

# **Role of Tompkins County in Water Resource Protection and Management**

NYSFOLA Western Regional Conference  
October 26, 2024



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Planning &  
Sustainability



# Overview

## Collaborations, Partnerships, Stakeholders

### Planning Documents

- Strategic Operations Plan
- Comprehensive Plan
- Water Quality Strategy
- HABs Strategy
- Resiliency and Recovery Plan

### Implementation

- Aquifer studies
- Wetlands mapping
- Natural Infrastructure Capital Program
- Grants



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# Who am I? Who are we?

Darby Kiley

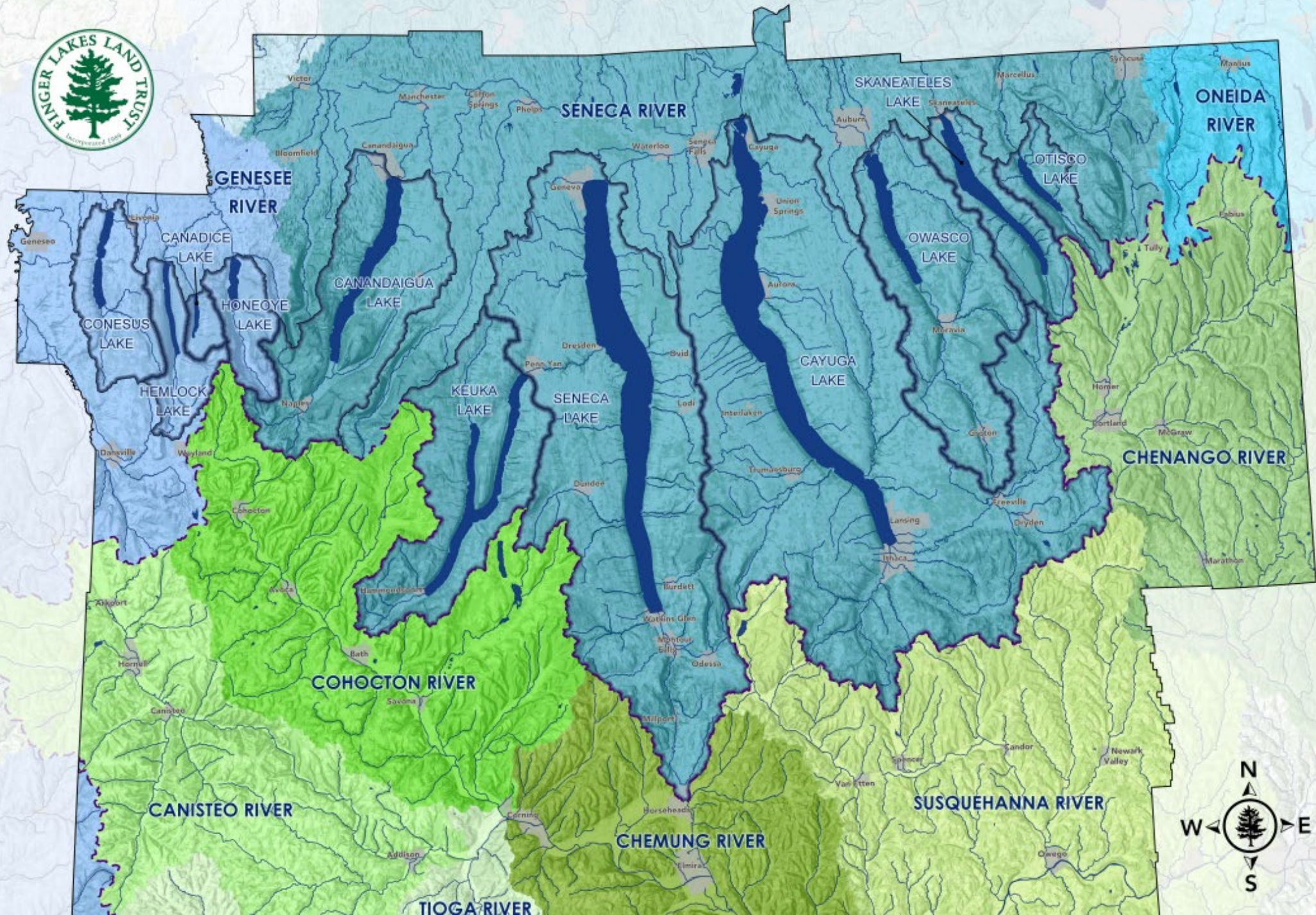
- Cayuga Lake Watershed Intermunicipal Organization (CWIO)
- Town planner (Lansing, Ithaca, Ulysses)
- 2018 - Tompkins County Department of Planning and Sustainability

TCDPS

- 14 staff members with expertise in housing, environmental planning, sustainability, transportation, tourism



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# THE CAYUGA LAKE WATERSHED

Cayuga, Cortland, Schuyler, Seneca, Tioga, and Tompkins Counties



See your watershed at [FLLT.ORG/WATER](http://FLLT.ORG/WATER)

