



**Department of
Environmental
Conservation**



New York State
Water Resources Institute
Cornell University

Stream Buffer Protection Resources

Beth Roessler – Stream Buffer Coordinator
Hudson River Estuary Program

September 16, 2020

Stream Buffer Protection Resources

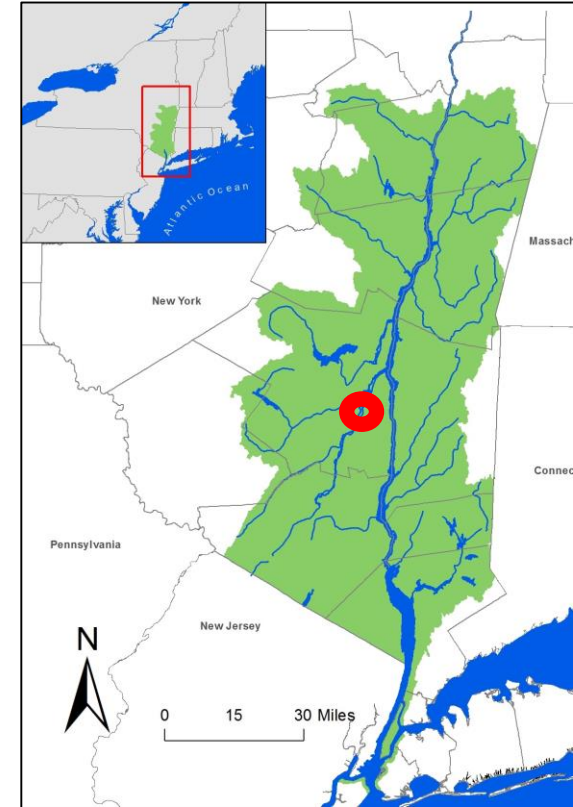
Tools to Assess, Plan, Prioritize and Implement protection

- Mapping tools
- Assessment tools
- Planning and prioritizing tools
- Implementation funds
- Who can help?

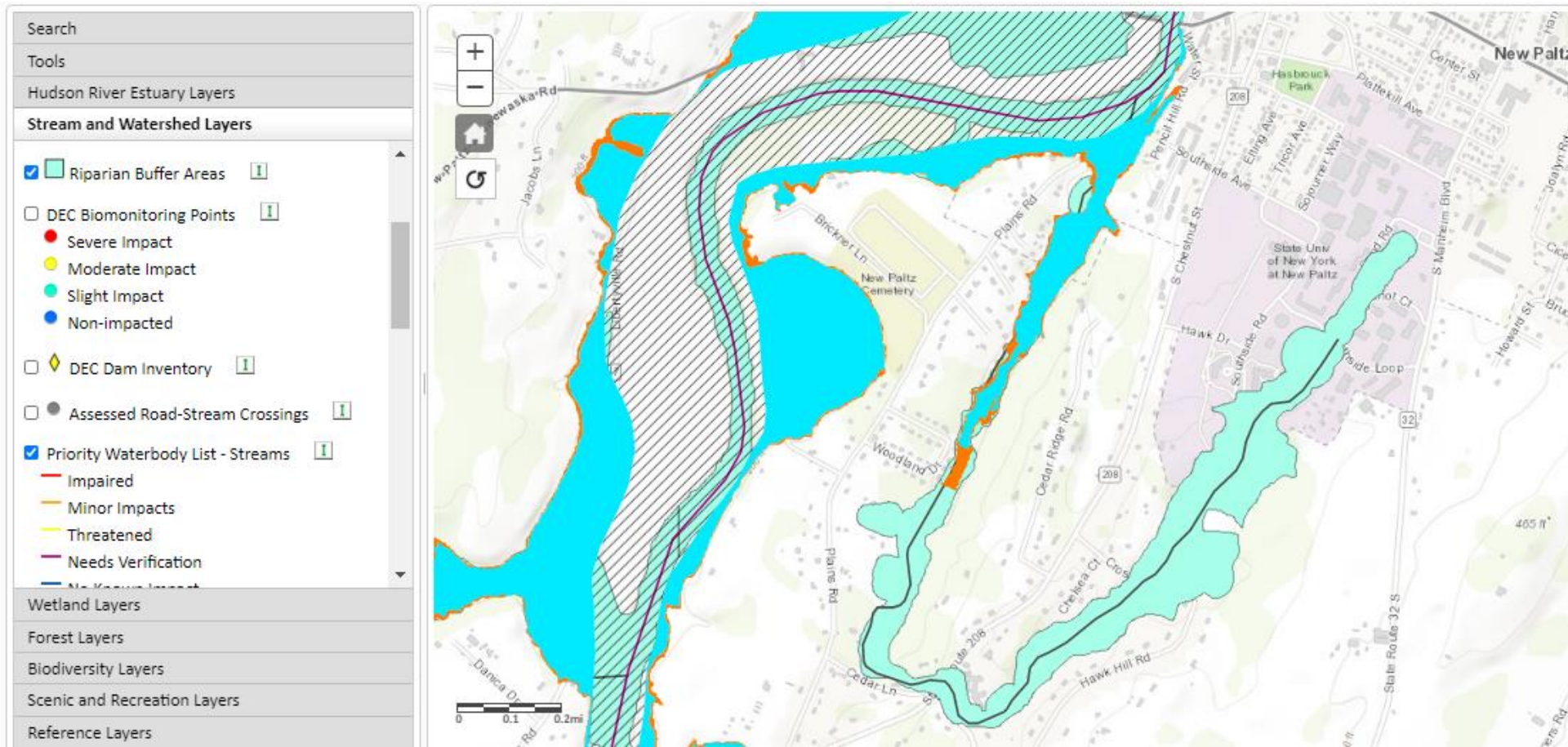


Existing Data – Online Map Tools

- [Hudson Valley Natural Resource Mapper](#)
- [DECInfo Locator](#)
- [Environmental Resource Mapper](#)
- [StreamStats \(USGS\)](#)
- [NY Riparian Opportunities Assessment](#)
- County Mapping platforms
- Aerial photos – e.g. Google, Yahoo, etc



