Micron Central New York Semiconductor Manufacturing Complex

Fish Creek

Stream and Wetland Mitigation Plan

Oswego County, NY

PREPARED BY:

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May 2025

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1. Introduction and Objectives

Six sites in Oswego County make up the Permittee Responsible Offsite Compensatory Mitigation Project (Project) for the Micron NY Semiconductor Manufacturing, LLC (Micron) semiconductor fabrication site in the town of Clay, Onondaga County, New York. The Fish Creek Stream and Wetland Mitigation Plan (Fish Creek Plan) location is south of Perry Road in the Town of Schroeppel, Oswego County, New York. The Project will address the total mitigation need for wetland credits and stream restoration to meet Micron permit requirements. The final number of credits required for compensation is still pending as of the drafting of this plan, however, an Overview document accompanying the six plans will be updated with final credit accounting. TWT submits this Fish Creek Plan as one of six plans to satisfy Project mitigation needs and in fulfillment of the requirements of 33 C.F.R. Part 332 (2024).

This Fish Creek Plan includes both stream and wetland mitigation components. Stream restoration will be achieved through the construction of new channels to replace the ditches and buried drainage structures where the altered portion of the Fish Creek tributary currently flows and integrate them into a stream/wetland complex. Re-establishment of wetlands will be the primary approach to achieving the necessary credits. Design and hydrology analysis assistance by Ramboll largely informs and verifies the stream restoration component of this plan following the extensive field investigation and conceptual approach TWT provided.

The objectives of the Fish Creek Plan are to develop approximately 19.2 wetland mitigation credits (USACE) or 19.9 mitigation acres (NYSDEC) toward a total compensation requirement of 414 credits/acres for the entire project. This includes:

- Re-establish wetlands to generate 18.9 USACE wetland credits equivalent to the creation of 18.9 NYSDEC wetland mitigation acres, including:
    - 2.1 acres of PEM - Shallow Emergent Marsh
    - 0.7 acres of PEM - Deep Emergent Marsh
    - 2.4 acres of PSS – Scrub-Shrub
    - 9.2 acres of PFO - Floodplain Forest
    - 4.5 acres of PFO - Red Maple Hardwood Swamp
- Rehabilitate wetlands of the above cover types to generate 0.29 USACE wetland credits equivalent to the enhancement of 1 NYSDEC wetland mitigation acres.
- Establish 38.2 acres of upland buffer habitat, including:
    - 7.3 acres of herbaceous buffer habitat
    - 30.9 acres of shrub/forest buffer habitat

- Construct 5,413 feet of Fish Creek stream channels.

The distribution of wetland types may change due to balancing distribution among the other five mitigation plans in development. The distribution of wetland cover types, mitigation type, and acreage is dependent on site-specific characteristics which ultimately determine what wetlands are suitable at specific locations.

2. Site Description

The Fish Creek Site is approximately 184.8 acres in size in the Town of Schroeppel, Oswego County, New York (**Figure 2-1**). The Site is within the Oneida River 10-digit HUC (0414020209) watershed, and the U.S. Geological Survey 7.5-minute quadrangle indexed as Pennellville. Coordinates for the approximate center of the Site are: [43.29523747, -76.27250778]. The Site is bordered by Perry Road to the north and Godfrey Road to the south (**Figure 2-2**).

2.1 Site Selection

The Fish Creek Mitigation Site was selected along with five other sites to satisfy compensatory mitigation requirements for Micron Campus Impacts using site selection protocols described in Section 2.1 and 4.1 of the Micron Overview of Stream/Wetland Mitigation Plan document. This Site is particularly well suited for restoration of a stream/wetland complex. TWT and Ramboll performed assessments of all TWT-held Wetland Mitigation properties for potential restoration of stream/wetland complexes. While all sites have some potential, the Fish Creek site has a combination of:

- heavily disturbed and modified stream reaches,
- opportunity to enhance water quality by addressing erosional head cutting within the ditch system,
- thick clay layers near the surface,
- a clear history of stream wetland complexes,
- sufficient perennial flow in the existing stream to support the desired hydrology and channel design, and
- ample opportunity for construction of adjacent wetlands hydrologically integrated with the designed stream channels.

2.2 Site Protection

The Wetland Trust, Inc. (TWT) is a 501(c)(3) nonprofit corporation and qualifying conservation organization (NYS ECL) whose mission is the protection, conservation, and restoration of wetlands and other critical habitat. TWT owns the Fish Creek site fee simple and in perpetuity, with provisions to transfer to other similar nonprofits its lands and stewardship funds should TWT fail. All sites will receive the same protection. There are two layers of protection for this site:

Figure 2-1. Wetland Mitigation Sites Location Overview

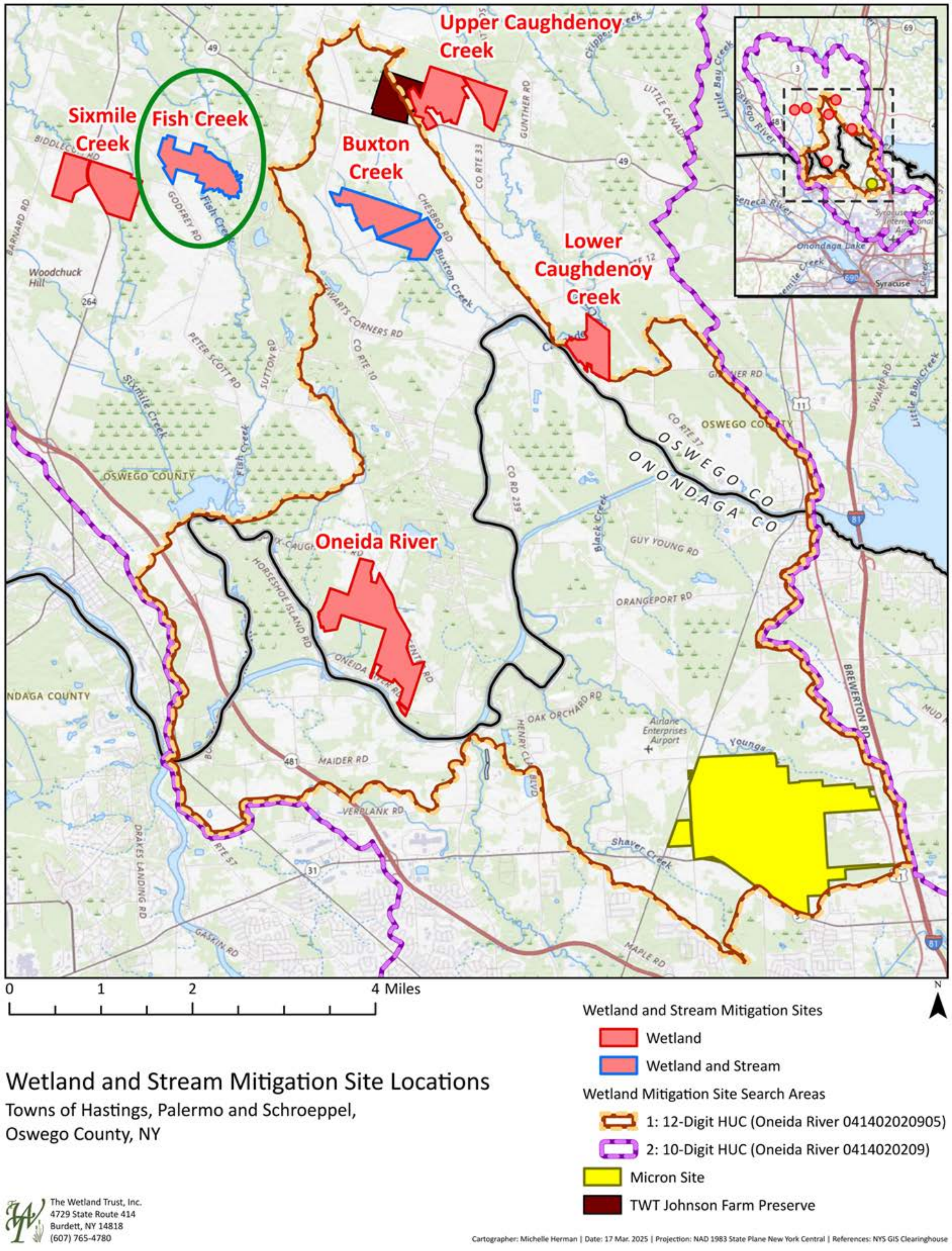
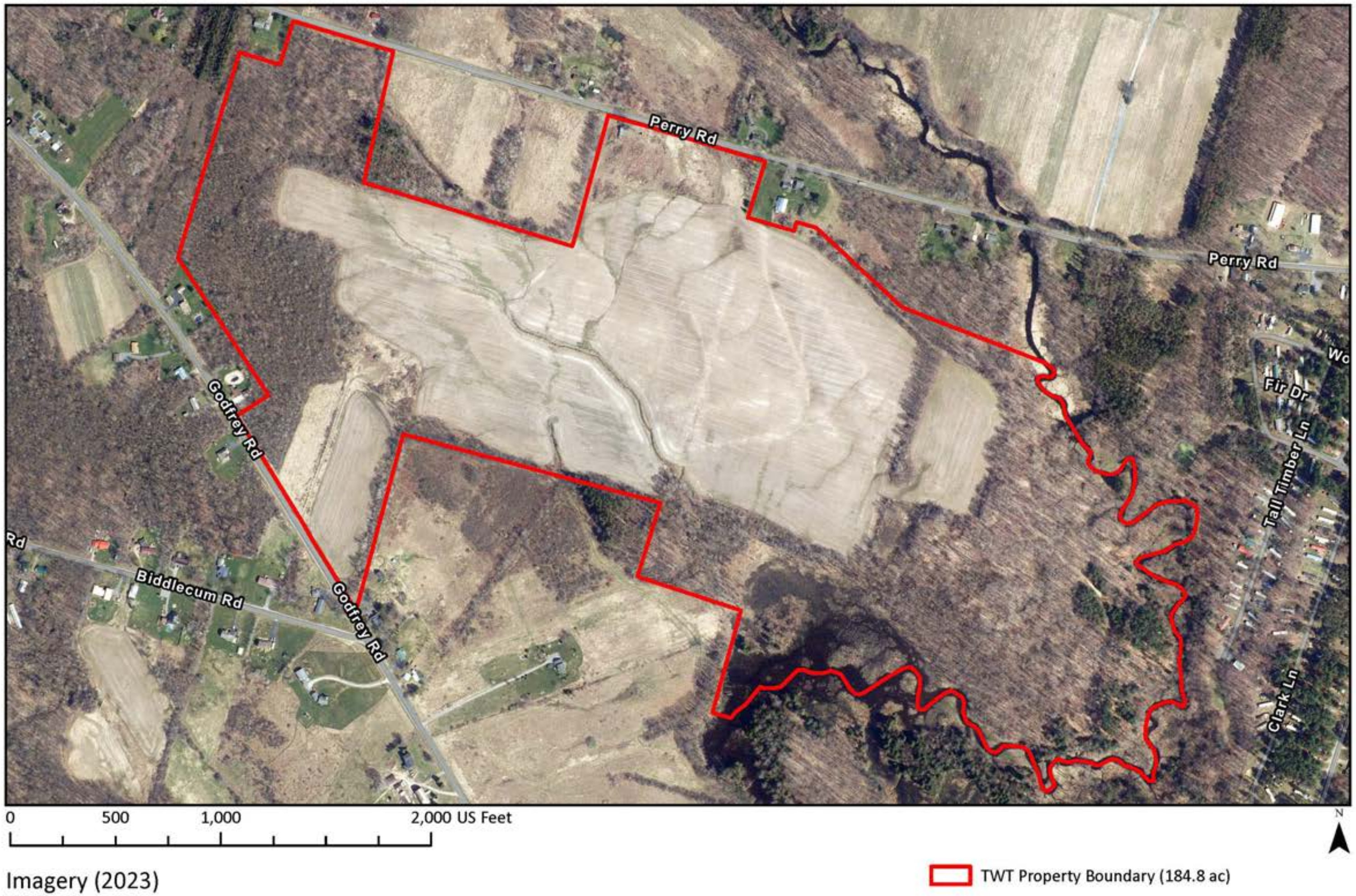


Figure 2-2. Fish Creek Property (2023)



Imagery (2023)
Fish Creek
Town of Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 10 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

First, TWT will own the Fish Creek mitigation site in perpetuity. TWT's vested interest in the site through fee-simple ownership reduces the risk of failure to satisfy performance standards.

Second, TWT will file a USACE-approved Conservation Easement (CE, **Appendix A**) with the Oswego County Clerk. The Wetland Conservancy, Inc. (TWC), P.O. Box 220, Burdett, NY 14818-0220, a 501(c)(3) nonprofit corporation and qualifying conservation organization (NYS ECL), will be the easement holder. The easement will cite specific conditions and prohibitions and apply to the credit generating areas of the site. The site plan provides the rationale for the easement and assists in its enforcement. The CE names the USACE and NYSDEC as third-party enforcement entities.

With the exception of activities approved as part of this Project permit or other activities approved by the USACE and NYSDEC, no further alterations within the easement boundary shall occur.

3. Baseline Information

3.1 Land Use History

Historic

A review of historic and modern aerial photographs (**Appendix B**) was conducted to understand the property's land use history. The 1955 imagery captures the landscape in a state of peak vegetation disturbance—nearly the entire property, except for the very wet areas adjacent to Fish Creek, had been cleared for agriculture, with little woody vegetation remaining. Although the site was heavily cultivated, no surface drainage modifications were visible at that time, though the use of buried drainage tiles is possible given the farming practices of the era. A significant shift occurred between 1981 and 1994, when a large central ditch first appears in the aerial record. This engineered channel was likely excavated to accelerate drainage across the field and reroute surface water, marking the beginning of intensive hydrologic manipulation. Over time, this system expanded and became increasingly effective, particularly with the addition of 4-inch corrugated plastic subsurface drainage pipe.

Vegetation and reforestation had naturally recovered to approximately present levels by 2006, particularly in the less intensively farmed areas, with gradual improvements in forest cover continuing in the years since. Additionally, a homestead located on the eastern side of the property was removed between 2017 and 2019, leaving only a small shed remaining at the present day.

Current Land Use

Current land use largely consists of commercial crop production in corn and soybeans. The site remains in a state of peak hydrologic modification: the central ditch has incised to depths exceeding seven feet due to ongoing head cutting, and the subsurface drainage system rapidly conveys water off-site to support intensive row crop agriculture. Grading and drainage structures are actively maintained to optimize field conditions and maximize agricultural productivity. Much of the landscape is managed for high-efficiency cultivation. The forested and wettest areas of the property, primarily adjacent to Fish Creek, are not currently being actively modified, and are used for hunting.

3.2 Soils

USDA Natural Resources Conservation Service (NRCS) soil mapping of the site is summarized in **Table 3-1** and **Figure 3-1**. Williamson very fine sandy loam and Raynham silt loam together comprise a significant portion of the site. Scriba gravelly fine sandy loam, a somewhat poorly drained soil, is also widespread. Canandaigua silt loam, a poorly drained soil type crucial for wetland restoration, holds the greatest importance for site rehabilitation. In the eastern portion of the site, especially along the ridges, gravelly soils such as Ira and Sodus gravelly fine sandy loams dominate. These soils are less suitable for wetland restoration.

Table 3-1. Soil Series Mapped within the Mitigation Area*

Series	**Symbol**	**Acres**	**% of Area**	**Drainage Class**	**Hydrologic Soil Group**
Amboy very fine sandy loam, 6-12% slopes, severely eroded	AvC3	4.73	2.56%	Well drained	C/D
Canandaigua silt loam	Cd	30.56	16.54%	Poorly drained	C/D
Humaquepts and Fibrists, ponded	HW	7.18	3.88%	Very poorly drained	A/D
Ira gravelly fine sandy loam, 3-8% slopes	IrB	18.54	10.03%	Moderately well drained	D
Ira-Sodus gravelly fine sandy loams, rolling	IsC	2.86	1.55%	Moderately well drained	D
Massena silt loam	Me	0.41	0.22%	Somewhat poorly drained	C/D
Minoa very fine sandy loam	Mn	5.87	3.18%	Somewhat poorly drained	B/D
Palms muck	Pa	0.3	0.16%	Very poorly drained	B/D
Raynham silt loam, 0-6% slopes	RaB	31.25	16.91%	Poorly drained	C/D
Rhinebeck silt loam, 2-6% slopes	RhB	5.25	2.84%	Somewhat poorly drained	C/D
Rumney loam	RU	0.01	0.01%	Poorly drained	B/D
Scriba gravelly fine sandy loam, 0-8% slopes	ScB	28.49	15.41%	Somewhat poorly drained	D
Sodus gravelly fine sandy loam, 3-8% slopes	SgB	6.5	3.52%	Well drained	C
Sodus gravelly fine sandy loam, 15-25% slopes	SgD	3.3	1.79%	Well drained	C
Swanton fine sandy loam	Sw	0.27	0.15%	Poorly drained	C/D
Williamson very fine sandy loam, 2-6% slopes	WIB	39.09	21.15%	Moderately well drained	D

*Derived from NRCS Web Soil Survey

A 4-foot-long open-faced clay auger was used to sample soils across the mitigation area. Locations of soil test pits and the description of soil textures and depth to groundwater are detailed in **Figure 3-1** below.

3.3 Wetlands and Hydrology

Hydrological characteristics at Fish Creek were determined by TWT through wetland and aquatic resource delineations, aerial imagery interpretation, review of regulatory maps, wetland design field assessments which included a series of soil test pits, and interviews with previous property owners.

Both state and federal wetlands are mapped onsite (**Figure 3-2**). Existing wetlands, streams, and drainage features were delineated in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and Regional Supplement. Field visits for delineation concurrence by USACE and NYSDEC were conducted in August 2024 with final concurrence and pending as of this writing. All field data points were recorded with a centimeter-level accurate GNSS receiver and mapped in ArcGIS Pro. See **Figure 3-3** for mapped wetlands and drainage features and **Appendix C** for delineated features summary table and data sheets.

Site hydrology is influenced by a combination of variable soils, historic stream channels, and extensive agricultural drainage. Many of the site's drainage features are remnants of historic Fish Creek tributaries, most of which originate on the property and now function as deepened agricultural ditches due to tile drainage and headcutting.

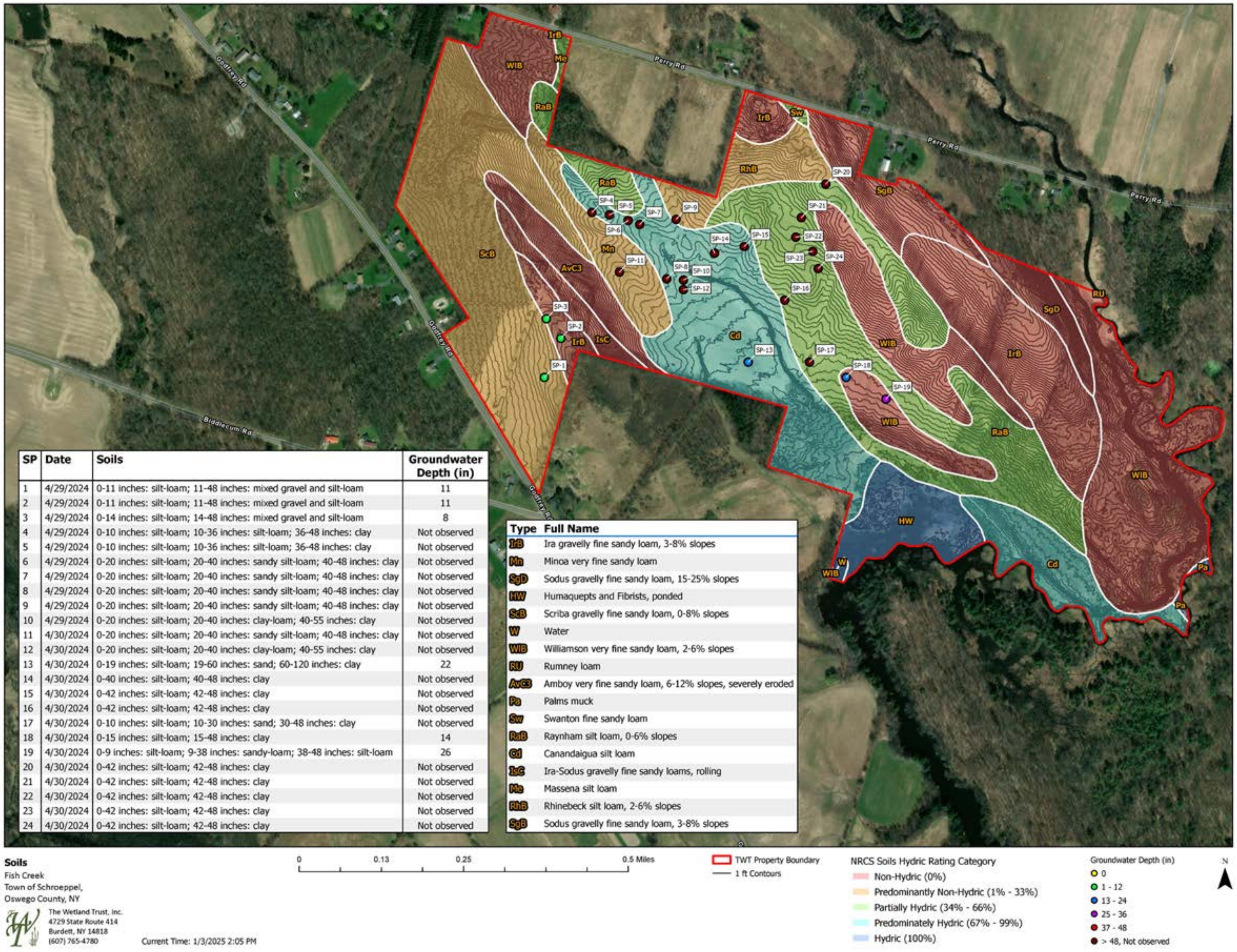
The property has been farmed for over 75 years and contains a mix of clay loam soils and areas of sand and gravel. Wetland establishment is focused on the heavier clay soils and historic tributary corridors, while sandy/gravel areas have been avoided. Surface flows generally trend northwest to southeast toward a large, mapped NYSDEC wetland.

Restoration efforts will involve creating shallow depressions, removing deeply incised drainage features, and reconstructing a stream system with elevations and profiles more consistent with historical conditions. Existing tile drainage systems will be deactivated. Hydrology at the site will continue to be monitored until work begins. Groundwater monitoring wells, staff gauges, and a rain gauge will be installed at the site in spring 2025.

Staff Gauges

Staff gauges will be installed at Fish Creek for the purpose of measuring water levels in the stream and ditches, providing critical data to monitor surface water dynamics and its relationship to groundwater monitoring well data. A total of 2 staff gauges will be strategically installed based on hydrology, field observations, contour maps, and wetland and stream design plans (**Table 3-2** and **Figure 3-4**). Placement will ensure easy accessibility and unobstructed views to accommodate

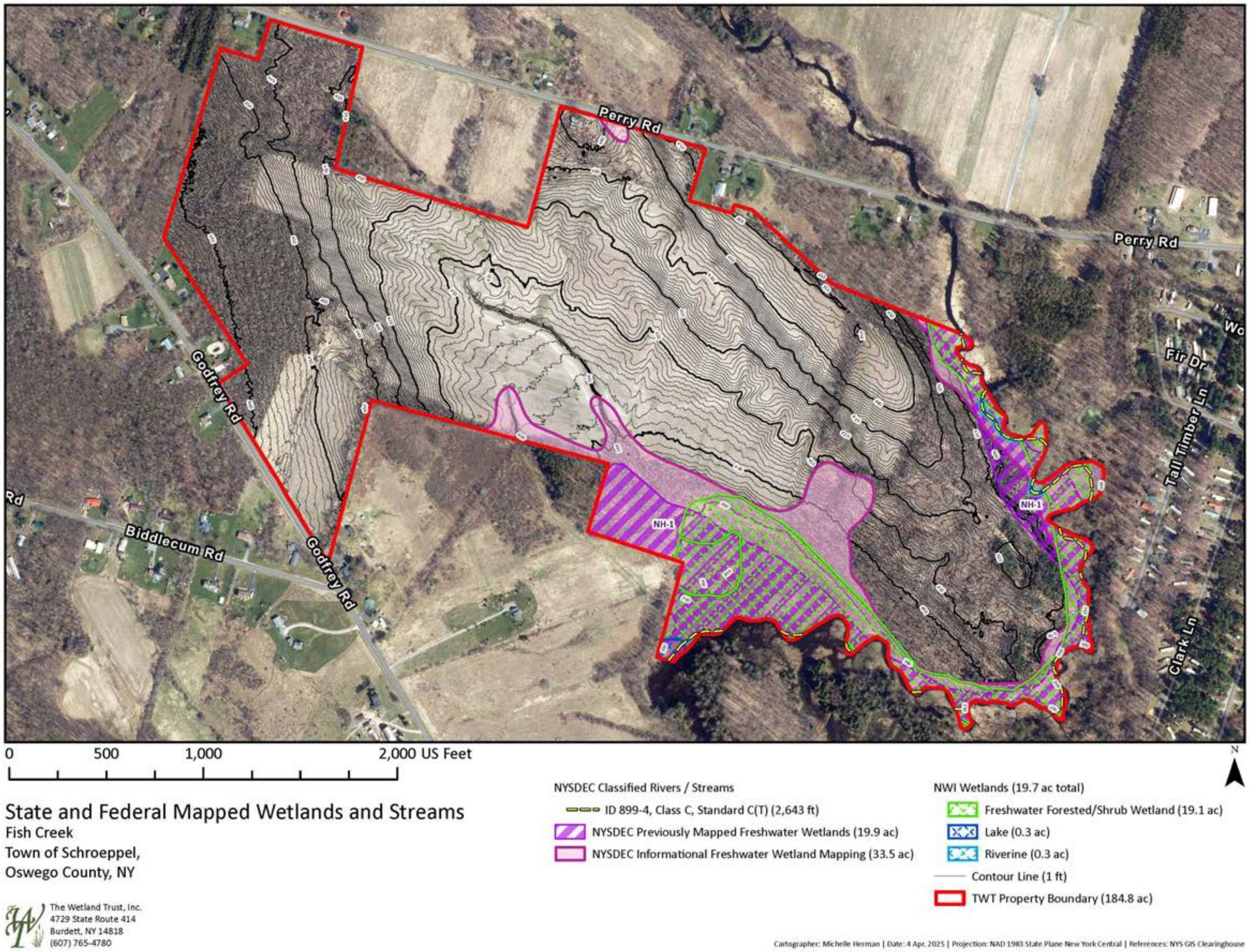
Figure 3-1. Fish Creek Soils



SP	Date	Soils	Groundwater Depth (in)
1	4/29/2024	0-11 inches: silt-loam; 11-48 inches: mixed gravel and silt-loam	11
2	4/29/2024	0-11 inches: silt-loam; 11-48 inches: mixed gravel and silt-loam	11
3	4/29/2024	0-14 inches: silt-loam; 14-48 inches: mixed gravel and silt-loam	8
4	4/29/2024	0-10 inches: silt-loam; 10-36 inches: silt-loam; 36-48 inches: clay	Not observed
5	4/29/2024	0-10 inches: silt-loam; 10-36 inches: silt-loam; 36-48 inches: clay	Not observed
6	4/29/2024	0-20 inches: silt-loam; 20-40 inches: sandy silt-loam; 40-48 inches: clay	Not observed
7	4/29/2024	0-20 inches: silt-loam; 20-40 inches: sandy silt-loam; 40-48 inches: clay	Not observed
8	4/29/2024	0-20 inches: silt-loam; 20-40 inches: sandy silt-loam; 40-48 inches: clay	Not observed
9	4/29/2024	0-20 inches: silt-loam; 20-40 inches: sandy silt-loam; 40-48 inches: clay	Not observed
10	4/29/2024	0-20 inches: silt-loam; 20-40 inches: clay-loam; 40-55 inches: clay	Not observed
11	4/30/2024	0-20 inches: silt-loam; 20-40 inches: sandy silt-loam; 40-48 inches: clay	Not observed
12	4/30/2024	0-20 inches: silt-loam; 20-40 inches: clay-loam; 40-55 inches: clay	Not observed
13	4/30/2024	0-19 inches: silt-loam; 19-60 inches: sand; 60-120 inches: clay	22
14	4/30/2024	0-40 inches: silt-loam; 40-48 inches: clay	Not observed
15	4/30/2024	0-42 inches: silt-loam; 42-48 inches: clay	Not observed
16	4/30/2024	0-42 inches: silt-loam; 42-48 inches: clay	Not observed
17	4/30/2024	0-10 inches: silt-loam; 10-30 inches: sand; 30-48 inches: clay	Not observed
18	4/30/2024	0-15 inches: silt-loam; 15-48 inches: clay	14
19	4/30/2024	0-9 inches: silt-loam; 9-38 inches: sandy-loam; 38-48 inches: silt-loam	26
20	4/30/2024	0-42 inches: silt-loam; 42-48 inches: clay	Not observed
21	4/30/2024	0-42 inches: silt-loam; 42-48 inches: clay	Not observed
22	4/30/2024	0-42 inches: silt-loam; 42-48 inches: clay	Not observed
23	4/30/2024	0-42 inches: silt-loam; 42-48 inches: clay	Not observed
24	4/30/2024	0-42 inches: silt-loam; 42-48 inches: clay	Not observed

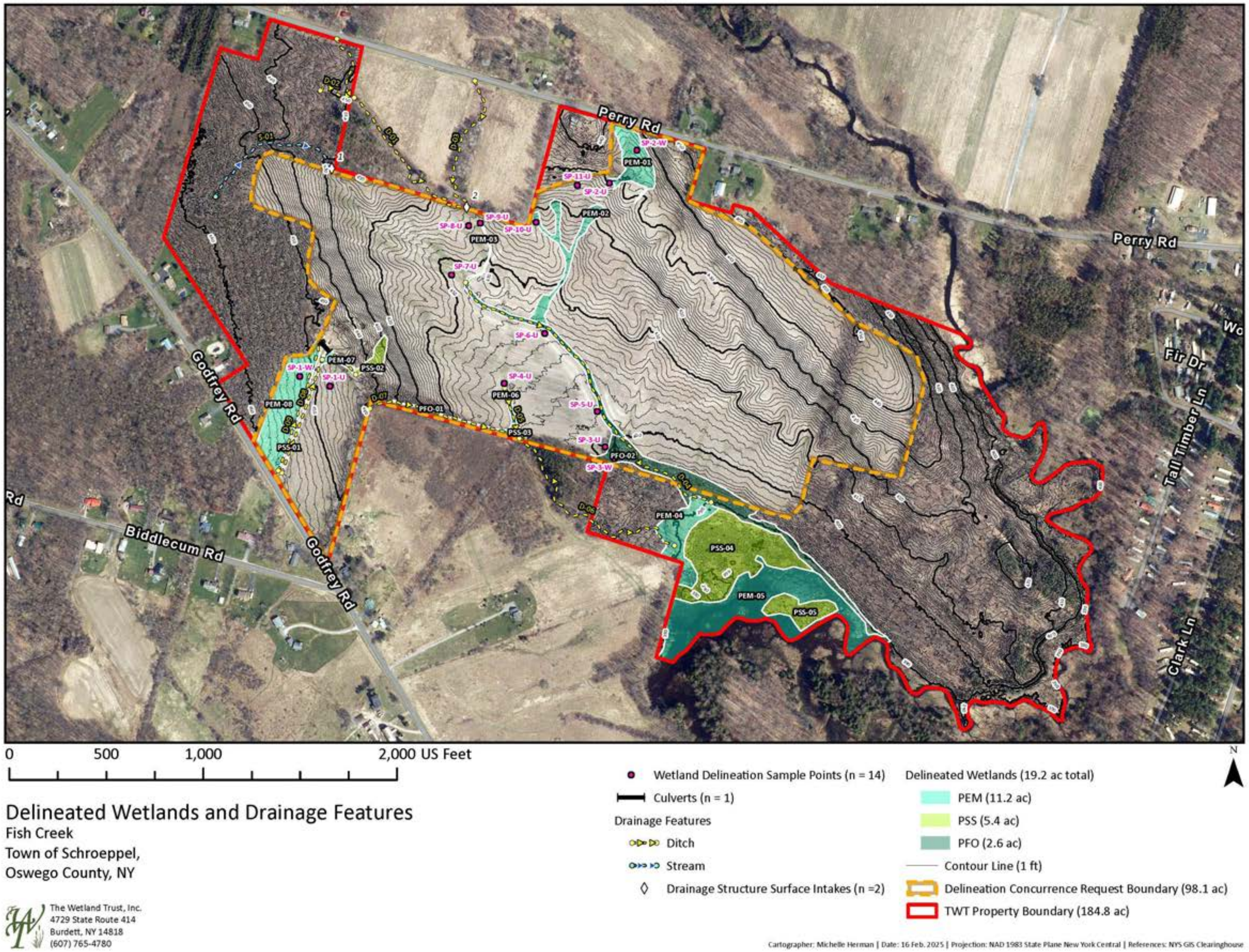
Type	Full Name
IrB	Ira gravelly fine sandy loam, 3-8% slopes
Mn	Minoa very fine sandy loam
SgD	Sodus gravelly fine sandy loam, 15-25% slopes
HW	Humaquepts and Fibrists, ponded
ScB	Scriba gravelly fine sandy loam, 0-8% slopes
W	Water
WlB	Williamson very fine sandy loam, 2-6% slopes
RU	Rumney loam
AvC3	Amboy very fine sandy loam, 6-12% slopes, severely eroded
Pa	Palms muck
Sw	Swanton fine sandy loam
RaB	Raynham silt loam, 0-6% slopes
Cd	Canandaigua silt loam
IsC	Ira-Sodus gravelly fine sandy loams, rolling
Me	Massena silt loam
RhB	Rhinebeck silt loam, 2-6% slopes
SgB	Sodus gravelly fine sandy loam, 3-8% slopes

Figure 3-2. State and Federal Mapped Wetlands



Cartographer: Michelle Herman | Date: 4 Apr. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Figure 3-3. Delineated Wetlands and Drainage Features



Cartographer: Michelle Herman | Date: 16 Feb. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

both drone and physical observations. Approximate elevations derived from GIS data will be field verified during installation using survey grade GPS.

Table 3-2. Staff Gauge Locations

Gauge Number	Elevation (ft)	Latitude	Longitude	Description
1	405.19	43.29635656	-76.27555738	Located at the shallowest part of the drainage ditch
2	397.23	43.2945881	-76.27297151	Located at the deepest part of the drainage ditch.

Monitoring Wells

Up to 5 groundwater monitoring wells using Onset HOBO water level dataloggers will be strategically placed across the site to capture critical groundwater data every four hours, with locations informed by hydrology and drainage patterns, soil delineations, and observed site characteristics. Elevations will be verified during installation to ensure accuracy, and placement adjustments may be made based on field findings. Any changes will be documented in the as built report. See **Table 3-4** and **Figure 3-5** for details.

