Jess Kuonen,NY Sea Grant

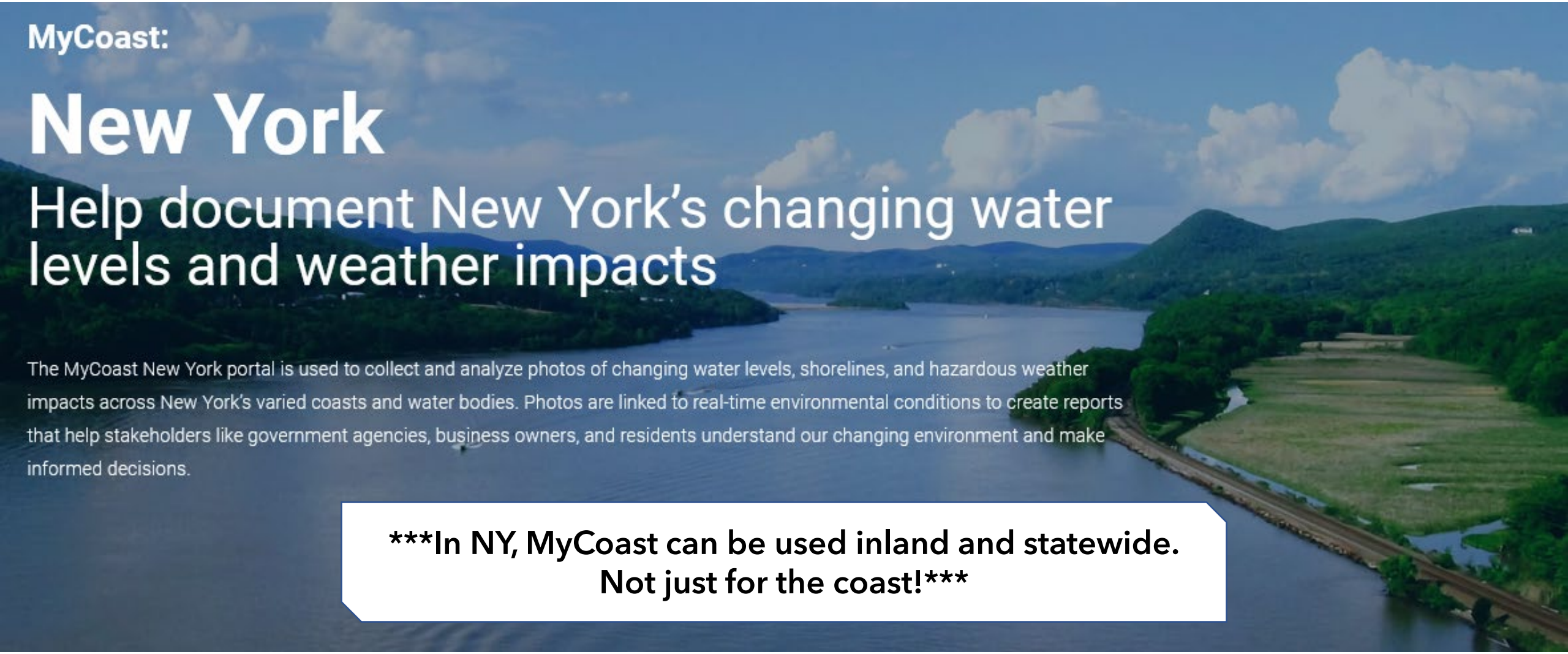
2024 NYSFOLA Annual Conference

MyCoast NY:
A statewide tool for engaging communities and documenting flood and storm events

Sea Grant NEW YORK

NEW YORK STATE WATER RESOURCES INSTITUTE

www.mycoast.org/ny

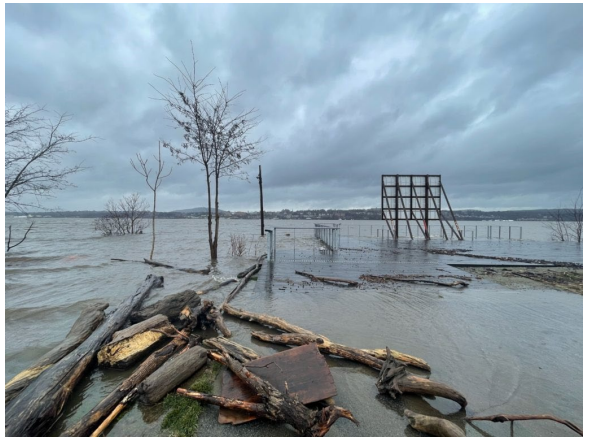


In NY, MyCoast can be used inland and statewide. Not just for the coast!

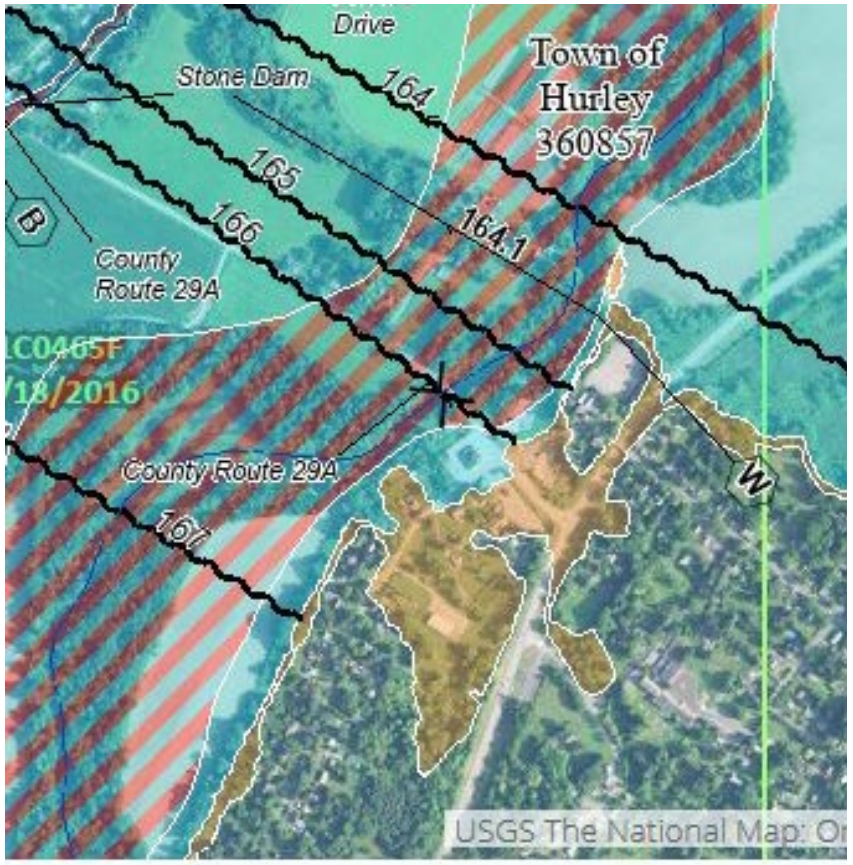
Why MyCoast?