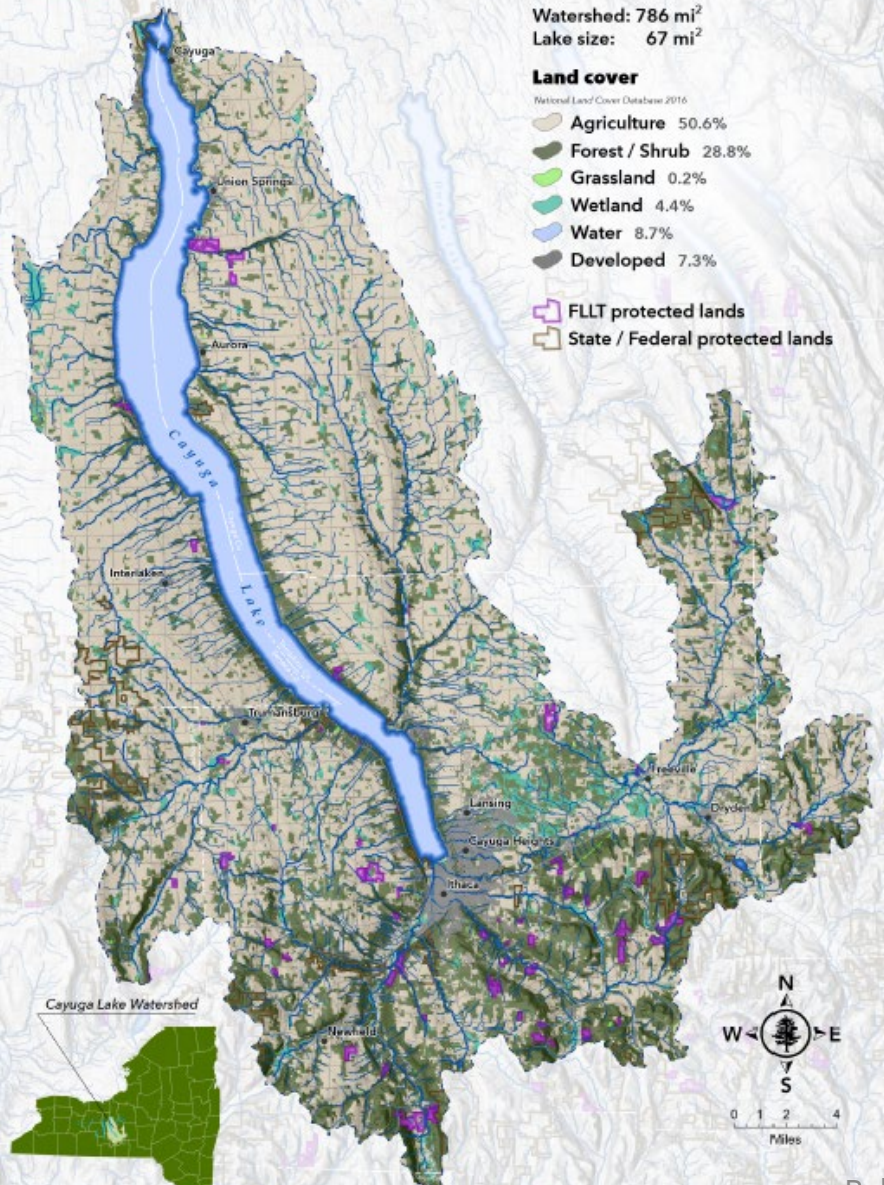
Watershed: 786 mi<sup>2</sup>  
Lake size: 67 mi<sup>2</sup>