Hudson Valley Natural Resource Mapper



DECinfo Locator

Search

Tools


DEC Information Layers

Environmental Quality Outdoor Activity

Permits and Registrations

Environmental Cleanup

Environmental Monitoring

☐ Check / Uncheck all  Layer Information

☐ Lakes and Reservoirs

☐ Estuaries

☒ Rivers and Streams

☐ Shorelines

☐ Air Quality Monitoring Sites

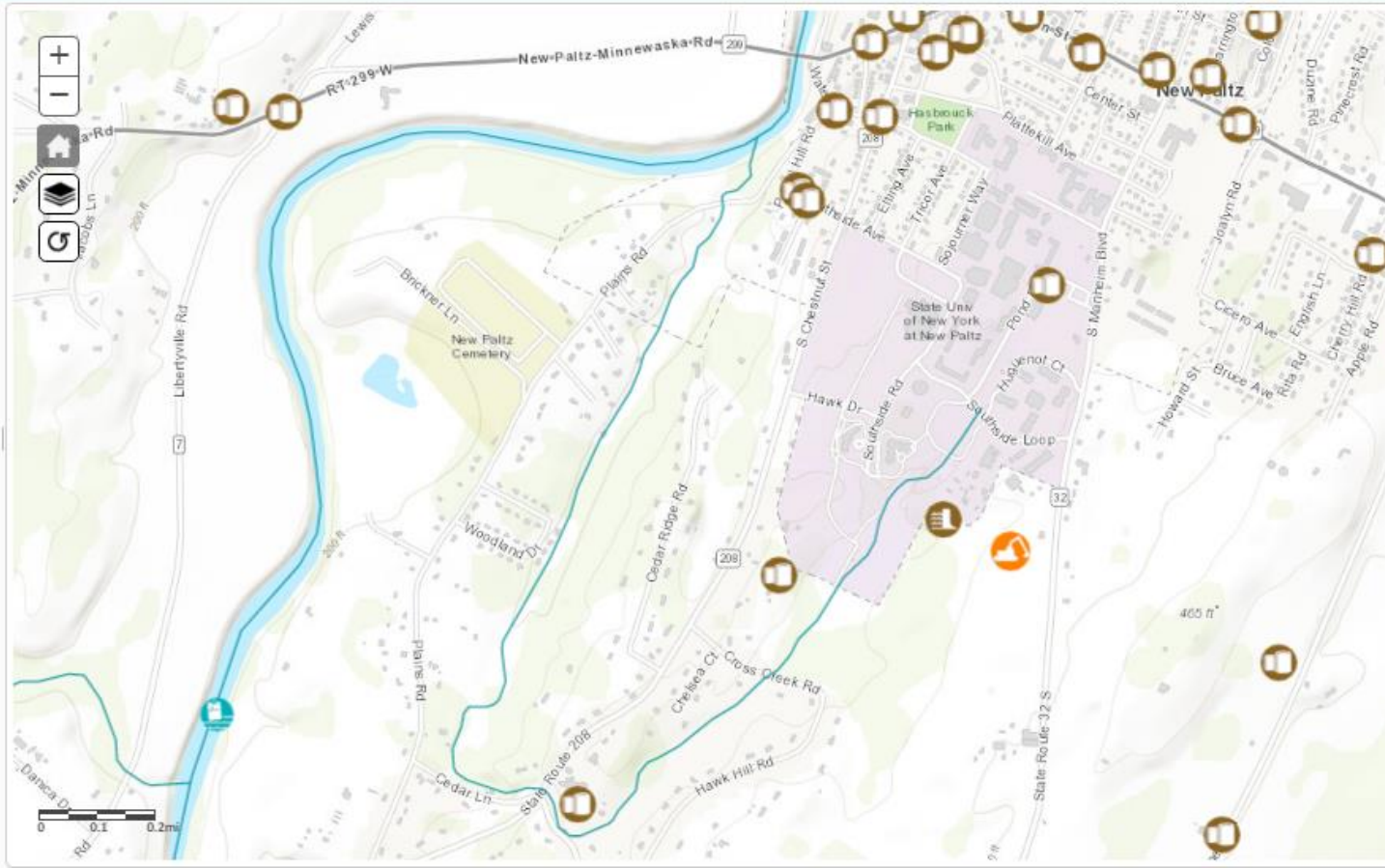
☒ Aquatic Biological Monitoring

Public Involvement

Environmentally Sensitive Areas

Legal Information

Reference Layers



StreamStats - Streams



StreamStats

Report

About

Help

SELECT A STATE / REGION

New York ⓘ ▼

IDENTIFY A STUDY AREA ➔