Table 3-3. Monitoring Well Location

Well #	Elevation (ft)	Latitude	Longitude	Location
1	447.51	43.29461839	-76.27838259	Near wetland 1; highest elevation point, monitors rocky soil influence
2	409.78	43.29690564	-76.27624938	Near wetland 7; adjacent to drainage ditch and located on side of hill
3	402.06	43.29509951	-76.2739571	Between wetland 12 and 13; between three drainage features
4	400.68	43.29455023	-76.27187369	Near wetland 18; lowest elevation point, adjacent to drainage ditch
5	420.03	43.29711088	-76.2728891	Near wetland 21; monitors groundwater presence

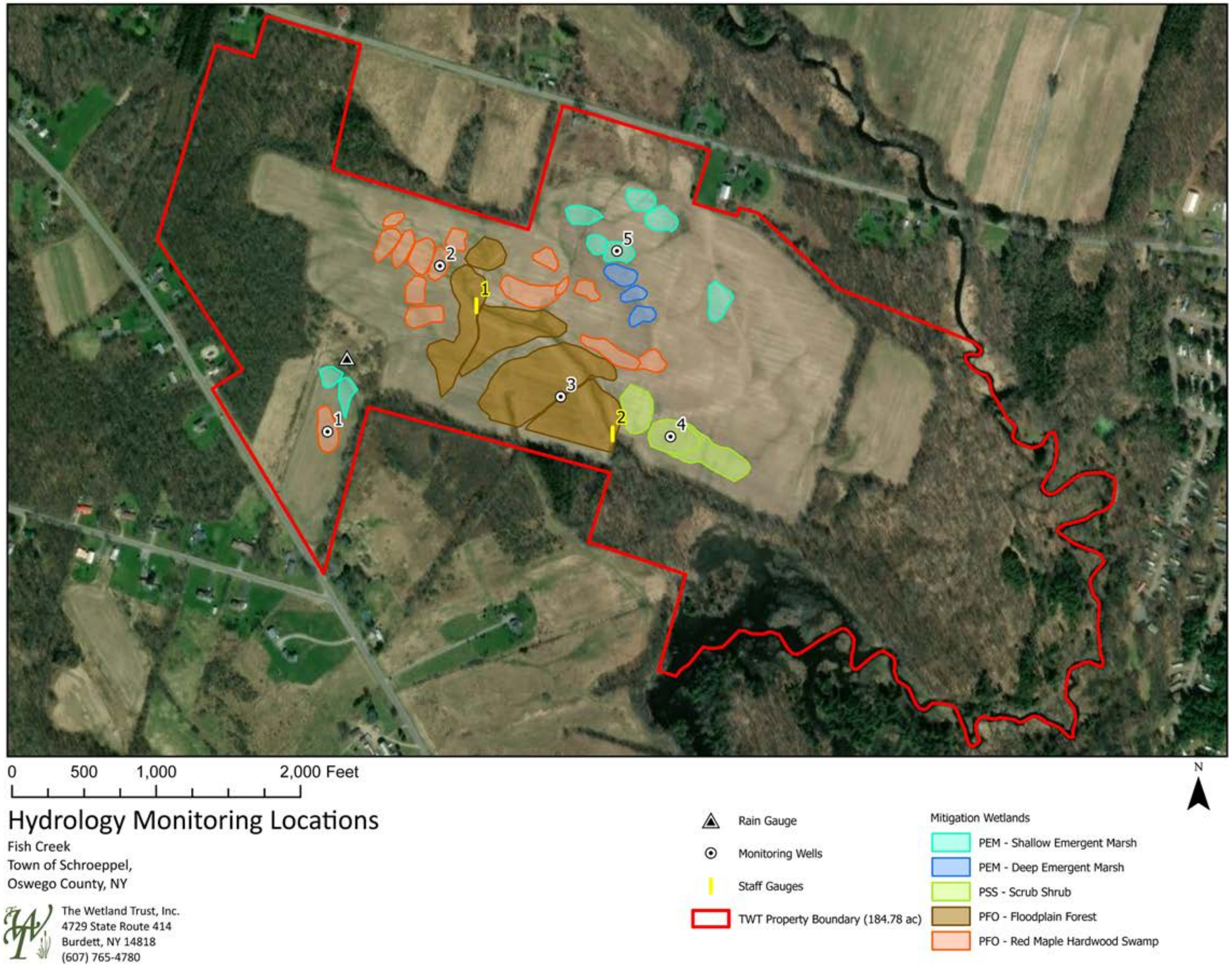
Rain Gauge

One HOBO Rain Gauge Data Logger (RG3) is installed at the site to measure precipitation on-site (coordinates: 43.295656, -76.278014, Elevation: 446.1) and has been recording data since April 28, 2025. This data will support the interpretation of hydrologic responses observed in monitoring wells and staff gauges. This device will not be used in peak winter as it cannot measure snow, only rainfall.

3.4 Existing Wildlife

Various wildlife, including amphibian, bird, and mammal species, have been recorded at the Fish Creek mitigation site, either through visual or auditory observations. Amphibians were identified by sight using egg mass, juvenile, or adult presence and by sound if mating calls were discernible. Three main species were documented at this site, including the American toad (*Anaxyrus americanus*), northern green frog (*Lithobates clamitans melanota*), and northern leopard frog (*Lithobates pipiens*), all of which are secure both statewide and globally.

Figure 3-4. Fish Creek Hydrology Monitoring Locations



Numerous bird species were observed at the Fish Creek mitigation site using both visual and auditory identification. The bird species of greater conservation concern that were documented at the Fish Creek site include the northern harrier (*Circus hudsonius*), which is a threatened species in New York State. In addition, various mammal species were observed at the Fish Creek site either directly or indirectly (i.e., scat, footprints, etc.), including the white-tailed deer (*Odocoileus virginianus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), and eastern cottontail (*Sylvilagus floridanus*), all of which are of least conservation concern. A full species list is included as **Appendix D**.

3.4.1 Federally Listed Species and Habitat Consideration

Consultation has been initiated with the U.S. Fish and Wildlife Service (USFWS) in accordance with Section 7 of the Endangered Species Act to ensure that the proposed stream/wetland mitigation activities will not adversely affect federally listed species or their critical habitats. Coordination is ongoing, and any conservation measures or recommendations provided by USFWS will be incorporated into the project design and implementation, as appropriate. The official species list generated through the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) system is included in **Appendix D.**

3.5 Existing Vegetation

The Fish Creek site features a mix of agricultural, upland, and wetland ecosystems. A large portion of the site is currently cultivated as a soybean (*Glycine max*) field, resulting in limited vegetative diversity within the agricultural zone. Surrounding the field and perimeter are delineated wetlands that support a combination of native and invasive plant species. Native vegetation, including mayapple (*Podophyllum peltatum*), false hellebore (*Veratrum viride)* and red trillium (*Trillium erectum*) contribute vital habitat and ecological functions. A complete list of species observed at the Fish Creek site can be found in **Appendix D**.

3.6 Invasive Species

Key invasives of Fish Creek include purple loosestrife (*Lythrum salicaria*) affecting 3.99 acres, reed canary grass (*Phalaris arundinacea*) affecting 6.79 acres, common reed (*Phragmites australis*) affecting 0.26 acres, and cattail (*Typha spp*) affecting 1.02 acres (**Table 3-4**). In addition to these dominant species, other invasive plants present in the area include Eurasian live forever (*Hylotelephium telephium*), honeysuckle (*Lonicera spp.*), moneywort (*Lysimachia nummularia*), Japanese knotweed (R*eynoutria japonica*), and multiflora rose (*Rosa multiflora*). Refer to the Invasive Species Management Plan (**Appendix E**) for baseline maps of key invasive species extent.

Table 3-4. Invasive Species Coverage at Fish Creek in 2025

Invasive Species	1-5% Cover (Acres)	5-25% Cover (Acres)	>25% Cover (Acres)	Total Affected Area (Acres)

Common Reed (*Phragmites australis*)	0.25	0.00	0.00	0.26
Reed Canary Grass (*Phalaris arundinacea*)	5.82	0.83	0.14	6.79
Purple Loosestrife (*Lythrum salicaria*)	1.43	0.76	1.80	3.99
Cattail (*Typha sp.*)	0.66	0.00	0.36	1.02

3.7 Cultural and Historic Considerations

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), initial consultation was initiated with the New York State Historic Preservation Office (NY SHPO) in August 2024 to assess the potential for the proposed mitigation site to affect historic properties or cultural resources. An August 13, 2024 letter from NY SHPO indicated that no historic properties or cultural resources would be affected by this project. Further tribal consultation with Onondaga Nation required a Phase 1A Report of the site to show why no field work was proposed. A Phase 1A Report was submitted on [reporting still in progess], 2025 (**Appendix F**).

4. Wetland Credit Accounting

The USACE and NYSDEC will determine credit generation based on wetland acres that meet or exceed performance standards and proposed credit ratios (**Table 4-1**). One-to-one ratios are based on re-establishment (or NYSDEC creation) of the specific cover types targeted to replace lost functions. 3.5-to-one ratios are based on rehabilitation (or NYSDEC enhancement) of existing wetlands and were informed by numerous discussions with regulatory agencies. The final credit generation will be adjusted based on monitoring results and meeting the performance standards of the mitigation site.

Figure 4-1. USACE Wetland Credit Generation and NYSDEC Mitigation Acreage

Wetland type Cowardin	**Cover type** Edinger	**Mitigation Type** NYSDEC	**Acres**	**Mitigation type** USACE	**USACE Ratio** (Acre:Credit)	**Credits**
PEM	**Shallow emergent marsh**	Restoration	2.1	Re-establishment	1:1	2.1
		Enhancement	0.1	Rehabilitation	3.5:1	0.028
	Deep emergent marsh	Restoration	0.7	Re-establishment	1:1	0.7
		Enhancement	-	Rehabilitation	3.5:1	-
PFO	**Floodplain forest**	Restoration	9.2	Re-establishment	1:1	9.2
		Enhancement	0.8	Rehabilitation	3.5:1	0.23
	Red maple- hardwood swamp	Restoration	4.5	Re-establishment	1:1	4.5
		Enhancement	0.1	Rehabilitation	3.5:1	0.028
PSS	**Scrub shrub**	Restoration	2.4	Re-establishment	1:1	2.4
		Enhancement	-	Rehabilitation	3.5:1	-
		Total	**19.9***			**19.2**

* total amount of NYSDEC mitigation acres.

Open water areas (deep water aquatic habitats and vegetated shallows) greater than 0.1 contiguous acre will only be credited where they equal 10% or less of the total wetland creation and re-establishment areas or so long as they are part of a well-integrated complex of open water and emergent vegetation. Deepwater aquatic habitat is defined as any open water area that is either a) permanently inundated at mean annual water depths >6.6 ft, lacks soil, and/or is either unvegetated or supports only floating or submersed macrophytes, or b) permanently inundated areas ≤6.6 ft in depth that do not support rooted-emergent or woody plant species. Areas ≤6.6 ft mean annual depth that support only submergent aquatic plants are vegetated shallows, not wetlands. The 2 acres of open water (POW) that will be impacted will be accommodated by POW areas within the wetlands where they are not counted toward the credit total.

5. Wetland Mitigation Work Plan

The wetland mitigation work plan at Fish Creek will focus on re-establishing naturally appearing and functioning wetlands as part of an integrated stream/wetland complex. Work methods include removing or disabling existing drainage tiles, disabling ditches, restoring shallow basins and the natural rims of drained and filled wetlands, and restoring microtopography as described throughout this section. These methods will ensure the target hydrology is met, supporting a diverse community of hydrophytic vegetation. The treatment of existing invasive vegetation will begin prior to construction to minimize the extent of spread to work areas. Streams and wetlands will be constructed concurrently, and seeding/planting will be completed after all grading is complete.

Wetlands were designed at the site in April 2024 by TWT staff. Field design forms were filled out for each wetland polygon **(Appendix G)**. Determination of the types of wetlands to be re-established for each area within the Fish Creek Site is based on the cover types outlined in Ecological Communities of New York State (Edinger, 2014) and is guided by the number of acres of each wetland type necessary to meet mitigation requirements for the Micron impacts.

Approximately 2.1 acres of shallow emergent marsh, 0.7 acres of deep emergent marsh, 2.4 acres of scrub-shrub, 9.2 acres of floodplain forest and 4.5 acres of red maple hardwood swamp will be re-established with 1 acre of incidental rehabilitation of these cover types **(Figure 5-1)**. The following characteristics guide the locations of each type of wetland to be re-established.

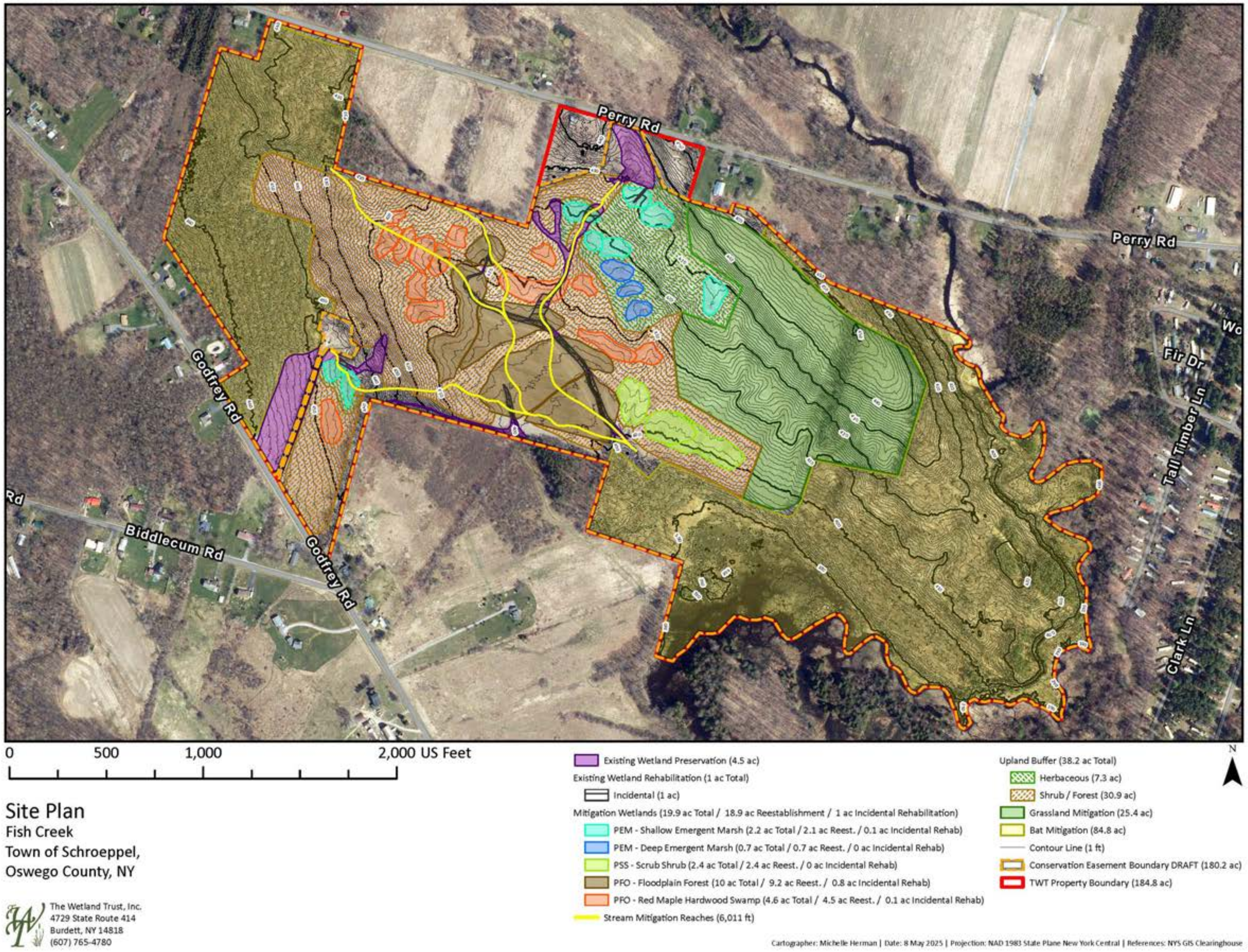
Floodplain Forest

- Low terraces of river floodplains, and the floodplains of stream restoration areas
- Low areas of inundation in spring and irregular inundation of high areas
- Mineral soils

Red Maple-Hardwood Swamp

- Poorly drained depressions
- Usually inorganic soils with peat, if present, that is less than 20 cm deep
- Occasionally on muck or shallow peat, that is typically acidic to circumneutral

Figure 5-1. Fish Creek Site Plan



Cartographer: Michelle Herman | Date: 8 May 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Deep Emergent Marsh

- Often placed so they are visible to the public
- Prioritized for building within grassland areas
- Mineral soils or fine-grained organic soils
- Substrate is flooded by waters that are not subject to violent wave action

Shallow Emergent Marsh

- Often placed so they are visible to the public
- Prioritized for building within grasslands
- Occurs on mineral soil or deep muck soils (rather than true peat)
- Permanently saturated and seasonally flooded

Shrub Swamp

- Often occurs along the shore a lake, river, or stream
- In wet depressions or valleys not associated with lakes, or as a transition zone between a marsh, fen, or bog and a swamp or upland community
- Substrate is usually mineral soil or muck

Equipment operators will include local construction and farming personnel, including those currently farming the sites, and TWT staff. The on-site experience of farming and local knowledge of the operators will maximize productivity and work quality. Prior to construction, work areas will be mowed and/or crops harvested to increase visibility. One or more parking/staging areas for heavy equipment and vehicles will be designated along Godfrey and Perry Roads as necessary, avoiding any identified wetlands or aquatic resources. TWT staff will be onsite every day to direct and oversee construction. No tree removal is planned. Should any tree removal be necessary, it will only occur after November 1st.

5.1 Invasive Vegetation Control

Prior to the initiation of earthwork, invasive vegetative species will be controlled following strategies outlined in the Invasive Species Management Plan (ISMP, **Appendix E**). This Fish Creek ISMP details the target species, timing, and control methods. Methods may include mechanical removal, such as hand-pulling or mowing and chemical treatments using targeted herbicides. These actions will occur during the appropriate season of the target species to maximize effectiveness. Invasive species control will avoid soil disturbance, reduce seed dispersal, and limit impacts on local resources. All treated areas will be monitored to ensure the effectiveness of the control measures, and follow-up treatments will be applied as necessary.

5.2 Grading Plan: Re-establishment Wetlands

Basin and berm construction

A shallow basin will be shaped for each designed wetland. The basins will measure 10 feet in diameter to over 200-feet in diameter based on location characteristics and targeted cover type.

The basin is dug so that it is deepest in the center in relation to the low edge of the marked perimeter. Basins will range in depth from 1-inch to 36-inches, based on targeted cover type. Refer to **Figures 5-4 and 5-5** for plan view details. Small, earthen berms around the lower two-thirds of the wetland basin will be constructed from 1.0 to 2.0 feet high at a minimum width of 3-feet wide and gradual 5 percent slopes. Core trenches filled with compacted clay layers will be constructed under the berms to disable the buried drainage structures. See **Figures 5-2 and 5-3** for a typical section and plan view.

An excavator and dozer will be used to shape gradual slopes and bays along the inside edge of the constructed wetland for a natural look and function. Elevations are verified during construction using a laser level. Topsoil will be temporarily stored on site and spread in and around the finished wetland basin. Spoil material removed is shaped with gradual slopes so that it appears like natural hummock/hollow and ridges. Operators will aim to create wetlands on top of clay texture spoil material by leveling areas of spread soil and creating shallow basins in the soil.

Figure 5-2. Restored Wetland Section View

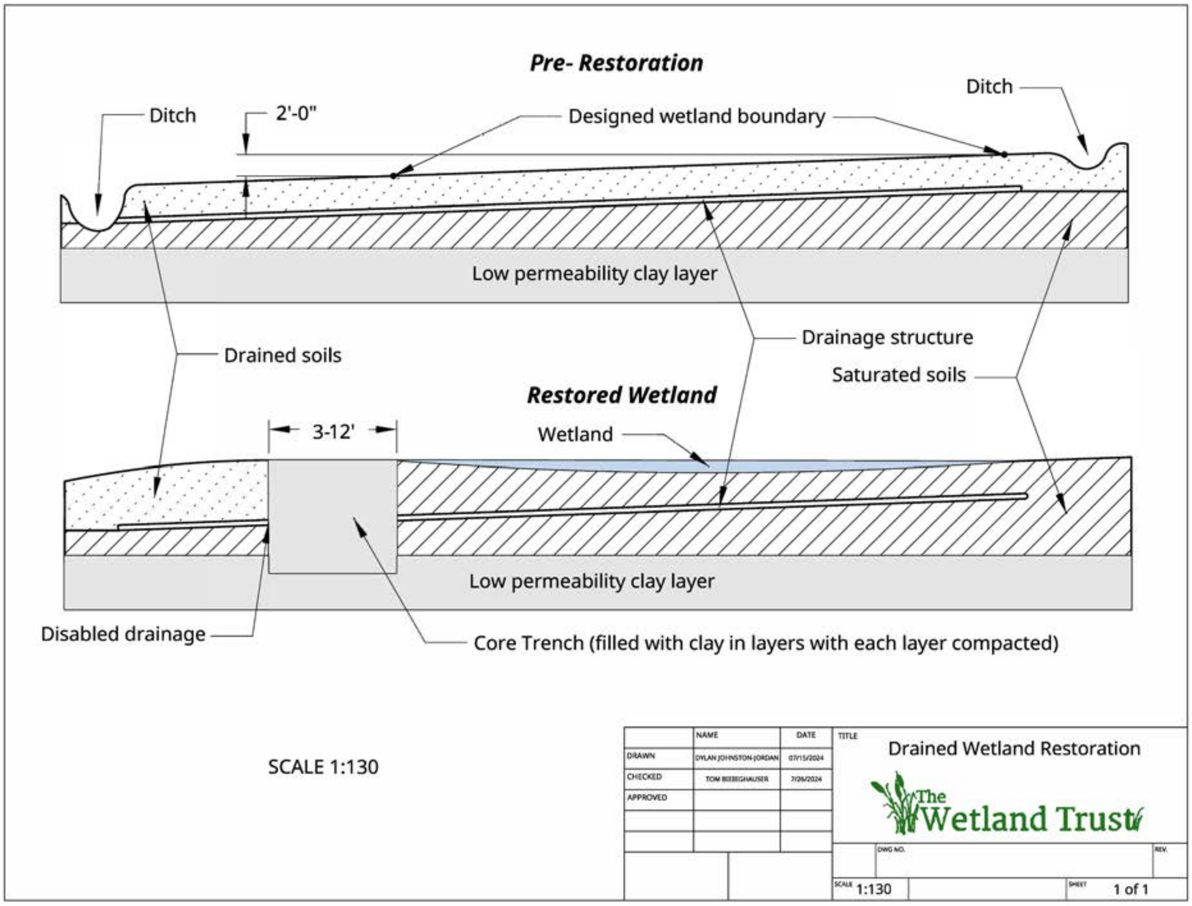
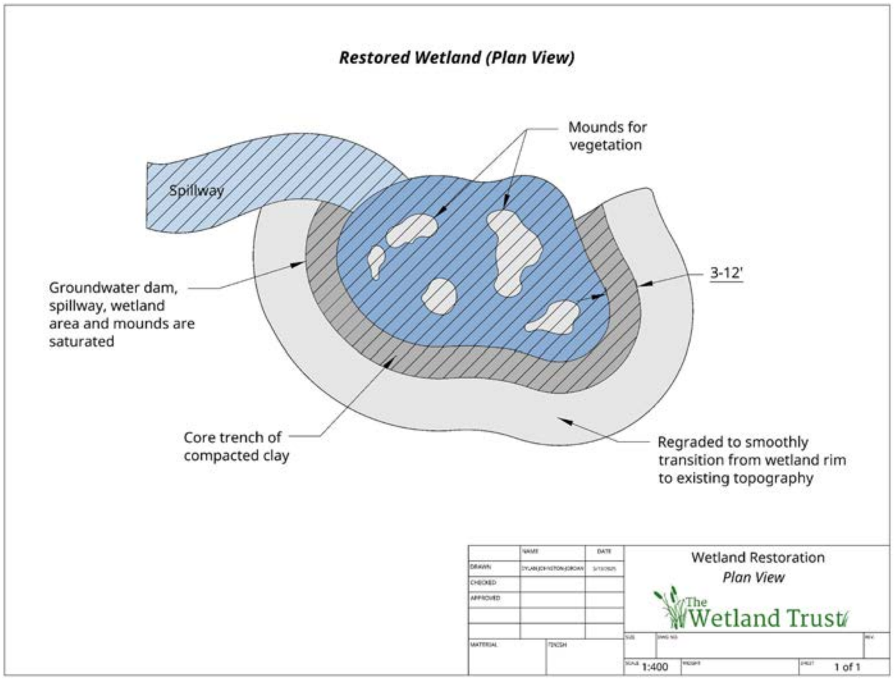


Figure 5-2. Restored Wetland Plan View



Microtopography restoration

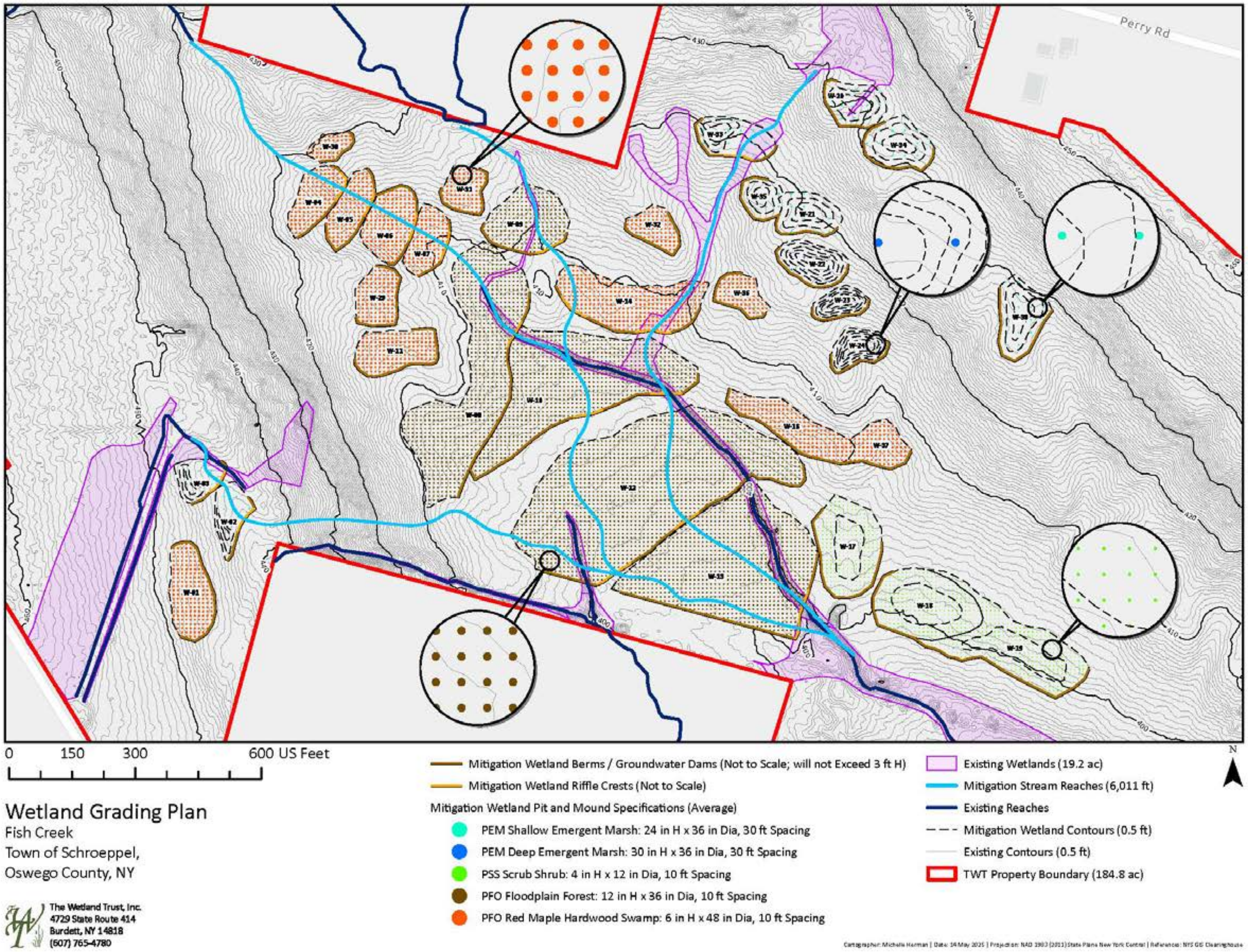
Pit and mound microtopography will be created within each wetland basin, with average specifications depending on the desired wetland type (**Table 5-1**). Emergent basins will generally have the deepest pits, i.e. maximum water depth (approximately 36 inches), and higher and larger mounds (24-30 inches high and 36 inches in diameter) that are spaced farther apart (30 feet) relative to all other wetland types. The remaining PSS and PFO wetland types will have 10-foot-spaced mounds ranging from 4-12 inches high and 12-48 inches in diameter set within 1-6 inches of water. The soil in these features will not be compacted so it can be expected to settle by 50-percent. Typical cross sections for emergent, scrub-shrub, and forested cover types are depicted in **Figures 5-6 to 5-8**.

Table 5-1. Fish Creek Grading for Wetland Types

Wetland Type	Maximum wetland basin depth (in)	Average individual mound height (in)*	Average mound diameter (in)	Mound Spacing (ft)	Mound Density/acre
PEM – Shallow Emergent Marsh	24	24	36	30	80
PEM – Deep Emergent Marsh	36	30	36	30	40
PFO – Floodplain Forest	4	12	36	10	200
PFO – Red Maple Hardwood Swamp	1	6	48	10	200
PSS – Scrub-shrub	6	4	12	10	400

*soil is kept uncompacted and will settle by up to 50%

Figure 5-4. Wetland Grading Plan



Cartographer: Michelle Harman | Date: 14 May 2025 | Projection: NAD 1983 (2011) State Plane New York Central | Reference: NYS GIS Clearinghouse

Figure 5-5. Restored Emergent Wetland

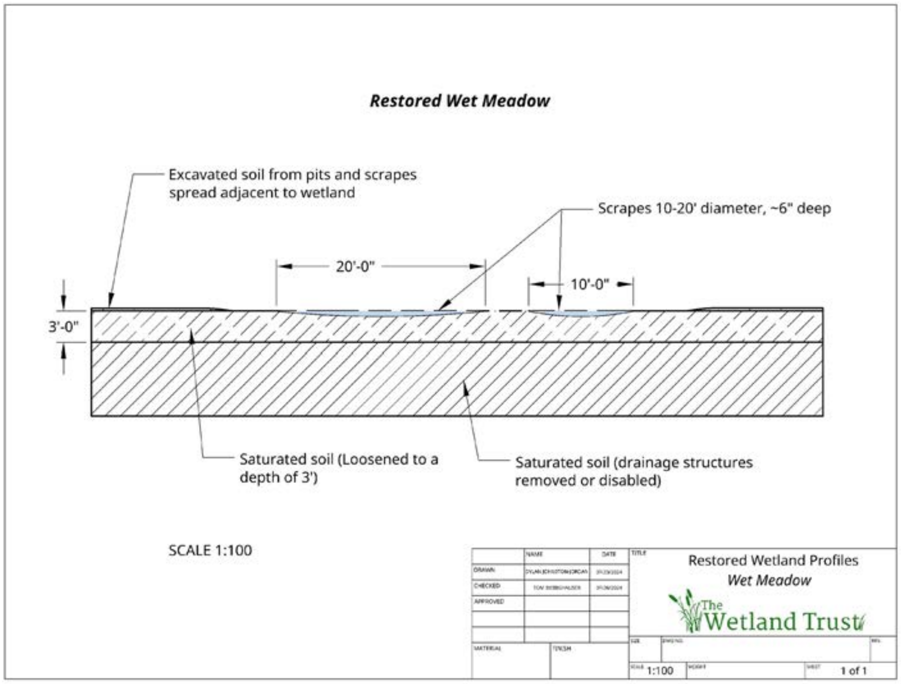


Figure 5-6. Restored Scrub-Shrub Wetland

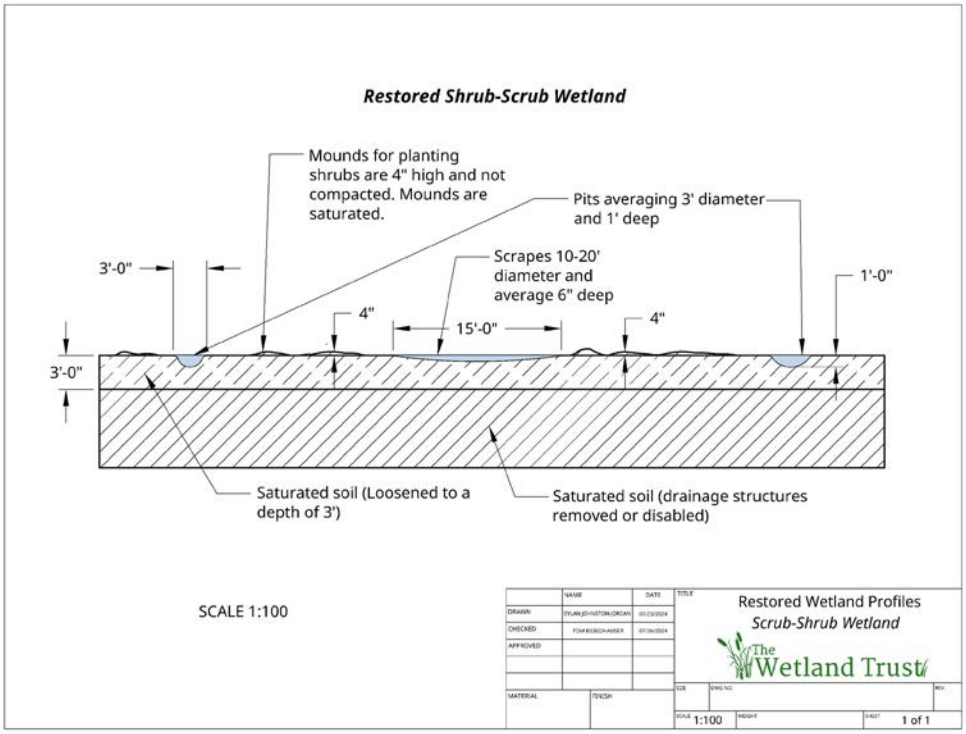
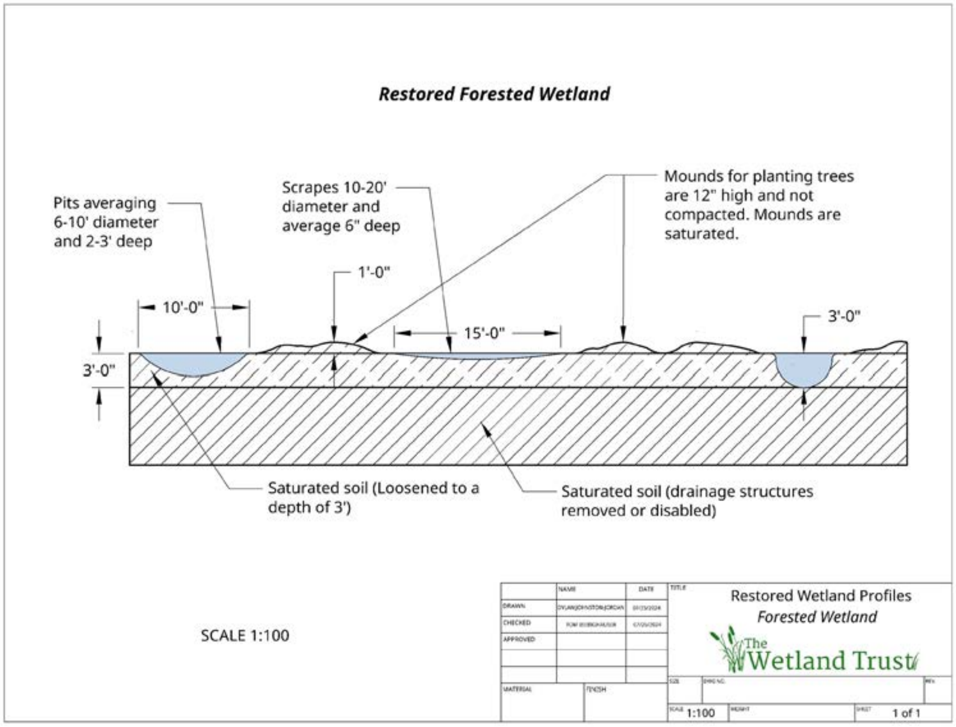


Figure 5-7. Restored Forested Wetland



5.3 Buffer Establishment

Upland buffers will be established surrounding all re-established, restored, or rehabilitated wetland areas to enhance habitat quality, protect water quality, and improve ecological function. Where buffers surround re-established palustrine emergent (PEM) wetlands, they will be planted with native herbaceous upland species to maintain open habitat structure and provide transitional zones that support pollinators and other wildlife. In areas adjacent to re-established palustrine scrub-shrub (PSS), palustrine forested (PFO) wetlands, or restored stream channels, upland buffers will be planted with native shrub and tree species to create structurally diverse, forested buffer zones. These plantings will promote shading, nutrient uptake, and habitat connectivity.