- Storms and floods are increasing in frequency and severity
- Impacts are costly
- Lack of documentation during and after weather events

Edgemere, NY
https://mycoast.org/reports/103950



Beacon, NY
https://mycoast.org/reports/101081



- Current data used for decisions doesn't consider our shifting baseline conditions due to climate change
- Photos can complement these data

Value of crowd-sourced photos

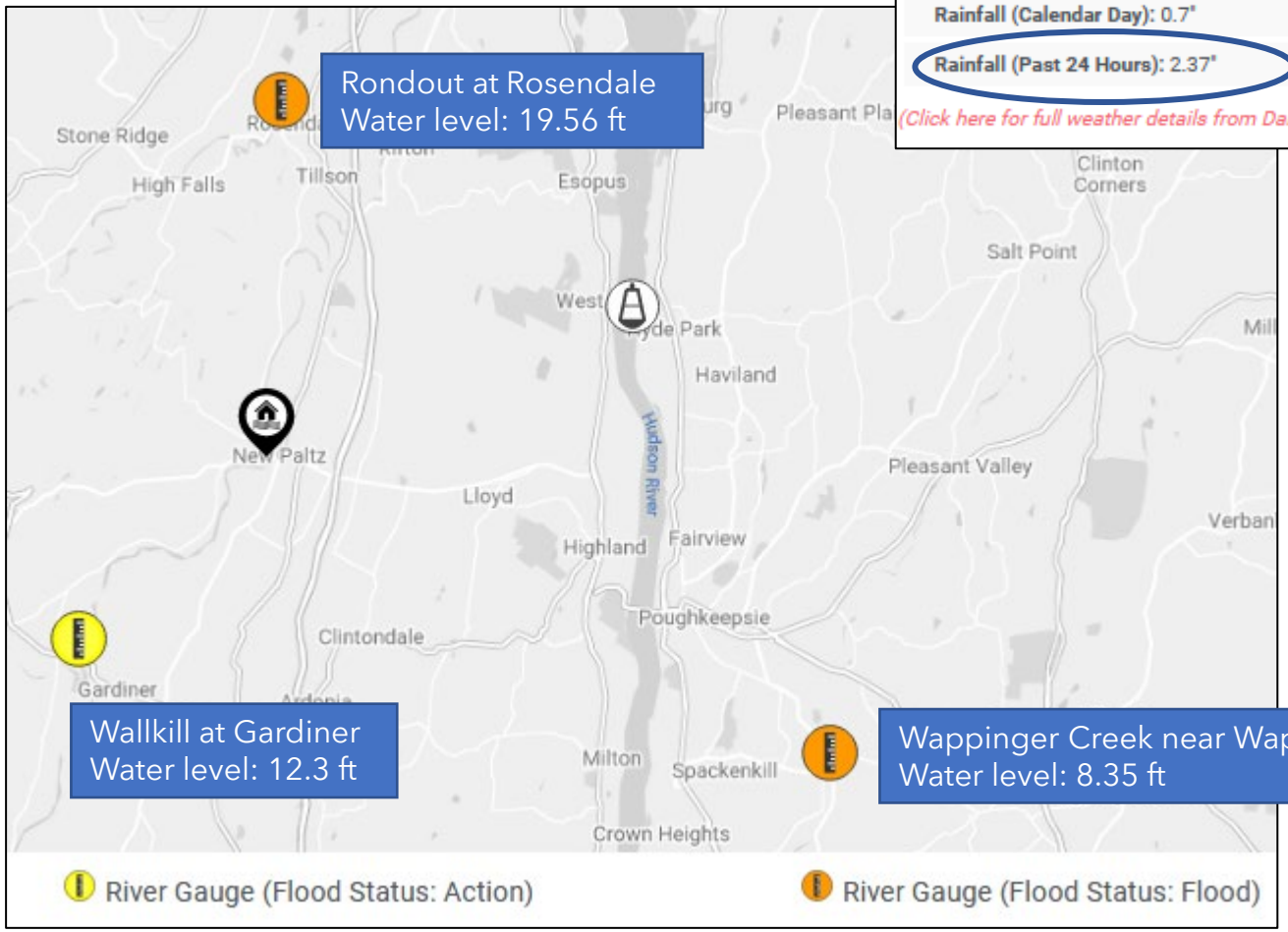
- Powerful visual of flooding and impacts
- Hyperlocal
- Engages residents

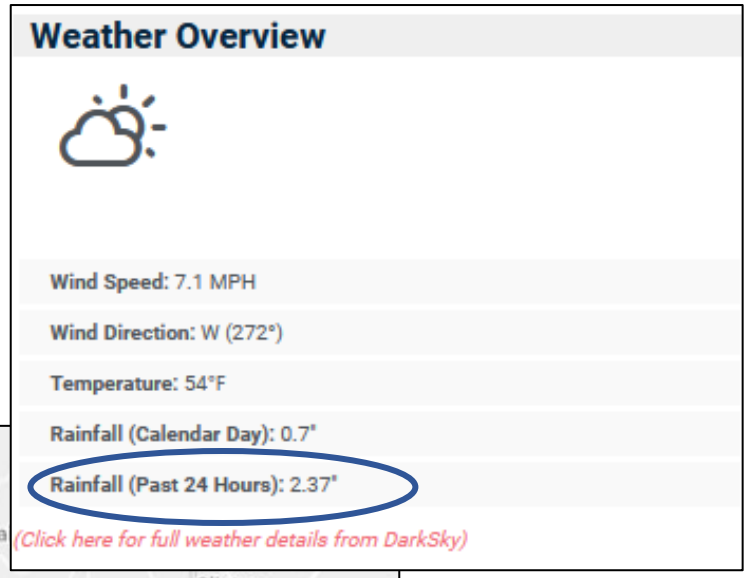
Why should you submit to MyCoast NY?