### Land cover

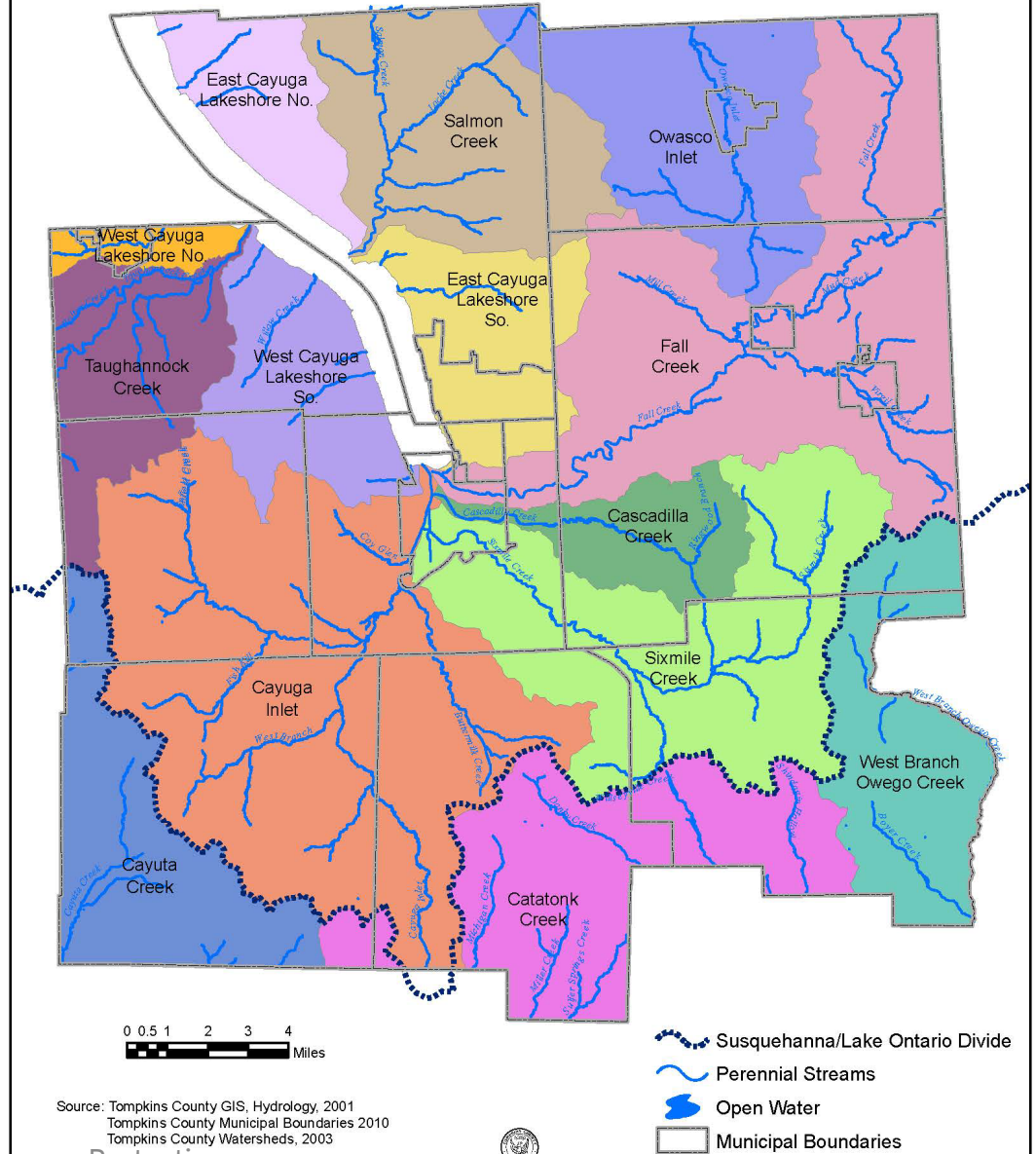
National Land Cover Database 2016

-  Agriculture 50.6%
-  Forest / Shrub 28.8%
-  Grassland 0.2%
-  Wetland 4.4%
-  Water 8.7%
-  Developed 7.3%

-  FLLT protected lands
-  State / Federal protected lands



# Tompkins County Watersheds



# Collaboration, Partnerships, Stakeholders

- County Legislature – Planning, Energy, and Environmental Quality
  - Water Resources Council, Environmental Management Council, Planning Advisory Board, Climate and Sustainable Energy Board
- DPS
  - Hazard Mitigation Partners, GML 239 guide
- Membership on Cayuga Lake Watershed Intermunicipal Organization, Drinking Water Source Protection Plan committees



# Planning Documents



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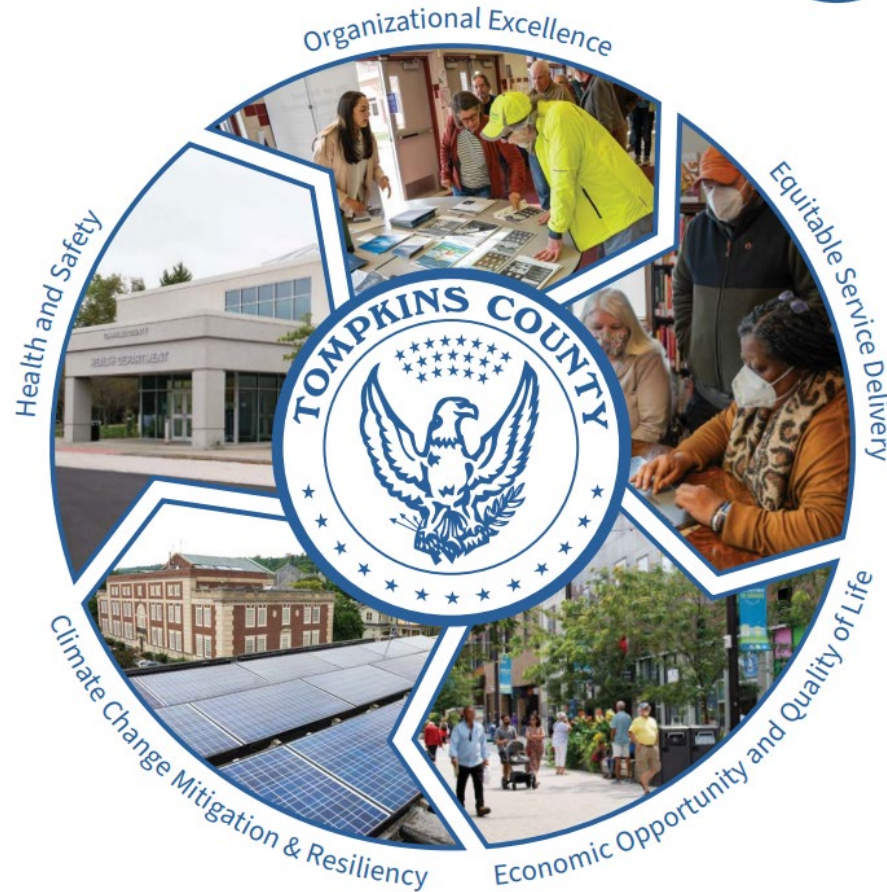
# 2024 Strategic Operations Plan