Step 2: Click the 'Delineate' button to activate the delineation tool

📍 Delineate

SELECT SCENARIOS ▼

BUILD A REPORT ▼

POWERED BY WIM

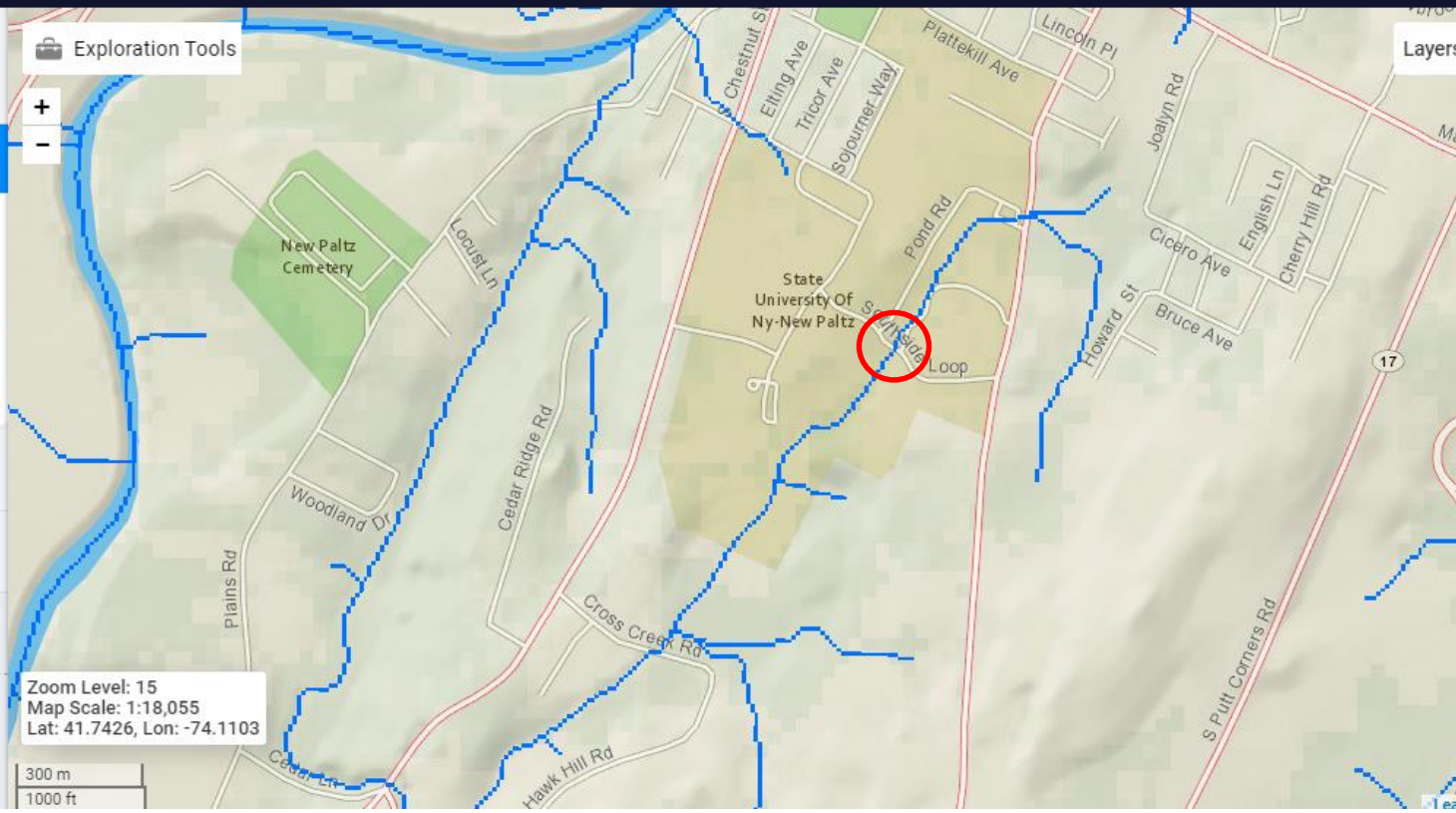
[USGS Home](#) [Contact USGS](#) [Search USGS](#)
[Accessibility](#) [FOIA](#) [Privacy](#) [Policy & Notices](#)

🔧 Exploration Tools



Zoom Level: 15
Map Scale: 1:18,055
Lat: 41.7426, Lon: -74.1103

300 m
1000 ft



Layers

StreamStats – Delineate a Watershed



StreamStats

Report About Help

SELECT A STATE / REGION

New York ⓘ ▾

IDENTIFY A STUDY AREA

Basin Delineated ▾

SELECT SCENARIOS ▶

Step 1: Select a scenario below, or expand the "Basin Characteristics" panel to select specific basin characteristics.