- A way to share your experience
- Connects you to where you live
- Build a dataset with your neighbors that can serve the community

Photos linked to nearby weather and USGS river gauge

Location: Route 299 & Springtown Rd, New Paltz
Date/time: 4/8/2022 10:43 am



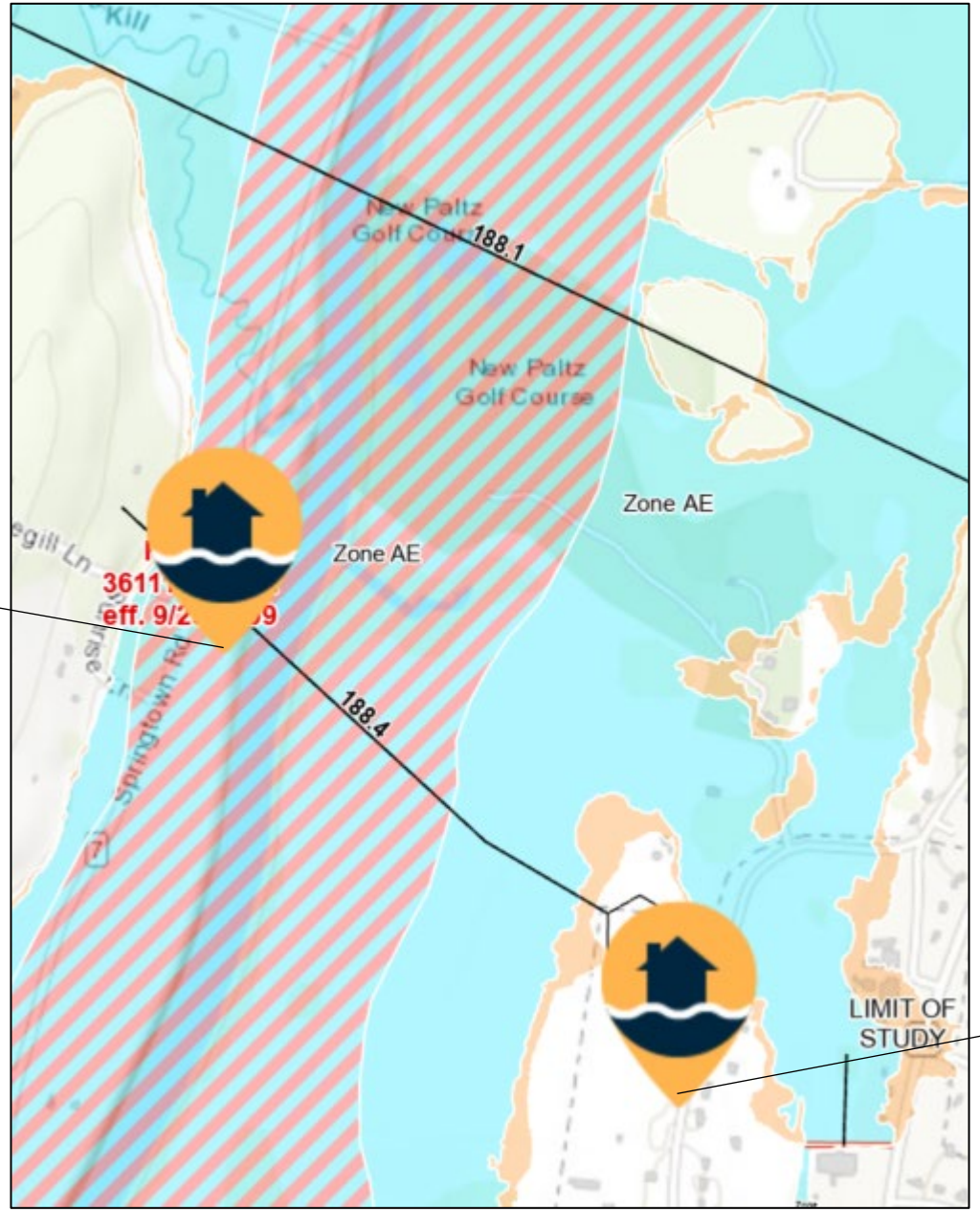


https://mycoast.org/reports/95822

SFHA

Road in floodway, barricades deployed

5/1/2023



New Paltz, Wallkill River

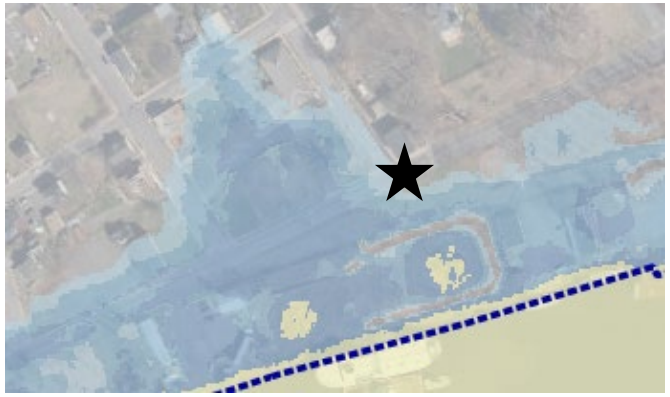
Road outside flood hazard area, no barricades deployed

7/16/2023

Who is Engaged? Why?