- The planning process resulted in a new **mission** and **vision**, updated **values**, and a reaffirmation of the **diversity statement**.
- **Our mission:** Tompkins County safeguards and enhances lives by providing services driven by the needs of its community.
- **Our Vision:** All Tompkins County residents thrive in a supportive, healthy, safe, and inclusive environment.
- **Our Values:** Respect, Accountability, Integrity, Equity, Stewardship
- **Diversity Statement:** Tompkins County Government centers diversity, equity, and inclusion. We are committed to the empowerment of employees and residents to dismantle systemic barriers that inhibit inclusive governance and the provision of government services to all.





# 2024 Strategic Priorities



- Organizational Excellence
- Equitable Service Delivery
- Economic Opportunity and Quality of Life
- **Climate Change Mitigation and Resiliency**
- Health and Safety

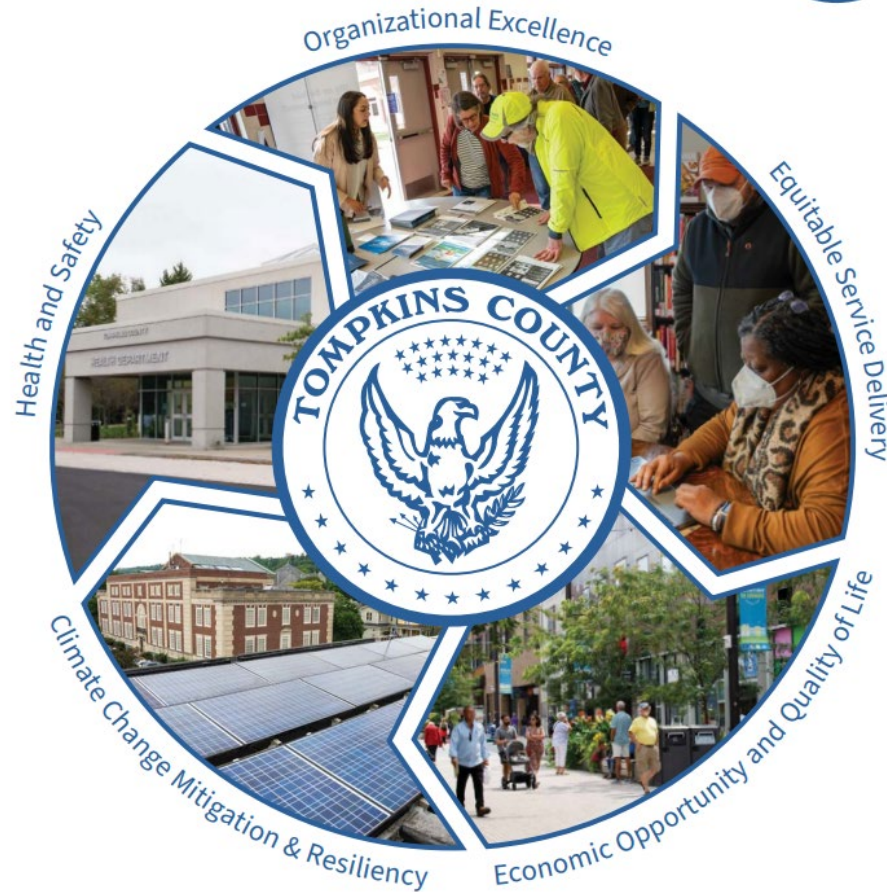


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# 2024 Strategic Priorities



## Climate Change Mitigation and Resiliency

- Reduce flooding and improve habitat corridors
- Improve water quality and reduce sediment and phosphorus
- Combat impacts of drought and improve water supply resiliency



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10/28/2024

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10



- Overarching Principles: Sustainability, Regional Cooperation, Fiscal Responsibility
- Water resources addressed in Environment and Climate Change chapters
- Water resource principle: Tompkins County should be a place where water resources are clean, safe, and protected.

# Comp Plan: Environment – Natural Resources

- Promote specific land use tools that protect important lands.
- Proactively engage owners of land located in priority protection areas to participate in long-term conservation programs.
- Promote stream corridor protection efforts.
- Develop a program to protect wetlands and aquifer recharge areas in the county.



