



# Floodplain Management and Resilience Resources for Disadvantaged Communities in New York State

October 16, 2024

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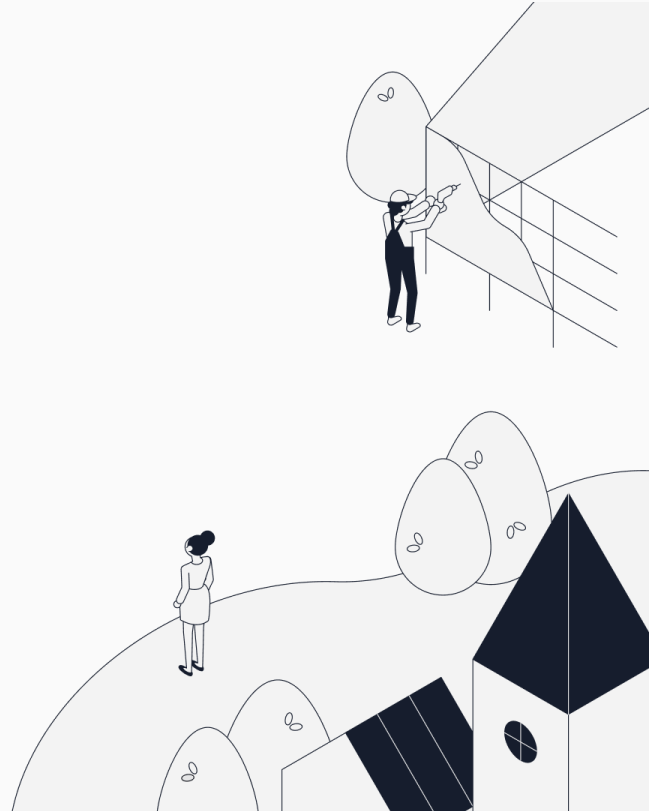
[withforerunner.com](https://withforerunner.com)



WELCOME

## Housekeeping

- This presentation is being recorded
- The recording and presentation will be shared via email and posted on our blog
- Use the Q+A or the Chat to ask questions
- CFMs: Complete the post-attendance survey to receive your CEC. The CEC Certificate will be sent via email to you (and the list will be sent to ASFPM) next week



## Agenda

- 1 **Introduction**
- 2 **Floodplain Management and Resilience Resources in New York**
- 3 **Q&A**

## Agenda

- 1 Introduction**
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GOV. PARTNERS

We work with over  
100 of the most at-risk  
communities  
throughout the U.S.



FDEM  
Florida



Cedar Rapids  
Iowa



Harris County  
Texas



Tampa  
Florida



Jefferson Parish  
Louisiana



Alexandria  
Virginia



Kitty Hawk  
North Carolina



Las Cruces  
New Mexico



Georgetown County  
South Carolina



Norfolk  
Virginia



Leon County  
Florida



Calvert County  
Maryland



Peterborough  
New Hampshire



Orting  
Washington



Hoboken  
New Jersey



Clearwater  
Florida

PRODUCT

Our geospatial dashboard drives per-property insight.

Search for address

Parcel ID: 0351050100090

141 Solano Prado, Coral Gables, FL 33156

Share public profile SI/SD Tracking

Overview Activity SI/SD Documents Logs

Warnings Edit

- Lowest Floor does not conform to local regulatory standards
- Machinery does not conform to NFIP requirements
- Machinery does not conform to local regulatory standards
- Flood insurance requirement
- Flood Zone changes

FIRM Info Effective FIRM

Flood zone	AE
In Floodway	No
In CBRS	No
BFE	12.0'
Design Flood Elevation	13.0'
Datum	NGVD29

Property Warnings

Parcel-level Info

Zone AE (EL 12 feet)

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**Brad Wenskoski, CFM**

Environmental Program Specialist II

New York State Department of Environmental Conservation





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# Climate Resilient Floodplain Management Resources for Disadvantaged Communities

# New York State Disadvantaged Communities



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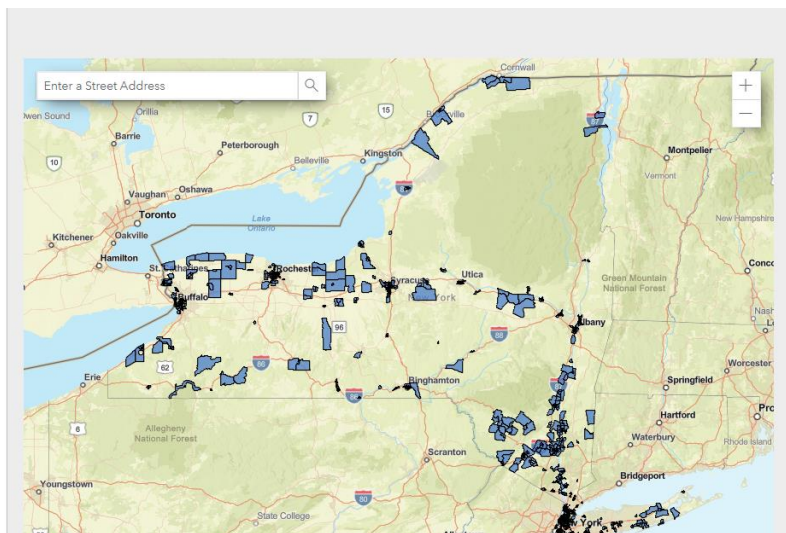
# Disadvantaged Communities (DACs)

New York's Climate Act recognizes that climate change doesn't affect all communities equally.

45 indicators used to identify 35% of New York as DAC.