5.4 Planting Plan

The desired wetland plant community will be established through broadcasting high-quality, native seeds and planting trees and shrubs as per the planting plan in **Table 5-2a-e** below. The objective is to re-establish and rehabilitate high-quality emergent, shrub, and forested wetlands of select communities to replace the lost functions at the Micron Site.

Species proposed are based on many factors including commercial availability, typical species present in similar/local plant communities, species present at the impact site and Mitigation site, species establishment considerations (e.g. rhizomatous), etc. The species listed are not intended to be exclusive and may be supplemented or changed with ecologically similar species.

Spacing is a general recommendation and will be random and not grid like. Site conditions and topographic features will be utilized in plant placements, such as black willow (*Salix nigra*) along riparian features. TWT staff will coordinate and provide guidance to the planting crew prior to the start of work and will be on-site during operations. Pre-staking of planting locations, used to facilitate instruction to planting staff, will be completed as necessary.

The site will also be seeded and planted to increase the likelihood of successfully establishing target species/quantities and to minimize the opportunity for invasive species to become established. Seeding shown are targeted to supplement plantings and will be further customized with distributor based on site factors and seed/plant material availability. The distributor has confirmed that all mixes can be customized as necessary.

Table 5-2a. PEM- Shallow Emergent Marsh Planting List

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Planting Rate
Swamp Milkweed	*Asclepias incarnata*	OBL	6	15-20 pounds/acre
Longhair Sedge	*Carex comosa*	OBL	5	
Fringed Sedge	*Carex crinita*	OBL	5	
Bottlebrush Sedge	*Carex hystericina*	OBL	4	
Shallow Sedge	*Carex lurida*	OBL	3	
Pointed Broom Sedge	*Carex scoparia*	FACW	2	
Upright Sedge	*Carex stricta*	OBL	6	
Hairy-fruited sedge	*Carex trichocarpa*	OBL	5	
Fox Sedge	*Carex vulpinoidea*	FACW	3	
White Turtlehead	*Chelone glabra*	OBL	7	
Swamp Loosestrife	*Decodon verticillatus*	OBL	8	
Three-way Sedge	*Dulichium arundinaceum*	OBL	5	
Common Spikerush	*Eleocharis palustris*	OBL	4	
Riverbank Wildrye	*Elymus riparius*	FACW	5	
Virginia Wildrye	*Elymus virginicus*	FACW	4	
Joe-Pye Weed	*Eupatorium fistulosum*	OBL	6	
Boneset	*Eupatorium perfoliatum*	FACW	4	
Spotted Touch-me-not	*Impatiens capensis*	FACW	2	
Pale Touch-me-not	*Impatiens pallida*	FACW	3	
Northern Blue Flag	*Iris versicolor*	OBL	7	
Canada Rush	*Juncus canadensis*	OBL	5	
Soft Rush	*Juncus effusus*	OBL	3	
Cardinal Flower	*Lobelia cardinalis*	FACW	7	
Great Blue Lobelia	*Lobelia siphilitica*	FACW	6	

Square-stemmed Monkey Flower	*Mimulus ringens*	OBL	5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	
Lizard's Tail	*Saururus cernuus*	OBL	7	
Purple-Stemmed Aster	*Symphyotrichum puniceum*	OBL	4	
Marsh Fern	*Thelypteris palustris*	FACW	4	
Blue Vervain	*Verbena hastata*	FACW	3	

Table 5-2b. Deep Emergent Marsh

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Gray’s Sedge	*Carex grayi*	FACW	5	15-20 pounds/acre
Cartex lacustris	*Carex lacustris*	OBL	5	
Royal Fern	*Osmunda regalis*	OBL	7	
Green Bulrush	*Scirpus atrovirens*	FACW	4	
Woolgrass	*Scirpus cyperinus*	FACW	3	
River Bulrush	*Scirpus fluviatilis*	OBL	6	
Water Parsnip	*Sium suave*	OBL	5	
Bur-reed	*Sparganium americanum*	OBL	5	

Table 5-2c. Scrub Shrub

Common Name	Scientific Name	Wetland Indicator	CoC	Planting/Spacing Rate
Smooth alder	*Alnus serrulata*	OBL	7	400/acre Shrub clusters Trees 10-25 feet apart
Coastal shadbush	*Amelanchier canadensis*	FAC	7	
Chokeberry	*Aronia melanocarpa*	FACW	6	
Purple chokeberry	*Aronia prunifolia*	FACW	7	
Buttonbush	*Cephalanthus occidentalis*	OBL	8	
Silky dogwood	*Cornus amomum*	FACW	5	
Gray dogwood	*Cornus racemosa*	FAC	2	
Red osier dogwood	*Cornus sericea*	FACW	5	
Common winterberry	*Ilex verticillata*	FACW	7	
Northern spicebush	*Lindera benzoin*	FACW	6	

Ninebark	*Physocarpus opulifolius*	FACW	5	
Swamp rose	*Rosa palustris*	FACW	9	
Bebbs willow	*Salix bebbiana*	FACW	3	
Pussy willow	*Salix discolor*	FACW	4	
Silky willow	*Salix sericea*	OBL	6	
Common elderberry	*Sambucus canadensis*	FACW	3	
Meadow-sweet	*Spiraea alba*	FACW	5	
High bush blueberry	*Vaccinium corymbosum*	FACW	6	
Northern wild raisin	*Viburnum cassinoides*	FACW	7	
Arrow-wood	*Viburnum dentatum*	FAC	4	
Nannyberry	*Viburnum Lentago*	FAC	4	
Highbush cranberry	*Viburnum opulus*	FACW	3	

Table 5-2d. PFO- Floodplain Forest

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Boxelder	*Acer negundo*	FACW	0	400/acre Shrub clusters Trees 10-25 feet apart
Red maple	*Acer rubrum*	FAC	1	
Silver maple	*Acer saccharinum*	OBL	2	
Grey birch	*Betula populifolia*	FAC	4	
Hackberry	*Celtis occidentalis*	FAC	4	
Buttonbush	*Cephalanthus occidentalis*	OBL	8	
Silky dogwood	*Cornus amomum*	FACW	5	
Red osier dogwood	*Cornus sericea*	FACW	4	
Green ash	*Fraxinus pennsylvanica*	FACW	2	
Spicebush	*Lindera benzoin*	FACW	6	
Black gum	*Nyssa sylvatica*	FAC	5	
Ninebark	*Physocarpus opulifolius*	FACW	5	
American sycamore	*Platanus occidentalis*	FACW	3	
Eastern cottonwood	*Populus deltoides*	FAC	2	
Swamp white oak	*Quercus bicolor*	FACW	7	
Bur oak	*Quercus macrocarpa*	FAC	6	
Pin oak	*Quercus palustris*	FACW	7	
Black willow	*Salix nigra*	OBL	3	

Table 5-2e. PFO- Red Maple Hardwood Swamp

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Red maple	*Acer rubrum*	FAC	2	400/acre Shrub clusters Trees 10-25 feet apart
Silver maple	*Acer saccharinum*	FACW	6	
Ironwood	*Carpinus caroliniana*	FAC	5	
Bitternut hickory	*Carya cordiformis*	FAC	5	
Blackgum	*Nyssa sylvatica*	FAC	7	
American sycamore	*Platanus occidentalis*	FACW	6	
Eastern cottonwood	*Populus deltoides*	FAC	2	
Swamp white oak	*Quercus bicolor*	FACW	7	
American elm	*Ulmus americana*	FACW	3	
Slippery elm	*Ulmus rubra*	FAC	8	

5.5 Timing and Sequence

Micron's large project size will require a phased approach for construction; and the wetland mitigation development will follow a similar phased approach consistent with regulatory requirements. See 33 C.F.R. § 332.3(m) "Implementation of the compensatory mitigation project shall be, to the maximum extent practicable, in advance of **or concurrent with the activity causing the authorized impacts**." The Fish Creek Site will be developed in the second construction year, following the Buxton Creek, Oneida River, and Lower Caughdenoy Creek sites (**Table 5-3**).

Table 5-3. Mitigation Site Sequence

Site Name	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031 ~**	**∞ In Perpetuity**
Buxton Creek Stream and Wetlands		**Construction begins**						
Oneida River Wetlands		**Construction begins**						
Lower Caughdenoy Creek Wetlands		**Construction begins**						
Fish Creek Stream and Wetlands			**Construction begins**	**Monitoring, maintenance, and adaptive management after construction for a 15-year period* after approved as-built (not to scale)**				**Permanent stewardship begins after monitoring period ends, pending agency approval**
Upper Caughdenoy Creek Wetlands				**Construction begins**				
Sixmile Creek Wetlands					**Construction begins**			

The construction sequence at Fish Creek follows that shown in **Table 5-4**. The site will be constructed in approximately one year with the following spring dedicated to planting that will initiate the monitoring and maintenance window to meet success criteria. Planting in the fall may occur if it is advantageous to plant establishment.

The mitigation work plan at Fish Creek will be phased in several steps. The treatment of existing invasive vegetation will begin as early as possible to minimize spread to work areas once agricultural activities cease and the stream and wetlands are constructed. Sections of stream and adjacent wetlands will be constructed concurrently and seeding/planting will be completed after all grading is complete.

Table 5-4. Fish Creek Construction Sequence

Activity	Timing	Phase
Invasive species management.	Spring Year 1*	Pre-construction
Work area layout and preparation, SWPPP implementation.	Spring Year 1	Pre-construction
Groundwater dam installation, basin excavation, pond and ditch filling. Erosion control seeding.	Summer Year 1	Construction Phase I: Earthwork
Final grading to develop microtopography, loosening of soil as necessary.	Summer Year 1	Construction Phase II: Topography Enhancement
Seeding, planting, and mulching per planting plan and SWPPP, placement of woody debris for a natural look	Fall Year 1	Construction Phase III: Seeding & Planting
Removal of all construction materials and general site clean-up. Erosion and sediment control structures (silt fencing) will be removed once site is stabilized.	Fall Year 1	Post-construction

*invasive species management will likely begin prior to this time with repeat treatments

5.6 Sediment and erosion control measures

All erosion and sediment control practices will be installed as specified by the Stormwater Pollution Prevention Plan (SWPPP, **Appendix H**) prior to any ground disturbance. The limit of disturbance and spoil deposition areas will be clearly marked to ensure ground disturbances are minimized. Temporary erosion and sedimentation control measures in and around mitigation sites will receive consistent and constant inspection and maintenance by qualified personnel. Spoil and sediment collected will be removed and placed upland in a manner that prevents erosion and transportation of sediment to a waterway or wetland. All erosion and sediment control devices and structures will be removed once full stabilization is achieved and no later than three full growing seasons after the planting of the mitigation site.

6. Wetland Performance Standards

Szsuccess within the mitigation sites is based on wetland acreage meeting the USACE criteria for the three parameters described in the 1987 Corps of Engineers Wetland Delineation Manual and 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, or any amendments thereto. Mitigation success will also depend on the establishment of wetland community types that replace in form and function the impacted wetlands. Credits generated are determined by acreage meeting the following parameters, in addition to the final vegetative goals:

- Hydrology: the wetland area is inundated, or the water table is ≤12 inches below the soil surface for ≥14 consecutive days during the growing season at a minimum frequency of 5 years in 10. Any combination of inundation or shallow water table is acceptable in meeting the 14-day minimum requirement. For wetland re-establishment areas, deepwater aquatic habitats and/or vegetated shallows will only be credited where they equal 10% or less of the re-establishment areas on the site and are part of a well-integrated complex. Vegetated shallows and/or deep-water habitats over 0.1 acre in size will be mapped in each monitoring report/delineation. It is not anticipated that any such aquatic habitats will develop at the site.
- Vegetation: the wetland area demonstrates a relative dominance of Facultative (FAC) or wetter plant coverage, meeting one or more USACE Wetland Determination Data Form Hydrophytic Vegetation Indicators.
- Soils: the wetland area contains soil profiles that demonstrate one or more USACE Wetland Determination Data Form Hydric Soil Indicators.

By the end of the 15-year monitoring period, the site shall meet or exceed the following vegetative performance standards (see also **Table 6-1**):

- **Palustrine Emergent Wetland (PEM):** The areas meeting palustrine emergent wetland criteria will have ninety percent (90%) relative cover of wetland work areas by native hydrophytes (FAC, FACW, or OBL). Monitoring will be conducted yearly with interim targets of 20% relative cover after the first full year after planting, 40% by Year 3, 60% by Year 5, and 80% by Year 7, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met. Final performance standards met at 10 years.

  Deep emergent and shallow emergent marsh (Edinger et al. 2014) are the targeted cover types for PEM areas.
  - Shallow marshes will be 6 inches to 3 feet deep with exposed soils in the summer and very variable in species.
  - Deep emergent marshes will be 6 inches to 6 feet deep, less likely to have exposed soils, and very variable in species, with species more likely to be submerged or floating.
- **Palustrine Scrub Shrub (PSS)**: The areas meeting palustrine scrub shrub criteria will have at least 400 native shrubs/trees per acre, and those stems will display normal and healthy growth, free of disease and pests. At least 280 of those stems will be native shrub species. Stem density monitoring will be conducted biannually, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.
- **Palustrine Forest (PFO)**: The areas meeting palustrine forest criteria will have a minimum of 400 native, live, and healthy (disease- and pest-free) woody plants growing per acre. At

least 280 of these will be native tree species. Stem density monitoring will be conducted biannually for a period of 15 years, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.

Because tree height is an important factor in reducing long-term herbivory and ensuring overall success, monitoring will also occur for a period of 15 years, with average tree height targets within planting areas at 2 ft. by the 3rd year of vegetation growth, 3 ft. by the 5th year of vegetation growth, 4 ft. by the 7th year of vegetation growth, 6 ft. by the 10th year of vegetation growth, 8 ft by the 12th year, and 9 ft by the 15th year. The wetland forest types targeted are:

  - Floodplain Forest, will be planted adjacent to streams
  - Red-maple hardwood swamp- can be characterized by being seasonally flooded with hummocks and hollows, and red maple will most likely be the dominant canopy tree. Although ash may be abundant, those species are no longer planted.

- **Invasive Species**
  - Wetland acreage will have a final target of less than 5% relative cover of all non-Typha invasive plant species such as, but not limited to: purple loosestrife, common reed, and reed canarygrass. Interim targets will be 15% the first year following planting, 15% by Year 3, 12.5% by Year 5 and 10% by Year 7.
  - Due to the difficulty of distinguishing the three species of cattails, as well as the likelihood that at least one of these will be present in many types of New York wetlands, the total relative cover of all invasive species, including cattails, will be less than 10%. Interim targets will be 20% the first year following planting, 18.5% by Year 3, 15% by Year 5 and 12.5% by Year 7.
- **VIBI:** The vegetation index of biotic integrity “floristic quality” (VIBI-FQ) of the rehabilitated and re-established wetlands will be equal to or greater than 40 by the end of the monitoring period. Final scores will be dependent on baseline VIBI scores and will have a minimum of 10-point increase. VIBI plots will be placed in each cover type for re-establishment and rehabilitation. Interim targets will aim for a score of 15 or more by the first year following planting, ≥20 by Year 3, ≥30 by Year 5, and ≥35 by Year 7.

Table 6-1. Wetland Performance Standards and Interim Goals

Performance Standard	Interim and Final Goals						
	Year 1[1]	Year 3	Year 5	Year 7	Year 10[2]	Year 12	Year 15[3]
Relative cover by native perennial hydrophytes (FAC or wetter)	20%	40%	60%	80%	90%		
Stem density in PSS areas (per acre, at least 280 must be shrub species)	400	400	400	400	400		
Stem density in PFO areas (per acre, at least 280 must be tree species)	400	400	400	400	400	400	400
Tree height in PFO areas	1 ft	2 ft	3 ft	4 ft	6.6 ft	8ft	9ft

Relative cover of all non-Typha invasive plant species in PEM, PSS, and PFO areas	15%	15%	12.5%	10%	5%		
Total relative cover of all invasive species, including Typha spp. in PEM, PSS, and PFO areas	20%	18.5%	15%	12.5%	10%		
VIBI-FQ score	≥15	≥20	≥30	≥35	≥40		
1. First full growing season following planting 2. Final herbaceous/PEM and PSS goals to be met at this time or additional monitoring years added 3. Final PFO (tree height and density) goals to be met at this time							

7. Stream Credits

The stream credits for this Fish Creek Plan are based on re-establishment, thus a 1:1 credit ratio has been applied, ensuring that each linear foot of restored stream generates an equivalent amount of mitigation credit in accordance with regulatory expectations.

Table 7-1. Anticipated stream feet and credits generated

Site	Stream Restoration linear feet	Credit Ratio	Credits
Fish Creek	5,413	Re-establishment (1:1)	5,413
Total	5,413		5,413

8. Stream Mitigation Work Plan

8.1 Design Considerations

To develop a Stream Mitigation Strategy to offset impacts to streams on the Micron Campus, TWT and Ramboll took into consideration the following strategies:

1. Use of NYSDEC Tribs for Trees assessment to account for different stream restoration and protection measures. This enabled comparison of mitigation measures using a comprehensive system of stream credits.
2. Protection and restoration of singular stream corridors as stand-alone projects.
3. Restoration of stream reaches and buffers on TWT wetland mitigation properties.
4. Full restoration of stream reaches on TWT properties in concert with wetland mitigation to create a more functional stream wetland complex.

After examining these options, and assessing the benefits of each, full restoration of a stream/wetland complex is found to be the best option. It provides not only the highest ecological lift for streams but complements the wetland restoration resulting in the entire system demonstrating the maximum uplift over individual stream and wetland components alone.

Reference Stream Reaches

Local streams that have not been relocated, channelized, placed underground, affected by head cuts, or otherwise heavily altered were used to inform the design of the mitigation streams. Key reference streams were portions of Fish Creek, Bell Creek, and Sixmile Creek as shown in **Figures 8-1a-e.** Reference reach #1 (**Figure 8-1b**) is most proximate to the Fish Creek property to the north. The imagery shows a stream that is braided with a complex of wetlands on nearly level ground, characteristics that will be present at the Fish Creek Mitigation Site. Bell Creek and Sixmile Creek references reaches #2-4 (**Figures 8-1c-e**) exemplify the sinuosity and presence of wetlands on the floodplain of natural streams in the area.

Watershed Characteristics

The Fish Creek Tributary watershed is a 0.42 square mile basin located within a predominantly agricultural landscape. With only 28.6 percent forest cover and minimal natural storage (0.81 percent), the system is highly vulnerable to runoff impacts. Agricultural activities have dominated recent land use, resulting in elevated levels of nutrient and sediment input during rain and storm events. These inputs contribute to increased turbidity in the tributary, with fine sediments and associated pollutants frequently conveyed downstream into the adjacent wetland complex and ultimately into Fish Creek itself. The reduced forest cover limits natural buffering capacity, while farming practices amplify overland flow and degrade water quality. Extensive ditching and buried drainage structures increase the velocity of the area’s watershed out of the basin and into Fish Creek. The drainage pattern of part of the watershed has been altered to prevent water from the northeastern section of the basin from draining south and has been diverted to a large ditch, while the water still enters the wetland and Fish Creek complex its path has been altered.

8.2 Work Plan

The channel design is the result of historic examination of the site and extensive field measurement and modeling of the site and watershed. Fish Creek was once sinuous, wide, and shallow, being a blend between stream and wetland. Careful examination of historic aerial photos, ortho images, high resolution topography (1-ft and .5-ft contours), and combined with on-the-ground examination led to the overall concept. In addition, Ramboll hydrologists and engineers reviewed the restoration concept and using StreamStats data (**Appendix I**), field data (stream surveys, velocity data, sediment assessment), and current topography to .5-1 feet resolution collected by a drone with LiDAR sensor confirmed the channel dimensions, slope, sinuosity and overall approach to restoration of creating a stream wetland complex.

Approximately 5,413 feet of new channel will be developed to restore Fish Creek within the existing agricultural fields on the property. The restored natural-appearing and functioning meandering stream will connect to wetlands on the restored floodplain and adjacent re-established wetlands. This stream wetland complex will support a diversity of hydric plants and provide significant habitat for a variety of animals. See **Appendix J** for specifications.

Figure 8-1a. Reference Stream Reaches

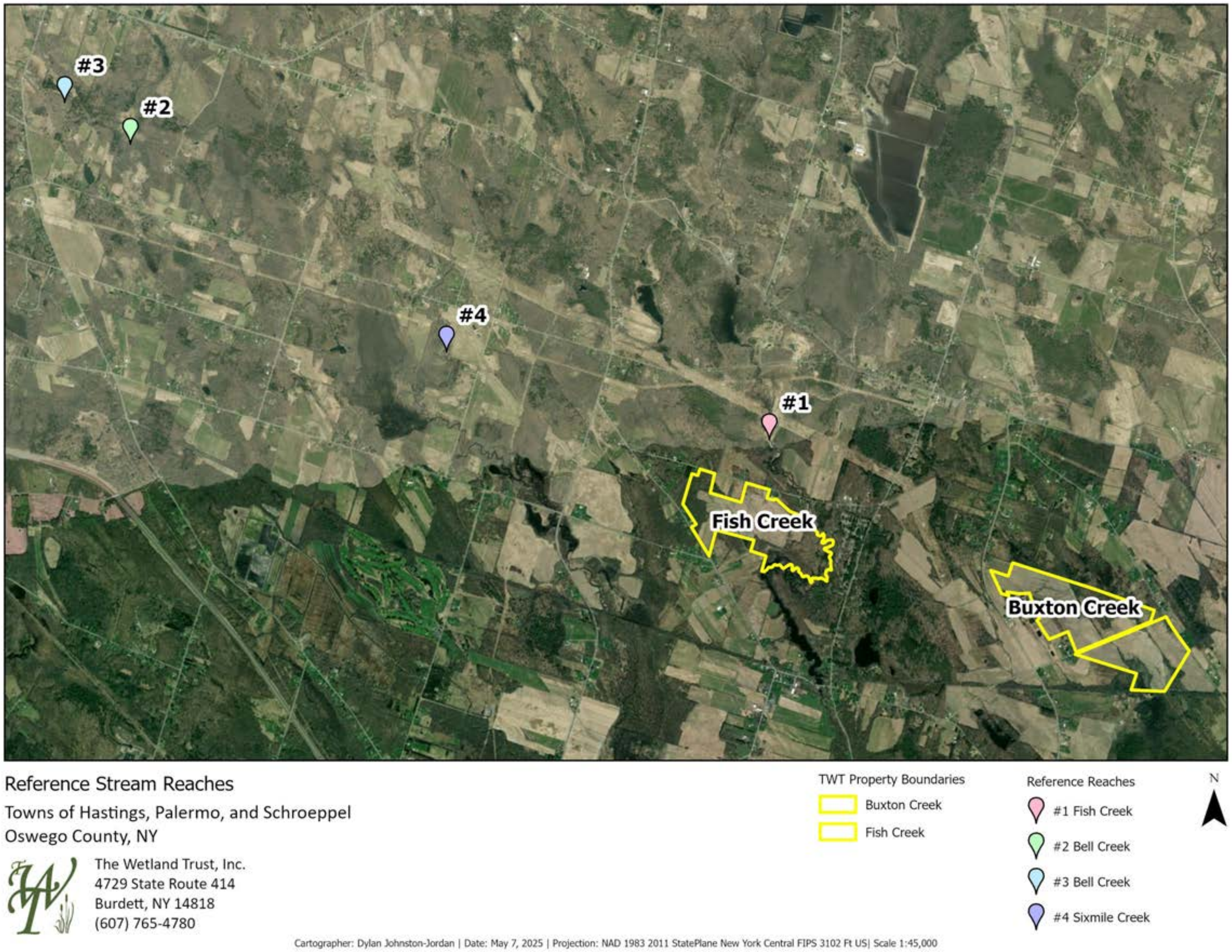
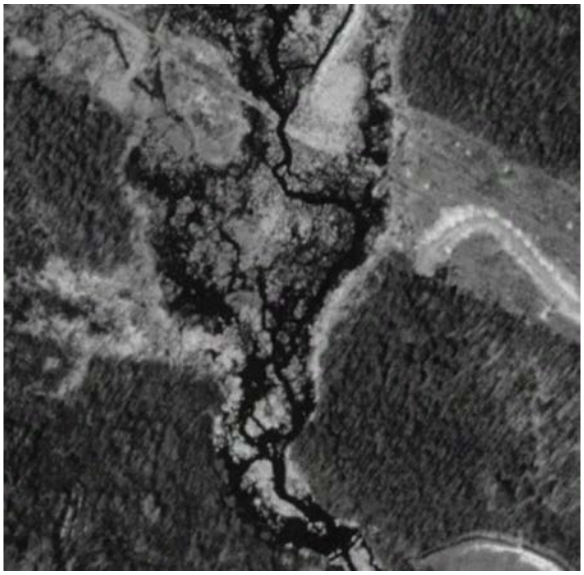


Figure 8-1b. Reference Reach #1 Fish Creek



Imagery: 1994, Location: 43.304067, -76.271105

Figure 8-1d. Reference Reach #3 Bell Creek

Imagery: 2017, Location: 43.334094 -76.356244

Figure 8-1c. Reference Reach #2 Bell Creek

Imagery: 2017, Location: 43.330381, -76.348298

Figure 8-1e. Reference Reach #4 Sixmile Creek

Imagery: 1994, Location: 43.311918, -76.310130

Stream Channel

Stream channels from 2-6 feet wide with 6-18 inches deep pools, depending on the characteristics of the reach, will be restored. Stream channels will be narrower where the valley slope is steeper than 3-percent and wider where the valley slope is less than 3-percent.

Streambanks

Bank will generally be 6 inches high and allow flow across the floodplain in a sheet-like pattern. (**Appendix J**). The stream banks will have slopes ranging from 5-33 percent.

Floodplains

Floodplains will be restored to a width of 66 feet, generally, where valley slopes are less than 1 percent, with narrower floodplains being built on any steeper slopes. Floodplains will be restored to support wet-meadow wetlands on either side of the stream channel, with shrub-scrub wetlands on slightly higher ground, and forested wetlands being restored along the outer edge of the floodplain.

Established Wetlands and Buffers

Established wetlands will be constructed up to the floodplain along with small upland inclusions and upland buffers.

Vertical Grade Control

Head-cuts greater than 2-foot vertical will generally be controlled by installing vertical grade control structures made using 6–12-inch diameter angular rock, mixed with fines, that is buried in the ground across the floodplain of the stream (**Figures 8-1 and 8-2**), immediately upstream and adjacent to the head-cut being controlled. Buried vertical grade control structures will also be placed near the downstream end of each stream being restored to protect the stream from head-cuts located downstream on land not owned by TWT. Head-cuts less than 2-foot vertical may be controlled using the slope and armor technique.

Embedded Rock

If necessary, erosion will be controlled by embedding rock in the ground beneath restored stream channels and floodplains. Topsoil will be spread over the rock on the floodplain to establish plants. Topsoil will generally not be spread in the restored stream channel to control erosion. Rock will be used as needed to armor sections of the restored stream channel and floodplain to control erosion. This armoring will be necessary on steeper sections downstream of the bridge and where the restored stream connects with the existing ditch.

Figure 8-1. Head-cut Repair with Rock Armor

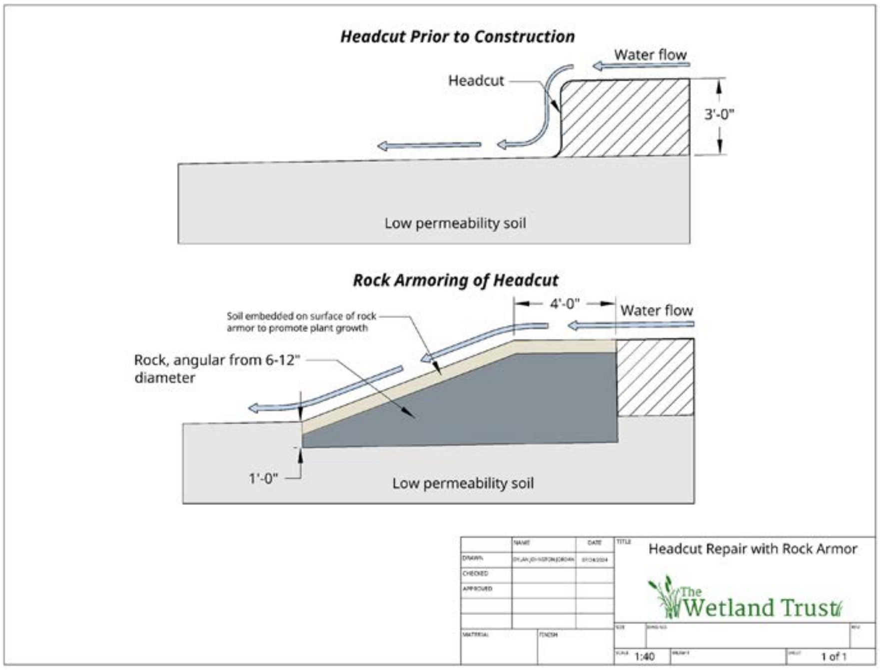
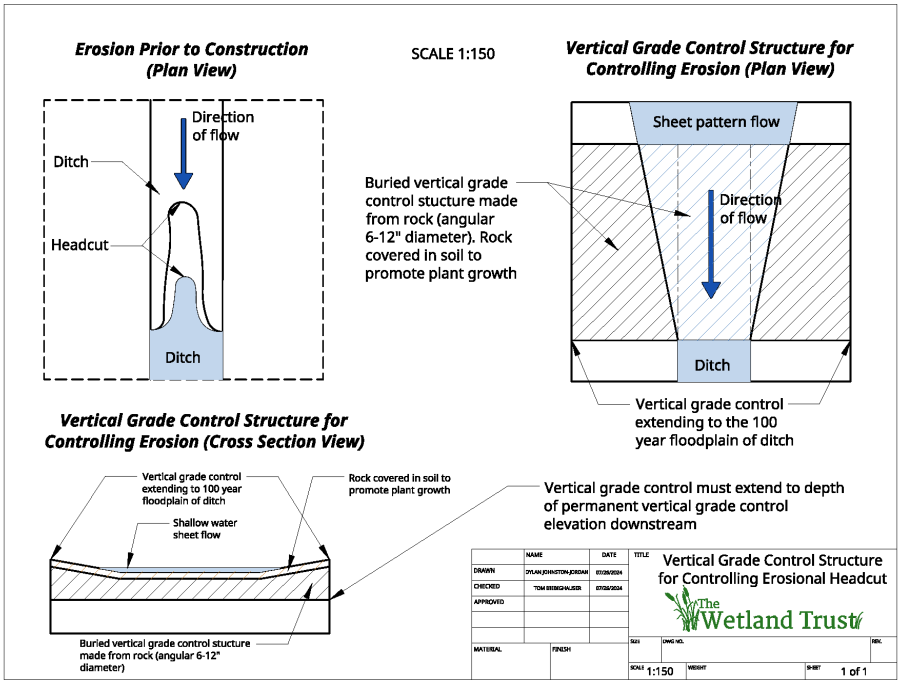


Figure 8-2. Vertical Grade Control Structure (Plan View)



Riffle Crests

Naturally appearing riffles and riffle crests will be built where restored streams flow out of re-established wetlands. These riffle crests will be placed to prevent erosional head-cuts from forming and prevent erosion from occurring in the restored stream and re-established wetlands. (Figure 1.84-A and Figure 1.84-B).