# Comp Plan: Environment – Water Resources

- Contribute to NYSDECs work assessing and improving water quality in the southern end of Cayuga Lake
- Develop an integrated green infrastructure program that combines existing efforts to identify and protect the quality of stream corridors, wetlands, and aquifers.
- Support the Water Resources Council in its work to update delineation of wetland resources in the County



# Comp Plan – 5-Year review

- **HABs Strategy:** Establish a detailed countywide Harmful Algal Blooms (HABs) strategy.
- **Stream Corridor Protection:** Provide resources to local officials to establish mechanisms and programs.
- **Watershed Rules and Regulations:** Evaluate existing WRR to determine best practices for protecting drinking water quality and enforcement mechanisms



# Water Quality Strategy

- Update every 3 years
- Guide policy and activities related to water resources
- Actions focus on what WRC can accomplish
- Host trainings, develop educational materials, respond to state plans



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# Harmful Algal Bloom Strategy

- Based on NYS HABs Action Plans for Cayuga and Owasco lakes
- Implementation actions in four topic areas:
  - Agriculture
  - Ditch management
  - Stream buffers and wetlands
  - Collaboration

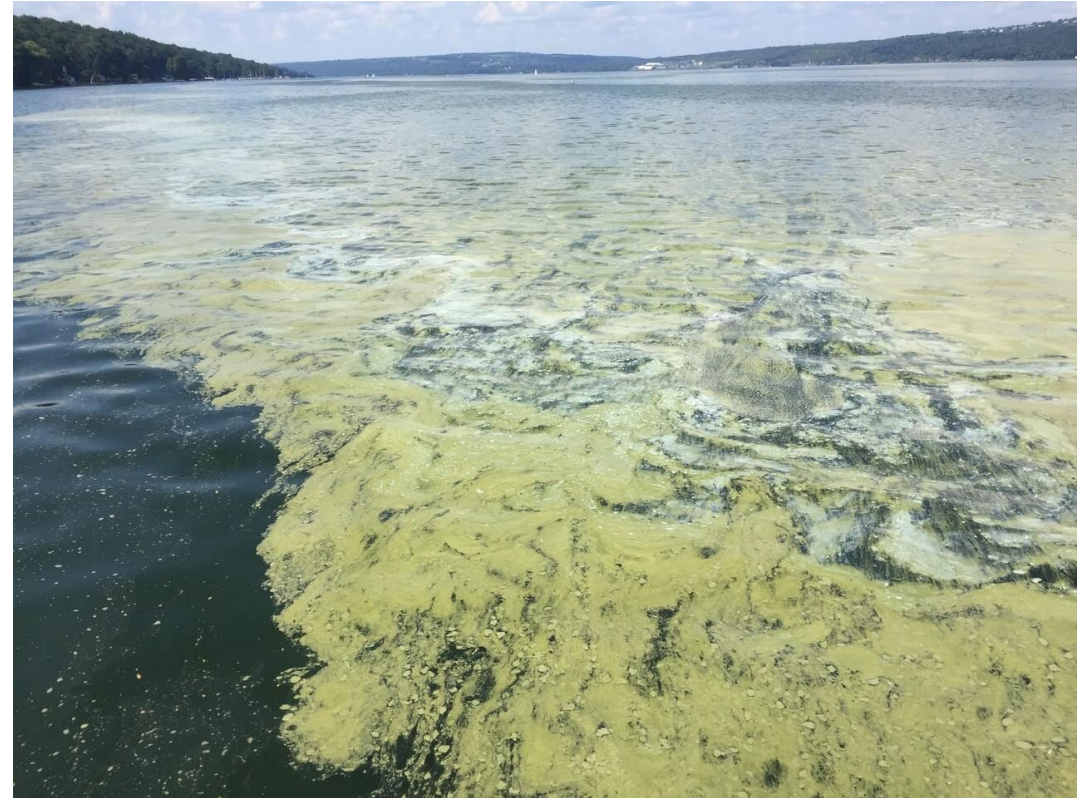
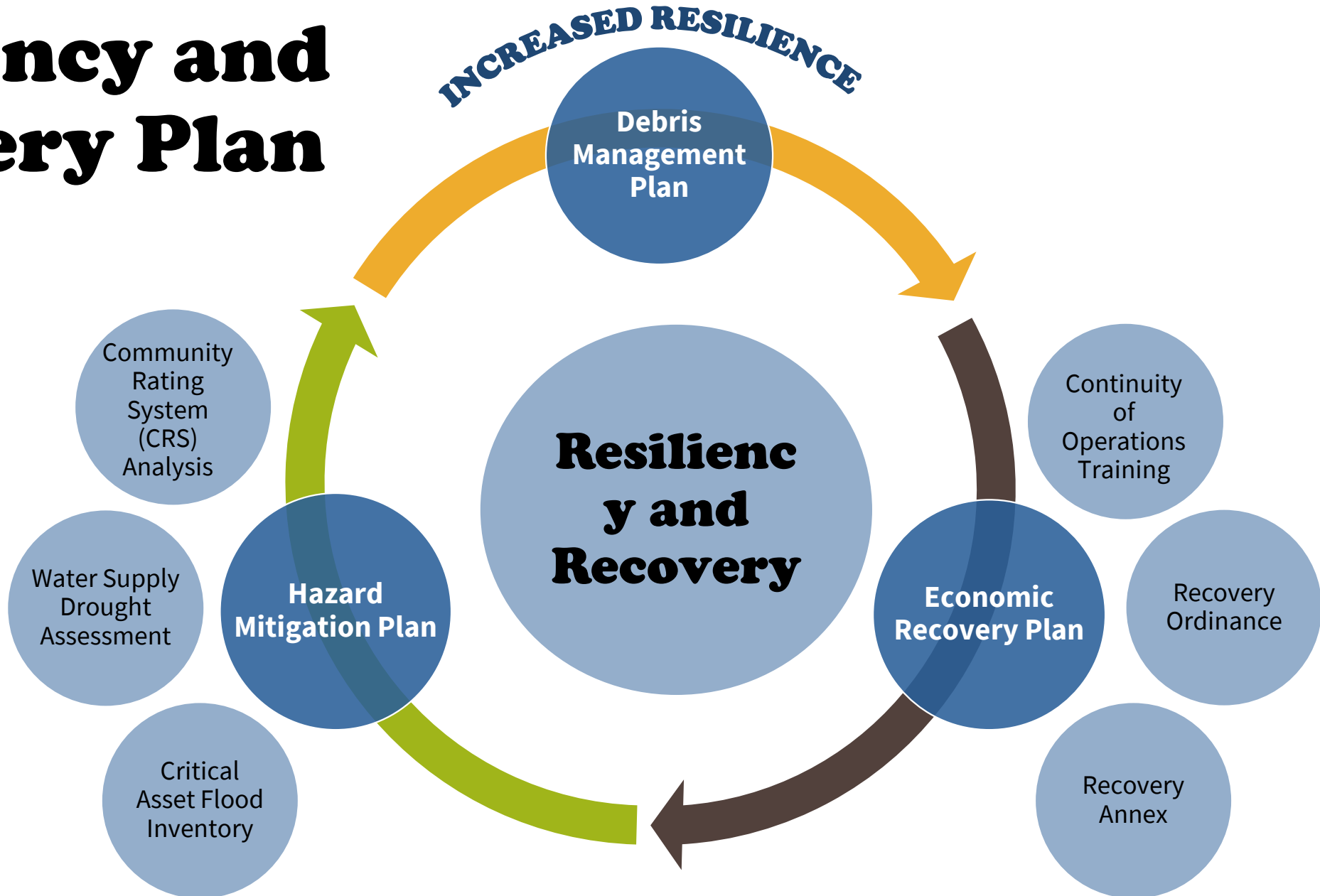


