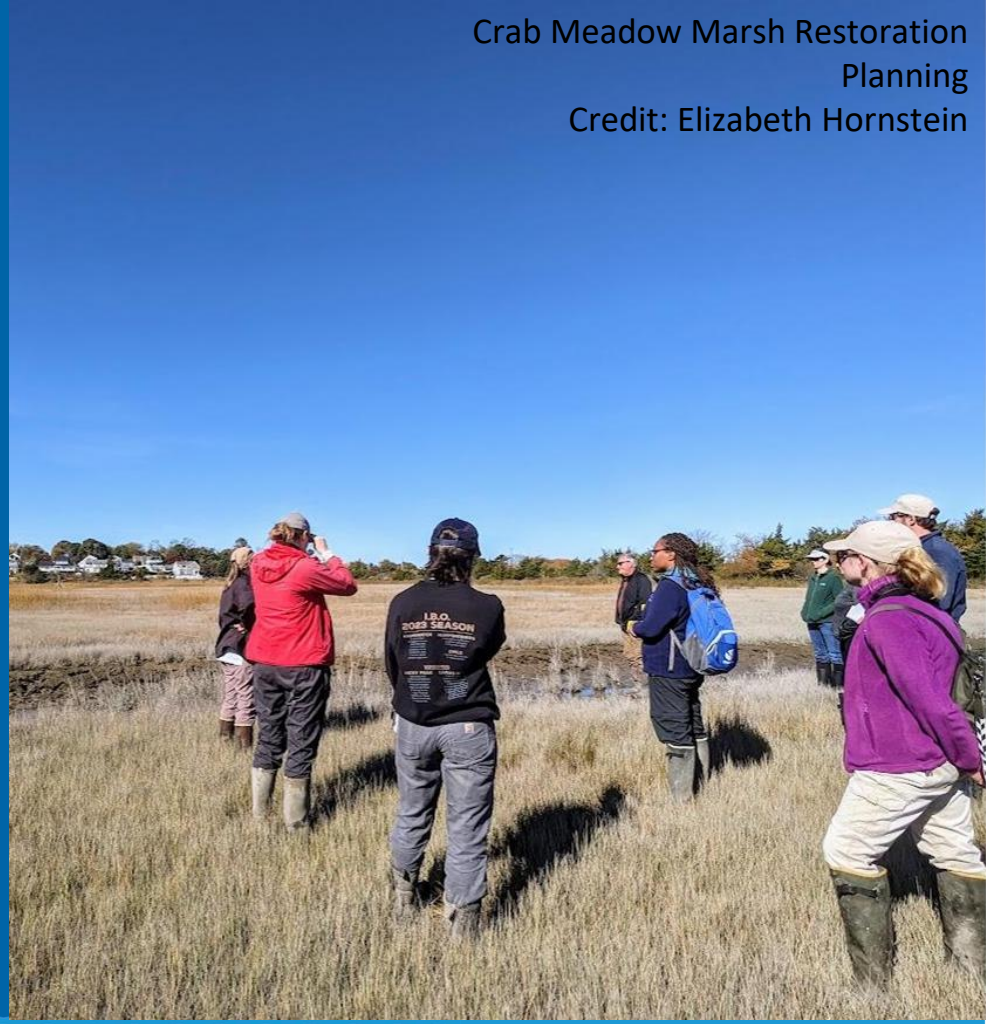
Resilience Planning Adaptation Strategies



Crab Meadow Marsh Restoration Planning
Credit: Elizabeth Hornstein

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Community Resilience Planning

LEARN

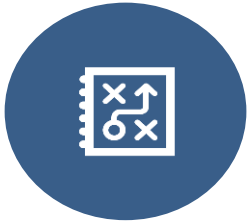
Identify Risks

PLAN

Identify Strategies to Reduce Vulnerability

IMPLEMENT

Secure Funding to Implement Strategies



SUSTAIN

Maintain, Evaluate, and Adapt

How familiar are you with resilience planning?

0

Not very - I'm aware of climate impacts in my community, but am new to resilience planning.

0

Somewhat - I have looked into available resources and/or am currently aware of planning happening in my community, but want to learn more.

0

Very familiar - I'm engaged with planning efforts in my community but am excited to learn new things today.

0

Start the presentation to see live content. For screen share software, share the entire screen. Get help at **pollev.com/app**

Adaptation Strategies

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General Adaptation Strategies:

- Raise Awareness
- Plan & Enforce
- Conserve & Restore
- Accommodate
- Relocate
- Defend
- Do Nothing

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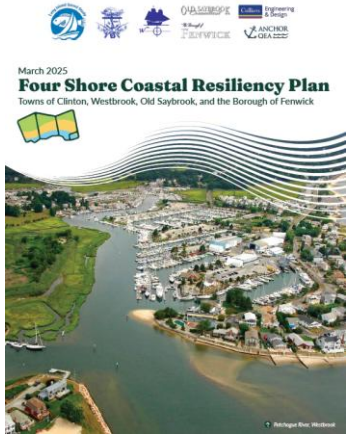
Develop and Update Plans

- Incorporate climate impacts into all municipal/community plans
- Consider undertaking a Climate Vulnerability Assessment and Adaptation Plan
- Consider collaborating with neighboring communities
- Make sure to have emergency response plans!



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Strengthen & Enforce Regulations and Policies

- Update zoning codes to ensure future infrastructure is located outside hazard areas
- Strengthen wetland and shoreline management codes
  - Increase coastal setbacks
- Strengthen stormwater control measures
- Incentivize nature-based solutions
- Establish resilience financing mechanisms
  - CT Climate Resilience Improvement Districts (RIDs)
  - Stormwater Utilities

NYS Model Local Laws to Increase Resilience

https://dos.ny.gov/model-local-laws-increase-resilience

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Upgrade, relocate, or remove at risk infrastructure

Roadways, Crossings, and Dams

Guilford, CT

Beaver Brook Culvert, Mill Neck, NY

Mill Pond Dam & Harbor Road in Stony Brook, NY

Upgrade, relocate, or remove at risk infrastructure

Stormwater and Wastewater Infrastructure

Stormwater Infrastructure
Brookhaven, NY

Overflowing stormwater drain in Port Jefferson, NY

A house in Centerport Harbor, NY gets an enhanced nitrogen removal septic system to replace a cesspool.

Upgrade, relocate, or remove at risk infrastructure

Housing, businesses, and other critical infrastructure

New Rochelle, NY

Groton Long Point Police Station, CT

Crumbling sea wall, Centerport, NY

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Natural and Nature-Based Solutions

Preserve/restore natural defenses, such as beaches, dunes, coastal bluffs, wetlands, seagrass beds, and oyster reefs

Marsh Conservation Planning, Cold Spring Harbor, NY

Bluff Restoration, Riverhead, NY

Dodge Paddock and Beal Preserve, Stonington, CT

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Natural and Nature-Based Solutions

Living Shorelines

Fenwick, CT Living Shoreline (L) and Artificial Shellfish Reefs at Stratford Point, CT (R)

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Natural and Nature-Based Solutions

Riparian Buffers & Reforestation

Otter Creek Forest Restoration, Mamaroneck, NY

Vegetative buffer along Niantic Bay, CT

Hoffman Evergreen Preserve Restoration, Stonington, CT

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Natural and Nature-Based Solutions

Green Infrastructure

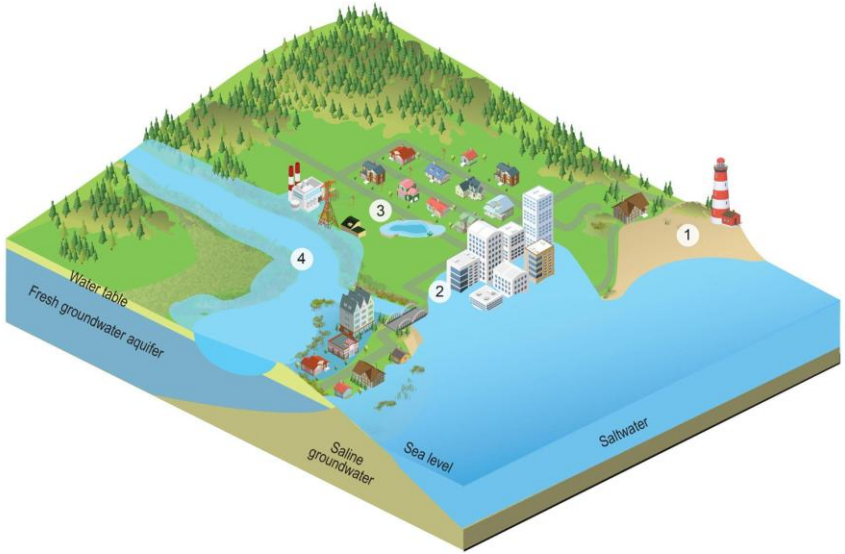
Constructed stormwater wetland at Sunken Meadow State Park, NY

Bioswale in New Haven, CT

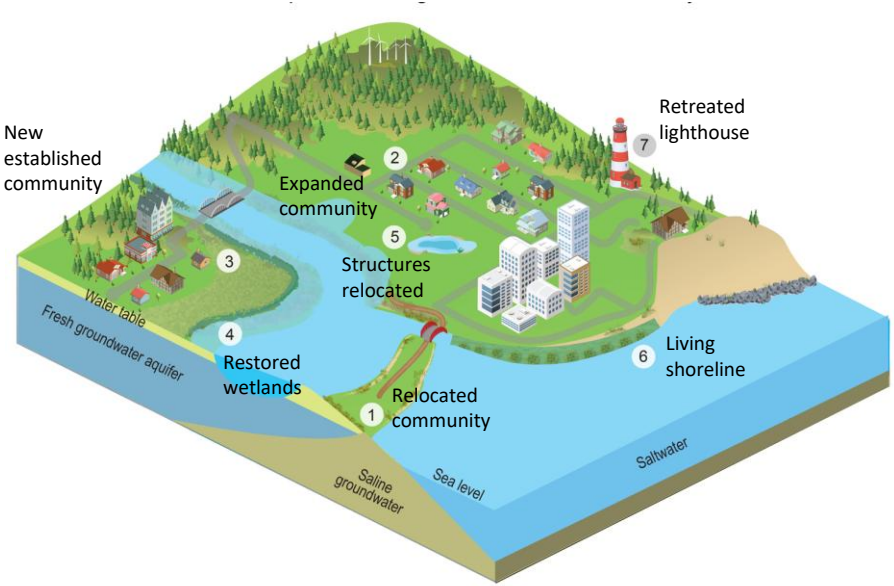
Rain Garden at Bay Walk Park, Village of Port Washington North, NY

Adaptation Strategies for a Coastal Community

Increasing hazards in a coastal community



Adaptation strategies

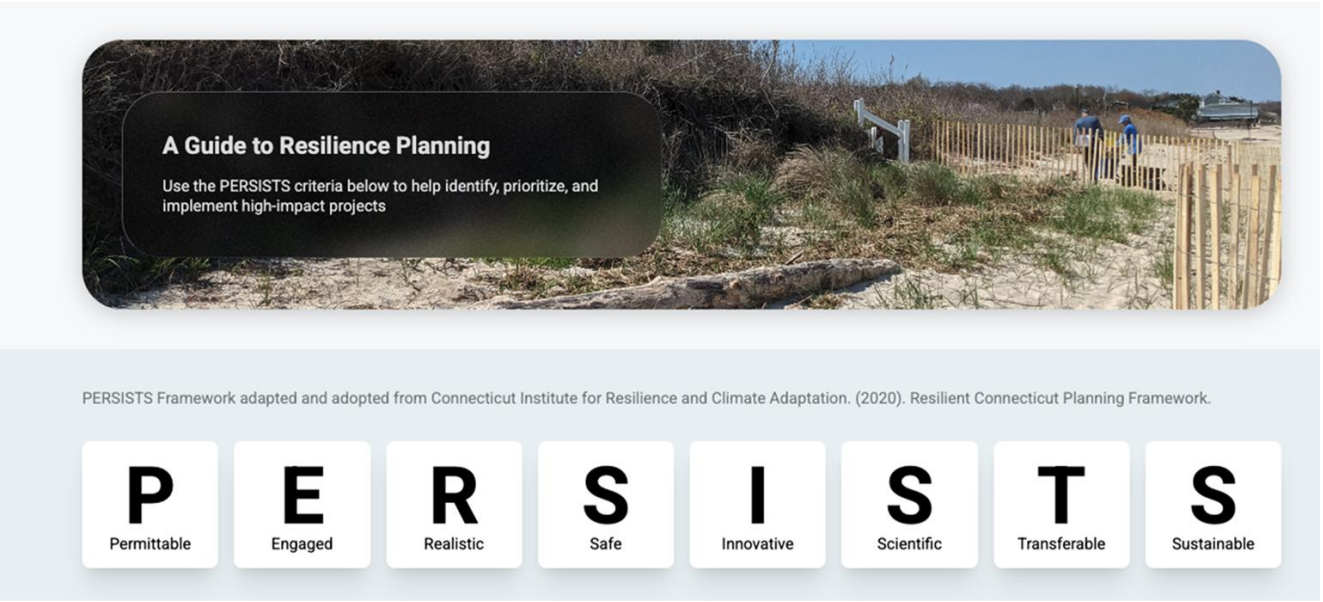


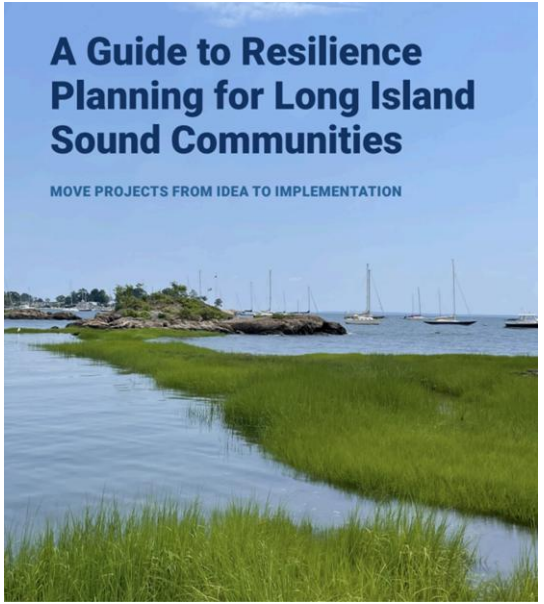
Source: Fifth National Climate Assessment

Resilience Planning Guide

LONG ISLAND SOUND PARTNERSHIP

From Idea to Implementation: Use our guiding criteria to identify, prioritize, and implement impactful strategies and projects





PERSISTS Decision Support Criteria

Permittable – Can get all necessary permits and/or permissions

Engaged – Considers input from and impacts to all communities

Realistic – Has community support and can be realistically achieved

Safe – Enhances or maintains the wellbeing of communities

Innovative – Process has considered innovative options including nature-based solutions

Scientific – Incorporates the best available science

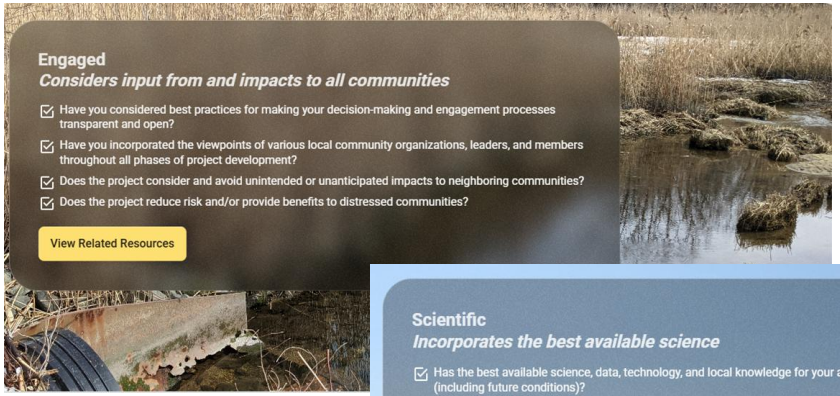
Transferable – Can serve as model for other communities

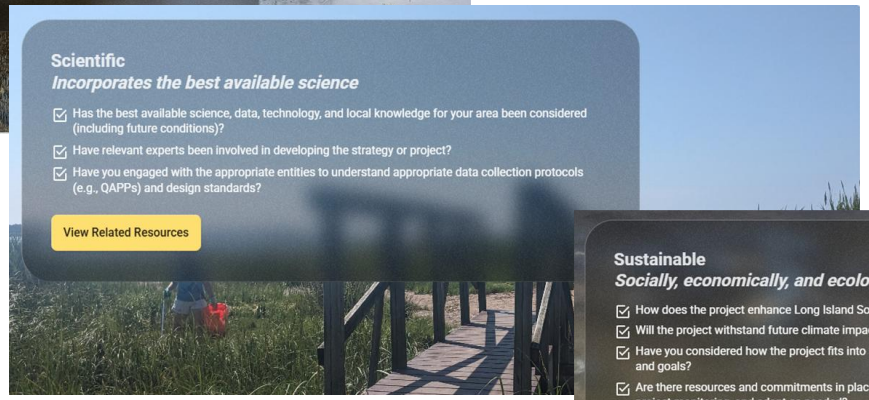
Sustainable – Socially, economically, and ecologically sustainable

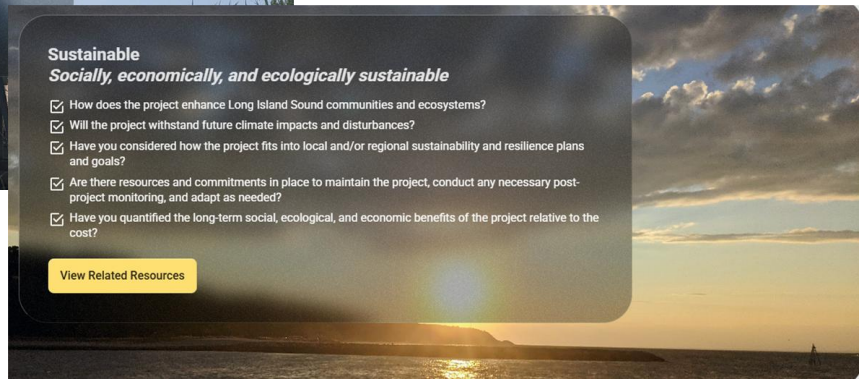
*Adapted and adopted from Connecticut Institute for Resilience and Climate Adaptation. (2020). *Resilient Connecticut Planning Framework*.

