Town of Berne, NY
Wetland Inventory Update

Presented By:
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Project Objectives

- **Update the size and location of previously NYSDEC designated wetlands, mapping them based upon the GIS layers designed during the 2013 Erosion Hazard project while incorporating newly available data**

- **Hypothesize which wetlands in Berne are important to water quality, flooding, and erosion**

- **Integrate the updated information with the data and reports on the flooding and erosion consequent to Tropical Storm Irene**

- **Attempt to identify animal and plant species inhabiting specific wetland within the town, noting any invasive species**

- **Recommend techniques for mitigation and protection of NYSDEC designated wetlands, as well as identical recommendations for wetlands smaller than the NYSDEC designated wetland minimum size of 12.4 acres (5 hectares)**

- **Produce a final report detailing the results of our work and share our findings with the Town Board, Planning Board, and Conservation Board**

Methodologies

- **Using NYSDEC Environmental Resource Mapper, National Wetlands Inventory Interactive Mapper, and NYS GIS Clearinghouse data I complied all wetlands and provided GIS map products displaying those wetlands within the town**
- **Created a Microsoft Excel spreadsheet which compiled the previous wetland inventory data and newly incorporated wetland characteristics and properties**
- **Walked wetlands on state lands (Partridge Run, Cole Hill) to understand the local wetlands, while looking for invasive species and attempting to delineate wetland borders**
- **Researched watershed management practices, wetland values and services, incorporated new findings with related information from the 2013 Erosion Hazard project**
- **Researched the local geology, flora and fauna to better understand the project area**
- **Researched and recommend watershed management and wetland mitigation techniques**
- **Provided other GIS map products which I deemed valuable to the project and to the Town in general**
- **Designed a report detailing the scope and findings of the wetland inventory project**

Understanding Wetlands

- **Wetland ecosystems generally possess three essential characteristics: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology**

- **"Wetlands are defined as lands and submerged lands commonly known as swamps, sloughs, bogs and flats which support wetland vegetation" (DEC Article 24, Fresh. Wet. Act)**

- **1 acre of wetland storing 1 foot of water (an acre-foot) equals 326,000 gallons (or 43,650 cu. ft.) of water**

- **Over 1/3 of the 564 species listed as threatened or endangered in the US utilize wetland habitats for at least some portion of their life cycles**

- **Wetlands are hubs - transitional areas between upland and aquatic ecosystems**

Understanding Wetlands

Wetland Functions, Values, and Ecosystem Services

- Provide valuable habitat for flora and fauna
- Flood water retention properties
- Sediment and nutrient retention
- Fish spawning areas
- Riverbank stabilization
- Groundwater recharge (particularly for seasonally flooded and riparian zone wetlands)
- Slows runoff by wetland vegetation and topography
- Trapping and filtering of pollutants (even converting some to less harmful forms by biochemical processes)
- Nitrogen and some phosphorus entering wetlands is taken up by wetland plant materials (ultimately deposited in sediments or converted into gases which escape into the atmosphere)

Berne is a Unique Geographic Area

- **Combination of forested, agricultural and residential areas**
- **Most wetlands on private lands, also on state lands (Partridge Run WMA, Cole Hill SF)**
- **Drastic elevation changes within the town (most residences in lower elevations)**
- **Proximity of major streams to roads, residences**
- **Already seen damage from major events like Irene, more frequent similar events expected in the future**

<u>Karst Geology</u>

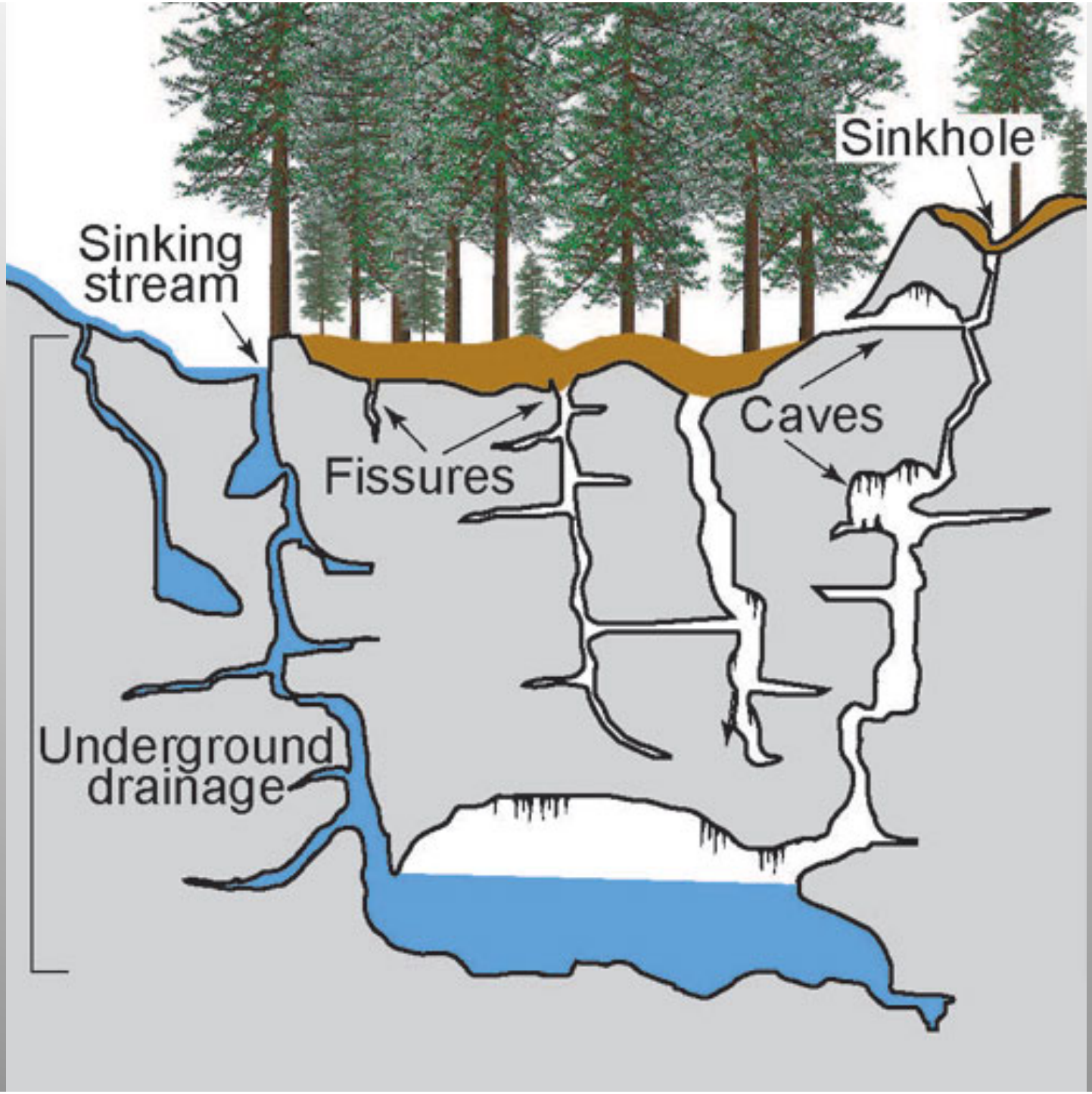
Karst formations are limestone rocks (bedrock) which underly surface soils; exist wherever bedrock is Helderberg group limestones or Onondaga limestones (majority of the town)

Caves, sinking streams, and sinkholes are created by the chemical interaction of acidic water and carbonate rocks

Poses significant development problems:

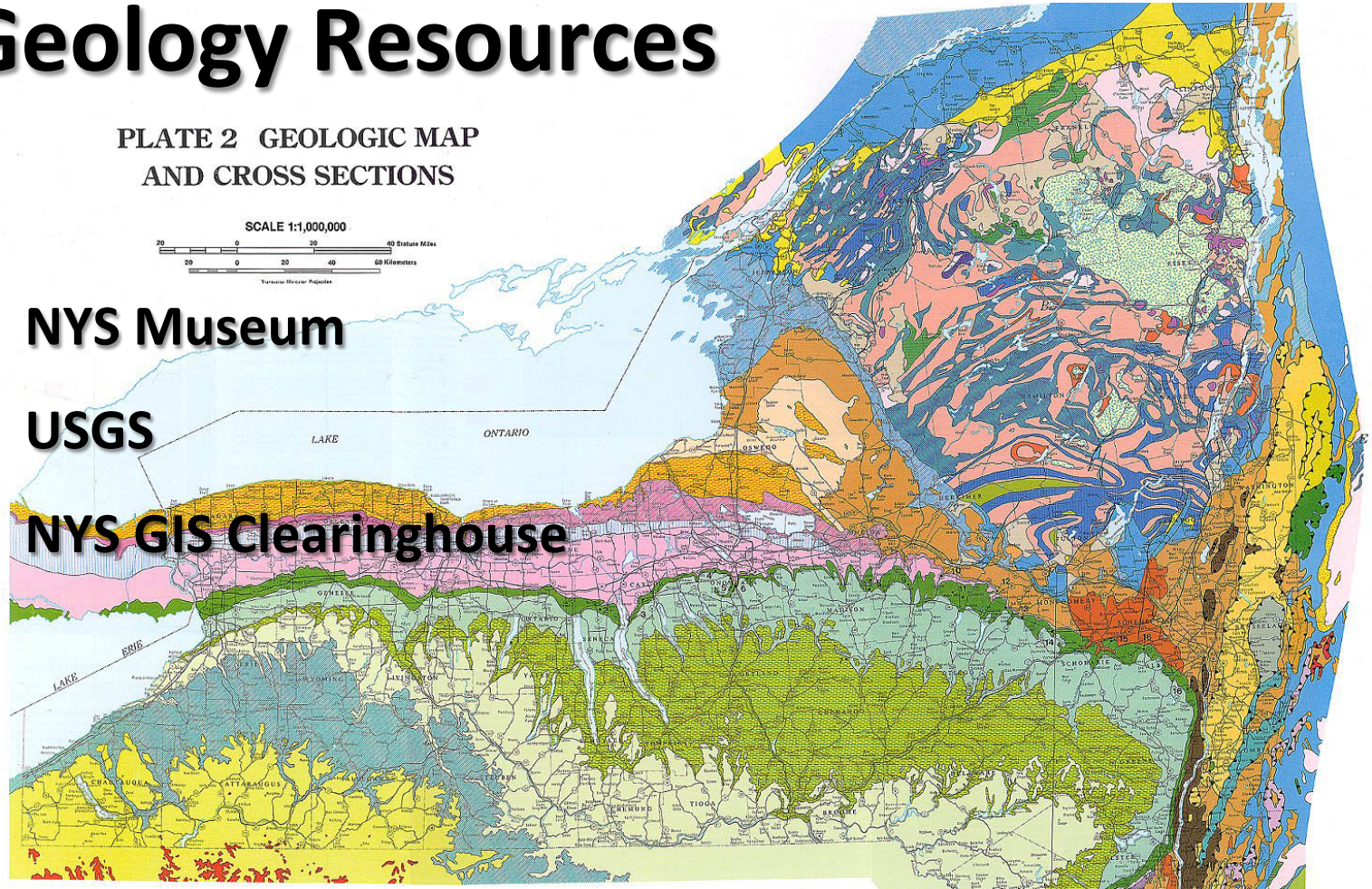
-Water flowing through karst does not have the advantage of being filtered or purified by soils