Figure 8-3. Fish Creek Stream Restoration Profile

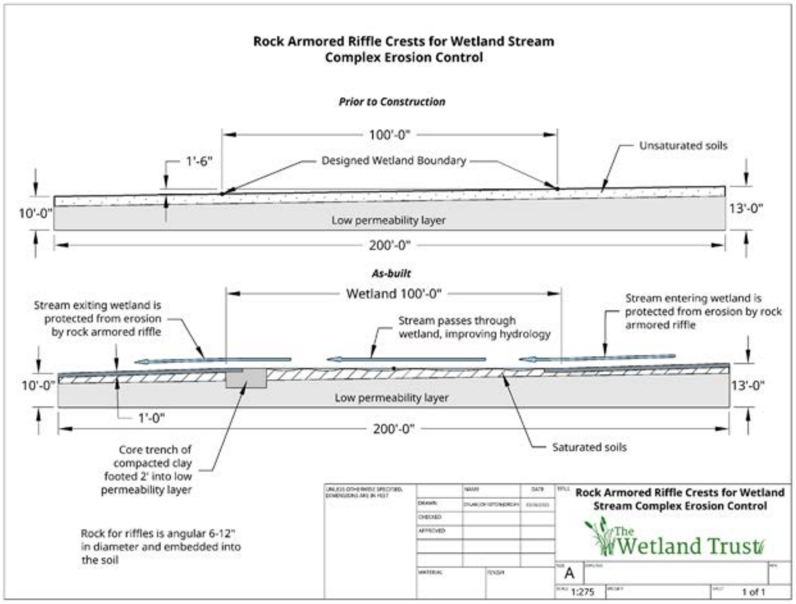
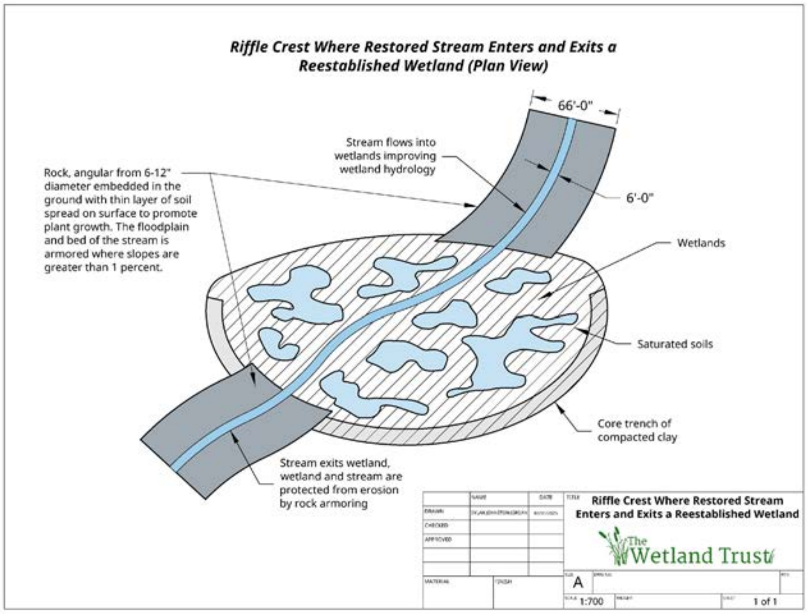


Figure 8-4. Riffle Crest Plan View



9. Stream Performance Standards

Success of stream restoration will rely on the linear footage of re-established stream that meets the performance standards (USACE 2016b) described below:

- **Perennial Stream Reaches:** The sections of re-established streams exhibiting perennial flow shall meet the following performance standards:
  - Less than 15% increase in cross sectional area of stream reaches caused by erosion.
  - A bank height ratio (BHR) less than 1.2 at riffle cross-sections.
  - Entrenchment ratio (ER) greater than 1.4 at riffle cross-sections.
  - Stream reach meets a Natural Resource Conservation Service (NRCS) Stream Visual Assessment Protocol Version 2 (SVAP 2) average of 7.
- **Intermittent and Ephemeral Stream Reaches:** The following indicators of stream hydrology shall be observed during the monitoring period or adaptive management shall be implemented:
  - Scour (indicating sediment transport by flowing water)
  - Sediment deposition (accumulations of sediment and/or formation of ripples)
  - Sediment sorting (sediment sorting indicated by grain-size distribution within the primary path of flow)
  - Multiple observed flow events (must be documented by gauge data and/or photographs)
  - Destruction of terrestrial vegetation
  - Presence of litter and debris
  - Wracking (deposits of drift material indicating surface water flow)

  - Vegetation matted down, bent, or absent (herbaceous or otherwise)
  - Leaf litter disturbed or washed away
- **Vegetation**
  - Vegetation performance standards will be consistent with those described above for wetlands.

- **Stream Visual Assessment Protocol Version 2 (SVAP2):** The Natural Resource Conservation Service (NRCS) *Stream Visual Assessment Protocol Version 2* (SVAP 2) will evaluate the physical and biological parameters of restored reaches qualitatively and quantitatively. This evaluation tool provides an indication of the health of a stream and its associated riparian area and of the functions and services they perform in the landscape. This is achieved by scoring and averaging up to 16 different stream attributes, or "elements", identified in Table 10-2, to derive an overall stream health score.

Table 9-1. Stream SVAP 2 Elements
Channel Condition
Bank Condition
Riparian area quantity
Canopy Cover
Water appearance
Manure or human waste
Aquatic invertebrate habitat
Aquatic invertebrate community
Fish habitat complexity
Pools
Hydrologic alteration
Nutrient enrichment
Riffle embeddedness
Barriers to movement
Salinity

Each relevant assessment element (e.g., salinity is not applicable to the proposed mitigation reaches) will be scored with a value of zero to 10 by comparing the observations to the descriptions in the SVAP2 Manual. Adding the values for each element and dividing by the number of elements will determine the overall assessment SVAP score. The following SVAP score index classify and describe the results:

  - 1 to 2.9 = Severely degraded
  - 3 to 4.9 = Poor
  - 5 to 6.9 Fair
  - 7 to 8.9 = Good
  - 9 to 10 = Excellent

An SVAP score less than 7 indicates the need for adaptive management actions to the extent they raise the SVAP score to at least 7.

10. Monitoring Requirements

There will be an initial post-construction "as-built" plan sheet of constructed features with 1' contours, map/descriptions of planted materials, wetland delineation by wetland cover type (PEM, PSS, PFO) and other habitat types e.g. tributaries, ditches, vegetated shallows, deepwater, estimates of invasive plant species cover within the re-establishment areas, and other information relevant for monitoring comparison.

Site monitoring begins after construction is completed and continues for ten (10) years unless additional monitoring is required to demonstrate achievement of performance standards.

Monitoring information collected will determine if performance standards are being met and inform maintenance tasks or adaptive management needed to help meet those standards.

Each monitoring report will include:

- Work completed, as-builts, and milestones
    - Evaluation of progress toward all performance goals (i.e. Sections 6 and 9) as appropriate.
    - Report on the status of all erosion control measures on the mitigation site, and any additional temporary measures needed.
    - Weekly mapping of all work completed.
- Hydrological reporting
    - Hydrology data collected from permanent water wells, as well as hydrology information derived from Wetland Determination Data Forms completed throughout the site.
    - Maps showing the location and extent of wetland cover types (PEM, PSS, PFO) and other habitat types (e.g., tributaries, ditches, vegetated shallows, deepwater), locations of monitoring wells, staff gauges, and precipitation gauges.
    - Vegetated shallows and/or deep-water habitats >0.1 acre in size will be mapped and reported.
- Vegetation reporting
    - Description of the general plant health, vigor, and mortality including a prognosis for future survival with qualitative descriptions and photos illustrating tree growth.
    - Relative cover, stem density, and tree height reporting with descriptions of the monitoring protocols used.
    - VIBI scores and data sheets for wetland rehabilitation areas.
- Wildlife reporting
    - List of wildlife observed and other salient biological occurrences.
- Invasive species reporting
    - Relative cover of invasive species with descriptions of the monitoring protocols used.
    - Any areas >0.1 acre that are dominated by invasives will be mapped with acreages.
- Corrective actions proposed/implemented
    - Description of remedial actions completed during the monitoring year. Any measures requiring additional soil manipulation or changes in hydrology, all of which will be undertaken only after written approval from NYSDEC and USACE Buffalo District.
- Other
    - Photographs at permanent photo points.

10.1 Reporting schedule

After an initial Post-Construction As-Built Report, monitoring reports will be submitted by December 31st of the monitoring year to describe conditions in the growing season. All reports in digital format will be submitted to USACE, Regulatory Branch, Auburn Office and NYSDEC, Region 7 Headquarters in Syracuse, with any hard copies provided upon request. All monitoring, reporting, requests, and adaptive management is the responsibility of the permittee, Micron, with implementation by TWT.

Table 10-1. Anticipated Reporting Schedule

Activity	**Years Post Construction**															
Wetland	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Wetland and aquatic resources delineation		X		X		X		X		X	X					
Hydrologic monitoring	*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Vegetation: native and invasive relative cover		X	X	X	X	X	X	X	X	X	X					
Vegetation: woody stem density and tree height		X		X		X		X			X		X			X
Vegetation: VIBI-FQ		X		X		X		X		X	X					
Photo sequence		X		X		X		X			X					
Detailed site mapping		X	X	X	X	X	X	X	X	X	X		X			X
Stream	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**					
Erosion monitoring (BHR, ER, cross section area)		X	X	X	X	X	X	X	X	X	X					
SVAP2 assessment		X	X	X	X	X	X	X	X	X	X					
Vegetation monitoring		X	X	X	X	X	X	X	X	X	X					
Detailed site mapping		X	X	X	X	X	X	X	X	X	X					
Reports	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
As-built report	X															
Monitoring & management report		X	X	X	X	X		X		X		X		X		X

*Location of wells and gauges will be detailed in the as-built report

If construction takes more than one growing season to be completed, an interim construction report will be submitted and will describe completed tasks and those remaining. The monitoring timeline will begin following the completion of construction and planting activities described herein.

11. Maintenance Plan

Periodic maintenance activities will be expected to occur following initial construction and planting to ensure long-term viability of the restored and protected resources on the project sites. Below are descriptions outlining the projected maintenance activities during the monitoring period. Any maintenance activities undertaken will be documented in the appropriate monitoring report along with a discussion of any anticipated maintenance to be completed in future years. Significant adjustments such as earthwork will require USACE and DEC approval.

11.1 Hydrology Maintenance

Immediately following construction and throughout the 10-year monitoring period, TWT will monitor the development of site hydrology to ensure that adequate and anticipated hydrology has been restored. It is understood that wetland hydrology may take time to develop, sometimes years, and the desired hydrology or hydric soils may not be achieved until later in the monitoring period. Factors that could negatively impact the intended hydrology include erosion of spillways, failed ditch plugs, compromised groundwater dams, unidentified drainage tiles, and wildlife activity (i.e. beaver and muskrats). If hydrology standards are not being met, TWT will determine if more time is needed for development or make the appropriate adjustments as soon as practicable, preferably before vegetation establishment to minimize disturbance. Possible maintenance actions addressing hydrology issues include:

- Reinforcing spillways with rock or installing other vertical grade control structures,
- Adjusting height/depth of ditch fill or groundwater dams,
- Additional drain tile searches,
- Trapping and/or relocating nuisance wildlife.

11.2 Vegetation Maintenance

The development of a healthy and diverse native vegetative community is crucial for the success of this wetland restoration project, therefore, TWT will closely monitor vegetative establishment following initial planting/seeding and throughout the 10-year monitoring period. Regular maintenance is intended to ensure the health and survival of native woody plants and herbaceous species, to limit the establishment and spread of invasive plant species, and to keep performance standard progress on track. Maintenance actions for vegetative community health include:

- Herbivory prevention- Whitetail deer are a major threat to plant diversity (Blossey et al. 2024). TWT, to the degree practical, will install deer fence along the entirety of the wetland compensation areas with commercial grade 8 ft deer fence. The fence will stay on site for the project duration. To ensure other wildlife’s free passage, the fence bottom will be raised to allow small mammals and herpetofauna to pass (about 6 inches),
- Tree and shrub maintenance to combat disease, herbivory, or competition from other plants,
- Supplemental planting/seeding of native trees, shrubs, or herbaceous vegetation,

- Managing invasive species as needed through mechanical or chemical control using aquatic-safe herbicides by a licensed applicator.

11.3 General Site Maintenance

General site maintenance is anticipated to occur regularly throughout the 10-year monitoring period and beyond. As the fee-simple owner of the site, TWT bears responsibility for all non-ecological maintenance tasks, including but not limited to fence and gate upkeep, structural maintenance where applicable, signage installation, monitoring for vandalism, and maintaining trail/security cameras if deemed necessary.

12. Long Term Management Plan

The purpose of the Long-Term Management Plan (LTMP) is to ensure the long-term sustainability of the protected and restored resources after mitigation performance standards have been achieved. The LTMP has been included in **Appendix K**. As the site develops and matures, the LTMP will be amended as needed to include relevant information. After the monitoring period has ended, TWT will prepare a final LTMP to be submitted with the project's final monitoring report that will be reviewed and approved by the USACE. The final LTMP will address the site-specific future needs of the project based upon conditions at the time of the active period closeout.

12.1 Responsible Party

Micron is the Responsible Party for all phases of this permittee responsible mitigation through monitoring and final acceptance when a Certificate of Completion (or an equivalent) will be provided by the agencies. Once the mitigation is complete Micron will transfer long-term management to TWT.

12.2 Long-Term Monitoring and Management Activities

The LTMP includes the anticipated long-term monitoring and management activities and their estimated costs. These activities will be adjusted as needed throughout and after the active ecological monitoring period.

12.3 Long-Term Funding Mechanism

TWT has a director-controlled Stewardship Management Investment Account specifically established for Micron mitigation projects. This account's investment income will come from investment instruments that are low-risk and broad-based, (e.g., TWT may use 30-year Treasury Bonds) to support permanent long-term management and maintenance as described in the final LTMP. The entirety of the account will be funded before implementation starts at $8,000/credit (or per DEC restoration/creation acre) for the wetland compensation and $60/ft for stream compensation. The funding level designed in the Long-Term Management Budget in the LTMP is sufficient to sustain the long-term management of all of Micron's wetland and stream compensation. This fund will also have a clause in TWT's Bylaws that provides for its transfer along with the Micron lands to another NGO should that issue arise.

13. Adaptive Management Plan

Beyond the anticipated maintenance needs detailed in Section 11, preparedness for unexpected changes in site conditions is imperative to the continued success of the project. This adaptive management strategy outlines the approach for addressing potential challenges and unexpected changes, including those related to fire, climate change, disease, and other factors. Continuous monitoring to inform the adaptation of management strategies will ensure that the protected and restored resources remain resilient and meet long-term conservation goals. Potential challenges warranting adaptive management include:

- **Fire**: The effects of a significant fire event can lead to negative impacts on a young, re-established wetland. Fire can scorch and kill newly planted or immature vegetation, particularly woody species like trees and shrubs. The loss of vegetative cover can lead to increased soil erosion resulting in potential sedimentation issues to connected water bodies. Fire can create favorable conditions for invasive species as well as affect soil structure and permeability thereby altering hydrology. In the event of a significant fire event, TWT will address the loss of plants, erosion, and any other impacts and determine the appropriate adaptive management approach such as replanting, stabilizing soils, and/or monitoring water quality to facilitate recovery.
- **Climate change**: Changes in precipitation and temperatures associated with climate change can significantly affect wetland mitigation sites through a variety of mechanisms, impacting the hydrology, vegetation, wildlife, and overall ecological functions. To adaptively manage the impacts of climate change on wetland mitigation sites, TWT can implement strategies such as altered water management practices and management of vegetative communities with an emphasis on native species resilient to climate variability and extremes.
- **Disease**: Unforeseen damage to wildlife, vegetation, and ecosystem services is possible via disease or pests. Pathogen spread or a pest invasion can decrease plant diversity and biomass, disrupting the wetland's structural integrity and the success of mitigation performance standards. Monitoring and early detection will be key to assessing such an event and implementing adaptive management strategies such as replanting (i.e. with hardier, disease-resistant species), sanitation processes and controlling the spread.
- **Flood**: Though wetlands aid in flood attenuation, a significant flooding event can have negative effects on a young wetland mitigation project. High energy floodwaters can cause soil erosion and sedimentation, leading to the damage of plant roots and flooding of vegetation. Ditch plugs or groundwater dams/low earthen berms that were installed during

construction may fail or breach under serious flooding events. In such an event, TWT will determine the appropriate adaptive management action including replanting of the site, soil stabilization, or re-construction of ditch plugs and groundwater dams.

14. Financial Assurances

The short-term financial assurances for this compensatory mitigation plan will include individual performance bonds for each mitigation site to ensure compliance with permit requirements and project success. Experienced insurance brokers with the Great American Insurance Group will assist in preparing these financial assurances by providing guidance on structuring the performance bonds and ensuring they meet regulatory expectations. This approach ensures that each mitigation site is financially secured independently, providing clear accountability and reducing risk for both regulatory agencies and stakeholders.

15. References

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Appendix A.

CONSERVATION EASEMENT

On lands of The Wetland Trust, Inc.

184 Godfrey Road, Town of Schroeppel,

Oswego County, NY

covering a 181.1-acre portion of

Tax Parcels 256.00-4-14 and 256.00-4-14.01

THIS DECLARATION OF CONSERVATION EASEMENT is made as of the _____ day of ________202_, by The Wetland Trust, Inc. (the "Grantor"), a New York not-for-profit with offices at 4729 State Route 414, Burdett, NY 14818, for the benefit of, but not the burden upon, The Wetland Conservancy, Inc. (the "Holder"), a New York not-for-profit entity having its office at P.O. Box 220, Burdett, New York 14818.

WHEREAS, Grantor is the owner in fee simple of approximately 184.8 acres of certain real property located in the Town of Schroeppel, County of Oswego, and State of New York, of which property is covered by this conservation easement and more fully described in Schedule A and annexed hereto (the "Protected Property"), and

WHEREAS, The Wetland Trust, Inc., a non-profit 501(c)(3) organization, is providing compensatory mitigation services to Micron New York Semiconductor Manufacturing LLC, with principal offices at 8000 South Federal Way, Boise, Idaho, 83716 for unavoidable adverse impacts to waters of the United States authorized under Section 404 of the Clean Water Act (33 U.S.C. § 1344) , and/or Sections 9 or 10 of the Rivers and Harbors Act (33 U.S.C. §§ 401, 403); and impacts to jurisdiction waters of New York State authorized under …….

WHEREAS, the Protected Property is to be protected in perpetuity through this Conservation Easement for those purposes as described in the Micron Fish Creek Mitigation Plan, attached to this CE, pursuant to which The Wetland Trust, Inc., has committed to permanently protect and maintain a mitigation project on the Protected Property; and

WHEREAS, in relation to the compensatory mitigation activities, the Protected Property is subject to the conditions of the Mitigation plan, and any Federal or NY State Permit; and

WHEREAS, to ensure the long-term protection of the Protected Property, Grantor agrees to restrict ownership and use of the Protected Property: in order to protect, restore, and maintain the chemical, physical, and biological integrity of waters of the United States including wetlands through the control of discharges of dredged or fill material located on the Protected Property; in accordance with the common law and with the Conservation Easements provisions of New York Environmental Conservation Law ("**ECL**") Article 49, Title 3; in recognition of the continuing benefit to scenic and natural resources and the environment; and as a condition of being issued the Permit; and

WHEREAS, Grantor desires to declare, create, and convey to the Holder a Conservation Easement placing certain limitations and affirmative obligations on the Protected Property for the purpose of maintaining the Protected Property substantially in its natural condition, in perpetuity; and

WHEREAS, the purposes of this Conservation Easement are to protect the scenic, natural resource, and aquatic resource values of the Protected Property including native flora and fauna and the ecological processes that support them, diverse forest types and conditions, soil productivity, biological diversity, water quality, and aquatic habitats including wetlands; and

WHEREAS, the Holder is a 501 ©(3) not-for-profit corporation and is qualified to hold a Conservation Easement in accordance with ECL Section 49-0305; and

WHEREAS, Grantor agrees, in accordance with ECL Section 49-0305.5, that rights of enforcement of the terms of this Conservation Easement shall be held by the Holder, and that the USACE, NYSDEC or other appropriate enforcement agencies of the United States or New York State hold rights of enforcement under the Permit; and

NOW, THEREFORE, for the foregoing consideration, and in further consideration of the restrictions, rights, and agreements herein, and for the purposes of preservation, protection, and conservation of the Protected Property and the conservation and wildlife resources thereon, Grantor hereby creates, gives, grants, bargains, and conveys to the Holder a perpetual easement in, to, over, and across the Protected Property subject to the Permit, , and any current and future modifications thereto.

A. RESTRICTIONS

Grantor shall ensure compliance with the following Restrictions on the Protected Property, which shall run with the Protected Property in perpetuity, and be binding on the Grantor, the Holder, and their respective successors, assigns, lessees, and other occupiers and users. These Restrictions are subject to Grantor's Reserved Rights, which follow.

1. **General**. There shall be no future fillings, flooding, excavating, mining, or drilling; no removal of natural materials (soil, sand, gravel, rock, minerals, etc.); no dumping of materials; and no alteration of the topography which would materially affect the Protected Property in any manner, except as authorized by the Permit, , and any modifications thereof.

2. **Waters and Wetlands**. In addition to the general restrictions above, within the Protected Property there shall be no draining, dredging, damming, or impounding; no changing the grade or elevation, impairing the flow or circulation of waters, or reducing the reach of waters; and no other discharges or activity requiring a permit under applicable water pollution control laws and regulations, except as authorized by the Permit, and any modifications thereof.

3. **Trees/Vegetation**. On the Protected Property there shall be no clearing, burning, cutting, or destroying of trees or vegetation, except as may be necessary to protect public health or safety or as authorized by the Permit, and any modifications thereof; there shall be no planting or introduction of non-native or exotic species of trees or vegetation.

4. **Waste Disposal.** There shall be no disposal or storage of liquid or solid waste or other unsightly, hazardous, toxic or offensive material on the Protected Property.

5. **Uses**. No agricultural, animal husbandry, industrial, residential development, mining, logging, or commercial activity shall be undertaken or allowed on the Protected Property.

6. **Structures**. There shall be no construction, erection, or placement of buildings, billboards, or any other structures, to include fences, parking lots, trailers, mobile homes, camping accommodations, or recreational vehicles, or additions to existing structures, on the Protected Property, except as

authorized by the Permit, and any modifications thereof.

7. **New Roads**. There shall be no construction of new roads, trails, or walkways on the Protected Property without the prior written approval (including approval of the manner of construction) of the Holder and the USACE and NYSDEC

8. **Utilities**. There shall be no construction or placement of utilities or related facilities (including telecommunications towers and antennas) in, over, or under the Protected Property without the prior written approval (including approval of the manner of construction) of the Holder, the USACE and the NYSDEC.

9. **Pest Control**. There shall be no application of pesticides or biological controls, including controls of problem vegetation, on the Protected Property without prior written approval (including approval of the manner of application) of the Holder, the USACE, the NYSDEC or as authorized by the Permit, and any modifications thereof.

10. **Vehicular Use**. There shall be no use of any motorized vehicle or motorized equipment, and no use of any non-motorized bicycle anywhere on the Protected Property, except in the case of emergency, for the purpose of enforcement of applicable laws and regulations, for the purpose of monitoring compliance with the purposes of this Conservation Easement, or as authorized by the Permit, and any modifications thereof.

11. **Subdivision**. There shall be no division or subdivision of the Protected Property.

12. **Marking**. The Grantor shall mark the limits of the Protected Property in a manner approved by the Holder, USACE, and NYSDEC and shall maintain the marking in place so as to notify the public that the Protected Property is an area preserved for conservation purposes.

13. **Other Prohibitions**. Any other use of, or activity on, the Protected Property which is or may become inconsistent with the purposes of the Conservation Easement, the preservation of the Protected Property substantially in its natural condition, or the protection of its environmental systems, is prohibited, except as authorized by the Permit, and any modifications thereof.

B. RESERVED RIGHTS OF GRANTOR

Grantor reserves the right to engage in all acts or uses not prohibited by the Restrictions, which are not inconsistent with the Purpose of this Conservation Easement, the preservation of the Protected Property substantially in its natural condition, and the protection of its environmental systems, and which do not interfere with any obligations under the Permit, and any modifications or amendments thereof. Nothing herein shall be deemed to modify or amend any other or additional agreements between or among Grantor, the Holder, and/or the USACE and NYSDEC. In the event any of Grantor's acts or uses on the Protected Property are subject to review under the New York State Environmental Quality Review Act (SEQRA), Grantee and the Holder shall be designated as interested parties and notified of the review process.

C. GENERAL PROVISIONS

The following General Provisions shall be binding upon the Grantor and the Grantor's heirs, successors, grantees, transferees, administrators, assigns, lessees, licensees and agents, and shall inure to the benefit of the Holder, USACE and NYSDEC, and the heirs, successors, grantees, transferees, administrators, assigns, lessees, licensees and agents of the Holder, USACE and NYSDEC:

1. **Rights of Access and Entry.** The Holder, USACE and NYSDEC shall have the right to enter and go upon the Protected Property for purposes of monitoring and inspection, and to take actions necessary to verify compliance with the Restrictions. The Holder shall also have rights of visual access and view, and the right to enter and go upon the Protected Property for purposes of making scientific or educational observations and studies, and taking samples, in such a manner as will not disturb the quiet enjoyment of the Protected Property by Grantor. No right of access or entry by the general public to any portion of the Protected Property is conveyed by this Conservation Easement.

2. **Enforcement.** Grantor acknowledges and agrees that the Holder's, USACE's and NYSDEC's

remedies at law for any violation of this Conservation Easement are inadequate. In the event of a breach of any of the Restrictions set forth above, the Holder, USACE, or NYSDEC will notify the Grantor in writing of the breach. The Grantor shall have thirty (30) days after receipt of such notice to undertake actions that are reasonably calculated to promptly correct the conditions constituting the breach. If the Grantor fails to commence such corrective action within thirty (30) days, or fails to complete the necessary corrective action, the Holder, USACE, or NYSDEC may undertake such actions, including legal proceedings, as are necessary to effect such corrective action. Among other relief, the Holder, USACE, NYSDEC shall be entitled to specific performance of the terms of this Conservation Easement and to a complete restoration of the Protected Property, correcting damage caused by any breach of the Restrictions. Breaches of the General Provisions of this Conservation Easement shall be actionable without notice. The costs of a breach, correction or restoration, including reasonable Holder expenses, expert or consultant expenses, court costs and attorneys' fees, shall be paid by the Grantor. Enforcement shall be at the discretion of the Holder, USACE, or NYSDEC. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel or waiver. The Holder, USACE, or NYSDEC's enforcement rights are in addition to, and shall not limit, enforcement rights available under other provisions of law or equity, or under any applicable permit or certification. Failure to timely enforce compliance with this Conservation Easement or the use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any provision of this Conservation Easement.

Events Beyond Grantor's Control. Nothing herein shall be construed to authorize the Holder or the USACE to institute any proceedings against Grantor for any changes to the Protected Property caused by acts of God or circumstances beyond the Grantor's control such as earthquake, fire, flood, storm, war, civil disturbance, strike, or similar causes.

3. **Obligations of Ownership.** Grantor is responsible for payment of all real estate taxes, assessments, fees, or other charges levied upon the Protected Property, and Grantor will provide copies of receipts evidencing payment of any such charges upon request of the Holder, USACE, or NYSDEC. Any liens, mortgages or other encumbrances affecting the Protected Property shall be subject to the terms of this Conservation Easement. The Holder, USACE, or NYSDEC shall not be responsible for any costs or liability of any kind related to the ownership, operation, insurance, upkeep, or maintenance of the Protected Property, except as expressly provided herein. Nothing herein shall relieve the Grantor of the obligation to comply with federal, state, or local laws, regulations, and permits that may apply to the exercise of ownership, or rights under this

Conservation Easement, by Grantor.

4. **Recording.** The Grantor shall have this Conservation Easement duly recorded and indexed as such in the Office of the County Clerk of Oswego County, New York, as described in ECL Section 49-0305.4. Upon recording, the Grantor shall forward a copy of this Conservation Easement as recorded to the Holder, USACE, and NYSDEC and, as described in ECL Section 49-0305.4, the New York Department of Environmental Conservation.

5. **Extinguishment.** In the event that changed conditions render impossible the continued use of the Protected Property for conservation purposes, this Conservation Easement may only be extinguished, in whole or in part, by judicial proceeding under authority of ECL Section 49-0307. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to amend or terminate this Conservation Easement.

6. **Eminent Domain.** If all or part of the Protected Property is taken in the exercise of eminent domain so as to substantially abrogate the Restrictions imposed by this Conservation Easement, the Grantor and the Holder shall promptly notify the USACE and NYSDEC and shall join in appropriate actions at the time of such taking to recover the full value of the taking, and all incidental and direct damages due to the taking. Each party shall be responsible for its own costs in any such legal proceeding.

7. **Proceeds of Taking.** This Conservation Easement constitutes a real property interest immediately vested in the Holder. In the event that all or a portion of this Protected Property is sold, exchanged, or involuntarily converted following an extinguishment or the exercise of eminent domain, the Holder shall be entitled to the fair market value of this Conservation Easement. The parties stipulate that the fair market value of this Conservation Easement shall be determined by identifying the fair market value of the Protected Property unencumbered by this Conservation Easement (minus any increase in value after the date of this grant attributable to improvements) and subtracting the value of the Protected Property with the Conservation Easement at the time of this grant. The values at the time of this grant shall be the values used, or which would have been used, to calculate a deduction for federal income tax purposes, pursuant to Section l70(h) of the Internal Revenue Code (whether the grant is eligible or ineligible for such a deduction). The Holder shall use its share of the proceeds in a manner consistent with the purposes of this Conservation Easement.

8. **Notification.** Any notice, request for approval, or other communication required under this Conservation Agreement shall be sent by registered or certified mail, postage prepaid, to the

following addresses (or such address as may be hereafter specified by notice pursuant to this paragraph):

To Grantor:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, New York 14818

To Holder:

The Wetlands Conservancy, Inc
P.O. Box 220
Burdett, New York 14818

To the USACE:

U.S. Army Corps of Engineers, New York District ATTN:

Regulatory Branch
Room 1937, 26 Federal Plaza
New York, NY 10278-0090

And

U.S. Army Corps of Engineers, Buffalo District ATTN:

Regulatory Branch
1776 Niagara Street
Buffalo, NY 14207-3199

To the NYSDEC:

?

9. **Assignment.** This Conservation Easement is transferable, but only to a holder qualified under ECL Section 49-0305.3, and approved in writing by the USACE and NYSDEC before transfer. As a condition of such transfer, the transferee shall agree to all of the restrictions, rights, and provisions herein, and to continue to carry out the purposes of this Conservation Easement. Assignments shall be accomplished by amendment of this Conservation Easement in accordance with Section C, Paragraph 14. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to assign this Conservation Easement.

10. **Failure of Holder.** If at any time the Holder is unable or fails to enforce this Conservation Easement, or if the Holder ceases to be a holder qualified under ECL Section 49-0305, and if within

a reasonable period of time after the occurrence of one of these events the Holder fails to make an assignment pursuant to paragraph 10, then the Holder's interest shall become vested in another holder, as approved by the USACE and NYSDEC, qualified in accordance with an appropriate (e.g., cy pres) proceeding, to be brought by the Grantor in a court of competent jurisdiction, or by Holder, USACE, and NYSDEC finding a replacement entity agreeable to USACE and NYSDEC

11. **Subsequent Transfer.** This Conservation Easement shall be perpetual and run with the land and shall be binding upon all future owners of any interest in the Protected Property. The conveyance of any portion of or any interest in the Protected Property, by sale, exchange, devise or gift, shall be made by an instrument which expressly provides that the interest thereby conveyed is subject to this Conservation Easement, without modification or amendment of the terms of this Easement, and such instrument shall expressly incorporate this Conservation Easement by reference, specifically setting forth the date, office, liber and page of the recording of this Conservation Easement. The failure of any such instrument to comply with the provisions hereof shall not affect the validity or enforceability of this Conservation Easement, nor shall such failure affect the Holder's or the USACE' rights hereunder. No less than thirty (30) days prior to conveyance of any interest in the Protected Property, Grantor (to include any successor Grantor) shall notify the Holder, USACE, and NYSDEC of such intended conveyance, providing the full names and mailing addresses of all Grantees, and the individual principals thereof, under any such conveyance. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to transfer the Protected Property.

12. No **Merger of Interests.** In the event the same person or entity ever simultaneously holds an interest in the Protected Property under this Conservation Easement, and holds the underlying title in fee, the parties intend that the separate interests shall not merge.

13. **Amendment.** This Conservation Easement may be amended in accordance with ECL Section 49-0307, but only in a writing signed by the Grantor and the Holder, or their successors or assigns, and approved in writing by the USACE and NYSDEC, its successors or assigns; provided such amendment does not affect the qualification of this Conservation Easement or the status of the Holder under ECL Section 49-0305 or any other applicable law; and provided such amendment is consistent with the conservation purposes of this grant and its perpetual duration. Any amendment to this Conservation Easement shall be recorded and provided to the Holder, the USACE and the New York State Department of Environmental Conservation, in the manner set forth in paragraph C-5 above. In accordance with 33 C.F.R. 332.7(a)(3), USACE and NYSDEC must be provided 60-day advance notification before any action is taken to amend this Conservation Easement.

14. **Severability.** Should a court of competent jurisdiction find any separate part of this Conservation Easement void or unenforceable le, the remainder shall continue in full force and effect.

15. **Warranties by Grantor.** Grantor warrants that it owns the Protected Property in fee simple, and that Grantor owns all interests in the Protected Property that may be impaired by the granting of this Conservation Easement. Grantor further warrants that there are no outstanding mortgages, tax liens, encumbrances , or other interests in the Protected Property that have not been expressly subordinated to this Conservation Easement. Grantor further warrants that no structures of any kind, to include roads, trails or walkways, and no violations of restrictions of this of this Conservation Easement exist on the Protected Property at the time of execution hereof. Grantor further warrants that the Holder shall have the use of and enjoy all the benefits derived from and arising out of this Conservation Easement.

16. **No Gift or Dedication**. Nothing contained in this Conservation Easement shall be deemed to be a gift for dedication of all or any part of either the Permitted Property or the Protected Property to the public, or for public use.

IN WITNESS WHEREOF, Grantor and Holder have executed this Conservation Easement, as of the date written above.

Execution by Grantor: The Wetland Trust, Inc.

By: ________________________________

Title:

STATE OF NEW YORK) ss.:

COUNTY OF Schuyler)

On the __day of ____________in the year 202_ before me, the undersigned, a notary public in and for said state, personally appeared the Grantor _____________, __________ of The Wetland Trust, Inc. personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed this instrument.

____

Notary Public Date: ________________________________

Approval and Acceptance by Holder: The Wetland Conservancy, Inc.

By: ________________________________

Title: Chair

STATE OF NEW YORK) ss:

COUNTY OF Tompkins)

On the __day of ____________in the year 202_ before me, the undersigned, a notary public in and for said state, personally appeared the Holder **Aaron Ristow**, Chair of The Wetland Conservancy, Inc. personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed this instrument.

________________________________ ____________________________________

Notary Public Date

Schedule A. Legal description of parcel to be covered by this Conservation Easement.