Resilience Planning Guide

LONG ISLAND SOUND PARTNERSHIP

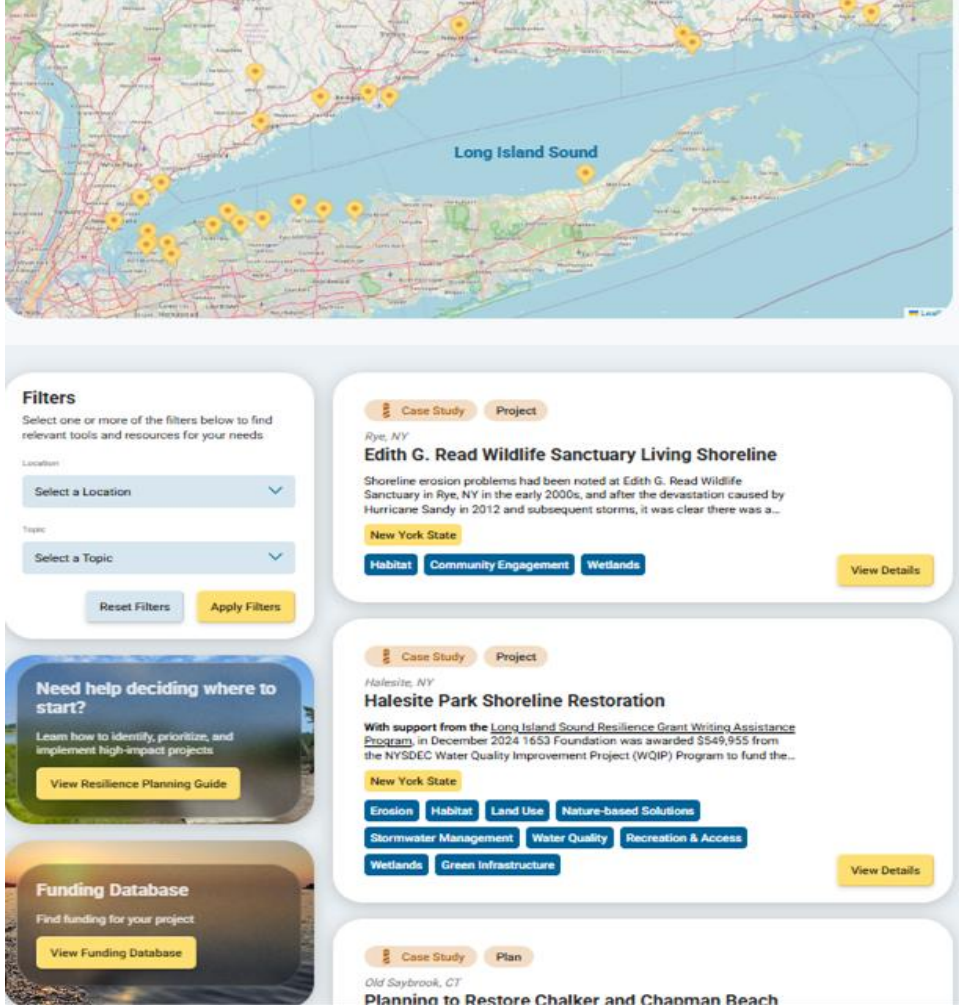






LONG ISLAND SOUND PARTNERSHIP

Case Studies



SRC Resilience Assistance Programs

LONG ISLAND SOUND PARTNERSHIP

LIS Resilience Planning Support Program

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

No Match!

Eligible Applicants: Municipalities, Nonprofits, Community Organizations

3rd round released December 1, 2025!

LIS Resilience Grant Writing Assistance Program

Focus: **Grant Preparation and Writing**

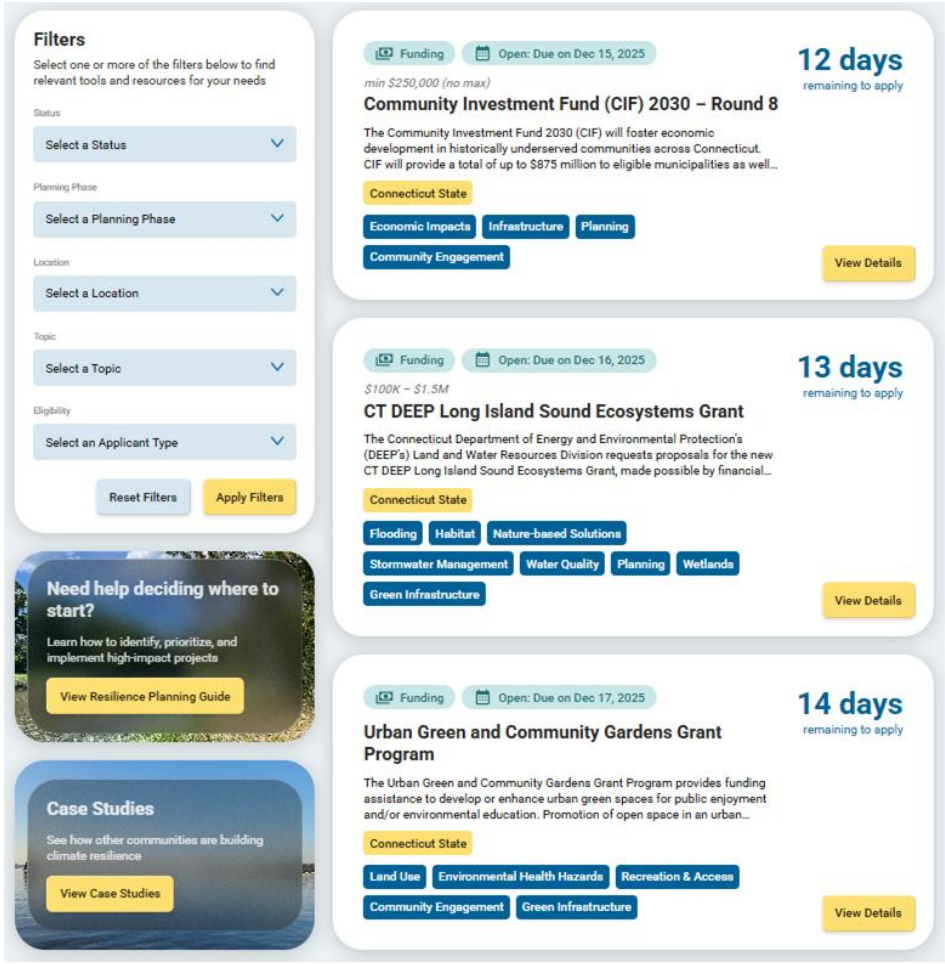
No Match!

Eligible Applicants: Municipalities, Nonprofits, Community Organizations

Rolling: Open until all available funding has been allocated

LONG ISLAND SOUND PARTNERSHIP

Funding Database



Funding Available for Resilience Projects

LONG ISLAND SOUND PARTNERSHIP

$7M for New Long Island Sound Ecosystems Grant Program: Supports the planning/engineering/design and construction of projects focused on coastal habitat restoration and green stormwater infrastructure across Connecticut. **No Match. Due December 16, 2025.**

$44M for CT DEEP Climate Resilience Fund: State and federal funds to support planning, project advancement, and construction to help Connecticut's communities build resilience to extreme weather. **Due January 15, 2026.**

$750K for New York Climate Resilience Grant Program (CRGP) through The Nature Conservancy in New York: For conservation and climate adaptation projects. **Due February 13, 2026.**

$4.2B NYS Environmental Bond Act: For climate resilience and protection of natural resources.

- $25M currently available for **Open Space Conservation Grant Program**. No match. **Due February 18, 2026.**

Upcoming Funding for Resilience Projects

LONG ISLAND SOUND PARTNERSHIP

Up to $400K for Long Island Sound Stewardship Fund: To restore and protect the health and living resources of Long Island Sound. *Opening December 8, 2025 with applications due February 5, 2026. Only nonprofits are eligible to apply.*

Long Island Sound Futures Fund: For water quality improvement, habitat restoration, and resilience projects in the Long Island Sound watershed. *Typically opens in March with applications due in May.*

NYS Consolidated Funding Application: Access to multiple state funding sources through one application. Grants are available for land protection, habitat restoration, water quality improvements, community resilience, and more! *Typically opens in May with applications due in July.*

Regional Funding Workshops

LONG ISLAND SOUND PARTNERSHIP

Coming Spring 2026

An opportunity to hear directly from federal, state, local funding programs and speak with program officers about your project ideas and applications!

LONG ISLAND SOUND PARTNERSHIP

Questions?

Credit: Sarah Schaefer-Brown

LONG ISLAND SOUND PARTNERSHIP

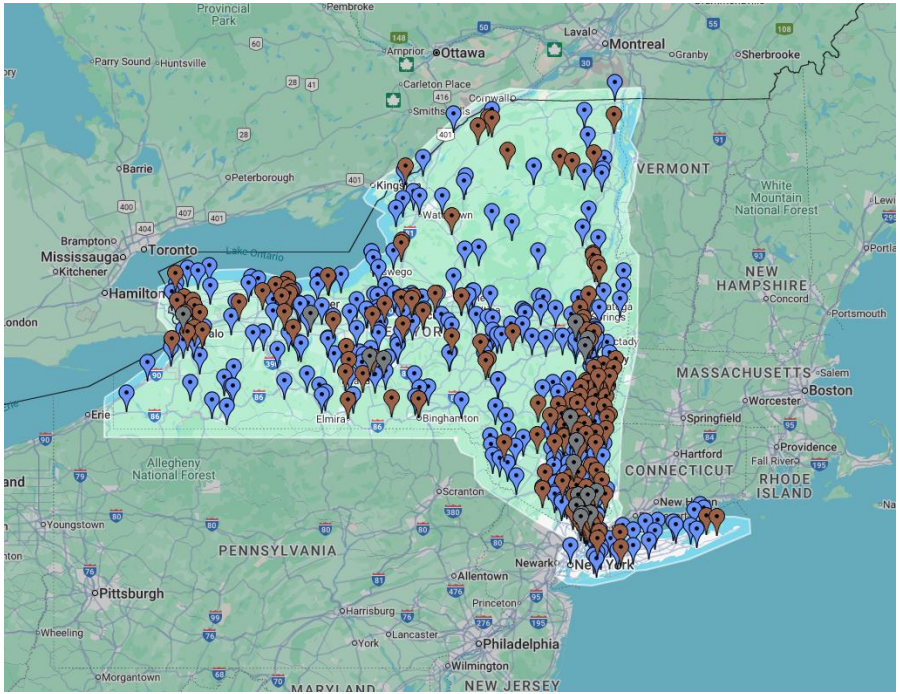
Guidance through State Climate Certification Programs

Credit: Sarah Schaefer-Brown

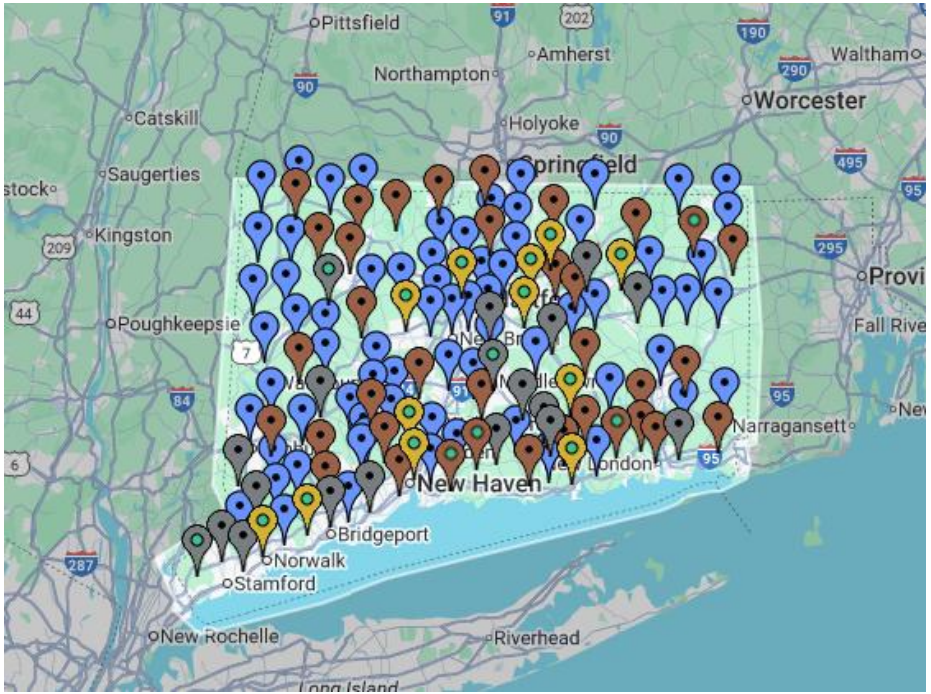
State Climate Certification Programs

LONG ISLAND SOUND PARTNERSHIP

NYS Climate Smart Communities (CSC)



Sustainable CT



Thank you to our guest speakers

LONG ISLAND SOUND PARTNERSHIP

NY Session

Sofie diTommaso
NYS CSC Coordinator (Mid-Hudson)
Resilience and Adaptation Coordinator
Hudson Valley Regional Council

Mary Lambert
NYS CSC (Mid-Hudson)
Climate Action Planning Manager
Hudson Valley Regional Council

Sarah Oral
NYS CSC (Downstate)
Senior Associate/Project Manager, IMEG

Jess Kuonen
Hudson Estuary Specialist, NY Sea Grant

CT Session

Kate Richard
Sustainable CT Program Director for Sustainability Best Practices

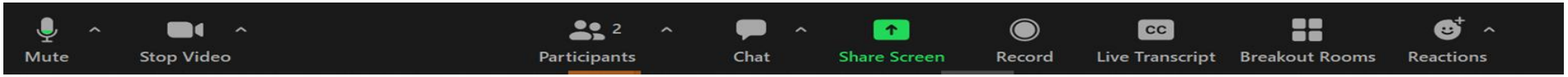
Sarah Schechter
SRC EP for Eastern Connecticut

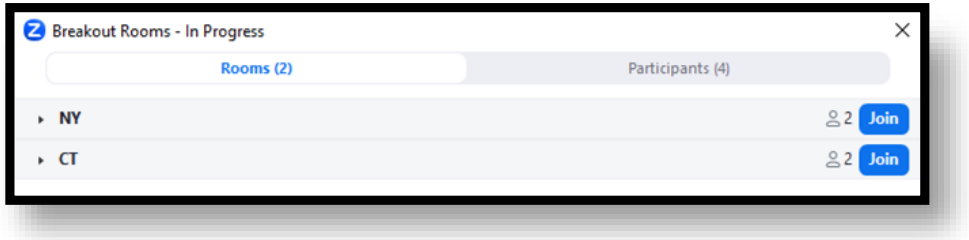
Breakout Room Instructions

Look for the breakout rooms button on your Zoom toolbar

- It may be under “More”

Select which room you’d like to join from the pop-up box and click ‘Join’





If you are having problems joining a breakout room—put in the chat what room (NY or CT) you would like to go to & please be patient as you are sent there.

LONG ISLAND SOUND PARTNERSHIP

New York Session

Credit: Sarah Schaefer-Brown

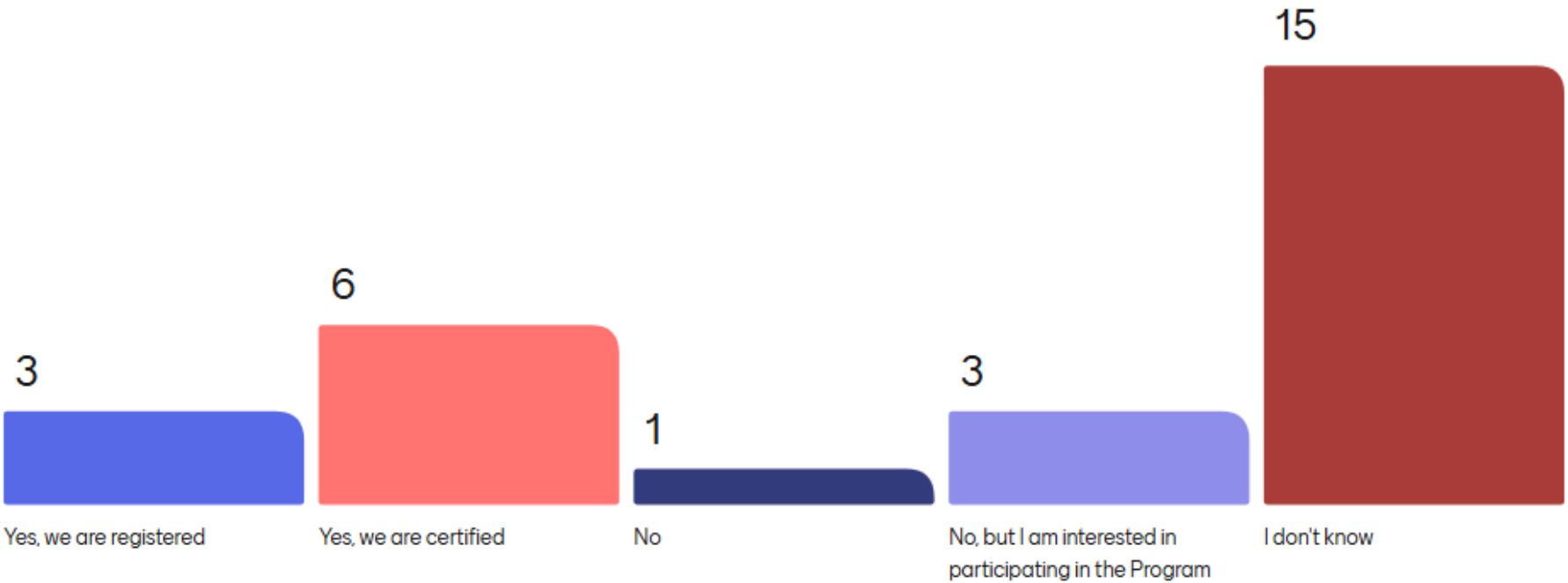
LONG ISLAND SOUND PARTNERSHIP

Is your municipality participating in NYS Climate Smart Communities?