Community members ⟷ Muni/State/ University ⟷ NGOs

- Build awareness and political will
- Inform municipal planning and decisions
- Validate forecasts and mapping projections
- Apply for flood mitigation funding



Modeled inundation: 20 yr storm (HRFIDSS)

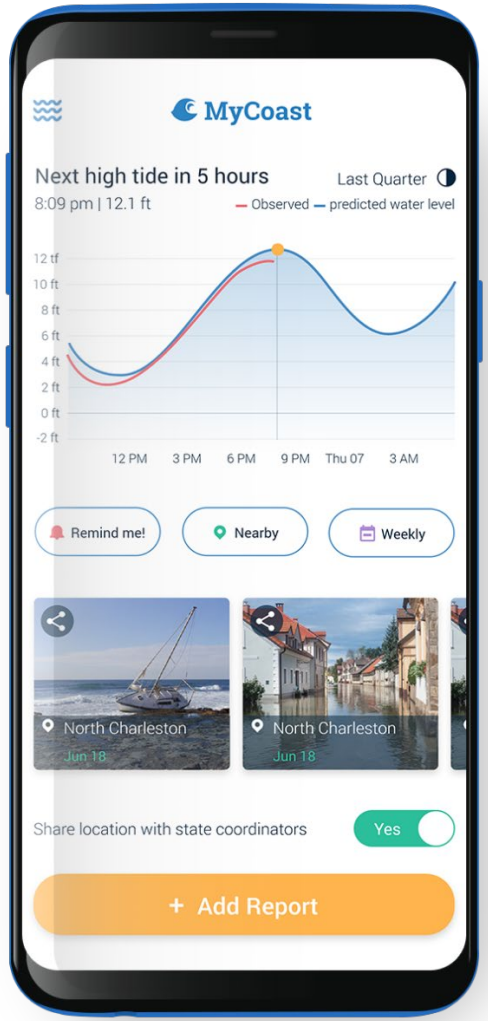
Kingston, NY
https://mycoast.org/reports/100952

Become a MyCoast NY volunteer

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

Download on the App Store

GET IT ON Google Play



New York's Tools

Flood Watch

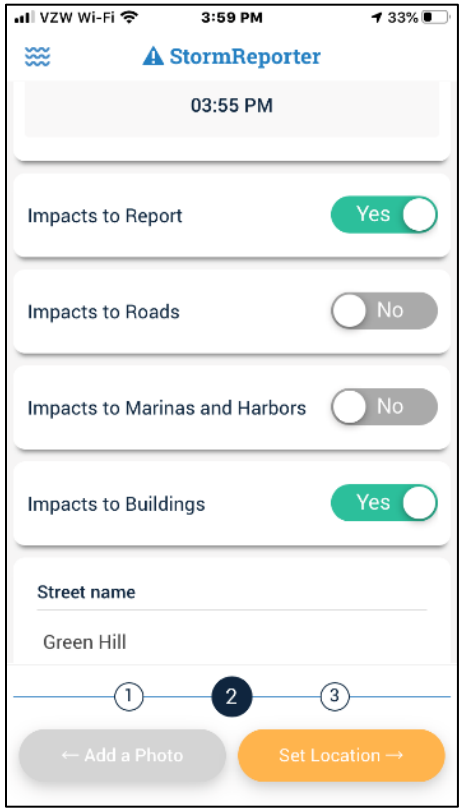
Tracking Flooding Across the State

- Any type of flooding (riverine, lake, tidal, storm surge, pluvial, etc.)

Storm Reporter

Documenting Storm Damage

- Uses a more detailed form for observations
- Includes other impacts (downed trees & powerlines, damaged buildings, etc.)
- Can upload flood photos as well



Access data: Search reports

By map

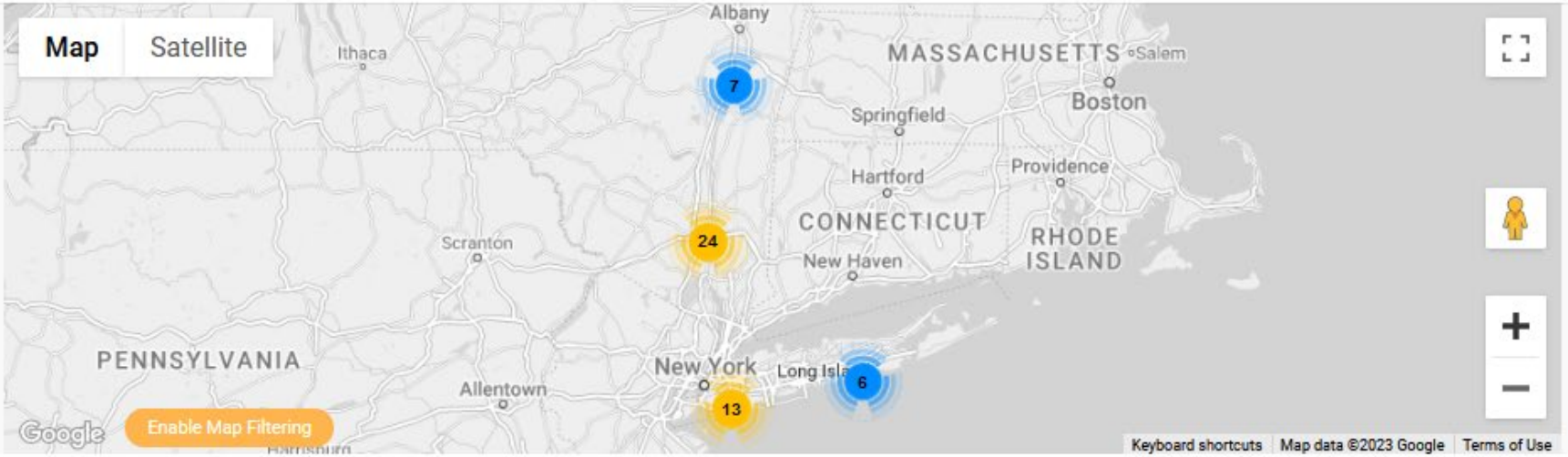
MyCoast

NY MyCoast | Flood Watch | Storm Reporter | CoastSnap | Search Reports | My Account | Download App

Filter Reports

- (●) All Types
- ( ) Flood Watch (102)
- ( ) CoastSnap (91)
- ( ) Storm (20)

By report type



All Counties

All Communities

All Reporters

Start Date

End Date

By report attributes (location, date, observations)

