

# Mapping Tools for Municipal Planning

Presented by Tompkins County Water Resources Council  
November 13, 2023

# Meeting Logistics

Questions for the speakers - Q&A after each segment or use the Chat

Please mute

The meeting is being **recorded** and will be posted on WRC website

## Planning and Sustainability

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[Housing](#)

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[Water Resources](#)

## Planning - Water Resources - Water Resources Council

### Water Resources Council

The Tompkins County Water Resources Council (WRC) advises the Tompkins County Legislature on matters related to water resources management and planning, and is charged with identifying problems, proposing priorities, and promoting the coordination of activities in the management and protection of the County's water resources. The WRC provides a public forum for local communities and stakeholder groups to address and discuss their water resources concerns, and it is the intent of the group to coordinate the water resources-related efforts of local governments, public and private institutions, and agencies and organizations throughout the County.

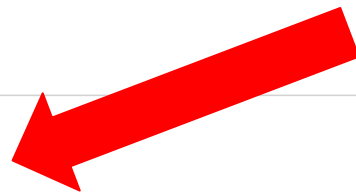
Residents of Tompkins County are invited to attend meetings of the WRC and apply for WRC membership ([application form](#)). The Water Resources Council meets the third Monday of each month from 4:15 to 6:00 PM. Meetings that conflict with federal holidays are rescheduled. There is usually no meeting in August. For more information, contact the [Tompkins County Planning and Sustainability Department](#). Learn more [about us](#).

#### [Business and Administrative Items](#)

- Agendas
- Meeting Minutes
- Annual Reports
- Resolutions
- Water Quality Strategy

#### Publications

- [2022 WRC Annual Report](#)
- [2021 WRC Annual Report](#)
- [A Resource Guide to Improving Soil Health & Water Quality](#)
- [Clean Boating on Cayuga Lake Map and Brochure](#)
- [2020 WRC Annual Report](#)
- [2019 WRC Annual Report](#)



# Who we are

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Annie Bastoni - stormwater specialist at VHB

Jenna DeRario - Cornell Cooperative Extension TC

Angel Hinickle - TC Soil and Water Conservation District

Kristen Hychka - NYS Water Resources Institute

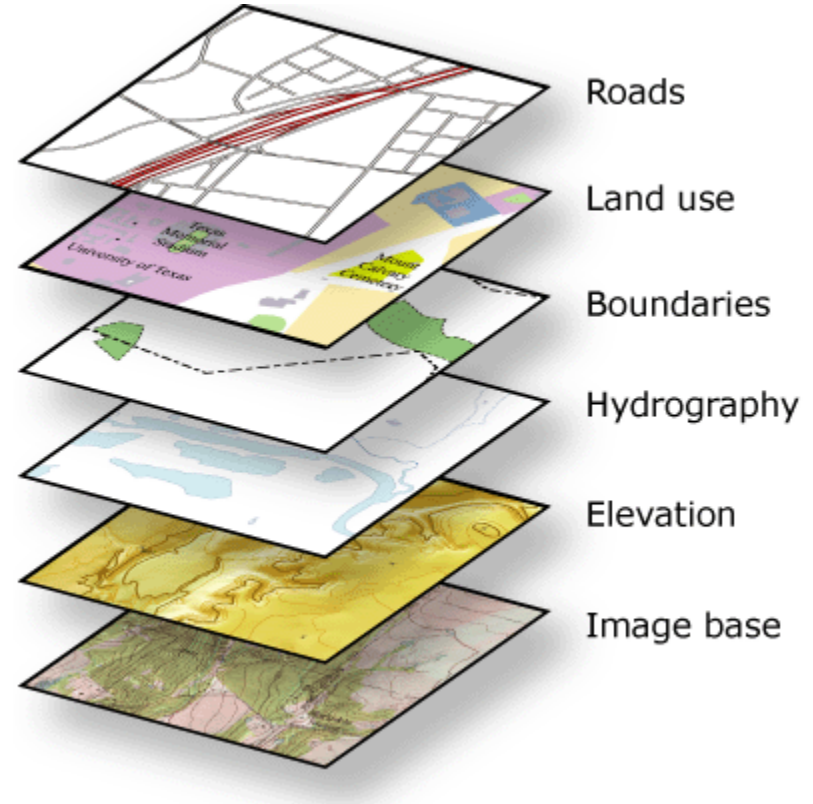
Darby Kiley - TC Department of Planning and Sustainability

# Agenda

- Navigating online maps
- Tompkins County: Mapping Tompkins, Natural Resources Inventory, Environmental Health
- State: DECInfo Locator, EAF Mapper, Riparian Opportunity Assessment
- Federal: FEMA FIRMs, StreamStats, Web Soil Survey (Climate Explorer, Model My Watershed)

# What is GIS?

- Geographic Information System
- Geographic information displayed on a map
- Overlay multiple “layers” of information in a spatial location
- Layers can have different “symbology”
- Available in easy-to-use online applications

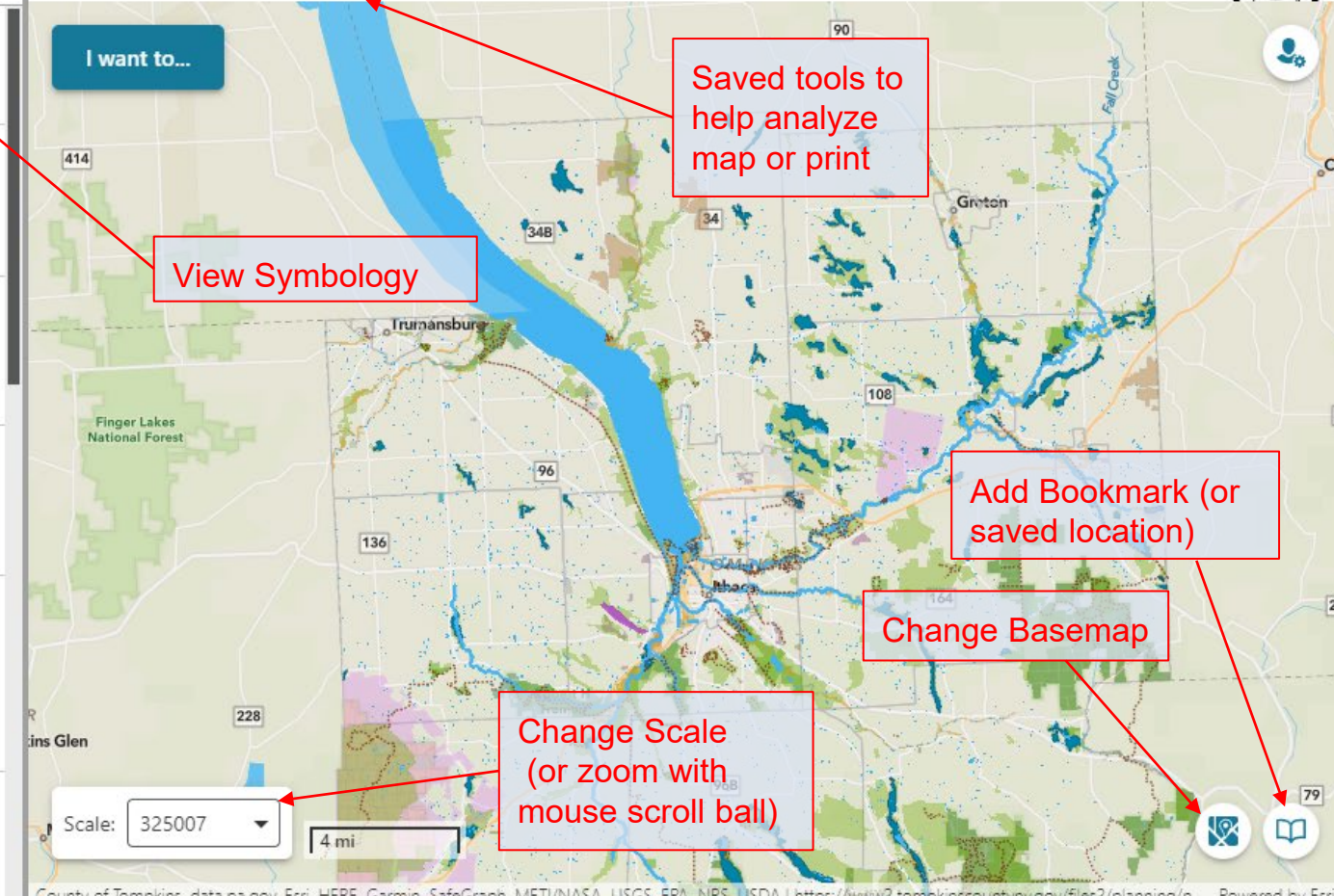




Home Layers Legend

Draw Measure Clear Markup Identify Buffer Search Print

- Trails 2020
- Open Water
- Water
- NYSDEC Regulated Wetlands
- Flood Zones
  - 100 Year Flood Zone
  - 500 Year Flood Zone
- Critical Environmental Area



I want to...

Saved tools to help analyze map or print

View Symbology

Add Bookmark (or saved location)

Change Basemap

Change Scale (or zoom with mouse scroll ball)

Scale: 325007

4 mi





- Trails 2020
- Protected Streams
- Open Water
- Parcels  
Zoom in to view
- Hydrology  
Zoom in to view
- Water
- 50' Intermittent Stream Buffers
- 100' Perennial Stream Buffer

Add Layer Add Layer from File

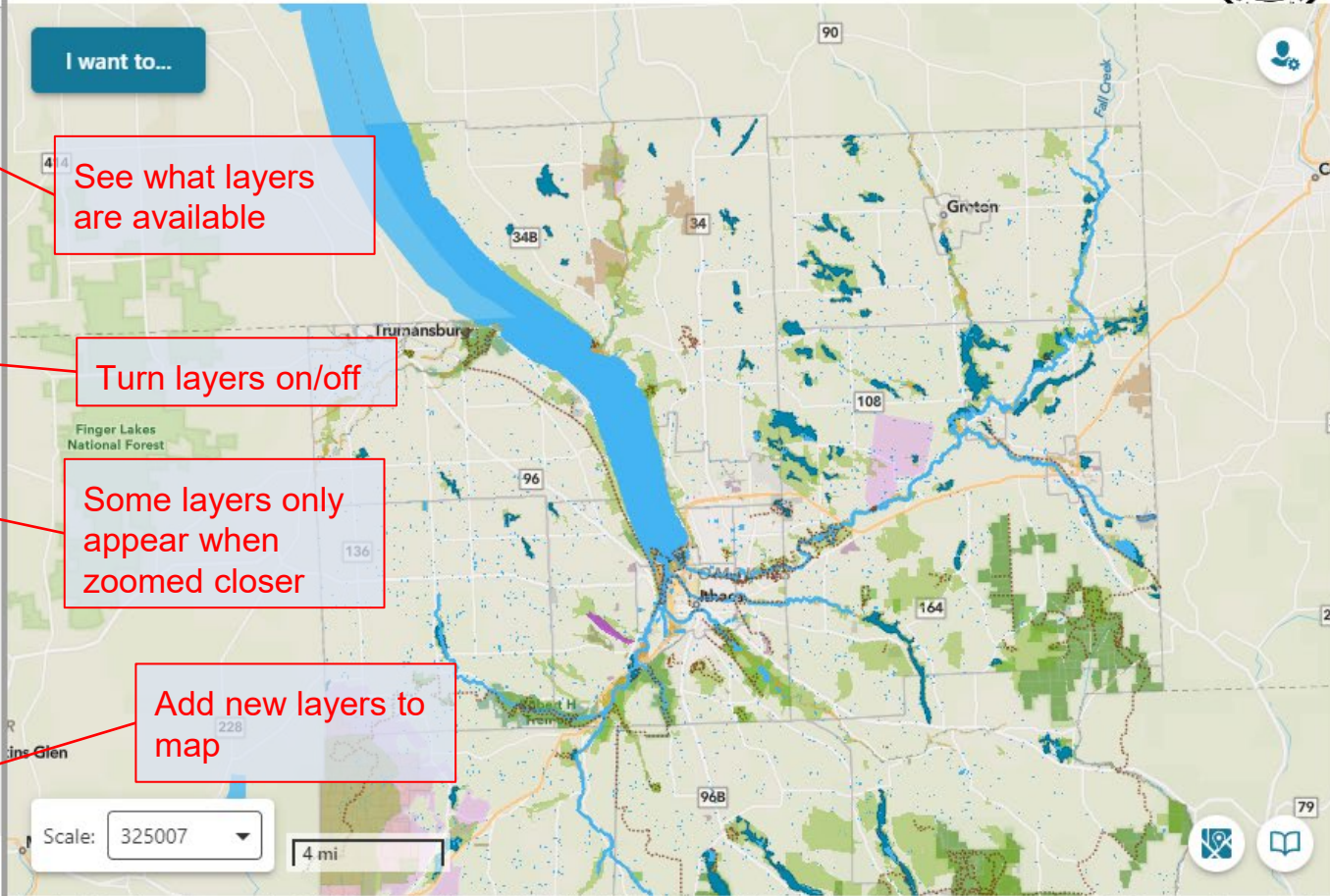
I want to...

See what layers are available

Turn layers on/off

Some layers only appear when zoomed closer

Add new layers to map





- Draw
- Measure
- Clear Markup
- Identify
- Buffer
- Search
- Print

< 1 2 3 >

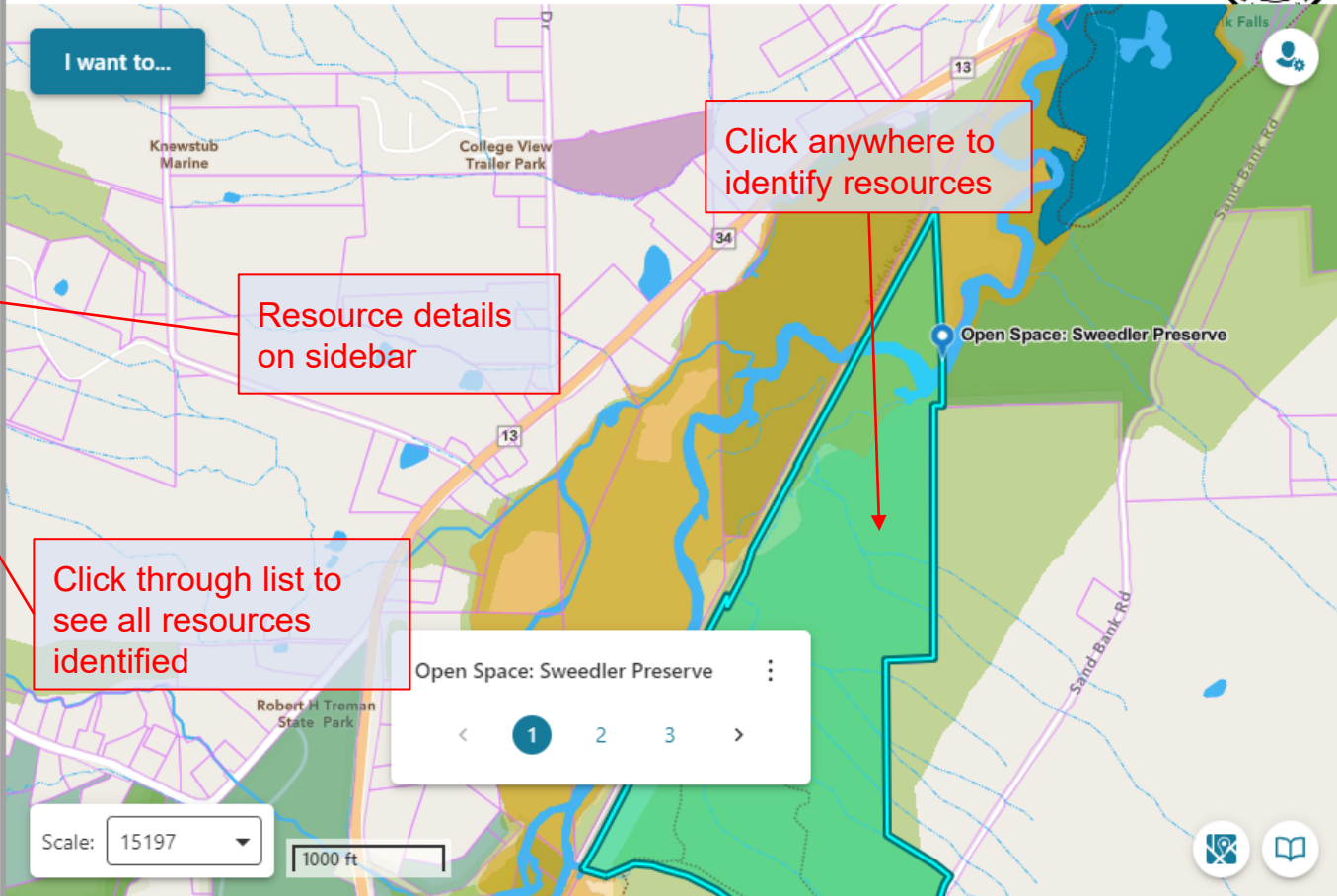
Open Space: Sweedler Preserve

- Zoom to Result(s)
- Buffer Result(s)

NAME	Sweedler Preserve
TYPE	Nature Preserve
AGENCY	FLLT
PRINTKEY	35.-1-5.1
OWNER	FINGER LAKES LAND TRUST
ACRES	133.27
MUNI	TOWN OF ITHACA
YearProt	0.00

File Attachments

No attachments.



I want to...

Click anywhere to identify resources

Resource details on sidebar

Click through list to see all resources identified

Open Space: Sweedler Preserve

< 1 2 3 >

Scale: 15197

1000 ft



# Tompkins County Resources



## Printable Maps

### Census

---

### Historic

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### Physical/Environmental

---

### Political

---

### Property

---

### Transportation/Utilities

---

## Physical Maps

- [Town of Lansing-Tompkins County](#)
- [Town of Danby-Tompkins County](#)
- [Town of Caroline-Tompkins County](#)
- [Town of Dryden-Tompkins](#)
- [Aquifers and Public Wells](#)
- [Shaded Relief of Tompkins County](#)
- [NYSDEC Wetlands](#) (*view the [DEC environmental resource mapper](#) for updated info*)
- [USGS Quadrangle Index-Tompkins County](#)
- [2000 Land Use/Land Cover](#)
- [1997 Generalize Land Use](#)
- [1995 Land Use/Land Cover](#)
- [Town of Lansing Zoning Map](#) (Updated 2018)

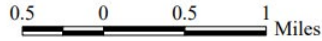
## Environmental Maps

- [Watersheds of Tompkins County](#)
- [Abandoned Landfills](#)
- [Household Composting Participants](#)
- [Tompkins County Flood Hazard Zones](#)
- [Unique Natural Areas](#) (2016)
- [Danby Watershed](#)
- [Town of Ithaca Unique Natural Areas](#) (2018)



New York State Plane Central  
1983 North American Datum

1:15,000



When printed on ARCH - E size media.

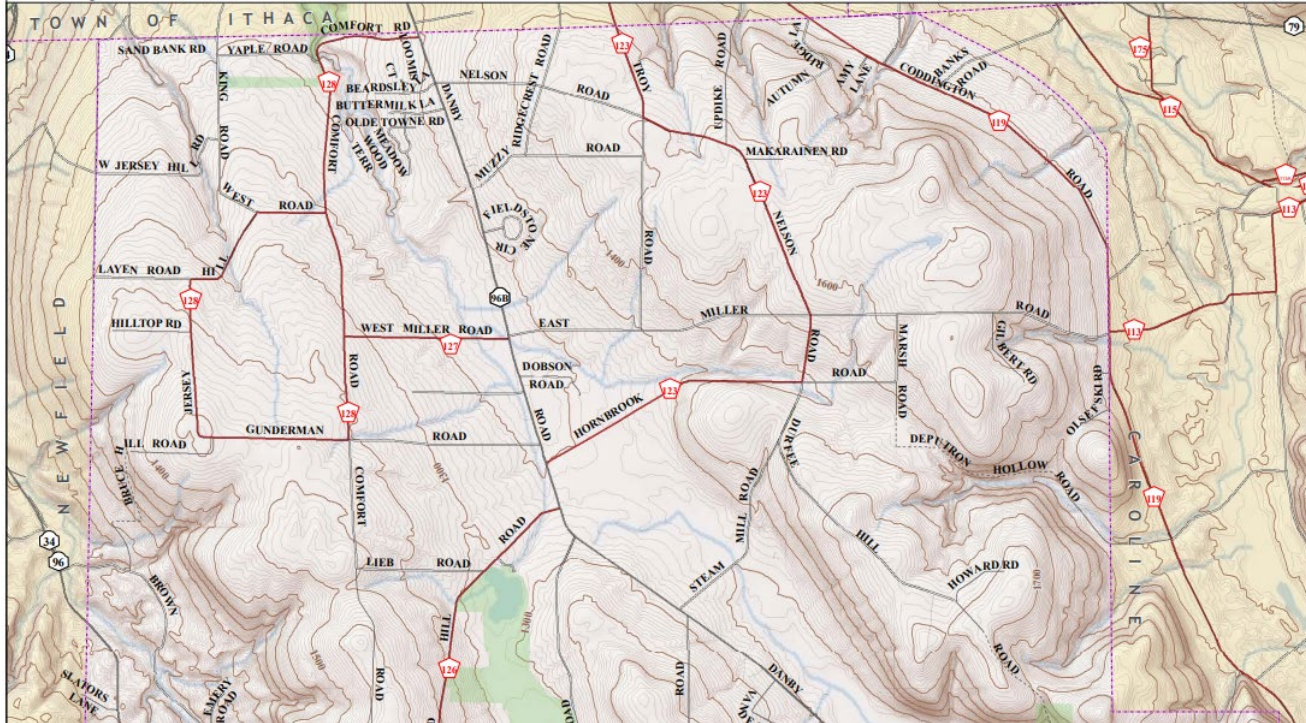
# Town of Danby

- State Highways
- County Roads
- Local Roads
- Private Roads
- Municipal Boundaries
- State Marine Park
- State Forests & Wildlife Areas



Tompkins County  
Information Technology Services  
GIS Division

T\_Danby.mxd 10/22/08  
Svetla Borovska



# Mapping Tompkins



PARCEL VIEWER - View location, type, size, school district and assessment info Countywide.



ELECTIONS- Enter address from the drop-down list and get info on polling places and elected officials.



LOCAL PRODUCE - View locations and info on Countywide farms, markets and local produce stands.



SCHOOL DISTRICTS - View property tax based school district and associated links countywide.



SIMPLE PARCEL VIEWER - Type in an address or Parcel ID (Printkey) and view basic parcel information.



FACILITY LOCATOR - Find and get information on County Departments including their current status



BROADBAND SCORE - Type and pick an address and obtain a broadband score based on upload/download speeds.



ENVIRO HEALTH - View environmental health layers such as private septic systems, water edge buffers, hydrology, etc.



HOUSING FOR SENIORS - View, select and get information on housing options for seniors.