Regression Based Scenarios ⓘ

Peak-Flow Statistics

Flow-Duration Statistics

Bankfull Statistics

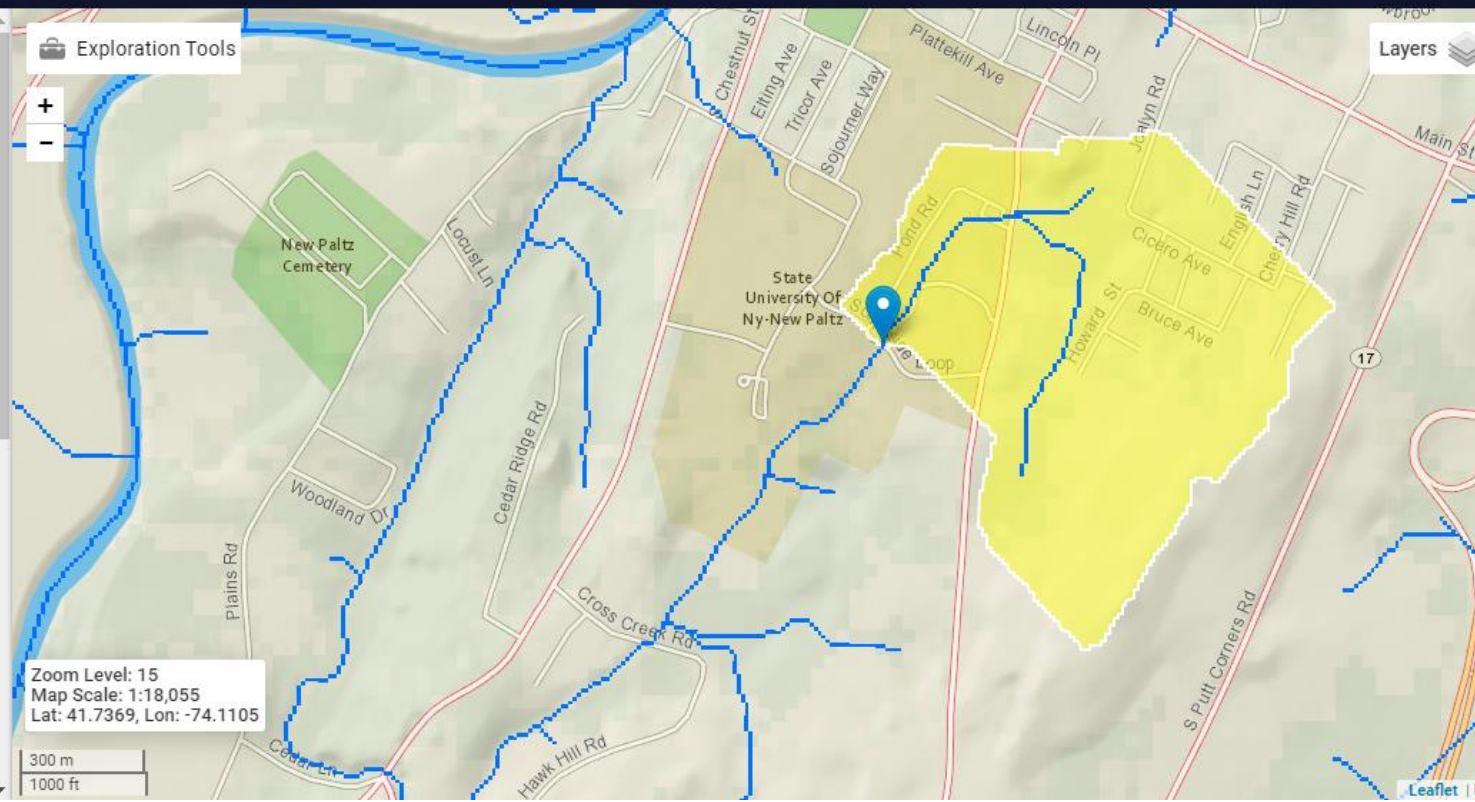
Exploration Tools