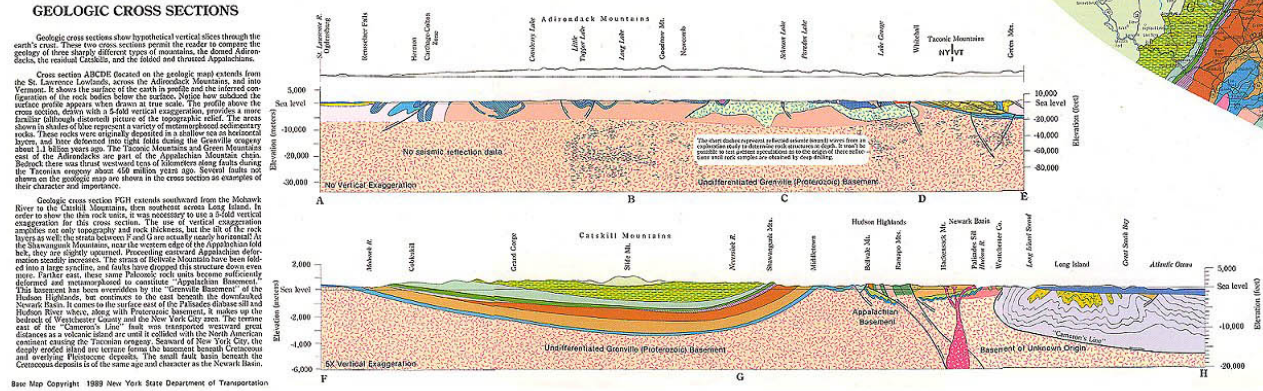
-Contaminant infiltration risks are greatest where little or no soil is present above karst


Sinkhole
Sinking stream
Caves
Fissures
Underground drainage

Geology Resources

- NYS Museum
- USGS
- NYS GIS Clearinghouse





dividual rock bodies that vary in size, shape, orientation, composition, color, and texture. Together they make up the bedrock, which is present everywhere, although commonly masked by surficial deposits.

The bedrock geologic map gives a vertical view of the pattern made by the eroded edges and surfaces of the rock bodies that crop out in the State. It is, however, only a two-dimensional view of three-dimensional rock bodies. The cross sections below the map show samples of the third dimension as inferred from the surface configuration of rock bodies and other information that may be available from drill holes or geophysical measurements.

Map patterns result from the intersection of topography and individual rock bodies. Most rock bodies are originally tabular and horizontal, but deformation changes their orientation and shape by tilting, folding, crumpling, and breaking. Map patterns can tell us much about the three-dimensional configuration of bedrock in different regions. For example, the rock bodies in western New York are layers of sedimentary rock, of greatly different thicknesses, that are tilted down to the south less than 1 degree. The broad bands on the map in that area are the patterns made by stacked layers that have beveled at a low angle by erosion. (Visualize a layer cake sliced at a low angle instead of the usual vertical.) Widths of outcrop bands are controlled by the thicknesses of individual map units, the topography, and the low dip. Stream valleys account for the jagged details in the pattern. Steeply dipping faults are omitted from the geologic map except where they separate rock bodies of greatly different ages. This avoids unnecessary congestion on the map, especially within the Adirondacks where such faults abound.

In the Adirondack Mountains the map pattern shows once-tabular rock bodies now swept into broad folds. This deformed-rock pattern is typical of highly metamorphosed "basement" rock. One can easily visualize this rock pattern continuing in the basement as it passes beneath the blanket of sedimentary strata that surrounds the Adirondacks. The pattern of small blocks along the eastern border of the Adirondacks results from faulting that dropped crustal blocks down into a giant staircase.

The Taconic Mountains east of the Hudson River Valley are huge slices of crust that were thrust into that area from the east. The heavy toothed lines show the edges of these thrust sheets. The earth's crust in this region was "telescoped" when a volcanic island arc collided with the edge of the continent, causing the Taconian orogeny. This collision compressed the layered rock and sediment at the intervening sea, thrusting them westward onto the continent as huge, stacked slices. The slices, which generally dipped east in a shingled arrangement, were contorted considerably in the process. When completed, the stack extended from New England past the western edge of the Hudson Valley. In the Catskill Mountains, the western edge of this transported rock remains buried beneath Devonian rock. Erosion has reduced the original thrust sheets to patches, creating windows to the rock beneath.

The legend on the facing page shows the formations and rock types in each map unit. The legend has two major parts based on divisions of geologic time, Proterozoic and Paleozoic-Mesozoic. Highly deformed Proterozoic rock bodies of the basement are buried beneath younger Paleozoic rock in most of the State, but crop out in the Adirondacks and the Hudson Highlands. Southeast of the Highlands, basement relationships become more complex as one approaches the deformed and metamorphosed root zone of the ancestral Appalachian Mountains (see cross section FGH beneath the geologic map). The Paleozoic-Mesozoic part of the legend applies to the wide expanse of sedimentary rock formations that blanket the State west of the Hudson River and south of the Adirondacks. The blank areas with yellow tint represent gaps in the rock record—geologic times not recorded by rock because of erosion or non-deposition.

Surficial material is ignored on generalized bedrock geologic maps, but it is shown here in several areas of the Adirondacks and over all of Long Island, where it is so thick that it masks all clues to the bedrock geology.

SURFICIAL GEOLOGY OF NEW YORK

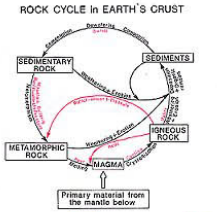
Bedrock generally is covered by a skin of soil and other loose material, especially in regions with humid climates. This cover material results as weathering breaks down the surface rock. The loose materials may remain in place or be eroded, transported, and deposited by water, wind, or glacial ice. In 50 percent of New York State, bedrock is buried by surficial deposits that are more than one meter thick. Most of these deposits were left by a continental glacier—an ice sheet that was perhaps 2 km thick.

Till is the most abundant glacial deposit. It is an unsorted mixture of mud, sand, gravel, cobbles, and boulders that the glacier spread over the countryside. Till can be up to 50 meters thick. It is generally thickest in valleys and thinnest over highlands. *Moraines* are elongate ridges or strings of hills that formed at the edge of the glacier and are composed of sand, gravel, or till. The Ronkonkoma and Harbor Hill moraines on Long Island dominate that landscape. The Valley Heads moraine dams the south ends of the Finger Lakes. *Glacial lake* are bound horizontal layers of mud (deep water) and sand (shore zone) that were deposited in lakes that formed in front of the glacier as the ice melted. *Outwash* is sand and gravel deposited by meltwater streams that flowed from the front of the glacier. All of these kinds of deposits have a wide range of thicknesses. In places, they may be piled one on top of the other.

ROCK FORMING PROCESSES

The earth's crust is of two major types, continental (35 km thick) and oceanic (10 km thick). Continental crust is less dense than oceanic crust, which causes the continents to stand higher than the ocean floors.

Three major classes of rock make up the earth's crust: igneous, metamorphic, and sedimentary. Continental crust is divided into crystalline "basement" rock and overlying layers of sedimentary rock or layered volcanic rock. The basement is a complex of metamorphic and igneous rock bodies that were generated in the roots of mountains. These record long, repeated cycles of submergence; burial by sedimentation; mountain-building with metamorphism, igneous intrusion, and volcanism; and uplift and erosion. Sedimentary rock blankets the basement over three quarters of the earth's continental area. This blanket ranges in thickness from a feather edge to more than 14 km. It includes many individual layers that began as widespread horizontal accumulations of sediment such as sand and mud. As sediment piles up, the lower part is compressed under the load. Water is squeezed out of the pores, and eventually the sediment is cemented into rock. These processes and cycles are summarized by the Rock Cycle diagram below.