2023 SUMMER CAMP GUIDE - Select an age add a keyword and get results.



NRI REPORTER - Click NRI icon select address or parcel to run report



FEMA FIRMS - Is your property in the 100 yr or 500 yr flood zone (FEMA prelim data)

# Mapping Tompkin S



SCENIC STORY MAP - View countywide distinctive, noteworthy, and characteristic views (pretty pictures).



SCENIC RESOURCES - View countywide distinctive, noteworthy, and characteristic views on a map.



RESILIENCY & RECOVERY - 2022 RPR, a collaborative story map on climate change mitigation and recovery in Tompkins County.



CITY OF ITHACA PROPERTIES - View City of Ithaca properties, parking, service routes, zoning and other districts.



NRI ORIGINAL- Select an address or parcel and get Natural resources info at that location



HIGHWAY PROJECTS 2020 - View dashboard of ongoing/completed road and bridge projects for the County Highway Department for 2020.



FIND YOUR FIRE DISTRICT - Enter an address or type a place and get the Fire protection district.



ROAD MAINTENANCE - Enter a road name in the search box, select to zoom and get info on who maintains the road.



FOOD INSPECTIONS - View name of establishments and food inspection violations for latest inspection results.



CITY TREE VIEWER - Click on the tree search icon and search by common name, address or species



ADDRESS LOOKUP - Search for addresses of interests and return the zip, municipality, and official address.



POLICE AGENCY LOOKUP - Search for an address or place and view law enforcement agency info for that location.



# Tompkins County Environmental Health

Welcome to the Tompkins County Environmental Health App.

The Environmental Health (EH) Division is an educational and regulatory agency dedicated to protect, preserve, and promote the health of the residents of Tompkins County through the natural and man-made environments.

The application below is for your convenience for questions or help please contact [Tompkins County GIS](#).

### Below are some items to get you started:

- Zoom in on the map with your preferred method to see some of the Environmental layers located within Tompkins County.
- Click on map features to view their attributes, related records, and attachments.
- Use the identify tool to capture a variety of data within a specified area.
- Click and type an address in the search box to find data within the visible extent. if you would like to find a parcel please enclose the parcel number in quotes for example "10.-1-21" for best results.
- Measure and mark-up the map and print.
- Save the project



# Environmental Health Layers

Private Sewage Systems

Additional Water Areas

Unique Natural Areas

Private Wells

Wetlands (DEC, NYS,  
County)

Soil Survey

Hydrology

Aquifer recharge

Contours (2', 10', 20')

Addresses

Flood zones

Public Sewer Areas

Parcels

Watershed boundary

Percent Slope

Floodplains

Municipal Boundaries

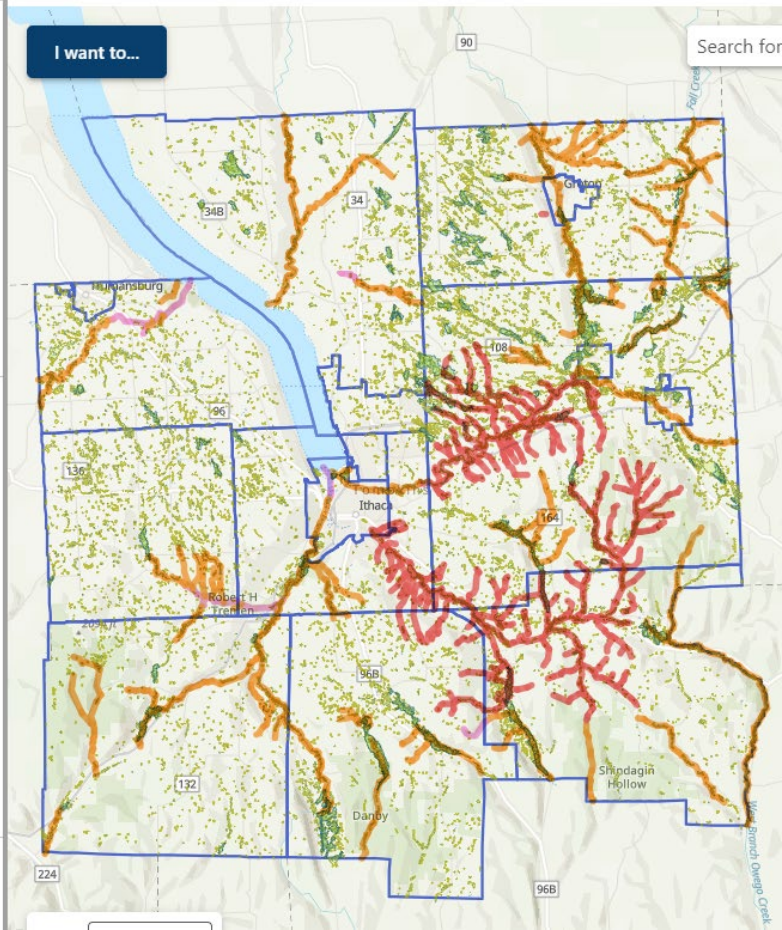
Protected Streams

Water Edge Buffers

- Protected Streams**
- AA- Drinking water source
  - A- Drinking water source
  - A(T)- Water source support trout pop
  - B- Swimming and other contact rec
  - C(T)- Support trout population
  - C(TS)- Support trout spawning
  - B(T)- Swimming and other contact rec may support trout pop
  - C- Support fisheries and other non contact rec

- Additional Water Areas**
- National Wetlands Inventory
- DEC Wetlands
- Water Resources Council Wetlands Inventory 2012

- Muni Boundaries**



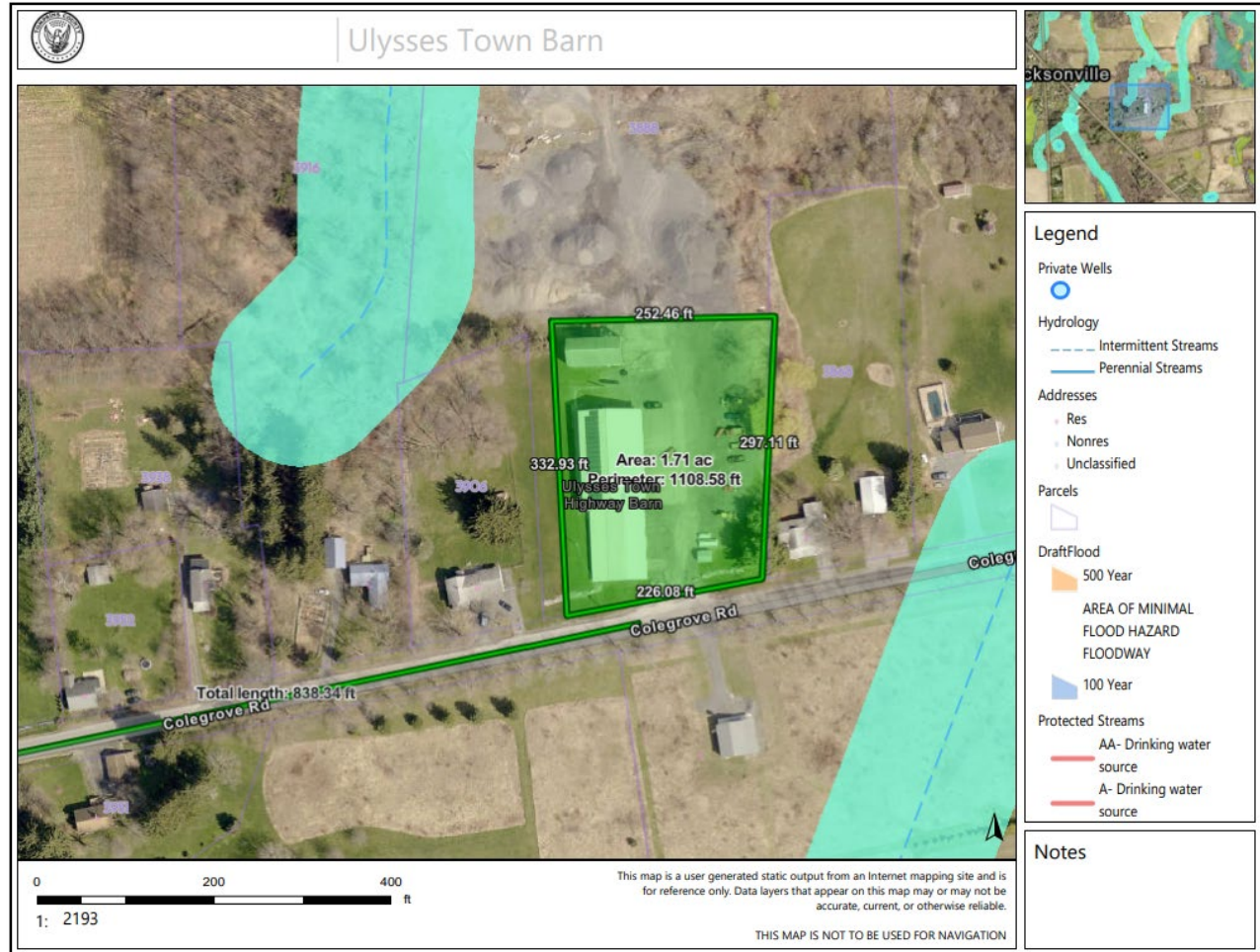
# Demonstration

Locate a parcel

Turn layers on/off

Measure

Print map







Home

Layers

Legend

Draw

Measure

All Markup

Identify

Buffer

Print

NRI Report



# Tompkins County

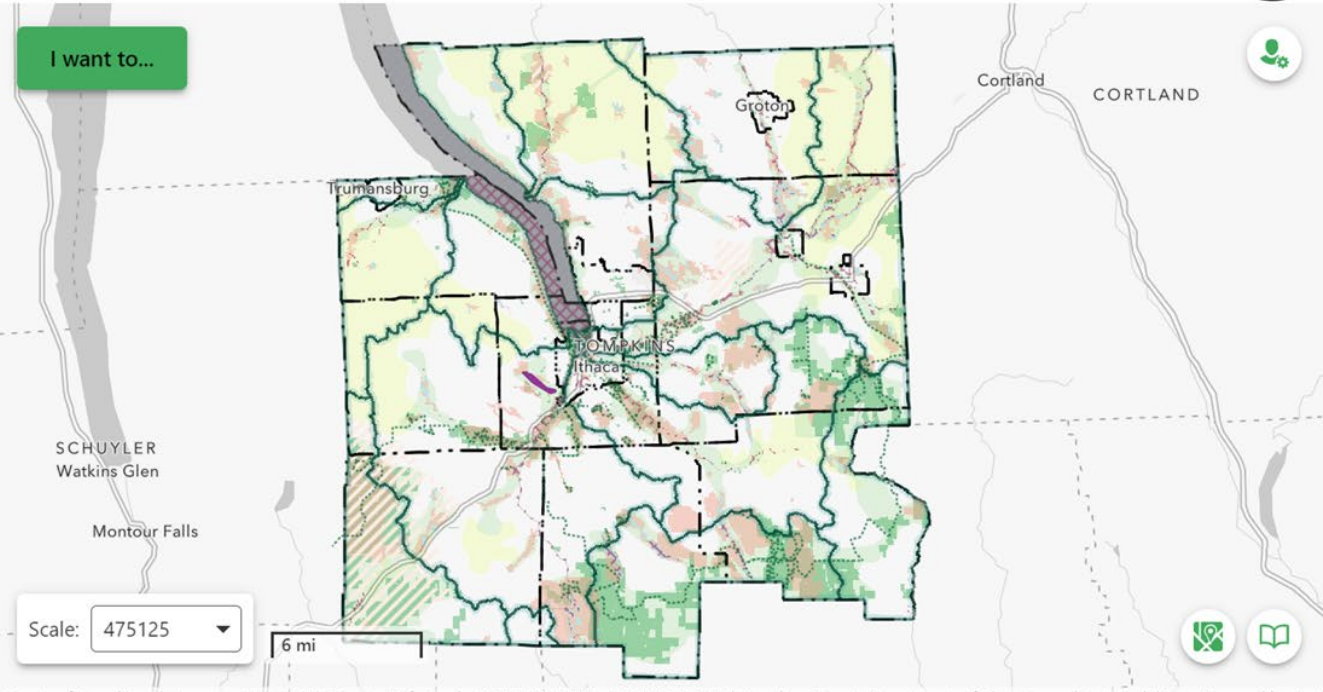
## Natural Resource Inventory (NRI)

Here are some things to try:

- Run NRI Report that provides a list of the natural resources located at a location of your choosing
- Zoom in on the map to see some of the natural resources located within Tompkins County.
- Click on map features to view their attributes.
- Toggle layers on and off to focus on layers of interest. To do this click on the "Layers" tab located at the top of this written section, then click the check boxes next to the layers.
- Use the identify tool to capture a variety of data within a specified area.



I want to...



Demonstration

Home

Layers

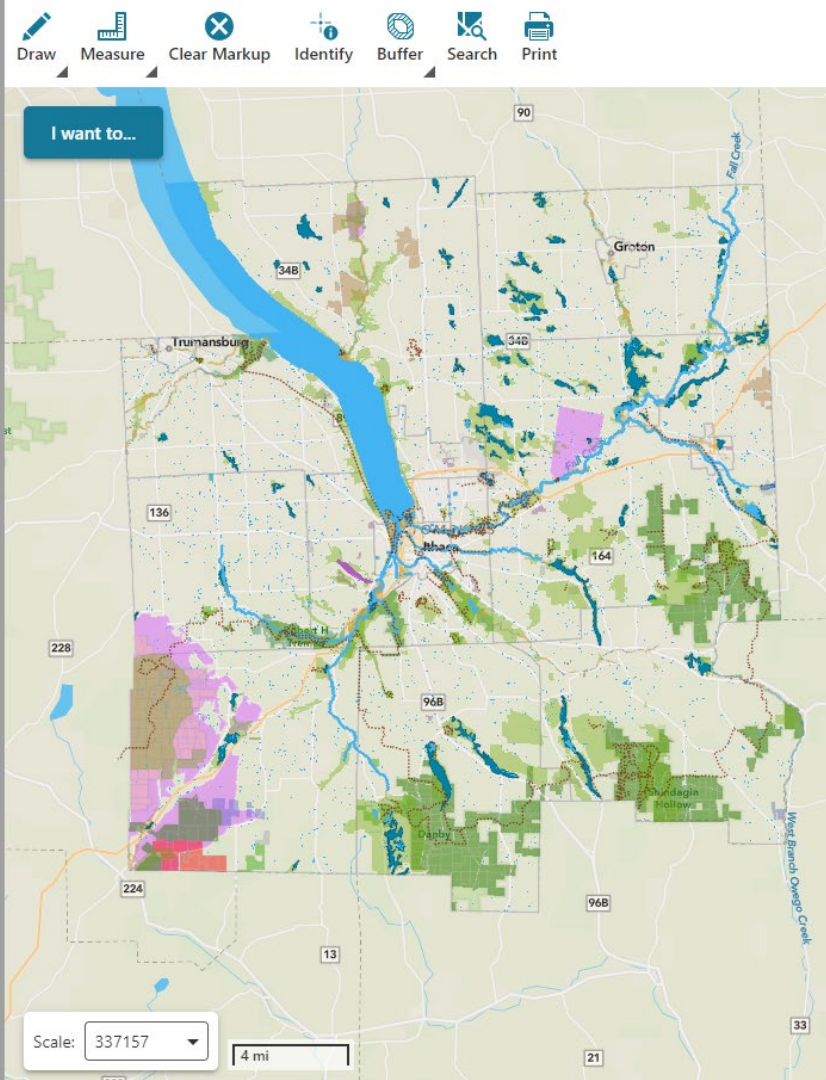
Legend

# Tompkins County Natural Resources Inventory

Welcome to Tompkins County Natural Resources Inventory Web App.

Here are some things to try:

- Zoom in on the map to see some of the Natural Features of Tompkins County. If you zoom in far enough property lines will appear.
- Click on map features to view their attributes, related records, and attachments. -Turn layers of interest on and others turn off to focus in on your interests.
- Use the identify tool to capture a variety of data within a specified area.
- Use the search tool and type in street address or parcel number in the search box to find a location you want to zoom to



# New York State Resources

## Interactive Maps

The following interactive online maps are available on the DEC website.

### DECinfo Locator

[DECinfo Locator](#) is an interactive map that lets you access many DEC documents and other public data about the environmental quality of specific sites in New York State, as well as information about sites for outdoor recreation. More than 80 data layers are available at this time.

### NYSHABS Mapper

View DEC's [HABS notification map](#) to view locations of current freshwater HABS in New York State. Each yellow dot on the map represents a HAB reported in the past two weeks. Click on a dot for more information, including the date it was reported, the waterbody name, and pictures. Click on the arrow at the bottom of the screen to view a list of reported HABS

### Environmental Resource Mapper

The [Environmental Resource Mapper](#) is an interactive mapping application that can be used to identify some of New York State's natural resources and environmental features that are state protected, or of conservation concern.

### New York Nature Explorer

[New York Nature Explorer](#), a gateway to biodiversity information, is an online tool for finding out about the animals, plants and habitats in your neighborhood or area of interest. Users may choose a county, town, or watershed, or they may specify their own location on a map, and they will receive a list of the animals, plants, and significant natural communities that have been found there.

### Hudson Valley Natural Resource Mapper

The [Hudson Valley Natural Resource Mapper](#) is a tool for viewing maps of natural features in the Hudson River estuary watershed to inform conservation and land-use planning. Resources shown include estuary habitats, streams, wetlands, forests, and biodiversity areas, as well as Hudson River recreation sites and protected lands.

### Mineral Resources Navigator

The [Mineral Resources Navigator](#) is an interactive utility to locate mines and oil, gas and other regulated well types. The information is refreshed nightly. Information on these sites are available through this application.

### Stormwater Interactive Map

The [Stormwater Interactive Map](#) is an interactive mapping application used to look up geographic information related to the Phase II Stormwater Program. It can also be used to find geographic information useful for construction projects, including the geographic coordinates for a site.

### EAF Mapper

the [EAF Mapper](#) is an interactive tool that helps answer some of the questions on Part 1 of the Environmental Assessment Form that may be required as part of the permit application process.

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# DECinfo Locator - Outdoor Activity & Environmental

## Terms and Conditions

The material on this site is made available as a public service. We welcome and invite you to use it.

The data and information on this site are subject to change. It is provided AS IS and is believed to be accurate, but accuracy is not guaranteed.

By accessing this site, you agree to the [Terms and Conditions](#).

Don't show this message again



### Get Started

We'll guide you through how to use the DECinfo Locator in this brief video tutorial.

Watch the 5 minute YouTube Video  
(<https://www.youtube.com/watch?v=04XmO0trwac>)



Agree and Continue



## DECinfo Locator

Search

Tools

### DEC Information Layers

Environmental Quality

Outdoor Activity

#### Permits and Registrations

Check / Uncheck all i Layer Information

 **Municipal Separate Storm Sewer System (MS4) Automatically Designated**

 **MS4 Additionally Designated Area (Criterion 3)**

 **Hazardous Waste Treatment, Storage & Disposal Facilities**

 **Air Facility Registrations**

 **Title V Air Facilities**

 **Air State Facilities**

 **Hazardous Waste Reduction Planning Program Generators**

 **Radiation Control Permit Facilities**

Environmental Cleanup

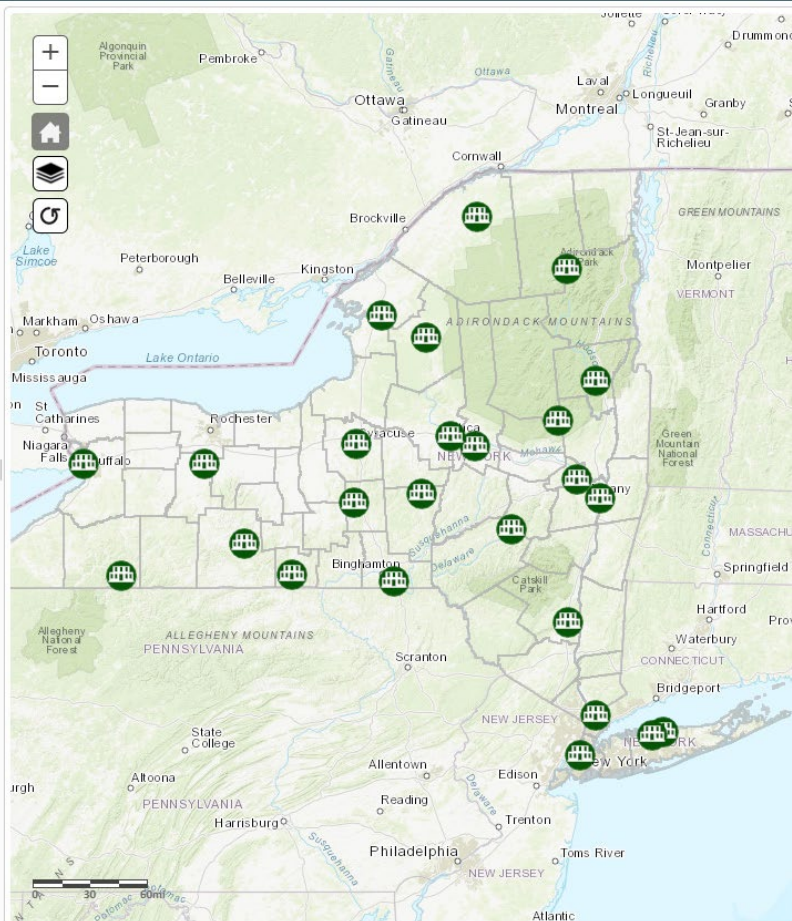
Environmental Monitoring

Public Involvement

Environmentally Sensitive Areas

Legal Information

Reference Layers





## DECinfo Locator

Search:  
Address,  
muni, place  
name, county

Tools:  
Measure  
Print  
Near me

Search

Tools

DEC Information Layers

Environmental Quality Outdoor Activity

Permits and Registrations

Check / Uncheck all i Layer Information

---

Municipal Separate Storm Sewer System (MS4) Automatically Designated

MS4 Additionally Designated Area (Criterion 3)

Hazardous Waste Treatment, Storage & Disposal Facilities

Air Facility Registrations

Title V Air Facilities

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Hazardous Waste Reduction Planning Program Generators