Photo credit: Don Sargent and Shannon Barrett, 2017





# Resiliency and Recovery Plan



# Implementation



# GML Section 239-1, m & n review

- Assess inter-community and county-wide planning and zoning actions
- Developed a guide to clarify referral and review process
- Common topics for potential negative impacts:
  - Wetlands
  - Stream buffers
  - Floodplain development
  - Unique Natural Areas
  - Public health, state/county roads, traffic, sidewalks, trails, energy, views



# Aquifer Studies

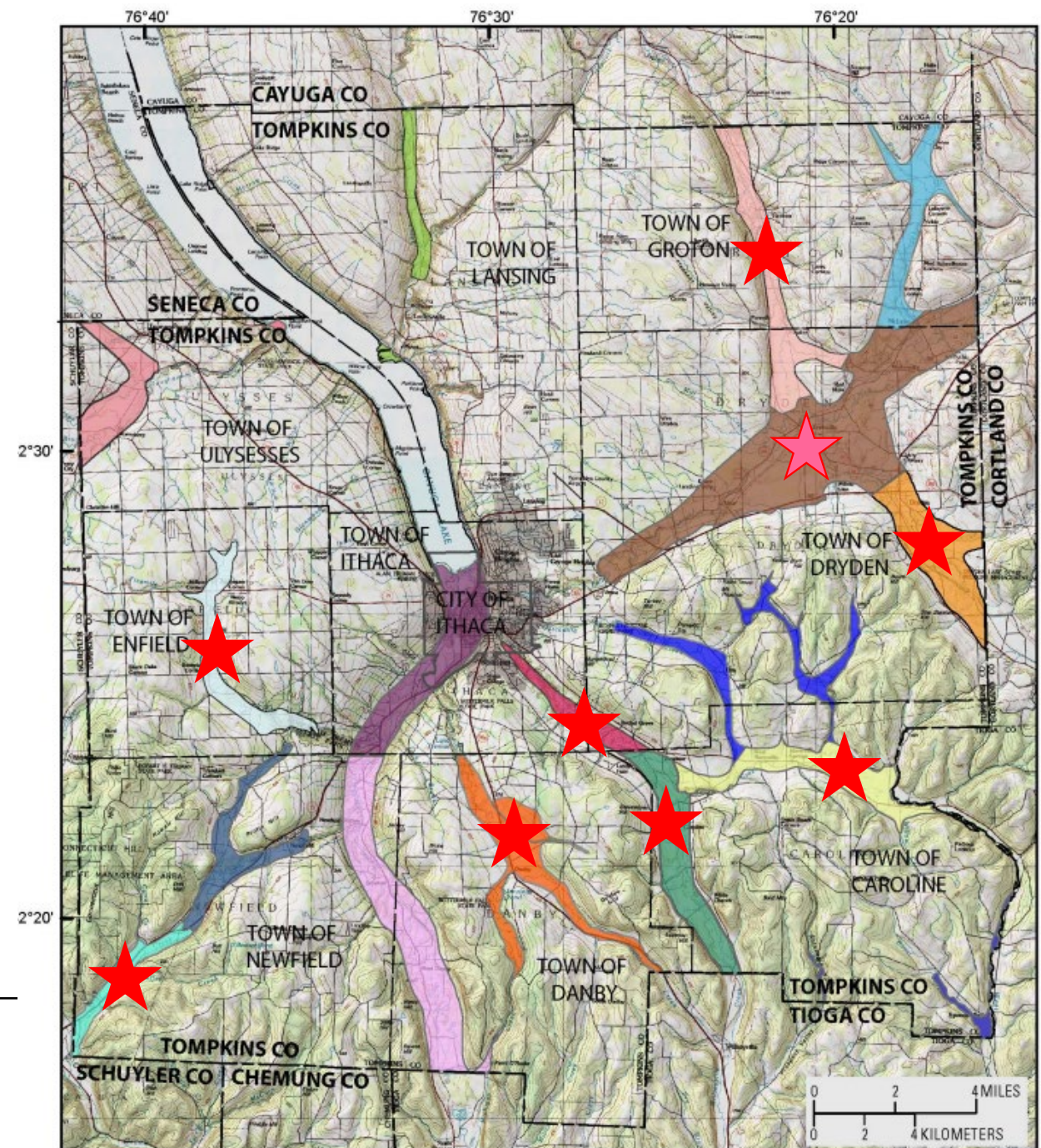