Environmental Burdens include:

- Flooding in coastal and tidally influenced areas
- Flooding in inland areas



Environmental Burdens and Climate Change Risk		
Land use and facilities associated with historical discrimination or disinvestment	Potential climate change risks	Potential pollution exposures
Proximity to remediation sites	Extreme heat projections	Vehicle traffic density diesel truck and bus traffic
Proximity to regulated management plan sites	Flooding in coastal and tidally influenced areas (projected)	Particulate matter (PM <sub>2.5</sub> )
Proximity to major oil storage facilities	Flooding in inland areas (projected)	Benzene concentration
Proximity to power generation facilities	Low vegetative cover	Wastewater discharge
Proximity to active landfills	Agricultural land	
Proximity to municipal waste combustors	Driving time to hospitals or urgent/critical care	
Proximity to scrap metal processors		
Industrial/manufacturing/mining land use		
Housing vacancy rate		

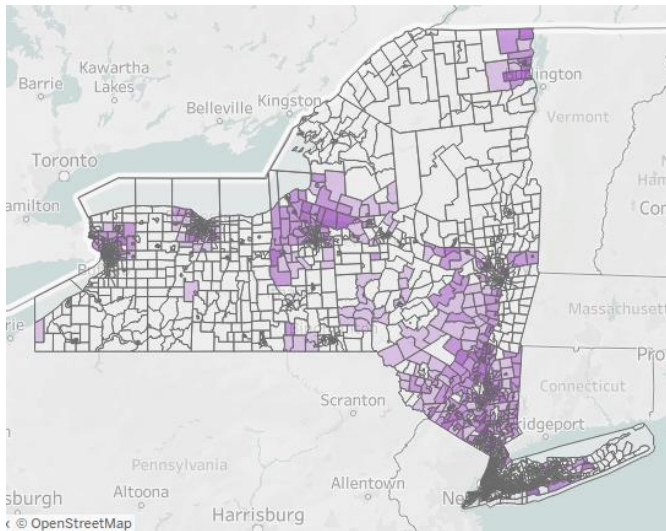
<sup>1</sup> Census tracts are delineated per the US Census Bureau. For more information visit: <https://www.census.gov/programs-surveys/geography/about/glossary.html#>



Department of Environmental Conservation | NYSERDA

# Flooding Indicators (DACs)

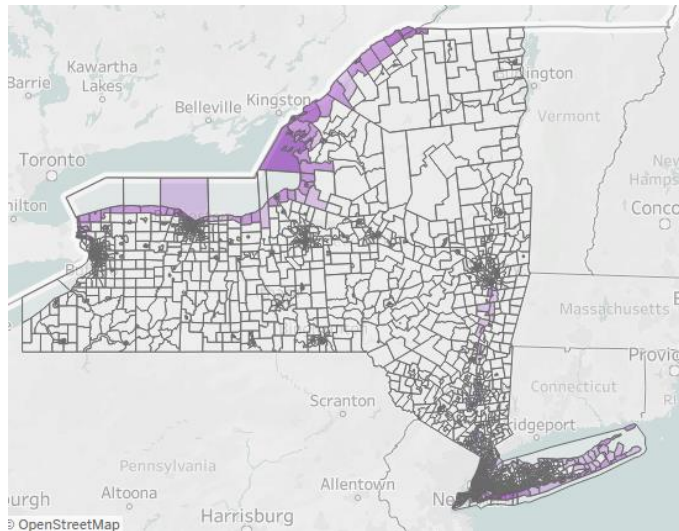
## Inland Flooding Risk Areas



### Description of Indicator:

Percentile ranking of the projected annual probability of exceeding FEMA's 100-year floodplain event in a given year, weighted by the proportion of the tract falling within the floodplain

## Coastal Flooding and Storm Risk Areas

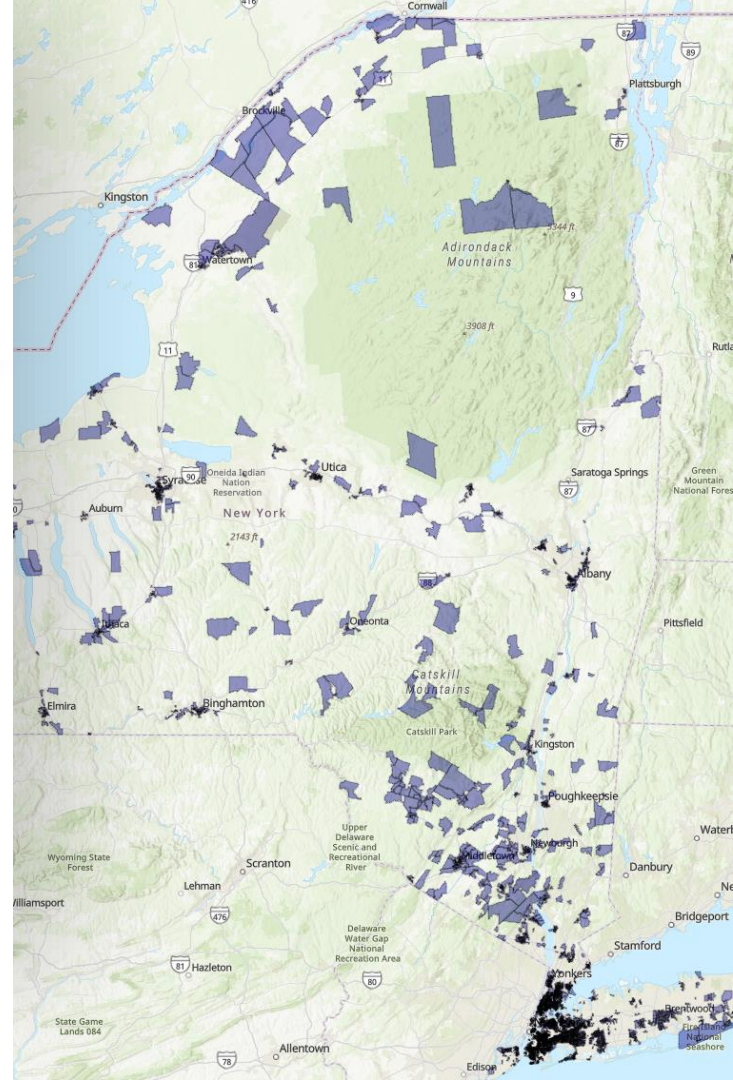


### Description of Indicator:

Percentile ranking of the projected percentage of census tract area at risk of flooding and erosion from: shallow water flooding areas, areas prone to erosion, sea level rise, FEMA Risk Zones (i.e., floodplains - V zone, 100, and 500 yr), and Category 3 Hurricane from SLOSH - projected out to year 2100