☐ Update live with new reports

1-50 of 213

Download These Reports

Queens County, NY

CoastSnap | January 5, 2023 at 2:01 pm

( ) Internal-Only ( ) Public ( ) Public and Featured

View | Edit Report | Delete | Download Images | Show Metadata

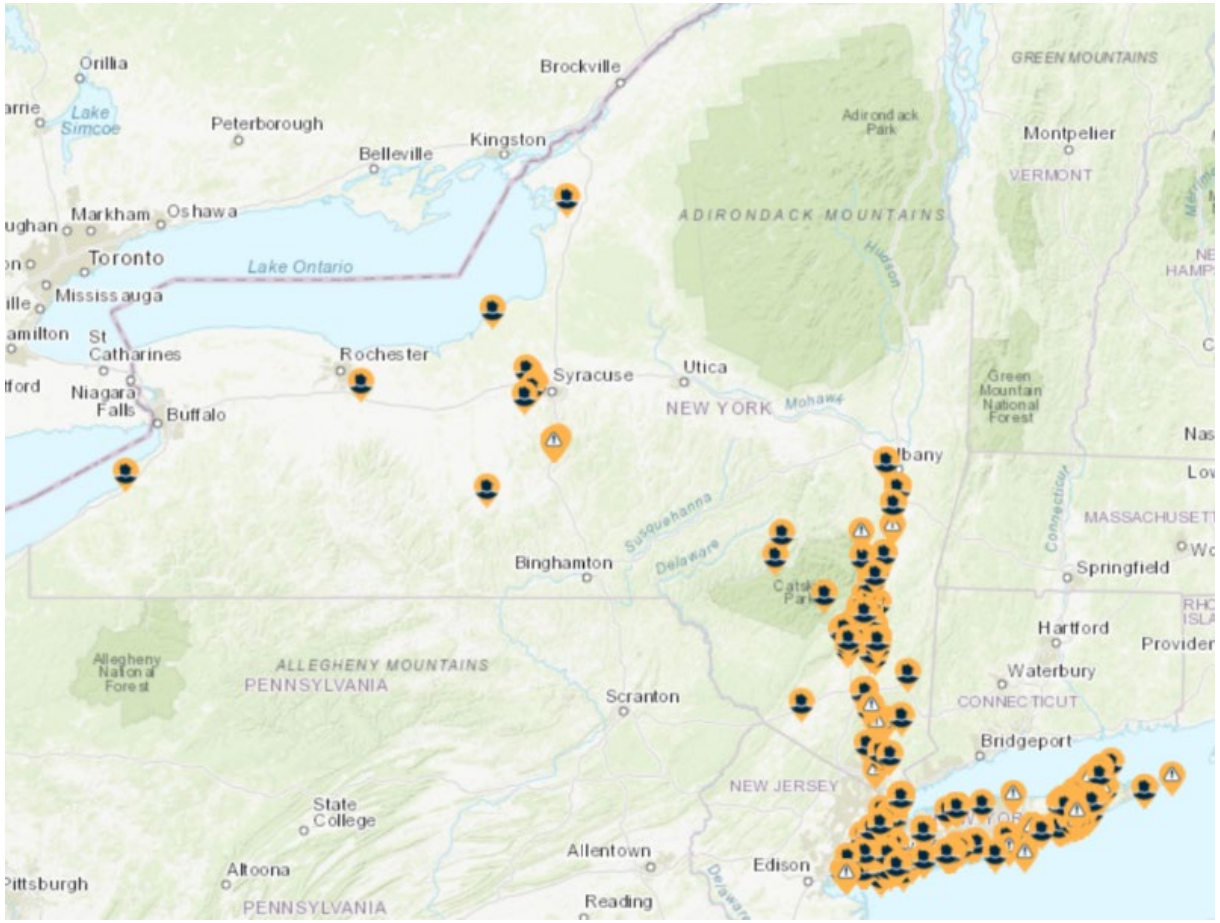
Data can be exported to .csv and brought into GIS

What have we seen and learned so far?

By the numbers

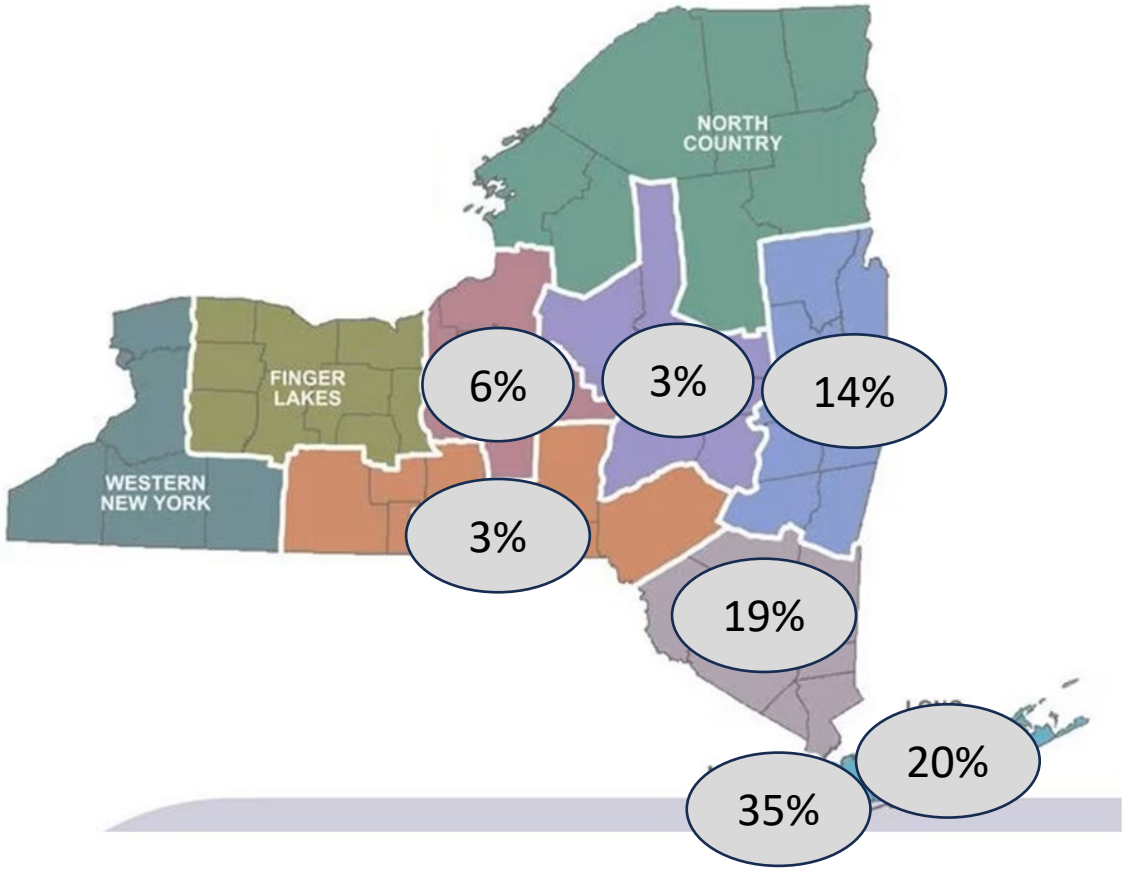
Since July 1, 2022…

- Registered users: 723
  - 265 users have submitted reports
  - 315 "Anonymous" reports
- Number of reports: 1,293
  - Flood Watch: 1,194
  - Storm Reporter: 99
- 24 counties