Zoom Level: 15
Map Scale: 1:18,055
Lat: 41.7369, Lon: -74.1105

300 m
1000 ft

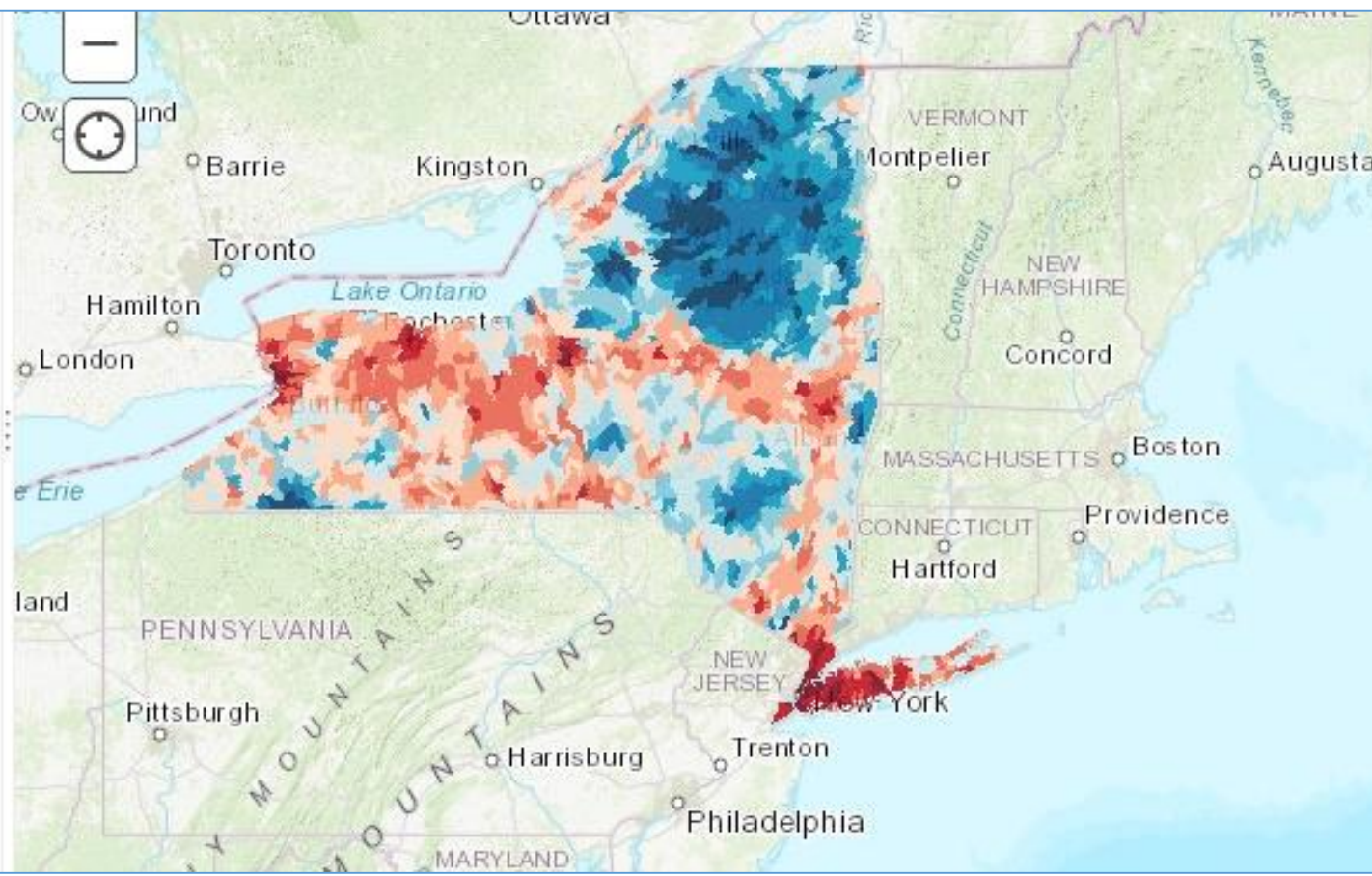
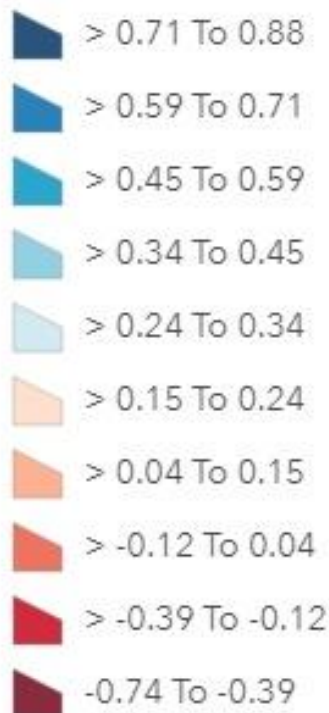
Layers