Radiation Control Permit Facilities

---

Environmental Cleanup

Environmental Monitoring

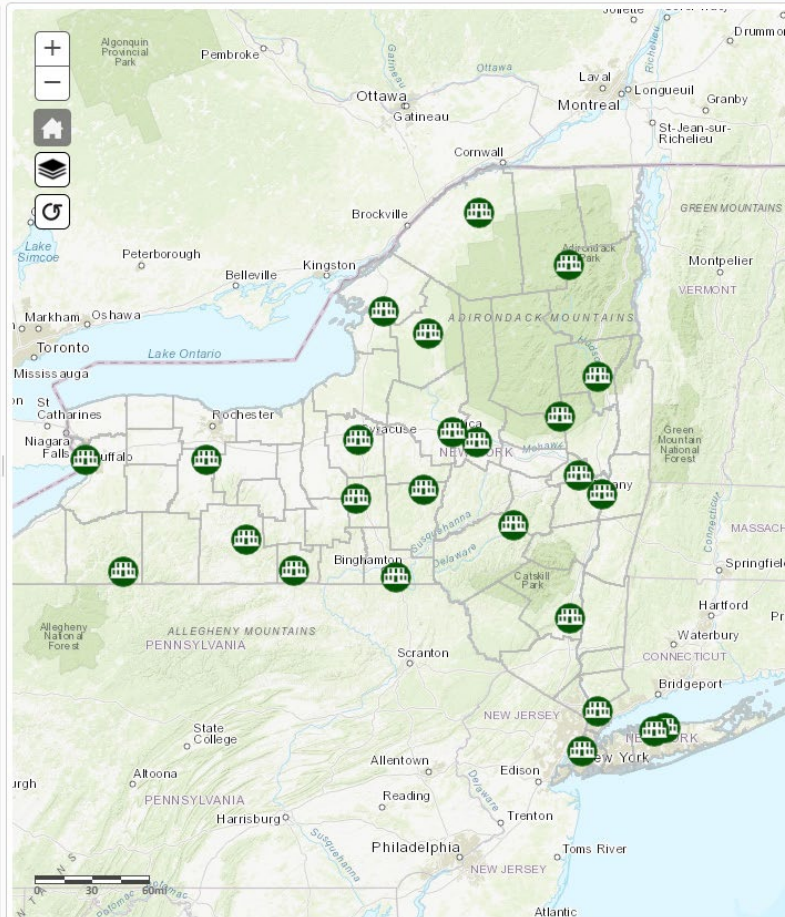
Public Involvement

Environmentally Sensitive Areas

Legal Information

---

Reference Layers





Search

Tools

### DEC Information Layers

Environmental Quality Outdoor Activity

Permits and Registrations

Environmental Cleanup

Environmental Monitoring

Check / Uncheck all 1 Layer Information

#### Waterbody Inventory/Priority Waterbodies List

- Lakes and Reservoirs
- Estuaries
- Rivers and Streams
- Shorelines

Hydrologic Unit Code (HUC) 10

\*Layer becomes visible when you zoom out on the map

Hydrologic Unit Code (HUC) 12

Clean Water Plans



Air Quality Monitoring Sites

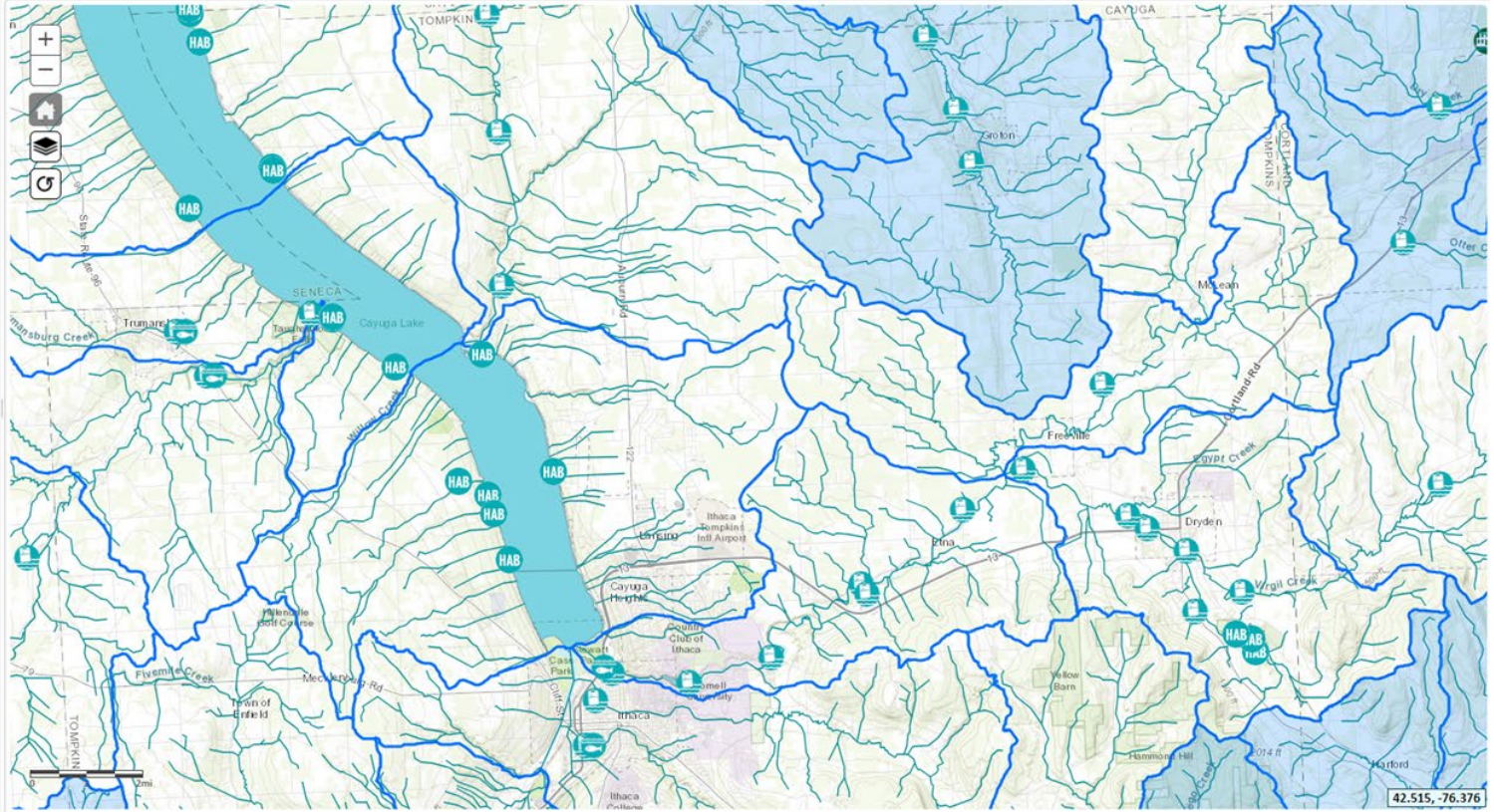


Public Involvement

Environmentally Sensitive Areas

Legal Information

Reference Layers



42.515, -76.376

Search

Tools

## DEC Information Layers

Environmental Quality Outdoor Activity

Permits and Registrations

Environmental Cleanup

Environmental Monitoring

Check / Uncheck all

**1** Layer Information

Waterbody Inventory/Priority Waterbodies List

- Lakes and Reservoirs
- Estuaries
- Rivers and Streams
- Shorelines

Hydrologic Unit Code (HUC) 10

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Clean Water Plans



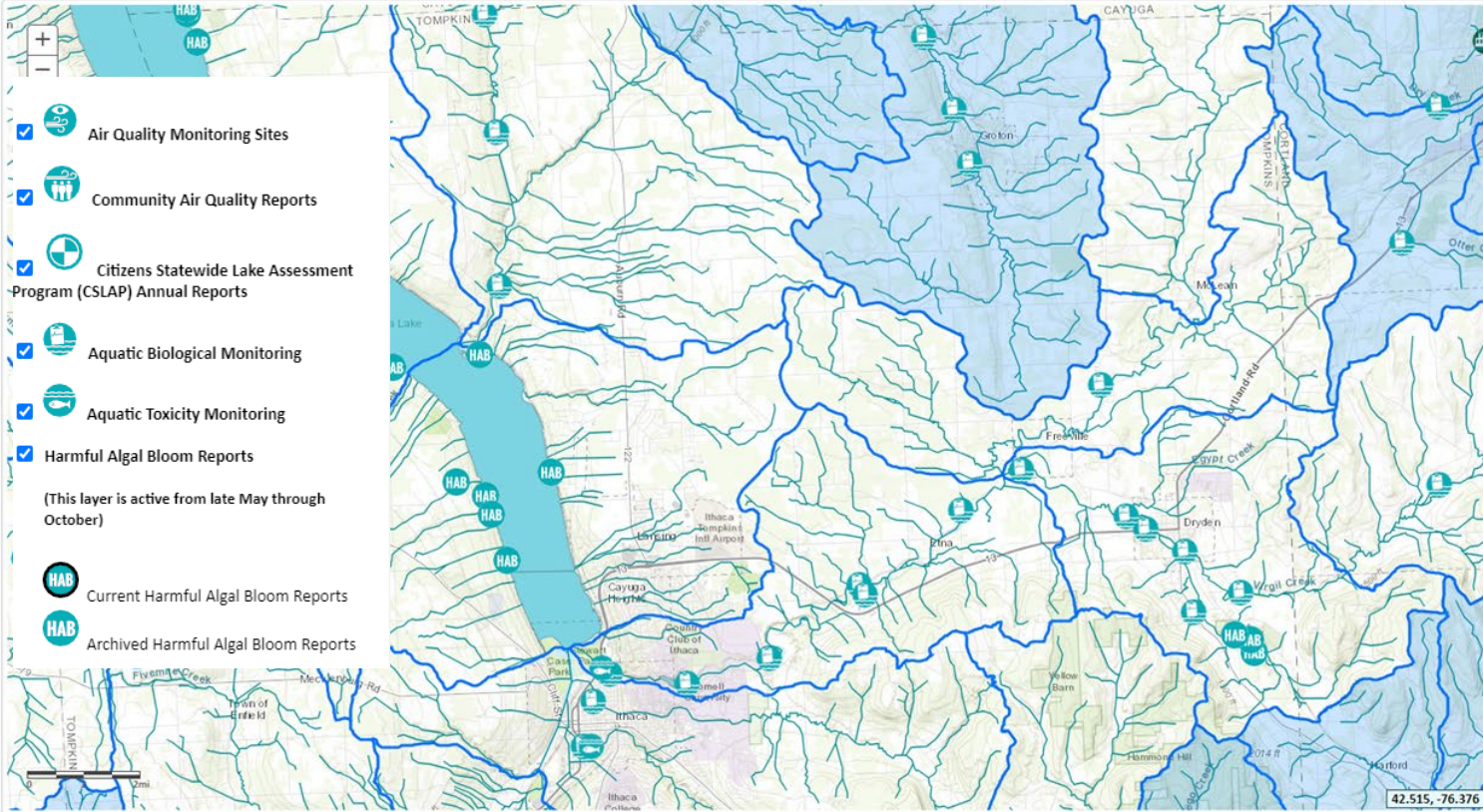
Air Quality Monitoring Sites

Public Involvement

Environmentally Sensitive Areas

Legal Information

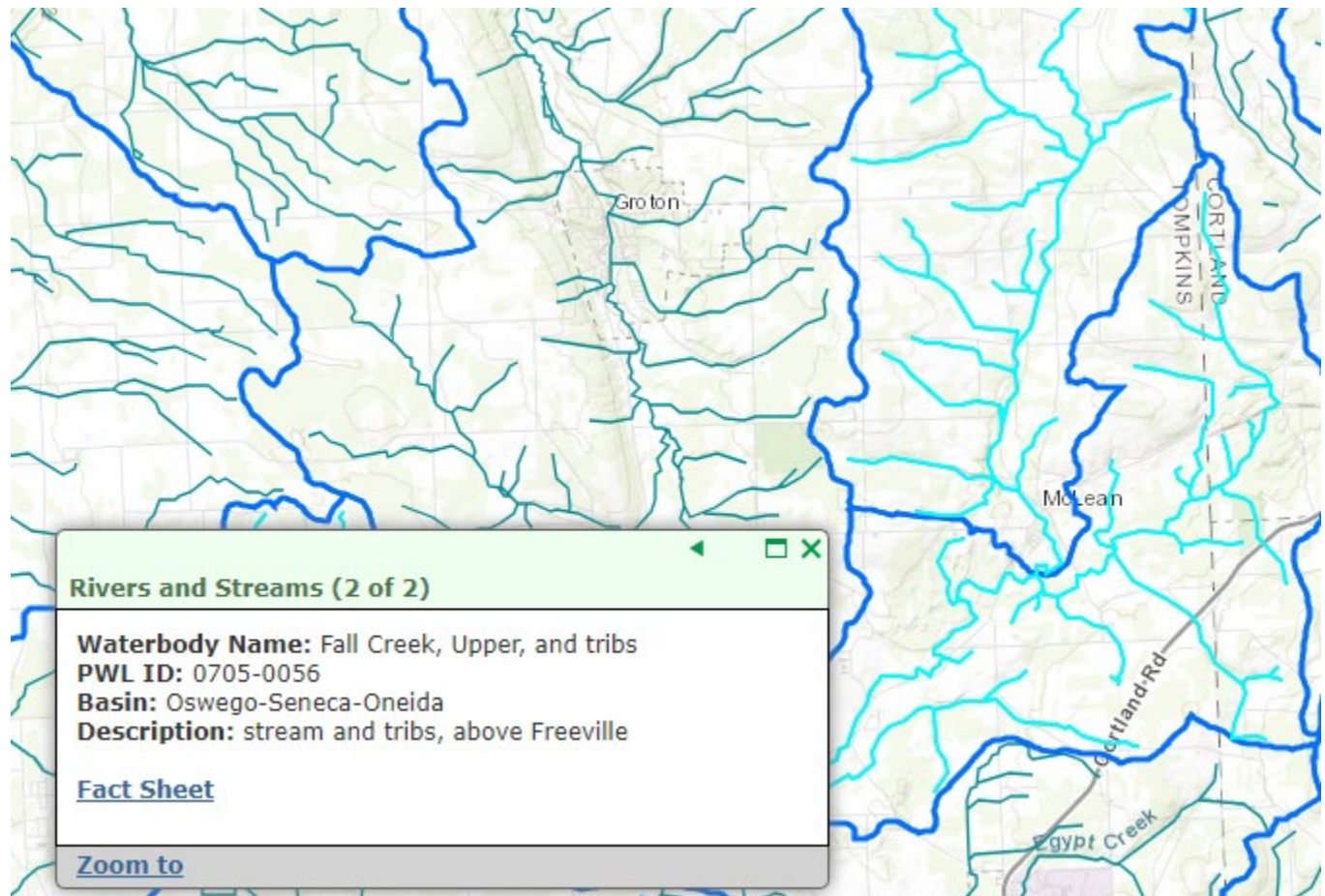
Reference Layers

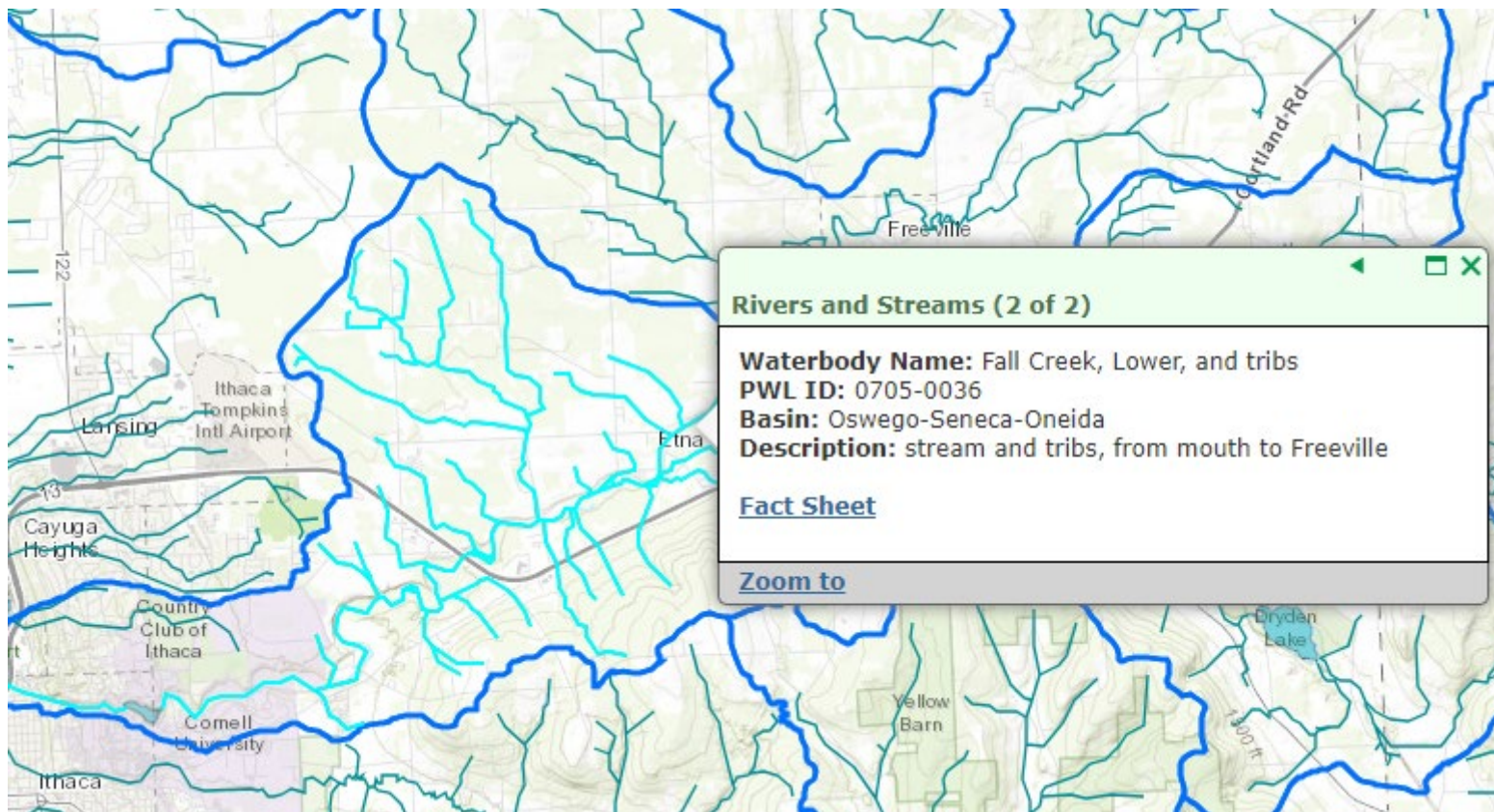


- Air Quality Monitoring Sites
- Community Air Quality Reports
- Citizens Statewide Lake Assessment Program (CSLAP) Annual Reports
- Aquatic Biological Monitoring
- Aquatic Toxicity Monitoring
- Harmful Algal Bloom Reports  
(This layer is active from late May through October)
- Current Harmful Algal Bloom Reports
- Archived Harmful Algal Bloom Reports

42.515, -76.376

Click on Fact Sheet  
Window Opens  
“This waterbody is  
unassessed.”





# FALL CREEK, LOWER, AND TRIBS

## (SEGMENT ID 0705-0036)

Waterbody Segment Assessment Factsheet Based on the 2021 CALM

Revised: December 07, 2021

### NEEDS VERIFICATION (IR CATEGORY 3)

#### Introduction

This is the most recent water quality assessment information for this waterbody segment. The assessment is based on water quality data that meet the quality assurance requirements of DEC's Division of Water. An outline of the process used to assess the quality of New York State waters is described in the DEC's [Consolidated Assessment and Listing Methodology \(CALM\)](#). The CALM describes the assessment and listing process to improve the consistency of assessment and listing decisions.




#### WATERBODY INFORMATION

- Water Index Number: Ont 66-12-P296- 74
- Classification: A
- Waterbody Type: River/Stream
- Size: 52.6 Miles
- Drainage Basin: Oswego-Seneca-Oneida
- Hydrologic Unit Code: 0414020110
- County: Tompkins
- Segment Description: Stream and tribs, from mouth to freeville

#### Assessment of Best Use

##### Background

New York State waterbodies are classified to reflect their best use(s) and the assessment of a waterbody is based on the ability of waters to support them. This section lists whether this waterbody segment supports its best use(s). View [DEC's CALM](#) for more information about the terms used below.

Best Use	Use Assessment	Use Assessment Confirmation	Pollutant(s)	Integrated Reporting Category	303(d) Year
 Fishing	Stressed	Unconfirmed	Dissolved Oxygen; Total Dissolved Solids	IR3	N/A for Assessment Category
 Secondary Contact Recreation	Stressed	Unconfirmed	Dissolved Oxygen; Total Dissolved Solids	IR3	N/A for Assessment Category
 Primary Contact Recreation	Stressed	Unconfirmed	Dissolved Oxygen; Total Dissolved Solids	IR3	N/A for Assessment Category

# Layers - Permits and Regulations

MS4s

Hazardous Waste Treatment, Storage and Disposal Facilities

Air Facility Registrations

Title V Air Facilities . . .