Join at menti.com | use code 1964 9912

Mentimeter

Is your municipality participating in NYS Climate Smart Communities?



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Climate Smart Communities Program: Resilience Overview

Hudson Valley Regional Council

IMEG

EPA

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

NEW YORK STATE Climate Smart Communities

Climate Smart Communities (CSC)

State Support for Local Climate Action

- Provide assistance and clear pathways for local government leaders to:
  - Reduce greenhouse gas pollution
  - Build resiliency in the face of climate change

Sponsored by seven state agencies working to support municipalities to act in the fight against climate change.

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NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

NEW YORK STATE Climate Smart Communities

CSC & Climate Resilience

CSC Pledge Element 7:
Enhance Community Resilience to Climate Change

CSC & Climate Resilience

CSC Pledge Element 7:
Enhance Community Resilience to Climate Change

21 Actions

CSC & Climate Resilience

CSC Pledge Element 7:
Enhance Community Resilience to Climate Change

21 Actions

PE7: Climate Vulnerability Assessment

CSC & Climate Resilience

CSC Pledge Element 7:
Enhance Community Resilience to Climate Change

21 Actions

PE7: Climate Vulnerability Assessment

PE7: Evaluate Policies for Climate Resilience

CSC & Climate Resilience

CSC Pledge Element 7:
Enhance Community Resilience to Climate Change

21 Actions

PE7: Climate Vulnerability Assessment

PE7: Evaluate Policies for Climate Resilience

PE7: Climate Adaptation Plans

CSC & Climate Resilience

CSC Pledge Element 7:
Enhance Community Resilience to Climate Change

21 Actions

PE7: Climate Vulnerability Assessment

PE7: Evaluate Policies for Climate Resilience

PE7: Climate Adaptation Plans

Climate Change Adaptation & Resilience Plan (CCARP)

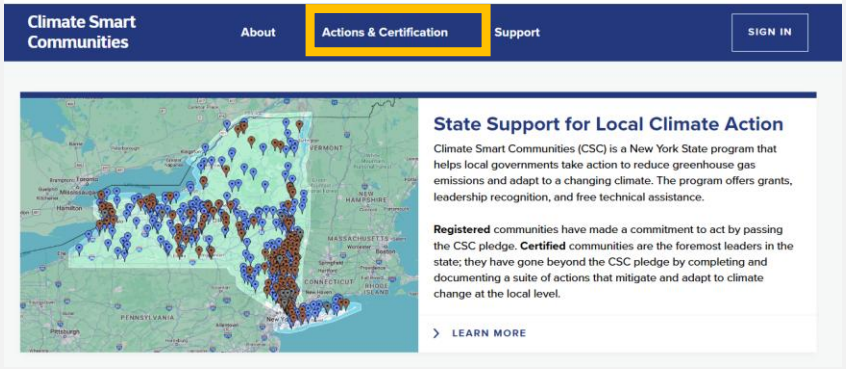
NY State Template

- Plan outline, guidance, resources, and recommended steps

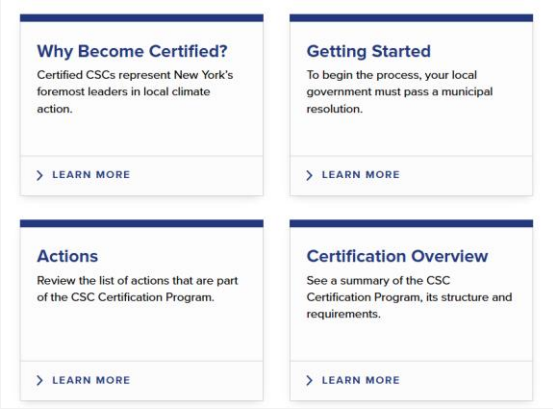
How to Explore More CSC Actions

Step 1: Visit https://climatesmart.ny.gov/

Step 2: Review Actions & Certifications



Step 3: Review Resources



Step 4: Explore Actions

For more tips on navigating the CSC Portal, check out HVRC's video series:
https://hudsonvalleyregionalcouncil.org/cec-institute/#csc-tutorial-vids

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NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE | Climate Smart Communities

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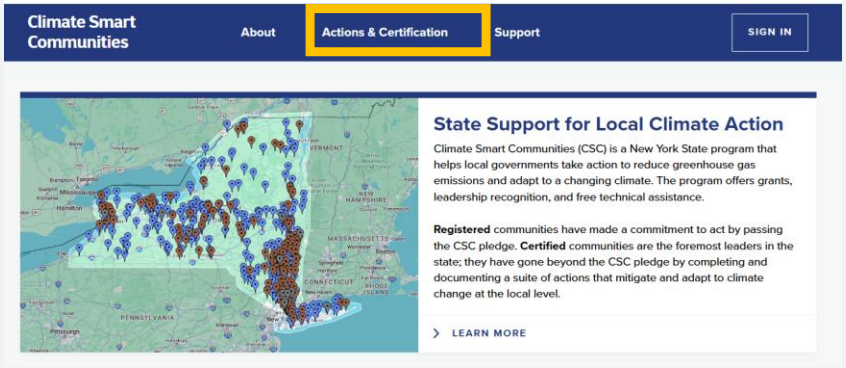

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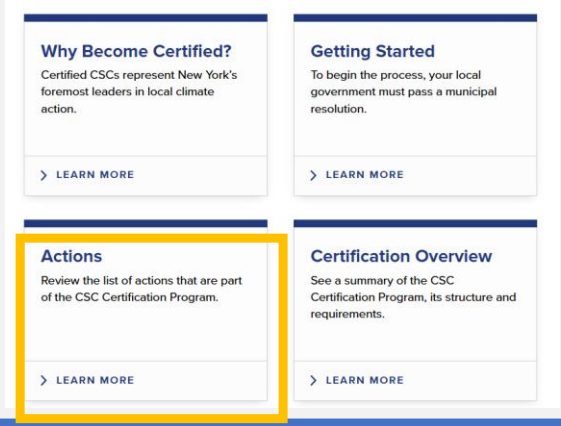

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NEW YORK STATE | Climate Smart Communities

CSC Crosswalk Tool

NY Sea Grant Tool

Purpose: Identify potential synergies between CSC Actions and other NY State programs, focused on water

- Hazard Mitigation Plan
- Community Rating System
- Coastal Erosion Hazard Area Communities
- Drinking Water Source Protection Program
- Local Waterfront Revitalization Program
- Municipal Separate Stormwater Sewer System

CSC Crosswalk Tool

Climate Smart Communities ***Crosswalk***

Local Hazard Mitigation Plan (HMP)

Sea Grant NEW YORK | NEW YORK STATE | Climate Smart Communities

Local HMP Program Components

#	CSC Pledge Element	CSC Certification Action	Public Involvement	Risk Assessment	Mitigation Strategy	Additional HMP Requirements	# of Relevant CSC Actions per Pledge Element
7	Enhance community resilience to climate change	*Climate Vulnerability Assessment*	✓	✓			8
		Evaluate Policies for Climate Resilience			✓	✓	
		Climate Adaptation Plan	✓		✓	✓	
		Climate-resilient Hazard Mitigation Plan	✓	✓	✓	✓	
		Heat Emergency Plan	✓		✓		
		Watershed-based Flood Mitigation Plan	✓	✓	✓		
		Green Infrastructure			✓	✓	
		Culverts & Dams		✓			

(CSC Crosswalk: Local Hazard Mitigation Plan p. 3)

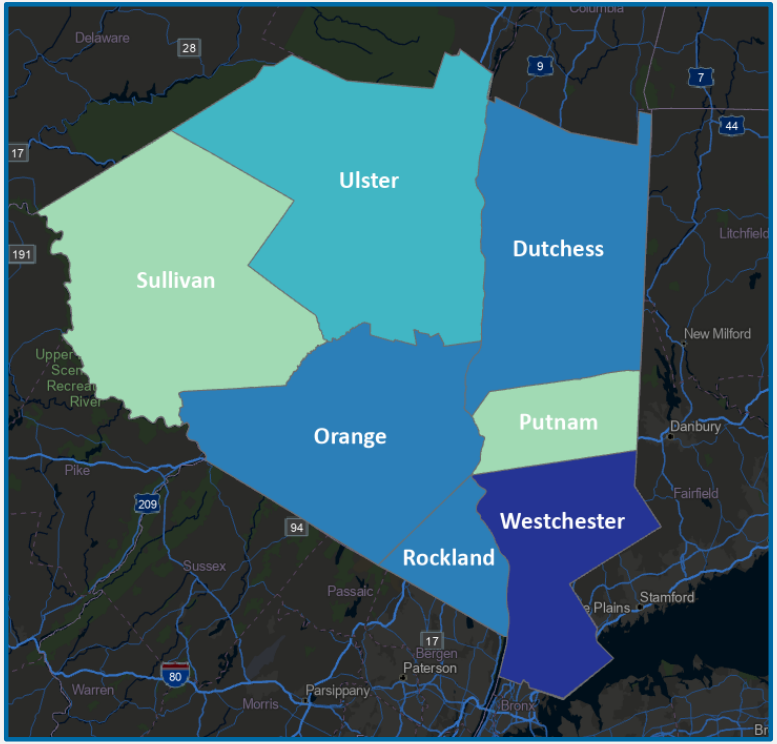
CSC in the mid-Hudson Region

Hudson Valley Regional Council

EPA | NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation | NEW YORK STATE Climate Smart Communities

HVRC Regional Initiatives

- US DOC Economic Development Administration
- US EPA CPRG Landfill Biofilter Project
- US EPA Rural, Small, Tribal Wastewater Program
- US NBRC & NYS DOS (to Sullivan County Local Governments only through HVRC's designation as a Local Development District)
- NYS DEC 604(b) Water Quality Planning Program
- NYSERDA Clean Energy Communities Program
- NYS Climate Smart Communities Program
- HVRC Climate Action Planning Institute & CAPI-Adapt
- Regional Platforms
  - Materials Management Working Group
  - Mid-Hudson Regional Sustainability Coalition



Hudson Valley Regional Council

HVRC CSC Technical Assistance

Registration/Restart Support

- Presentation to CAC/CSC Task Forces/Municipal Boards
- CSC Action Checklist Spreadsheet

Certification Support

- One-off Questions about Actions or Process
- Final CSC Certification Application Review

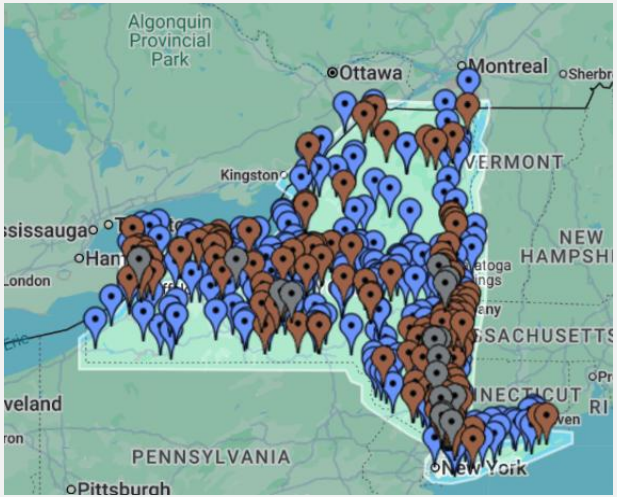
Further HVRC CSC Technical Assistance

HVRC

Produce Climate Vulnerability Assessments & Adaptation Plans for 2 Counties

Resources & technical assistance for municipalities & counties working on all CSC Actions, including PE 7

CSC Participation in Mid-Hudson Region



Registered Communities: 61

Bronze Certified Communities: 59 communities

Silver Certified Communities: 14

	Registered	Bronze	Silver
Dutchess	9	14	3
Putnam	2	4	
Orange	15	4	
Rockland	8	4	1
Sullivan	7	3	
Ulster	5	11	2
Westchester	15	19	8

HVRC Support for CSC/CEC

Mary Lambert, Climate Action Planning Manager

CSC technical assistance & Landfill Biofilters project

Liz Sun, CEC & CSC Coordinator

CEC & CSC technical assistance to communities in the mid-Hudson

Sofie diTommaso, Resilience & Adaptation Coordinator

CSC technical assistance for PE7: Enhance Community Resilience to Climate Change actions

Eleanor Peck, Deputy Executive Director & CEC & CSC Coordinator

CEC & CSC technical assistance to communities in the mid-Hudson

CSC in the Long Island Region

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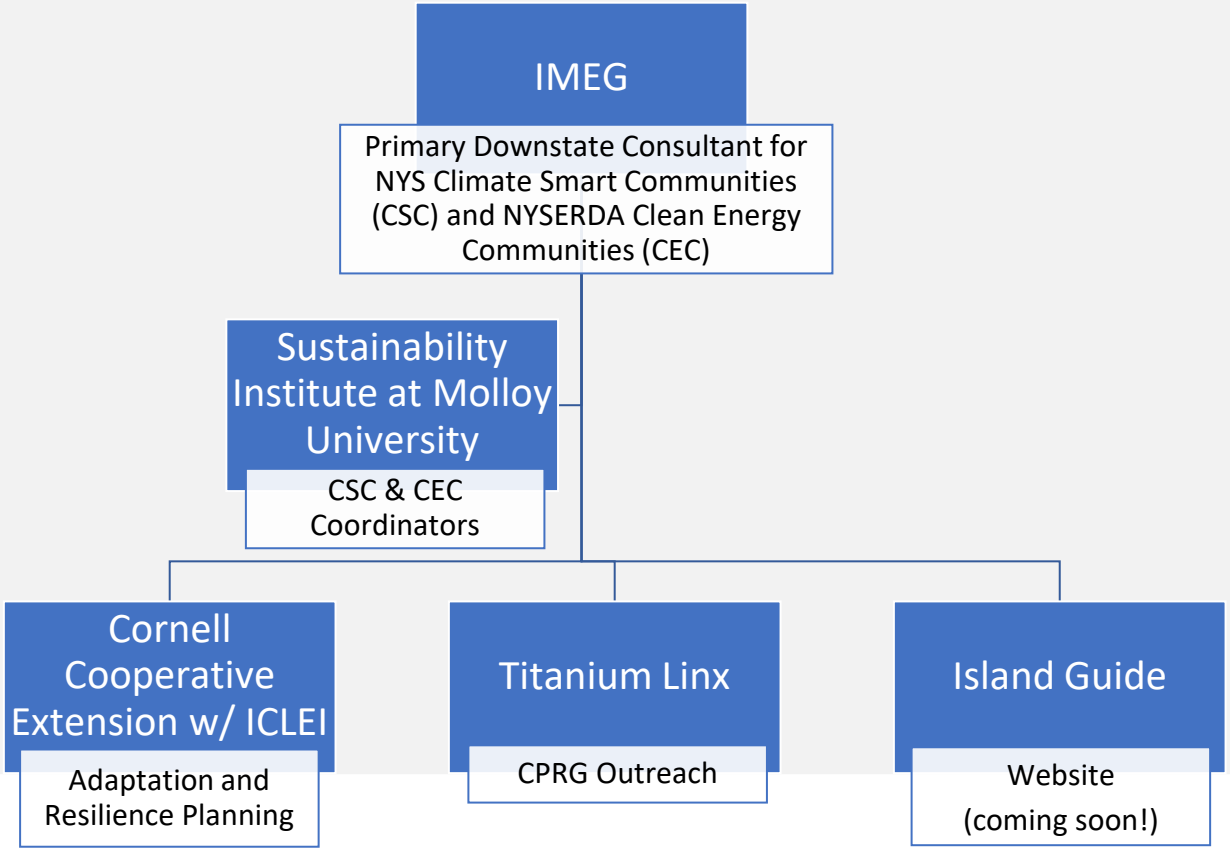
EPA | NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation | NEW YORK STATE Climate Smart Communities

Downstate Team



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Downstate CSC Technical Assistance

Registration/Restart Support

- Presentation to CAC/CSC Task Forces/Municipal Boards
- CSC Action Checklist Spreadsheet

Certification Support

- One-off Questions about Actions or Process
- Final CSC Certification Application Review