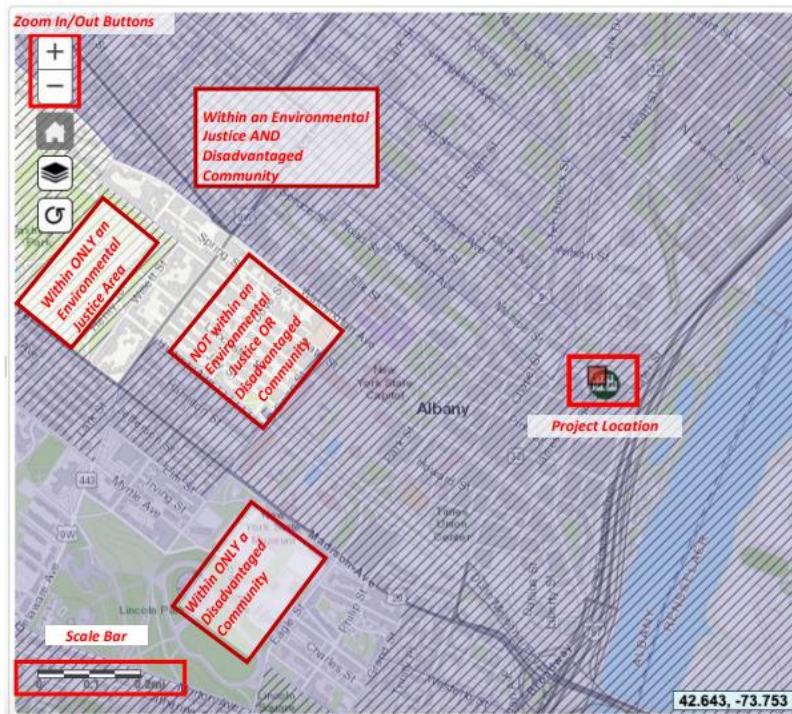
# Potential Environmental Justice Areas (PEJA)

PEJAs are identified based on U.S. Census data and are used to highlight areas that have experienced disproportionate negative impacts from environmental pollution due to historical and existing social inequities.

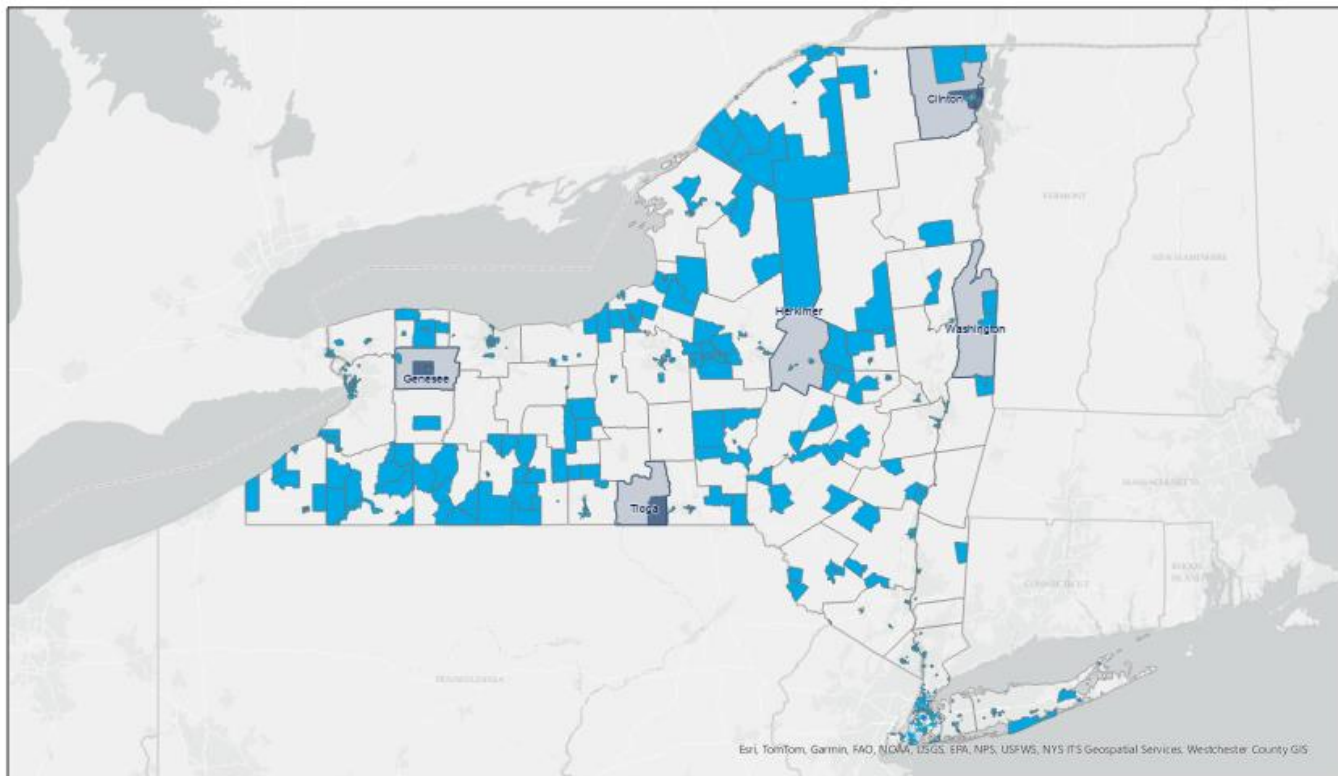




# DECinfo Locator



# Climate and Economic Justice Screening Tool



Riverine Flooding (RI)