MyCoast Survey

- Fall 2023
- 56 survey responses
- Top motivation: **Concerns about flood and storm impacts to my community (74%)**



Other motivations…

Contributing to something useful

"Timeline regarding the how the floods affects our living places"

Flood experience

"I live in Rockaway Park and lived through the trauma and damage of Sandy"

Identity

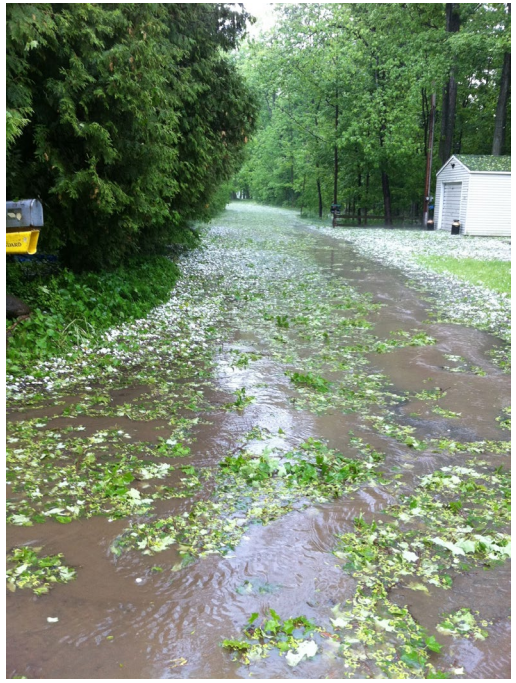
"I'm a geek, love astronomy and meteorology", "I'm an advocate"

Work

"I'm a meteorologist", "Office of Emergency Management"

Cortland Onondaga Federation of Kettle Lakes Association

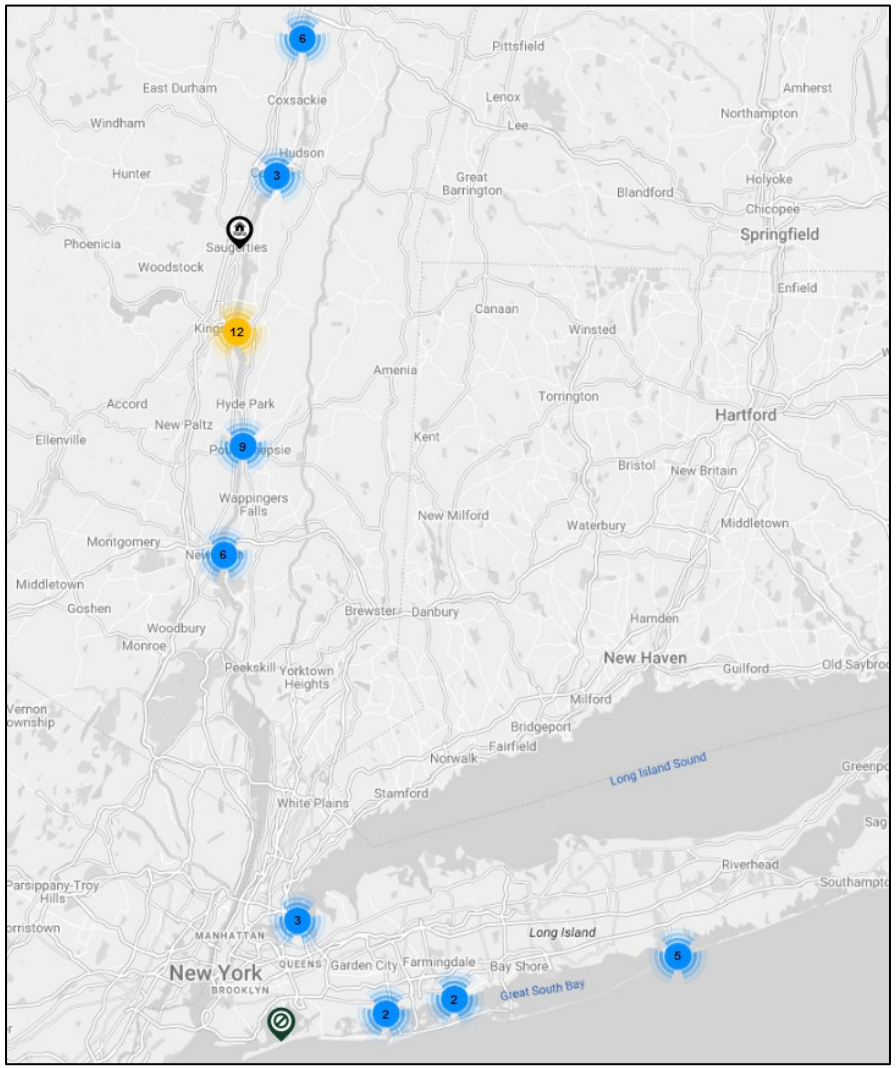
Using MyCoast as a data repository in support of Storm Response Plan



Use Case: Winter Storm Elliot (12/23/22)