Further Downstate CSC Technical Assistance

Downstate Team

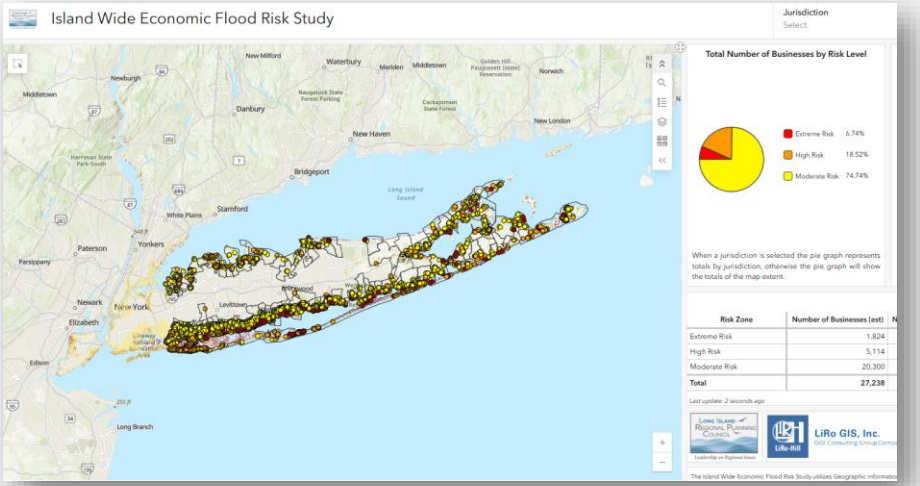
Produce Climate Vulnerability Assessments & Adaptation Plans for 6 Communities

Resources & technical assistance for municipalities & counties working on all CSC Actions, including PE 7

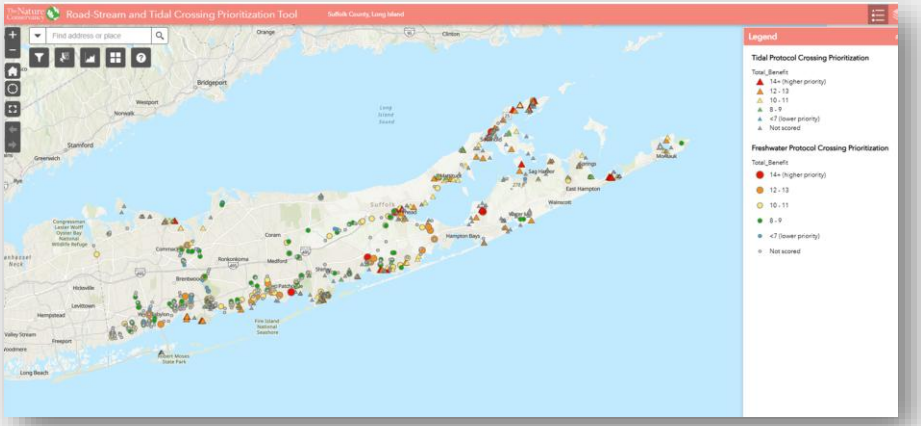
Cohort Model led by Cornell Cooperative Extension and ICLEI (2 Cohorts)

Additional Long Island Resources

Long Island Economic Flood Risk Study (LIRPC)



Long Island Road-Stream and Tidal Crossing Prioritization Tool (Nature Conservancy, Suffolk County)



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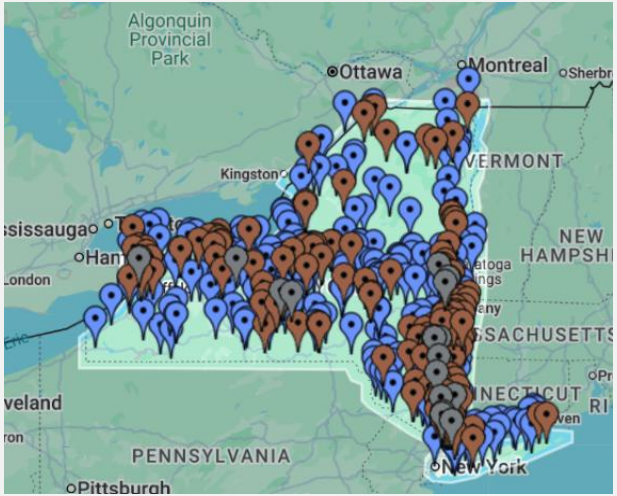
NEW YORK STATE | Climate Smart Communities

CSC Participation in Long Island Region



Registered Communities: 33 + NYC

Bronze Certified Communities: 6

- 2 Lapsed Bronze communities will be submitting for recertification in January

Silver Certified Communities: 0

- NYC set to submit for Silver certification in January

	Registered	Bronze	Silver
Nassau	13	2 (2 Former)	0
Suffolk	20	4 (1 Former)	0 (1 Former)

IMEG

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

NEW YORK STATE Climate Smart Communities

Downstate Support for CSC/CEC

Sarah Oral, CSC & CEC Director and Coordinator for Downstate

CSC & CEC technical assistance to communities on Long Island

Andrew Manitt, CSC & CEC Coordinator

CSC & CEC technical assistance to communities on Long Island

David Tepper, CSC & CEC Coordinator

CSC & CEC technical assistance to communities on Long Island

IMEG

Hastings-on-Hudson: A Case Study

Credit: Jeanne Newman

- **Population**: 8,590
- **Area**: ~3 sq miles
- **Location**: Westchester County, along Hudson River
- **Registered CSC:** 2010
- **Current CSC Certification**: Silver, 558 pts

T | Published 2021

Hastings-on-Hudson: CSC PE 7 Actions

2020 |
- **Evaluate Policies: Climate Smart Resiliency Planning exercise***
- **Climate Vision Statement**
- **Climate Vulnerability Assessment***
- Heat Emergency Plan* and Shade Structures Policy

2021 |
- Hazard Mitigation Plan (HMP) w/Westchester County

2022 |
- Right-sized culverts, riparian assessment

2023 |
- Revamped Green Building Code, green roof construction
- Village Wide Flood Study, follow-up Feasibility Study

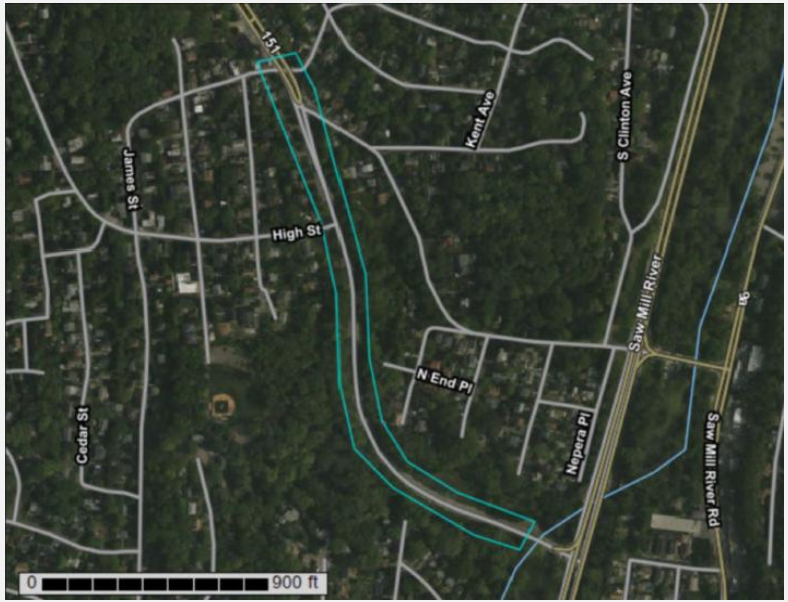
2024 |
- $2.5m NYS EFC Grant for Detention Pond Project

Hastings-on-Hudson: Flood Study

Credit: Tim Lamorte, Rivertowns Enterprise

- **Phase 1**: compile available information to ID drainage infrastructure and hydrology, and prepare long term plan to alleviate flooding
- **Phase 2**: Fieldwork
- **Phase 3**: Detailed analysis
- **Phase 4**: Final design and construction

Hastings-on-Hudson: Feasibility Study



Credit: James Hahn Engineering

Proposed project: Possible detention Pond on an extended shallow wetland.

Location: Farragut Parkway adjacent to the Boutilliers Brook.

Studied: Soil survey, water quality, bedrock depth, 100-year flood plain, adjacent property development.

Study findings: high feasibility at project cost of $2-2.5 million.

Hastings-on-Hudson: Green Infrastructure

Credit: Thomas McCue

- **Grant Award**: $2.5 m
- **Funding Source**: NYS EFC
- **Project Description**: Creation of Detention Pond in Village-owned open space
- **Project Benefits**: Store runoff, settle pollutants, reduce downstream peak flows, and increase beautification.

Contact HVRC / IMEG

Hudson Valley Regional Council
105 Ann Street, Ste2
Newburgh, NY 12550
845-564-4075

IMEG
177 Crossways Park Dr.
Woodbury, NY 11797
516-224-5237

Sofie diTommaso
Resilience & Adaptation Coordinator, HVRC
sditommaso@hudsonvalleyrc.org

Mary Lambert
Climate Action Planning Manager, HVRC
mlambert@hudsonvalleyrc.org

Sarah Oral
Senior Associate, IMEG
sarah.i.oral@imegcorp.com

Hudson Valley Regional Council

IMEG

LONG ISLAND SOUND PARTNERSHIP

Questions?

Credit: Sara Powell

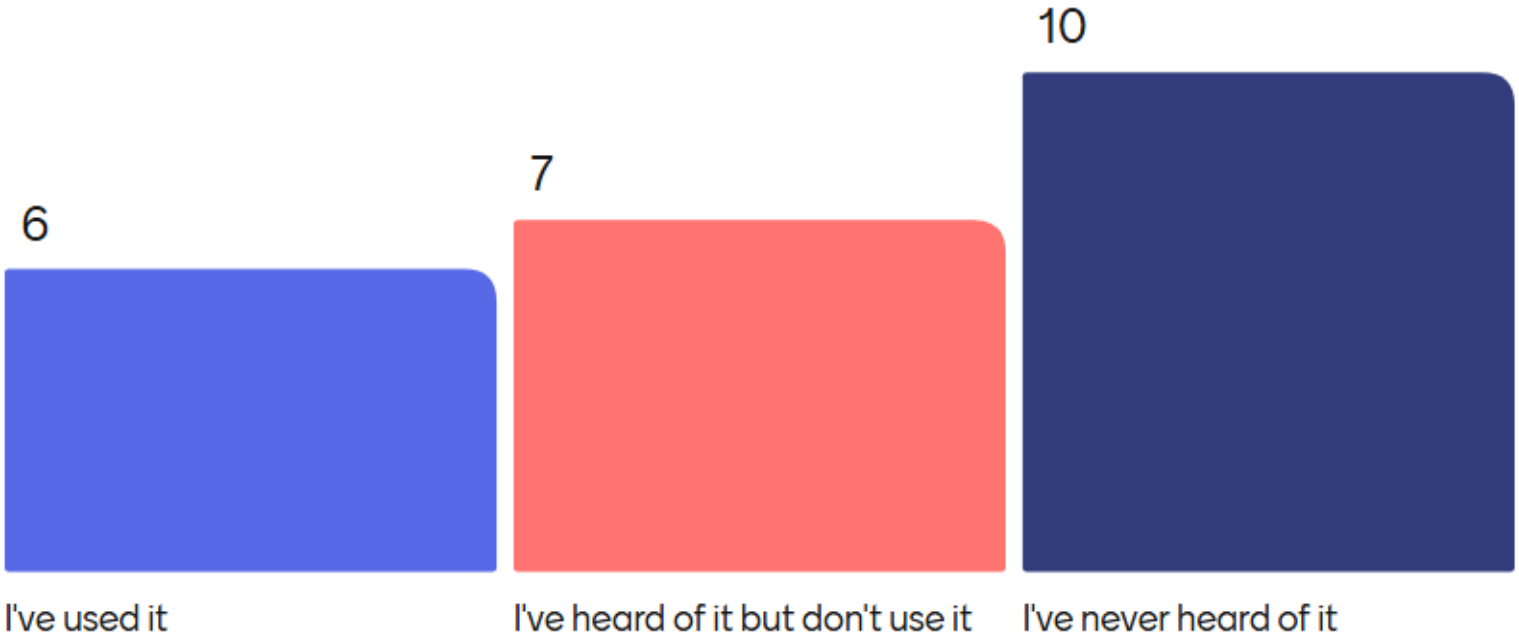
LONG ISLAND SOUND PARTNERSHIP

What is your current knowledge/experience with MyCoast NY?

Join at menti.com | use code 1964 9912

Mentimeter

What is your current knowledge/experience with MyCoast NY?



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MyCoast NY

A Free Tool for Documenting Storm Events and Engaging Residents

Jessica Kuonen, NYSG
SRC Annual Workshop
December 4, 2025

Sea Grant NEW YORK

Sea Grant NEW YORK

NEW YORK STATE WATER RESOURCES INSTITUTE

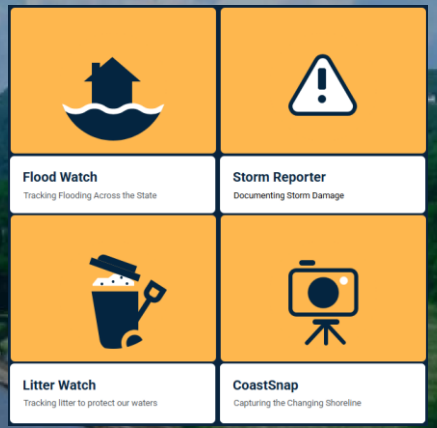
www.mycoast.org/ny

MyCoast:

New York

Help document New York's changing water levels and weather impacts

The MyCoast New York portal is used to collect and analyze photos of changing water levels, shorelines, and hazardous weather impacts across New York's varied coasts and water bodies. Photos are linked to real-time environmental conditions to create reports that help stakeholders like government agencies, business owners, and residents understand our changing environment and make informed decisions.



In NY, MyCoast can be used inland and statewide. Not just for the coast!

Why document storms and floods?

- Flood risk is increasing
- Photos complement existing datasets & help validate models
- Captures impacts and places that flood repeatedly
- Raise public awareness
- Engages and empowers communities

- “A picture is worth 1,000 words”

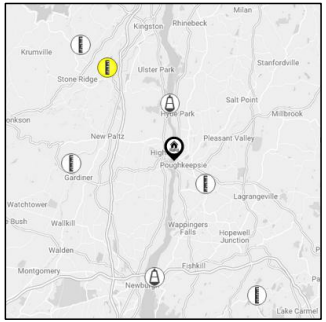
Tully, NY – 8/18/2021

How it works

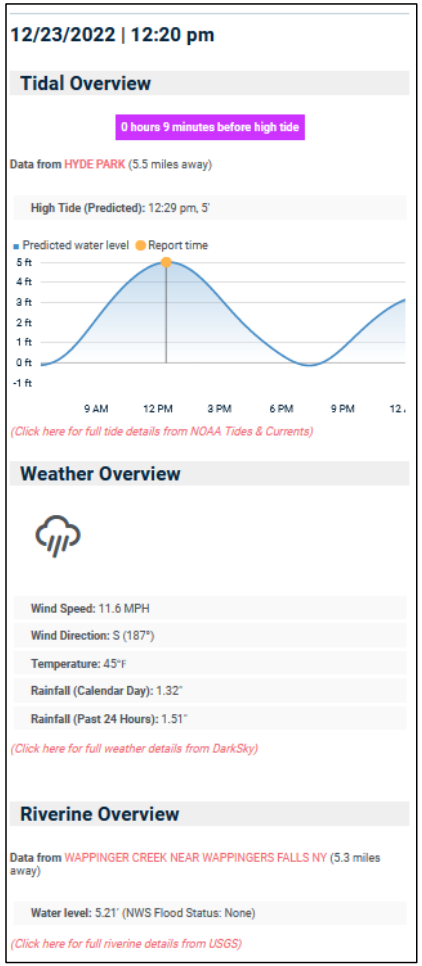
Submit a photo □ creates a “report” □ automatically places photo on a map and links it with nearby environmental conditions based on date, time, and location of photo.