Expected Annual Loss

Social Vulnerability

Community Resilience

County View

Census Tract View

Find a county or address

Zoom out

Legend

Social Vulnerability

- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- Data Unavailable

Expected Annual Loss  
× Social Vulnerability  
÷ Community Resilience

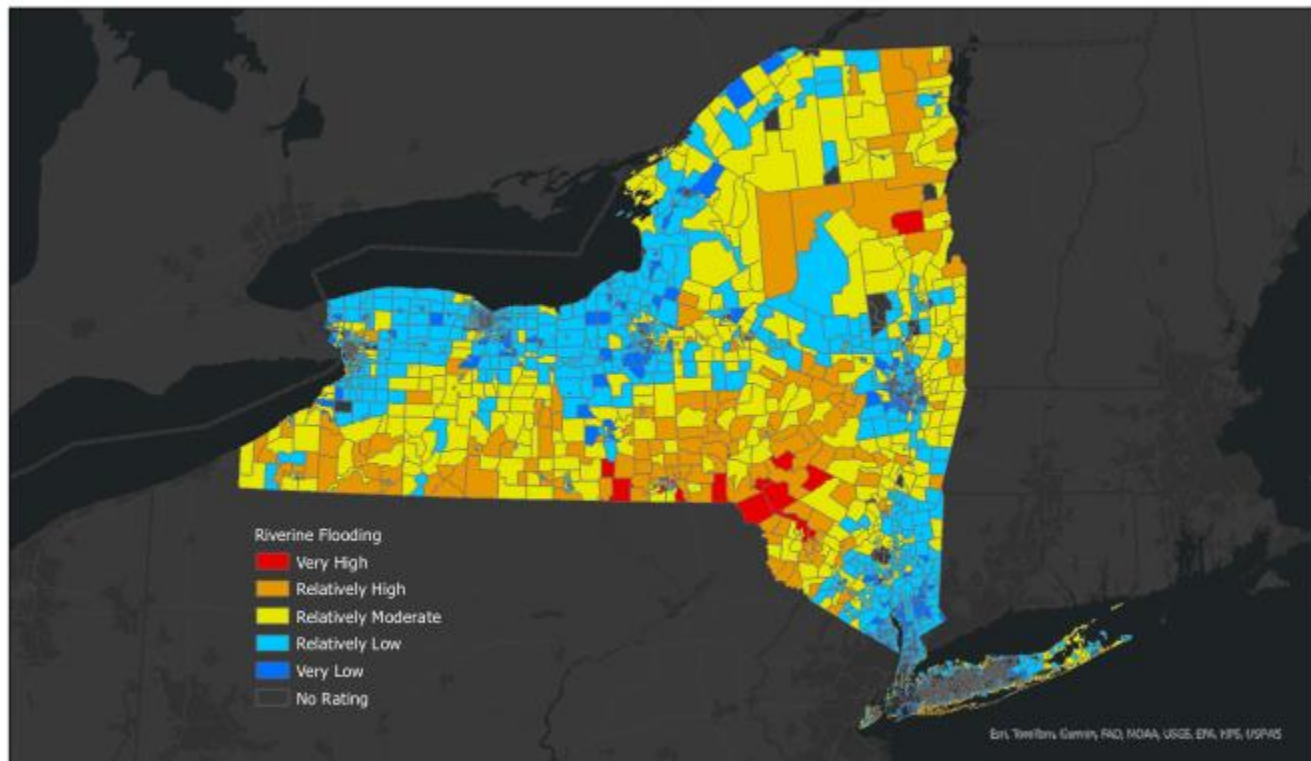
= Risk Index

Basemaps

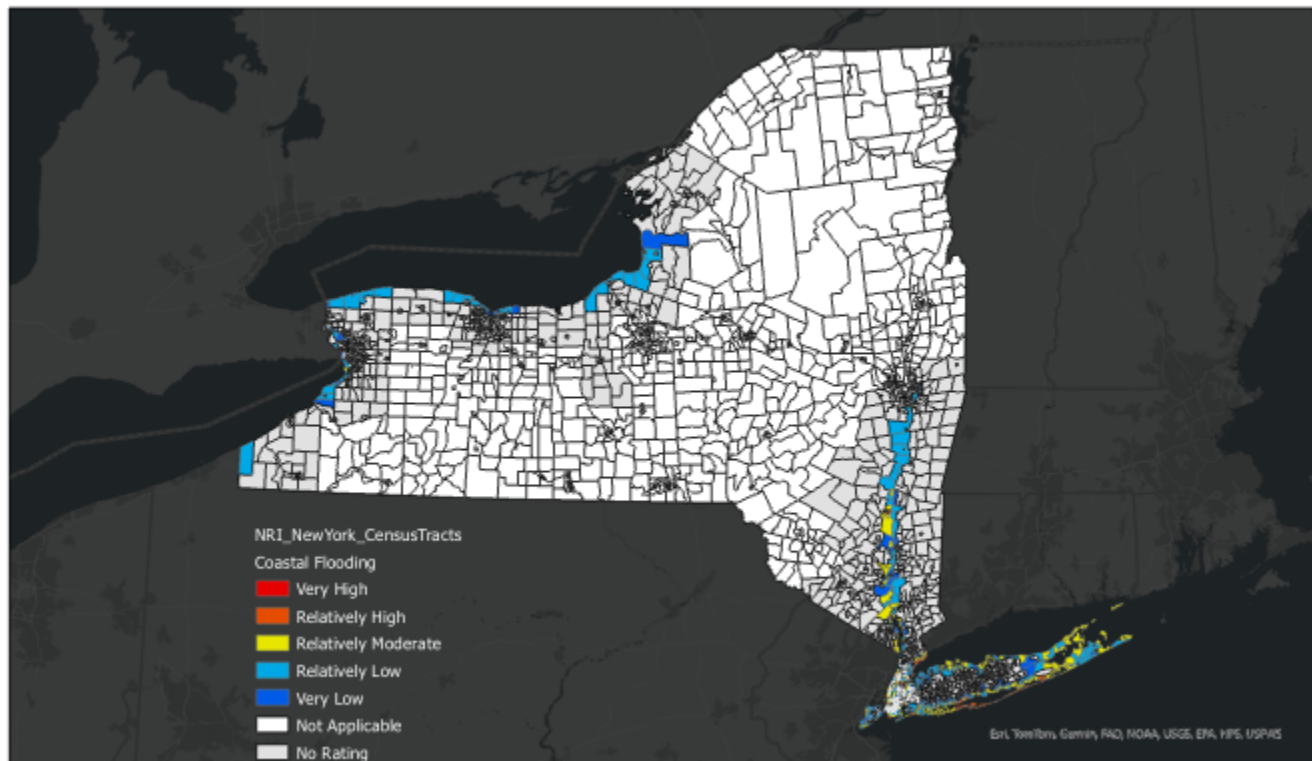
## Social Vulnerability



# Riverine Flooding (NRI)



# Coastal Flooding (NRI)



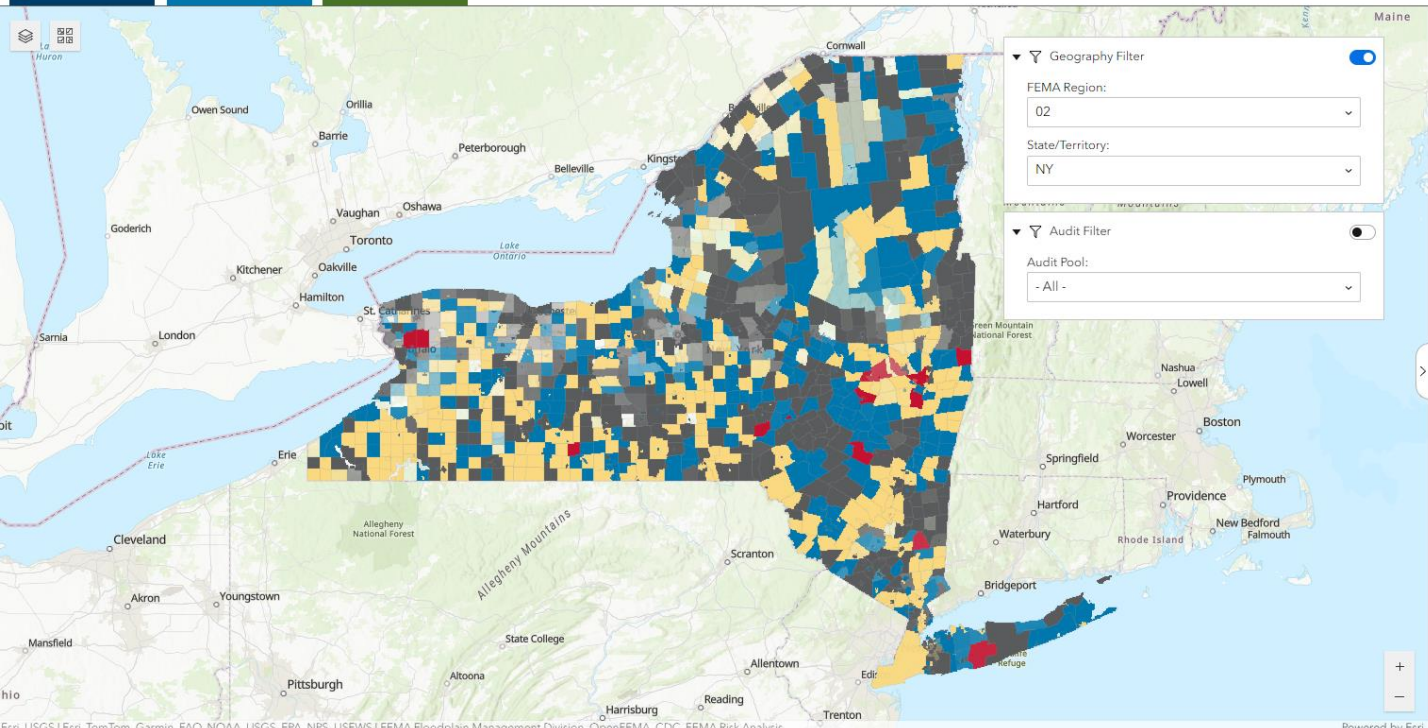
# Community Engagement Prioritization Tool

**CEPTool**  
COMMUNITY ENGAGEMENT  
PRIORITIZATION

Profile

Audit

Educate



# Resources

FEMA National Risk Index

<https://hazards.fema.gov/nri>

Maps & Geospatial Information System (GIS) Tools for Environmental Justice

<https://dec.ny.gov/get-involved/environmental-justice/gis-tools>

NYSERDA website for Disadvantaged Communities (DACs)

<https://www.nyserda.ny.gov/ny/Disadvantaged-Communities>

Climate Act Disadvantaged Communities Criteria

<https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria>

Climate and Economic Justice Screening Tool

<https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>



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# **Climate Resilient Floodplain Management**

**For Disadvantaged and  
Environmental Justice  
communities**



## FLOODPLAIN MANAGEMENT IN NEW YORK STATE

# Quick Guide



**New York State**  
**Department of Environmental Conservation**  
Floodplain Management

<https://www.dec.ny.gov/lands/24267.html>



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## Flood Risk Management: Resilience and Climate Change

In 2014, the New York legislature passed the **Community Risk and Resiliency Act (CRRA)** to increase resilience of the State and communities to future flooding and anticipated sea level rise. CRRA directed NYSDEC to include requirements for activities subject to NYSDEC permits to demonstrate consideration of sea-level rise, storm surge, and flooding, including projects for coastal erosion, streambank stabilization, and those that impact wetlands. CRRA also requires considerations of those future impacts in certain state-funded projects, including public infrastructure. In 2019, CRRA was expanded by the **Climate Leadership and Community Protection Act (CLCPA)** to include consideration of all climate-related hazards in NYSDEC permitted and funded projects.