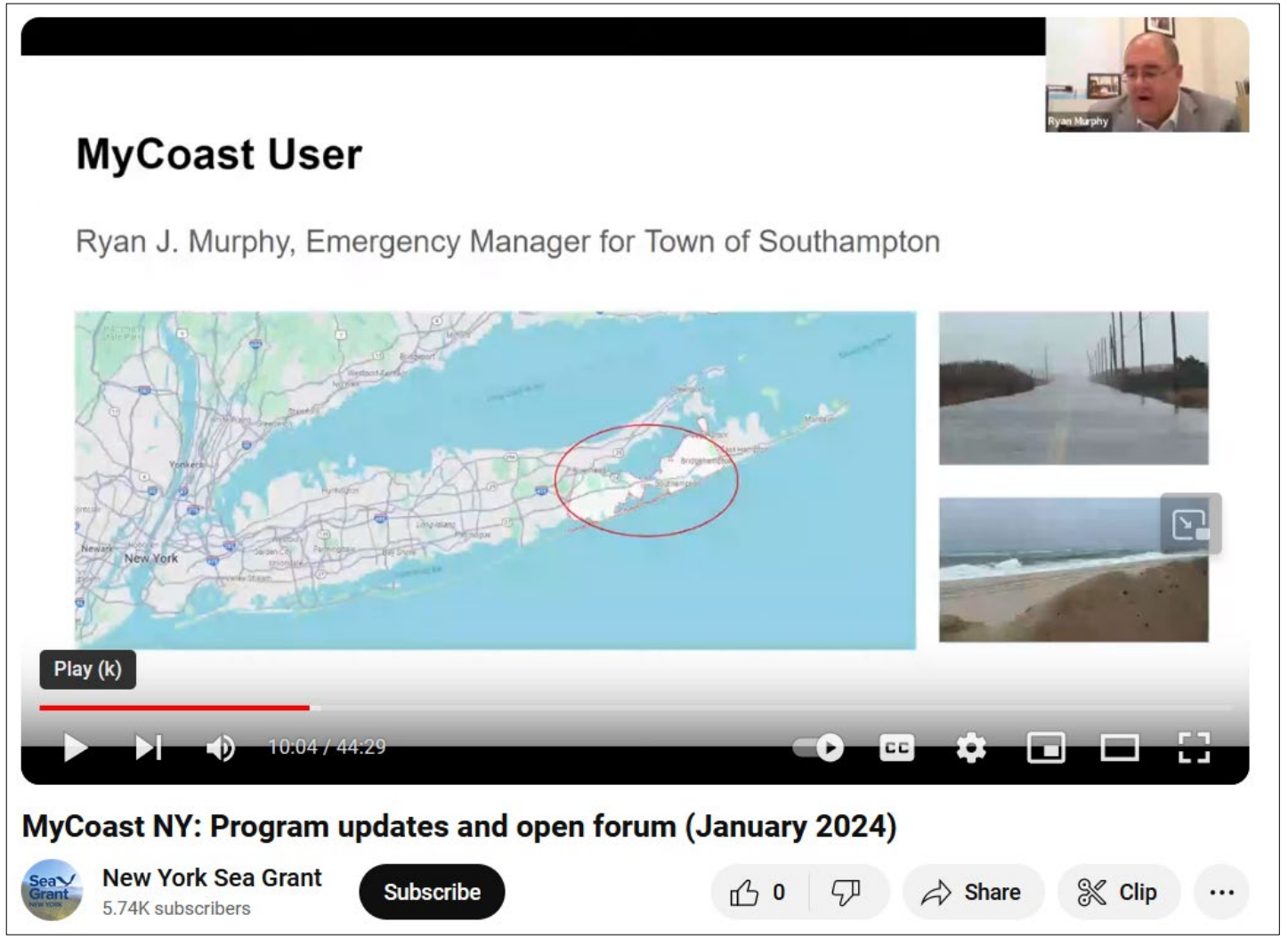
- 106 photo reports
- Captured storm surge from Long Island, NYC, and the length of the Hudson

Cold Spring
https://mycoast.org/reports/100732



Use Case: Town of Southampton

- In support of Emergency Management operations



Outreach for inland communities

Flood Watch New York

VOLUNTEERS NEEDED!

Help document flooding and storm damage

Flood Watch New York is a program that collects and analyzes crowd-sourced photos of flooding and hazardous weather impacts across New York's varied coasts and waterbodies through the MyCoast NY tool.

Photos are linked to real-time environmental conditions to create reports that help emergency managers, local planners, residents, and state agencies understand our changing environment and make informed decisions.

REPORT TYPES

FLOOD WATCH - Tracking flooding across the state

STORM REPORTER - Documenting damage after the storm

Download the **MyCoast app** or visit **MyCoast.org/ny**

DOWNLOAD

REGISTER

SNAP PHOTO

+ ADD REPORT

Need more info?
Contact Jessica Kuonen,
jak546@cornell.edu

MyCoast New York

Sea Grant NEW YORK

NEW YORK STATE WATER RESOURCES INSTITUTE

Documenting Local Flooding and Storm Impacts Through Community Science

A flooded road next to the Wallkill River after a heavy rain event on 4/30/2023.

Storm drain backup.

Extreme weather events can lead to hazards that put lives and property at risk. Floods are the costliest natural hazard in New York followed by wind, snow storm, tornado, ice storm, and coastal hazards[1]. According to New York State climate projections, the frequency of extreme weather events will continue to increase[2].

A picture is worth a thousand words

During and after flood and storm events, many residents take photos to record damage where they live with their mobile phones, often sharing them on social media. Photos play an important role in documenting extreme events and impacts at the local level and can be used in communication and visualization of future events.

The **MyCoast New York** portal is used to collect and view photos of flooding, changing shorelines, and hazardous weather impacts across New York's varied coasts and waterbodies.

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.

Photo reports submitted by volunteers can be accessed by everyone at MyCoast.org/ny. Use the 'Search Reports' page to view photos by location map, report type, or other filters.

SAFETY IS A PRIORITY

Volunteers should follow local safety precautions advised by authorities and take photos once it is safe to do so.

Use the Flood Watch and Storm Reporter tools to document how your community is impacted by weather and climate change.