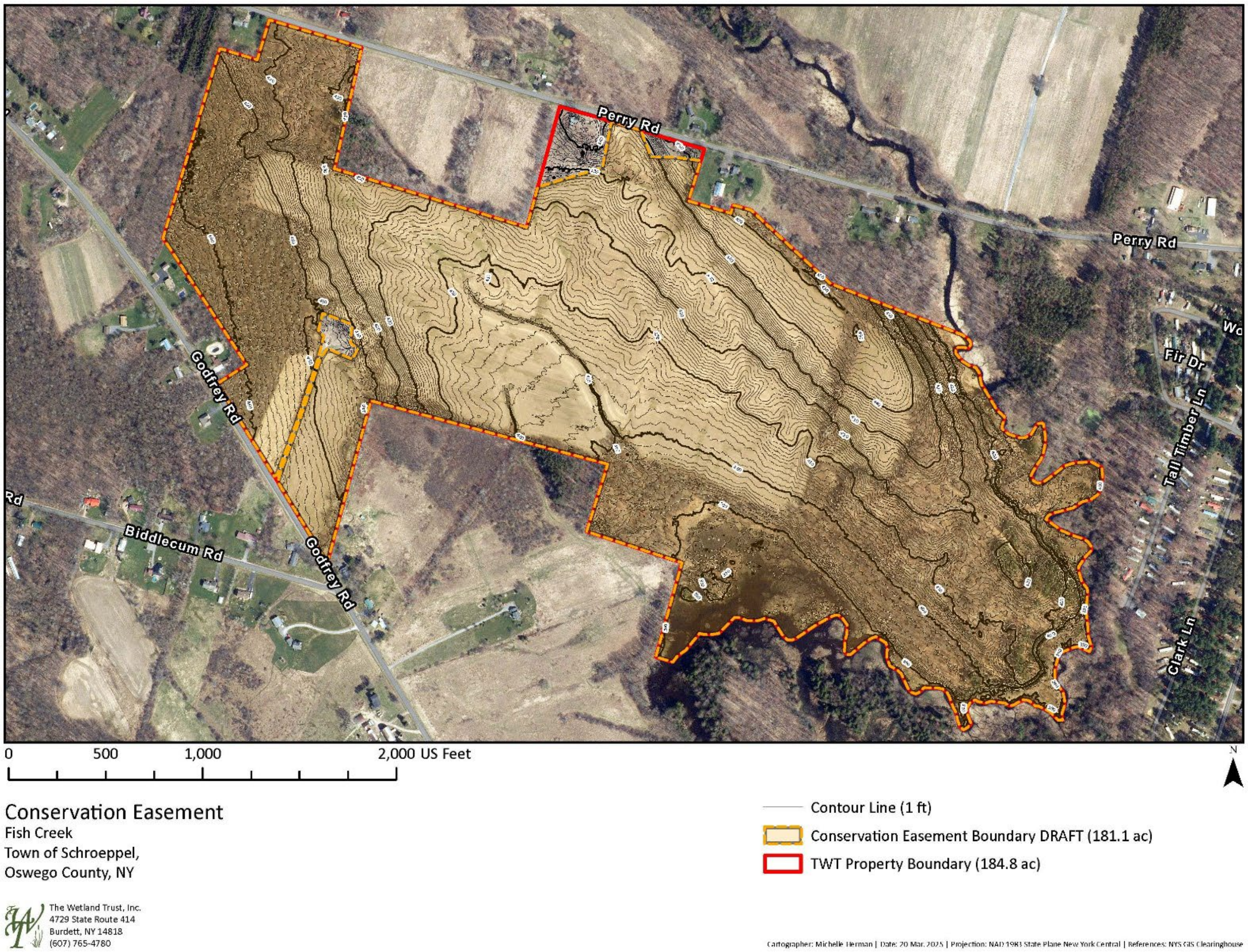
Fish Creek, 184 Godfrey Road

Town of Schroeppel, Oswego County, NY, covering a *181.1*-acre portion

of Tax Parcels 256.00-4-14 and 256.00-4-14.01

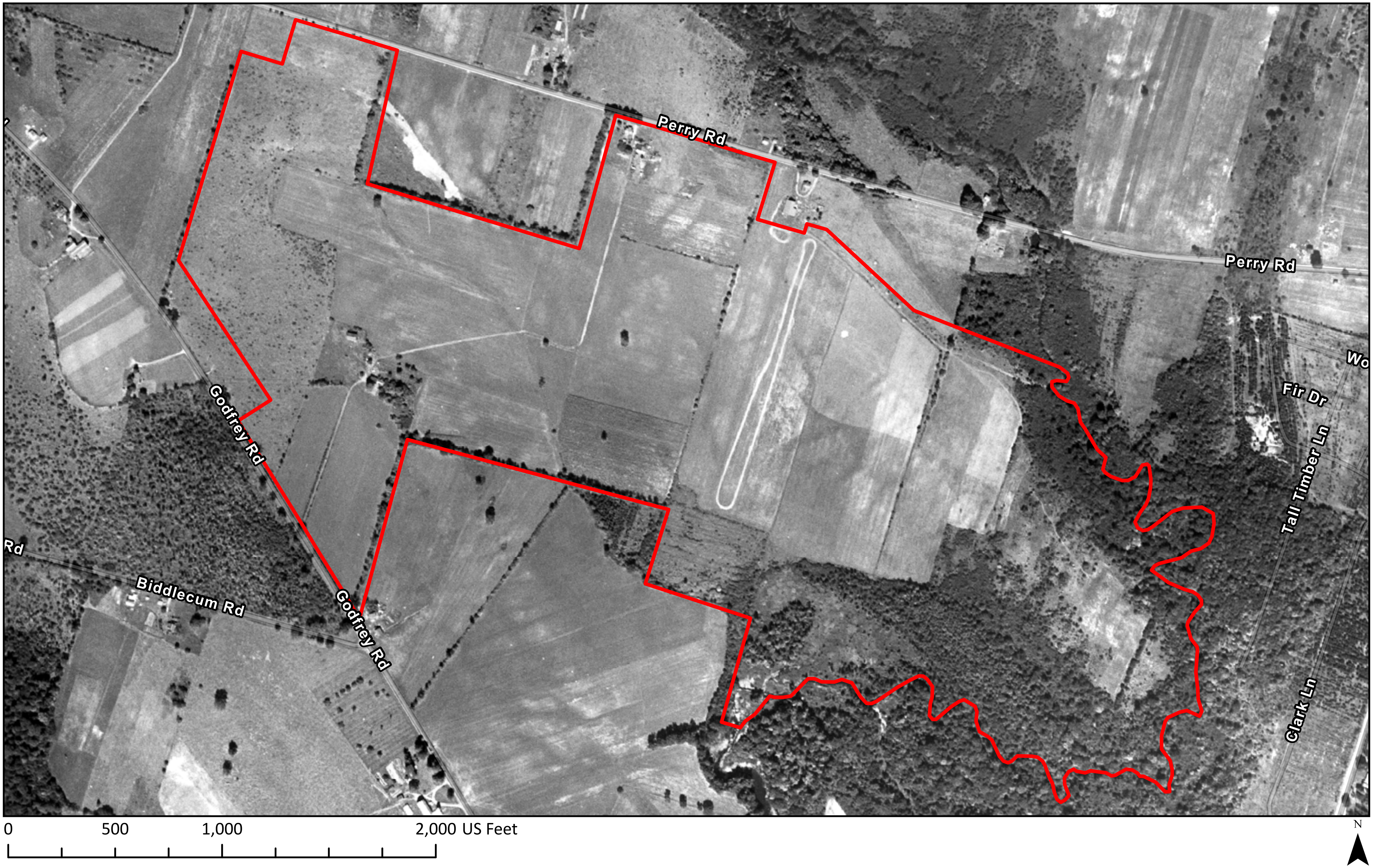
ALL THAT TRACT OR PARCEL OF LAND,

[Left intentionally blank- awaiting boundary survey with descriptions of metes and bounds]



Cartographer: Michelle Herman | Date: 20 Mar. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Appendix B.



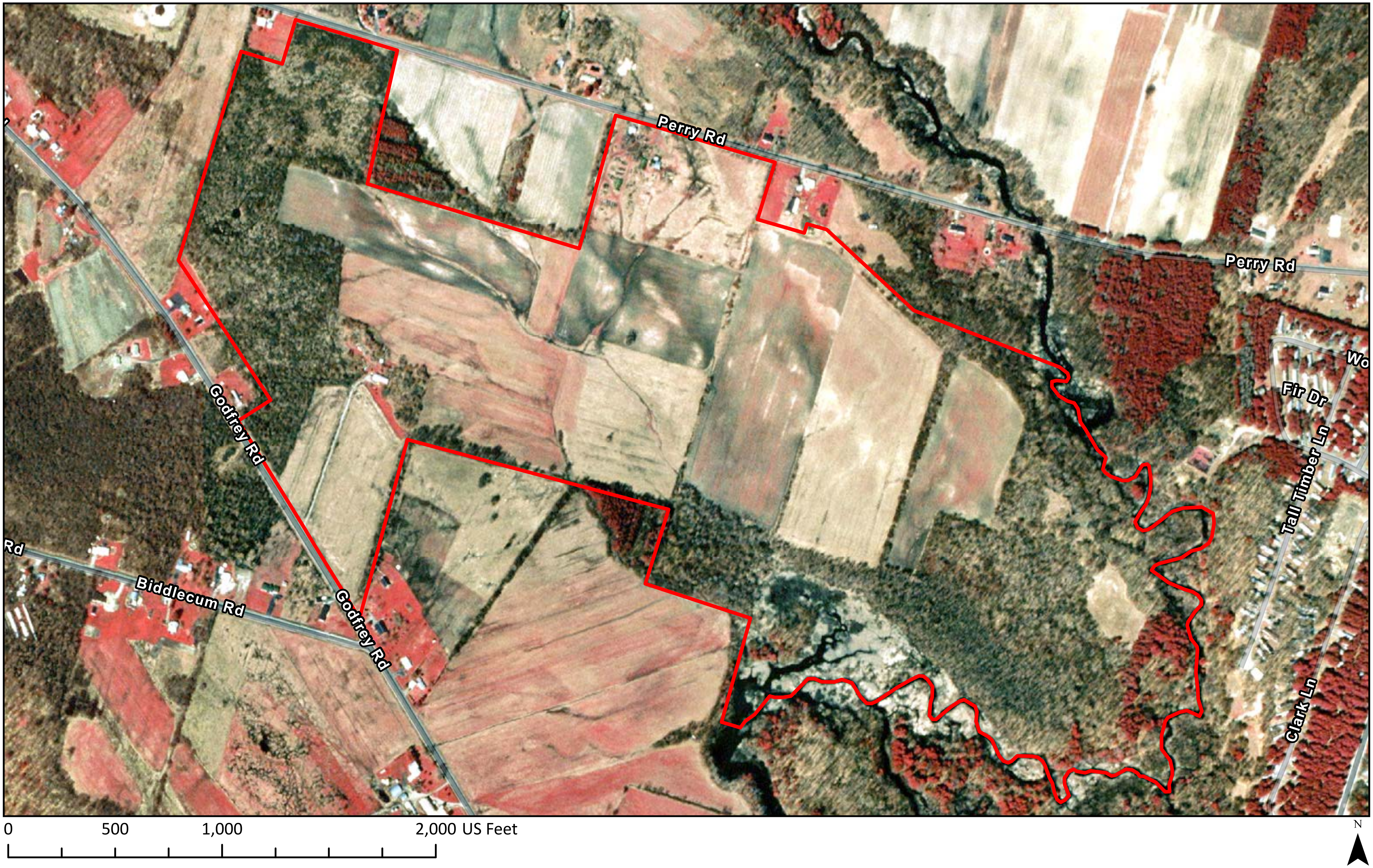
🟥 TWT Property Boundary (184.8 ac)

Imagery (1955)

Fish Creek
Town of Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 10 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



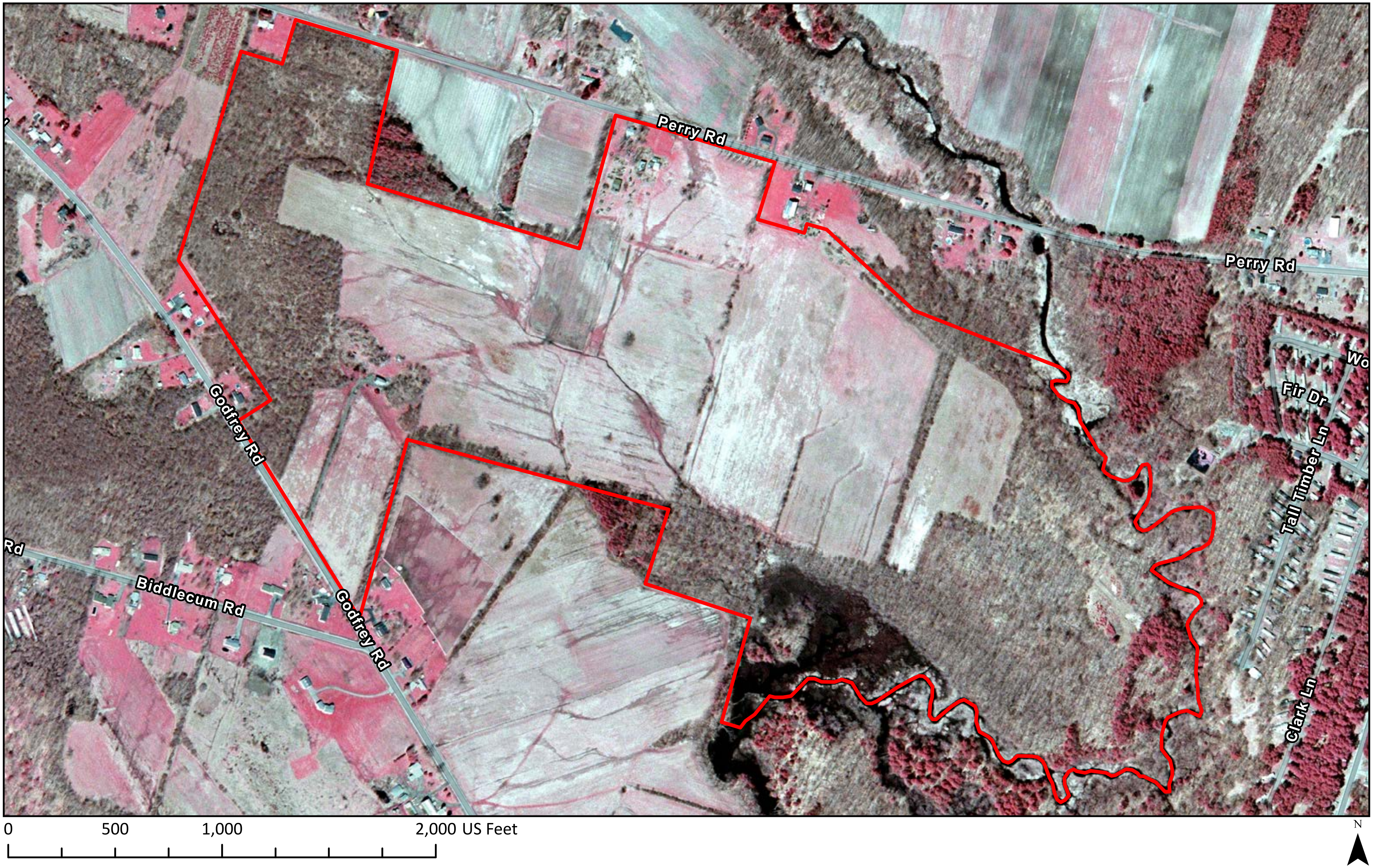
🟥 TWT Property Boundary (184.8 ac)

Imagery (1994)

Fish Creek
Town of Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 10 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



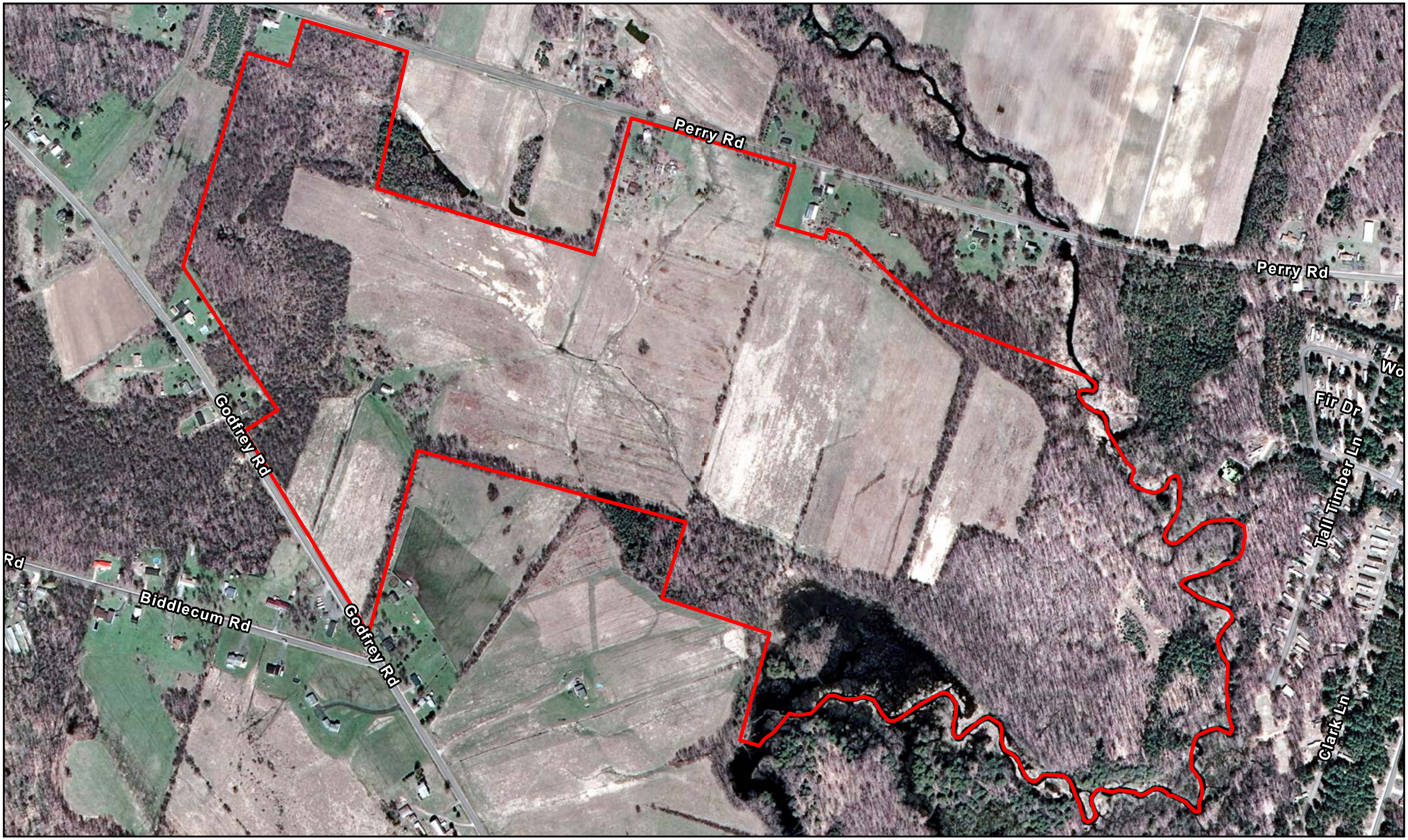
🟥 TWT Property Boundary (184.8 ac)

Imagery (2003)

Fish Creek
Town of Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 10 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



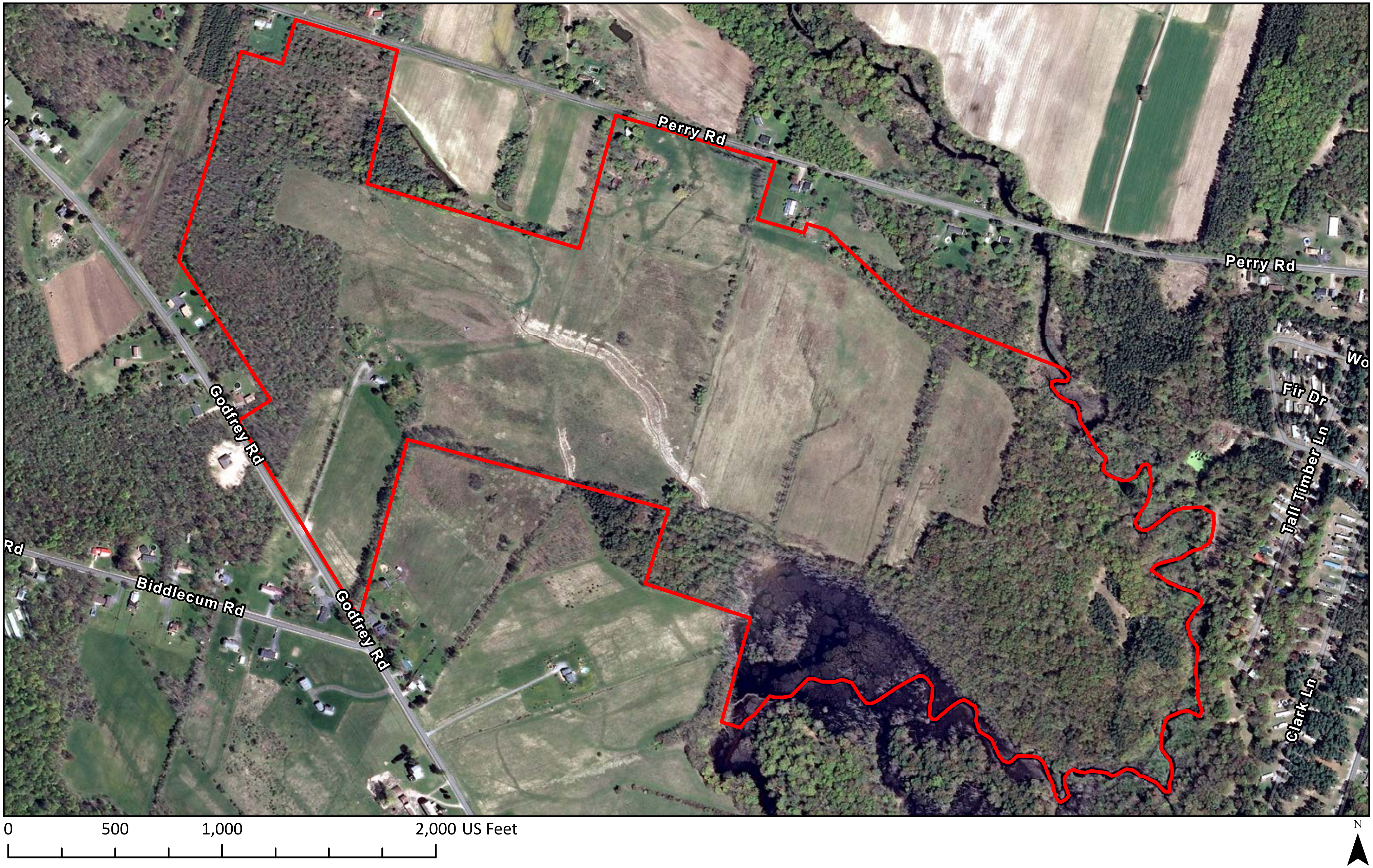
🟥 TWT Property Boundary (184.8 ac)

Imagery (2006)

Fish Creek
Town of Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 10 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



🟥 TWT Property Boundary (184.8 ac)

Imagery (2011)

Fish Creek
Town of Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 10 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

🟥 TWT Property Boundary (184.8 ac)

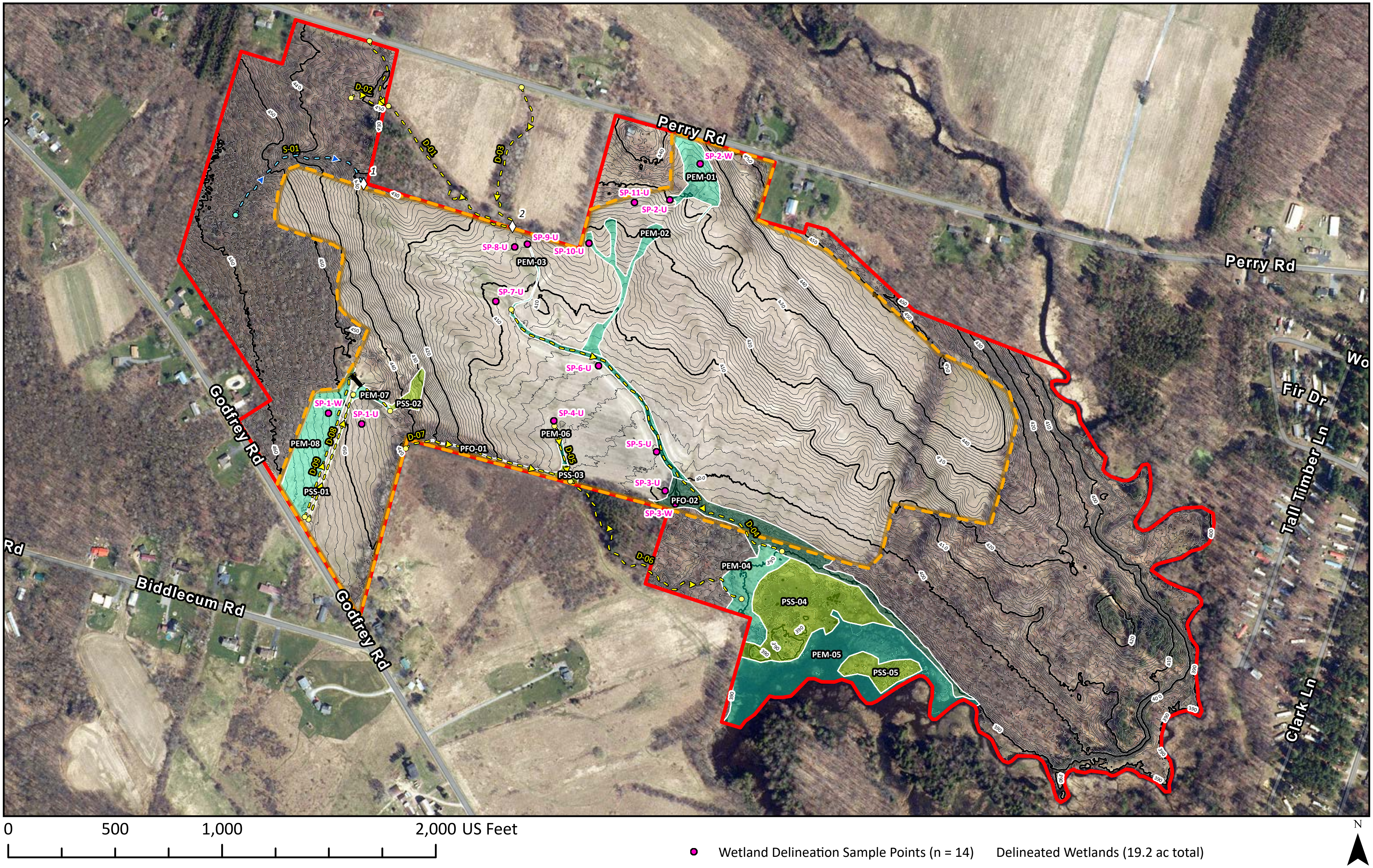
Imagery (2020)

Fish Creek
Town of Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 10 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Appendix C.



● Wetland Delineation Sample Points (n = 14)

Culverts (n = 1)

Drainage Features

Ditch

Stream

◇ Drainage Structure Surface Intakes (n =2)

Delineated Wetlands (19.2 ac total)

PEM (11.2 ac)

PSS (5.4 ac)

PFO (2.6 ac)

Contour Line (1 ft)

Delineation Concurrence Request Boundary (98.1 ac)

TWT Property Boundary (184.8 ac)

Delineated Wetlands and Drainage Features

Fish Creek
Town of Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 16 Feb. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Fish Creek Wetland Delineation Summary Table

ID	Wetland Type Cowardin	Cover Type Edinger	Acres	Linear Feet	Notes	Flow Regime
1	Culvert	-	-	52.78589884	12 in diameter. Agricultural driveway crossing, connects D-09 and D-08.	-
D-01	Ditch	Ditch / artificial intermittent stream	-	1266.290132	Largely off-site drainage from the northwest that flows southeast through forest to a drainage intake (#2) where it is directed underground.	Intermittent
D-02	Ditch	Ditch / artificial intermittent stream	-	196.2469444	Flows to D-01.	Intermittent
D-03	Ditch	Ditch / artificial intermittent stream	-	758.8443934	Off-site drainage in hedgerow that flows to a drainage intake (#2).	Intermittent
D-04	Ditch	Ditch / artificial intermittent stream	-	1826.76636	Main drainage for agricultural field, flowing Southeast; highly incised channel (1-8 ft vertical bank), infested with invasives. Modern yellow plastic drain tile visible in banks.	Intermittent
D-05	Ditch	Ditch / artificial intermittent stream	-	273.0101535	Drainage for agricultural field; steep sides (3-4 ft high), high invasive plant species cover.	Intermittent
D-06	Ditch	Ditch / artificial intermittent stream	-	1216.217059	Connects D-05 and D-07 to PEM-04, partly off-site.	Intermittent
D-07	Ditch	Ditch / artificial intermittent stream	-	817.1660835	Along south edge of agricultural field, flows to D-06.	Intermittent
D-08	Ditch	Ditch / artificial intermittent stream	-	620.656056	Along East side of farm driveway, drains adjacent field.	Intermittent
D-09	Ditch	Ditch / artificial intermittent stream	-	960.6810034	Along West side of farm driveway, drains adjacent field (PEM-08).	Intermittent
S-01	Stream	Stream	-	789.5750632	Stream flowing through northwestern forested area, connecting to a drainage intake (#1).	Perennial
PEM-01	PEM	Shallow emergent	2.13999837121	-	Wet meadow impacted by agriculture, invaded with Lythrum salicaria and Phalaris arundinacea.	Intermittent
PEM-02	PEM	Shallow emergent	1.00822703285	-	Actively farmed wet area with high clay content and yellowing crops.	Ephemeral
PEM-03	PEM	Shallow emergent	0.0897449341633	-	Surrounds D-04, starting near a drainage structure surface intake (#2).	Intermittent

PEM-04	PEM	Shallow emergent	0.785898161211	-	Wet meadow at end of D-04 and D-06. Surrounded by upland forest, agriculture and PSS-04.	Intermittent
PEM-05	PEM	Shallow emergent	0.144791694796	-	Emergent portion of larger wetland complex along Fish Creek, extends off-site.	Intermittent
PEM-06	PEM	Shallow emergent	0.889331599197	-	Surrounds D-05. Wet meadow mostly consisting of invasives.	Intermittent
PEM-07	PEM	Shallow emergent	4.81889340799	-	Wet meadow receiving drainage from D-08 and D-09.	Intermittent
PEM-08	PEM	Shallow emergent	1.32209413701	-	Agricultural field abandoned due to excessive hydrology. High invasive plant species cover.	Intermittent
PFO-01	PFO	Red maple- hardwood swamp	2.49065767426	-	Along south edge of agricultural field, surrounds D-07.	Intermittent
PFO-02	PFO	Red maple- hardwood swamp	0.118224584218	-	Surrounds D-04, at south edge of agricultural field.	Intermittent
PSS-01	PSS	Scrub shrub	0.319465447661	-	Narrow strip that surrounds D-08.	Intermittent
PSS-02	PSS	Scrub shrub	0.140660407952	-	Slope that receives hydrology from D-09 / PEM-07.	Intermittent
PSS-03	PSS	Scrub shrub	0.151919213906	-	Where D-05 and D-07 intersect to form D-06.	Intermittent
PSS-04	PSS	Scrub shrub	3.95537226446	-	Portion of larger wetland complex along Fish Creek.	Intermittent
PSS-05	PSS	Scrub shrub	0.855788268705	-	Portion of larger wetland complex along Fish Creek.	Intermittent

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey Rd City/County: Oswego Sampling Date: 5/17/24
Applicant/Owner: TWT State: NY Sampling Point: SP1-U
Investigator(s): MH, HF, KG Section, Township, Range: ____
Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none): ____ Slope (%): ____
Subregion (LRR or MLRA): LRR L Lat: 43.295163 Long: -76.278404 Datum: ____
Soil Map Unit Name: ScB: Scriba gravelly fine sandy loam NWI classification: ____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are “Normal Circumstances” present? Yes ____ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	**Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:	____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

____ Surface Water (A1)
____ High Water Table (A2)
____ Saturation (A3)
____ Water Marks (B1)
____ Sediment Deposits (B2)
____ Drift Deposits (B3)
____ Algal Mat or Crust (B4)
____ Iron Deposits (B5)
____ Inundation Visible on Aerial Imagery (B7)
____ Sparsely Vegetated Concave Surface (B8)
____ Water-Stained Leaves (B9)
____ Aquatic Fauna (B13)
____ Marl Deposits (B15)
____ Hydrogen Sulfide Odor (C1)
____ Oxidized Rhizospheres on Living Roots (C3)
____ Presence of Reduced Iron (C4)
____ Recent Iron Reduction in Tilled Soils (C6)
____ Thin Muck Surface (C7)
____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

____ Surface Soil Cracks (B6)
____ Drainage Patterns (B10)
____ Moss Trim Lines (B16)
____ Dry-Season Water Table (C2)
____ Crayfish Burrows (C8)
____ Saturation Visible on Aerial Imagery (C9)
____ Stunted or Stressed Plants (D1)
____ Geomorphic Position (D2)
____ Shallow Aquitard (D3)
____ Microtopographic Relief (D4)
____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____
Water Table Present? Yes ____ No x Depth (inches): ____
Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP1-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size: 5 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. *Ranunculus sceleratus*	4	No	OBL
2. *Cerastium fontanum*	8	No	FACU
3. *Poa annua*	75	Yes	FACU
4. *Veronica peregrina*	5	No	FAC
5. *Poa pratensis*	12	No	FACU
6. *Plantago major*	1	No	FACU
7. *Plantago lanceolata*	1	No	FACU
8.			
9.			
10.			
11.			
12.			
	106 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	4	x 1 =	4
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	97	x 4 =	388
UPL species	0	x 5 =	0
Column Totals:	106 (A)		407 (B)

Prevalence Index = B/A = 3.84

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP1-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/2	100					Loamy/Clayey	
9-10	10YR 2/2	87	10YR 5/6	5	C	M	Loamy/Clayey	Prominent redox concentrations
			7.5YR 4/6	8	C	M		Prominent redox concentrations
10-12	10YR 5/6	100					Loamy/Clayey	
12-16	7.5YR 4/6	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey Rd City/County: Oswego Sampling Date: 5/17/24

Applicant/Owner: TWT State: NY Sampling Point: SP1-W

Investigator(s): MH, HF, KG Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none): ___ Slope (%): ___