Transfer Facilities

Scrap Metal Processor

Wastewater Facilities

Petroleum Bulk Storage Facilities

Permitted and Reclaimed Mines

Oil, Gas and Other Regulated Wells

CAFOs

Water Withdrawal Annual Permits

Water Wells

Dams

Points of Interest



Layer  
Information

*Click to open page with description, information available, and update frequency*

# DECinfo Locator

Search

Tools


## DEC Information Layers

Environmental Quality

Outdoor Activity

### Land-related Activities


Check / Uncheck all

 Layer Information

 [Accessible Recreation](#)

 *DEC Lands*

 *Conservation Easements*

 Campgrounds and Day Use Areas

Trails

Water-related Activities

Reference Layers



# DEC Environmental Assessment Form Mapper

When to use:

You are the project applicant and need to develop the Part 1 of a SEQR form

<https://gisservices.dec.ny.gov/eafmapper/>

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Streets Aerials

Navigate To Area (Step 1)

Go To

Select County: [SELECT]

Select Town: [SELECT]

Define Project Site (Step 2)

Draw Project Site Or Select Tax Parcel

Area: Acres

Clear Site / Cancel

Create Report (Step 3)

Full Form, Part 1 Short Form, Part 1

Initial Extent Zoom In Zoom Out Show Overview Map



## Navigate To Area (Step 1)

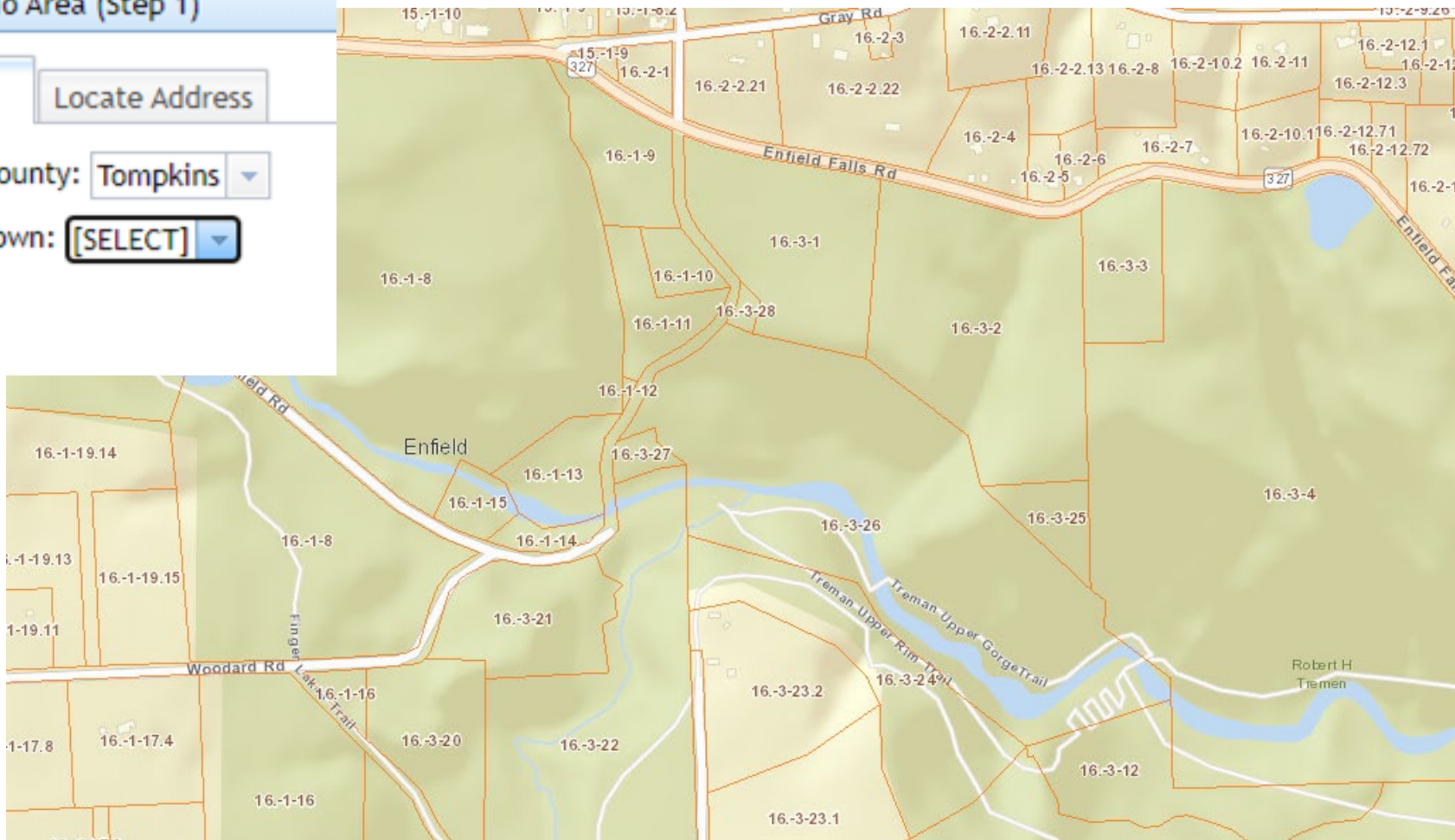
Go To

Locate Address

Select County:

Select Town:

Go



## Define Project Site (Step 2)

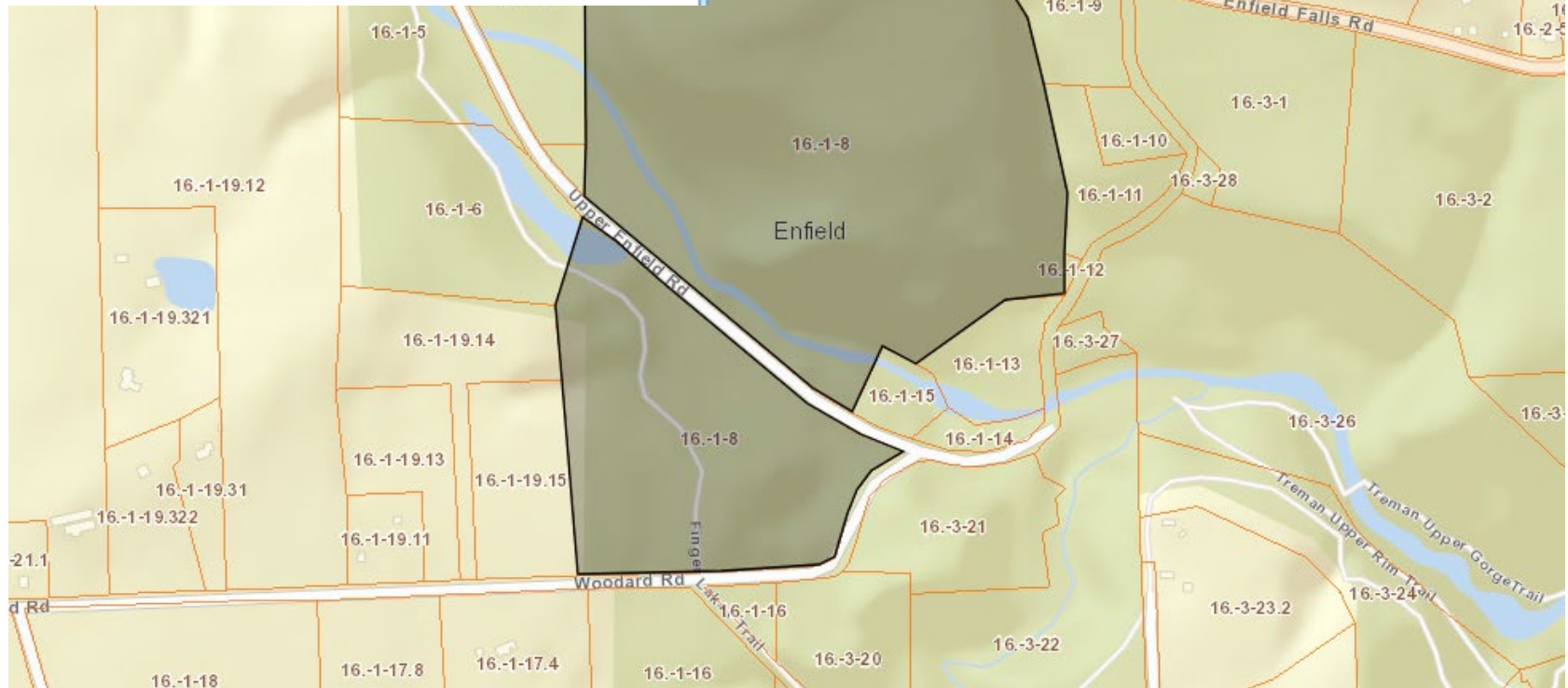
Draw Project Site

Or

Select Tax Parcel

Area: Acres ▼

Clear Site / Cancel



# EAF Mapper - Create report (Step 3)

A screenshot of a software interface. At the top, there is a light blue horizontal bar with a black border containing the text "Create Report (Step 3)". Below this bar, there are two light blue buttons with rounded corners and black borders. The left button is labeled "Full Form, Part 1" and the right button is labeled "Short Form, Part 1".

Full Form, Part 1

Short Form, Part 1

Pop up window will tell you that the report may take several minutes. Click OK

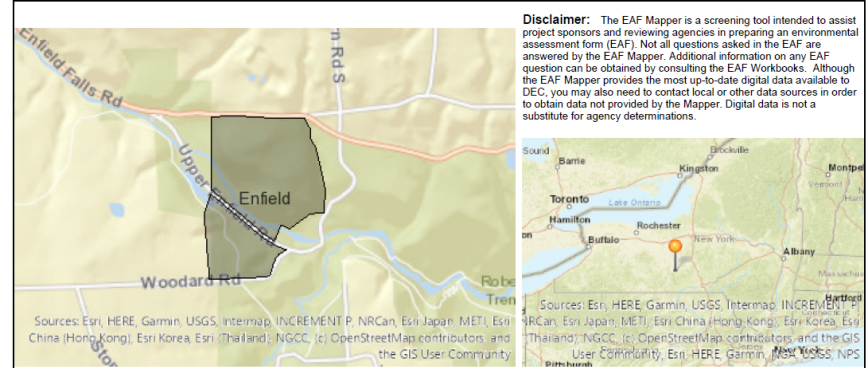
Short or Full Environment Assessment Form  
Part 1 - Project Information

Fills in answers to CEA, historic sites, wetlands, threatened/endangered species, hazardous waste sites

6. <u>Is the proposed action consistent with the predominant character of the existing built or natural landscape?</u>	NO	YES
	<input type="checkbox"/>	<input type="checkbox"/>
7. <u>Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?</u>	NO	YES
If Yes, identify: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. a. <u>Will the proposed action result in a substantial increase in traffic above present levels?</u>	NO	YES
	<input type="checkbox"/>	<input type="checkbox"/>
b. <u>Are public transportation services available at or near the site of the proposed action?</u>	<input type="checkbox"/>	<input type="checkbox"/>
c. <u>Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?</u>	<input type="checkbox"/>	<input type="checkbox"/>
9. <u>Does the proposed action meet or exceed the state energy code requirements?</u>	NO	YES
If the proposed action will exceed requirements, describe design features and technologies: _____ _____	<input type="checkbox"/>	<input type="checkbox"/>
10. <u>Will the proposed action connect to an existing public/private water supply?</u>	NO	YES
If No, describe method for providing potable water: _____	<input type="checkbox"/>	<input type="checkbox"/>
11. <u>Will the proposed action connect to existing wastewater utilities?</u>	NO	YES
If No, describe method for providing wastewater treatment: _____	<input type="checkbox"/>	<input type="checkbox"/>
12. a. <u>Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?</u>	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. <u>Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. a. <u>Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?</u>	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. <u>Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?</u>	<input type="checkbox"/>	<input type="checkbox"/>
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____		

### EAF Mapper Summary Report

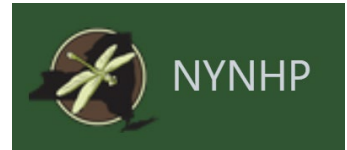
Friday, October 27, 2023 9:32 AM



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	Yes
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
Part 1 / Question 20 [Remediation Site]	No

# NYS RIPARIAN OPPORTUNITIES ASSESSMENT

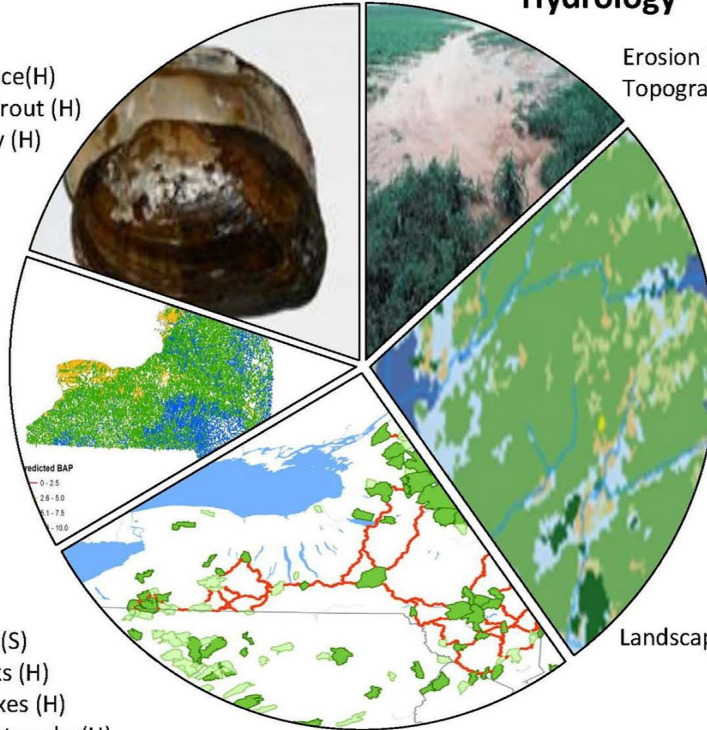
- Riparian land inventory and opportunity assessment to strategically identify and prioritize sites for:
  - Restoration
  - Protection, including conservation easements and land acquisition
- Benefits
  - water quality (reduction of nutrient and sediment loading, erosion control, etc.)
  - habitat quality (riparian cover, habitat connectivity, etc.)



# Suite of Indicators

## Species Presence

Ecological Significance(H)  
Presence of Brook Trout (H)  
Native Fish Diversity (H)



## Hydrology

Erosion Index (S)  
Topographic Wetness Index (S)

## Water Quality

Predicted Biological  
Assessment Profile (H)  
Known Water  
Impairments(S)

## Land Cover

Canopy Cover (H)  
Natural Cover (H)  
Impervious Surface (S)  
Landscape Condition Assessment (S)

## Connectivity

Dam Storage Ratio (S)  
Matrix Forest Blocks (H)  
Floodplain Complexes (H)  
Functional River Networks (H)

# NYS RIPARIAN OPPORTUNITIES ASSESSMENT



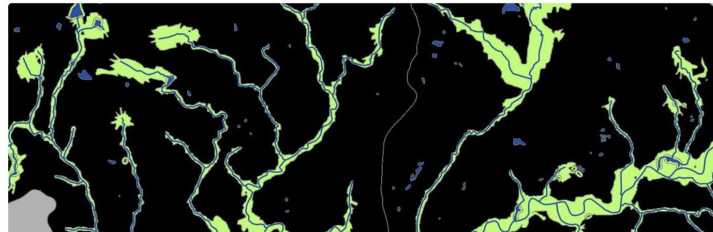
## Products

- Larger (HUC12) →
- Smaller →
- [Data Explorer](#)
  - [Sub-watersheds online map](#) ↗
  - [Catchments online map](#) ↗

## Downloads

- [Project report \(PDF, 9.5 MB\)](#)
- [Geodatabase \(ZIP, 77.2 MB\)](#)
- [Riparian buffers shapefile \(ZIP, 932 MB\)](#)
- [Appendix E \(XLSX, 69.9 KB\)](#)

Riparian Buffers

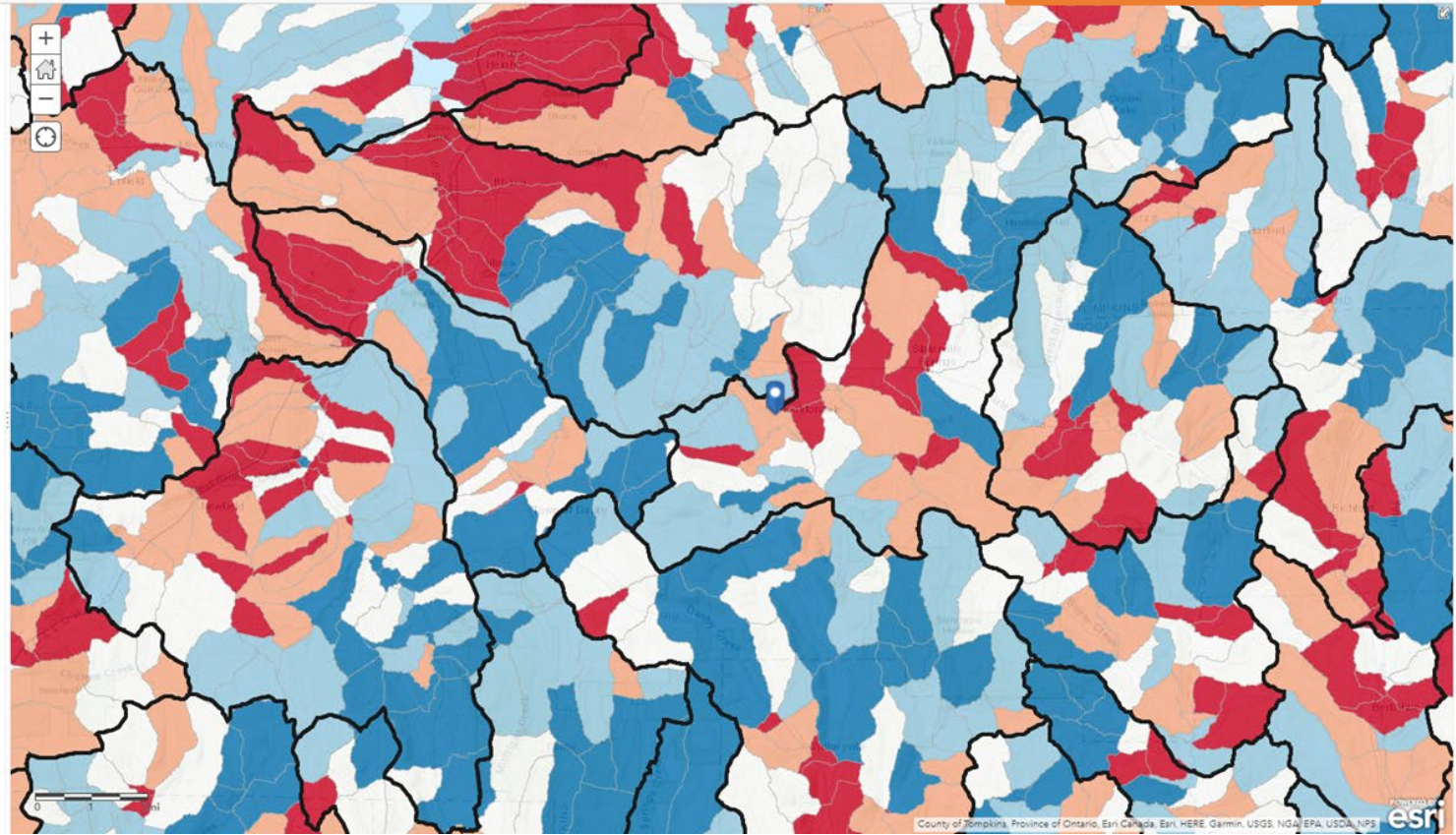


Details Basemap

Share Print Measure Brooktondale, NY, USA

About Content Legend

- Legend
- Comprehensive Score
- Percentile Comprehensive Score
- > 81 - 100
  - > 60.9 - 81
  - > 40.9 - 60.9
  - > 21 - 40.9
  - 0 - 21



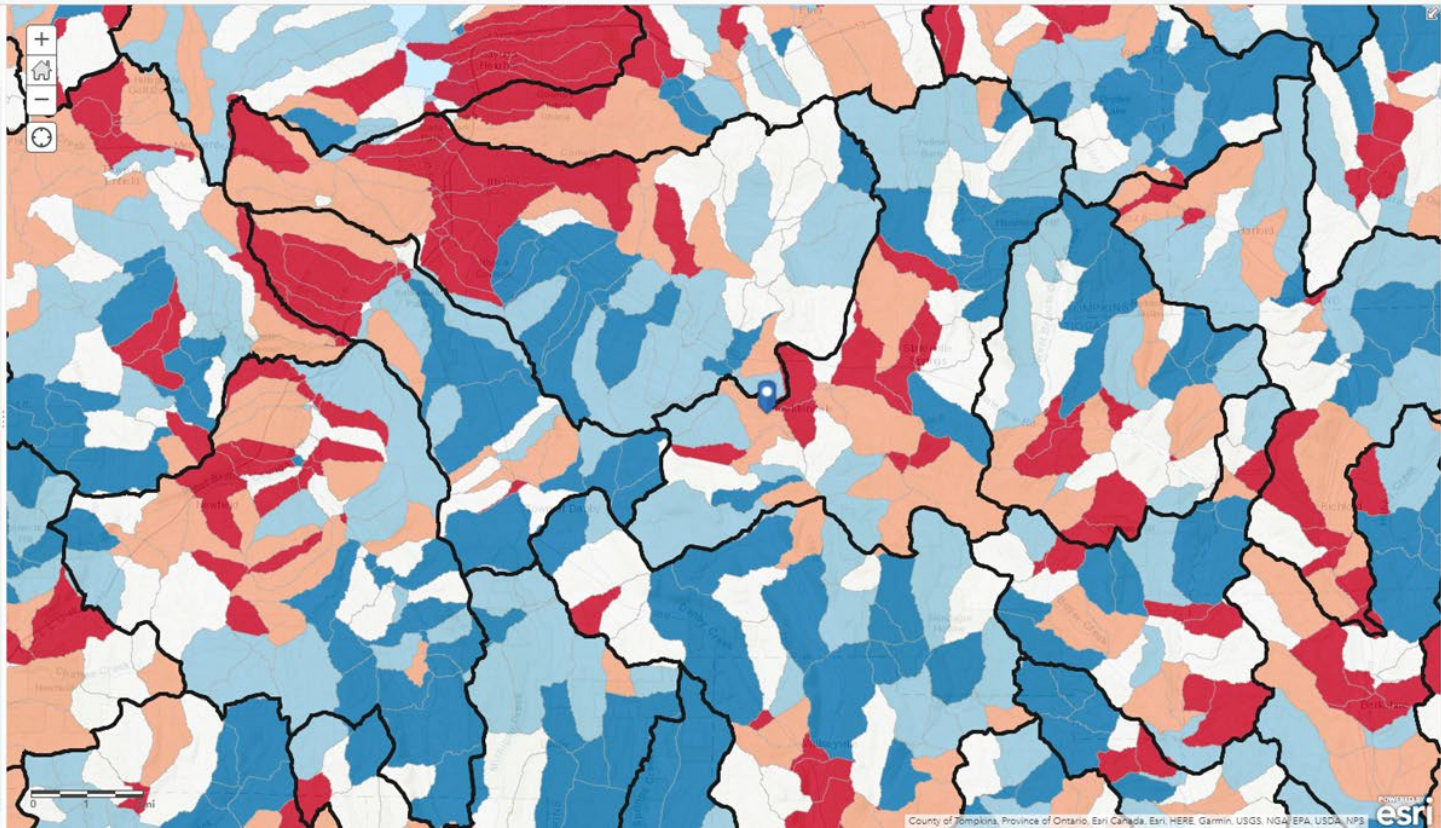


Details Basemap

Share Print Measure Brooktondale, NY, USA

About Content Legend

- Contents
- Map Notes
  - Subwatershed Boundaries
  - Filter 1: Urban Areas
  - Filter 2: Agricultural Land
  - Filter 3: Public Lands
  - Comprehensive Score
  - Health Score
  - Stress Score
  - Resilience Score
  - Community Involvement Score
  - Theme 1: Connectivity
  - Theme 2: Wetland Resiliency
  - Theme 3: Runoff Risk
  - Theme 4: Stream Temperature
  - Theme 5: Water Quality
  - H1 Canopy Cover
  - H1 Canopy Cover Riparian
  - H2 Natural Cover
  - H2 Natural Cover Riparian
  - H3 Biological Assessment Profile (BAP)
  - H4 Brook Trout
  - H5 Floodplain Complexes
  - H5 Floodplain Complexes Riparian
  - H6 Functional River Networks
  - H7 Matrix Forest Blocks
  - H7 Matrix Forest Blocks Riparian