- Partnership with USGS and local municipality
- County covered up to 35% of study cost and 100% of drilling
- 9 studies over 20-year capital program (>\$760,000)

## Successes:

- New water source for village
- Identified critical recharge areas
- Discovered larger than expected confined aquifer
- Protected confining layer during stream project



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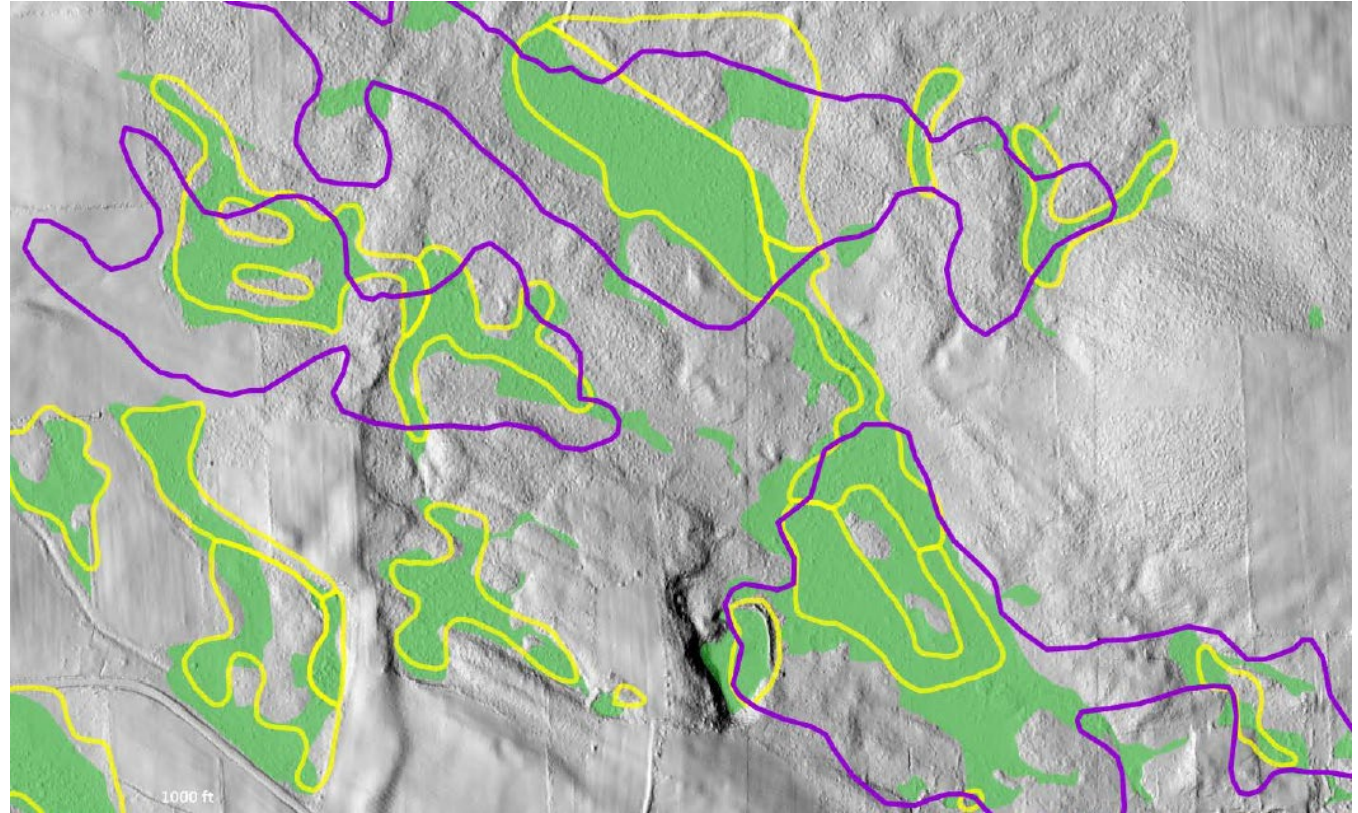
Basemap created with TOPO!, scale 1:100,000  
2003 National Geographic ([www.nationalgeographic.com/topo](http://www.nationalgeographic.com/topo))