Subregion (LRR or MLRA): LRR L Lat: 43.295302 Long: -76.278988 Datum: ___

Soil Map Unit Name: ___ NWI classification: ___

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): ___

Saturation Present? Yes X No ___ Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP1-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	5	Yes	FACW
2. *Cornus racemosa*	1	No	FAC
3.			
4.			
5.			
6.			
7.			
	6 =Total Cover		

Herb Stratum (Plot size: 5 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juncus effusus*	40	Yes	OBL
2. *Onoclea sensibilis*	4	No	FACW
3. *Lythrum salicaria*	2	No	OBL
4. *Rumex crispus*	2	No	FAC
5. *Lysimachia nummularia*	8	No	FACW
6. *Phalaris arundinacea*	50	Yes	FACW
7. *Glechoma hederacea*	1	No	FACU
8. *Barbarea vulgaris*	1	No	FAC
9. *Galium mollugo*	1	No	FACU
10. *Ranunculus acris*	20	No	FAC
11.			
12.			
	129 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	42	x 1 =	42
FACW species	67	x 2 =	134
FAC species	24	x 3 =	72
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	135 (A)		256 (B)

Prevalence Index = B/A = 1.90

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP1-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/2	98	10YR 5/8	2	C	M	Loamy/Clayey	Prominent redox concentrations
14-18	10YR 5/4	80	10YR 3/1	20	C	M	Sandy	Distinct redox concentrations

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
? Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___
Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey Rd City/County: Oswego Sampling Date: 5/17/24

Applicant/Owner: TWT State: NY Sampling Point: SP2-U

Investigator(s): MH, HF, KG Section, Township, Range: ____

Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none): ____ Slope (%): ____

Subregion (LRR or MLRA): LRR L Lat: 43.298023 Long: -76.272975 Datum: ____

Soil Map Unit Name: ____ NWI classification: ____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? Yes ____ No X Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP2-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. *Trifolium repens*	8	No	FACU
2. *Trifolium pratense*	4	No	FACU
3. *Sonchus asper*	3	No	FACU
4. *Cerastium fontanum*	60	Yes	FACU
5. *Veronica peregrina*	5	No	FAC
6. *Plantago lanceolata*	10	No	FACU
7. *Plantago major*	10	No	FACU
8. *Taraxacum officinale*	2	No	FACU
9. *Erigeron annuus*	4	No	FACU
10. *Barbarea vulgaris*	4	No	FAC
11. *Daucus carota*	1	No	UPL
12.			
	111 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	9	x 3 =	27
FACU species	101	x 4 =	404
UPL species	1	x 5 =	5
Column Totals:	111 (A)		436 (B)

Prevalence Index = B/A = 3.93

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP2-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/4	100					Loamy/Clayey	
6-16	10YR 4/3	90	10YR 4/6	10	C	M	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey Rd City/County: Oswego Sampling Date: 5/17/24
Applicant/Owner: TWT State: NY Sampling Point: SP2-W
Investigator(s): MH, HF, KG Section, Township, Range: ___
Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none): ___ Slope (%): ___
Subregion (LRR or MLRA): LRR L Lat: 43.298485 Long: -76.272439 Datum: ___
Soil Map Unit Name: ___ NWI classification: ___
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): ___
Water Table Present? Yes X No ___ Depth (inches): 3
Saturation Present? Yes X No ___ Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP2-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size: 5 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Phalaris arundinacea*	90	Yes	FACW
2. *Equisetum arvense*	3	No	FAC
3. *Lythrum salicaria*	6	No	OBL
4. *Juncus effusus*	7	No	OBL
5. *Lysimachia nummularia*	2	No	FACW
6. *Solidago gigantea*	3	No	FACW
7. *Onoclea sensibilis*	10	No	FACW
8. *Mentha aquatica*	1	No	OBL
9. *Galium obtusum*	2	No	FACW
10.			
11.			
12.			
	124 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	14	x 1 =	14
FACW species	107	x 2 =	214
FAC species	3	x 3 =	9
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	124 (A)		237 (B)

Prevalence Index = B/A = 1.91

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP2-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100						
8-23	10YR 4/3	92	10YR 5/8	3	C	M		Prominent redox concentrations
			10YR 3/1	5	C	M		Distinct redox concentrations

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Pennelville/Oswego Sampling Date: 7/25/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP3U

Investigator(s): EF,HF,KH Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none Flat Slope (%) 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: ___ Long: ___ Datum: WGS 84

Soil Map Unit Name ___ NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x

Hydric Soil Present? Yes ___ No x

Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? Yes ___ **No** x

If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Soy bean thriving over 30 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP3U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Mix of upland and wetland species Bitternut hickory, Aspen, and black cherry, Scattered dead ash trees, 100% herb cover, 60% tree cover, & shrub 15%

SOIL Sampling Point: SP3U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	5yr 5/1	100					Loamy/Clayey	
6-10	7.5yr 7/1	90	7.5yr 6/6	10			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
? Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: __________

Depth (inches): __________

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Hastings/Oswego Sampling Date: 7/25/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP3W
Investigator(s): EF,HF,KH Section, Township, Range: ____
Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none ____ Slope (%) ____
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.294121 Long: -76.272899 Datum: WGS 84
Soil Map Unit Name ____ NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ____
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes x No ____
Wetland Hydrology Present? Yes x No ____

Is the Sampled Area within a Wetland? **Yes** x **No** ____
If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____
Water Table Present? Yes ____ No x Depth (inches): ____
Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** x **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology, except oxidized root channels

VEGETATION – Use scientific names of plants.

Sampling Point: SP3W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1. *Prunus serotina*	15	Yes	FACU
2. *Acer rubrum*	30	Yes	FAC
3. *Carya cordiformis*	7	No	FAC
4. *Populus tremuloides*	20	Yes	FACU
5.			
6.			
7.			
	72	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1. *Quercus rubra*	3	No	FACU
2. *Fagus grandifolia*	3	No	FACU
3. *Carya cordiformis*	10	Yes	FAC
4. *Fraxinus pennsylvanica*	5	Yes	FACW
5.			
6.			
7.			
	21	=Total Cover	

Herb Stratum (Plot size:)			
1. *Onoclea sensibilis*	50	Yes	FACW
2. *Solidago rugosa*	10	No	FAC
3. *Lysimachia nummularia*	20	Yes	FACW
4. *Toxicodendron radicans*	5	No	FAC
5. *Impatiens capensis*	7	No	FACW
6. *Symphyotrichum lanceolatum*	5	No	FACW
7. *Athyrium filix-femina*	2	No	UPL
8. *Geum canadense*	5	No	FAC
9.			
10.			
11.			
12.			
	104	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	87	x 2 =	174
FAC species	67	x 3 =	201
FACU species	41	x 4 =	164
UPL species	2	x 5 =	10
Column Totals	197	(A)	549 (B)

Prevalence Index = B/A = 2.79

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP3W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/4	5			Loamy/Clayey	
10-16	7.5yr 5/2	65	7.5yr 4/1	15			Loamy/Clayey	
			7.5yr 5/6	20				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** X **No** ____

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Test pit down to 20 inches

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Hastings/Oswego Sampling Date: 7/25/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP4U
Investigator(s): EF,HF,KH Section, Township, Range: ___
Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none Flat Slope (%) ___
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: ___ Long: ___ Datum: WGS 84
Soil Map Unit Name ___ NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present?	Yes ___	No x
Hydric Soil Present?	Yes ___	No x
Wetland Hydrology Present?	Yes ___	No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point in an agricultural field planted with soybean. Soybean is thriving over 30 inches tall, man-made drainage feature approximately 20 feet away and 5 feet lower than sample point

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology, Bottom of drainage ditch has water, Plants in ditch cat tail, drainage ditch flows south toward wooded area, drain tile to ditch

VEGETATION – Use scientific names of plants.

Sampling Point: SP4U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW specie	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide support data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ___ No ___

Remarks: (Include photo numbers here or on a separate sheet.)
Soy bean is thriving no indication of stress

SOIL

Sampling Point: SP4U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ______

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Soils are consistent from 1-16 inches

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Hastings/Oswego Sampling Date: 7/25/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP5U
Investigator(s): EF,HF,KH Section, Township, Range: ___
Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none ___ Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.294791 Long: -76.273225 Datum: WGS 84
Soil Map Unit Name ___ NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x
Hydric Soil Present? Yes ___ No x
Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point located adjacent deep ditch, ditch is six feet lower , and flowing water moving across gray clay

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP5U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP5U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Soils deeper than10 inches are consistent with the upper half

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Hastings/Oswego Sampling Date: 7/25/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP6U
Investigator(s): EF,HF,KH Section, Township, Range: ___
Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none ___ Slope (%) ___
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.295898 Long: -76.274238 Datum: WGS 84
Soil Map Unit Name ___ NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x
Hydric Soil Present? Yes ___ No x
Wetland Hydrology Present? Yes X No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
x Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP6U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW specie	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide support data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP6U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** X **No** ____

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Hastings/Oswego Sampling Date: 7/25/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP7U

Investigator(s): EF,HF,KH Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none concave Slope (%) 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: ___ Long: ___ Datum: WGS 84

Soil Map Unit Name ___ NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x

Hydric Soil Present? Yes ___ No x

Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? Yes ___ No X

If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Slight depression leading toward the main drainage

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes X No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP7U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

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Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP7U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Hastings/Oswego Sampling Date: 7/25/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP8U
Investigator(s): EF,HF Section, Township, Range: ______
Landform (hillside, terrace, etc.): ______ Local relief (concave, convex, none concave Slope (%) 0-1
Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: 43.29741816 Long: -76.27570168 Datum: WGS 84
Soil Map Unit Name RhB: Rhinebeck silt loam, 2-6% slopes NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x
Hydric Soil Present? Yes ___ No x
Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID ______

Remarks: (Explain alternative procedures here or in a separate report.)
Slight depression leading toward the main drainage, area shows up as old drainage feature

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP8U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
plants are thiving with no signs of yellowing or stunted growth

SOIL

Sampling Point: SP8U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10yr 4/1	90	5yr 4/6	10			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_x_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ______

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Hastings/Oswego Sampling Date: 7/25/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP9U

Investigator(s): EF,HF Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none concave Slope (%) 0-1

Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: 43.29745458 Long: -76.27547743 Datum: WGS 84

Soil Map Unit Name RhB: Rhinebeck silt loam, 2-6% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x

Hydric Soil Present? Yes ___ No x

Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? Yes ___ No X

If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
area is downslope of a small wet meadow area that is just north of sample point on adjacent property

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP9U

Tree Stratum (Plot size: ______)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size: ______)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW specie	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide support data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
soy bean is thiving no indication of stress

SOIL

Sampling Point: SP9U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Hastings/Oswego Sampling Date: 7/25/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP10U

Investigator(s): EF,HF,KH Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none concave Slope (%) 0-1

Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: 43.29746309 Long: -76.27439574 Datum: WGS 84

Soil Map Unit Name RhB: Rhinebeck silt loam, 2-6% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x

Hydric Soil Present? Yes ___ No x

Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
slight depression/drainage feature shown on aerial

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology, agricultural field has signs of tile drainage

VEGETATION – Use scientific names of plants.

Sampling Point: SP10U

Tree Stratum (Plot size: ____)		Absolute % Cover	Dominant	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
			=Total Cover	

Sapling/Shrub Stratum (Plot size: ____)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
			=Total Cover	

Herb Stratum (Plot size: ____)				
1.	*Glycine max*	100	Yes	UPL
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		100	=Total Cover	

Woody Vine Stratum (Plot size: ____)				
1.				
2.				
3.				
4.				
			=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	100	x 5 =	500	
Column Totals	100	(A)	500	(B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
soy bean is thriving no indication of stress

SOIL

Sampling Point: SP10U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey City/County: Hastings/Oswego Sampling Date: 7/25/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP11U

Investigator(s): EF,HF Section, Township, Range: ____

Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none concave Slope (%) 0-1

Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: 43.2979922350227 Long: -76.2735959195864 Datum: WGS 84

Soil Map Unit Name RhB: Rhinebeck silt loam, 2-6% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ____

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ____ No x

Hydric Soil Present? Yes ____ No x

Wetland Hydrology Present? Yes ____ No x

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)
area selected due to an up slope area of wet meadow in the non agricultural portion of the field

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____

Water Table Present? Yes ____ No x Depth (inches): ____

Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP11U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW specie	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	100	x 5 =	500	
Column Totals	100	(A)	500	(B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide support data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
soy bean is thriving no signs of stress

SOIL

Sampling Point: SP11U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	7.5yr 4/1	95	7.5yr 5/6	5			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** X **No** ___

Remarks:
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Appendix D.

Category	Common Name	Scientific Name	Conservation Status	Indicator Status	Native	Buxton Creek	Lower Caughdenoy Creek	Oneida River	Fish Creek	Upper Caughdenoy Creek	Sixmile Creek
Amphibian	American toad	*Anaxyrus americanus*	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓	✓	✓	
Amphibian	gray treefrog	*Dryophytes versicolor*	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Amphibian	northern green frog	*Lithobates clamitans melanc*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓	✓	
Amphibian	northern leopard frog	*Lithobates pipiens*	S5 G5: secure in NYS and globally	-	Yes		✓		✓	✓	
Amphibian	wood frog	*Lithobates sylvaticus*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	red-winged blackbird	*Agelaius phoeniceus*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	wood duck	*Aix sponsa*	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	mallard	*Anas platyrhynchos*	S5 G5: secure in NYS and globally	-	Yes			✓			✓
Bird	American pipit	*Anthus rubescens*	Least concern	-	Yes			✓		✓	✓
Bird	sandhill crane	*Antigone canadensis*	S1B G5: critically imperiled (breeding) in NYS and secure globally	-	Yes			✓			
Bird	great blue heron	*Ardea herodias*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	tufted titmouse	*Baeolophus bicolor*	S5 G5: secure in NYS and globally	-	Yes			✓		✓	
Bird	Canada goose	*Branta canadensis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓		✓	✓
Bird	red-tailed hawk	*Buteo jamaicensis*	S5 G5: secure in NYS and globally	-	Yes			✓			✓
Bird	green heron	*Butorides virescens*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	northern cardinal	*Cardinalis cardinalis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	turkey vulture	*Cathartes aura*	S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			✓
Bird	killdeer	*Charadrius vociferus*	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Bird	northern harrier	*Circus hudsonius*	(NYS Threatened Species) S3B, S3N G5: vulnerable (breeding/non-breeding) in NYS and secure globally	-	Yes				✓		✓
Bird	northern flicker	*Colaptes auratus*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	American crow	*Corvus brachyrhynchos*	S5 G5: secure in NYS and globally	-	Yes			✓	✓		
Bird	blue jay	*Cyanocitta cristata*	S5 G5: secure in NYS and globally	-	Yes		✓	✓			
Bird	pileated woodpecker	*Dryocopus pileatus*	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	gray catbird	*Dumetella carolinensis*	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓	✓	✓			
Bird	willow flycatcher	*Empidonax traillii*	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓					
Bird	rusty blackbird	*Euphagus carolinus*	(NYS High Priority Species of Greatest Conservation Need) S2B G4: imperiled (breeding) in NYS and apparently secure globally	-	Yes			✓			
Bird	common yellowthroat	*Geothlypis trichas*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	bald eagle	*Haliaeetus leucocephalus*	(NYS Threatened Species) S2S3B, S2N G5: imperiled/vulnerable (breeding) and imperiled (non-breeding) in NYS, secure globally	-	Yes			✓		✓	✓
Bird	barn swallow	*Hirundo rustica*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	wood thrush	*Hylocichla mustelina*	S5B G4: secure (breeding) in NYS and apparently secure globally	-	Yes			✓	✓		
Bird	Baltimore oriole	*Icterus galbula*	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓		✓			
Bird	belted kingfisher	*Megaceryle alcyon*	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	red-bellied woodpecker	*Melanerpes carolinus*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	wild turkey	*Meleagris gallopavo*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	song sparrow	*Melospiza melodia*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	great crested flycatcher	*Myiarchus crinitus*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	osprey	*Pandion haliaetus*	(NYS Species of Special Concern) S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			
Bird	rose-breasted grosbeak	*Pheucticus ludovicianus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	eastern towhee	*Pipilo erythrophthalmus*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓				

Bird	American woodcock	*Scolopax minor*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	yellow warbler	*Setophaga petechia*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	eastern bluebird	*Sialia sialis*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	American goldfinch	*Spinus tristis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	European starling	*Sturnus vulgaris*	SNA G5: not applicable in NYS and secure globally	-	No				✓		
Bird	solitary sandpiper	*Tringa solitaria*	Least concern	-	Yes			✓			
Bird	American robin	*Turdus migratorius*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	eastern kingbird	*Tyrannus tyrannus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	warbling vireo	*Vireo gilvus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	mourning dove	*Zenaida macroura*	S5 G5: secure in NYS and globally	-	Yes			✓			
Fish	brown bullhead	*Ameiurus nebulosus*	Least concern	-	Yes		✓				
Fungi	morel	*Morchella esculenta*	-	-	Yes		✓				
Mammal	coyote	*Canis latrans*	Least concern	-	Yes		✓		✓		
Mammal	North American beaver	*Castor canadensis*	Least concern	-	Yes		✓				
Mammal	North American porcupine	*Erethizon dorsatum*	Least concern	-	Yes						✓
Mammal	white-tailed deer	*Odocoileus virginianus*	Least concern	-	Yes	✓	✓	✓	✓	✓	✓
Mammal	raccoon	*Procyon lotor*	Least concern	-	Yes		✓		✓	✓	
Mammal	eastern cottontail	*Sylvilagus floridanus*	Least concern	-	Yes			✓	✓		
Plant	box elder	*Acer negundo*	-	FAC	Yes						✓
Plant	red maple	*Acer rubrum*	-	FAC	Yes		✓	✓	✓	✓	✓
Plant	silver maple	*Acer saccharinum*	-	FACW	Yes		✓	✓			
Plant	sugar maple	*Acer saccharum*	-	FACU	Yes				✓		
Plant	common yarrow	*Achillea millefolium*	-	FACU	Yes		✓				
Plant	sweet flag	*Acorus calamus*	-	OBL	No		✓	✓			
Plant	common agrimony	*Agrimonia gryposepala*	-	FACU	Yes			✓		✓	
Plant	Rhode Island bentgrass	*Agrostis capillaris*	-	FAC	No					✓	
Plant	redtop	*Agrostis gigantea*	-	FACW	No	✓	✓			✓	✓
Plant	creeping bent	*Agrostis stolonifera*	-	FACW	No	✓				✓	
Plant	American water plantain	*Alisma subcordatum*	-	OBL	Yes		✓				
Plant	speckled alder	*Alnus incana*	-	FACW	Yes			✓			
Plant	New York fern	*Amauropelta noveboracensi*	-	FAC	Yes			✓			
Plant	common ragweed	*Ambrosia artemisiifolia*	-	FACU	Yes			✓		✓	
Plant	downy serviceberry	*Amelanchier arborea*	-	FACU	Yes		✓				
Plant	hog peanut	*Amphicarpaea bracteata*	-	FAC	Yes		✓				
Plant	Canada anemone	*Anemone canadensis*	-	FACW	Yes		✓				
Plant	sweet vernal grass	*Anthoxanthum odoratum*	-	FACU	No	✓	✓	✓		✓	
Plant	Indian hemp	*Apocynum cannabinum*	-	FAC	Yes			✓		✓	
Plant	swamp milkweed	*Asclepias incarnata*	-	OBL	Yes			✓			
Plant	common milkweed	*Asclepias syriaca*	-	UPL	Yes		✓	✓			✓
Plant	yellow birch	*Betula alleghaniensis*	-	FAC	Yes				✓		
Plant	gray birch	*Betula populifolia*	-	FAC	Yes					✓	
Plant	nodding beggar ticks	*Bidens cernua*	-	OBL	Yes					✓	
Plant	devil's beggar ticks	*Bidens frondosa*	-	FACW	Yes			✓		✓	
Plant	hairy brome	*Bromus commutatus*	-	-	No			✓			
Plant	smooth brome	*Bromus inermis*	-	-	No		✓	✓			
Plant	common woodland sedge	*Carex blanda*	-	FAC	Yes		✓				
Plant	bristly sedge	*Carex comosa*	-	OBL	Yes			✓			
Plant	fringed sedge	*Carex crinita*	-	OBL	Yes		✓	✓			
Plant	large yellow sedge	*Carex flava*	-	OBL	Yes			✓			
Plant	graceful sedge	*Carex gracillima*	-	FACU	Yes			✓			
Plant	lake sedge	*Carex lacustris*	-	OBL	Yes						✓
Plant	bladder sedge	*Carex intumescens*	-	FACW	Yes		✓	✓		✓	
Plant	hop sedge	*Carex lupulina*	-	OBL	Yes		✓	✓			
Plant	sallow sedge	*Carex lurida*	-	OBL	Yes			✓			
Plant	troublesome sedge	*Carex molesta*	-	FAC	Yes			✓			
Plant	cyperus-like sedge	*Carex pseudocyperus*	-	OBL	Yes					✓	
Plant	broom sedge	*Carex scoparia*	-	FACW	Yes		✓	✓			✓
Plant	awl-fruited sedge	*Carex stipata*	-	OBL	Yes			✓		✓	
Plant	tussock sedge	*Carex stricta*	-	OBL	Yes				✓	✓	✓
Plant	fox sedge	*Carex vulpinoidea*	-	OBL	Yes		✓	✓		✓	✓
Plant	ironwood	*Carpinus caroliniana*	-	FAC	Yes				✓	✓	
Plant	bitternut hickory	*Carya cordiformis*	-	FAC	Yes		✓			✓	
Plant	shagbark hickory	*Carya ovata*	-	FACU	Yes		✓	✓	✓	✓	
Plant	buttonbush	*Cephalanthus occidentalis*	-	OBL	Yes		✓				
Plant	white turtle head	*Chelone glabra*	-	OBL	Yes			✓		✓	
Plant	lamb's quarters	*Chenopodium album*	-	FACU	No					✓	
Plant	enchanter's nightshade	*Circaea canadensis*	-	FACU	Yes		✓	✓			
Plant	bull thistle	*Cirsium vulgare*	-	FACU	No		✓				

Plant	silky dogwood	*Cornus amomum*	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	gray dogwood	*Cornus racemosa*	-	FAC	Yes		✓	✓	✓		✓
Plant	red-osier dogwood	*Cornus sericea*	-	FACW	Yes						✓
Plant	hawthorn	*Crataegus sp.*	-	-	-		✓				✓
Plank	common yellow nut sedge	*Cyperus esculentus*	-	FACW	Yes			✓		✓	
Plant	false yellow nut sedge	*Cyperus strigosus*	-	FACW	Yes			✓		✓	
Plant	orchard grass	*Dactylis glomerata*	-	FACU	No	✓				✓	
Plant	wild carrot	*Daucus carota*	-	UPL	No		✓				
Plant	water willow	*Decodon verticillatus*	-	OBL	Yes			✓			✓
Plant	tufted hair grass	*Deschampsia cespitosa*	-	-	Yes					✓	
Plant	digit grass	*Digitaria eriantha*	-	-	No		✓				
Plant	smooth crab grass	*Digitaria ischaemum*	-	FACU	No			✓			
Plant	tall flat-topped white aster	*Doellingeria umbellata*	-	FACW	Yes					✓	
Plant	common wood fern	*Dryopteris intermedia*	-	FAC	Yes		✓				✓
Plant	autumn olive	*Elaeagnus umbellata*	-	-	No		✓				
Plant	blunt spike rush	*Eleocharis obtusa*	-	OBL	Yes		✓			✓	✓
Plant	fringed wilowherb	*Epilobium ciliatum*	-	FACW	Yes					✓	
Plant	purpleleaf willowherb	*Epilobium coloratum*	-	OBL	Yes		✓	✓		✓	
Plant	field horsetail	*Equisetum arvense*	-	FAC	Yes				✓	✓	✓
Plant	scouringrush horsetail	*Equisetum hyemale*	-	FAC	Yes	✓			✓		
Plant	annual daisy fleabane	*Erigeron annuus*	-	FACU	Yes			✓			
Plant	small daisy fleabane	*Erigeron strigosus*	-	FACU	Yes			✓			
Plant	yellow trout lily	*Erythronium americanum*	-	-	Yes		✓		✓		
Plant	boneset	*Eupatorium perfoliatum*	-	FACW	Yes			✓		✓	✓
Plant	common flat-topped goldenrod	*Euthamia graminifolia*	-	FAC	Yes					✓	
Plant	spotted Joe Pye weed	*Eutrochium maculatum*	-	OBL	Yes	✓					
Plant	American beech	*Fagus grandifolia*	-	FACU	Yes				✓	✓	
Plant	common wild strawberry	*Fragaria virginiana*	-	FACU	Yes		✓			✓	✓
Plant	glossy buckthorn	*Frangula alnus*	-	FAC	No		✓				
Plant	white ash	*Fraxinus americana*	-	FACU	Yes		✓				✓
Plant	green ash	*Fraxinus pennsylvanica*	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	hedge bedstraw	*Galium album*	-	FACU	Yes	✓		✓		✓	
Plant	common marsh bedstraw	*Galium palustre*	-	OBL	Yes		✓			✓	
Plant	yellow avens	*Geum aleppicum*	-	FAC	Yes		✓	✓			
Plant	white avens	*Geum canadense*	-	FAC	Yes			✓			✓
Plant	town avens	*Geum urbanum*	-	-	No		✓	✓			
Plant	American manna grass	*Glyceria maxima*	-	OBL	No			✓		✓	
Plant	fowl manna grass	*Glyceria striata*	-	OBL	Yes		✓	✓		✓	
Plant	soybean	*Glycine max*	-	-	-	✓	✓	✓	✓	✓	✓
Plant	marsh cubweed	*Gnaphalium uliginosum*	-	FAC	No			✓			
Plant	dame's rocket	*Hesperis matronalis*	-	FACU	No	✓					
Plant	common frogbit	*Hydrocharis morsus-ranae*	-	OBL	No			✓			
Plant	Eurasian live forever	*Hylotelephium telephium*	-	-	No				✓		
Plant	St. John's wort	*Hypericum sp.*	-	-	-						✓
Plant	spotted jewelweed	*Impatiens capensis*	-	FACW	Yes	✓	✓	✓		✓	
Plant	blue flag	*Iris versicolor*	-	OBL	Yes		✓				
Plant	soft rush	*Juncus effusus*	-	OBL	Yes	✓	✓	✓	✓	✓	✓
Plant	path rush	*Juncus tenuis*	-	FAC	Yes			✓			✓
Plant	rice cut grass	Leersia oryzoides	-	OBL	Yes					✓	✓
Plant	spicebush	*Lindera benzoin*	-	FACW	Yes		✓	✓			
Plant	tulip poplar	*Liriodendron tulipifera*	-	FACU	Yes	✓				✓	
Plant	Indian tobacco	*Lobelia inflata*	-	FACU	Yes			✓			
Plant	great blue lobelia	*Lobelia siphilitica*	-	FACW	Yes						✓
Plant	tall rye grass	*Lolium arundinace*	-	FACU	No			✓			
Plant	Japanese honeysuckle	*Lonicera japonica*	-	FACU	No		✓				
Plant	honeysuckle	*Lonicera spp.*	-	-	No	✓	✓	✓	✓	✓	✓
Plant	Tatarian honeysuckle	*Lonicera tatarica*	-	FACU	No		✓	✓			✓
Plant	water purslane	*Ludwigia palustris*	-	OBL	Yes	✓		✓		✓	
Plant	water whorehound	*Lycopus americanus*	-	OBL	Yes			✓		✓	
Plant	moneywort	*Lysimachia nummularia*	-	FACW	No	✓	✓		✓	✓	
Plant	purple loosestrife	*Lythrum salicaria*	-	OBL	No	✓	✓	✓	✓	✓	
Plant	Canada mayflower	*Maianthemum canadense*	-	FACU	Yes				✓		
Plant	ostrich fern	*Matteuccia struthiopteris*	-	FAC	Yes			✓			
Plant	white sweet clover	*Melilotus albus*	-	FACU	No						✓
Plant	Allegheny monkey flower	*Mimulus ringens*	-	OBL	Yes					✓	
Plant	blackgum	*Nyssa sylvatica*	-	FAC	Yes			✓			
Plant	sensitive fern	*Onoclea sensibilis*	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	royal fern	*Osmunda regalis*	-	OBL	Yes			✓			
Plant	cinnamon fern	*Osmundastrum cinnamome*	-	FACW	Yes			✓			
Plant	yellow wood sorrel	*Oxalis dillenii*	-	FACU	Yes		✓			✓	
Plant	fall panic grass	*Panicum dichotomiflorum*	-	FACW	Yes						✓
Plant	Virginia creeper	*Parthenocissus quinquefolia*	-	FACU	Yes		✓	✓			
Plant	green arrow arum	*Peltandra virginica*	-	OBL	Yes		✓				
Plant	water pepper	*persicaria hydropiper*	-	OBL	No					✓	

Plant	lady's thumb	*Persicaria maculosa*	-	FAC	No			✓			
Plant	arrow-leaved tearthumb	*Persicaria sagittata*	-	OBL	Yes			✓			
Plant	jumpseed	*Persicaria virginiana*	-	FAC	Yes		✓	✓		✓	
Plant	reed canary grass	*Phalaris arundinacea*	-	FACW	No	✓	✓	✓	✓	✓	✓
Plant	common Timothy	*Phleum pratense*	-	FACU	No		✓			✓	
Plant	common reed	*Phragmites australis*	-	FACW	No	✓	✓	✓			
Plant	pokeweed	*Phytolacca americana*	-	FACU	Yes			✓			
Plant	Norway spruce	*Picea abies*	-	-	No		✓	✓	✓		
Plant	red spruce	*Picea rubens*	-	FACU	Yes		✓				
Plant	white pine	*Pinus strobus*	-	FACU	Yes		✓		✓		
Plant	English plantain	*Plantago lanceolata*	-	FACU	No	✓	✓		✓	✓	
Plant	common plantain	*Plantago major*	-	FACU	No	✓			✓	✓	✓
Plant	northern tubercled orchid	*Platanthera flava*	-	FACW	Yes			✓			
Plant	annual blue grass	*Poa annua*	-	FACU	No				✓		
Plant	wood bluegrass	*Poa nemoralias*	-	FACU	No			✓			
Plant	common Kentucky blue grass	*Poa pratensis*	-	FACU	No		✓			✓	✓
Plant	mayapple	*Podophyllum peltatum*	-	FACU	Yes			✓	✓		
Plant	eastern cottonwood	*Populus deltoides*	-	FAC	Yes		✓		✓		
Plant	quaking aspen	*Populus tremuloides*	-	FACU	Yes	✓	✓	✓	✓	✓	✓
Plant	oldfield cinquefoil	*Potentilla simplex*	-	FACU	Yes		✓				
Plant	Eurasian selfheal	*prunella vulgaris*	-	FAC	No					✓	
Plant	pin cherry	*Prunus pensylvanica*	-	FACU	Yes		✓				
Plant	black cherry	*Prunus serotina*	-	FACU	Yes		✓	✓	✓	✓	
Plant	bracken fern	*Pteridium aquilinum*	-	FACU	Yes			✓			
Plant	white oak	*Quercus alba*	-	FACU	Yes		✓				
Plant	red oak	*Quercus rubra*	-	FACU	Yes		✓	✓			
Plant	tall buttercup	*Ranunculus acris*	-	FAC	No	✓	✓			✓	
Plant	creeping buttercup	*Ranunculus repens*	-	FAC	No					✓	
Plant	cursed crowfoot	*Ranunculus sceleratus*	-	OBL	Yes	✓			✓		
Plant	Japanese knotweed	*Reynoutria japonica*	-	FACU	No				✓		
Plant	alder buckthorn	*Rhamnus alnifolia*	-	OBL	Yes		✓				
Plant	buckthorn	*Rhamnus cathartica*	-	FAC	No		✓	✓		✓	✓
Plant	staghorn sumac	*Rhus typhina*	-	-	Yes		✓				
Plant	multiflora rose	*Rosa multiflora*	-	FACU	No	✓	✓	✓	✓	✓	✓
Plant	swamp rose	*Rosa palustris*	-	OBL	Yes				✓		✓
Plant	common blackberry	*Rubus allegheniensis*	-	FACU	Yes		✓	✓			
Plant	swamp dewberry	*Rubus hispidus*	-	FACW	Yes			✓			
Plant	red raspberry	*Rubus ideaus*	-	FACU	No		✓	✓			
Plant	dwarf raspberry	*Rubus pubescens*	-	FACW	Yes			✓			
Plant	sheep sorrel	*Rumex acetosella*	-	FACU	No			✓			
Plant	curly dock	*Rumex crispus*	-	FAC	No	✓	✓	✓		✓	✓
Plant	broad-leaved dock	*Rumex obtusifolius*	-	FAC	No		✓			✓	
Plant	swamp dock	*Rumex verticillatus*	-	OBL	Yes			✓			
Plant	Bebb's willow	*Salix bebbiana*	-	FACW	Yes			✓			
Plant	pussy willow	*Salix discolor*	-	FACW	Yes		✓	✓	✓		
Plant	black willlow	*Salix nigra*	-	OBL	Yes		✓				
Plant	basket willow	*Salix purpurea*	-	FACW	No			✓			
Plant	common elderberry	*Sambucus nigra*	-	FACW	Yes				✓		
Plant	lizard's tail	*Saururus cernuus*	-	OBL	Yes		✓				
Plant	soft-stemmed bulrush	*Schoenoplectus tabernaemc*	-	OBL	Yes			✓			
Plant	dark-green bulrush	*Scirpus atrovirens*	-	OBL	Yes		✓	✓			
Plant	woolgrass	*Scirpus cyperinus*	-	OBL	Yes		✓		✓	✓	✓
Plant	mad dog skullcap	*Scutellaria lateriflora*	-	OBL	Yes			✓			
Plant	horse nettle	*Solanum carolinense*	-	FACU	Yes					✓	
Plant	bitter-sweet nightshade	*Solanum dulcamara*	-	FAC	No		✓	✓			
Plant	tall goldenrod	*Solidago altissima*	-	FACU	Yes		✓				✓
Plant	Canada goldenrod	*Solidago canadensis*	-	FACU	Yes	✓		✓		✓	
Plant	swamp goldenrod	*Solidago gigantea*	-	FACW	Yes		✓			✓	✓
Plant	common wrinkle-leaved goldenr	*Solidago rugosa*	-	FAC	Yes	✓	✓	✓		✓	✓
Plant	spiny-leaved sow thistle	*Sonchus asper*	-	FACU	No			✓	✓		
Plant	green-fruited bur-reed	*Sparganium chlorocarpum*	-	OBL	Yes			✓			
Plant	grass-leaved stitchwort	*Stellaria graminea*	-	UPL	No					✓	
Plant	white panicle aster	*Symphyotrichum lanceolatu*	-	FACW	Yes			✓		✓	✓
Plant	calico aster	*Symphyotrichum lateriflorun*	-	FAC	Yes		✓			✓	
Plant	new england aster	*Symphyotrichum novae-angl*	-	FACW	Yes						✓
Plant	purple-stemmed aster	*Symphyotrichum puniceum*	-	OBL	Yes	✓		✓		✓	✓
Plant	skunk cabbage	*Symplocarpus foetidus*	-	OBL	Yes				✓		
Plant	common dandelion	*Taraxacum officinale*	-	FACU	No	✓	✓	✓	✓	✓	✓
Plant	marsh fern	*Thelypteris palustris*	-	FACW	Yes		✓				
Plant	American basswood	*Tilia americana*	-	FACU	Yes			✓			
Plant	poison ivy	*Toxicodendron radicans*	-	FAC	Yes	✓	✓	✓	✓	✓	✓
Plant	red clover	*Trifolium pratense*	-	FACU	No	✓			✓	✓	✓
Plant	white clover	*Trifolium repens*	-	FACU	No	✓	✓			✓	✓
Plant	red trillium	*Trillium erectum*	-	FACU	Yes				✓		

Plant	white trillium	*Trillium grandiflorum*	-	-	Yes				✓		
Plant	eastern hemlock	*Tsuga canadensis*	-	FACU	Yes				✓	✓	
Plant	tower mustard	*Turritis glabra*	-	UPL	No			✓			
Plant	coltsfoot	*Tussilago farfara*	-	FACU	No		✓				
Plant	narrowleaf cattail	*Typha angustifolia*	-	OBL	No			✓			✓
Plant	hybrid cattail	*Typha glauca*	-	OBL	No	✓	✓	✓			
Plant	wide-leaved cattail	*Typha latifolia*	-	OBL	Yes		✓	✓			
Plant	cattail	*Typha sp.*	-	OBL	-	✓	✓	✓	✓	✓	✓
Plant	American elm	*Ulmus americana*	-	FACW	Yes		✓	✓	✓		✓
Plant	false hellebore	*Veratrum viride*	-	FACW	Yes				✓		
Plant	moth mullein	*Verbascum blattaria*	-	FACU	No			✓			
Plant	blue vervain	*Verbena hastata*	-	FACW	Yes	✓	✓			✓	
Plant	smooth arrowwood	*Viburnum dentatum*	-	FAC	Yes	✓	✓	✓		✓	✓
Plant	nannyberry	*Viburnum lentago*	-	FAC	Yes		✓	✓		✓	✓
Plant	tufted vetch	*Vicia cracca*	-	-	No			✓			✓
Plant	common blue violet	*Viola sororia*	-	FAC	Yes		✓				
Plant	riverbank grape	*Vitis riparia*	-	FAC	Yes		✓	✓			✓
Reptile	painted turtle	*Chrysemys picta*	S5 G5: secure in NYS and globally	-	Yes		✓				
Reptile	eastern garter snake	*Thamnophis sirtalis sirtalis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓		✓	

United States Department of the Interior

FISH AND WILDLIFE SERVICE
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In Reply Refer To: 04/11/2025 15:39:33 UTC
Project code: 2025-0082147
Project Name: Micron Stream and Wetland Mitigation

Federal Nexus: yes
Federal Action Agency (if applicable): Army Corps of Engineers

Subject: Technical assistance for 'Micron Stream and Wetland Mitigation'

Dear Kirsten Gerhardt:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on April 11, 2025, for "Micron Stream and Wetland Mitigation" (here forward, Project). This project has been assigned Project Code 2025-0082147 and all future correspondence should clearly reference this number.