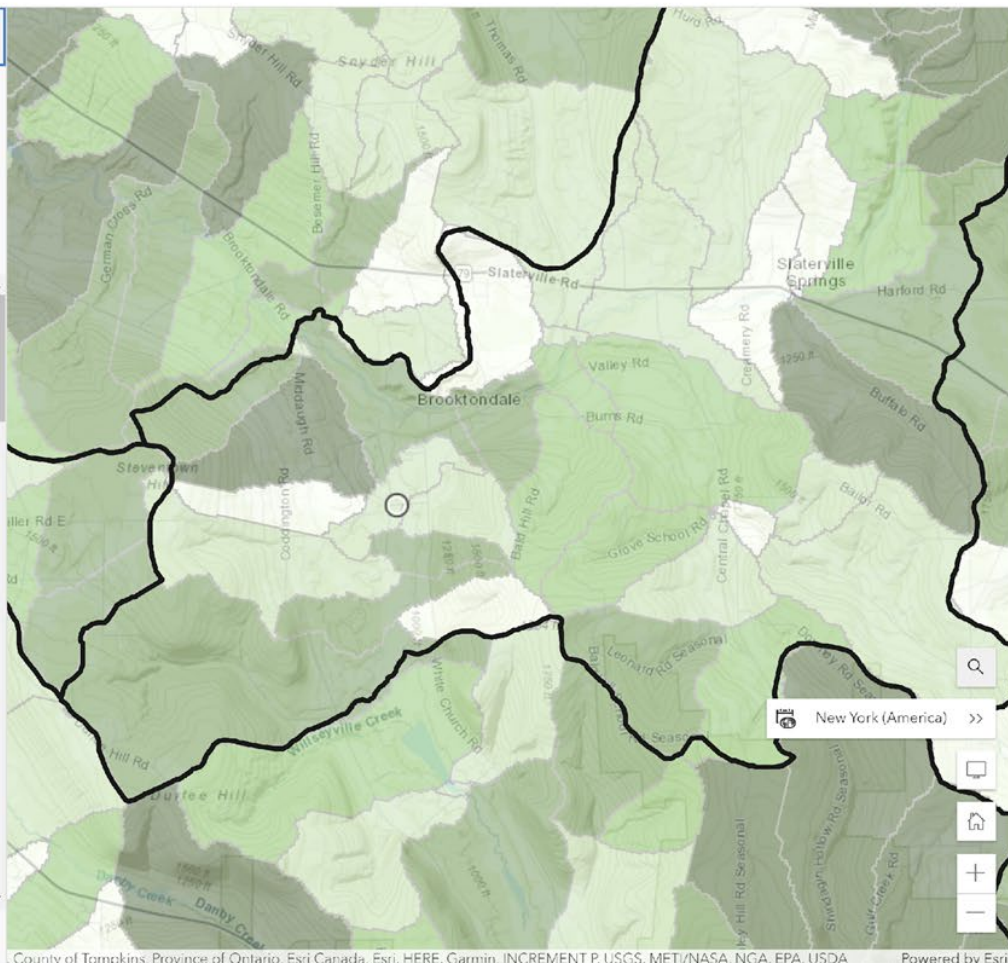
### Draft Results: NY Riparian Assessment- Catchments

#### Layers

Get started  
You can explore maps, add layers, and more without signing in. To save your work, sign in before creating your map.  
[Learn more about Map Viewer](#)

- Subwatershed Boundaries
- Filter 1: Urban Areas
- Filter 2: Agricultural Land
- Filter 3: Public Lands
- Comprehensive Score
- Health Score**
- Stress Score
- Resilience Score
- Community Involvement Score
- Theme 1: Connectivity

Add



#### Health Score

Properties

Information

Symbology

##### Health Score

Percentile

- > 80 to 100
- > 60 to 80
- > 40 to 60
- > 20 to 40
- 0 to 20
- Other

Appearance

Blending

Normal

Transparency

50%

25% 50% 75%

Visibility

**Layers**

**Get started**  
You can explore maps, add layers, and more without signing in. To save your work, sign in before creating your map.  
[Learn more about Map Viewer](#)

- Subwatershed Boundaries
- Filter 1: Urban Areas
- Filter 2: Agricultural Land
- Filter 3: Public Lands
- Comprehensive Score
- Health Score**
- Stress Score
- Resilience Score
- Community Involvement Score
- Theme 1: Connectivity
- Theme 2: Wetland Resiliency
- Theme 3: Runoff Risk
- Theme 4: Stream Temperature
- Theme 5: Water Quality

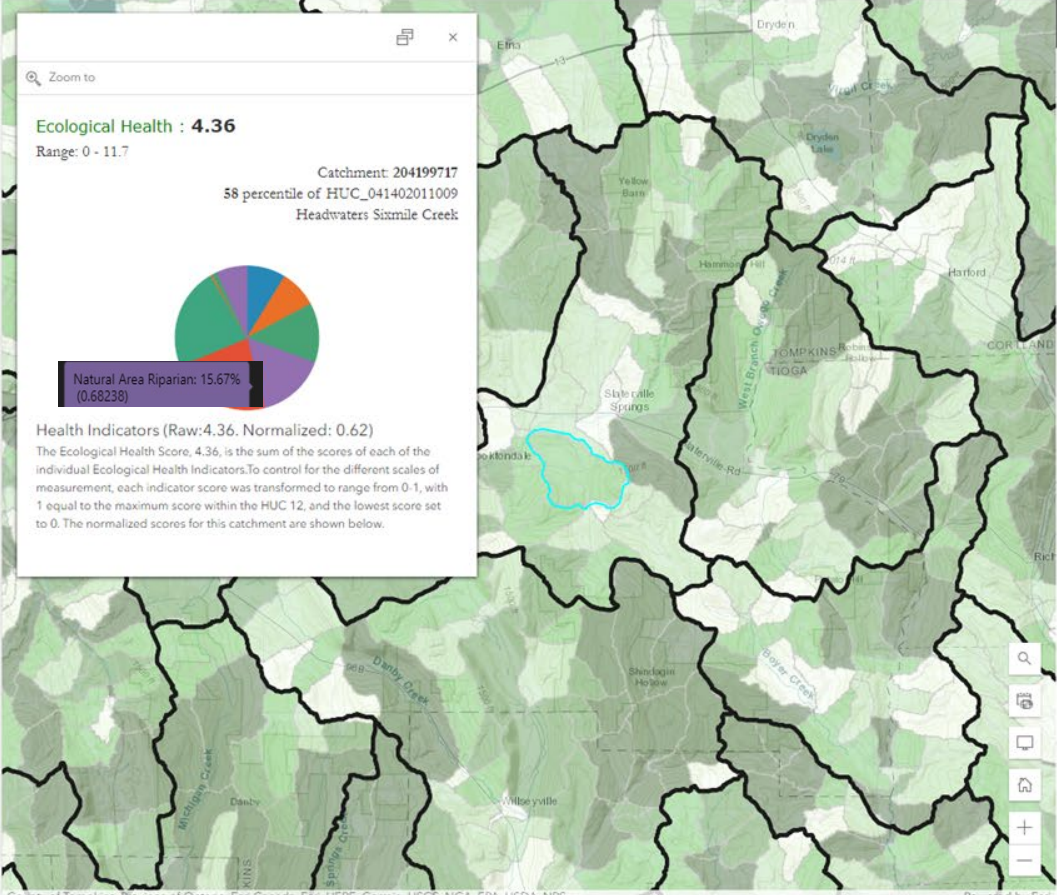
[Add](#)

Zoom to

**Ecological Health : 4.36**  
Range: 0 - 11.7

Catchment: 204199717  
58 percentile of HUC\_041402011009  
Headwaters Sixmile Creek:

Health Indicators (Raw:4.36, Normalized: 0.62)  
The Ecological Health Score, 4.36, is the sum of the scores of each of the individual Ecological Health Indicators. To control for the different scales of measurement, each indicator score was transformed to range from 0-1, with 1 equal to the maximum score within the HUC 12, and the lowest score set to 0. The normalized scores for this catchment are shown below.



**Health Score**

**Properties**

**Information**

**Symbology**

**Health Score**

Percentile

- > 80 to 100
- > 60 to 80
- > 40 to 60
- > 20 to 40
- 0 to 20
- Other

**Appearance**

Blending

Normal

Transparency

55%

25% 50% 75%

**Visibility**

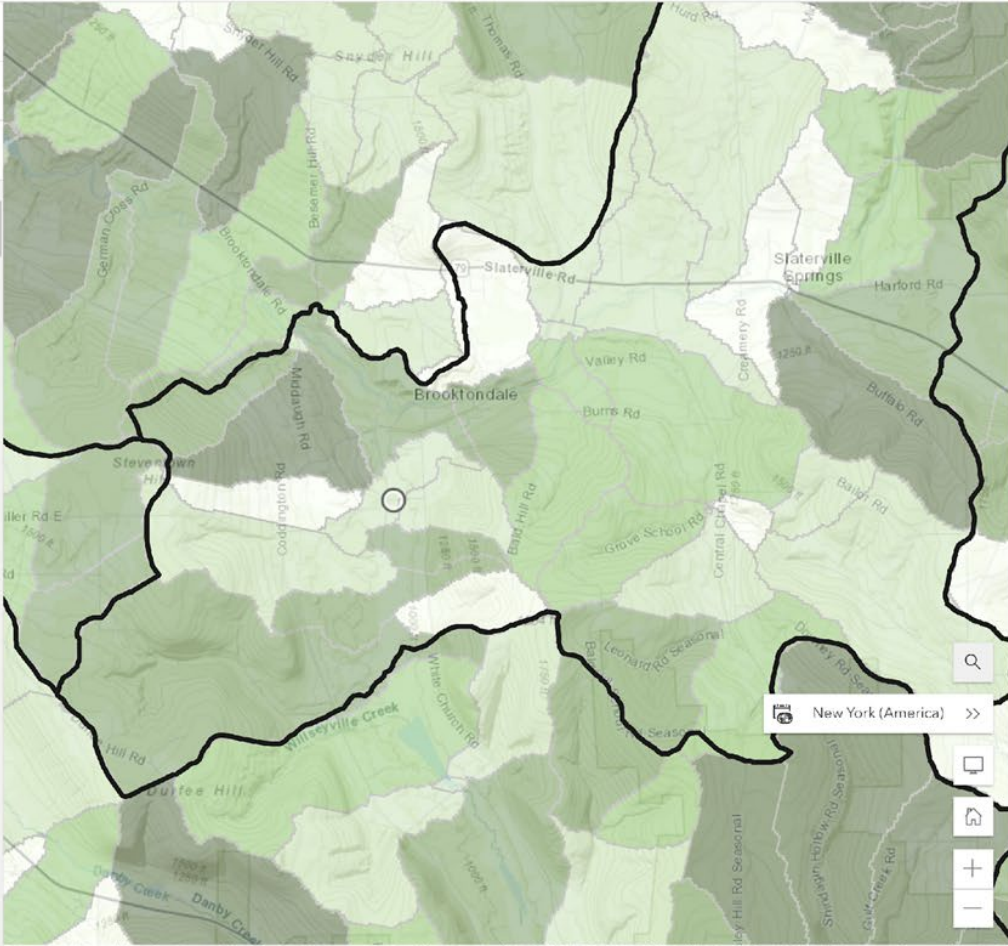
Visible range

Counties Room

Draft Results: NY Riparian Assessment- Catchments

Add layer

- Living Atlas
- Search
- USA Short-Term Weather Warnings
  - Feature Layer
  - + Add
- Recent Earthquakes
  - Feature Layer
  - + Add
- Satellite (MODIS) Thermal Hotspots and Fire Activity
  - Feature Layer
  - + Add
- USA Storm Reports
  - Feature Layer
  - + Add
- USA Current Wildfires
  - Feature Layer
  - + Add



Health Score

Properties

Information

Symbology

Health Score

Percentile

- > 80 to 100
- > 60 to 80
- > 40 to 60
- > 20 to 40
- 0 to 20
- Other

Appearance

Blending

Normal

Transparency

50%

25% 50% 75%

Visibility



Print

PDF

Advanced options

Set scale

144447.638572

Author

Copyright

DPI

96

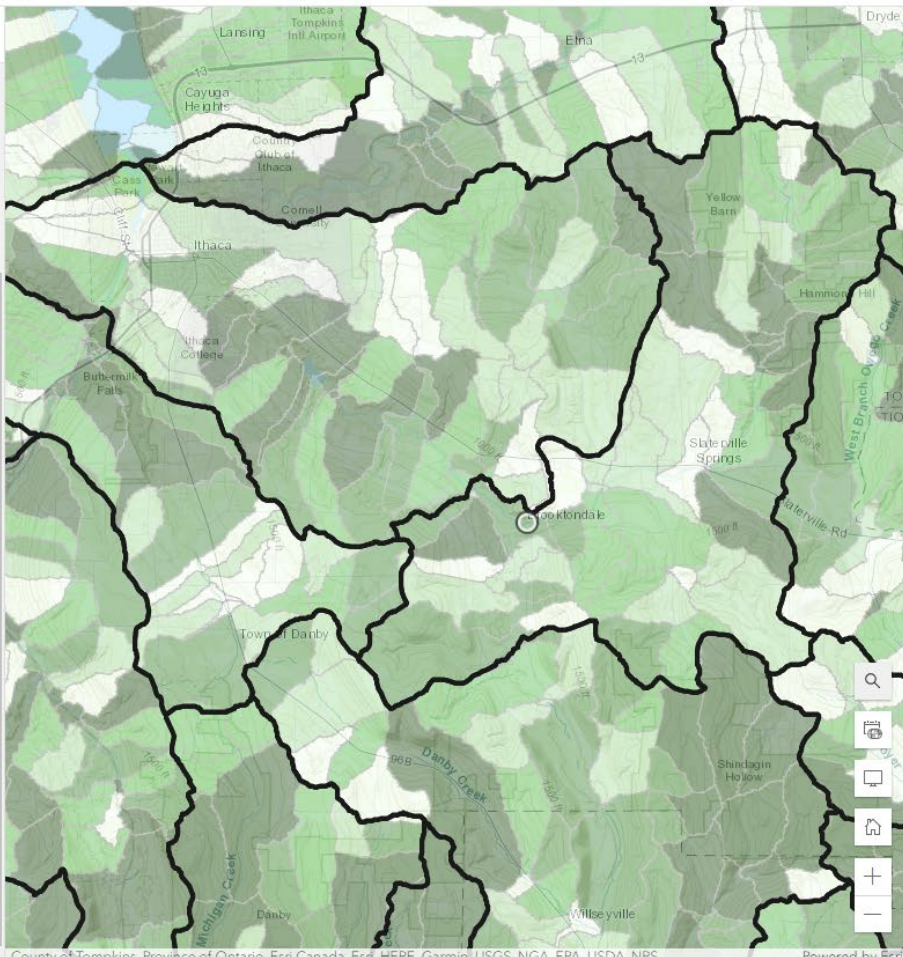
Include legend

Include north arrow

Export

Exported files

- Draft Results: NY Riparian Assessment- Catchments.pdf
- Draft Results: NY Riparian Assessment- Catchments(1).pdf
- Draft Results: NY Riparian Assessment- Catchments(2).pdf
- Draft Results: NY Riparian Assessment- Catchments(3).pdf



Health Score

Properties

Information

Symbology

Health Score

Percentile

- > 80 to 100
- > 60 to 80
- > 40 to 60
- > 20 to 40
- 0 to 20
- Other

Appearance

Blending

Normal

Transparency

49%

25%

50%

75%

Visibility

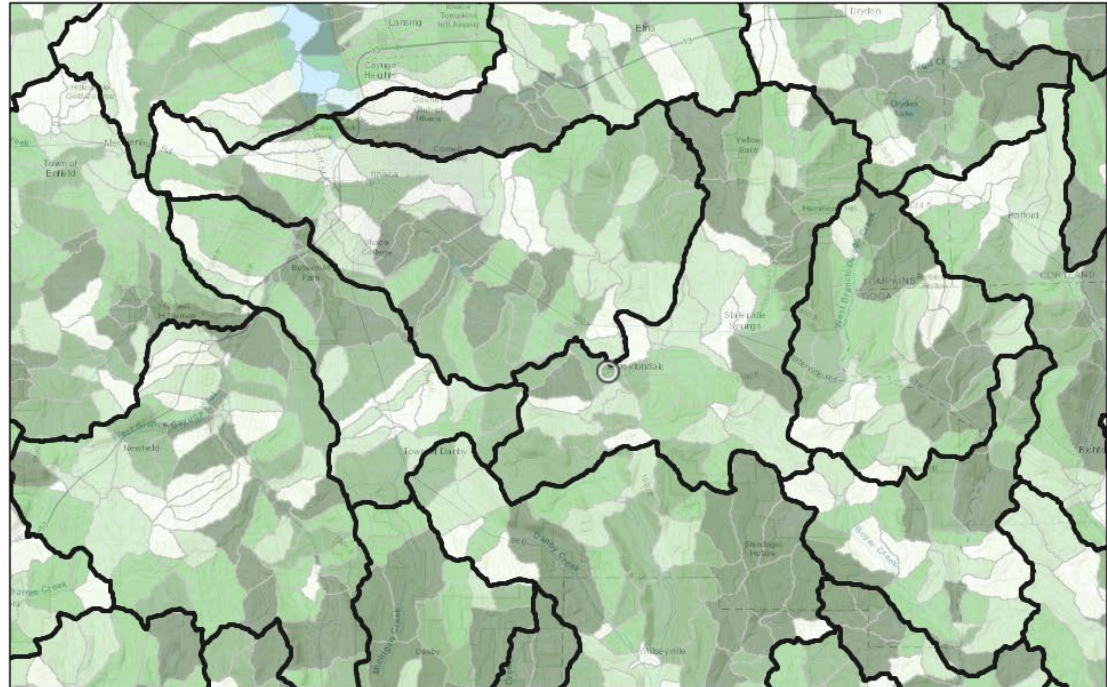
Visible range



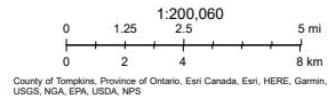
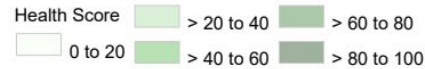


1

### Draft Results: NY Riparian Assessment- Catchments



11/13/2023



# Federal Resources

# FEMA Flood Insurance Rate Maps - FIRMS

The current effective/paper maps were digitized by

**Corelogic automated system.** The effective Special Flood Hazard Area (SFHA) designation – accuracy/reliability – of the data is not guaranteed. It is for information purposes only. Please talk to your local community officials for details.

**Preliminary data** are for review and guidance purposes only. By viewing preliminary data and maps, the user acknowledges that the information provided is preliminary and subject to change. Preliminary data, including new or revised Flood Insurance Rate Maps (FIRMs), Flood Insurance Study (FIS) reports, and FIRM Databases, are not final and are presented on the Map Service Center (MSC) as the best information available at this time. Additionally, preliminary data cannot be used to rate flood insurance policies or enforce the Federal mandatory purchase requirement. FEMA will remove preliminary data once effective data are available.

**1%-Annual-Chance Flood Hazard:** High-risk flood zone that has a 1% chance of flooding in any given year, and a 26% chance of flooding over the life of a 30-year mortgage. This area is also known as the Special Flood Hazard Area (SFHA) or the 100-year floodplain. Flood insurance is required for any building in an SFHA that has a mortgage backed by a federally regulated lender.

**0.2%-Annual-Chance Flood Hazard:** Moderate-risk flood zone that has a 0.2% chance of flooding in any given year. This area is also known as the 500-year floodplain. Flood insurance is not required for buildings in this flood zone. However, flooding can occur even in areas of moderate or minimal flood hazards. FEMA recommends flood insurance, even if it is not required. It is the best way for people to protect themselves from the major financial losses a flood can cause.



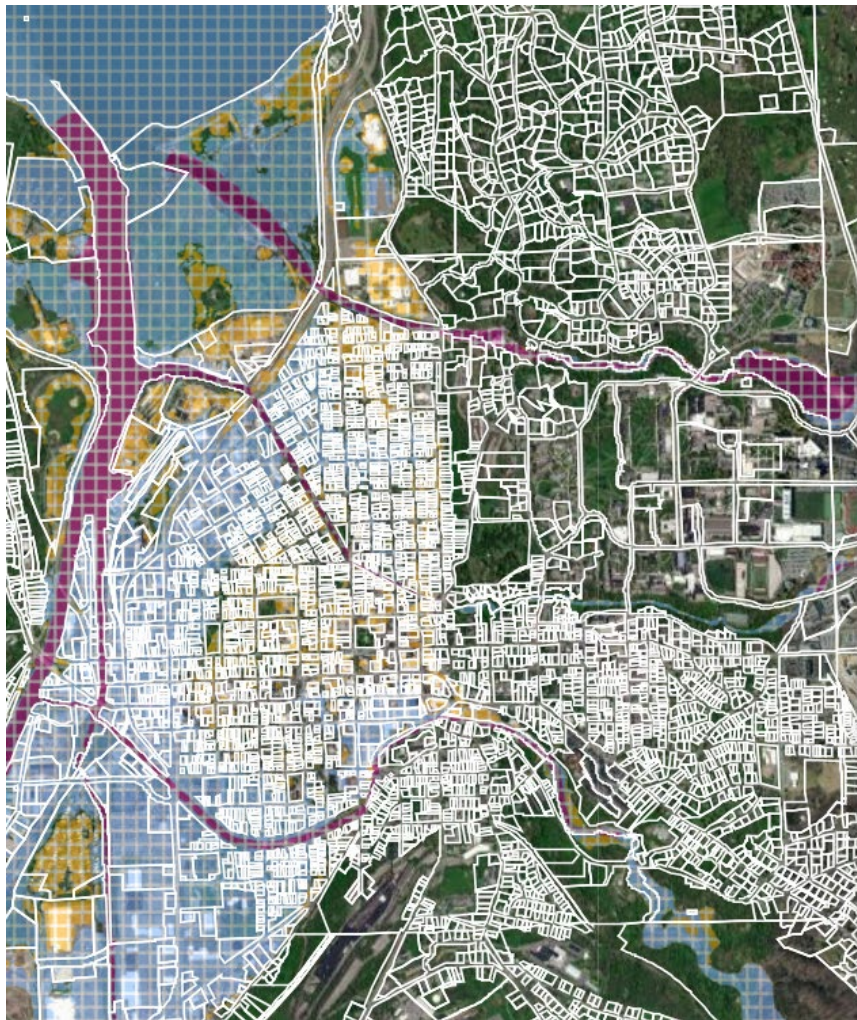
Find address or place



Layer List

- Counties of Interest
- County Boundary
- GeoIndex (Effective Digital and Non-digital FIRM)
- Tompkins County Parcel Data
- Building Footprints
- Tompkins County CoreLogic Base Flood Elevations
- Tompkins County CoreLogic Effective Flood Hazard Zones
- Tompkins County Additional Preliminary Flood Hazard Data
- Tompkins Preliminary Flood Hazard Zone
- Ithaca Inundation Boundary (USGS)
- Tompkins County Georeferenced Panels
- Ithaca DEM
- Tompkins County DEM





## Layer List



### Layers



- Counties of Interest ...
- County Boundary ...
- GeoIndex (Effective Digital and Non-digital FIRM's) ...
- Tompkins County Parcel Data ...
- Building Footprints ...
- Tompkins County CoreLogic Base Flood Elevations ...
- Tompkins County CoreLogic Effective Flood Hazard Zones ...
- Tompkins County Additional Preliminary Flood Hazard Data ...
- Tompkins Preliminary Flood Hazard Zone ...
- Ithaca Inundation Boundary (USGS) ...
- Tompkins County Georeferenced Panels ...
- Ithaca DEM ...
- Tompkins County DEM ...