NY Riparian Opportunities Assessment

Comprehensive Score

Comprehensive Score



NY Riparian Opportunities Assessment

Contents

☒ Comprehensive Score


Percentile Comprehensive Score

 > 81 - 100

 > 60.9 - 81

 > 40.9 - 60.9

 > 21 - 40.9

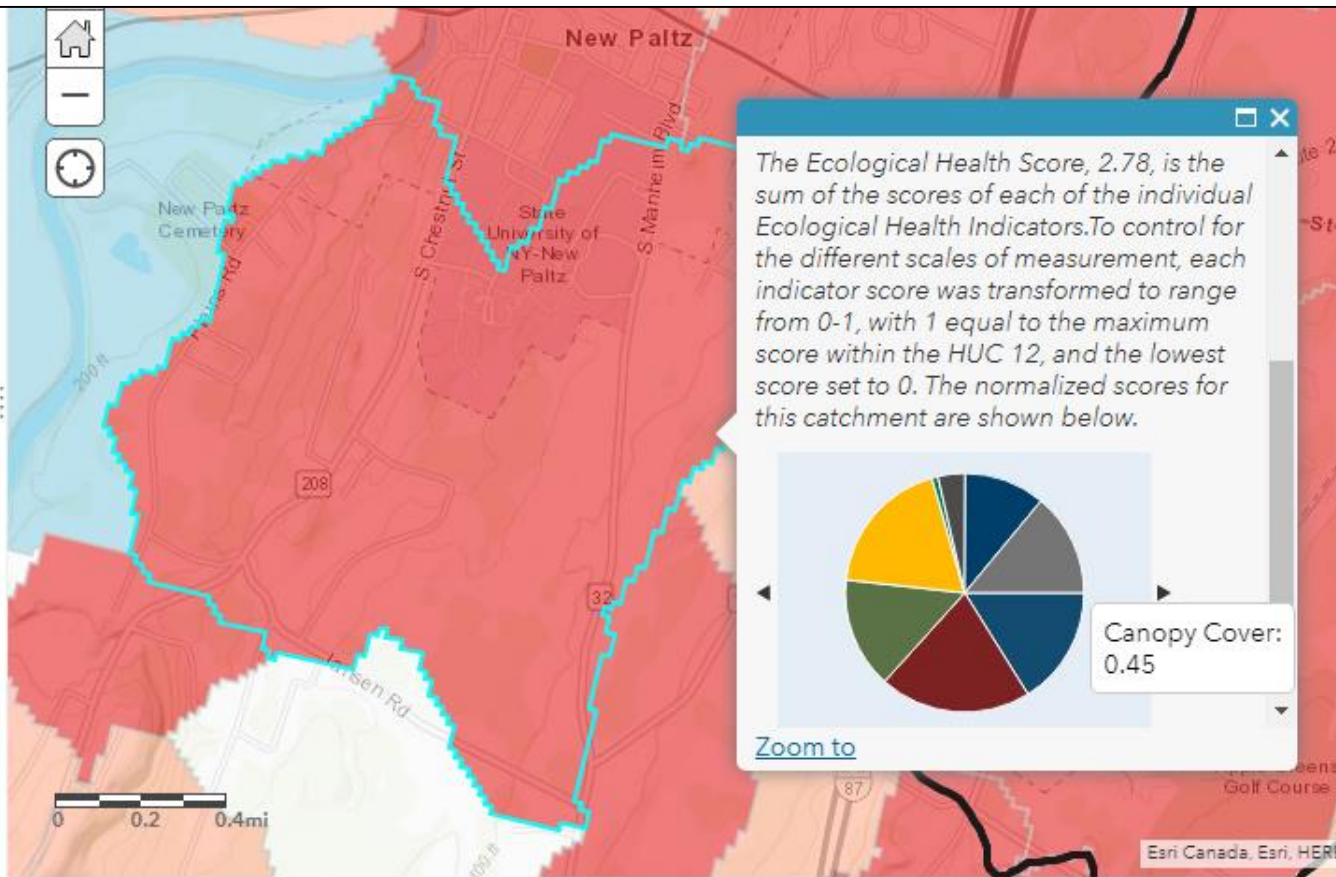
 0 - 21

☐ Health Score

☐ Stress Score

☐ Resilience Score

☐ Community Involvement Score



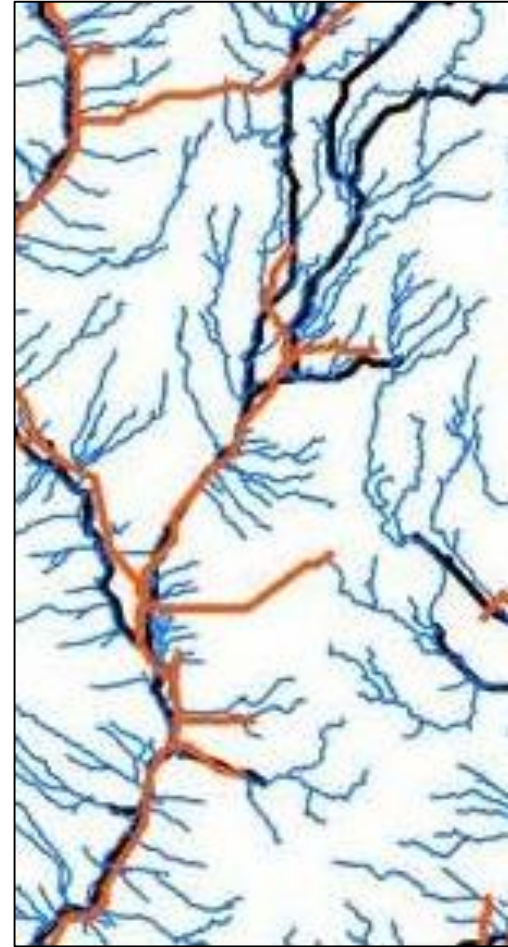


Google



Map Disclaimers

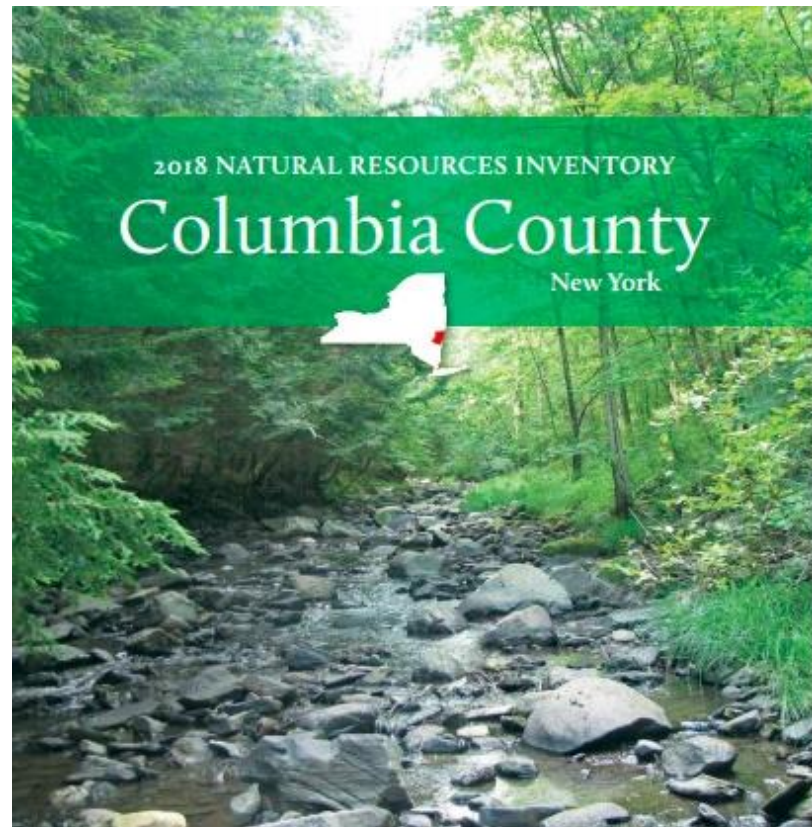
- Layers are created at different scales
- Layers were created for different purposes
- Maps have errors and omissions
- Not all streams are mapped
- For local decisions – visit the site!
- For permit questions – contact permit agency
- [DEC Permits](#)



from (Liu, et al 2005)

Existing data - Local Documentation

- Watershed plans / watershed assessments / flood studies
- Natural Resource Inventory / Open Space Plan
- Existing Local Watercourse protection ordinances
- Historical documents