Historical Berne Wetland Inventory

- **Conducted in 1979/1980**
- **Very limited map product (technology of the time)**
- **Conflicting info within the report :**

  40 shown on old map, 36 in discussion, 34 in acreage section

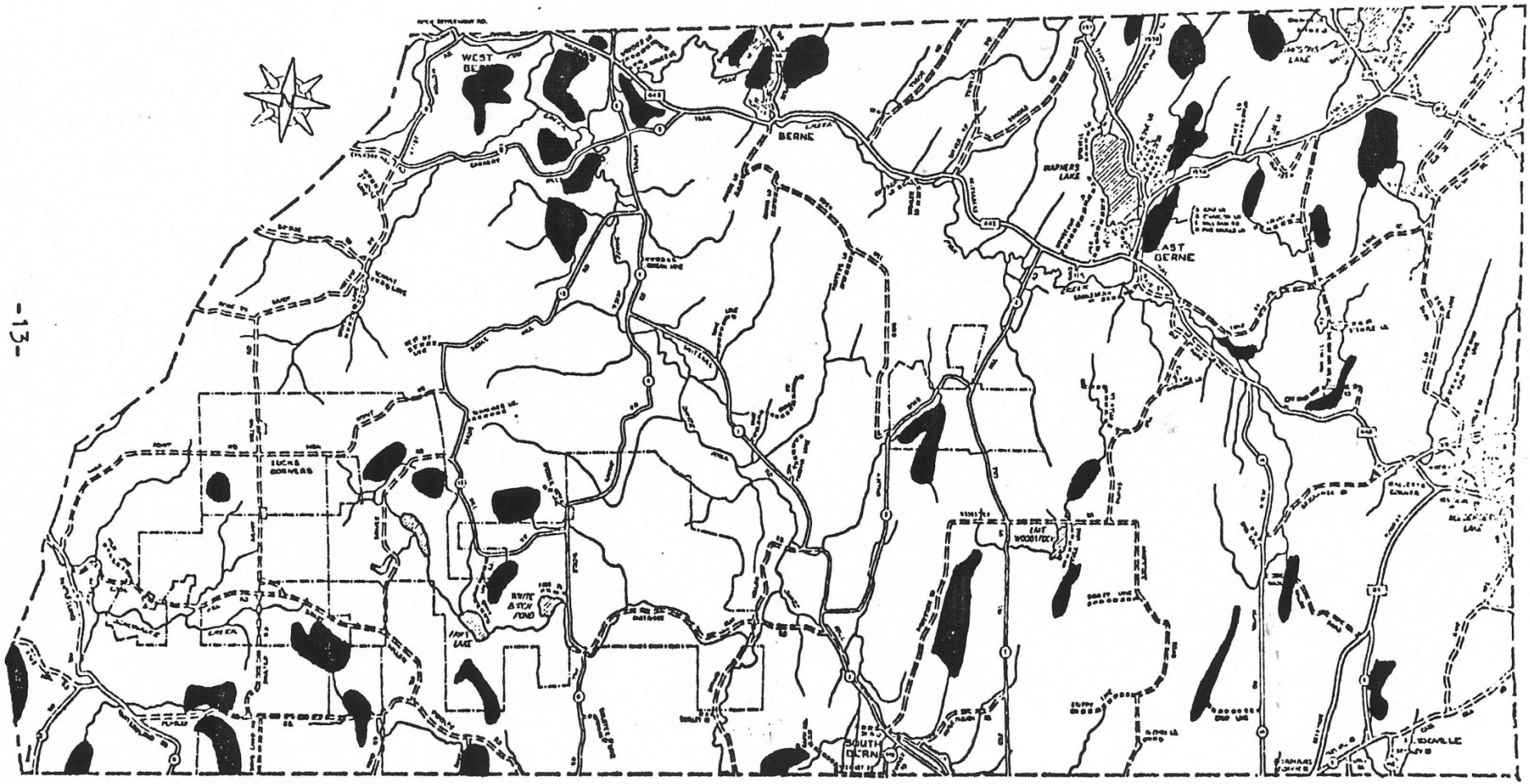
  (40 shown but really less since some are fragmented)

  DEC Wetland Identification numbers not included (cannot identify)

  Acreages are conflicting (some not even close) to current DEC numbers
- **Had more manpower (and seemingly time) to conduct the inventory**
- **Actually conducted wetland flora/fauna inventory for all DEC wetlands with the help of a class of SUNY Cobleskill students (all records are now lost)**

The Original Map of DEC Wetlands in Berne, circa 1979

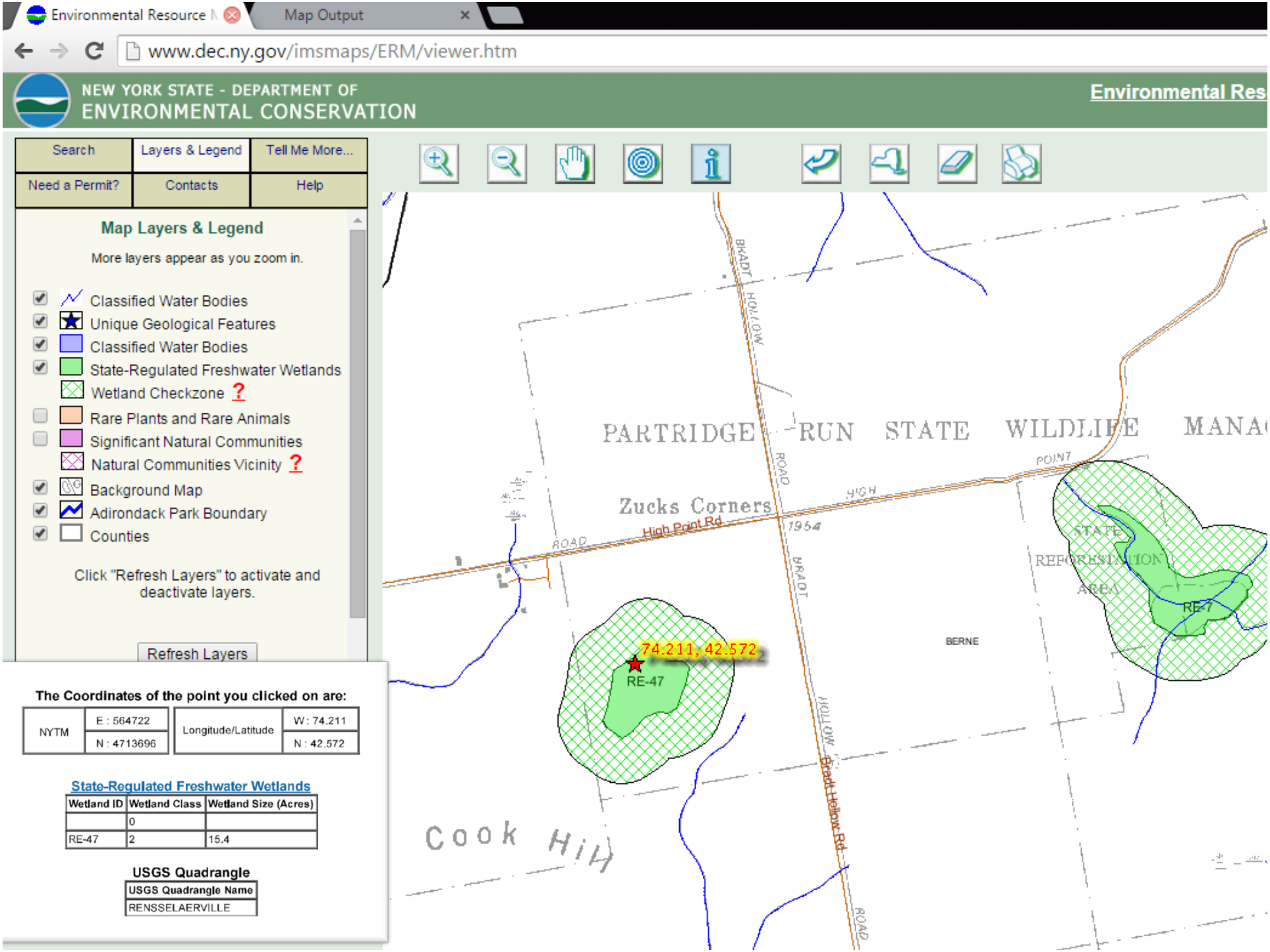
Protected Wetlands, Town of Berne, N.Y.



Note: Solid areas indicate protected wetlands.

Access to GIS resources

- There are numerous web-based GIS resources available to the public
  - Much more advanced than what I am capable of creating
    - County, regional and national “interactive mappers”
    - USGS Streamstats (very technical but can be very valuable)
- Verify DEC wetlands, check (buffer) zones, compare to NWI wetlands
  - NWI interactive mapper has detailed wetland classifications
    - Geology, Hyrdology, Contours, etc.