Community member as registered user

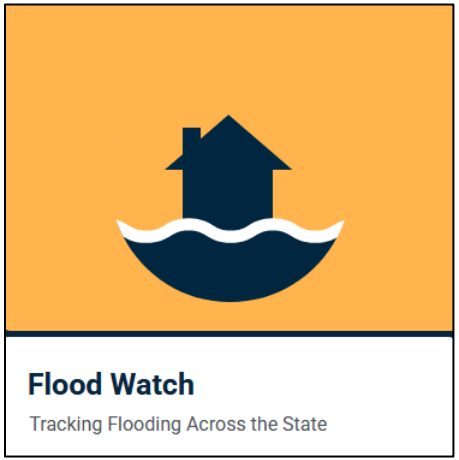
Photo



Data

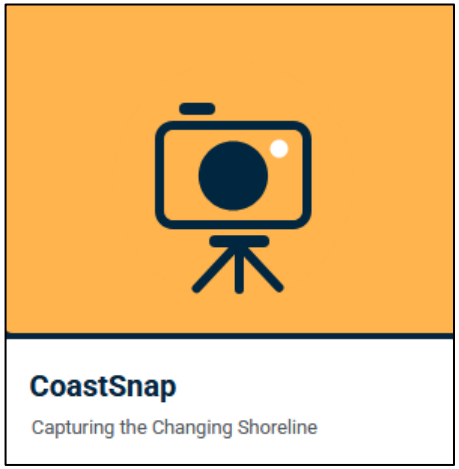


Report types



Flooding: water on land that's normally dry

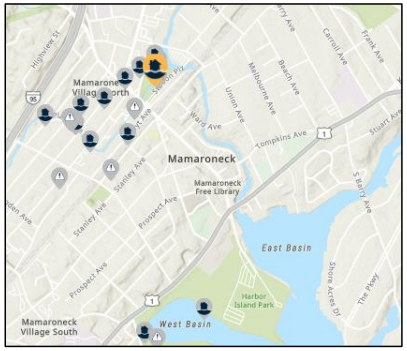
Damage from wind, water, ice, snow, fire

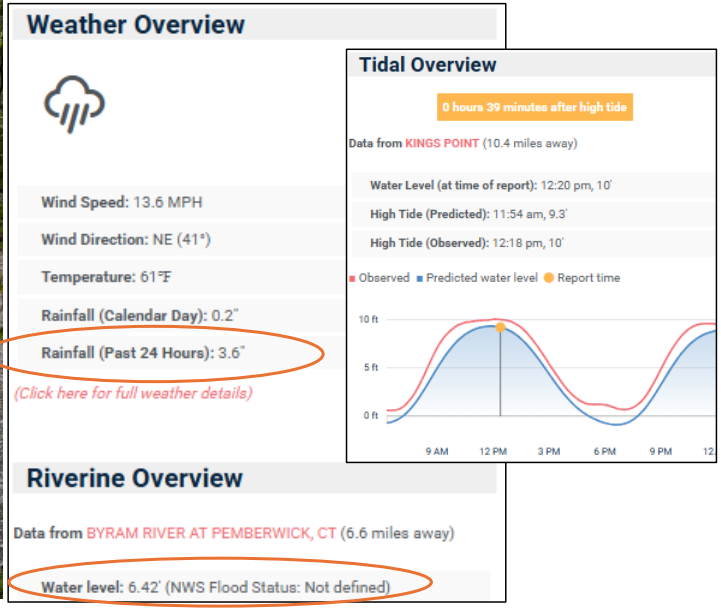


Phone cradles at 9 locations across NYS

Flood Watch Report: Heavy Rain

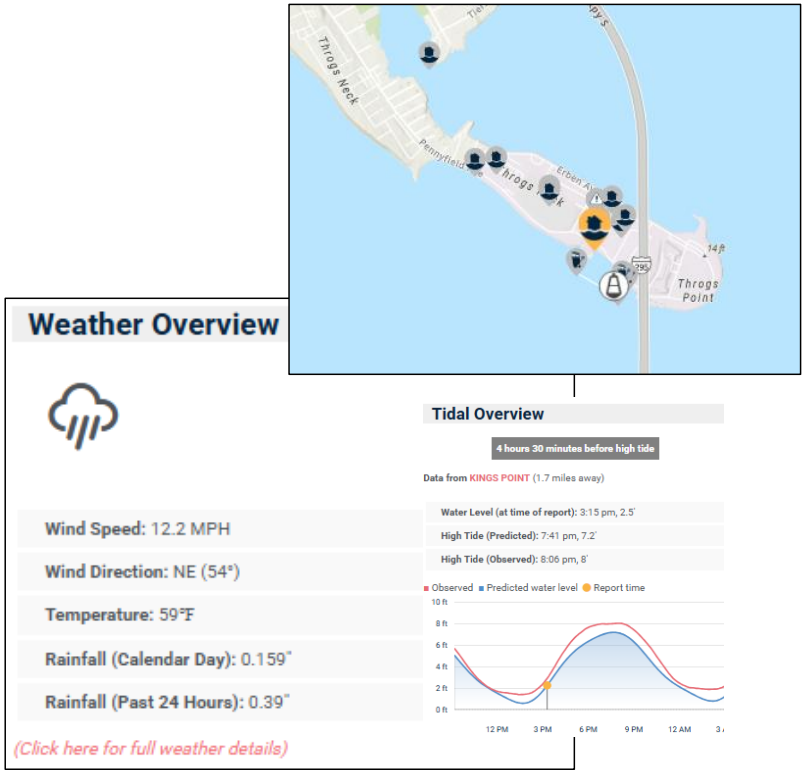
Mamaroneck, NY
9/29/2023 12:20 pm





Flood Watch Report: Shallow flooding

East Bronx, NY (SUNY Maritime)
5/5/25 3:15 pm



Flood Watch: Coastal Flooding

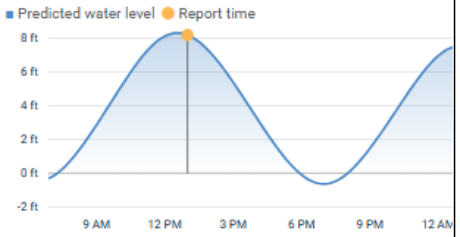
Nissequogue, NY
9/30/2023 12:57 pm

Tidal Overview

0 hours 24 minutes after high tide

Data from PORT JEFFERSON (5.9 miles away)

High Tide (Predicted): 12:33 pm, 8.3'



(Click here for full tide details from NOAA Tides & Currents)

Weather Overview

Wind Speed: 13.9 MPH

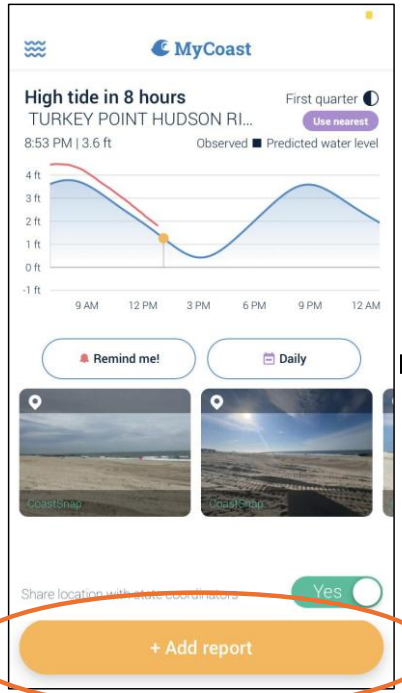
Wind Direction: NNE (30°)

Temperature: 62°F

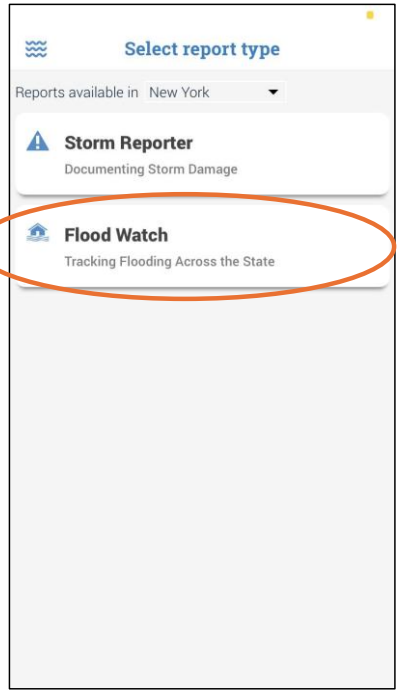
Rainfall (Calendar Day): 0.031"

Rainfall (Past 24 Hours): 1.34"

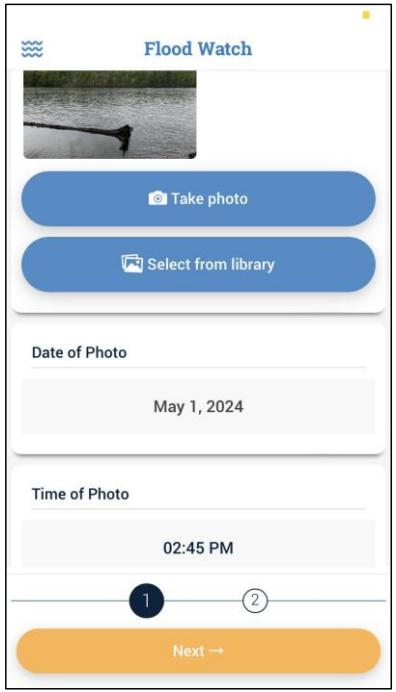
How to upload a photo in the app



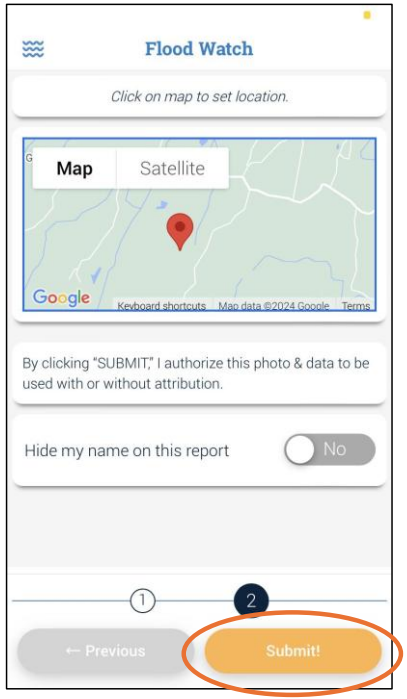
Select: **+ Add Report**



Select: Report type

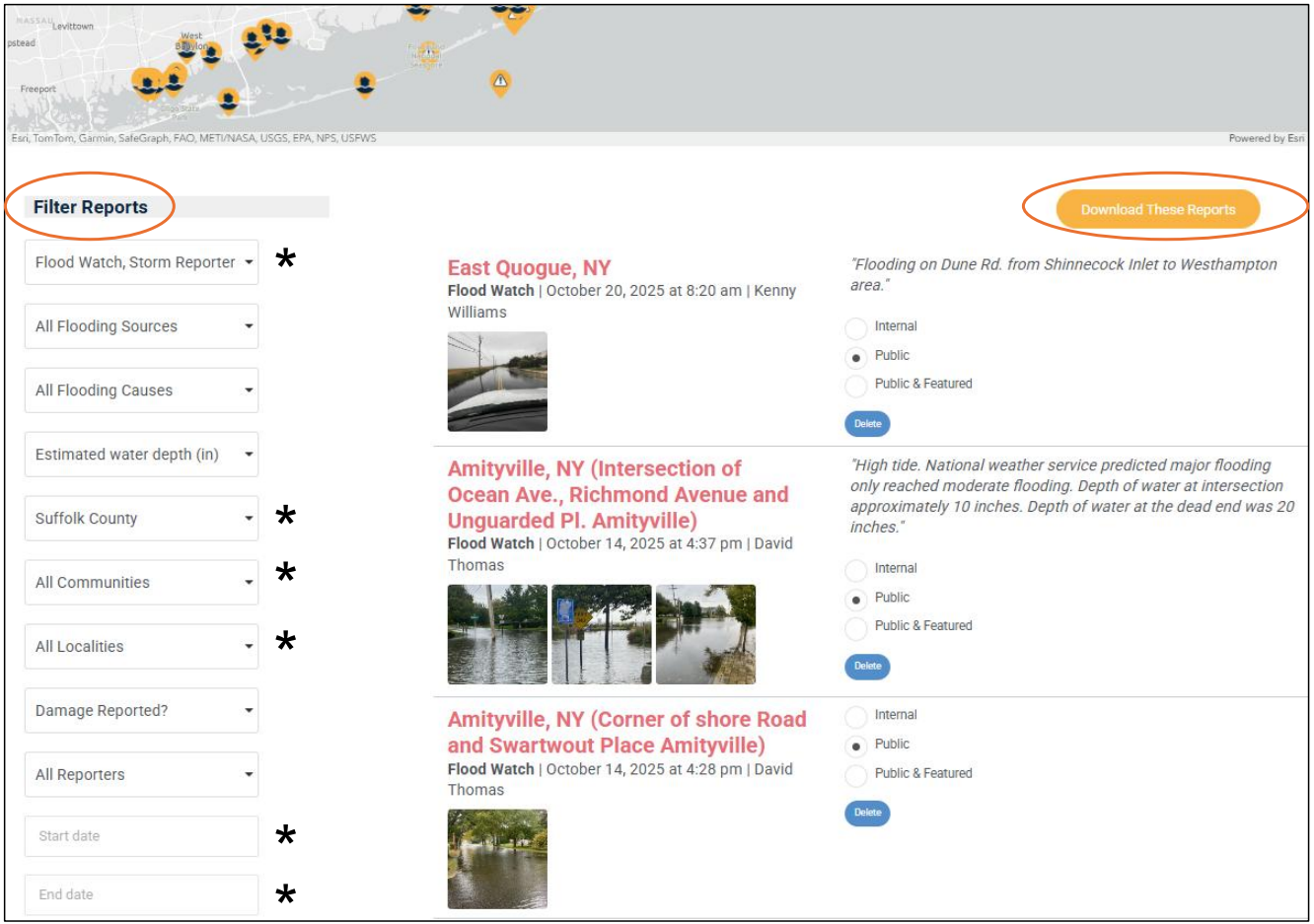


Upload/take photo, check date/time, add additional info, **Next**



Check location, **Submit!**

Search reports on website (not app)



Resources on website

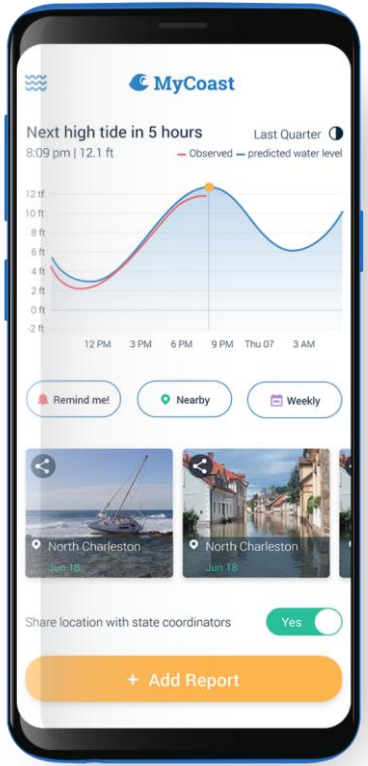
- Flyer
- Factsheets
- Newsletters
- Recordings

Become a MyCoast NY volunteer

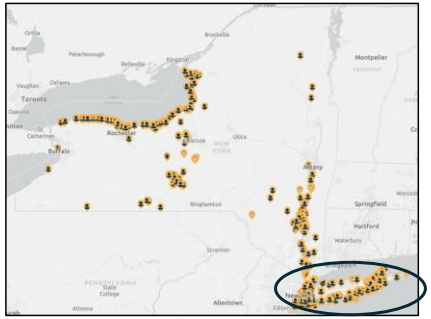
1. Download the MyCoast app or visit MyCoast.org/ny
2. Register
3. Select or snap photo
4. Submit photo report

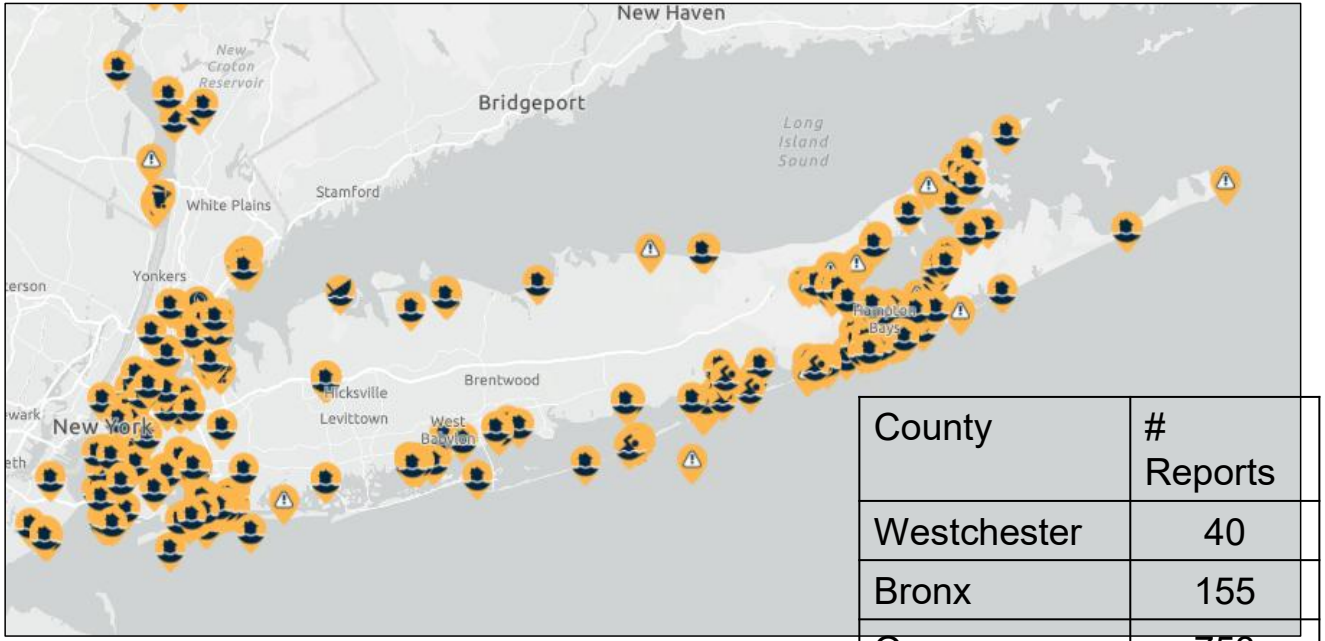
Download on the App Store

GET IT ON Google Play



MyCoast NY Photo Reports: Flood Watch & Storm Reporter





Statewide:
1,841 photos

County	# Reports
Westchester	40
Bronx	155
Queens	753
Nassau	20
Suffolk	224

MyCoast NY and Resilience Planning

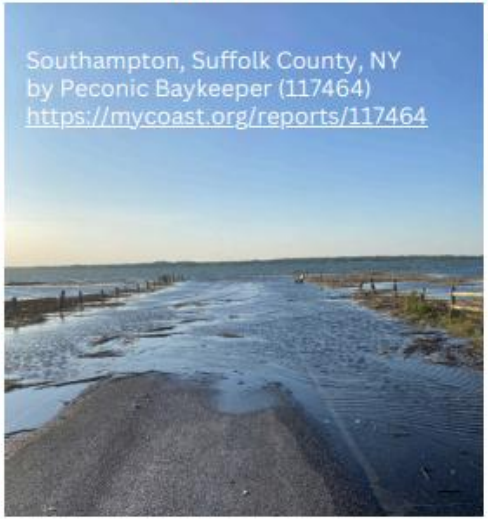
- Understand Risk
- Engage community
- Secure funding

Case Study: Southampton, NY

Improved Emergency Management Operations in Southampton, NY

> In the Emergency Operations Center, we are able to view pictures of conditions in the field as soon as they are submitted via MyCoast NY. These images are also shared with the National Weather Service staff, who can utilize them to verify forecasts and improve warning operations. It has enhanced our situational awareness within the town. This app also allows us to benefit from a degree of crowdsourcing to obtain flooding, coastal erosion, and storm damage information throughout the Town that informs planning and can be used in grant applications.