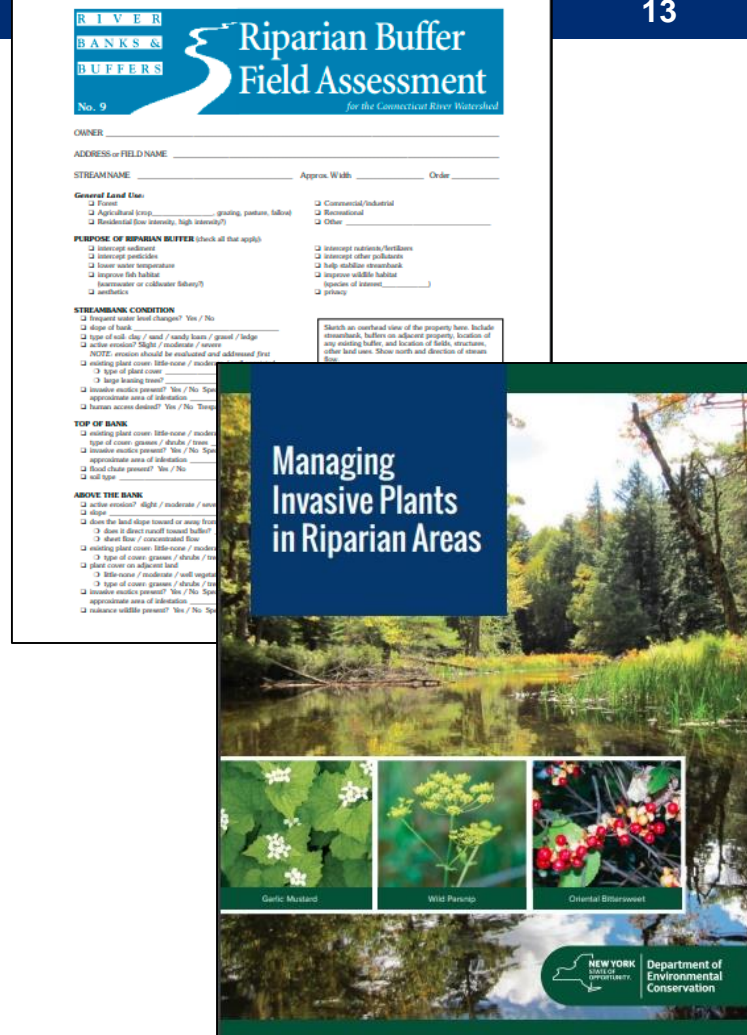


Assessment Guides

- [Riparian field assessment / checklist](#)
- [Stream corridor assessment](#)

Invasive Species

- [Guide to Managing Invasive Plants in Riparian Areas \(DEC\)](#)
- [Partnerships for Regional Invasive Species Management \(PRISM\)](#)



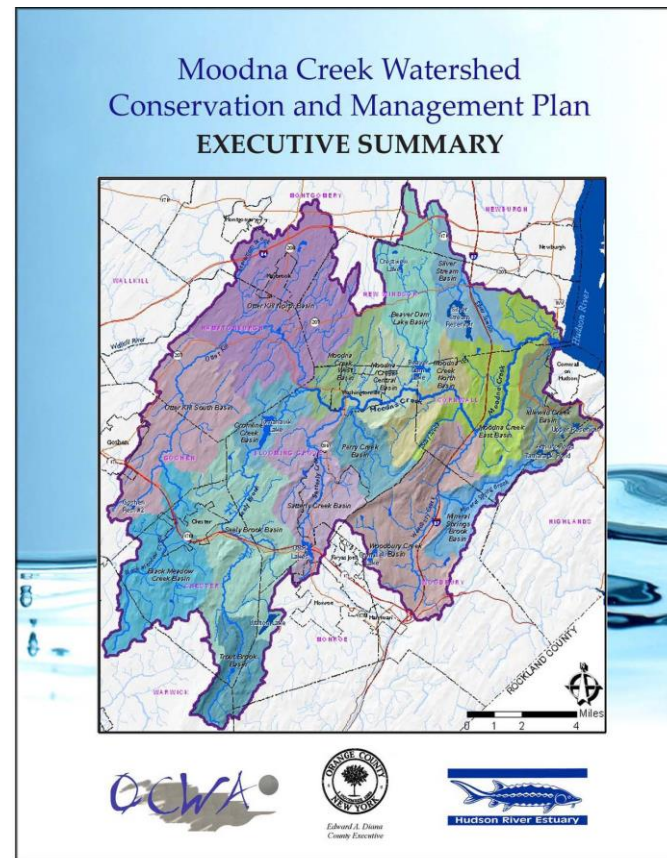
Planning – data, goals, priorities

Watershed

- Watershed Characterization
- Watershed Plan
 - DOS - [Guidebook](#)
 - DEC - [Nine Element Plan](#)

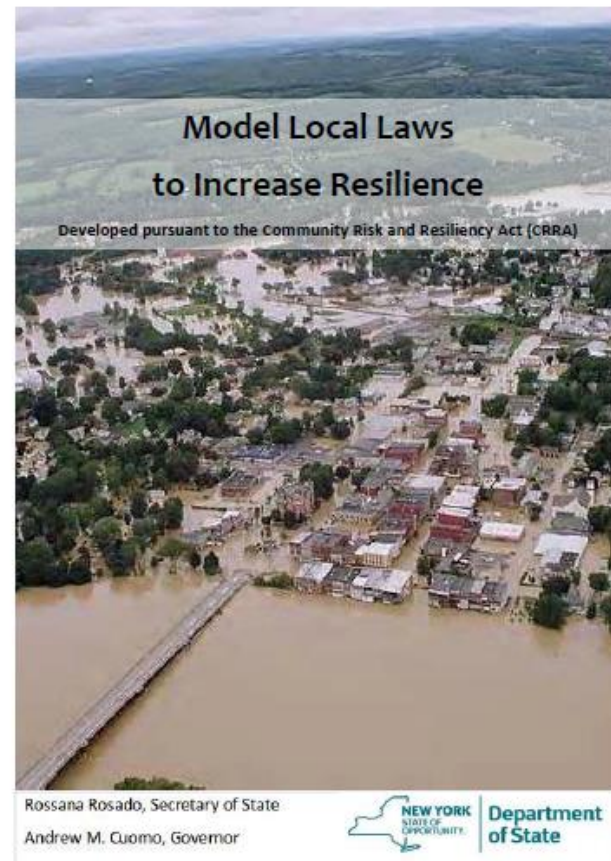
Municipal

- [Natural Resource Inventory](#)
- [Open Space Plan](#)



Municipal Protection tools

- Watercourse protection policies
- Designate Critical Environmental Areas
- Consider streams in environmental review
- Conservation Easements
 - [From PA conservationtools.org](http://PAconservationtools.org)
 - [Catskill Streams - Streamside acquisition](http://CatskillStreams.org)