The **New York State Flood Risk Management Guidance** outlines three methods to estimate projected future flood elevations and areas subject to those future risks:

- Download the guidance for state agencies on consideration of flooding risk based on project and environment types: [https://www.dec.ny.gov/docs/administration\\_pdf/crrafloodriskmgmtgdnc.pdf](https://www.dec.ny.gov/docs/administration_pdf/crrafloodriskmgmtgdnc.pdf)
- Download companion guidance for estimating elevations using the three methods: [https://www.dec.ny.gov/docs/administration\\_pdf/crraestelevguidelines.pdf](https://www.dec.ny.gov/docs/administration_pdf/crraestelevguidelines.pdf)

Three methods to estimate projected future flood elevations and areas subject to those future risks:

- Horizontal extension of BFE + 2 or 3 feet
- Identifying 10% or 20% design flow criteria based on project type.
- Using climate informed science to adjust projects based on sea-level rise projections.



## Climate Change and Sea Level Rise Adaptation Strategies

Community planners and property owners should understand the impacts of climate change and sea level rise on future flooding:

- **Coastal Floodplains:** New York State updates sea level rise projections every 5 years. NYS sea level rise projections are online: <https://www.dec.ny.gov/energy/102559.html>.

- **Inland Floodplains:** Storms are increasing in frequency and the amount of heavy rainfall produced, which can result in more frequent and higher flooding than shown on FIRMs.

Some adaptation strategies include:

- Modify density in areas expected to experience the most significant increased flooding.
- With NYS Code Council approval, require more freeboard for new building than specified in the NYS Uniform Code.
- Apply floodplain management requirements in areas subject to projected sea-level rise flooding.
- Expand outreach and public education to advise citizens about future flood risks.



**Important**

**Information**

FEMA **does not** include climate change and sea level rise impacts when preparing Flood Insurance Studies and FIRMs.