Ryan Murphy, Southampton Code Compliance & Emergency Management



In Southampton, MyCoast:

- Provides a centralized tool for field reporting and damage assessments, as opposed to staff's informal updates sent via text or email.
- Continuously refreshes information, enabling timely responses by emergency management personnel.
- Has filters that allow the narrowing of reports by location, from counties to hamlets.
- Operates alongside national data sources, such as information from the National Weather Service.
- Is a cost-free force multiplier, with an estimated cost savings of $100,000** annually.

***Based on the cost of additional staff annual salary staff or developing and maintaining a similar app).*

Thank you! Questions?

Jess Kuonen

New York Sea Grant

jak546@cornell.edu

https://mycoast.org/ny

LONG ISLAND SOUND PARTNERSHIP

What other resources would help you pursue resilience in your community?

Join at menti.com | use code 1964 9912

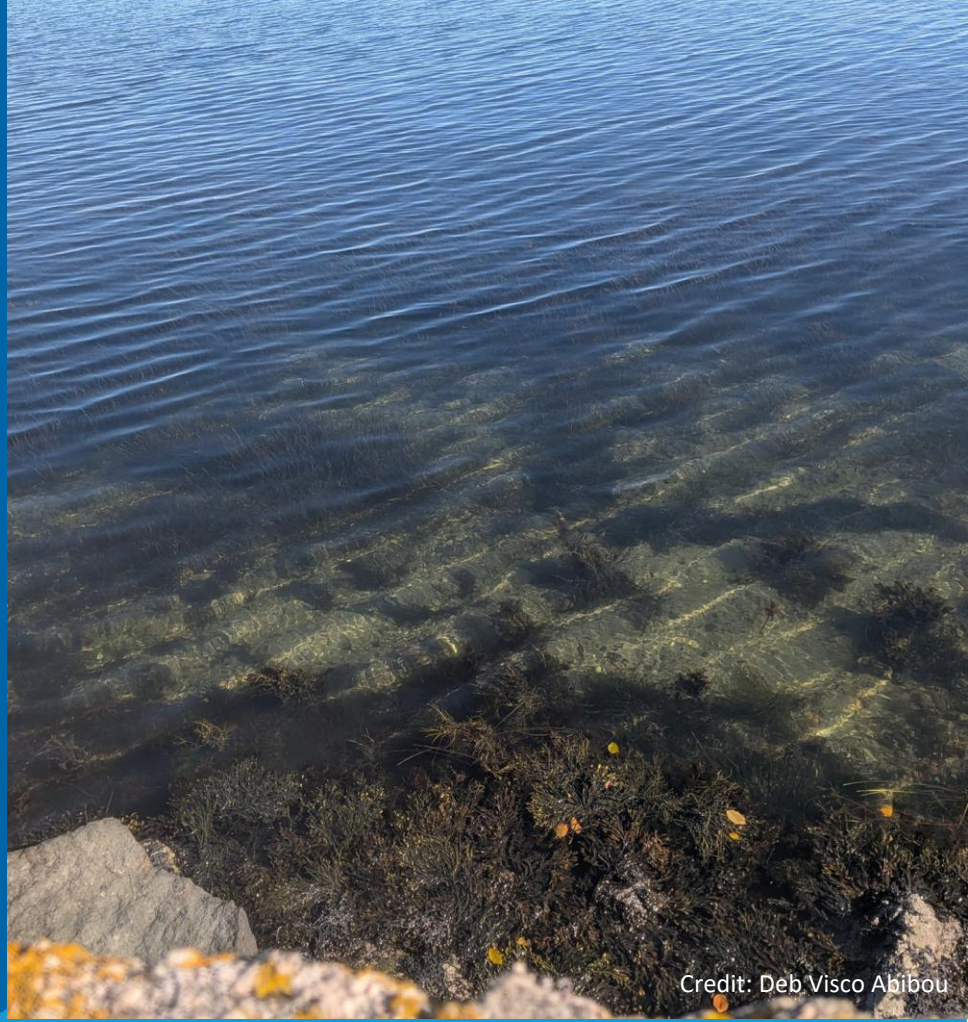
Mentimeter

What other resources would help you pursue resilience in your community?

$

LONG ISLAND SOUND PARTNERSHIP

Connecticut Session



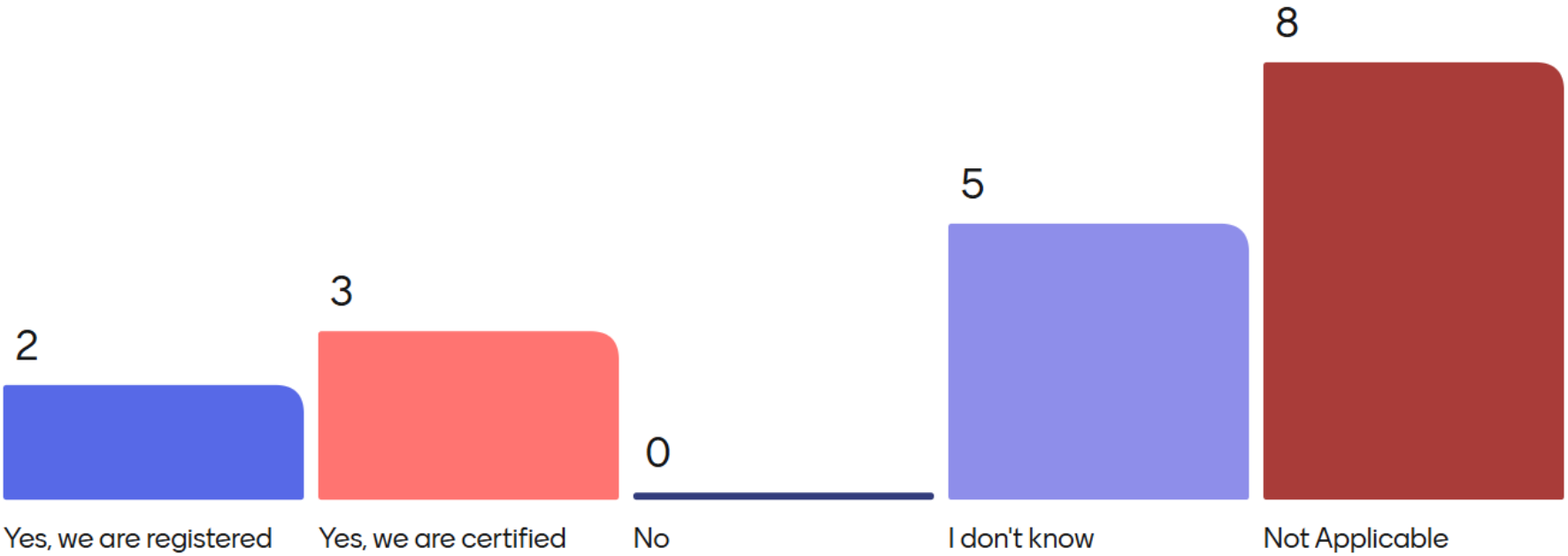
Credit: Deb Visco Abibou

LONG ISLAND SOUND PARTNERSHIP

Poll #1

Mentimeter

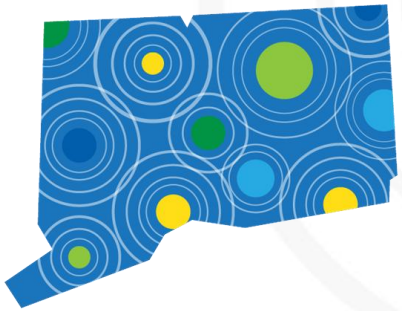
Is your municipality participatingn in Sustainable CT?



18

Sustainable CT

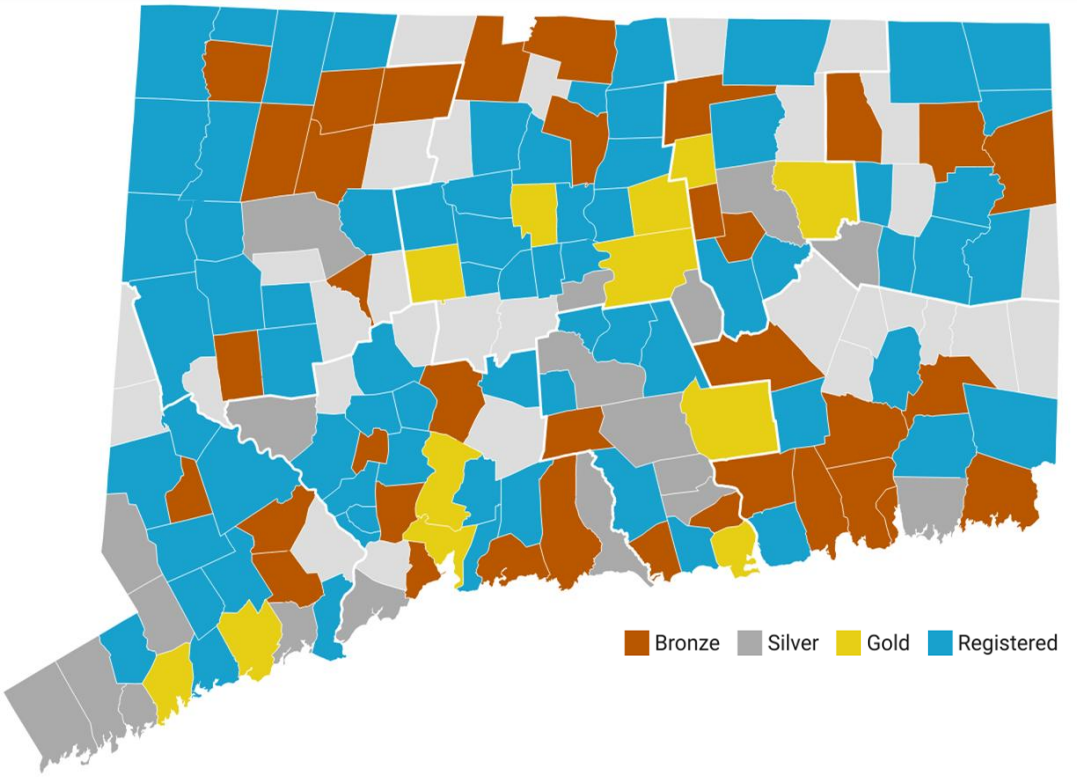
Local Actions. Statewide Impact.®



Sustainable & Resilient Communities Workshop

Sustainable CT, Climate Resilience, and Resources for Your Community

Sustainable CT: Our Vision



- Sustainable CT is a voluntary certification program to recognize thriving and resilient Connecticut municipalities.
- 139 of Connecticut's 169 municipalities are currently registered with Sustainable CT, and 67 are currently certified.

Sustainable CT
Local Actions. Statewide Impact.

Advancing Sustainability Through…

Roadmap

- Menu of sustainability actions

Sustainable CT
Local Actions. Statewide Impact.®

COMMUNITY MATCH FUND

Resources

- Technical assistance and funding

Certification

- Recognition and celebration of achievements

Sustainable CT
Local Actions. Statewide Impact.®

Roadmap of Voluntary Actions

1. Inclusive and **equitable community** impacts
2. Thriving **local economies**
3. Well-steward **land and natural resources**
4. Vibrant and creative **cultural ecosystems**
5. Dynamic and resilient **planning**
6. Clean and diverse **transportation** systems
7. Renewable and efficient **energy infrastructure and operations**
8. Inclusive **engagement, communication and education**
9. Strategic **materials management**
10. Optimal **health and wellness** opportunities
11. Healthy, efficient, and diverse **housing**
12. Effective, compassionate **homelessness prevention**
13. Innovative **strategies and practices**

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Climate Resilience in the Action Roadmap

- 3.8 Implement Low Impact Development
- 5.4 Assess Climate Vulnerability
- 5.7 Plan for Long-Term Recovery
- 5.8 Promote Cool Roofs
- 5.9 Participate in the NFIP Community Rating System
- 10.6 Plan and Prepare for Extreme Heat

Sustainable CT
Local Actions. Statewide Impact.

Resilience Activities Examples

- Glastonbury: Extreme heat and summer safety educational campaign
- Groton: Downtown Mystic resilience study and town-wide Community Resilience Building Workshop
- New Haven: Bioswales and green infrastructures program
  - Long Island Sound Partnership Case Study
- Old Saybrook: Amended local regulations to require two additional feet of freeboard in certain areas
- West Hartford: Provide resources and information on cool roofs on their municipal website

5.10 Plan and Implement Climate Resilience Strategies

- New action for 2026 focused on climate resilience measures
- Municipalities can earn points toward certification by:
  - Educating residents and/or local businesses on climate resilience
  - Adopting a climate resilience plan
  - Implementing resilience projects in their community
  - Adopting local ordinances and policies that support climate resilience

Support and Technical Assistance

- Community Match Fund
- Certification application and other support from Fellows
- Community Resilience Building Workshops with The Nature Conservancy
- Letters of support for grant applications
- Connecting your community to neighbors or other municipalities in Connecticut
- Equity coaching

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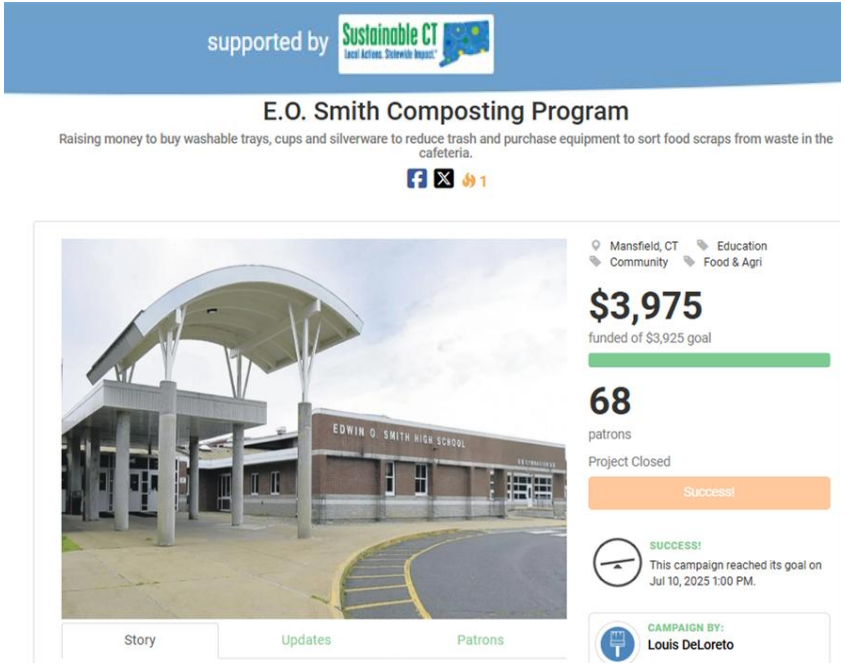
Support and Technical Assistance

- Events calendar
- Monthly virtual coffee hours
- External grants portal
- Email newsletter
- Library of “success stories”
- No-cost assistance partners page

Sustainable CT
Local Actions. Statewide Impact.®

Community Match Fund

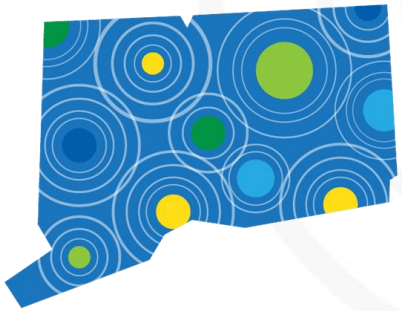
- Fast, easy, and flexible
- Anyone with a good idea to improve their community
- Crowdfunding doubled by **$1-to-$1** matching grant from Sustainable CT
- Up to **$6,000** from matching grant
- Coaching and support for project leaders
- More than **$4.7 million** invested in over **380 community-led** projects in **88 communities**



Sustainable CT
Local Actions. Statewide Impact.

Sustainable CT

Local Actions. Statewide Impact.®



www.sustainablect.org

General Questions: info@sustainablect.org

Community Match Fund: funding@sustainablect.org

LONG ISLAND SOUND PARTNERSHIP

Questions?

Credit: Deb Visco Abibou

LONG ISLAND SOUND PARTNERSHIP

Poll #2

Mentimeter

What other resources can Sustainable CT offer that would help you pursue resilience in your community?