Aquifers mapped Miller (2000)

EXPLANATION

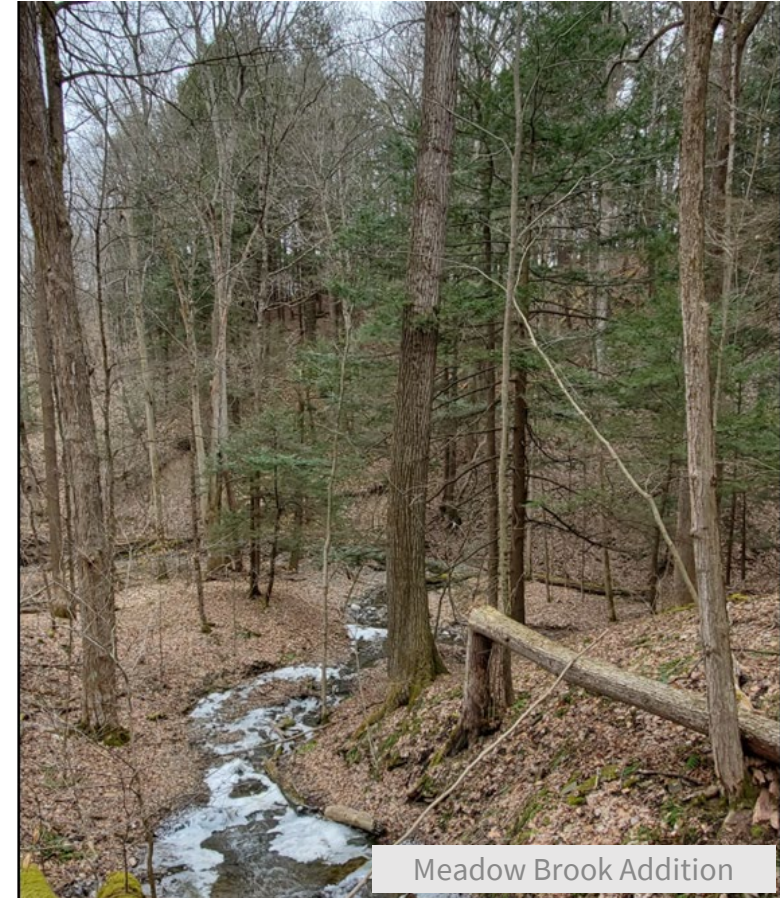
# Wetlands mapping project

- Acres mapped
  - County 15,000
  - NWI 10,750
  - NYS 5,600
- Resource for development projects and municipal boards



# Natural Infrastructure Capital Program

- Mitigate downstream flooding and sedimentation
- Establish migratory corridors for plants and animals
- Long-term protection (fee simple acquisition or conservation easement)
- Nonprofit or public entity



# Natural Infrastructure Capital Program



*Finger Lakes Land Trust, Bell Station*

- Priority protection area
- Habitat connectivity
- Stream buffer
- Wetland
- FEMA flood zone
- Scenic or recreational value



# Natural Infrastructure Capital Program

- Funds up to one-half of assessed value up to a maximum of \$200,000
- County invests \$250,000 annually
- \$444,274 funding 16 projects since program started in 2017



Finger Lakes Land Trust, Eberhard Preserve





# Stream Corridor Assessment Study

- Recommendation of City of Ithaca Drinking Water Source Protection Plan to address erosion and sediment control
- NYS DEC Non-agricultural Nonpoint Planning Grant
- Study will identify areas of erosion and identify/prioritize areas for streambank stabilization, riparian buffer restoration, floodplain reconnection and/or culvert replacement and repair.
- Includes flood risk assessment and modeling



# What is the county's role?

- Collaboration
- Gather input for plans
- Facilitate plan implementation

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26