## Legend



### County Boundary



### Tompkins County CoreLogic Effective Flood Hazard Zones

Flood Hazard Zones

ZONE,FLOODWAY



1% Annual Chance of Flood Hazard



0.2% Annual Chance Flood Hazard

### Tompkins Preliminary Flood Hazard Zone

Preliminary Flood Hazard Zones



1% Annual Chance of Flood Hazard



Regulatory Floodway



0.2% Annual Chance Flood Hazard

# More information on County Flood Information page

## Flood Information

[Home](#)

[FEMA and DEC FAQs](#)

[Flood Insurance Rate Map  
\(FIRM\) Tools](#)

[Flood Insurance](#)

[Local Contacts and Resources](#)

[Archive](#)

## FEMA And DEC Flood Map Update FAQs

**For properties newly mapped into the 1% flood zone is there a phase in period for the cost of required flood insurance (for people who did not have coverage before they were mapped in and it was required)?**

A property may be eligible for the Newly Mapped discount if it was once designated outside of the Special Flood Hazard Area (SFHA) on an effective Flood Insurance Rate Map (FIRM) and, following a map revision, is designated within a Special Flood Hazard Area (SFHA). The Newly Mapped discount phases out annually until reaching the policy's full-risk premium. The insurer must verify the policy's eligibility for the Newly Mapped discount, including by confirming any prior flood zone designation before the most current FIRM.

### *Eligibility*

A property may be eligible for the Newly Mapped discount if it was either:

- Previously designated in a Zone B, C, or X on the previous flood map and newly mapped into an SFHA.
- Previously designated in a Zone D, A99, or AR and newly mapped into a different SFHA zone.
- The policy in force start date is within 12 months of the effective FIRM revision date; or
- The policyholder applied for the policy within 45 days of initial lender notification, if the notification occurred within 24 months of the effective FIRM revision date.

FEMA provides Newly Mapped statutory discounts on the first \$35,000 of coverage for buildings and \$10,000 of contents coverage for pre-Flood Insurance Rate Map (FIRM) primary residences. The policy's first term of eligibility for the statutory discount is 70%. For subsequent renewal terms, the statutory annual increase cap applies, which would be no more than 15% for most policies, excluding NFIP fees.

**Can a homeowner see the parameters that Risk 2.0 has assigned to their home to decide if a challenge or Elevation Certificate is merited?**

<https://tompkinscountyny.gov/flood-info>



# STREAMSTATS

## USGS

- Web application that provides access to an assortment of analytical tools that are useful for water-resources planning and management, and for engineering and design purposes.
- Anywhere in CONUS can be used to:
  - delineate drainage areas for user-selected sites on streams
  - get basin characteristics
  - estimate flow statistics
- U.S. Geological Survey data-collection stations
  - get measured flow statistics and other information for the stations



SELECT A STATE / REGION >

Exploration Tools

Step 1: Use the map or the search tool to identify an area of interest. At zoom level 8 or greater State/Region selection will be enabled.

Brooktondale, NY

Help

IDENTIFY A STUDY AREA

SELECT SCENARIOS

BUILD A REPORT

POWERED BY WIM

USGS Home Contact USGS Search USGS Accessibility FOIA Privacy Policy & Notices



Layers

- Base Maps
- National Layers

Zoom Level: 4  
Map Scale: 1:36,978,596  
Lat: 9.2756, Lon: -91.7578

500 km  
500 mi



SELECT A STATE / REGION

Save Exploration Tools

Step 2: You have zoomed in sufficiently to select a state or regional study area. Your selection will dictate the data used to perform basin delineation and flow statistics calculation.

Click to select a State or Regional Study Area

New York



Delaware River Basin



Search for a place

Help

IDENTIFY A STUDY AREA

SELECT SCENARIOS

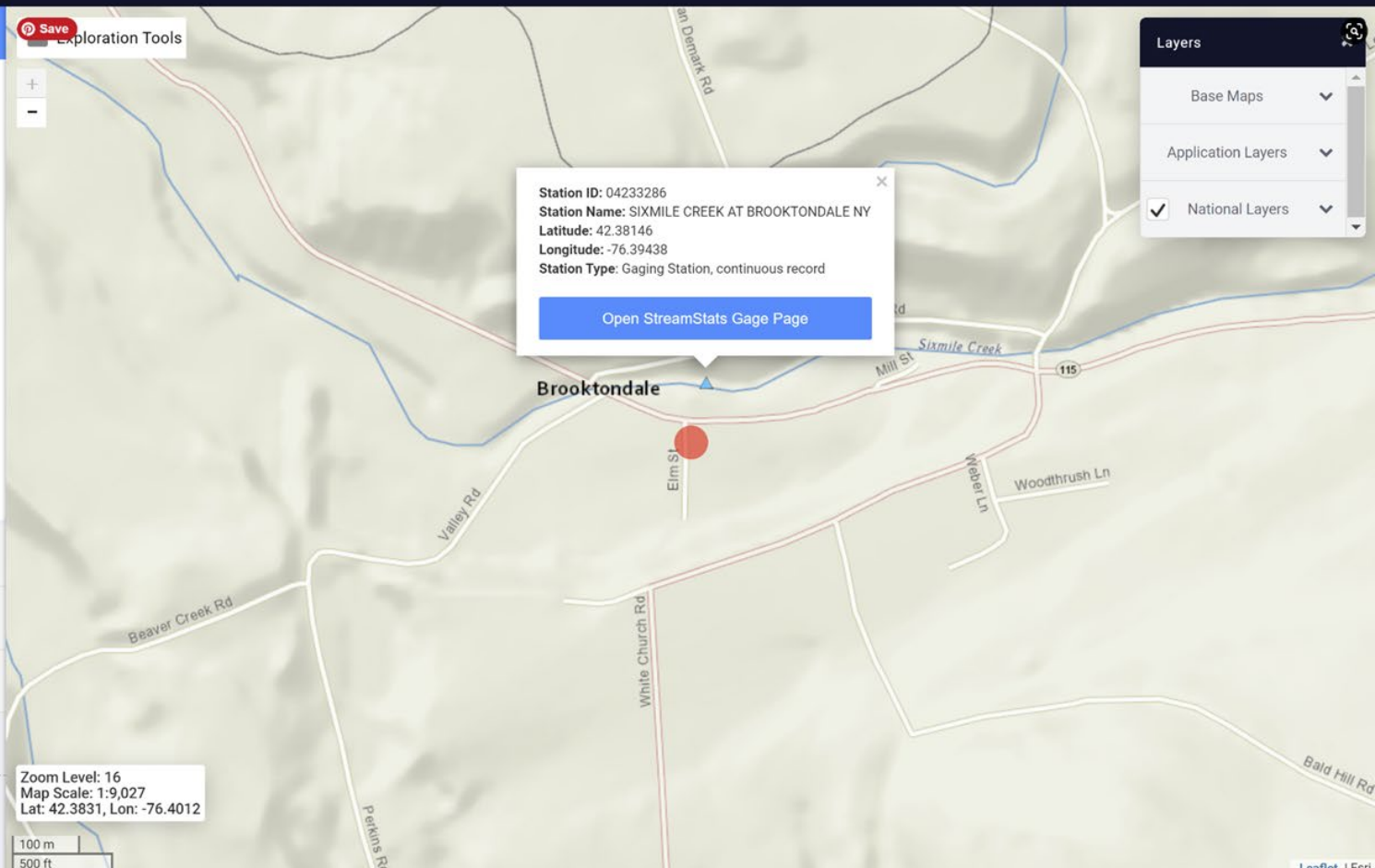
BUILD A REPORT

POWERED BY WIM

USGS Home Contact USGS Search USGS Accessibility FOIA Privacy Policy & Notices

Zoom Level: 16
Map Scale: 1:9,027
Lat: 42.3831, Lon: -76.4012

100 m
500 ft



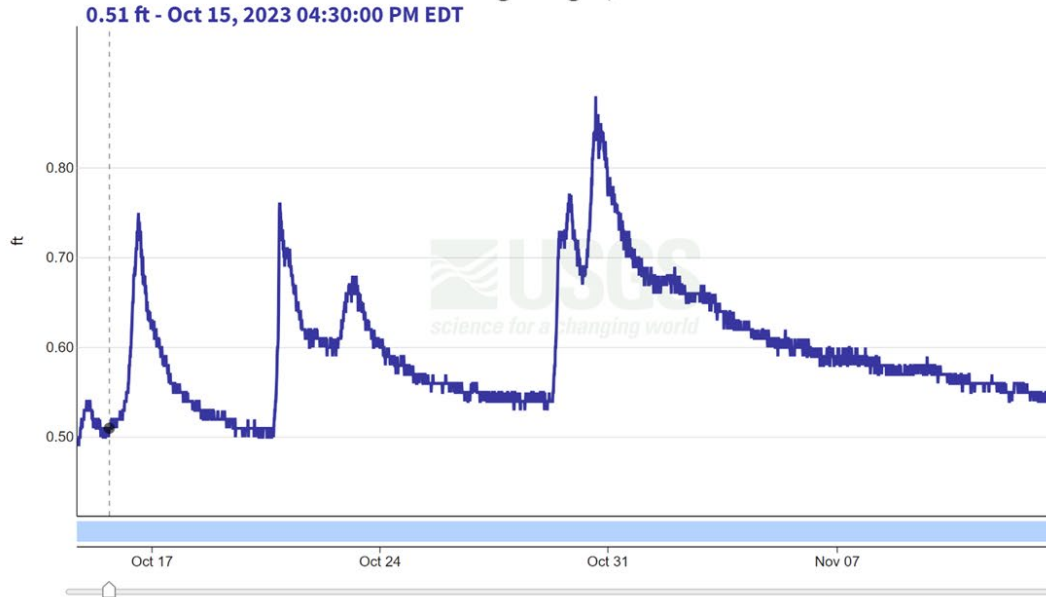
Layers panel with dropdowns for Base Maps, Application Layers, and National Layers (checked).

7 days  30 days  1 year

# Sixmile Creek at Brooktondale NY - 04233286

October 14, 2023 - November 13, 2023

Gage height, feet



**IMPORTANT** Data may be [provisional](#)

Show legend

	Value	Status	Time
<input checked="" type="radio"/> Latest value	0.55 ft	Provisional	Nov 13, 2023 15:30:00 PM EST
<input checked="" type="radio"/> Selected	0.51 ft	Provisional	Oct 15, 2023 04:30:00 PM EDT
<input type="radio"/> Compare			Add last year's data to graph

Questions or Comments





SELECT A STATE / REGION  
New York

Exploration Tools

Layers

- Base Maps
- Application Layers
- National Layers
- NY Map Layers

IDENTIFY A STUDY AREA

Step 4: Wait for delineation process to complete...

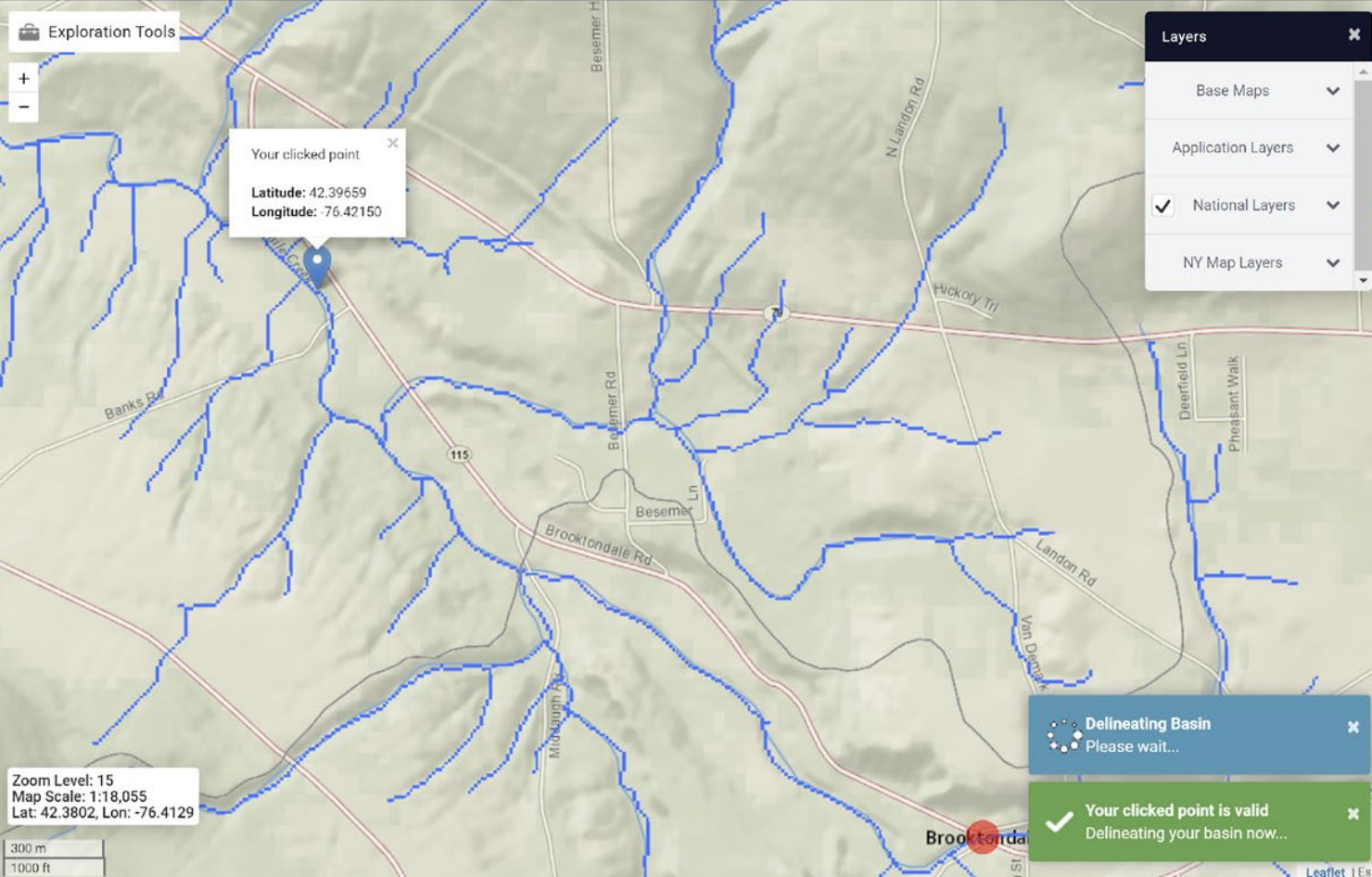
Delineate

SELECT SCENARIOS

BUILD A REPORT

POWERED BY WIM

USGS Home Contact USGS Search USGS  
Accessibility FOIA Privacy Policy & Notices



Your clicked point

Latitude: 42.39659  
Longitude: -76.42150

Zoom Level: 15  
Map Scale: 1:18,055  
Lat: 42.3802, Lon: -76.4129

300 m  
1000 ft

Delineating Basin  
Please wait...

Your clicked point is valid  
Delineating your basin now...



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

Maximum Probable Flood Statistics

Basin Characteristics

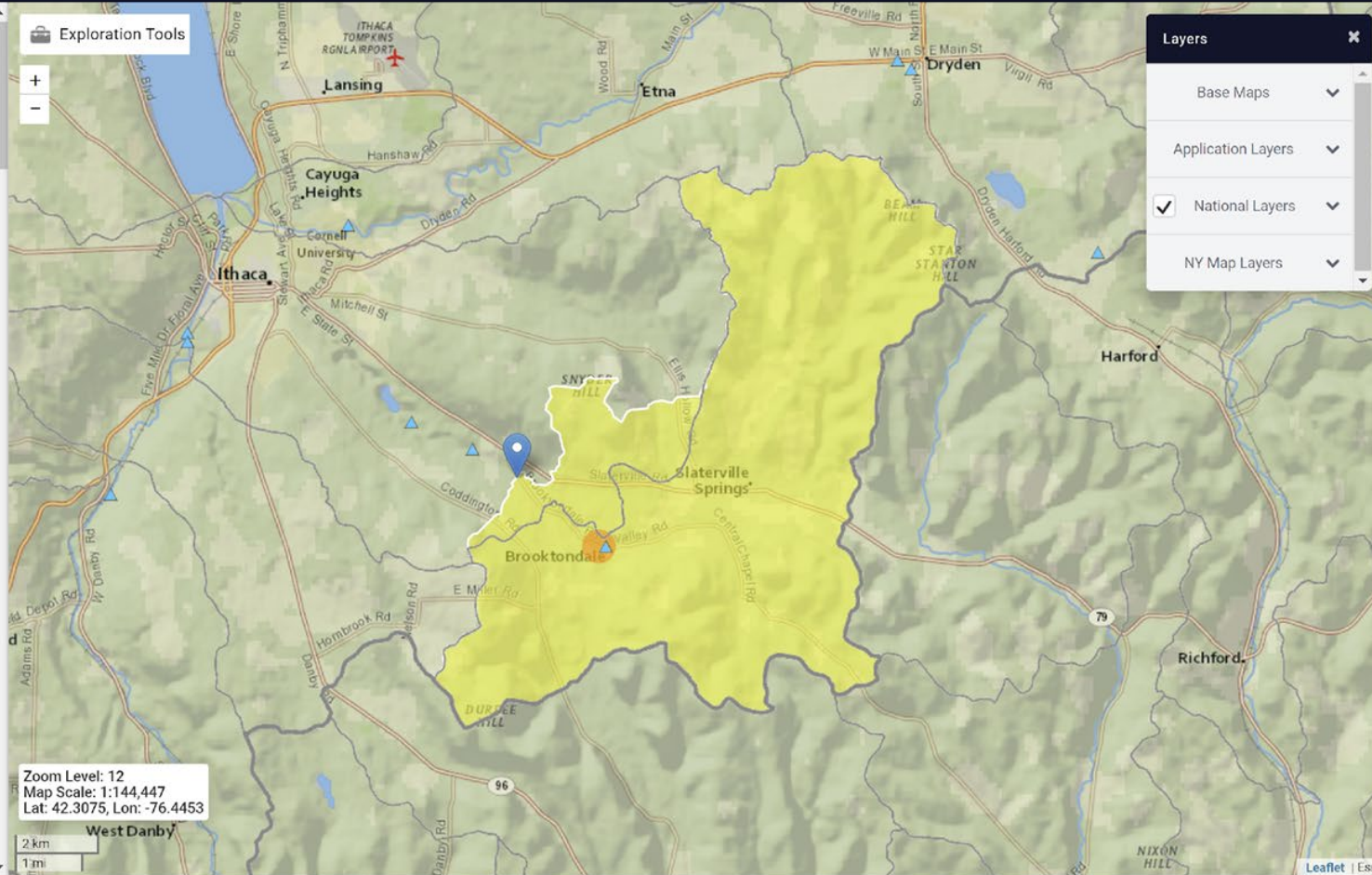
Select All Basin Characteristics

Select	Parameter	Description
<input type="checkbox"/>	BSLOPCM	Mean basin

Exploration Tools

+

-



**Layers**

- Base Maps
- Application Layers
- National Layers
- NY Map Layers

Zoom Level: 12  
Map Scale: 1:144,447  
Lat: 42.3075, Lon: -76.4453

2 km  
1 mi

JULAVPRE	3.86
MAYAVPRE	3.47
PRJUNAug00	11.9
JUNMAXTMP	73.8
SSURGOA	8.59
EL1200	74.9

Select available reports to display:

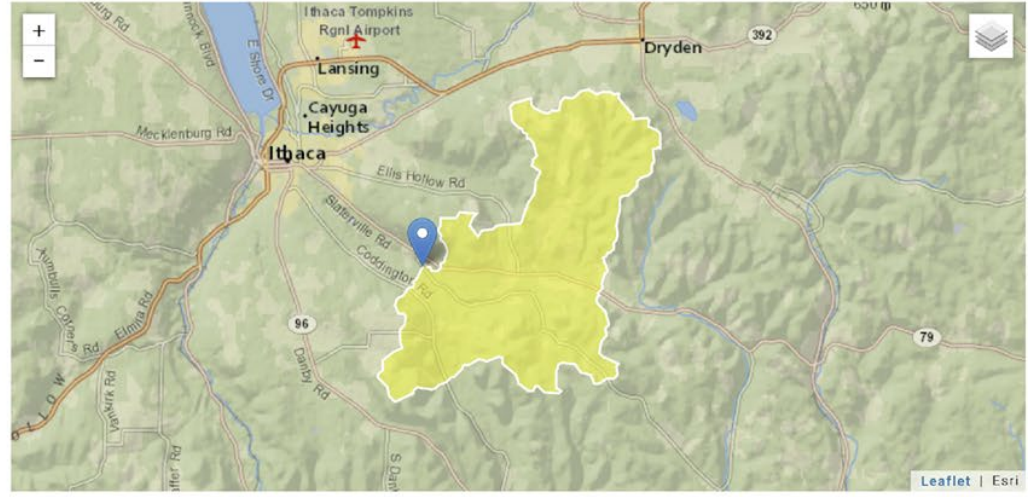
- Basin Characteristics Report
- Scenario Flow Reports

[Open Report](#)

POWERED BY WIM

### StreamStats Report

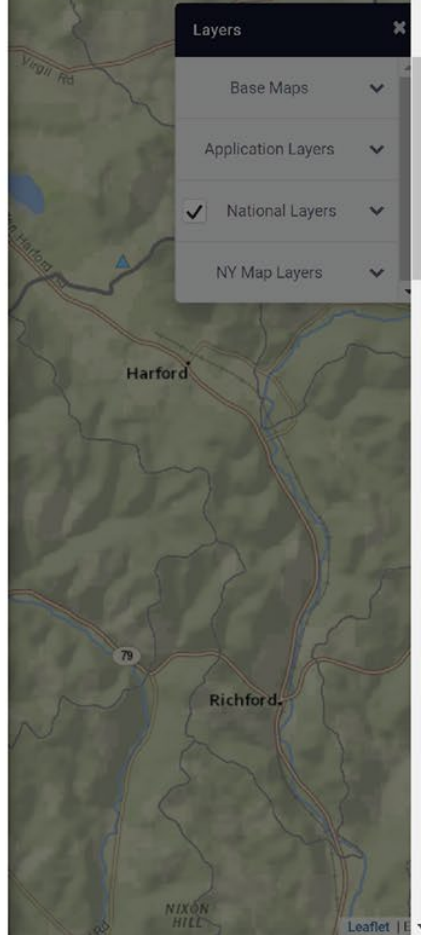
**Region ID:** NY  
**Workspace ID:** NY20231102183809726000  
**Clicked Point (Latitude, Longitude):** 42.39659, -76.42150  
**Time:** 2023-11-02 14:38:35 -0400



[Collapse All](#)

#### Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	388041.4	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	4695062	meters
CSL1085LO	10-85 slope of lower half of main channel in feet per mile.	58.2	feet per mi
DRNAREA	Area that drains to a point on a stream	36.3	square miles



# USDA WEB-SOIL SURVEY



- Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey
- Operated by the USDA Natural Resources Conservation Service (NRCS)

Search

Area of Interest

Open All | Close All

AOI Properties

Clear AOI

AOI Information

Name

- Use Soil Survey Area Map Unit Symbols
- Use National Map Unit Symbols

Area (acres) 4.89

Soil Data Available from Web Soil Survey

Tompkins County, New York (NY109)

Data Availability Tabular and Spatial, incomplete

Tabular Data Version 19, Sep 5, 2023

Spatial Data Version 12, Sep 16, 2019

Clear AOI

Import AOI

Export AOI

Quick Navigation

Address

State and County

Soil Survey Area

Latitude and Longitude or Current Location

PLSS (Section, Township, Range)

Bureau of Land Management

Department of Defense

Area of Interest Interactive Map

Legend

View Extent: Contiguous U.S. | Scale: (not to scale)



Area of Interest (AOI)

**Soil Map**

Soil Data Explorer

Download Soils Data

Shopping Cart (Free)

Printable Version

Add to Shopping Cart

Search

Map Unit Legend

**Tompkins County, New York (NY109)**

Tompkins County, New York (NY109)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ab	Alluvial land	4.5	91.5%
Gn	Genesee silt loam	0.1	2.5%
HsD3	Hudson silty clay loam, 12 to 20 percent slopes, eroded	0.1	2.1%
RnC3	Rhinebeck silty clay loam, 6 to 12 percent slopes, eroded	0.2	3.9%

**Totals for Area of Interest**      **4.9**   **100.0%**

Soil Map

Legend    Scale (not to scale)    ?