Environmental Resource
Map Output
www.dec.ny.gov/imsmaps/ERM/viewer.htm
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Map Layers & Legend
More layers appear as you zoom in.
Classified Water Bodies
Unique Geological Features
Classified Water Bodies
State-Regulated Freshwater Wetlands
Wetland Checkzone ?
Rare Plants and Rare Animals
Significant Natural Communities
Natural Communities Vicinity ?
Background Map
Adirondack Park Boundary
Counties
Click "Refresh Layers" to activate and deactivate layers.
Refresh Layers
The Coordinates of the point you clicked on are:
NYTM
E : 564722
N : 4713696
Longitude/Latitude
W : 74.211
N : 42.572
State-Regulated Freshwater Wetlands
Wetland ID
Wetland Class
Wetland Size (Acres)
0
RE-47
2
15.4
USGS Quadrangle
USGS Quadrangle Name
RENSSELAERVILLE
PARTRIDGE RUN STATE WILDLIFE
Zucks Corners
High Point Rd
BRADT HOLLOW ROAD
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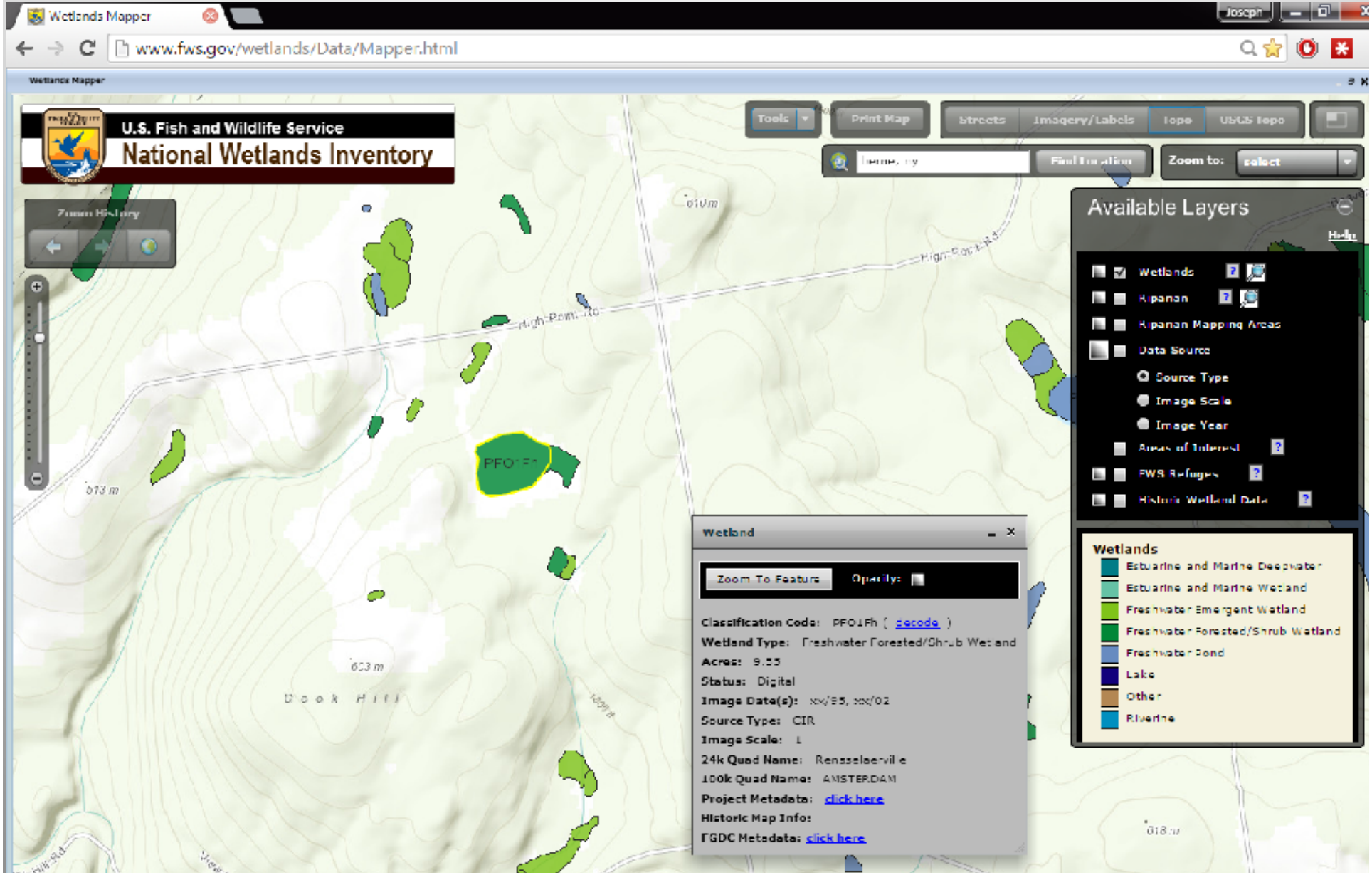
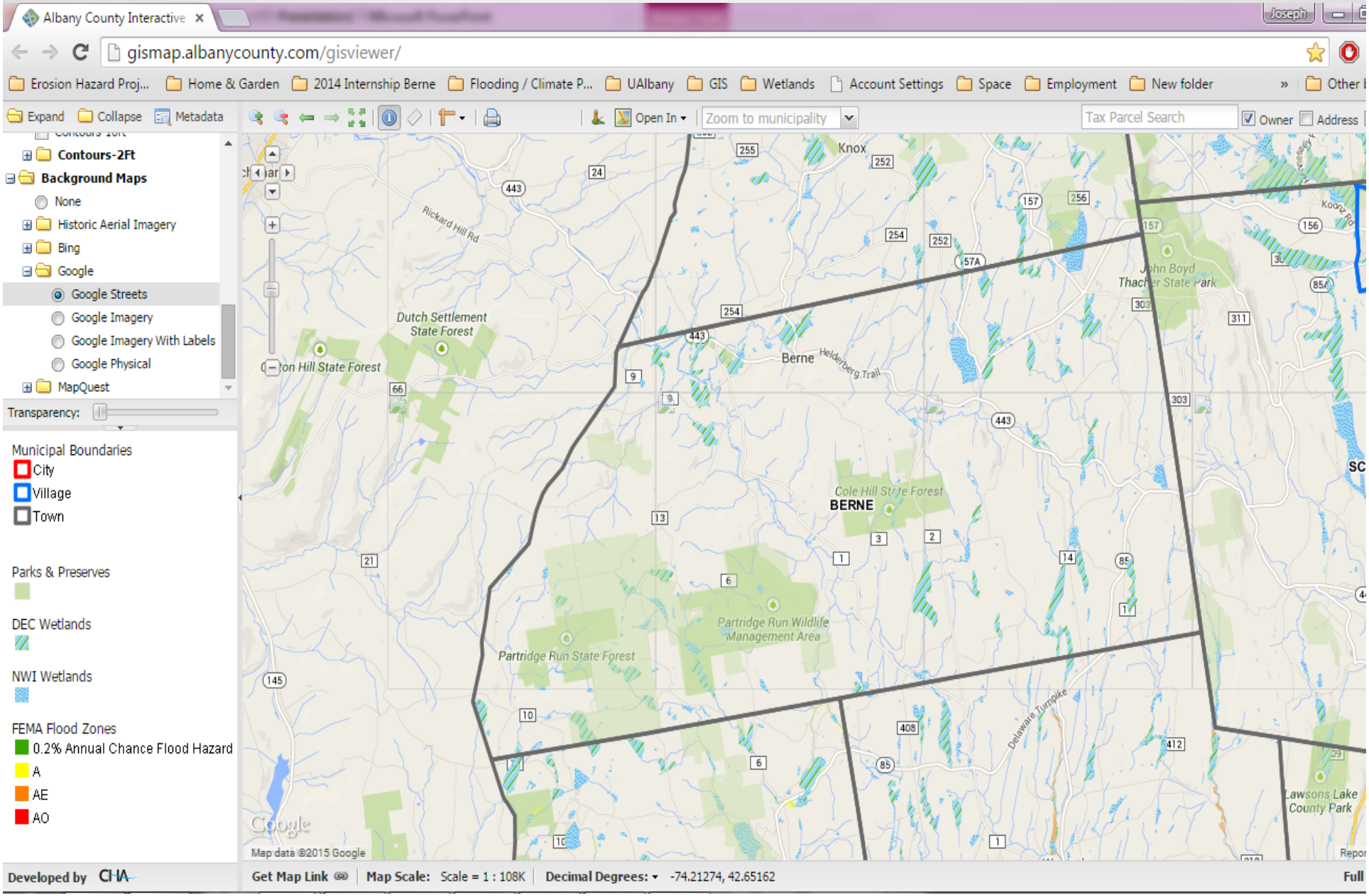
BERNE
74.211, 42.572
RE-47
Brad Hollow Rd
Cook Hill