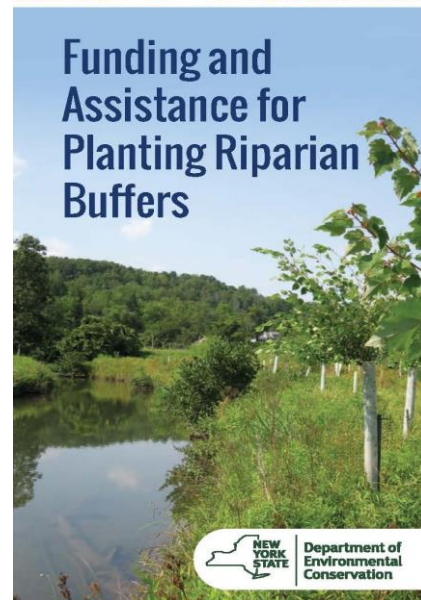
<https://www.dos.ny.gov/opd/programs/resilience/index.html>

State funding for restoration and protection

- NYS Environmental Facilities Corporation
 - Green Innovation Grant Program
- Climate Smart Communities
- NYS Dept of Environmental Conservation
 - Water Quality Improvement Project (WQIP)
 - Hudson River Estuary Grants
 - Trees for Tribs
 - Hudson Estuary Trees for tribs
 - Trees for Tribs (statewide)



Funding and
Assistance for
Planting Riparian
Buffers



Agricultural Funding

State

- **Ag Nonpoint Source Abatement and Control -**
Technical and financial assistance for practices to preventing water pollution

Federal Programs

- **Conservation Reserve Enhancement Program (CREP) -**
financial incentives to plant buffers
- **Debt for Nature (DFN) Program –**
loan cancellation for conservation practices
- **Environmental Quality Improvement Program (EQIP) –**
financial and technical assistance for practices on farmland and forestland.

Green Innovation Grant Program (GIGP)

Establish or Restore Floodplains,
Riparian Buffers, Streams or
Wetlands

- Floodplain restoration and replanting
- Lake-side tree planting
- Wetland construction
- Brownfield to park with wetland and buffer



Berm Removal and Replanting, Tioga County (NYSEFC)

Climate Smart Communities

- Restoration Floodplains & Riparian Buffers
- Preserve Natural Areas Through Zoning or Other Regulations
- Natural Resources Inventory
- Watershed Assessment
- Conservation of Natural Habitats



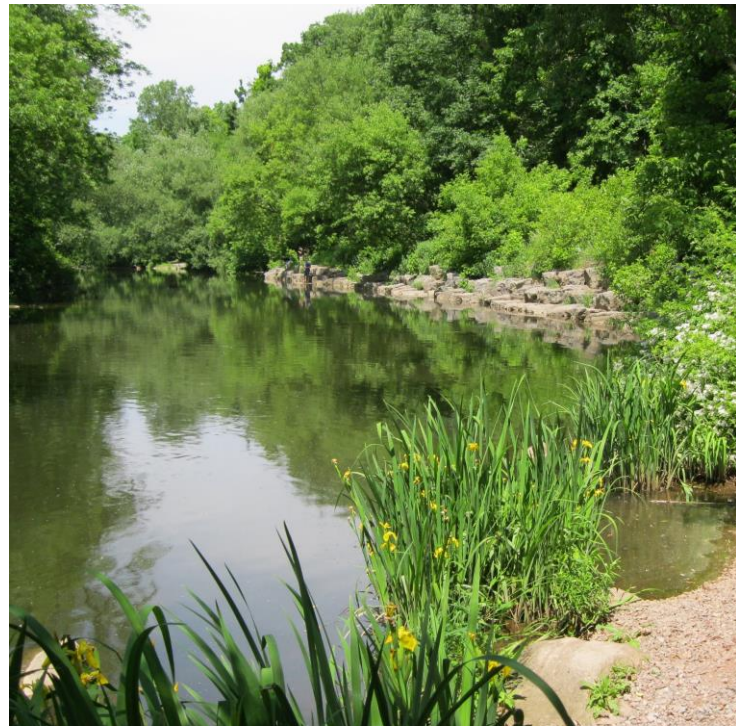
Water Quality Improvement Program (WQIP)

Non-Point Source Abatement and Control

- Streambank Stabilization/Restoration and Riparian Buffers
- Land Acquisition for Source Water Protection
 - Easement / land acquisition
 - High Priority for buffer around reservoir

Aquatic connectivity

**Based on 2019 description*



Hudson River Estuary Grants

Local Stewardship Planning

- Watershed planning
- Conservation planning (NRI, Open Space plans)

Tributary Restoration and Resiliency

- Aquatic passage (culverts and dams)

**Based on 2019 description*

wallkill river
watershed alliance
we fight dirty

2019 ALMANAC

Hudson Estuary Trees for Tribes - Revegetation

- Native trees and shrubs
- Plant protection
- Planting recommendations
- Education and planting demonstrations
- *Applicant provides labor and maintenance*



Web Pages with Resource Links

- [NYS Dept of Env Conservation - *Riparian Buffers*](#)
- [NYS Water Resources Institute/Cornell - *Riparian Buffer Restoration & Assessment*](#)
- [Catskill Streams - *Catskill Stream Buffer Initiative*](#)
- [Cornell Department of Natural Resources and the Environment - *Conservation Planning in the Hudson River Estuary Watershed*](#)

Technical Assistance

- [NYS Dept of Env Conservation](#)- trainings, grants, permits
- NYS Dept of State - [planning assistance](#), grants
- [Hudson River Watershed Alliance](#) - trainings and resources
- [Soil and Water Conservation Districts](#) – agricultural projects, stream dynamics, plants
- [Cornell Cooperative Extension](#) – [resilience planning](#), plant id
- [Partnerships for Regional Invasive Species Management \(PRISM\)](#) – invasive species

Local Partners

- [Watershed groups](#)
- County government
- Conservation Organizations
- Colleges
- Streamside residents
- Volunteer Groups
- Users (kayakers, anglers, streamside park users)



Thank You

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