References: [1]https://mitigateny.availabs.org/hazards; [2]https://www.nyserda.ny.gov/climaid

Need more info?
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jak546@cornell.edu

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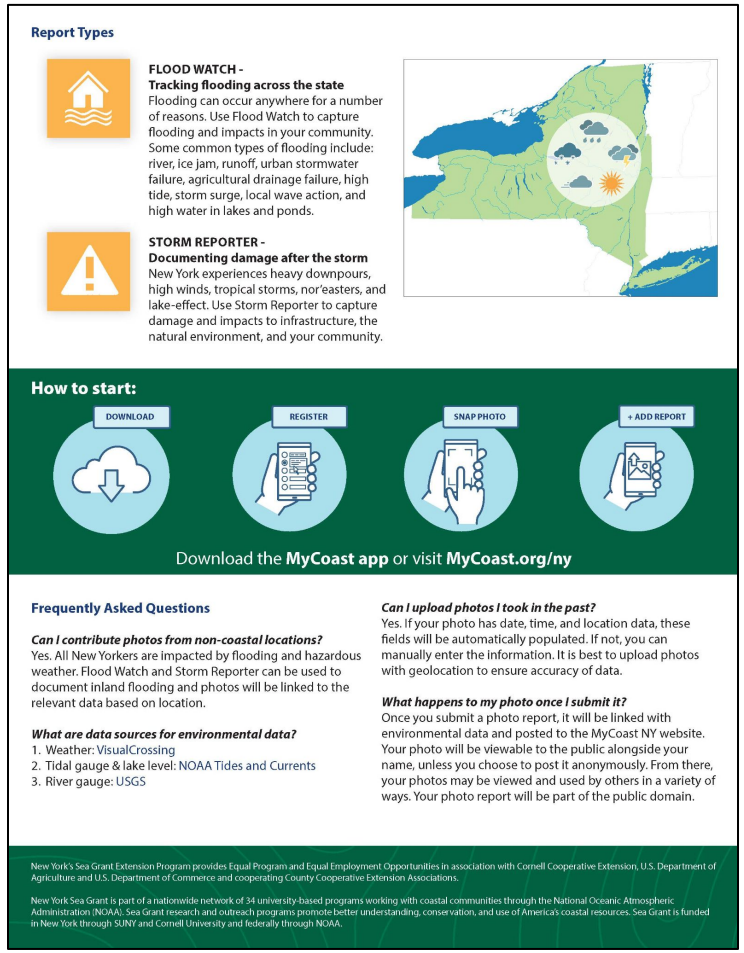

Report Types

FLOOD WATCH -
Tracking flooding across the state
Flooding can occur anywhere for a number of reasons. Use Flood Watch to capture flooding and impacts in your community. Some common types of flooding include: river, ice jam, runoff, urban stormwater failure, agricultural drainage failure, high tide, storm surge, local wave action, and high water in lakes and ponds.

STORM REPORTER -
Documenting damage after the storm
New York experiences heavy downpours, high winds, tropical storms, nor'easters, and lake-effect. Use Storm Reporter to capture damage and impacts to infrastructure, the natural environment, and your community.

How to start:

DOWNLOAD

REGISTER

SNAP PHOTO

+ ADD REPORT

Download the **MyCoast app** or visit **MyCoast.org/ny**

Frequently Asked Questions

Can I contribute photos from non-coastal locations?
Yes. All New Yorkers are impacted by flooding and hazardous weather. Flood Watch and Storm Reporter can be used to document inland flooding and photos will be linked to the relevant data based on location.

What are data sources for environmental data?
1. Weather: VisualCrossing
2. Tidal gauge & lake level: NOAA Tides and Currents
3. River gauge: USGS

Can I upload photos I took in the past?
Yes. If your photo has date, time, and location data, these fields will be automatically populated. If not, you can manually enter the information. It is best to upload photos with geolocation to ensure accuracy of data.

What happens to my photo once I submit it?
Once you submit a photo report, it will be linked with environmental data and posted to the MyCoast NY website. Your photo will be viewable to the public alongside your name, unless you choose to post it anonymously. From there, your photos may be viewed and used by others in a variety of ways. Your photo report will be part of the public domain.

New York's Sea Grant Extension Program provides Equal Program and Equal Employment Opportunities in association with Cornell Cooperative Extension, U.S. Department of Agriculture and U.S. Department of Commerce and cooperating County Cooperative Extension Associations.

New York Sea Grant is part of a nationwide network of 34 university-based programs working with coastal communities through the National Oceanic Atmospheric Administration (NOAA). Sea Grant research and outreach programs promote better understanding, conservation, and use of America's coastal resources. Sea Grant is funded in New York through SUNY and Cornell University and federally through NOAA.

Challenges and limitations of the tool

- Can’t search reports easily through the phone app
- No cell/wifi service in many areas
- “Search Reports” function on website has limitations
- Data sources
  - Tide: NOAA Tides & currents
  - River: USGS
- Data exports (.csv)
  - Doesn’t record tide/river/lake observations
  - Doesn’t record submission date

Next Steps

- Funding secured through July 2026
- Increasing social media presence
  - Instagram: @mycoastny #mycoastny
  - Facebook: MyCoast NY
- Define value, recommendations for sustainability based on first 2-years
- Exploring partnerships
- Continue promoting use

Become a Mycoast NY volunteer

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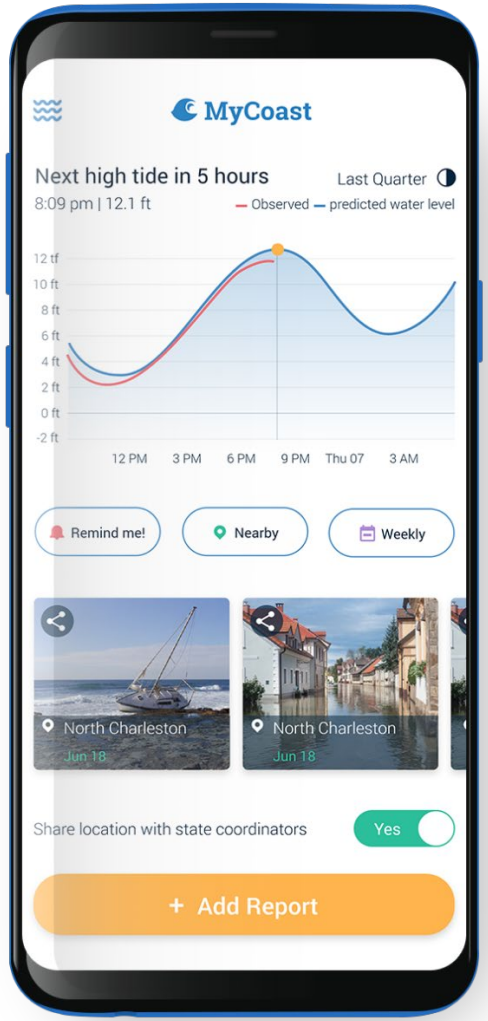

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