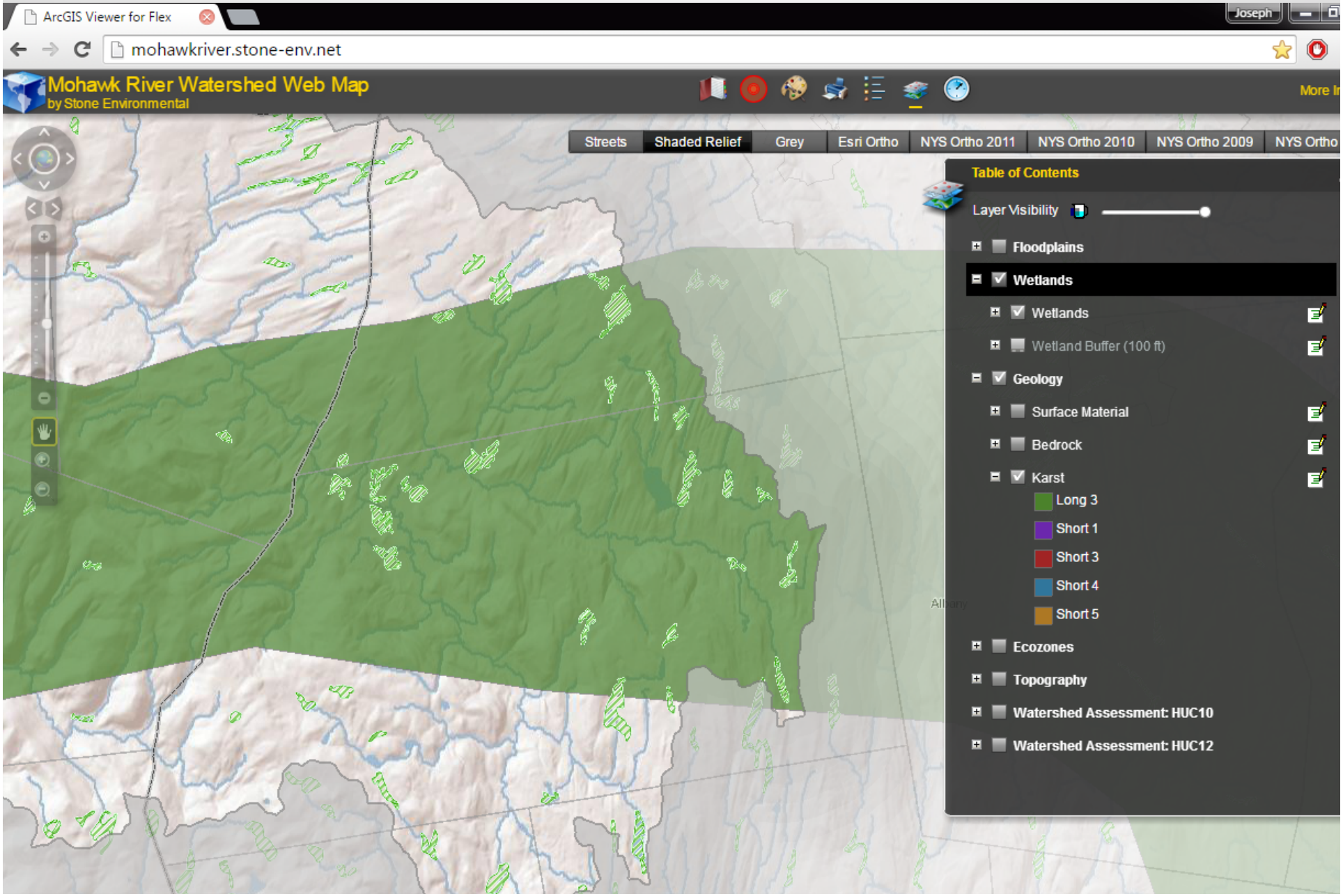
NWI Interactive Mapper

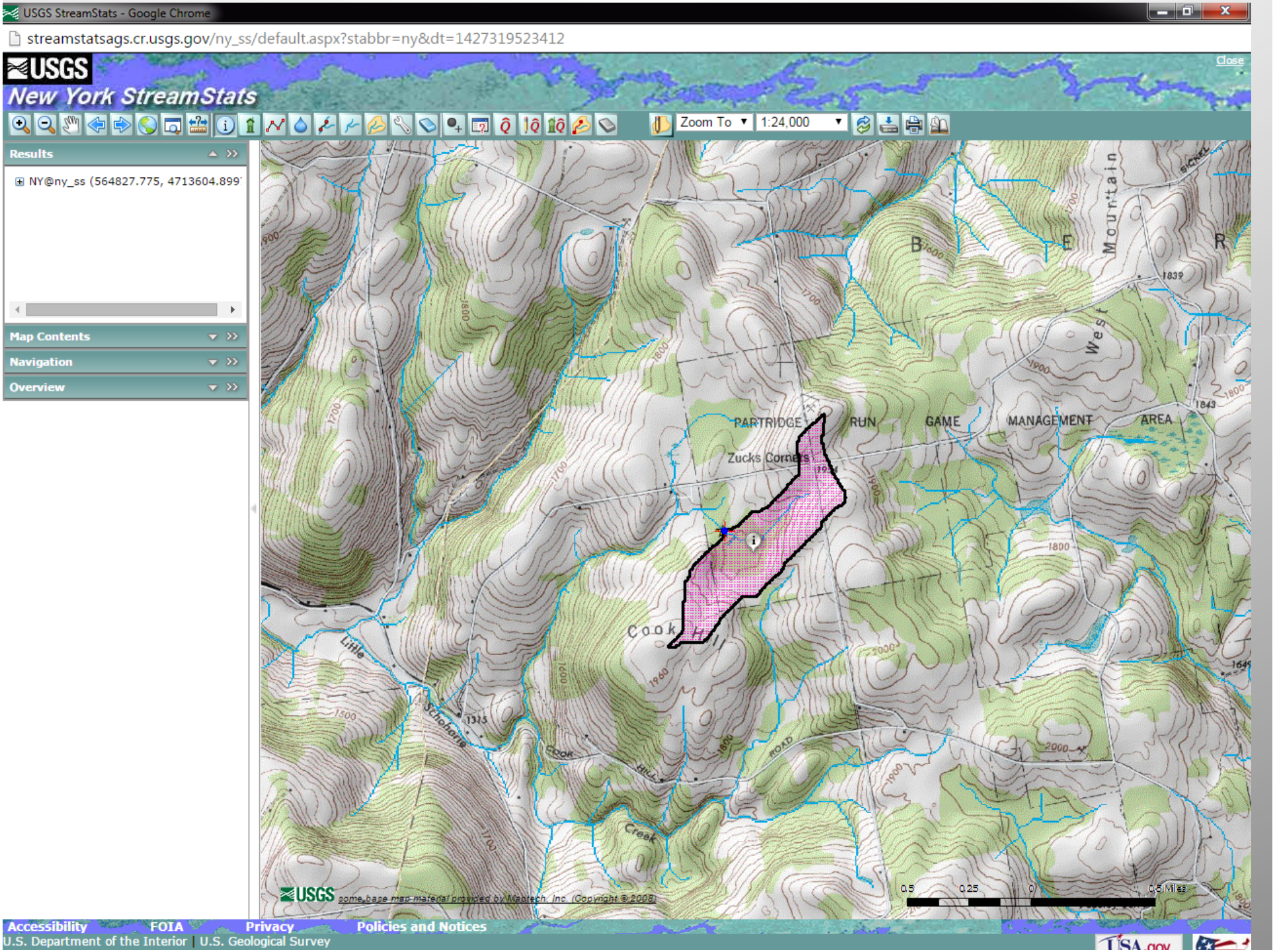


Albany County GIS Viewer



Mohawk River Watershed Web Map




USGS StreamStats - Google Chrome
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Map Contents
Navigation
Overview
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Little
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ROAD
West
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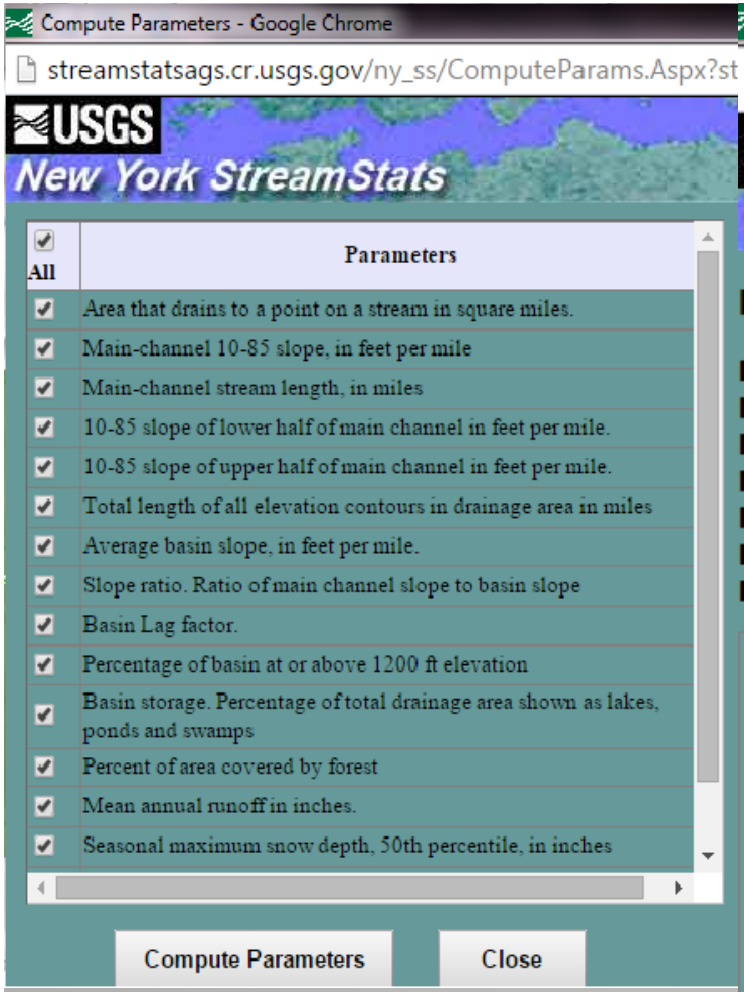
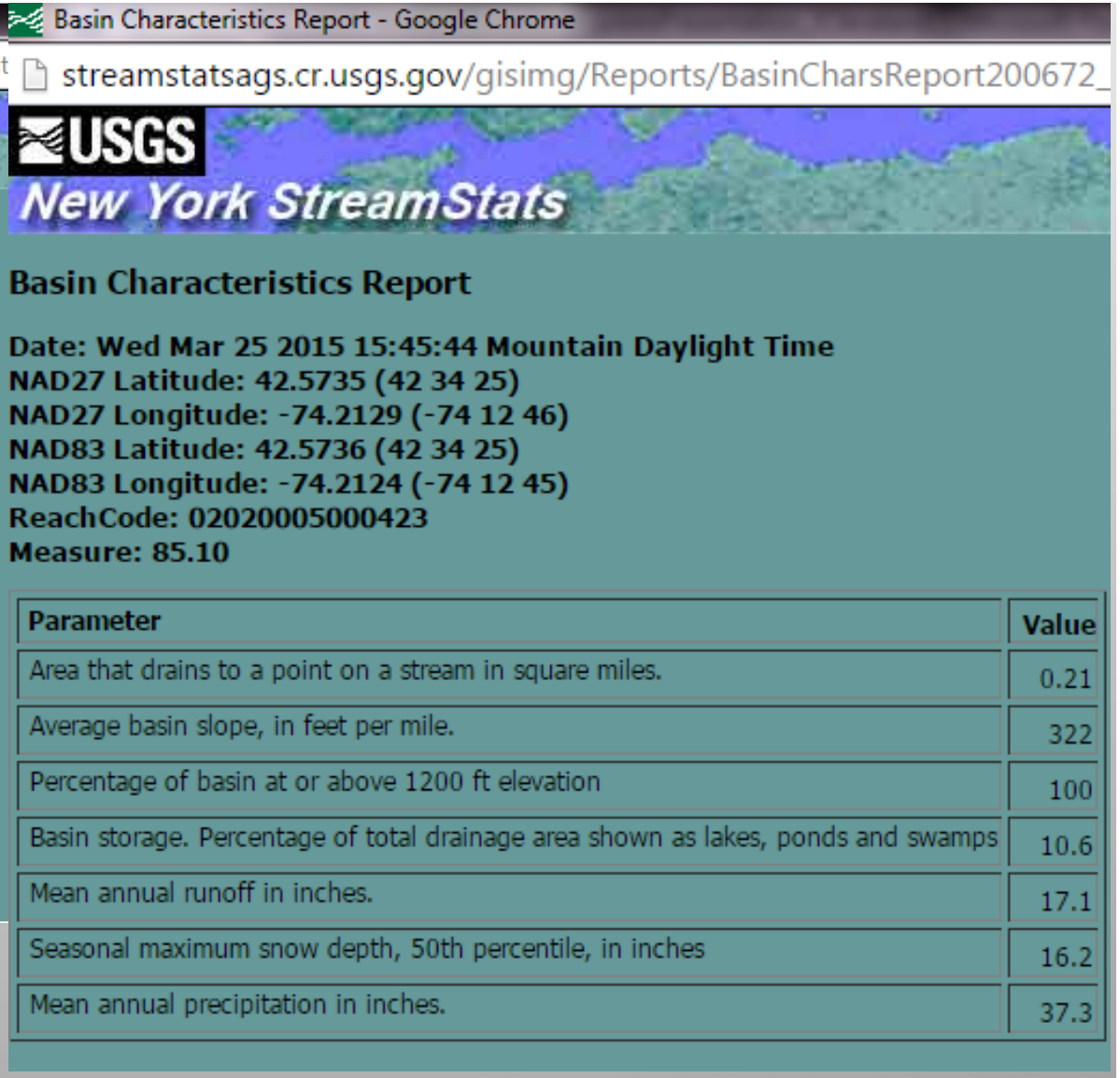




Parameters

-Basin Characteristics Report provides a multitude of basin (watershed, or wetland) parameters

-Results can be used to understand shape, size, and capacity of each wetland

Updated Wetland Inventory

- Spreadsheet design for easy updating
- GPS Coordinates, elevation, NWI Classifications, area above outlet, etc.
- Attempt to identify areas of special concern or greater value (subjective, Ralph Tiner @ NWI)
- GIS maps of just DEC, DEC and NWI, hydric soils, geology (attempted), watersheds