Learn more about how projected climate change will impact communities and residents by reviewing the NYSDEC *Observed and Projected Climate Change in New York State: An Overview*:

[https://www.dec.ny.gov/docs/administration\\_pdf/ccnys2021.pdf](https://www.dec.ny.gov/docs/administration_pdf/ccnys2021.pdf)





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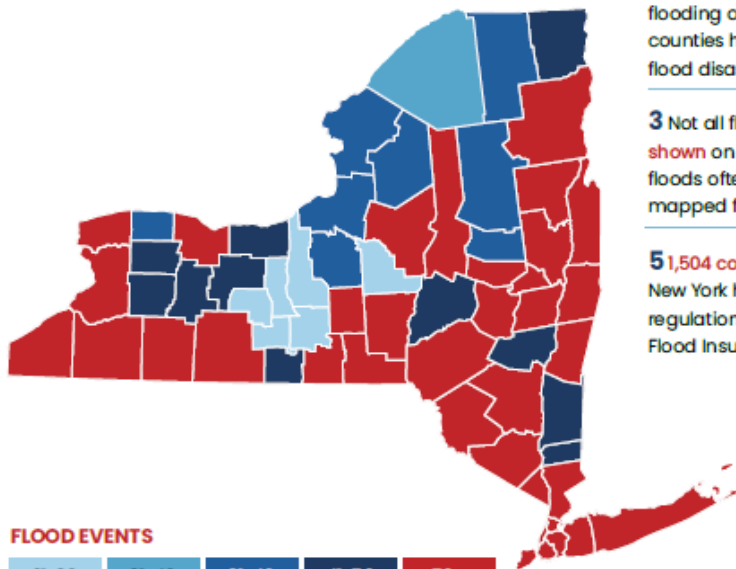
# Argh!

## I JUST FLOODED! NOW WHAT?

**A Quick Guide to Help New York State Residents Recover Smartly**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC)

## New York Floodplain Facts



Flood impacts according to the National Oceanic and Atmospheric Administration Storm Events Database. Source: <https://www.fema.gov/data-visualization/historical-flood-risk-and-costs>.

**1** Every county in New York has seen flooding over the past 12 years. Sixteen counties have had **five or more** federal flood disasters in that time.

**2** Most **High Risk Floodplains** are shown on Flood Insurance Rate Maps.

**3** Not all flood risk areas **are shown** on the flood maps and floods often extend beyond the mapped flood risk area.

**4** Over **620,000 New Yorkers** live in flood risk areas and nearly 20,000 properties have flooded multiple times!

**5** **1,504 counties and municipalities** in New York have adopted flood protection regulations and joined the National Flood Insurance Program.

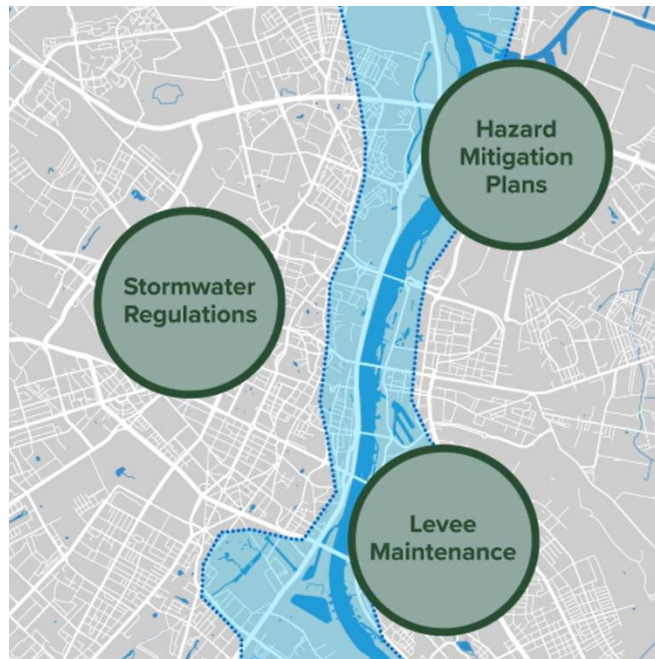
**6** Nearly **61,000 New Yorkers** have taken steps to protect their properties and reduce the chances of future flooding.

- Did You Know?**
- Dangerous floods occur often in New York.
  - Floods can impact coastal areas, small streams, large rivers and urban areas.
  - Programs and funding are available to help New Yorkers reduce the chance of future flooding.

# Community Rating System

The CRS takes a more comprehensive approach and rewards communities for improvements throughout a municipality.

- Reduced Flooding
- Better Stormwater Management
- Better Planning



### 300 SERIES PUBLIC INFORMATION ACTIVITIES

310 Construction Certificate Management	116
320 Map Information Service	90
330 Outreach Projects	350
340 Hazard Disclosure	80
350 Flood Protection Information	125
360 Flood Protection Assistance	110
370 Flood Insurance Promotion	220

#### MAX POINTS

### 400 SERIES MAPPING REGULATIONS

410 Flood Hazard Mapping	850
420 Open Space Preservation	2,870
430 Higher Regulatory Standards	2,462
440 Flood Data Management	222
450 Stormwater Management	755

#### MAX POINTS

### 500 SERIES FLOOD DAMAGE REDUCTION

510 Floodplain Management Planning	762
520 Acquisition and Relocation	2,250
530 Flood Protection	1,600
540 Drainage System Maintenance	470