MyCoast Connecticut

A pilot project for New London, Groton, and Stonington

Sea Grant CONNECTICUT

CIRCA Connecticut Institute for Resilience and Climate Adaptation

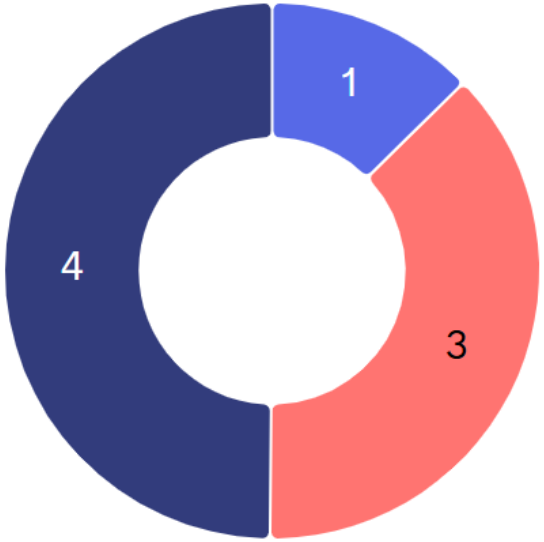
Connecticut National Estuarine Research Reserve

Sarah Schechter - SRC EP for Eastern Connecticut

LONG ISLAND SOUND PARTNERSHIP

Poll #3

What is your current knowledge of or experience with MyCoast CT?



1	I've used it
3	I've heard of it, but haven't used it
4	I hadn't heard of it before this session

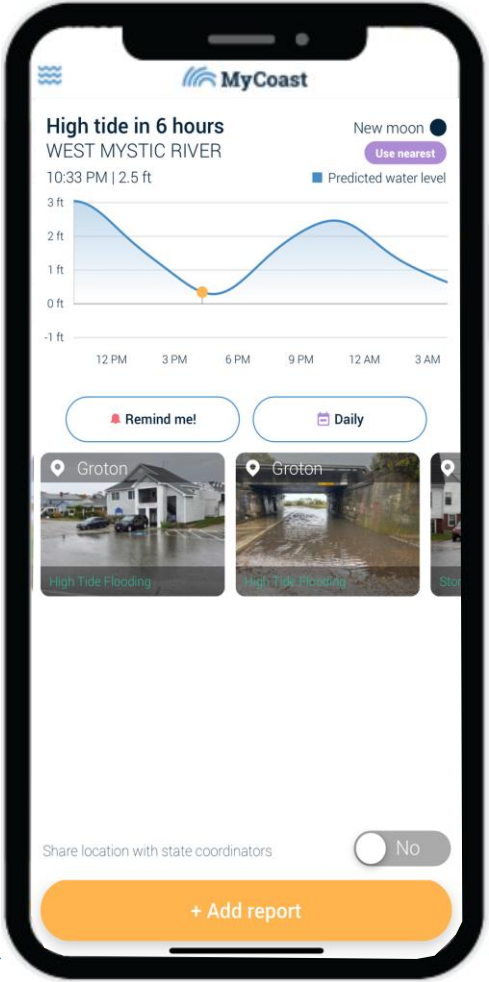
MyCoast CT

MyCoast is a free, user-friendly app for people to upload photos of **coastal flooding, storm damage, and extreme high tide events** in their community.

Download the MyCoast App, or visit https://mycoast.org/ct to upload photos to a public database.

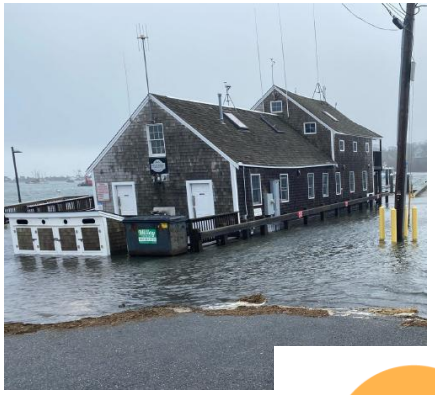
MyCoast

mycoast.org

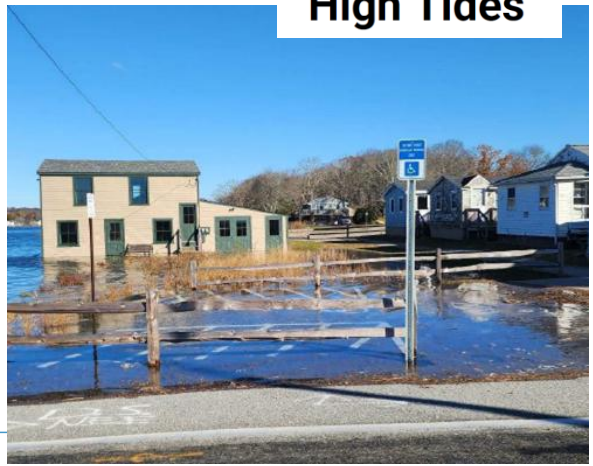


How are we using MyCoast?

- Raise public awareness of local flooding and storm preparedness.
- Identify areas repeatedly affected by flooding.
- Monitor changes in shoreline conditions over time.
- Inform state and local resilience planning and storm response strategies.



High Tides



Storm Damage

Monthly High Tide Alerts:

MyCoast Connecticut

Snap. Report. Inform.

View as Webpage

Each month, certain high tides rise higher than normal, sometimes leading to flooding in low-lying coastal areas—even on clear, sunny days. These events provide a valuable opportunity to observe how water levels are changing along Connecticut's coast.

You can help us track these tides by taking and sharing photos during these events using the **MyCoast app.**

Highest High Tides - October

Below are the dates and time windows when tides will be higher than usual.

High Tide Outlook:

- October 8 | 7:20am - 11:00am
- October 9 | 10:30am - 11:50am
- October 10 | 11:10am - 12:40pm
- October 11 | 12:00pm - 1:30pm

How to Submit a Photo

Whether it's during an extreme high tide, after a storm, or on a clear day, your observations make a difference. Please take safety precautions while taking photos.

Storm Alerts:

View as Webpage

Powerful Nor'easter This Weekend

As we head into the weekend we are anticipating a nor'easter that could bring heavy rainfall, coastal flooding, strong winds, and more opportunities for MyCoast photos from Sunday into Monday. If you're in New London, Groton, Stonington, or nearby areas, your observations through the MyCoast App can help us better understand and respond to these events. Check out the safety guidance below and share what you see this weekend.

Thank you to everyone who has captured photos of flooding and high tides so far. Reports are now publicly available here, and you can see some recent ones below.

Photos: Stonington (top left), Stonington (bottom left), Groton (right)

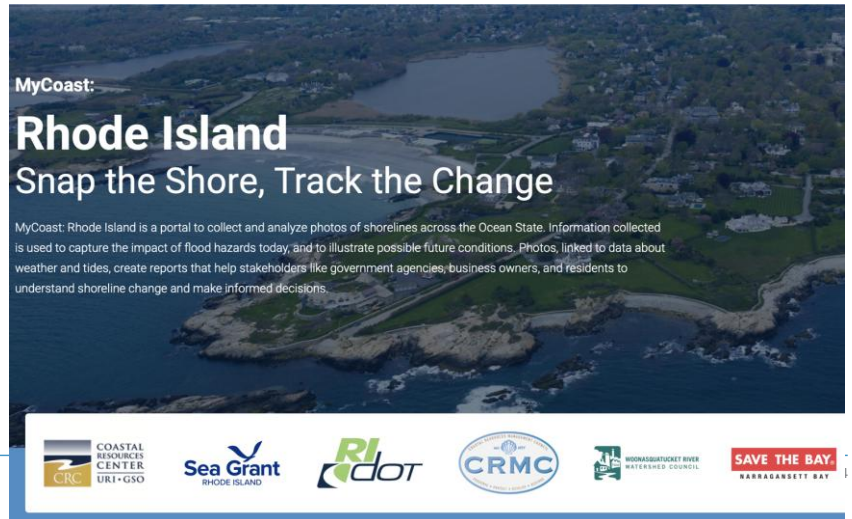
MyCoast Can Help

With the MyCoast app, you can document local impacts like:

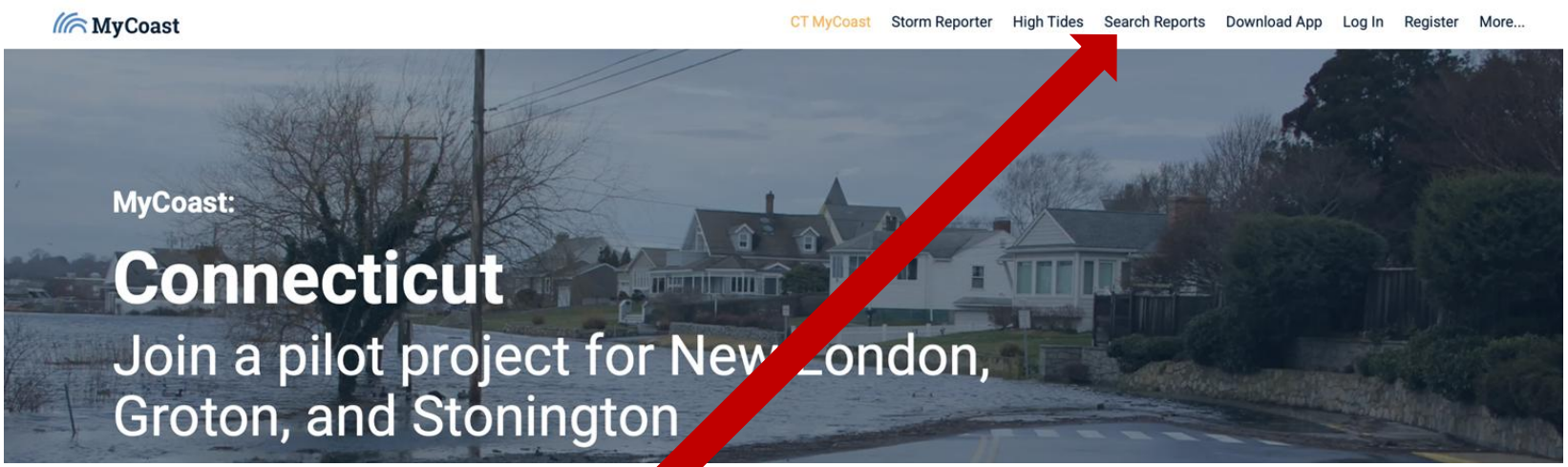
MyCoast:
New York
Help document New York's changing water levels and weather impacts
The MyCoast New York portal is used to collect and analyze photos of changing water levels, shorelines, and hazardous weather impacts across New York's varied coasts and water bodies. Photos are linked to real-time environmental conditions to create reports that help stakeholders like government agencies, business owners, and residents understand our changing environment and make informed decisions.
Sea Grant
NEW YORK
NEW YORK STATE
WATER RESOURCES
INSTITUTE

MyCoast: New Jersey
Help Document our Changing Coast
The MyCoast: New Jersey portal is used to collect and analyze photos of coastal events and places. Photos are linked to data about weather and tides to create reports that help stakeholders like government agencies, business owners, and residents to understand

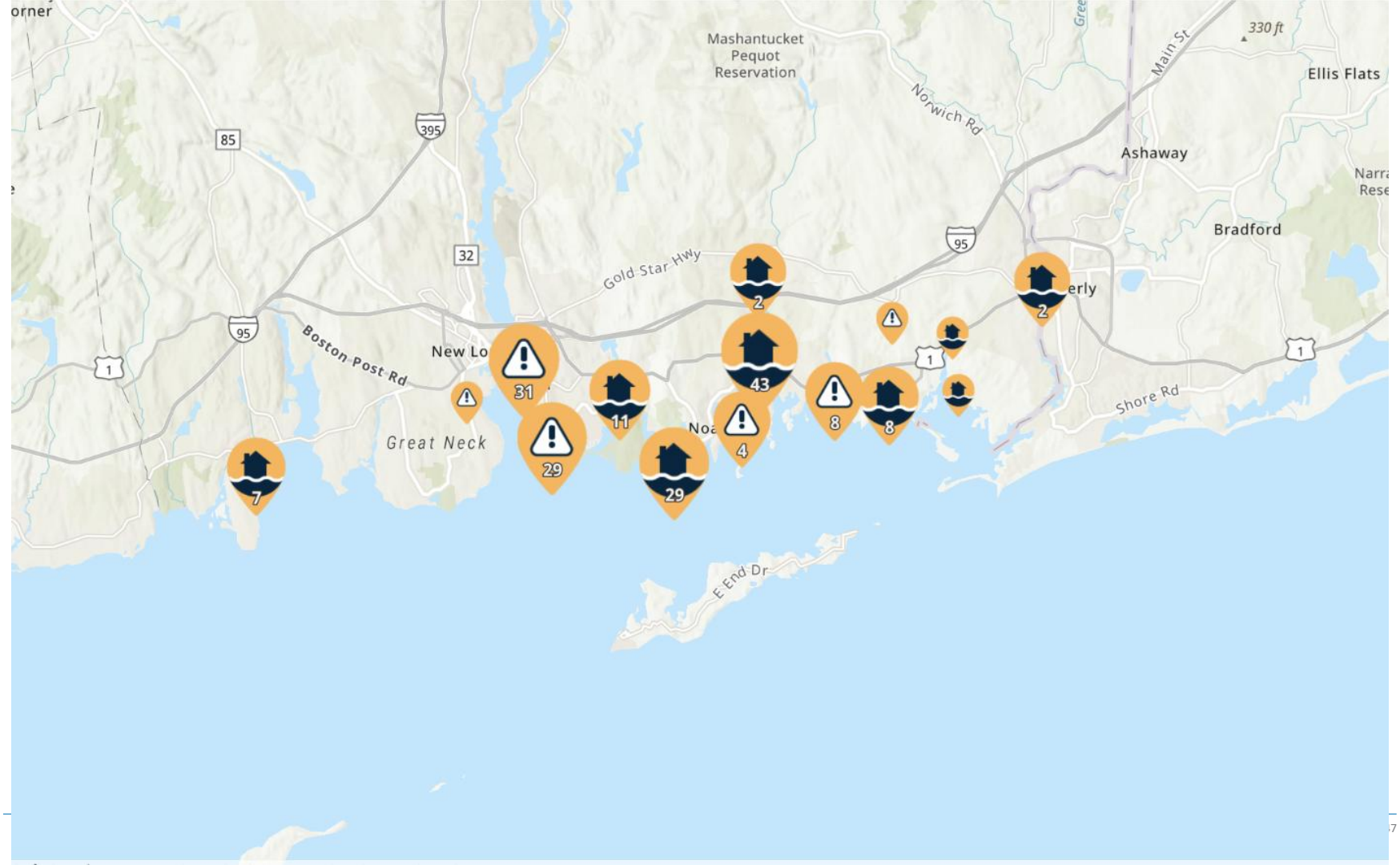
MyCoast:
Massachusetts
A project of the Massachusetts Office of Coastal Zone Management
MyCoast: Massachusetts is a portal for the Massachusetts Office of Coastal Zone Management to collect and share photos and observations of coastal flooding, coastal storm impacts, and shoreline adaptation. MyCoast reports help increase awareness of coastal hazards and inform coastal management. Scroll down to view reports and learn how to submit your own.
Massachusetts Office of Coastal Zone Management


MyCoast:
Rhode Island
Snap the Shore, Track the Change
MyCoast: Rhode Island is a portal to collect and analyze photos of shorelines across the Ocean State. Information collected is used to capture the impact of flood hazards today, and to illustrate possible future conditions. Photos, linked to data about weather and tides, create reports that help stakeholders like government agencies, business owners, and residents to understand shoreline change and make informed decisions.
COASTAL RESOURCES CENTER URI • GSO
Sea Grant
RHODE ISLAND
RI DOT
CRMC
SAVE THE BAY
NARRAGANSETT BAY

https://mycoast.org/ct



Click “Search Reports” to view recently uploaded photos


Mashantucket
Pequot
Reservation
Norwich Rd
Main St
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Ellis Flats
Ashaway
Bradford
85
395
32
95
1
Gold Star Hwy
Boston Post Rd
New Lo
Great Neck
Noa
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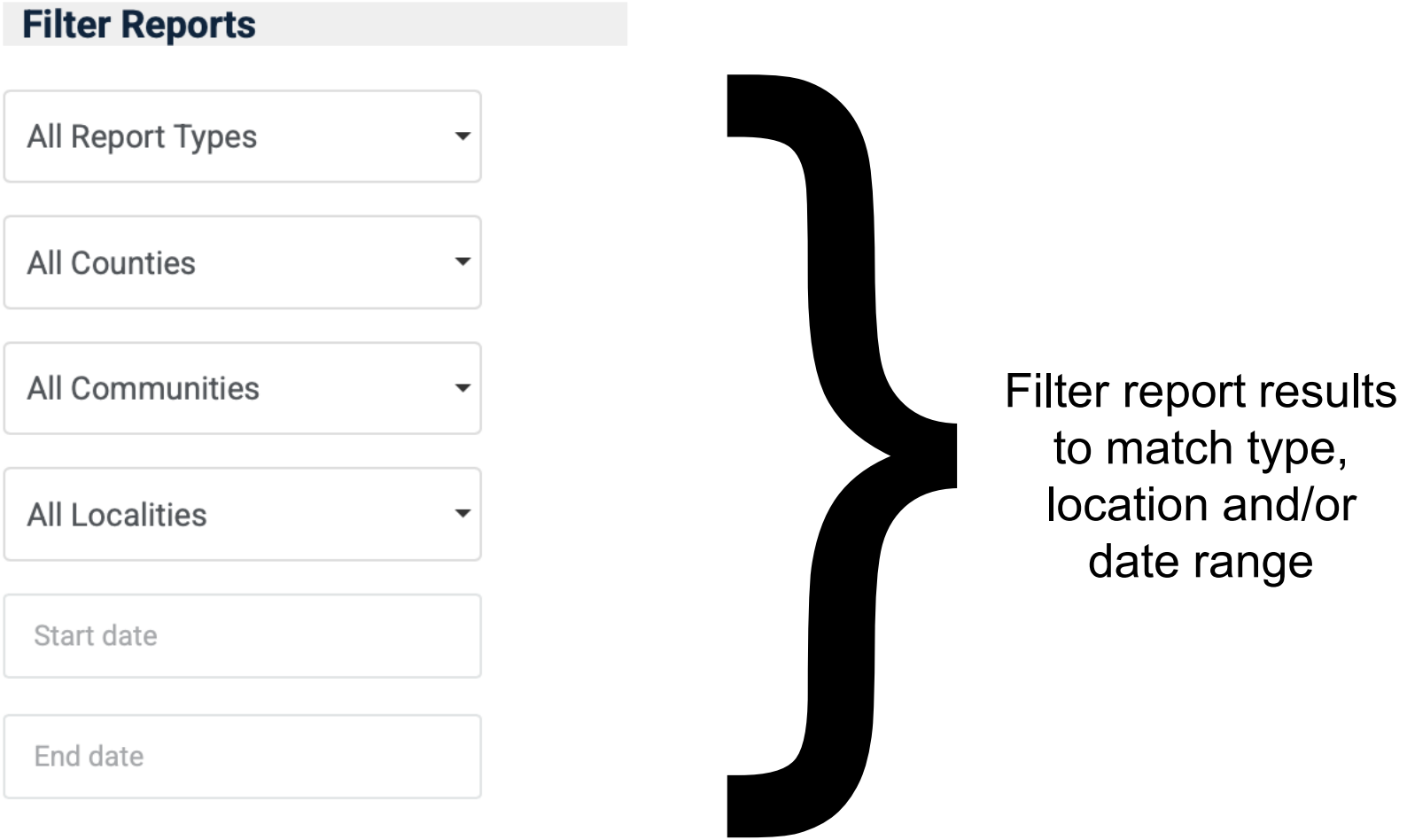