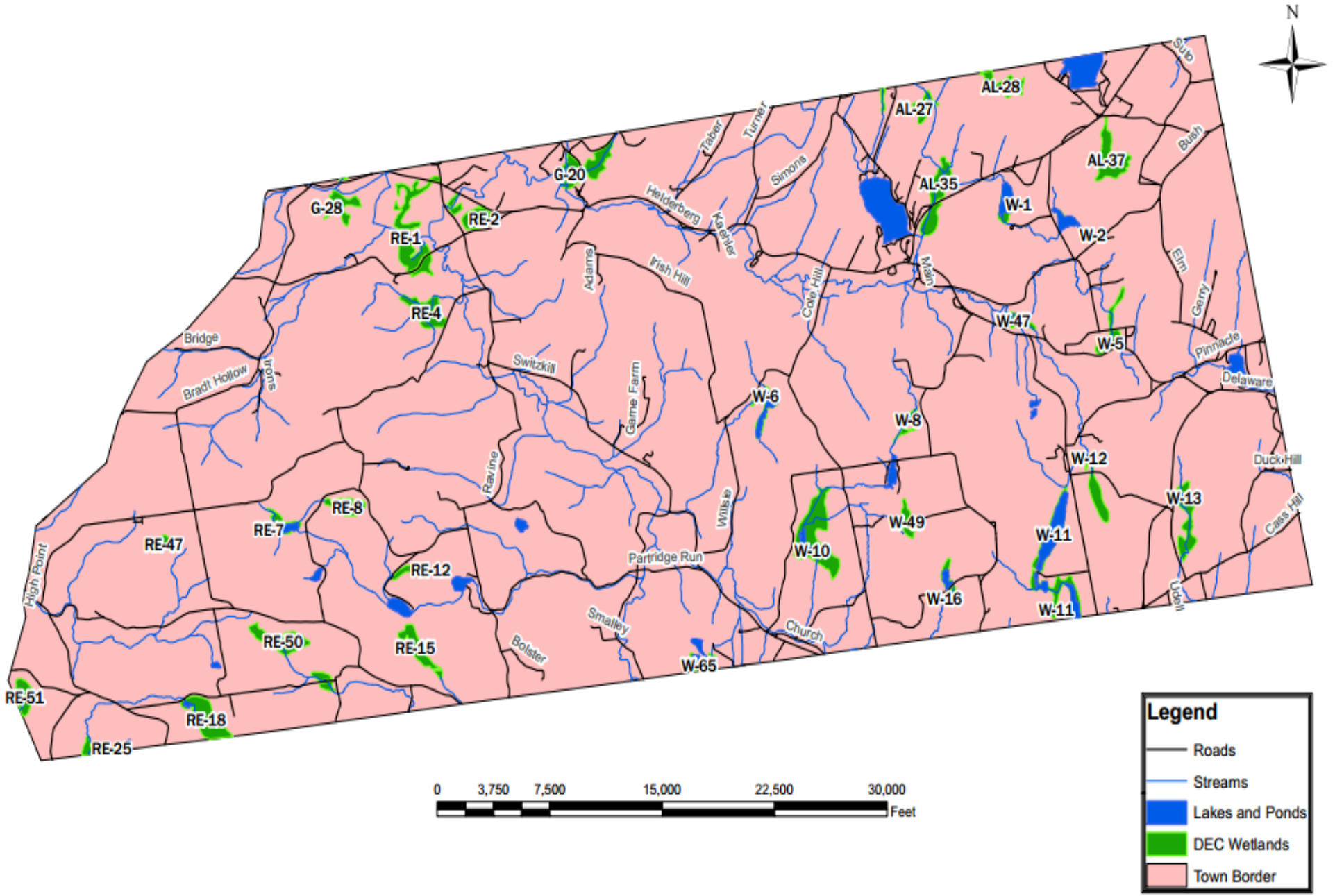
New Berne Wetland Inventory

Longitude (W) *	Latitude (N) *	NYS DEC wetland identification number	NYS DEC wetland classification	NWI wetland code(s) [1]	DEC acreage	NWI wetland acreage**	Berne 1980 wetland inventory acreage	Within FEMA 100 Yr. Flood Zone (Y/N)	Connected to Stream (Y/N)	DEC Special Status and/or Special Feature/Interest	HUC 12 Watershed****	Watershed Area Above Wetland Outlet (acres)	Mean Annual Precipitation (inches)	Mean Annual Runoff at Wetland Outlet (inches)	Elevation ***	Public Land Y/N/P (P = partial)
74.057	42.644	AL-28	B	L1UBHh; PSS1E; PUBHh; PEM1/SS1E;	87.6	72.1	79	Y	N	Rare Animals and/or Rare Plants - Drains into Thompson's Lake	Basen Kill	150.0 +	38.9	18.7	1,215	N
74.070	42.641	AL-27	B	L1UBHh; PEM1SFh; PSS1Eh	27.2	25.9	21	N	Y	n/a	Headwaters Fox Creek	568.6	38.6	18.3	1,290	N
74.079	42.641	AL-26	B	PUBHh; PEM1/SS1Fh; PSS1Ch	29.1	21.6	21	Y	Y	Inlet of Warner Lake	Headwaters Fox Creek	492.8	38.2	18.2	1,266	N
74.134	42.631	G-10	B	PEM1/SS1E; PSS1/FO1E; PFO1B; PUBHx; PFO1/SS; PEM1C; PEM1BE; PEM1/UBFh	76.9	41.6	69	Y	Y	n/a	Beaverdam Creek (Fox Creek)	7360.0	37.3	17.2	939	N
74.156	42.624	RE-2	B	PUBF; PSS1E; PFO1/SS ^	42.9	0.7	20	Y	Y	n/a	Beaverdam Creek (Fox Creek); Switzkill	217.1 +	37.1	17.1	923	N
74.166	42.620	RE-1	B	PFO1E; PSS1C ^	186.4	7.7	200	Y	Y	n/a	Beaverdam Creek (Fox Creek); Switzkill	200.1 +	37.1	17.1	916	N
74.178	42.625	G-28	B	PFO1E; PSS1/SS	38.4	27.7	40	N	Y	n/a	Beaverdam Creek (Fox Creek); Switzkill	192.0	36.9	16.9	909	N
74.168	42.628	RE-4	B	PUBHx ; PEM1E; PEM1/SS1E; PEM1Fh	52.5	25.7	38	Y	Y	Switzkill Natural Area	Switzkill	697.6	37.2	17.1	930	N
74.068	42.627	AL-25	B	PEM1C; PSS1/EM1C; PFO1C; PEM1Fh; PUBHh; PUBFh; PEM1Eh; PSS1Eh; PEM1Ah	70.1	71.7	n/a	N	Y	Adjacent to Warner's Lake	Headwaters Fox Creek	2035.2	38.1	18.0	1,187	N
74.056	42.625	W-1	B	L1UBHh; PEM1/SS1Ch; PUBHh; PUBHx	197	25.6	27	N	Y	n/a	Headwaters Fox Creek	280.4	38.7	18.5	1,252	N
74.046	42.623	W-2	M	PUBHh	15.1	16.5	13	N	Y	n/a	Headwaters Fox Creek	556.8	38.7	18.5	1,237	N
74.087	42.632	AL-27	B	PUBHBFh; PUBHh; PSS1; PEM1/ABFh; PSS1E; PFO1/AB	61.5	58.9	52	N	Y	n/a	Vly Creek-Normans Kill	115.7 +	40.2	20.0	1,298	N
74.087	42.626	W-4	B	PSS1B; PFO1Fh; PUBFh; PEM1E; PSS1/SS; PEM1/SS1E; PFO1E	36.9	40.0	36	N	Y	n/a	Headwaters Fox Creek	422.4	40.7	20.5	1,400	N
74.056	42.627	W-47	B	PSS1/EM1C; PEM1C	15	19.3	14	Y	Y	n/a	Headwaters Fox Creek	2585.6	40.4	20.2	1,218	N
74.211	42.572	RE-47	B	PFO1Fh; PFO1Fh	15.4	11.6	13	N	Y	n/a	Little Schoharie Creek	184.4	37.2	17.1	1,848	Y
74.189	42.575	RE-7	B	PUBHh; PEM1E; PUBFh	23.9	15.6	19	N	Y	n/a	Switzkill	728.6	37.3	17.2	1737	N
74.179	42.578	RE-8	B	PSS1/FO1E; PFO1E; PEM1Fh	31.7	30.4	27	N	Y	n/a	Switzkill	96.0	37.4	17.3	1828	N
74.166	42.568	RE-12	B	PUBHh; PEM1Fh ^	13.3	4.1	14	N	Y	n/a	Switzkill	47.0	37.7	17.5	1664	Y
74.102	42.583	W-6	B	PEM1Ch; L1UBHh; PEM1E; PEM1/SS1E	34.4	21.0	27	N	Y	n/a	Switzkill	518.4	38.9	18.6	1464	P
74.095	42.580	W-8	B	PEM1E; PUBHh; PFO1E; PSS1E	17.9	11.3	14	N	Y	n/a	Switzkill	384.0	39.6	19.4	1679	N
74.040	42.580	W-12	B	PUBHx; PEM1E; PSS1B; PEM1B; PSS1E; PEM1A, PSS1A, PEM1/SS1B; PUBHh; PFO1Fh; PSS1/FO1C; PEM1/SS1C	36.8	40.0	33	Y	Y	n/a	Switzkill	281.6	41.3	21.1	1420	N
74.033	42.575	W-13	I	PUBHh; PSS1/EM1E; PFO1/SS; PFO1E; PEM1E; PUBFh	55.3	19.4	19	N	Y	n/a	Hannacroix Creek	627.2	41.6	21.4	1441	N
74.049	42.571	W-11	I	L1UBHh; PFO1B; PUBHh; PFO1B; PSS1B; PEM1/SS1Ch; PEM1Fh	142.1	90.4	126	N	Y	n/a	Basic Creek	1088.0	40.9	20.7	1439	N
74.068	42.567	W-16	B	None Listed *	17.2	n/a	n/a	N	Y	n/a	Basic Creek	184.4	40.6	20.3	1681	N
74.075	42.576	W-49	B	PFO1E; PSS1B; PSS1E; PUBFh	19.6	10.8	16	N	Y	n/a	Switzkill	148.8	40.3	20.0	1698	N
74.090	42.572	W-10	B	PFO1/EM1E; PSS1/EM1E; PFO1E; PEM1E; PEM1Fh; PUBHh; PEM1Ch; PFO1E; PSS1E	126.6	69.8	96	N	Y	n/a	Switzkill	1305.6	39.7	19.5	1563	N
74.112	42.563	W-45	B	PUBHh; PEM1E; PUBFh; PEM1Ch	18.5	19.6	13	N	Y	n/a	Switzkill	63.2	39.6	19.3	1471	N
74.165	42.556	RE-15	B	PEM1/SS1B; PUBFh; PEM1/SS1B; PUBF; PSS1/EM1E; PFO1/SS1B; PSS1E; PSS1B	43.4	30.0	38	N	Y	n/a	Switzkill	172.8	38.1	17.7	1688	P
74.181	42.560	RE-19	B	PSS1Ch; PEM1Ch; PUBHh; PEM1C	16.6	16.7	24	N	Y	n/a	Townsle Creek	748.8	37.6	17.6	1791	P
74.189	42.556	RE-60	B	PUB/EM1Fh; PEM1E; PFO1/EM1Fh; PUBFh	53.6	32.1	47	N	Y	n/a	Townsle Creek	313.6	37.6	17.8	1893	P
74.203	42.544	RE-18	B	PUBHh; PFO1A; PSS1/EM1E; PEM1B; PEM1/SS1B; PSS1/EE	85.4	58.7	13	N	Y	n/a	Lake Creek-Catskill Creek	470.6	37.6	17.8	1982	P
74.235	42.535	RE-25	B	PSS1/EM1Ch; PSS1E; PEM1E	66.8	52.0	18	Y	Y	Rare Plant Species	Lake Creek-Catskill Creek	1350.4	37.5	17.2	1816	N
74.186	42.548	RE-61	B	PSS1/EE	42.5	36.8	29	N	Y	n/a	Lake Creek-Catskill Creek	286.8	37.8	17.1	1870	N
DNE	DNE	RE-17	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
DNE	DNE	RE-10	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
DNE	DNE	RE-21	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE

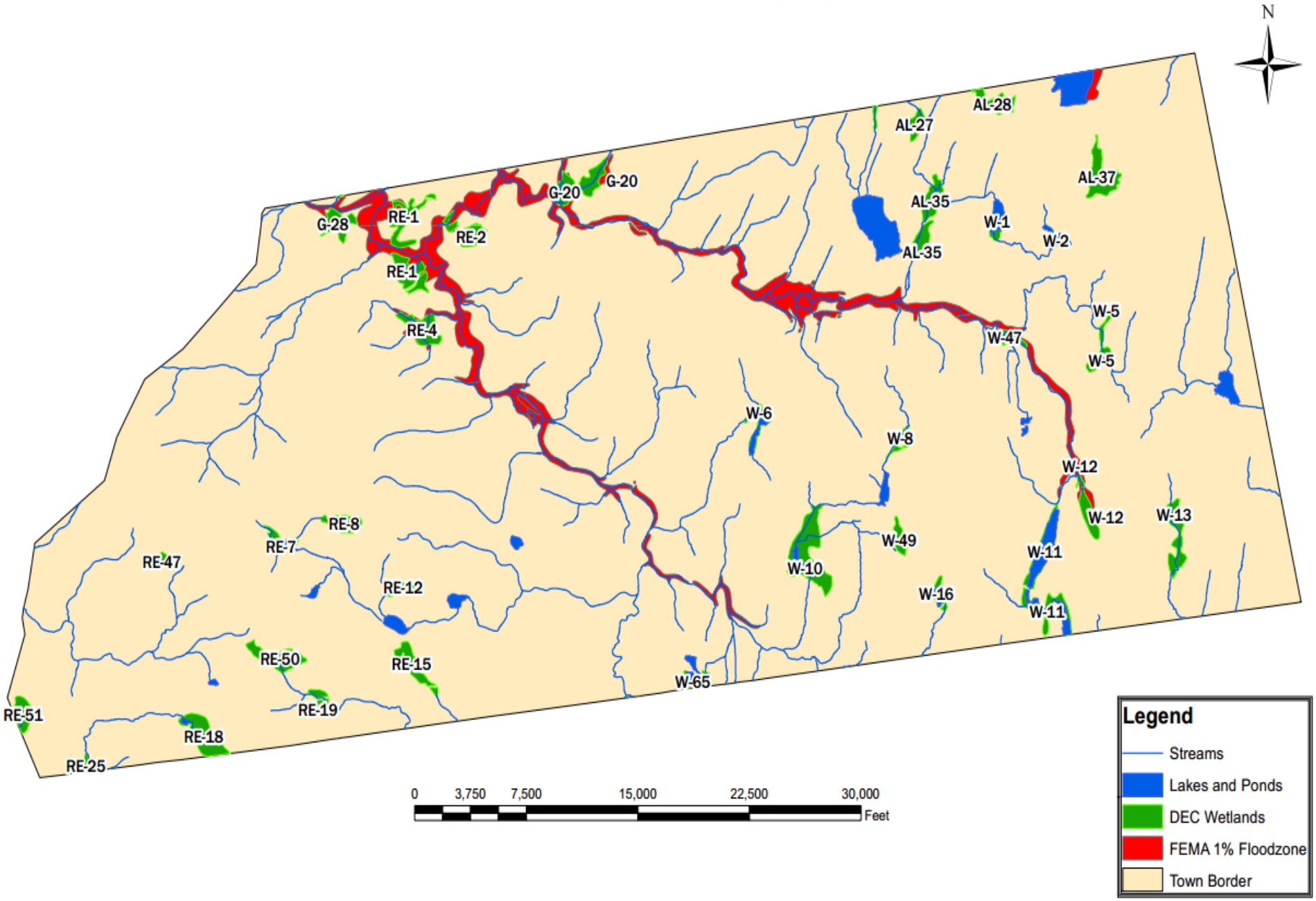
Includes:

Lat/Long, DEC WIN, DEC Wetland Classification, NWI Wetland Code(s), DEC acreage, NWI acreage (estimated), 1980 Wetland acreage, within 100 yr. flood zone, Stream Connectivity, DEC Special Status, HUC 12 Watershed, Watershed area above outlet, Mean annual precip.,, Mean annual runoff at outlet, elevation, public/private land