#### MAX POINTS

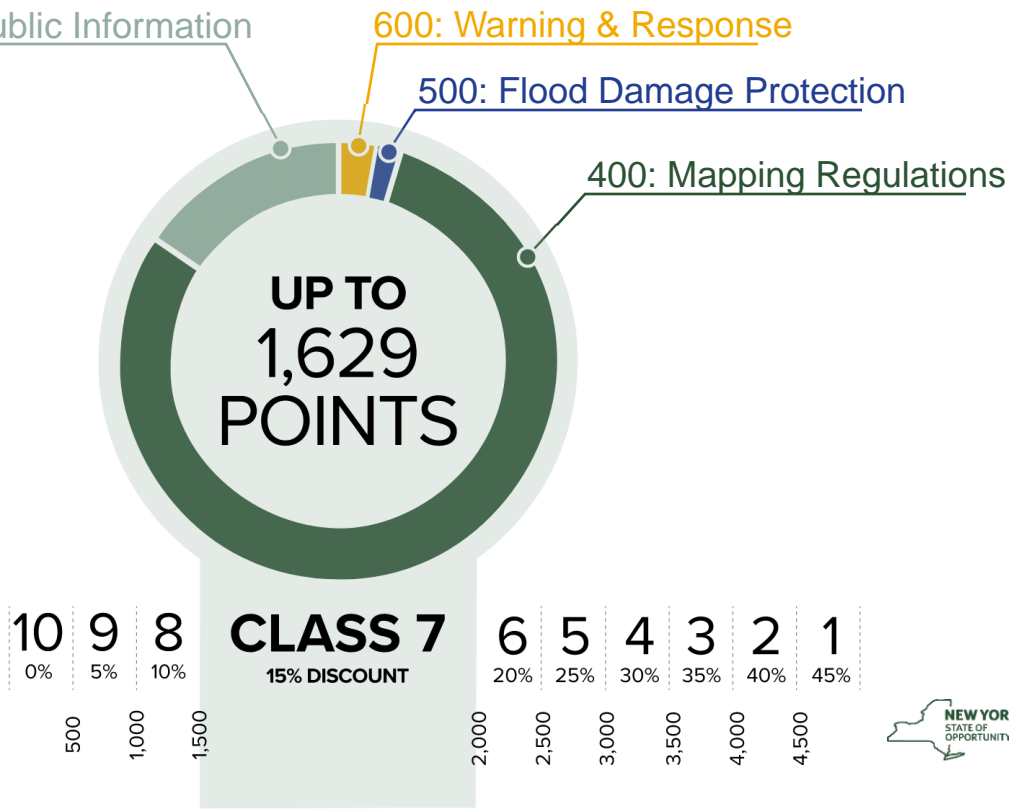
### 600 SERIES WARNING & RESPONSE

610 Flood Warning and Response	395
620 Levees	235
630 Dams	160

#### MAX POINTS



# New York State – Highly Achievable Points



GRANT FUNDING PROGRAMS	CLIMATE SMART COMMUNITIES	WATER QUALITY IMPROVEMENT PROJECT	GREEN INFRASTRUCTURE GRANT PROGRAM	BRIDGE NY	LOCAL WATERFRONT REVITALIZATION PROGRAM
	50% match required	25% match required	10-50% match required*	5% match required	15-25% match required*
SOURCE	NYSDEC	NYSDEC	NYSEFC	NYSBOT	NYSBOS
ELIGIBLE APPLICANTS	<ul style="list-style-type: none"> <li>COUNTY</li> <li>MUNICIPALITY</li> </ul>	<ul style="list-style-type: none"> <li>MUNICIPALITY</li> <li>SOIL &amp; WATER CONSERVATION DISTRICT (SWCD)</li> <li>NOT-FOR-PROFIT</li> </ul>	<ul style="list-style-type: none"> <li>MUNICIPALITY</li> <li>PRIVATE ENTITY</li> <li>STATE AGENCY</li> <li>SWCD</li> </ul>	<ul style="list-style-type: none"> <li>COUNTY</li> <li>MUNICIPALITY</li> <li>OTHER POLITICAL SUBDIVISION</li> </ul>	<ul style="list-style-type: none"> <li>MUNICIPALITY ADJACENT AND/OR INTERSECTING A WATERWAY</li> </ul>
SUBMISSION TIMING	ANNUAL (JULY)	ANNUAL (JULY)	ANNUAL (JULY)	ANNUAL (JANUARY 2022-2027)	ANNUAL (JULY)
APPLICABLE ELEMENTS	<ul style="list-style-type: none"> <li>MITIGATION PROJECTS REDUCING GREENHOUSE GAS EMISSIONS OR INVOLVING RENEWABLE ENERGY</li> <li>ADAPTATION PROJECTS INCREASING/ PRESERVING NATURAL RESILIENCE, REDUCING FUTURE FLOOD RISK, REPLACING FLOW BARRIERS OR PREPARING FOR EXTREME HEAT</li> </ul>	<ul style="list-style-type: none"> <li>WASTEWATER TREATMENT IMPROVEMENTS,</li> <li>NON-AGRICULTURAL NONPOINT SOURCE</li> <li>ABATEMENT &amp; CONTROL, LAND ACQUISITION FOR SOURCE WATER PROTECTION</li> <li>SALT STORAGE</li> <li>AQUATIC CONNECTIVITY &amp; RESTORATION</li> <li>MARINE DISTRICT HABITAT RESTORATION</li> </ul>	<ul style="list-style-type: none"> <li>GREEN STORMWATER INFRASTRUCTURE</li> <li>ENERGY EFFICIENCY</li> <li>WATER EFFICIENCY</li> <li>ENVIRONMENTAL INNOVATION</li> </ul>	REHABILITATION AND REPLACEMENT OF BRIDGES AND CULVERTS ON PUBLIC ROADWAYS ELIGIBLE FOR FEDERAL AID IN ALL PHASES OF PROJECT DEVELOPMENT, INCLUDING DESIGN, RIGHT-OF-WAY ACQUISITION, AND CONSTRUCTION	DEVELOPING A REVITALIZATION PROGRAM OR LOCAL WATERFRONT REVITALIZATION PLANNING: <ul style="list-style-type: none"> <li>STATE &amp; LOCAL COASTAL POLICY IMPLEMENTATION AND ADOPTION</li> <li>LOCAL WATERFRONT REVITALIZATION EXECUTION</li> </ul>
GRANT LINKS	<a href="#">CSC PROGRAM APPLICATION INFO</a>	<a href="#">WQIP PROGRAM &amp; APPLICATION INFO</a>	<a href="#">GIGP PROGRAM APPLICATION INFO</a>	<a href="#">BRIDGE NY PROGRAM &amp; APPLICATION INFO</a>	<a href="#">LWRP PROGRAM APPLICATION INFO</a>

\*Funding provided based on fulfillment of the project evaluation criteria, at the discretion of the program managers, and is a maximum of \$3 million.

\*\*If the project is located in an environmental justice community, the local match is 15%, if not, it is 25%.

# RATING SYSTEM: OVERLAP WITH CLIMATE SMART COMMUNITIES PLEDGE ELEMENT 7

This matrix is intended to help municipalities identify overlaps between the Community Rating System (CRS) Program and the Climate Smart Communities (CSC) Certification Program **Pledge Element 7: Enhance Climate Change**. It highlights areas where the municipality may already be conducting CRS eligible activities, or can invest in activities that earn credit for the CRS program. Municipalities can better gauge potential from the CRS program and the CSC program using this matrix.