Filter Reports
All Report Types
All Counties
All Communities
All Localities
Start date
End date
Filter report results to match type, location and/or date range

Groton Long Point Police Station

Photo Credit: M. White

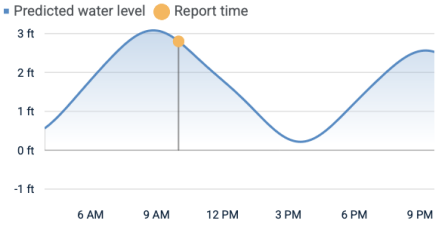
10/20/2025 | 9:57 am

Tidal Overview

1 hours 6 minutes after high tide

Data from **WEST MYSTIC, MYSTIC RIVER** (2.9 miles away)

High Tide (Predicted): 8:51 am, 3.1'



(Click here for full tide details from NOAA Tides & Currents)

Weather Overview

Wind Speed: 23 MPH

Wind Direction: S (180°)

Temperature: 62°F

Rainfall (Calendar Day): 0.287"

Rainfall (Past 24 Hours): 0.81"

(Click here for full weather details)

Example MyCoast Report 1

Pearl Street in Mystic

Photo Credit: K. Lund

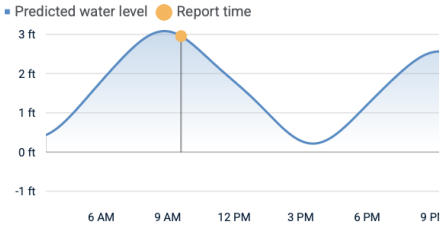
10/20/2025 | 9:35 am

Tidal Overview

0 hours 44 minutes after high tide

Data from WEST MYSTIC, MYSTIC RIVER (0.9 miles away)

High Tide (Predicted): 8:51 am, 3.1'



(Click here for full tide details from NOAA Tides & Currents)

Weather Overview

Wind Speed: 21.9 MPH

Wind Direction: S (180°)

Temperature: 62°F

Rainfall (Calendar Day): 0.22"

Rainfall (Past 24 Hours): 0.81"

(Click here for full weather details)

Example MyCoast Report 2

Pine Island Road in Groton

Photo Credit: S. Schechter

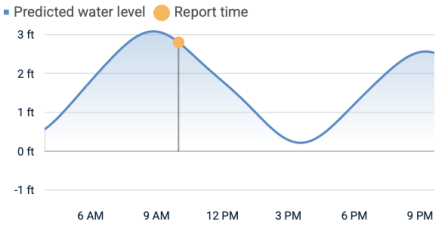
10/20/2025 | 9:57 am

Tidal Overview

1 hours 6 minutes after high tide

Data from **WEST MYSTIC, MYSTIC RIVER** (2.9 miles away)

High Tide (Predicted): 8:51 am, 3.1'



(Click here for full tide details from NOAA Tides & Currents)

Weather Overview

Wind Speed: 23 MPH

Wind Direction: S (180°)

Temperature: 62°F

Rainfall (Calendar Day): 0.287"

Rainfall (Past 24 Hours): 0.81"

(Click here for full weather details)

Example MyCoast Report 3

Shore Avenue in Groton

Photo Credit: C. Patrick

10/13/2025 | 4:24 pm

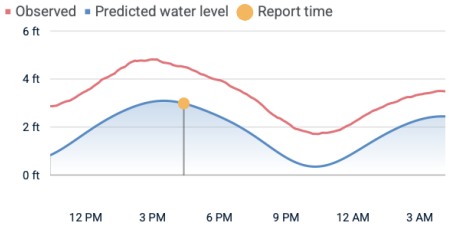
Tidal Overview

0 hours 54 minutes after high tide

Data from NEW LONDON, STATE PIER (3.6 miles away)

Water Level (at time of report): 4:24 pm, 4.5'

High Tide (Predicted): 3:30 pm, 3.1'



(Click here for full tide details from NOAA Tides & Currents)

Weather Overview

Wind Speed: 23 MPH

Wind Direction: NE (40°)

Temperature: 55°F

Rainfall (Calendar Day): 0"

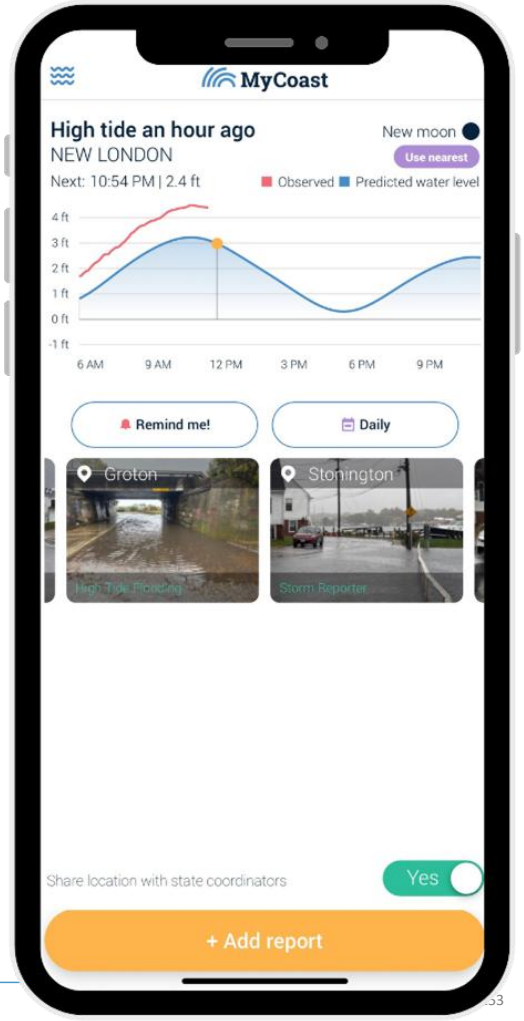
Rainfall (Past 24 Hours): 1.15"

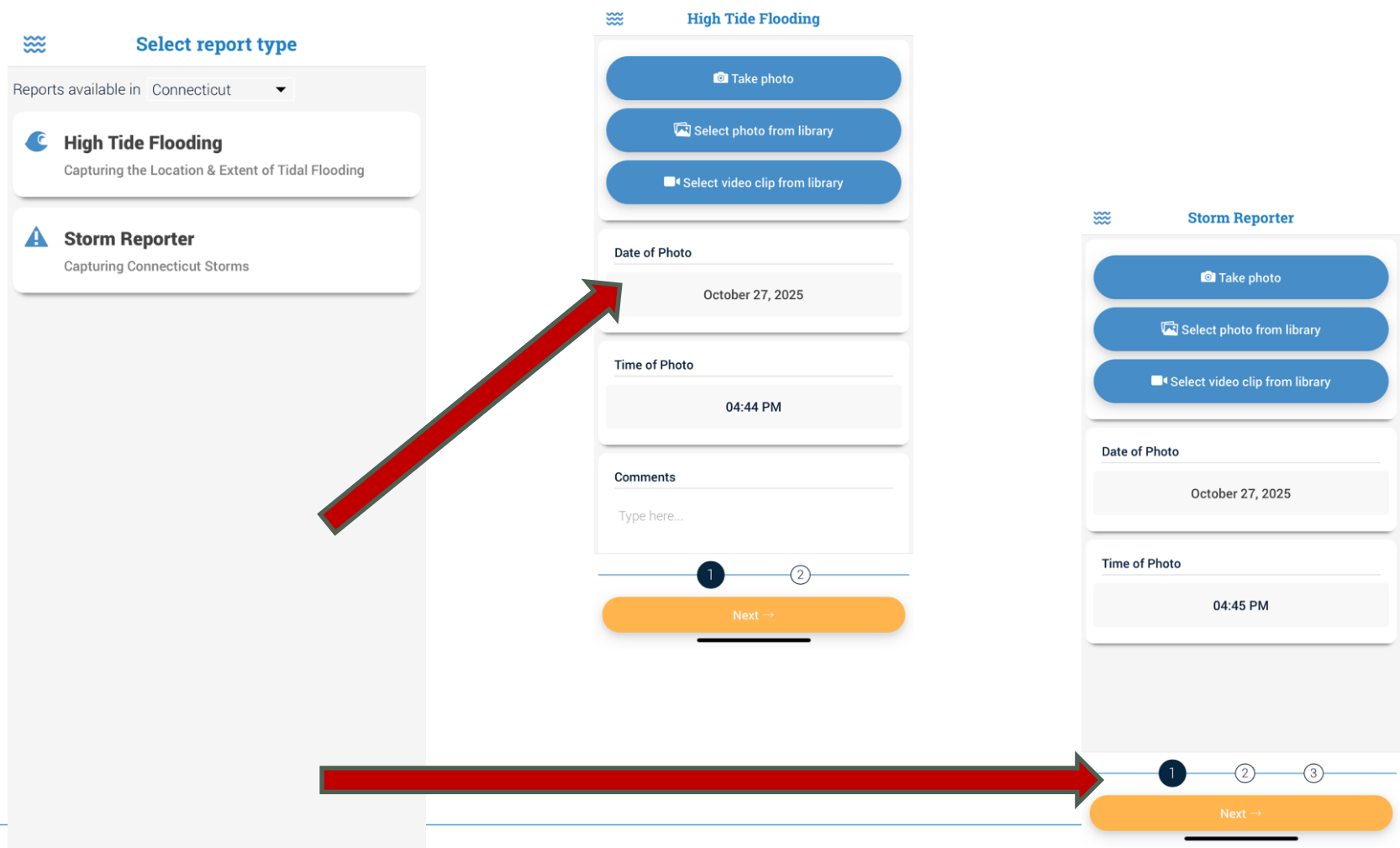
(Click here for full weather details)

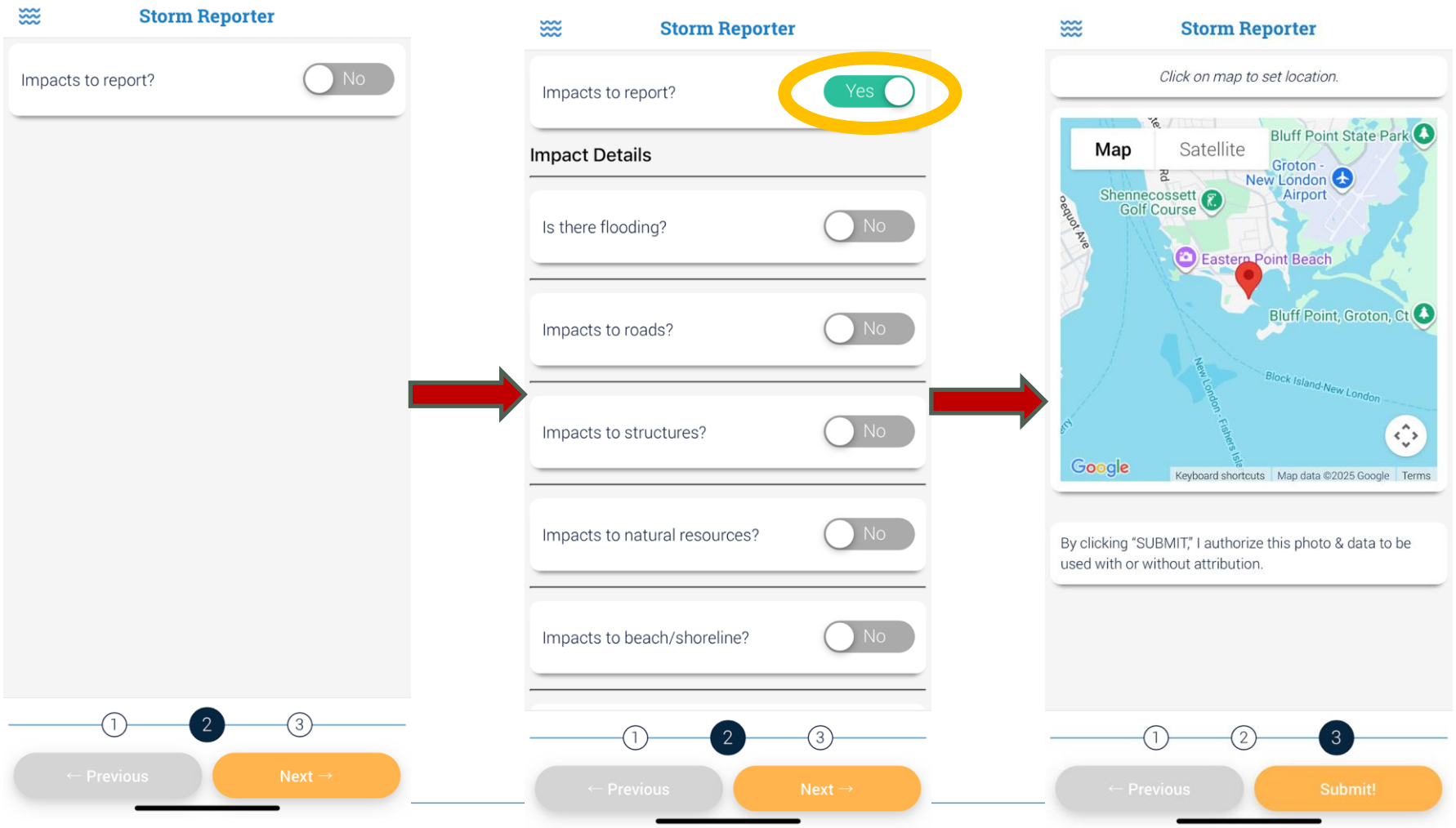
Example MyCoast Report 4

Add a report

- Click add report and complete the prompts to submit a photo to the MyCoast database




Select report type
Reports available in Connecticut
High Tide Flooding
Capturing the Location & Extent of Tidal Flooding
Storm Reporter
Capturing Connecticut Storms
High Tide Flooding
Take photo
Select photo from library
Select video clip from library
Date of Photo
October 27, 2025
Time of Photo
04:44 PM
Comments
Type here...
1
2
Next →
Storm Reporter
Take photo
Select photo from library
Select video clip from library
Date of Photo
October 27, 2025
Time of Photo
04:45 PM
1
2
3
Next →


Storm Reporter
Impacts to report?
No
1
2
3
← Previous
Next →
Storm Reporter
Impacts to report?
Yes
Impact Details
Is there flooding?
No
Impacts to roads?
No
Impacts to structures?
No
Impacts to natural resources?
No
Impacts to beach/shoreline?
No
1
2
3
← Previous
Next →
Storm Reporter
Click on map to set location.
Map
Satellite
Bluff Point State Park
Groton - New London Airport
Shennecossett Golf Course
Eastern Point Beach
Bluff Point, Groton, Ct
Block Island-New London
Google
Keyboard shortcuts
Map data ©2025 Google
Terms
By clicking "SUBMIT," I authorize this photo & data to be used with or without attribution.
1
2
3
← Previous
Submit!

LONG ISLAND SOUND PARTNERSHIP

Questions?

For more information, visit
https://mycoast.org/ct
or contact us at
MyCoastCT@uconn.edu

LONG ISLAND SOUND PARTNERSHIP

Thank you!

Please share feedback on today's session:

https://s.zoom.us/m/bPFdH0jUq

Session 2 – Using Nature-Based Solutions for Resilience: A Panel Discussion on Common Challenges & Strategies for Success

This afternoon! 1-3 PM

Session 3 – LIS Resilience Planning Support Program: New Round Available & Showcase of Completed Projects

Friday, December 5, 10-11:30 AM