View Soil Information By Use: All Uses

Printable Version | Add to Shopping Cart

Search

Suitabilities and Limitations Ratings

Open All | Close All

- Building Site Development
- Construction Materials
- Disaster Recovery Planning
- Land Classifications

Land Management

Construction Limitations for Haul Roads and Log Landings

Drought Vulnerable Soils

View Description | View Rating

View Options

- Map
- Table
- Component Breakdown and Rating Reasons
  - Numeric Values
- Description of Rating
- Rating Options  Detailed Description

Advanced Options

View Description | View Rating

Erosion Hazard (Off-Road, Off-Trail)

Map — Drought Vulnerable Soils

Legend

Scale (not to scale)



Area of Interest (AOI)

Soil Map

Soil Data Explorer

Download Soils Data

Shopping Cart (Free)

Check Out

Search

Report Properties

Title

Title Custom Soil Resource Report for  
Tompkins County, New York

- Subtitle
- Area of Interest Name: (none defined)
  - Custom Subtitle:
  - None

Map Options

Map Scale

Printed Sheet Size

Show UTM  
Coordinate Ticks

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  - How Soil Surveys Are Made
  - Soil Map
    - Soil Map
    - Map Unit Legend
    - Map Unit Description
  - Soil Data Explorer
    - All Uses





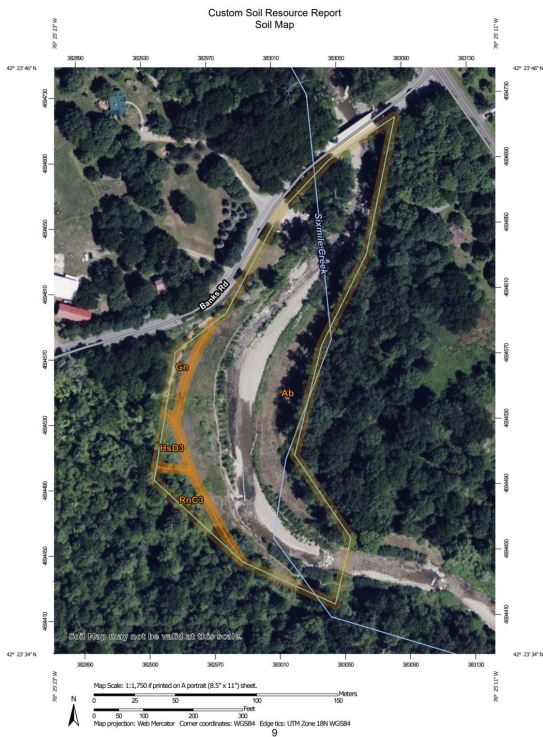
United States  
Department of  
Agriculture  
**NRCS**  
Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies. State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

## Custom Soil Resource Report for Tompkins County, New York



November 2, 2023



Custom Soil Resource Report

### Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ab	Alluvial land	4.5	91.5%
Gn	Genesee silt loam	0.1	2.5%
HdD3	Hudson silt clay loam, 12 to 20 percent slopes, eroded	0.1	2.1%
RrC3	Rhinebeck silt clay loam, 6 to 12 percent slopes, eroded	0.2	3.9%
<b>Totals for Area of Interest</b>		<b>4.9</b>	<b>100.0%</b>

### Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

# MODEL MY WATERSHED

Model My Watershed is a watershed-modeling web app that enables citizens, conservation practitioners, municipal decision-makers, educators, and students to

- Analyze real land use and soil data in their neighborhoods and watersheds
- Model stormwater runoff and water-quality impacts using professional-grade models
- Compare how different conservation or development scenarios could modify runoff and water quality



## Select Area

Explore mapped layers, such as streams, land cover, soils, boundaries and observations, using the layer selector in the lower left of the map. See our [documentation on layers](#).

Select an **Area of Interest** in the continental United States, using the suite of tools below, to analyze the factors that impact water in your area and to begin to model different scenarios of human impacts. Different modeling options for using these tools are described in the technical documentation.

### Select boundary

Choose a predefined boundary from several types

### Draw area

Free draw an area or place a square kilometer

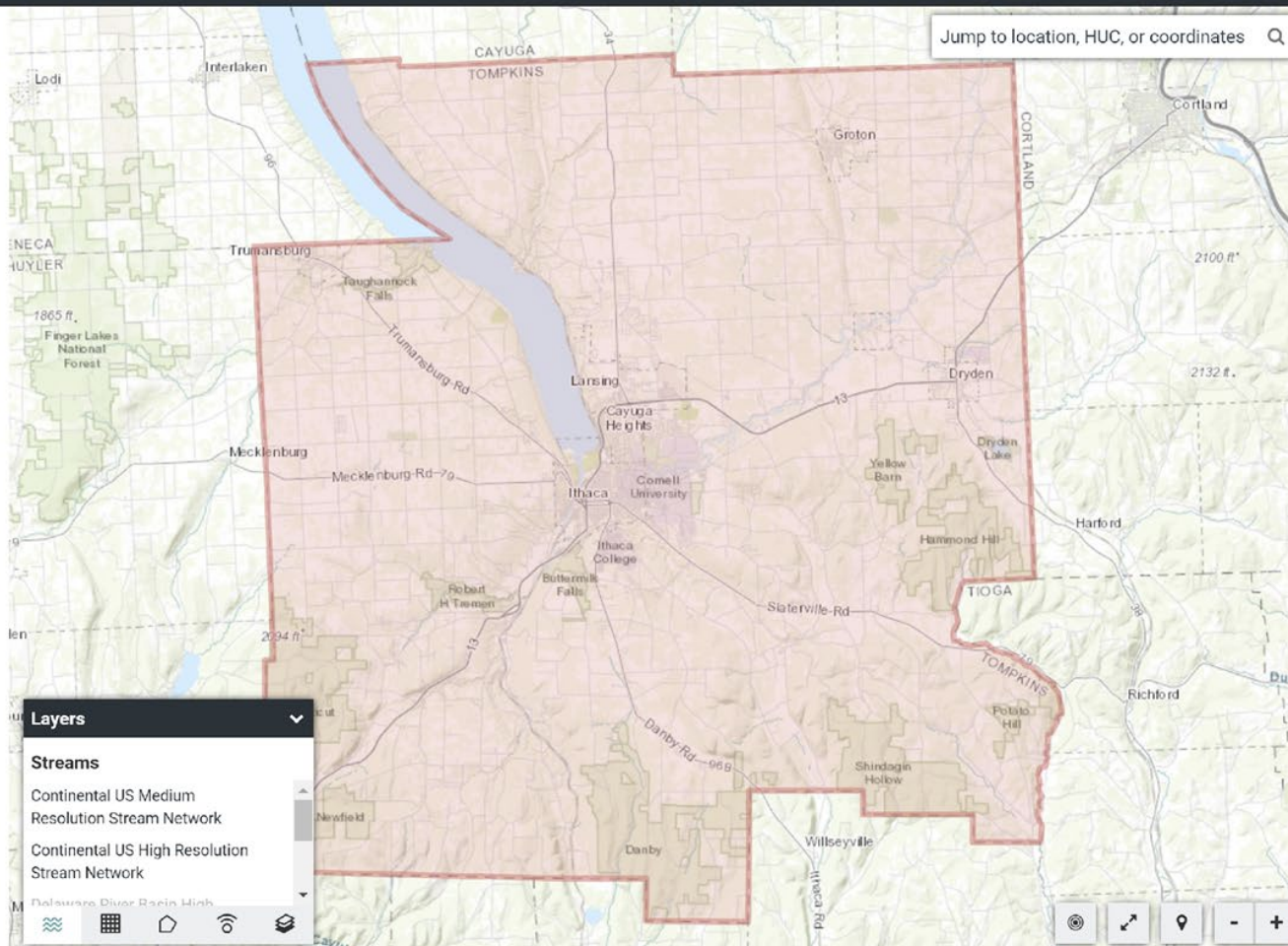
### Delineate watershed

Automatically delineate a watershed from any point

### Upload file

Upload a polygon for your area

Jump to location, HUC, or coordinates



**Layers**

- Streams
  - Continental US Medium Resolution Stream Network
  - Continental US High Resolution Stream Network

Map navigation controls: Home, Full Screen, Location, Zoom In, Zoom Out

Analyze Monitor Model

## Headwaters Sixmile Creek, HUC-12 Subwatershed

ID 041402011009 84 km<sup>2</sup>

Streams Land Soil Terrain Climate Pt Sources Animals Water Qual

NHD Medium Resolution Streams

### NHD Medium Resolution Stream Network Statistics

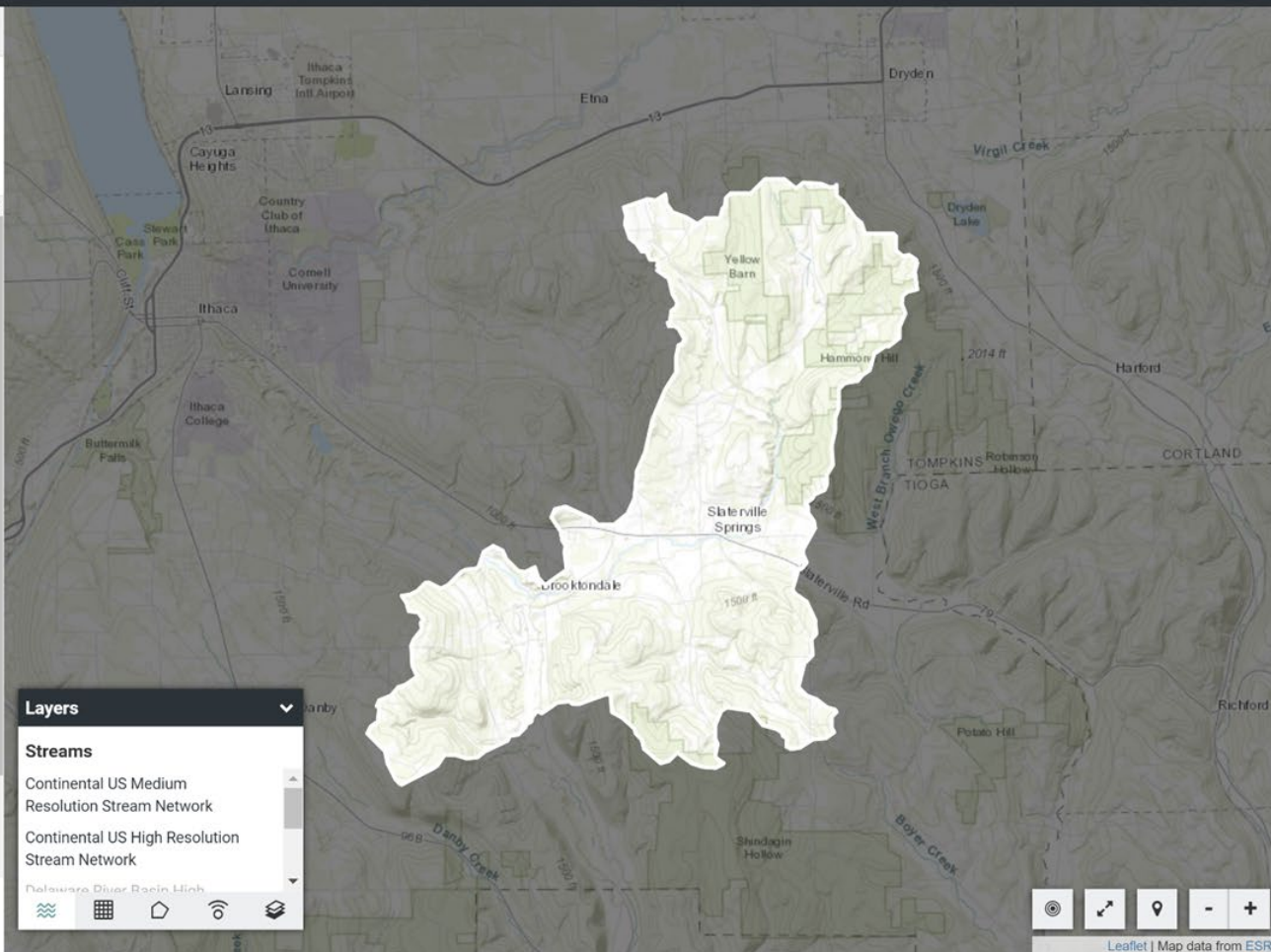
Related Layer: Continental US Medium Resolution Stream Network

Turn on

Source: NHDplusV2

Stream Order	Total Length (km)	Mean Channel Slope (%)
1st	50.47	4.03%
2nd	11.64	1.42%
3rd	13.38	1.38%
4th	0.00	No Data
5th	0.00	No Data
6th	0.00	No Data
7th	0.00	No Data
8th	0.00	No Data
9th	0.00	No Data
10th	0.00	No Data
Other	0.00	No Data
<b>Combined</b>	<b>75.49</b>	<b>3.16%</b>

Change area



**Layers**

- Streams
  - Continental US Medium Resolution Stream Network
  - Continental US High Resolution Stream Network

Delaware River Basin High

Map navigation controls: Home, Full Screen, Location, Zoom In, Zoom Out

Analyze Monitor Model

## Headwaters Sixmile Creek, HUC-12 Subwatershed

ID 041402011009 84 km<sup>2</sup>

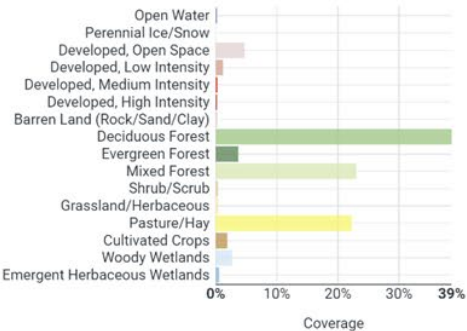
Streams Land Soil Terrain Climate Pt Sources Animals Water Qual

Land Use/Cover 2019 (NLCD19)

### Land Use/Cover 2019 (NLCD19)

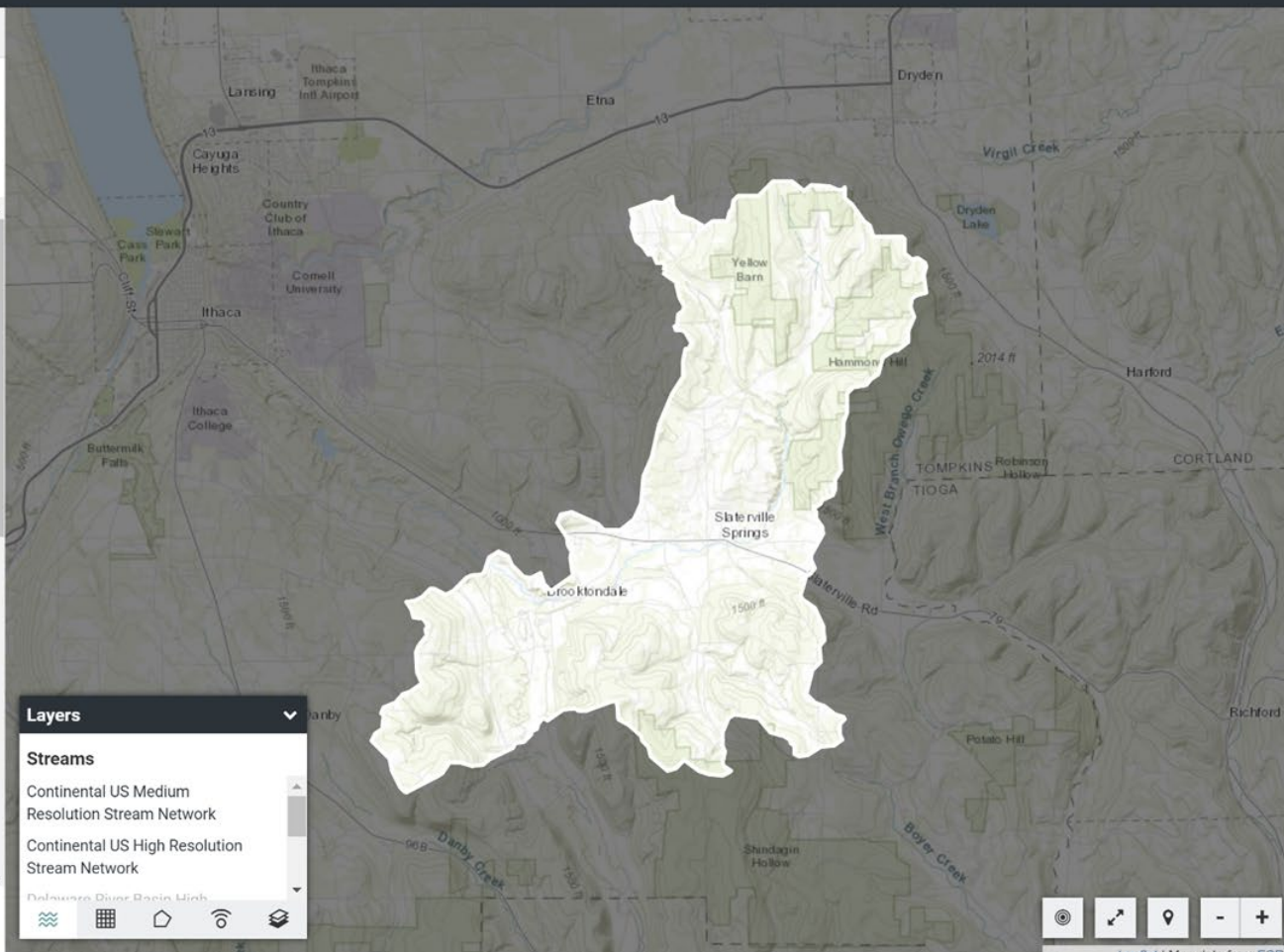
Related Layer: Land Use/Cover 2019 (NLCD19)  Turn on

Source: National Land Cover Database (NLCD 2019)



Type	Area (km <sup>2</sup> )	Coverage (%)	Active River Area (km <sup>2</sup> )
Open Water	0.09	0.10	0.02
Perennial Ice/Snow	0.00	0.00	0.00

Change area



**Layers**

- Streams
  - Continental US Medium Resolution Stream Network
  - Continental US High Resolution Stream Network

Palisades River Basin Mink

Map navigation controls: Home, Full Screen, Location, Zoom In, Zoom Out

	A	B	C	D	E	F
1	Type	NLCD Code	Area (km <sup>2</sup> )	Coverage (%)	Active River Area (km <sup>2</sup> )	
2	Open Water	11	0.09	0.1	0.02	
3	Perennial Ice/Snow	12	0	0	0	
4	Developed, Open Space	21	3.94	4.71	1.6	
5	Developed, Low Intensity	22	1.01	1.2	0.51	
6	Developed, Medium Intensity	23	0.24	0.29	0.13	
7	Developed, High Intensity	24	0.03	0.04	0.01	
8	Barren Land (Rock/Sand/Clay)	31	0.18	0.22	0.04	
9	Deciduous Forest	41	32.31	38.62	5.18	
10	Evergreen Forest	42	3.08	3.68	0.83	
11	Mixed Forest	43	19.23	22.99	4.75	
12	Shrub/Scrub	52	0.31	0.37	0.05	
13	Grassland/Herbaceous	71	0.33	0.39	0.02	
14	Pasture/Hay	81	18.63	22.27	4.26	
15	Cultivated Crops	82	1.57	1.88	0.26	
16	Woody Wetlands	90	2.25	2.69	1.89	
17	Emergent Herbaceous Wetlands	95	0.45	0.54	0.35	
18	Total		83.66	100	19.91	
19						

analyze\_land\_2019\_2019\_2023-11-



Ready



Accessibility: Unavailable

Analyze Monitor **Model**

## Headwaters Sixmile Creek, HUC-12 Subwatershed

ID 041402011009 84 km<sup>2</sup>

### Select a Model

Chose one of two models to simulate stormwater runoff and water quality, to create different conservation and development scenarios, and to compare human impacts of these scenarios.

#### Site Storm Model

Simulates a hypothetical 24-hour storm by a hybrid of SLAMM, TR-55, and EPA's STEP-L model algorithms. Designed primarily for use with smaller, more developed areas.

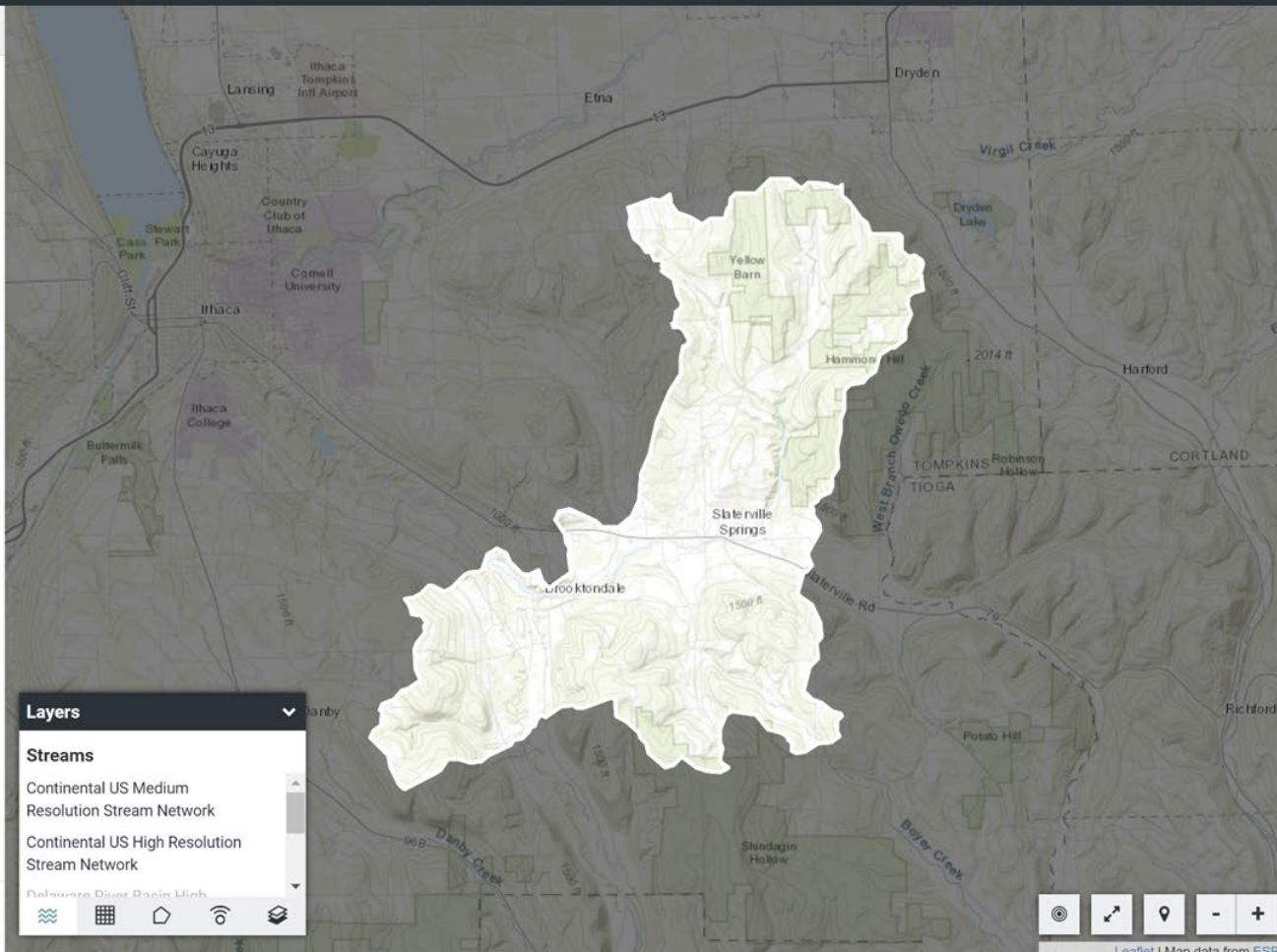
#### Watershed Multi-Year Model

Simulates 30-years of daily data by the GWLF-E (MapShed) model. Designed primarily for use with larger, more rural areas.