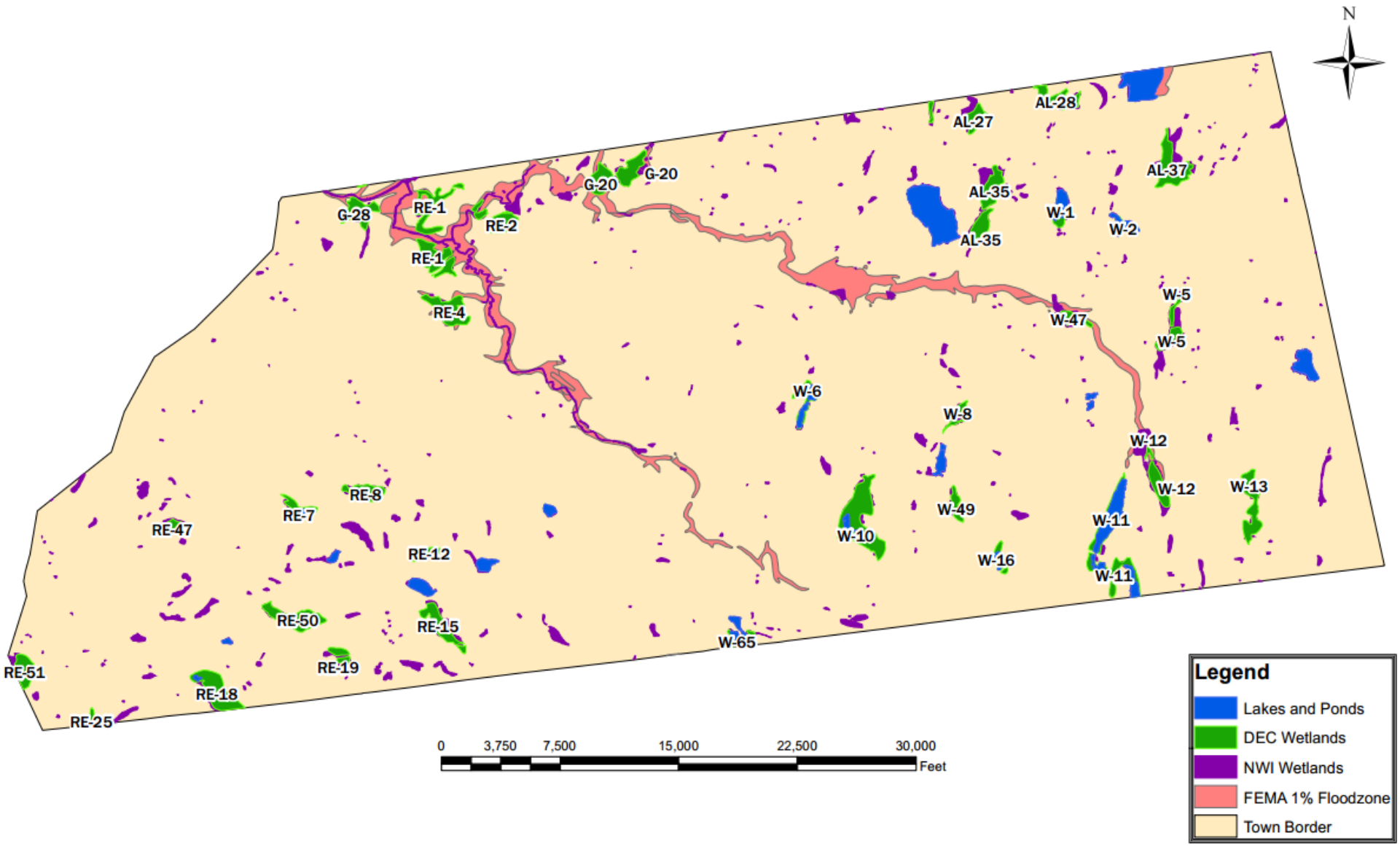
Berne, NY
DEC Wetlands



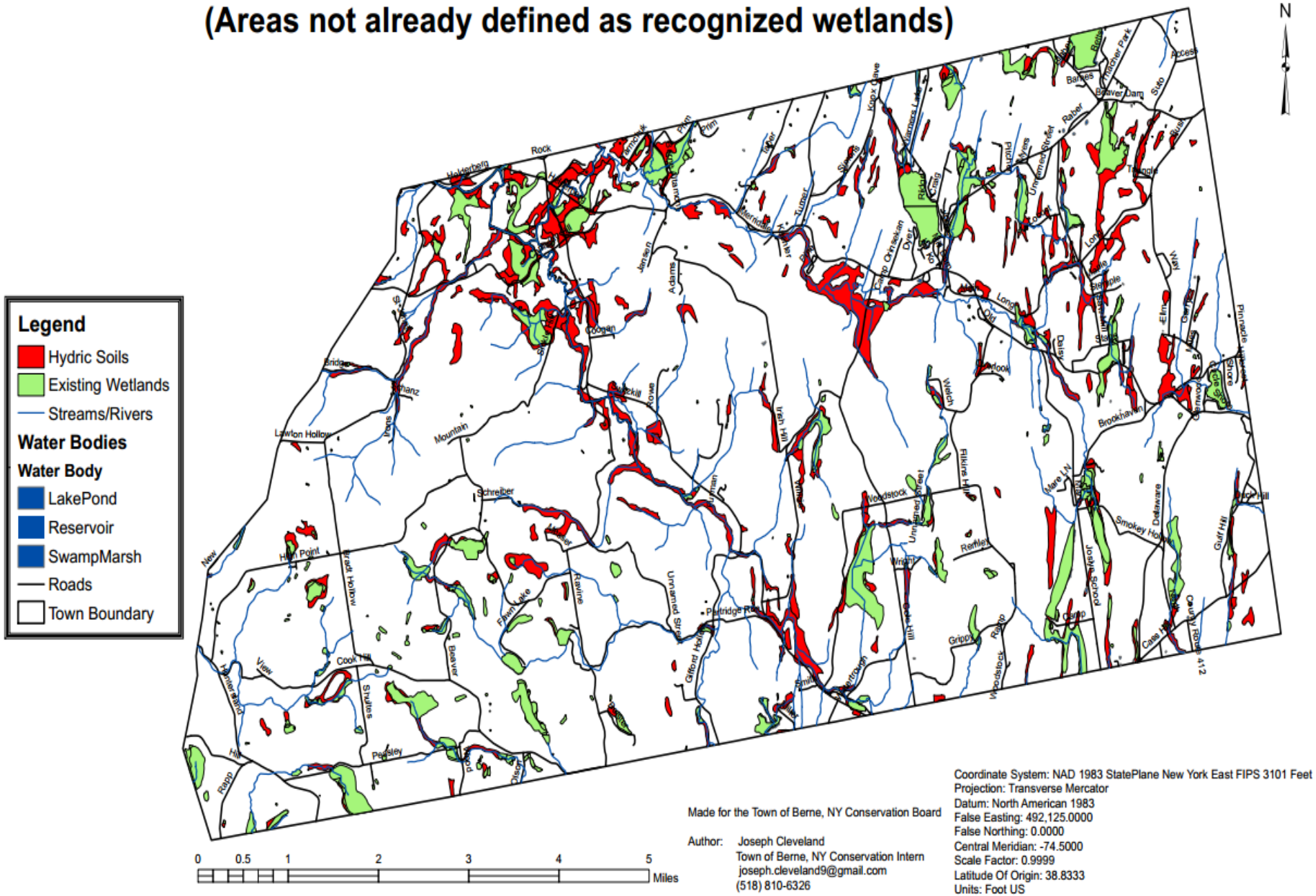
Berne, NY
DEC Wetlands and FEMA 100 Year (1%) Floodzone



Berne, NY
DEC Wetlands and NWI Wetlands



Potential Detention Areas within Berne, NY
(Areas not already defined as recognized wetlands)



Made for the Town of Berne, NY Conservation Board

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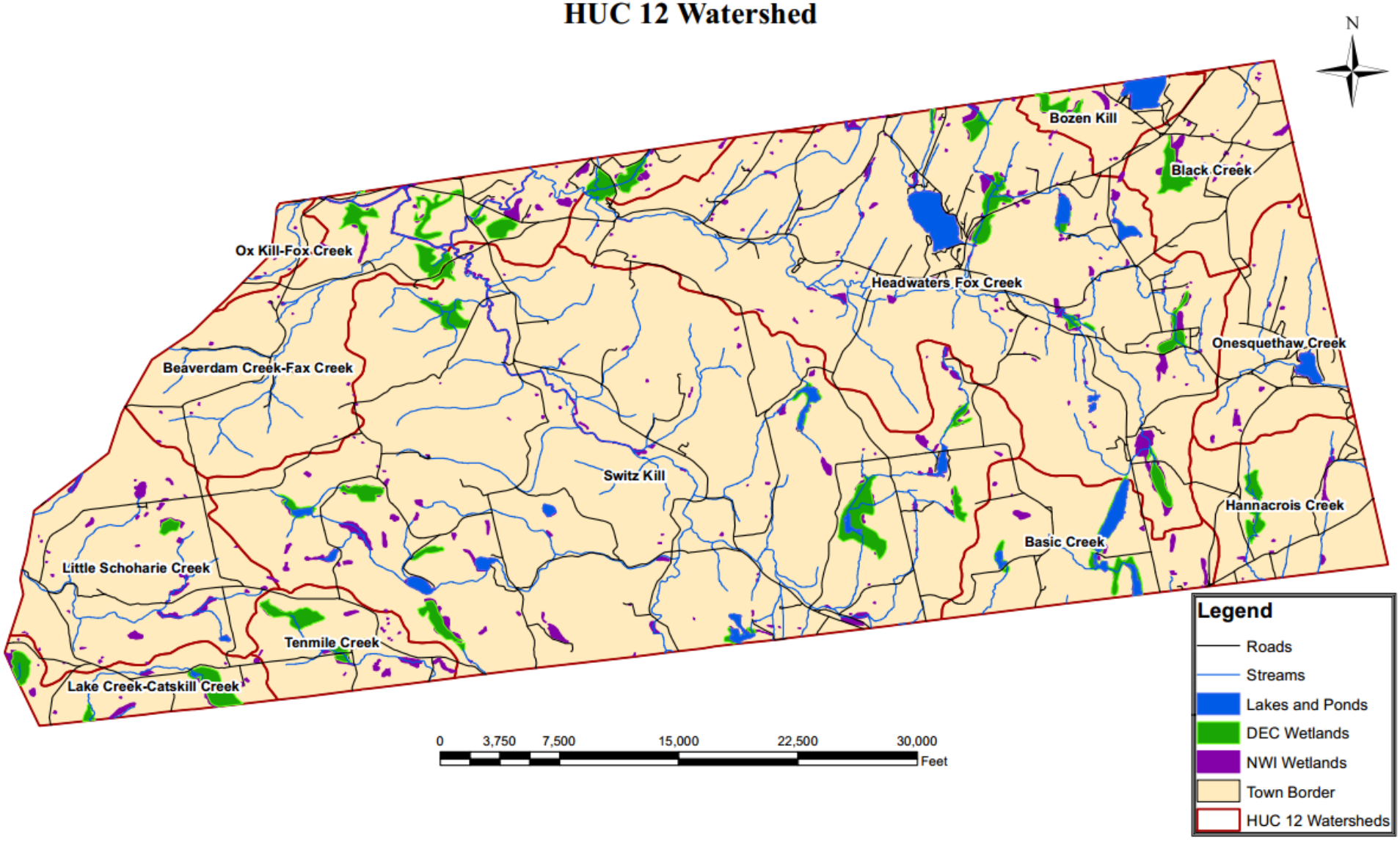
(518) 810-6326

Date: 08.14.2013

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 492,125.0000
False Northing: 0.0000
Central Meridian: -74.5000
Scale Factor: 0.9999
Latitude Of Origin: 38.8333
Units: Foot US

Berne, NY
DEC and NWI Wetlands
HUC 12 Watershed



Recommendations and Mitigation

- **Consider wetland management to be integrated with flood control, allocation of water supply, protection of habitat and plant and animal species, and stormwater and nonpoint source pollution (ag. runoff in Berne)**
- **Treat wetlands as a necessary means for protecting against repeated and serious flood damages**
- **Re-inventory flora and fauna of each DEC wetland (as done in 1980) to better understand each individual wetland**
- **Invasive species inventories of wetlands**
- **Study and treat wetlands in a watershed context, at different scales, to make valuable comparisons and to better understand the value of each individual wetland to the Town**
- **Continue to identify wetlands which provide the most benefit to the Town (next slide)**

Recommendations (cont'd)

- **Those wetlands found in upper watersheds, along main -stem streams, within 100 –year flood zones, those overlying Karst geology, and those containing rare or special concern plant and animal species should be regarded as most valuable to the town. ALL Wetlands are valuable, and should betreated as such (even those smaller than DEC designation)**
- **Consider including the NWI wetlands (down to a certain manageable size) in inventory**
- **Consider doing individual parcel analyses for those properties which contain wetlands**
- **Ensure wetland assessments are incorporated in development planning, open-space inventory**
- **Educate residents on the importance of wetlands and encourage them to allow the creation of new wetlands in place of old, unused agricultural land (and discuss the benefits to them from doing so) – NRCS Agricultural Conservation Easement Program (next slide)**

NRCS Agricultural Conservation Easement Program (ACEP)

Title 440 – Conservation Programs Manual
Part 528 – Agricultural Conservation Easement Program (ACEP)

- **Restore, protect, and enhance wetlands on eligible land**
- **NRCS provides cost-share assistance to eligible entities to purchase agricultural land easements from eligible landowner**
- **Private landowners who are seeking to conserve agricultural lands and grasslands and protect, restore and enhance critical wetlands and their related benefits.**
- **Available to all 50 States**
- **Landowners who are interested in participating in ACEP-WRE must apply by submitting a completed application**
- **Landowners "must be willing and able to grant …sufficient physical and legal access [to] right of way to the entire enrolled area for the term of the enrollment for restoration, management, maintenance, monitoring, and enforcement purposes.**
- **Ineligible owners: Highly Erodible Land and Wetland Conservation Compliance**


The End
Thanks for the opportunity and thanks for your time!