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northeast Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative effect(s)), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17). Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no further consultation with, or concurrence from, the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical

habitat, formal consultation is required (except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect (NLAA)" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13]).

The IPaC results indicated the following species is (are) potentially present in your project area and, based on your responses to the Service’s Northeast DKey, you determined the proposed Project will have the following effect determinations:

Species	**Listing Status**	**Determination**
Indiana Bat (*Myotis sodalis*)	Endangered	May affect

Consultation with the Service is not complete. Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of “May Affect”. Please contact our New York Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Bog Buck Moth *Hemileuca maia menyanthevora (=H. iroquois)* Endangered
- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference the Project Code associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Micron Stream and Wetland Mitigation

2. Description

The following description was provided for the project 'Micron Stream and Wetland Mitigation':

> This is a stream and wetland mitigation project in which restoration will occur across six sites. On average, one site will be constructed per year, making the construction period a total of six years approximately. All six sites are located in Hastings or Schroeppel in Oswego County, NY. Two of the sites will undergo stream restoration, one for a degraded portion of Buxton Creek, the other for a degraded portion of Fish Creek. Here, the stream restoration will be integrated with wetland restoration to create a functioning stream/wetland complex. The remaining four sites will be for wetland restoration only.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.29530445,-76.2730783955508,14z

QUALIFICATION INTERVIEW

1. As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?

   Yes

2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

   Note: This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

   No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project?

   No

5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

   Note: If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

   Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

   No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

   No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

9. Is the lead federal action agency the Natural Resources Conservation Service?

   No

10. Will the proposed project involve the use of herbicide where listed species are present?

    Yes

11. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

    No

12. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

    Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

13. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

    Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

14. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

    For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

    No

15. Will the proposed project affect wetlands where listed species are present?

    This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

    Yes

16. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

    Yes

17. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?

    Yes

18. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

    No

19. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

    No

20. Will the proposed project involve the removal of excess sediment or debris, dredging or in-stream gravel mining where listed species may be present?

    No

21. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

    Note New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

    No

22. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

    No

23. Will the proposed project involve blasting where listed species may be present?

    No

24. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

    No

25. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

    Note: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream.

    Yes

26. Will the proposed project impact streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography?

    Yes

27. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

    No

28. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

    Yes

29. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

    No

30. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?

    Automatically answered
    No

31. [Semantic] Does the project intersect the Indiana bat AOI?

    Automatically answered
    Yes

32. Is the action area within 0.5 mile radius of any known hibernacula (caves or mines) openings or underground features?
    Note: If you are unsure, contact the appropriate Ecological Services Field Office before continuing through the key.

    No

33. Are trees present within the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter), answer "Yes". If you are unsure, answer “Yes.” Or refer to Appendix A of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for definitions and an assessment form that will assist you in determining if suitable habitat is present within your project's action area. Suitable summer habitat for Indiana bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat

    Yes

34. Is the action area within known occupied Indiana bat habitat? Known occupied Indiana bat habitat includes established conservation buffers (10-mile buffer around Phase 1 or Phase 2 hibernacula, 5-mile buffer around Phase 3 or Phase 4 hibernacula; 5-mile buffer around Indiana bat captures or detections; 2.5-mile buffer around known roosts).

    Yes

35. [Semantic] Does the project intersect the Indiana bat critical habitat?

    Automatically answered
    No

36. [Semantic] Does the project intersect the candy darter critical habitat?

    Automatically answered
    No

37. [Semantic] Does the project intersect the diamond darter critical habitat?

    Automatically answered
    No

38. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?

    Automatically answered
    No

39. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

    Automatically answered
    No

40. Do you have any other documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

1. Approximately how many acres of trees would the proposed project remove?

   .1

2. Approximately how many total acres of disturbance are within the disturbance/construction limits of the proposed project?

   500

3. Briefly describe the habitat within the construction/disturbance limits of the project site.

   Active soybean fields and man-made agricultural drainages. Some existing wetlands of degraded quality that will ultimately be rehabilitated.

IPAC USER CONTACT INFORMATION

Agency: The Wetland Trust, Inc.
Name: Kirsten Gerhardt
Address: 4729 State Route 414
City: Burdett
State: NY
Zip: 14818
Email kirsten.gerhardt@gmail.com
Phone: 3028242336

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To: 04/11/2025 15:07:39 UTC
Project Code: 2025-0082147
Project Name: Micron Stream and Wetland Mitigation

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

PROJECT SUMMARY

Project Code:	2025-0082147
Project Name:	Micron Stream and Wetland Mitigation
Project Type:	Restoration / Enhancement - Wetland
Project Description:	This is a stream and wetland mitigation project in which restoration will occur across six sites. On average, one site will be constructed per year, making the construction period a total of six years approximately. All six sites are located in Hastings or Schroeppel in Oswego County, NY. Two of the sites will undergo stream restoration, one for a degraded portion of Buxton Creek, the other for a degraded portion of Fish Creek. Here, the stream restoration will be integrated with wetland restoration to create a functioning stream/wetland complex. The remaining four sites will be for wetland restoration only.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.29530445,-76.2730783955508,14z

Counties: Oswego County, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Bog Buck Moth *Hemileuca maia menyanthevora (=H. iroquois)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8023	Endangered
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: The Wetland Trust, Inc.
Name: Kirsten Gerhardt
Address: 4729 State Route 414
City: Burdett
State: NY
Zip: 14818
Email kirsten.gerhardt@gmail.com
Phone: 3028242336

Appendix E.

Fish Creek
Invasive Species Management Plan (ISMP)

Oswego County, New York

PREPARED BY:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
www.thewetlandtrust.org

May 2025

1. Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Mitigation (PRM) package on behalf of Micron NY Semiconductor Manufacturing, LLC, is proposing to develop stream and wetland mitigation acres/credits at their Fish Creek Site in the Town of Schroeppel, Oswego County, New York. The Mitigation Plan (Plan) at Fish Creek will contribute toward the fulfillment of required stream and wetland mitigation for impacts associated with the Micron Semiconductor Fabrication Campus project (Proposed Development) in the town of Clay, Onondaga County, New York. This Plan will incorporate wetland Re-establishment, Rehabilitation, Enhancement, Preservation, and stream restoration which involves disturbance to soil during grading activities. As part of the Performance Standards for this Mitigation Plan, invasive species-specific standards must be met. The following is the Invasive Species Management Plan (ISMP) for this Site. It contains the practices and procedures TWT proposes to implement to control the presence and spread of invasive species.

This ISMP will improve ecological outcomes by using a combination of mechanical, biological, cultural, and chemical controls to manage invasive species while minimizing environmental disturbance. By prioritizing early detection, habitat restoration, and targeted interventions, this ISMP is designed to reduce reliance on herbicides, lower the risk of non-target impacts, and promote the long-term success of native vegetation. This adaptive approach enhances wetland resilience, supports biodiversity, and ensures compliance with mitigation performance standards in a sustainable and cost-effective manner.

1.1 Purpose and Goal

- **Adaptive Management Framework:** This plan operates under an adaptive management strategy, ensuring that invasive species control efforts are adjusted based on monitoring results, site conditions, and evolving regulatory guidance. Preventing the establishment or spread of invasive species at this Site relies upon:
    - Thorough baseline information data collection,
    - Avoiding and/or treating existing invasive species populations,
    - Incorporating construction techniques into the Plan that minimize conditions that are favorable for invasive species colonization, and
    - Implementing thorough monitoring and maintenance practices throughout the life of the Project and beyond.

- **Long-Term Ecological Success:** The presence of invasive plant species can degrade wetland function by outcompeting native vegetation, altering soil and water chemistry, and reducing habitat quality for wildlife. This ISMP aims to restore and sustain native plant communities using minimal environmental disturbance construction techniques per the Mitigation Plan.

- The goal of this ISMP is to minimize presence and prevent expansion of invasive species within the Mitigation Site not only during the monitoring period, but in perpetuity, as TWT is the long-term owner and steward. Invasive species control will be considered successful only if invasive species are kept at or below the threshold outlined in Section 6 and 9 of the Mitigation Plan for the work areas and 0% net increase in invasive species found elsewhere at the Site is realized. Annual monitoring will help determine whether goals are being met. If it is determined the Site is not on track with its goals, TWT will submit a revised Management Plan and implement Adaptive Management strategies that are approved by USACE and NYSDEC.

1.2 Regulatory Compliance

This ISMP seeks to meet specific performance standards set by the USACE and NYSDEC as a condition of permit approval. These include thresholds for native plant diversity, invasive species control, and hydrological function.

Invasive species targeted by this ISMP are based on those regulated by NYS Regulation 6 NYCRR Part 575 List of Prohibited and Regulated Invasive Plants, developed by the New York Invasive Species Council and New York Department of Environmental Conservation (NYSDEC) and any others identified by NYSDEC or USACE.

2. Identification

Four key invasive plant species regulated by NYCRR Part 575 were identified at the Site during baseline data collection. Key invasive plants include purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), and cattail (*Typha* spp.). These species are highly competitive, forming dense monocultures that outcompete native vegetation, diminish biodiversity, and disrupt wetland functionality. These species are found in most wetland areas on-site and adjacent on wetlands, affecting over 12 acres at the Fish Creek Site at the time of data collection. These species, their common characteristics and their typical locations are provided in Table 2-1 below. In addition to these dominant species, other invasive plants present in the area include Eurasian live forever (*Hylotelephium telephium*), honeysuckle (Lonicera spp.), moneywort (*Lysimachia nummularia*), Japanese knotweed (*Reynoutria japonica*), and multiflora rose (*Rosa multiflora*).

Additional invasive plant species have the potential of occurring at the site, particularly in the post-construction and long-term monitoring phase of this plan. These additional species may require treatment if they meet action thresholds outlined in **Section 6-1**, in which case they will be included in future versions of this plan and treated.

Table 2-1. Invasive Species at the Fish Creek Site 2024

Species	Common Characteristics	Photo ID	Typical Location
Common Reed (Phragmites australis)	A perennial grass that can grow over 15 feet tall, forming dense stands with hollow stems and blue-green leaves up to 20 inches long. It spreads through seeds, rhizomes, and stolons, often outcompeting native vegetation in wetlands.		Tidal and non-tidal marshes, lakes, swales, and backwater areas of rivers, and streams

Reed Canary Grass (Phalaris arundinacea)	A tall, perennial grass that grows 2 to 6 feet high, with rough, flat leaves and dense flower clusters that turn beige as they mature. It thrives in wetlands and spreads aggressively through seeds and rhizomes, forming dense stands that outcompete native vegetation.		Wet habitats such as wetlands, moist meadows, and riparian areas
Cattail (Typha spp.)	Tall, perennial wetland plants characterized by their long, narrow, sword-like leaves and distinctive brown, cylindrical flower spikes. They thrive in shallow waters of marshes, ponds, and lakes, spreading through both wind-dispersed seeds and extensive rhizome networks, often forming dense stands that can outcompete other vegetation.		Wetland habitats, including marshes, river and stream banks, pond edges, lakes, ditches, and reservoirs
Purple Loosestrife (Lythrum salicaria)	An erect, branching perennial native to Europe, Asia, and northern Africa, characterized by dense, woody rootstocks that can produce multiple stems, lance-shaped leaves arranged oppositely or alternately, and showy purple flowers with 5-7 petals clustered on tall spikes. This invasive species thrives in wetlands and moist soils, rapidly displacing native vegetation and disrupting local ecosystems.		Wetland habitats, including marshes, pond and lakeshores, stream and riverbanks, and ditches. Also spreads in upland soils, allowing it to spread into meadows and pastures.

3. Pre-Construction Phase

3.1 Baseline Data Collection

Baseline data collection will identify existing invasive communities within the mitigation site. This process will involve field surveys using GIS mapping, orthoimagery using drones, and photographic documentation to establish the extent and density of invasive species populations. Baseline surveys will include mapping of invasive species distribution with percentage cover estimates. The data collected will be used to inform the site preparation and treatment strategies outlined in later sections of this ISMP. See **Figures X** in **Section 8** for invasive species maps.

3.2 Site Preparation & Prevention Measures

Prior to construction, invasive species control measures will be implemented to prevent the spread and establishment of problematic species. These measures will include:

- **Pre-Treatment of Invasives**: Identified invasive species populations will be treated before ground disturbance begins. This may include manual removal, herbicide application, or smothering techniques depending on the species and infestation severity.
- **Equipment Cleaning Protocols:** Any construction equipment arriving on-site will be inspected and cleaned to remove soil, plant material, or seeds that may introduce invasive species.

4. Construction Phase

To minimize the introduction and spread of invasive species during construction activities, the following best practices will be implemented:

- **Minimize Disturbance**: Clearing and grading activities will be restricted to designated project areas, reducing soil disturbance that can facilitate invasive species establishment.
- **Erosion and Sediment Control**: Use of weed-free erosion control materials, such as straw mulch, biodegradable mats, and hydroseeding with native plant mixes, will prevent soil erosion while avoiding the introduction of invasive species.
- **Construction Site Hygiene**: All machinery and equipment will be cleaned before entering and leaving the site, particularly when working in or near known invasive species populations.
- **Hydrology Management**: The project aims to restore natural hydrological conditions where feasible, as proper hydrology can prevent the establishment of invasive wetland species.
- **Native Plant Seeding**: Following ground disturbance, native plants will be seeded and planted in treated areas to prevent re-colonization by invasive species.

5. Post-Construction Phase

5.1 Monitoring for Early Detection

To ensure invasive species control measures remain effective, post-construction monitoring will be conducted. Monitoring efforts will include:

- **GPS Mapping and Photo Documentation**: Recording any changes in invasive species distribution.
- **Upstream and Adjacent Area Inspections**: Identifying potential new sources of invasive species propagules.
- **Disturbance Event Tracking**: Observing site conditions after events like flooding or drought, which may encourage invasive species spread.

5.2 Long-Term Monitoring & Adaptive Management

- Yearly Assessments: Evaluate treatment effectiveness and native vegetation recovery.
- Implement additional treatment as needed.
- Adjust Control Strategies: Based on monitoring results, refine methods to reduce reliance on chemical treatments.

6. Treatment Thresholds and Control Strategies

6.1 Treatment Thresholds

Control measures will be implemented when specific action thresholds are met, ensuring timely intervention to prevent invasive species from undermining mitigation success. The following triggers initiate management actions:

1. **Invasive Species Coverage Threshold**
    - If invasive species exceed **10% of total vegetative cover** within mitigation areas, management efforts (e.g., mechanical, chemical, or biological control) are required.

Table 6-1. Invasive Species Coverage Targets	**Year 1**	**Year 3**	**Year 5**	**Year 7**	**Year 10**
Non-*Typha* Invasive Species (e.g., purple loosestrife, common reed, reed canarygrass)	≤ 15%	≤ 15%	≤ 12.5%	≤ 10%	< 5% cover
All Invasive Species including *Typha* spp.	≤ 20%	≤ 18.5%	≤ 15%	≤ 12.5%	< 10% cover

    - Annual monitoring data, including vegetation surveys and aerial imagery, will be used to determine exceedance.

2. **Failure to Meet Native Vegetation Performance Standards**
    - If native plant cover falls below required thresholds (typically **70% native cover** or a minimum diversity standard set in the mitigation permit), corrective action is necessary.

  - This includes replanting, selective herbicide application, or modifying site conditions to support native species.

3. **Encroachment of Invasives into Priority Habitat Areas**
    - If invasive species are detected in areas designated for high-value habitat (e.g., scrub-shrub wetlands, emergent wetlands, etc) treatment measures will be implemented to prevent establishment.
4. **New Invasive Species Detection**
    - Any newly introduced invasive species not previously recorded on-site will trigger an immediate assessment and control response to prevent spread.
5. **Regulatory Non-Compliance or Agency Notification**
    - If annual monitoring reports indicate performance standards are not being met or if USACE/NYSDEC identifies deficiencies, corrective action is required to maintain compliance.

By adhering to these action thresholds, this ISMP ensures that invasive species are proactively managed, wetland functions are maintained, and regulatory compliance is achieved.

6.2 Summary of Treatment Timing & Methods

A combination of mechanical, cultural, biological, and chemical control methods will be used depending on species, infestation size, and site conditions.

Table 6-2. Treatment Timing & Methods Summary Table

Species	Best Treatment Time	Mechanical	Chemical	Biological	Cultural
Phragmites	Late summer - fall	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	None approved for use in the US	Planting Natives for Competition
Reed Canary Grass	Spring & Fall	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	None available	Planting Natives for Competition, Prescribed burn
Cattails	Mid-late summer	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	Muskrat/waterfowl	Planting Natives for Competition
Purple Loosestrife	Mid-late summer	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	Loosestrife beetles	Planting Natives for Competition

6.2.1 *Phragmites australis* (Common Reed)

Control Approach:

Best Time for Treatment: Late summer to early fall (when carbohydrates are translocating to rhizomes).

1. Mechanical Control:
    - Cutting & Flooding: Cutting stems at water level during late summer combined with water level manipulation can drown rhizomes.
    - Smothering: Small patches can be covered with black plastic or heavy mulch to prevent regrowth.
2. Chemical Control: *(Only if necessary, as a last resort in sensitive areas)*
    - Glyphosate-basedand/or Imazapyr-Based application (spot treatment):
        - Apply to standing Phragmites in late summer/early fall using backpack sprayers, drones or wicking methods to minimize non-target impacts.
    - Follow-up with mechanical removal of dead stalks in the winter.
3. Cultural & Biological Control:
    - Promote competition by seeding native sedges, rushes, and forbs.
    - Biological control species may be utilized for targeted control.

6.2.2 ***Phalaris arundinacea*** **(Reed Canary Grass)**

Control Approach:

Best Time for Treatment: Early spring (before seed set) and late fall (targeting rhizomes).

1. Mechanical Control:
    - Mowing in early spring and late summer to deplete energy reserves.
    - Hand-pulling small infestations before seed set.
    - Covering with tarps or thick mulch to shade out new shoots.
2. Chemical Control: *(Selective use in dense monocultures if needed)*
    - Glyphosate application in fall when nutrients are moving into rhizomes.
    - Use wiping techniques instead of spraying to reduce non-target impact.
3. Cultural & Biological Control:
    - Planting native sedges & rushes to outcompete Phalaris.

  - Prescribed fire in late spring can reduce seed production.

6.2.3 *Typha spp.* (Cattails)

Control Approach:

Best Time for Treatment: Mid-to-late summer when plants are transporting nutrients downward.

1. Mechanical Control:
   - Cut stems below water level to drown rhizomes.
   - Excavation in high-density areas, followed by native planting.
2. Chemical Control: *(For monocultures in restoration sites if needed)*
   - Glyphosate-based pesticide applied to standing plants in late summer.
   - Follow-up by removing dead biomass to prevent thick mats from suppressing native growth.
3. Cultural & Biological Control:
   - Encourage muskrat or waterfowl activity in natural systems to suppress regrowth.

6.2.4 *Lythrum salicaria* (Purple Loosestrife)

Control Approach:

Best Time for Treatment: Mid-to-late summer before seed dispersal.

1. Mechanical Control:
   - Hand-pull small infestations, removing all roots.
   - Cut flower heads before seed drop to prevent spread.
2. Biological Control (Preferred Method):
   - Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
   - Releases should be monitored over multiple years to assess impact.
3. Chemical Control: *(For large stands if necessary)*
   - Spot treat with glyphosate-based pesticide in late summer.
   - Follow-up by seeding native competitors.

6.3 Pesticide Selection and Application Guidelines

When chemical control is necessary, pesticides will be carefully selected to minimize environmental impact while effectively managing invasive species. The selection and application methods will be determined based on site-specific conditions, regulatory requirements, and best management practices to ensure effective control while reducing unintended ecological impacts.

- **Target-Specific Formulations:** Only herbicides approved for use in wetland environments will be used, with preference given to herbicides that have minimal impact on non-target species.
- **Reduced Persistence and Toxicity:** Herbicides with low residual activity and rapid breakdown in soil and water will be favored to prevent long-term contamination.
- **Application Methods Based on Site Conditions:** Techniques such as cut-stump treatments, wick application, and spot spraying will be prioritized over broadcast spraying, depending on the infestation size, proximity to sensitive habitats, and hydrological conditions.

All pesticides will be applied in accordance with the label and all applicable federal, state, and local regulations to ensure compliance and environmental protection.

All pesticide applications will be conducted by New York State Certified Pesticide Applicators or individuals working under the direct supervision of a certified applicator, in compliance with New York Environmental Conservation Law (ECL) Article 33 and 6 NYCRR Part 325. This ensures that all chemical treatments are applied safely, legally, and in accordance with state regulations governing pesticide use in wetland environments.

7.0 Reporting

The Wetland Trust, Inc. will provide an annual wetland restoration monitoring report which details the status of invasive plant species and all control measures. This report will be submitted by December 31st each year to USACE and NYSDEC.

8. Maps and Figures

Figure 8-1. Purple Loosestrife Percent Cover

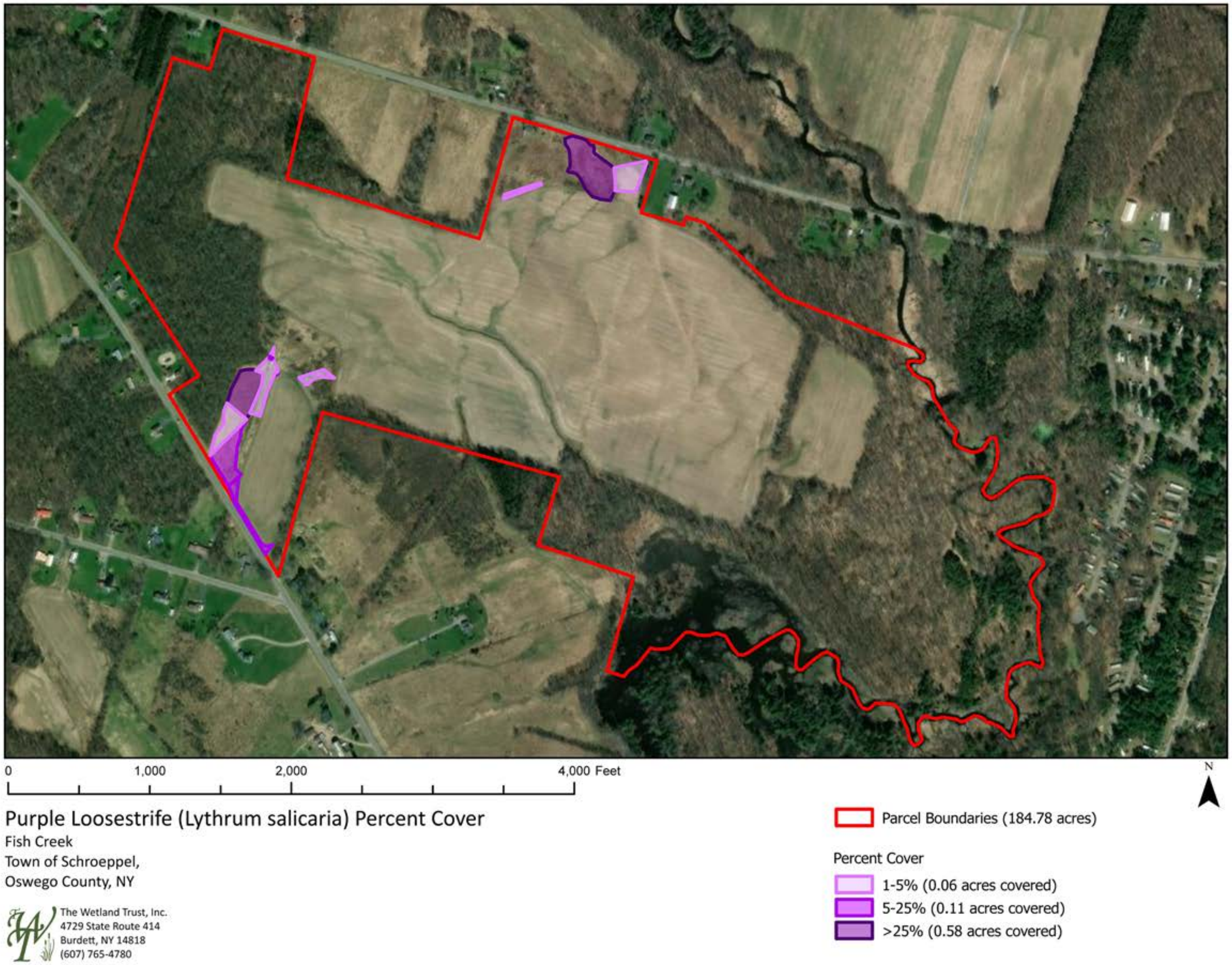


Figure 8-2. Reed Canary Grass Percent Cover

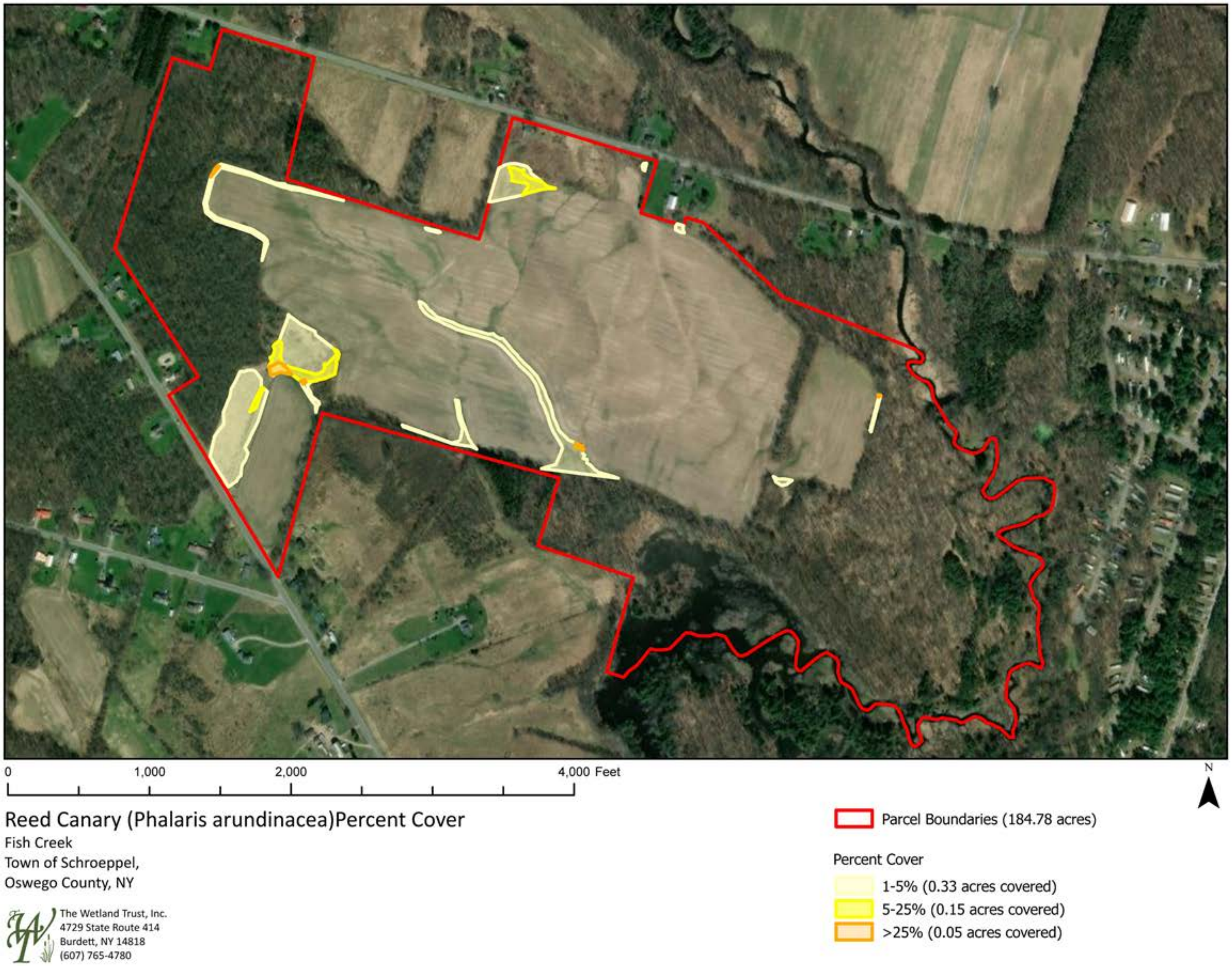


Figure 8-3. Phragmites Percent Cover

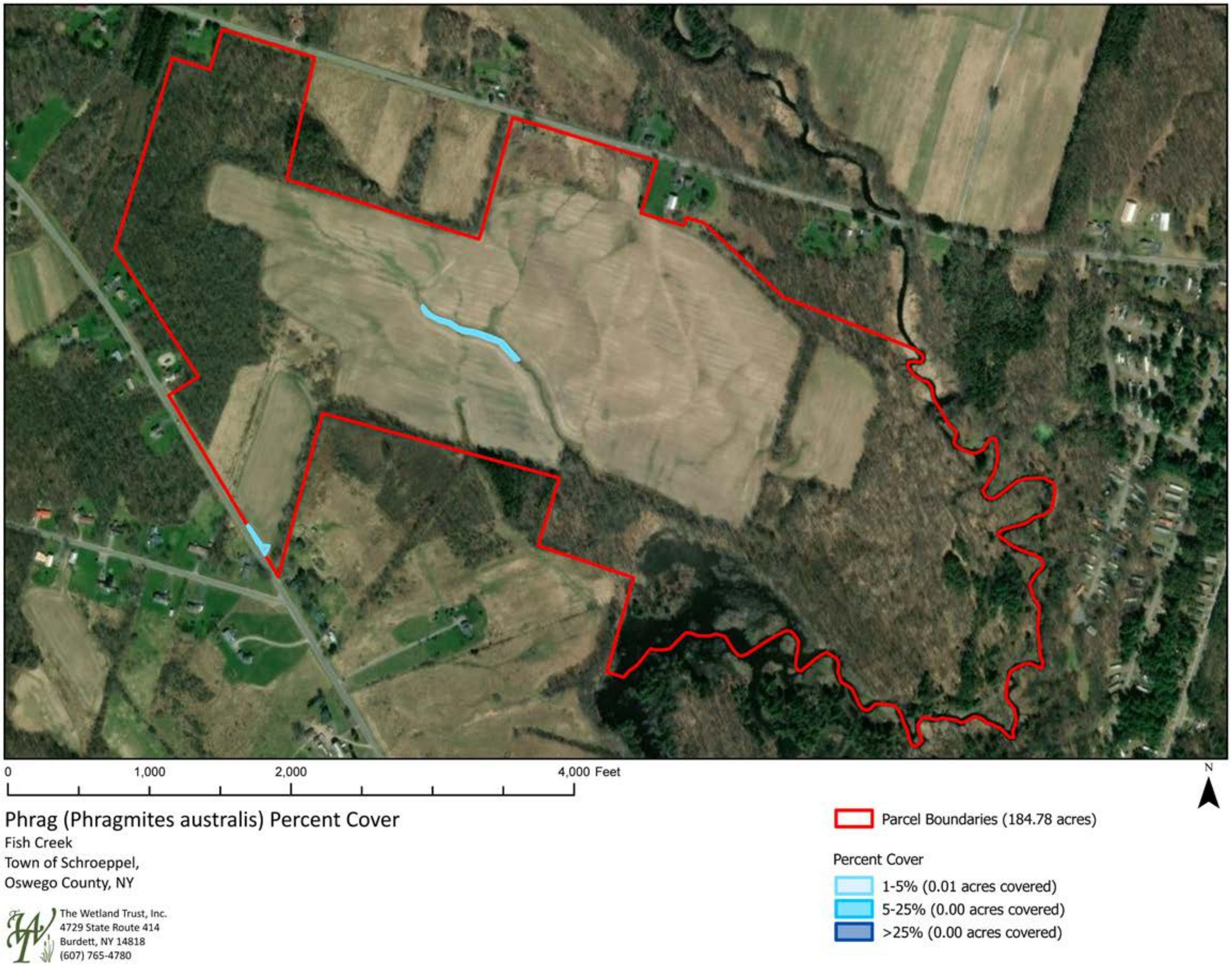


Figure 8-4. Cattail Percent Cover

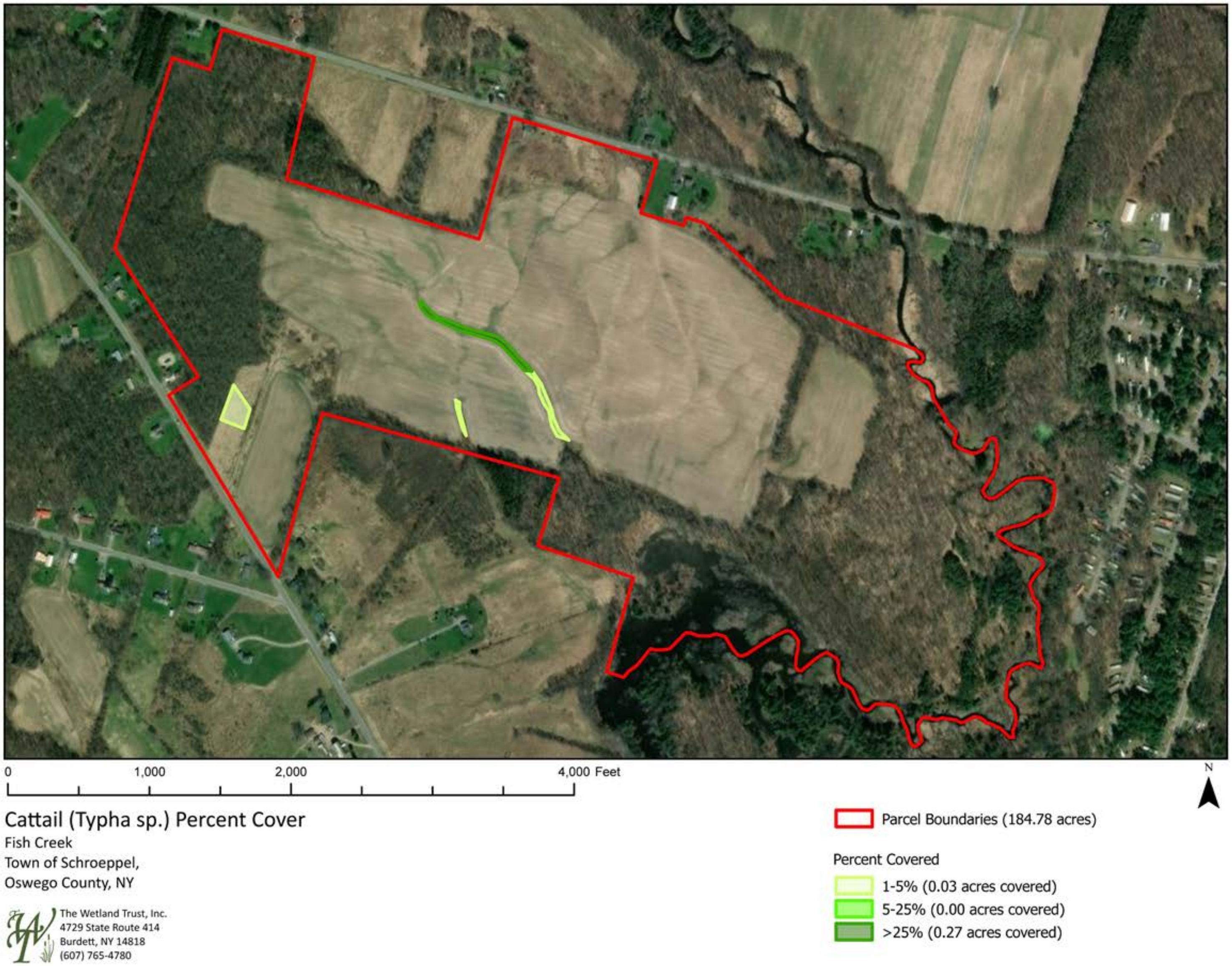


Table 8-1: Invasive Species at Fish Creek

Invasive Species	**1-5% Cover (Affected Acres)**	**5-25% Cover (Affected Acres)**	**>25% Cover (Affected Acres)**	**Total Area (Affected Acres)**
Common Reed (*Phragmites australis*)	0.25	0.00	0.00	0.26
Reed Canary Grass (*Phalaris arundinacea*)	5.82	0.83	0.14	6.79
Purple Loosestrife (*Lythrum salicaria*)	1.43	0.76	1.80	3.99
Cattail (Typha sp.)	0.66	0.00	0.36	1.02

Appendix F.