#### Watershed Multi-Year Worksheet

Generates an Excel worksheet using the given urban area of interest, pairing it with the HUC-12s it belongs to. It contains Land, Stream, and Water Quality analyses generated using the Watershed Multi-Year Model for the HUC-12. The worksheet allows for more detailed BMP analyses.

Change area



Hydrology Water Quality

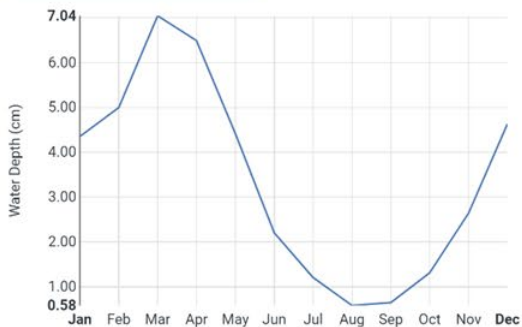
Average monthly water fluxes (cm) from 30-years of daily water balance

Related Layer: Weather Stations used in this model. [Turn on](#)

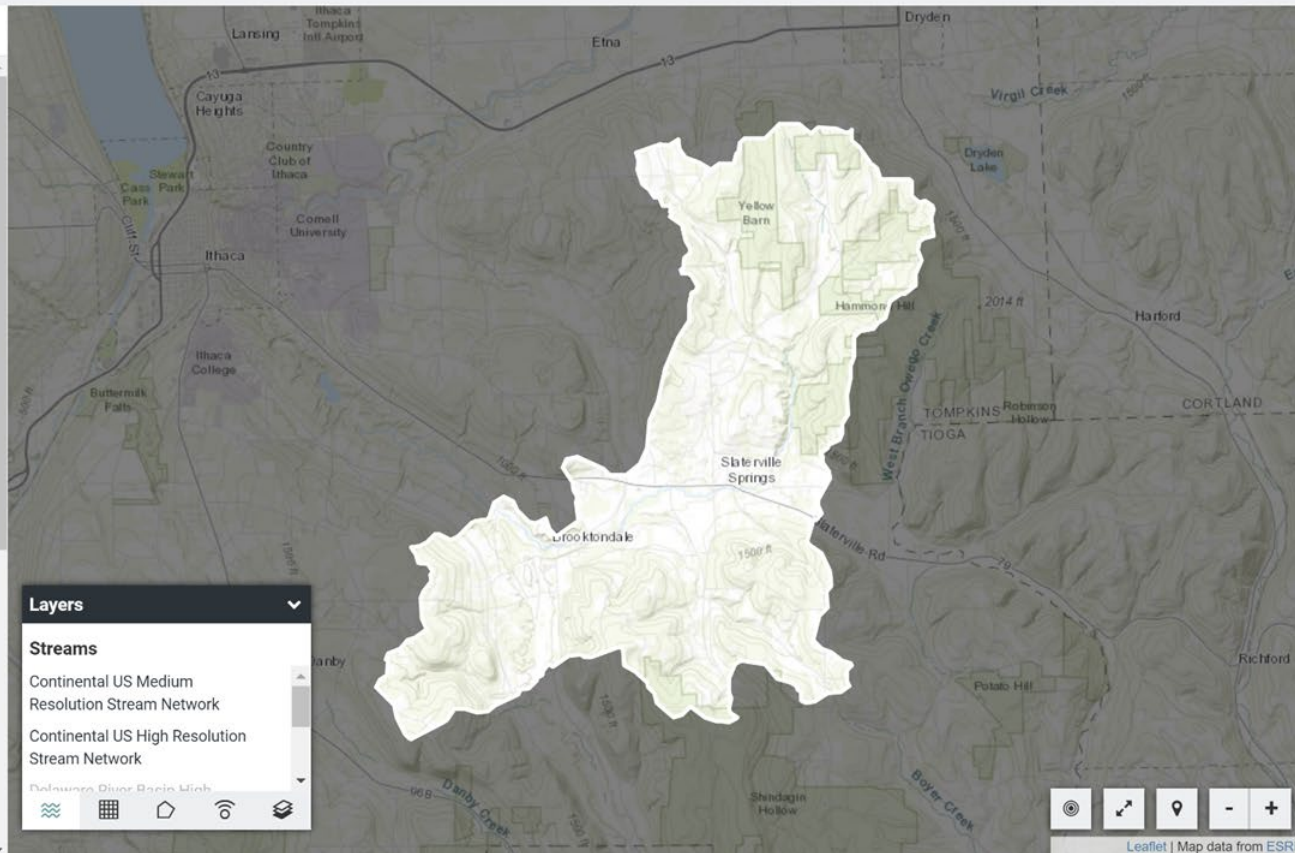
Weather Source: USEPA National Climate Data

Simulated by the GWLF-E (MapShed) model

Stream Flow



Month	Stream Flow (cm)	Surface Runoff (cm)	Subsurface Flow (cm)	Point Src Flow (cm)
Jan	4.35	0.61	3.74	0.00
Feb	5.00	1.00	4.00	0.00
Mar	7.04	1.16	5.88	0.00



Map navigation controls: Home, Full Screen, Location, Zoom In, Zoom Out.



Current Conditions

Export GMS

Add changes to this area

Hydrology Water Quality

Average annual loads from 30-years of daily fluxes

Related Layer: Weather Stations used in this model. Turn on

Weather Source: USEPA National Climate Data

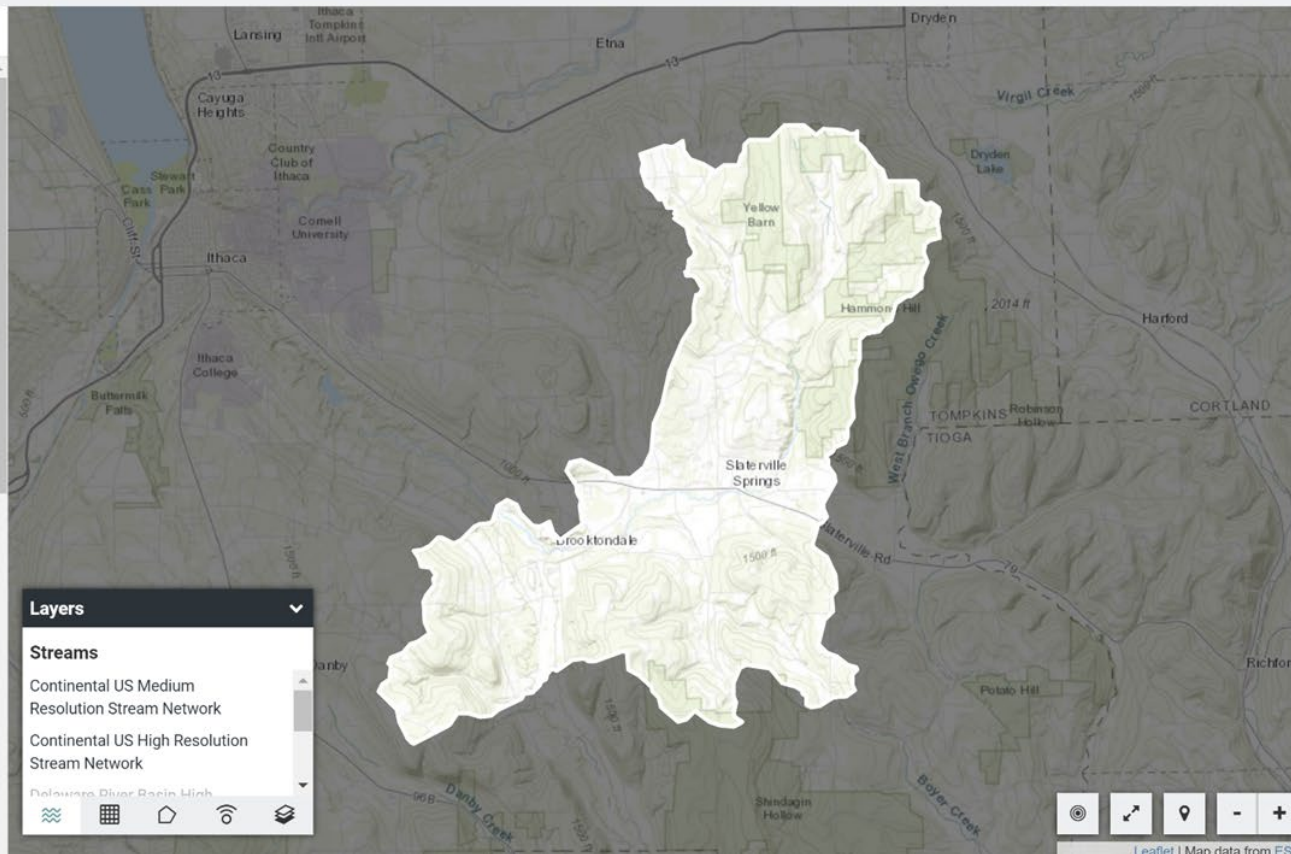
Simulated by the GWLF-E (MapShed) model

Sources	Sediment	Total Nitrogen	Total Phosphorus
Total Loads (kg)	1,008,878.8	43,267.2	2,811.2
Loading Rates (kg/ha)	120.29	5.16	0.34
Mean Annual Concentration (mg/L)	29.68	1.27	0.08
Mean Low-Flow Concentration (mg/L)	55.69	1.87	0.24

Mean Flow: 33,987,055 (m<sup>3</sup>/year) and 1.08 (m<sup>3</sup>/s)

Download this data

Sources	Sediment (kg)	Total Nitrogen (kg)	Total Phosphorus (kg)
Hay/Pasture	44,076.7	1,118.4	581.3
Cropland	31,500.1	551.0	126.0
Wooded Areas	5,108.5	506.7	33.6
Wetlands	281.0	79.3	4.6
Open Land	1,432.3	30.0	2.7



# U.S. CLIMATE RESILIENCE TOOLKIT

## CLIMATE EXPLORER

- How climate conditions in the United States are projected to change over the coming decade
  - Models
  - Observations
- U.S. Climate Resilience Toolkit and Climate Explorer
  - NOAA's Climate Program Office
  - National Environmental Modeling and Analysis Center (NEMAC) at the University of North Carolina Asheville
  - <https://crt-climate-explorer.nemac.org/>



# THE CLIMATE EXPLORER

Explore how climate is projected to change in any county in the United States.

**Caroline, NY**



or click one of these cities:

New York City, NY

Los Angeles, CA

Anchorage, AK

Phoenix, AZ

Houston, TX

Honolulu, HI

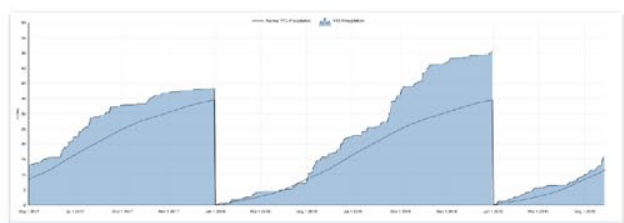
**New!** Climate projection charts are now available for [Hawai'i and U.S. territories](#).

Caroline, NY

Select one of the following for Tompkins County



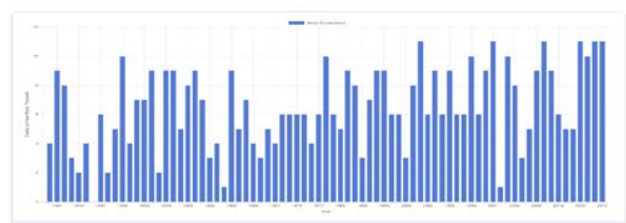
**Climate Maps**  
Compare past and projected future conditions in your county.



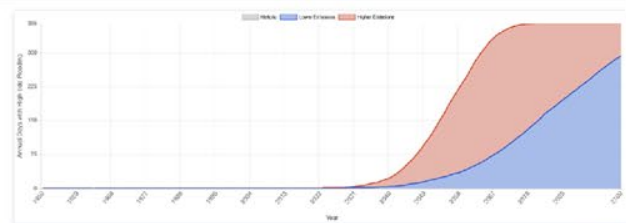
**Historical Weather Data**  
Compare observed daily weather to long-term climate.



**Climate Graphs**  
Check past and projected values for climate variables.



**Historical Thresholds**  
Check how often temperature or precipitation has exceeded user-defined values.



**High-Tide Flooding**  
Explore the number of days per year with high-tide floods.

**Ready to plan for resilience?**  
Resources from our partners can help you identify what matters to your community and evaluate how climate change could affect it:

- Check your exposure to extreme events such as wildfires and flooding
- Identify social vulnerabilities across urban areas
- Get step-by-step guidance for completing a vulnerability assessment or crafting an action plan.

Explore planning tools →

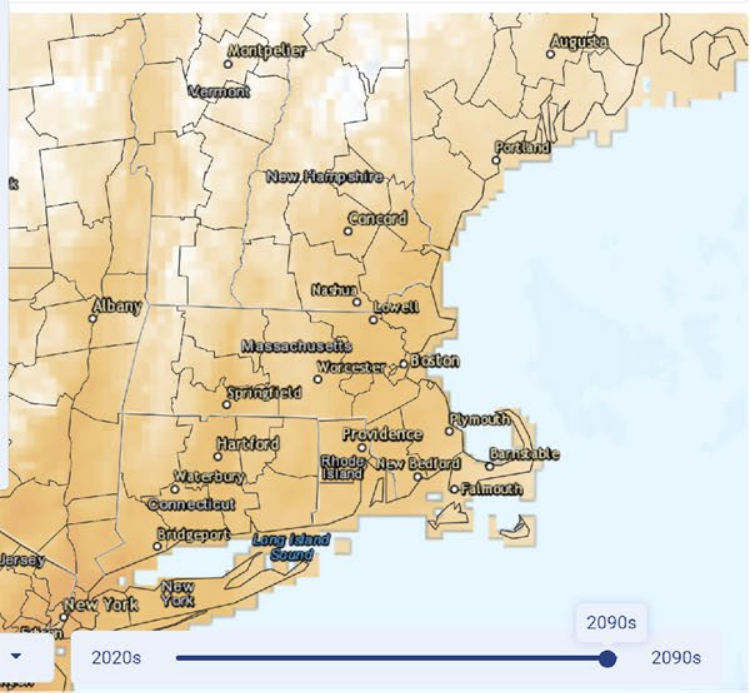
Caroline, NY

Stations

Tompkins County - Average Daily Maximum Temp (°F)

Average Daily Maximum Temp (°F) Graph Map **Annual** Spring Summer Fall Winter Downloads

Temperature	Precipitation	Other
Average Daily Maximum Temp (°F) ?	Total precipitation ?	Heating Degree Days ?
Average Daily Minimum Temp (°F) ?	Dry Days ?	Cooling Degree Days ?
Days w/ maximum temp > 90°F ?	Days w/ > 1" Precipitation ?	Growing Degree Days ?
Days w/ maximum temp > 95°F ?	Days w/ > 2" Precipitation ?	Modified Growing Degree Days ?
Days w/ maximum temp > 100°F ?	Days w/ > 3" Precipitation ?	
Days w/ maximum temp > 105°F ?		
Days w/ maximum temp < 32°F ?		
Days w/ minimum temp < 32°F ?		
Days w/ minimum temp > 80°F ?		
Days w/ minimum temp > 90°F ?		



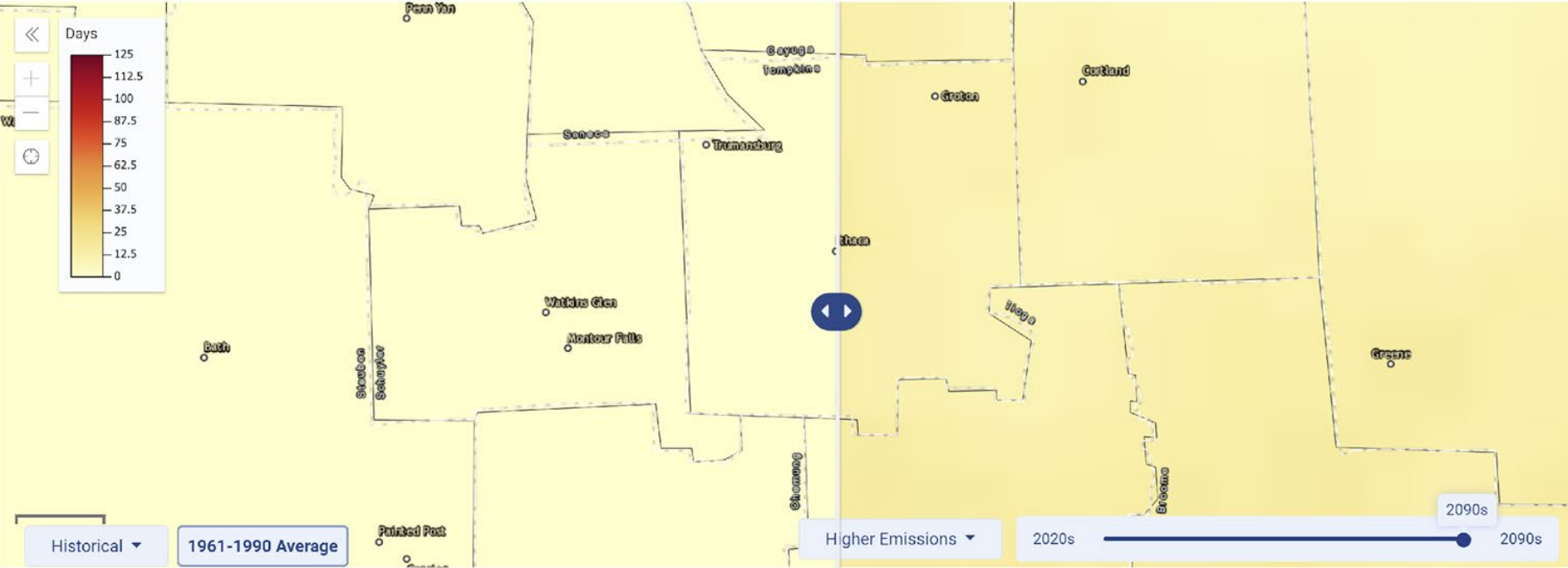
# The Climate Explorer

Caroline, NY

Stations

Tompkins County - Days w/ maximum temp > 100°F

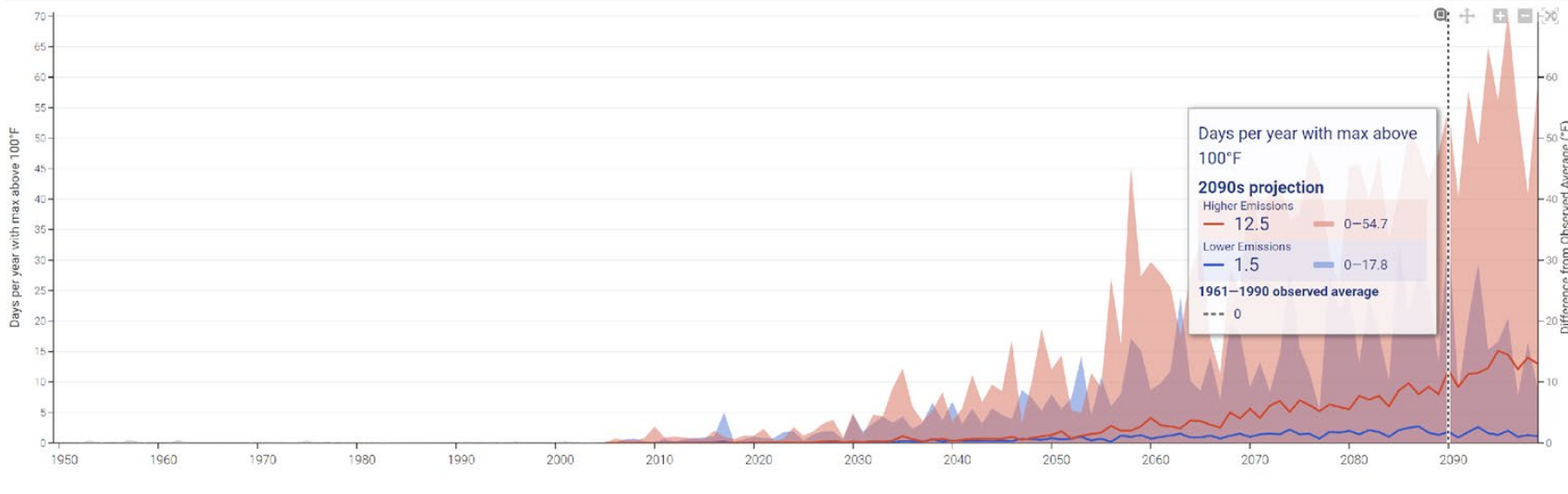
Days w/ maximum temp > 100°F ▼ Graph **Map** Annual Spring Summer Fall Winter Downloads ▼



Caroline, NY Stations

Tompkins County - Days w/ maximum temp > 100°F

Average Daily Maximum Temperature (°F) **Graph** Map Annual Monthly Downloads About



# Wrap up

What future training would be helpful?

What other tools do you use?

Zoom office hour for follow-up questions: Nov 20 at 6:00PM

<https://cornell.zoom.us/j/99831831341?pwd=T3Q1L0F5aHgZSVF0eVVYbk5WcEtndz09>

Webinar resources:

Hudson River Estuary Program: <https://www.dec.ny.gov/lands/120539.html>