SYSTEM	CLIMATE SMART COMMUNITIES (CSC) Pledge Element 7 Actions																			Opportunities to Achieve CRS Points Through the CSC Program		
	Climate Vulnerability Assessment	Evaluate Policies for Climate Resilience	Climate Adaptation Plan	Hazard Mitigation Plan	Emergency Plan	Shelter-in-Place Policy	Evacuation Centers	Protective Natural Areas	Watershed-based Flood Mitigation	Develop Flood Elevation & Flood	Revised Policies	Infrastructure	Dams & Levees	Flood Buffers	Strategic Relocation	Ecosystem-based Shorelines	Community Rating System	Revised Plan for Water Quality	Source Water Protection		Water Conservation & Reuse	Water-smart Landscaping
on																						13
lations																						16
Reduction																						9
onse																						3
SC ements	2	1	2	4	0	0	0	3	3	2	2	1	4	2	3	1	4	1	0	3	2	40

Program

LEGEND: NUMBER OF OVERLAPPING ACTIONS

0 1-2 3-4 5-7 8-10 over 10



# Climate Smart Communities Pledge Element 7

## 7. Enhance community resilience to climate change.

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### PE7 Action: Climate Vulnerability Assessment

7 Points

 Bronze Priority  Silver Priority

#### Program Summary:

PDF: [ALBANY CLIMATE CHANGE - VULNERABILITY ASSESSMENT & ADAPTATION \(FINAL SEPT 2013\).PDF](#)

PDF: [PLEDGE ELEMENT 7 DOCUMENTATION SUBMITTAL FORM.PDF](#)

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### PE7 Action: Climate Adaptation Plan

5 Points

#### Program Summary:

PDF: [ALBANY CLIMATE CHANGE - VULNERABILITY ASSESSMENT & ADAPTATION \(FINAL SEPT 2013\).PDF](#)

PDF: [PLEDGE ELEMENT 7 DOCUMENTATION SUBMITTAL FORM.PDF](#)



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## 300 SERIES

## COMMUNITY RATING SYSTEM: OVERLAP WITH CLIMATE SMART COMMUNITIES PLEDGE ELEMENT 7



HOW TO USE THE MATRIX. This matrix is intended to help municipalities identify overlaps between the Community Rating System (CRS) Program and the Climate Smart Communities (CSC) Certification Program **Pledge Element 7: Enhance Community Resilience to Climate Change**. It highlights areas where the municipality may already be conducting CRS eligible activities, or can invest in activities that earn credit for the CRS program. Municipalities can better gauge potential enrollment in and benefit from the CRS program and the CSC program using this matrix.

NFP COMMUNITY RATING SYSTEM (CRS) 300 SERIES: PUBLIC INFORMATION	CLIMATE SMART COMMUNITIES (CSC) Pledge Element 7 Actions																				Opportunities to Achieve CRS Points Through the CSC Program	
	Climate Vulnerability Assessment	Evaluate Policies for Climate Resilience	Climate Adaptation Plan	Hazard Mitigation Plan	Heat Emergency Plan	Shade Structures Policy	Cooling Centers	Conserve Natural Areas	Watershed-based Flood Mitigation Plan	Design Flood Elevation & Flood Maps	Freeboard Policies	Green Infrastructure	Culverts & Dams	Riparian Buffers	Strategic Relocation	Nature-based Shorelines	NFP Community Rating System	Watershed Plan for Water Quality	Source Water Protection	Water Conservation & Reuse		Water-smart Landscaping
310 Elevation Certificates																						1
320 Map Information Service																						9
330 Outreach Projects																						4
340 Hazard Disclosure																						1
350 Flood Protection Information																						11
360 Flood Protection Assistance																						1
370 Flood Insurance Promotion																						1
Opportunities to Achieve CSC Pledge Actions With CRS Elements	2	2	1	2	0	0	0	2	2	2	1	0	1	0	3	0	7	0	0	1	2	28

# Floodplain Managers Handbook

NYSDEC Floodplain Managers Handbook  
Chapter 11 Supplement

## Community Rating System

The Community Rating System (CRS) is a voluntary national program developed by the Federal Emergency Management Agency (FEMA) that rewards communities for going above and beyond the minimum requirements of the National Flood Insurance Program (NFIP) to help their citizens prevent or reduce flood losses. Any community fully compliant with the NFIP floodplain management requirements may apply to join the CRS. The CRS also provides an incentive for communities to initiate new flood risk reduction activities.

### Goals

There are three main goals to the CRS:

**Goal 1: Reduce and Avoid  
Flood Damage to Insurable  
Property**

**Goal 2: Strengthen and  
Support the Insurance Aspects  
of the NFIP**

**Goal 3: Foster  
Comprehensive Floodplain  
Management**



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## COMMUNITY RATING SYSTEM INTERACTIVE MAP USER GUIDE

<https://experience.arcgis.com/experience/95f9e9ca30354e049022f7d039621dd9>

**New York State Community Rating System**

**BASEMAPS**

- Click here to change the basemap

**SELECTION TOOL**

- Click here to select multiple features within or partially contained by an area

**MEASURE TOOL**

- Click here to measure a distance between two points or measure an area within a set of points

**LEGEND**

- Zoom to layer, adjust transparency, link to layer description site, layer details, and export all
- Display layer legend
- Click arrow beside each layer to view sublayers
- Check boxes to turn layers on and off

**SCALE BAR**

- Automatically adjusts to the scale of the map when zooming in and out, in both imperial and metric units

**DRAW**

- Click this to draw on the map

**PRINT**

- Click this to print a pdf or image of the map on a selected template

**NAVIGATION**

- Click this to reorient the map north
- Click this to find your current location
- Click these icons to zoom in and out
- Click this to reset to the default map extents (New York State)
- This indicated the amount of features you have selected using the selection tool

100 km  
60 mi

Selected features: 0





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# Resources



# Online Resources



- CRS Resources - <https://crsresources.org/>
- Success With CRS - <https://successwithcrs.us/>
- New York State Floodplain and Stormwater Managers Association (NYSFSMA) - <https://nyfloods.org/>
- NYSDEC Floodplain Management - <https://www.dec.ny.gov/lands/24267.html>
- Association of State Floodplain Managers (ASFPM) - <https://www.floods.org/>

## Additional References



1

**Flood Science Center**  
Association of Floodplain Managers



2

**NYFloods.org**  
Association of Floodplain Managers



3

**FEMA**  
Floodplain Management



4

**NYSDEC**  
Floodplain Management

# Acknowledgements

Resources developed by:



**P. Oz Consulting, LLC |  
Karen Birky Graphic Design**



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# Thank You

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## Agenda

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- 3 **Q&A**



Thank you!

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