100 YEARS
**New York State
Parks, Recreation and
Historic Preservation**

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

August 13, 2024

Kirsten Gerhardt
Restoration Ecologist
The Wetland Trust
4729 NY 414
Burdett, NY 14818

Re: DEC
Perry Road Wetland Restoration
24PR07315

Dear Kirsten Gerhardt:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Bradley Russell at the following email address:

Bradley.Russell@parks.ny.gov

Sincerely,

Roger Daniel Mackay

R. Daniel Mackay

Deputy Commissioner for Historic Preservation
Division for Historic Preservation

Appendix G.

Wetland Design Form

Site Name: W-1 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing and functioning forested or shrub-scrub wetland for mitigation.

Site Description: An agricultural field that will be planted to soybeans.

Evidence of historic drainage or filling: Ditches along the edge of the field and the edge of the access road are removing surface water and lowering the elevation of groundwater. Buried drainage structures may be present in the field.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? 11-inches below the surface.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 3.0-feet

Soil test hole location: 43.294526°N 76.278344°W
Soil texture: 0-11-inches = silt-loam topsoil, 11-inches – 48-inches mixed gravel and silt loam.

Rock armoring is needed at the inlet and outlet due to high erosion potential.
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep = 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: It should be possible to build a wetland on this site because the old field on the opposite site of the access road, which has the same soil texture and the same slope, supports a diversity of wetland plants. Fill the shallow and deep ditches bordering the field. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Build a low dam that is 1-foot high. Excavate a basin that is 6-inches deep in the center. Spread soil downhill. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet to prevent erosion.


W-1


W-1

Wetland Design Form

Site Name: W-2 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing and functioning forested or shrub-scrub wetland for mitigation.

Site Description: Located in the lower edge of an agricultural field that will be planted to soybeans.

Evidence of historic drainage or filling: A ditch in the center of the planned wetland and ditches along the edge of the field and the access road are removing surface water and lowering the elevation of groundwater. Buried drainage structures may be present in the field.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? 11-inches below the surface.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 3.0-feet

Soil test hole location: 43.295150°N 76.277983°W
Soil texture: 0-11-inches = silt-loam topsoil, 11-inches – 48-inches mixed gravel and silt loam.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep = 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: It should be possible to build a wetland on this site because the old field on the opposite site of the access road, which has the same soil texture and the same slope, supports a diversity of wetland plants. Fill the shallow and deep ditches bordering the field. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Build a low dam that is 1-foot high. Excavate a basin that is 6-inches deep in the center. Spread soil downhill. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet to prevent erosion.

W-2

W-2 (Ditch in center

Wetland Design Form

Site Name: W-3 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing and functioning forested or shrub-scrub wetland for mitigation.

Site Description: Located in the lower edge of an agricultural field that will be planted to soybeans. The field is very wet.

Evidence of historic drainage or filling: Ditches along the edge of the field and the edge of the access road are removing surface water and lowering the elevation of groundwater. Buried drainage structures may be present in the field.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? 8-inches below the surface.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 3.0-feet

Soil test hole location: 43.295464°N 76.278301°W
Soil texture: 0-14-inches = silt-loam topsoil, 14-inches – 48-inches mixed gravel and silt loam.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep = 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: It should be possible to build a wetland on this site because the old field on the opposite site of the access road, which has the same soil texture and the same slope, supports a diversity of wetland plants. Fill the shallow and deep ditches bordering the field. Dig a core trench around the lower 2/3 perimeter of the area. Excavate a basin that is 6-inches deep in the center. Spread soil uphill past W-1. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet to prevent erosion.

W-3

W-3

Wetland Design Form

Site Name: W-4 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland and a stream for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and the steep slopes.

Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. A ditch was dug in the center of the valley to serve as the outlet for a recently installed system of buried drainage pipes (4-inch diameter yellow-colored plastic). Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.297163°N 76.277299°W
Soil texture: 0-10-inches = silt-loam topsoil, 10-inches – 36-inches silt loam, 36-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 70-feet long x 1.0-feet deep = 840 feet^3/27 feet^3/yard^3 = 31 yards^3 x 1.5 tons/yard^3 = 47 tons
Outlet: 12-feet wide x 70-feet long x 1.0-feet deep = 840 feet^3/27 feet^3/yard^3 = 31 yards^3 x 1.5 tons/yard^3 = 47 tons
Total = 94 tons/24 tons/dump truck = 4- dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. Yes. A deep eroding ditch bisects the site.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Fill the ditch draining the area. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Build a sinuous stream with a channel from 12-20-feet wide and banks no higher than 6-inches with restored forested and shrub-scrub wetlands on either side. Avoid building a dam because the restored stream must flow into and out from the wetland, and not look like an artificial spillway. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed over the sides of the valley and not in the wetland being built. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-4

W-4

Wetland Design Form

Site Name: W-5 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland and a stream for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and the steep slopes.

Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. A ditch was dug in the center of the valley to serve as the outlet for a recently installed system of buried drainage pipes (4-inch diameter yellow-colored plastic). Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes.

Plant species: Soybeans

How the planned wetland is marked: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge: 2.0-feet

Soil test hole location: 43.297125°N 76.276916°W

Soil texture: 0-10-inches = silt-loam topsoil, 10-inches – 36-inches silt loam, 36-48-inches = clay.

Rock armoring is needed at the inlet and outlet:

Inlet: 12-feet wide x 70-feet long x 1.0-feet deep = 840 feet^3/27 feet^3/yard^3 = 31 yards^3 x 1.5 tons/yard^3 = 47 tons

Outlet: 12-feet wide x 70-feet long x 1.0-feet deep = 840 feet^3/27 feet^3/yard^3 = 31 yards^3 x 1.5 tons/yard^3 = 47 tons

Total = 94 tons/24 tons/dump truck = 4- dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. Yes. A deep eroding ditch bisects the site.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Fill the ditch draining the area. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Build a sinuous stream with a channel from 12-20-feet wide and banks no higher than 6-inches with restored forested and shrub-scrub wetlands on either side. Avoid building a dam because the restored stream must flow into and out from the wetland, and not look like an artificial spillway. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed over the sides of the valley and not in the wetland being built. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-5

W-5

Wetland Design Form

Site Name: W-6 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland and a stream for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and the steep slopes.

Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. A ditch was dug in the center of the valley to serve as the outlet for a recently installed system of buried drainage pipes (4-inch diameter yellow-colored plastic). Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes.

Plant species: Crabgrass, mustard

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.297035°N 76.276503°W
Soil texture: 0-20-inches = silt-loam topsoil, 20-40-inches = sandy silt loam, 40-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 70-feet long x 1.0-feet deep = 840 feet^3/27 feet^3/yard^3 = 31 yards^3 x 1.5 tons/yard^3 = 47 tons
Outlet: 12-feet wide x 70-feet long x 1.0-feet deep = 840 feet^3/27 feet^3/yard^3 = 31 yards^3 x 1.5 tons/yard^3 = 47 tons
Total = 94 tons/24 tons/dump truck = 4- dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. Yes. A deep eroding ditch bisects the site.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Fill the ditch draining the area. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Build a sinuous stream with a channel from 12-20-feet wide and banks no higher than 6-inches with restored forested and shrub-scrub wetlands on either side. Avoid building a dam because the restored stream must flow into and out from the wetland, and not look like an artificial spillway. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed over the sides of the valley and not in the wetland being built. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-6

W-6

Wetland Design Form

Site Name: W-7 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland and a stream for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. A ditch was dug in the center of the valley to serve as the outlet for a recently installed system of buried drainage pipes (4-inch diameter yellow-colored plastic). Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. Lands with dead furrows are present.

Plant species:

How the planned wetland is marked on the ground: Pink wire flags

Invasive species: none

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.296971°N 76.276249°W
Soil texture: 0-20-inches = silt-loam topsoil, 20-40-inches = sandy silt loam, 40-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 70-feet long x 1.0-feet deep = 840 feet^3/27 feet^3/yard^3 = 31 yards^3 x 1.5 tons/yard^3 = 47 tons
Outlet: 12-feet wide x 70-feet long x 1.0-feet deep = 840 feet^3/27 feet^3/yard^3 = 31 yards^3 x 1.5 tons/yard^3 = 47 tons
Total = 94 tons/24 tons/dump truck = 4- dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. Yes. A deep eroding ditch bisects the site.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Fill the ditch draining the area. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Build a sinuous stream with a channel from 12-20-feet wide and banks no higher than 6-inches with restored forested and shrub-scrub wetlands on either side. Avoid building a dam because the restored stream must flow into and out from the wetland, and not look like an artificial spillway. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed over the sides of the valley and not in the wetland being built. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-7

W-7

Wetland Design Form

Site Name: W-8 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland and a stream for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. A ditch was dug in the center of the valley (5-foot-deep x 26-feet wide) to serve as the outlet for a recently installed system of buried drainage pipes (4-inch diameter yellow-colored plastic). Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. Lands with dead furrows are present.

Plant species: Crabgrass, dandelion

How the planned wetland is marked on the ground: Orange wire

Invasive species: none

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.296102°N 76.275655°W

Soil texture: 0-20-inches = silt-loam topsoil, 20-40-inches = sandy silt loam, 40-48-inches = clay.

Rock armoring is needed at the inlet and outlet:

Inlet: 26-feet wide x 100-feet long x 1.0-feet deep = 2,600 feet^3/27 feet^3/yard^3 = 96 yards^3 x 1.5 tons/yard^3 = 144 tons

Outlet: 26-feet wide x 100-feet long x 1.0-feet deep = 2,600 feet^3/27 feet^3/yard^3 = 96 yards^3 x 1.5 tons/yard^3 = 144 tons

Total = 288 tons/24 tons/dump truck = 12- dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. Yes. A deep eroding ditch bisects the site.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Fill the ditch draining the area. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Build a sinuous stream with a channel from 18-26-feet wide and banks no higher than 6-inches with restored forested and shrub-scrub wetlands on either side. Avoid building a dam because the restored stream must flow into and out from the wetland, and not look like an artificial spillway. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed over the sides of the valley and not in the wetland being built. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-8

W-8

Site Name: W-9 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. Lands with dead furrows are present.

Plant species:

How the planned wetland is marked on the ground: Pink wire flags

Invasive species: none

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 3.0-feet

Soil test hole location: 43.297052°N 76.275451°W
Soil texture: 0-20-inches = silt-loam topsoil, 20-40-inches = sandy silt loam, 40-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep = 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. Yes. A deep eroding ditch bisects the site.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Fill the ditch draining the area with soil. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed over the sides of the valley and not in the wetland being built. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-9 (showing ditch)

W-9 (Showing head-cut)

Site Name: W-10 (Perry Road)

Date: 04-29-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland and a stream for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. Drainpipes are at least 3.5-feet below the surface. Lands with dead furrows are present.

Plant species:

How the planned wetland is marked on the ground: Pink wire flags

Invasive species: none

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.296083°N 76.275287°W
Soil texture: 0-20-inches = silt-loam topsoil, 20-40-inches = clay loam, 40-55-iches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 26-feet wide x 100-feet long x 1.0-feet deep = 2,600 feet^3/27 feet^3/yard^3 = 96 yards^3 x 1.5 tons/yard^3 = 144 tons
Outlet: 26-feet wide x 100-feet long x 1.0-feet deep = 2,600 feet^3/27 feet^3/yard^3 = 96 yards^3 x 1.5 tons/yard^3 = 144 tons
Total = 288 tons/24 tons/dump truck = 12- dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. Yes. A deep eroding ditch bisects the site.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Fill the ditch draining the area with soil. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Build a sinuous stream with a channel from 18-26-feet wide and banks no higher than 6-inches with restored forested and shrub-scrub wetlands on either side. Avoid building a dam because the restored stream must flow into and out from the wetland, and not look like an artificial spillway. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed over the sides of the valley and not in the wetland being built. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-10

W-10

Site Name: W-11 (Perry Road)	**Date: 04-30-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)	
Objectives: Build a naturally appearing forested/shrub-scrub wetland for mitigation.	**Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.**
Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. Lands with dead furrows are present.	
Plant species:	**How the planned wetland is marked on the ground: Orange wire flags**
Invasive species: none	**Groundwater elevation in test hole? Not found**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge of designed wetland: 2.0-feet**
Soil test hole location: 43.296209°N 76.276693°W **Soil texture: 0-20-inches = silt-loam topsoil, 20-40-inches = sandy silt loam, 40-48-inches = clay.**	
Rock armoring is needed at the inlet and outlet: **Inlet: 12-feet wide x 50-feet long x 1.0-feet deep = 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons** **Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons** **Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed**	
Head-cuts located uphill or downhill of the planned wetland. Yes. An eroding ditch bisects the site.	
Woody debris source: Not available on site. Would need to be transported to the site.	
Construction notes: Fill the ditch draining the area with soil. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed over the sides of the valley and not in the wetland being built. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.	

W-11

W-11

Site Name: W-12 (Perry Road)

Date: 04-30-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland and a stream for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. Drainpipes are at least 3.5-feet below the surface. Lands with dead furrows are present.

Plant species:

How the planned wetland is marked on the ground: Pink wire flags

Invasive species: none

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.295930°N 76.275289°W
Soil texture: 0-20-inches = silt-loam topsoil, 20-40-inches = clay loam, 40-55-iches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 26-feet wide x 100-feet long x 1.0-feet deep = 2,600 feet^3/27 feet^3/yard^3 = 96 yards^3 x 1.5 tons/yard^3 = 144 tons
Outlet: 26-feet wide x 100-feet long x 1.0-feet deep = 2,600 feet^3/27 feet^3/yard^3 = 96 yards^3 x 1.5 tons/yard^3 = 144 tons
Total = 288 tons/24 tons/dump truck = 12- dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. Yes. A deep eroding ditch bisects the site. Head-cuts are also located in the ditch along the south edge of the field.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Fill two ditches the area with soil. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Build a sinuous stream with a channel from 18-26-feet wide and banks no higher than 6-inches with restored forested and shrub-scrub wetlands on either side. Avoid building a dam because the restored stream must flow into and out from the wetland, and not look like an artificial spillway. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed in the buffer area. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-12 (Ditch to be filled)

W-12 (Ditch to be filled)

Site Name: W-13 (Perry Road)

Date: 04-30-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland and a stream for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: The 7-foot-deep ditch is removing surface water and lowering the elevation of groundwater. Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. Drainpipes are at least 3.5-feet below the surface. Lands with dead furrows are present.

Plant species: Clover, dandelion, crabgrass

How the planned wetland is marked on the ground: Pink wire flags

Invasive species: none

Groundwater elevation in test hole? 22-inches below the surface

Hydric soil present near the surface? No

Elevation-change from upper to lower edge: 2.0-feet

Soil test hole location: 43.294771°N 76.273865°W
Soil texture: 0-19-inches = silt-loam, 19-60-inches = sand, 60-120-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 26-feet wide x 80-feet long x 1.0-feet deep = 2,080 feet^3/27 feet^3/yard^3 = 77 yards^3 x 1.5 tons/yard^3 = 115 tons
Buried vertical grade control at outlet: (70-feet wide x 80-feet long x 11-feet deep) x (0.5) = 30,800 feet^3/27 feet^3/yard^3 = 1,141 yards^3 x 1.5 tons/yard^3 = 1,140 tons
Total = 1,255 tons/24 tons/dump truck = 52- dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. Yes. A deep eroding ditch bisects the site. Head-cuts are also located in the ditch along the south edge of the field.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Fill the ditch with soil. Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area that blocks the sand layer. Build a sinuous stream with a channel from 18-26-feet wide and banks no higher than 6-inches with restored forested and shrub-scrub wetlands on either side. Install a buried vertical grade control structure made from rock where the restored stream meets the ditch. Avoid building a dam because the restored stream must flow into and out from the wetland, and not look like an artificial spillway. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed in the buffer area. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-13 (Ditch to be filled)

W-13 (Head-cut to control)

Site Name: W-14 (Perry Road)	**Date: 04-30-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)	
Objectives: Build a naturally appearing forested/shrub-scrub wetland for mitigation.	**Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.**
Evidence of historic drainage or filling: Ditches are removing surface water and lowering the elevation of groundwater. Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. Lands with dead furrows are present.	
Plant species: Crabgrass and dandelions	**How the planned wetland is marked on the ground: Pink wire flags**
Invasive species: none	**Groundwater elevation in test hole? Not found**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge of designed wetland: 2.0-feet**
Soil test hole location: 43.296513°N 76.274603°W **Soil texture: 0-40-inches = silt-loam, 40-48-inches = clay.**	
Rock armoring is needed at the inlet and outlet. Yes **Inlet: 12-feet wide x 50-feet long x 1.0-feet deep = 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons** **Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons** **Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed**	
Head-cuts located uphill or downhill of the planned wetland. No	
Woody debris source: Not available on site. Would need to be transported to the site.	
Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed over the sides of the valley and not in the wetland being built. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.	

W-14

W-14

Site Name: W-15 (Perry Road)

Date: 04-30-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland for mitigation. Control erosion in drainage.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: A ditch bisects the planned wetland area. Ditches remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. Lands with dead furrows are present.

Plant species: Crabgrass and bare ground

How the planned wetland is marked on the ground: Orange wire flags

Invasive species:

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.296617°N 76.273954°W
Soil texture: 0-42-inches = silt-loam, 42-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Fill the ditch with soil. Spread the soil that is removed downhill but not in W-10. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-15

W-15

Site Name: W-16 (Perry Road)

Date: 04-30-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland for mitigation.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: Ditches remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields with surface inlets that were installed to provide runoff with rapid entry into buried drainpipes. The field was sloped so it would drain.

Plant species: Crabgrass and bare ground

How the planned wetland is marked on the ground: Orange wire flags

Invasive species:

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.295761°N 76.273063°W
Soil texture: 0-42-inches = silt-loam, 42-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. None

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Spread the soil that is removed to the Southeast over the sides of the valley. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the stream inlet and outlet to prevent erosion.

W-16

W-16

Site Name: W-17 (Perry Road)

Date: 04-30-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland for mitigation. Control erosion in drainage.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: Ditches and buried drainage structures remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields. Lands with dead furrows are present.

Plant species: Crabgrass and bare ground

How the planned wetland is marked on the ground: Orange wire flags

Invasive species:

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.9-feet

Soil test hole location: 43.294770°N 76.272520°W
Soil texture: 0-10-inches = silt-loam, 10-30-inches = sand, 30-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. A major head-cut is located at the low edge.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area that blocks the sand layer. Excavate a large and shallow basin that is 6-inches deep in the center. Fill ditches with soil. Restore natural stream channel and floodplain wetlands. Spread the soil that is removed downhill but not in W-10. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet to prevent erosion.

W-17

W-17 (Vertical holes show buried drainage structures are present.

Site Name: W-18 (Perry Road)
Combine with W-19

Date: 04-30-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing forested/shrub-scrub wetland for mitigation. Control erosion in drainage.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes. The NRCS maps the area as fine sandy loam when it's clay.

Evidence of historic drainage or filling: Ditches and buried drainage structures remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields Lands with dead furrows are present.

Plant species: Crabgrass and bare ground

How the planned wetland is marked on the ground: Orange wire flags

Invasive species:

Groundwater elevation in test hole? 14-inches below the surface.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.294527°N 76.271713°W
Soil texture: 0-15-inches = silt-loam, 15-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland. A major head-cut is located at the low edge.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Fill ditches with soil. Spread the soil that is removed downhill. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet to prevent erosion.

W-18

W-18 (Soil test hole)

Site Name: W-19 (Perry Road) Combine with W-18	Date: 04-30-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)	
Objectives: Build a naturally appearing forested/shrub-scrub wetland for mitigation. Control erosion in drainage.	Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.
Evidence of historic drainage or filling: Broken pieces of drainage tile were found on the surface. Ditches and buried drainage structures remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields L	
Plant species: Crabgrass and bare ground	How the planned wetland is marked on the ground: Orange wire flags
Invasive species:	Groundwater elevation in test hole? 26-inches below the surface.
Hydric soil present near the surface? No	Elevation-change from upper to lower edge of designed wetland: 2.0-feet
Soil test hole location: 43.294181°N 76.270839°W Soil texture: 0-9-inches = silt-loam, 9-38-inches = sandy loam, 38-48-inches silt-loam.	
Is rock armoring needed at the inlet and outlet? Yes, see W-18.	
Head-cuts located uphill or downhill of the planned wetland. None	
Woody debris source: Not available on site. Would need to be transported to the site.	
Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Replace the sand in the core trench with clay or silt-loam texture soil. Excavate a large and shallow basin that is 6-inches deep in the center. Fill ditches with soil. Spread the soil that is removed downhill. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet to prevent erosion.	

W-19

W-19 (Soil test hole)

Site Name: W-20 (Perry Road)	**Date: 04-30-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)	
Objectives: Build a naturally appearing emergent, forested/shrub-scrub wetland for mitigation. Control erosion in drainage.	**Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.**
Evidence of historic drainage or filling: An eroding ditch in the center of the area along with possible buried drainage structures remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields.	
Plant species: Crabgrass and bare ground	**How the planned wetland is marked on the ground: Orange wire flags**
Invasive species:	**Groundwater elevation in test hole? Not found**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge of designed wetland: 2.0-feet**
Soil test hole location: 43.297618°N 76.272161°W **Soil texture: 0-42-inches = silt-loam, 42-48-inches = clay.**	
Rock armoring is needed at the inlet and outlet: **Inlet: 12-feet wide x 50-feet long x 1.0-feet deep 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons** **Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons** **Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed**	
Head-cuts located uphill or downhill of the planned wetland: Small head-cuts are in the ditch.	
Woody debris source: Not available on site. Would need to be transported to the site.	
Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Fill ditches with soil. Restore a natural stream channel and floodplain wetlands. Spread the soil that is removed downhill and over the side slopes. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet of the restored stream channel to prevent erosion.	

W-20

W-20 (Showing ditch that would be restored to a stream)

Site Name: W-21 (Perry Road)

Date: 04-30-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing emergent, forested/shrub-scrub wetland for mitigation. Control erosion in drainage.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: An eroding ditch near the center of the area along with possible buried drainage structures remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields.

Plant species: Crabgrass and bare ground

How the planned wetland is marked on the ground: Pink wire flags

Invasive species:

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.297081°N 76.272699°W
Soil texture: 0-42-inches = silt-loam, 42-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland: Small head-cuts are in the ditch.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Fill ditches with soil. Restore a natural stream channel and floodplain wetlands. Spread the soil that is removed downhill and over the side slopes. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet of the restored stream channel to prevent erosion.

W-21

W-21

Site Name: W-22 (Perry Road)	**Date: 04-30-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)	
Objectives: Build a naturally appearing emergent, forested/shrub-scrub wetland for mitigation. Control erosion in drainage.	**Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.**
Evidence of historic drainage or filling: An eroding ditch near the center of the area along with possible buried drainage structures remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields.	
Plant species: Crabgrass and bare ground	**How the planned wetland is marked on the ground: Pink wire flags**
Invasive species:	**Groundwater elevation in test hole? Not found**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge of designed wetland: 2.0-feet**
Soil test hole location: 43.296768°N 76.272821°W **Soil texture: 0-42-inches = silt-loam, 42-48-inches = clay.**	
Rock armoring is needed at the inlet and outlet: **Inlet: 12-feet wide x 50-feet long x 1.0-feet deep 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons** **Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons** **Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed**	
Head-cuts located uphill or downhill of the planned wetland: Small head-cuts are in the ditch.	
Woody debris source: Not available on site. Would need to be transported to the site.	
Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Fill ditches with soil. Restore a natural stream channel and floodplain wetlands. Spread the soil that is removed downhill and over the side slopes. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet of the restored stream channel to prevent erosion.	

W-22

W-22 (Showing the ditch that would be restored to a stream)

Site Name: W-23 (Perry Road)

Date: 04-30-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing emergent, forested/shrub-scrub wetland for mitigation. Control erosion in drainage.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: An eroding ditch near the center of the area along with possible buried drainage structures remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields.

Plant species: Crabgrass and bare ground

How the planned wetland is marked on the ground: Pink wire flags

Invasive species:

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.296541°N 76.272448°W
Soil texture: 0-42-inches = silt-loam, 42-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep 600 $\text{feet}^3/27\ \text{feet}^3/\text{yard}^3 = 22\ \text{yards}^3 \times 1.5\ \text{tons}/\text{yard}^3 = 33$ tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 $\text{feet}^3/27\ \text{feet}^3/\text{yard}^3 = 33\ \text{yards}^3 \times 1.5\ \text{tons}/\text{yard}^3 = 50$ tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland: Small head-cuts are in the ditch.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Fill ditches with soil. Restore a natural stream channel and floodplain wetlands. Spread the soil that is removed downhill and over the side slopes. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet of the restored stream channel to prevent erosion.

W-23

W-23

Site Name: W-24 (Perry Road)

Date: 04-30-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Harrison Franz (The Wetland Trust)

Objectives: Build a naturally appearing emergent, forested/shrub-scrub wetland for mitigation. Control erosion in drainage.

Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture soil on the surface and steep slopes.

Evidence of historic drainage or filling: An eroding ditch near the center of the area along with possible buried drainage structures remove surface water and lower the elevation of groundwater. Diversion ditches are present along the edges of the fields.

Plant species: Crabgrass and bare ground

How the planned wetland is marked on the ground: Pink wire flags

Invasive species:

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Soil test hole location: 43.296266°N 76.272328°W
Soil texture: 0-42-inches = silt-loam, 42-48-inches = clay.

Rock armoring is needed at the inlet and outlet:
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep 600 feet^3/27 feet^3/yard^3 = 22 yards^3 x 1.5 tons/yard^3 = 33 tons
Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 83 tons/24 tons/dump truck = 3.5 dump truck loads of rock needed

Head-cuts located uphill or downhill of the planned wetland: Small head-cuts are in the ditch.

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Dig a core trench and build a groundwater dam around the lower 2/3 perimeter of the area. Excavate a large and shallow basin that is 6-inches deep in the center. Fill ditches with soil. Restore a natural stream channel and floodplain wetlands. Spread the soil that is removed downhill and over the side slopes. Create pits, mounds, and scrapes. Plant trees and shrubs on the mounds. Use rock to armor the inlet and outlet of the restored stream channel to prevent erosion.

W-24

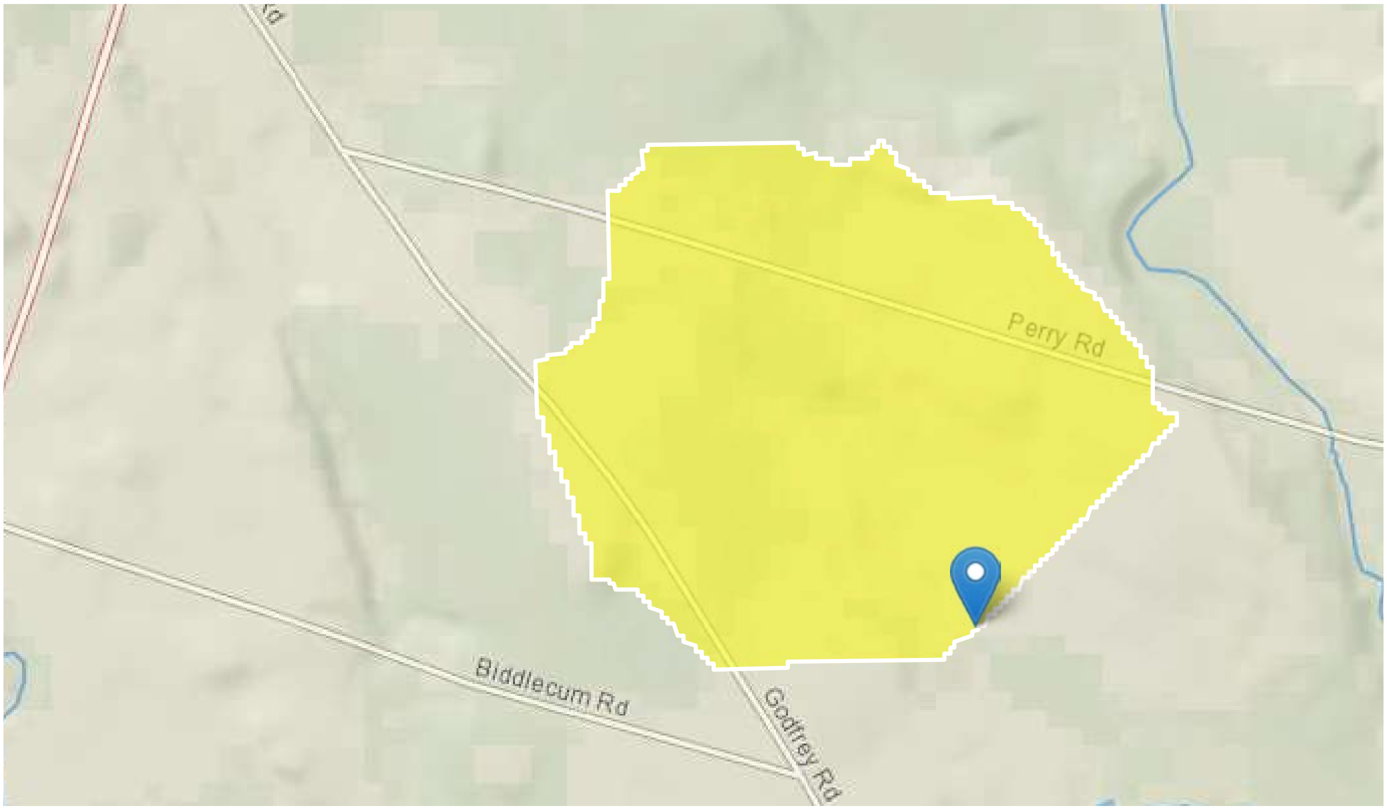
W-24 (Showing the ditch that would be restored to a stream)

Appendix H.

Appendix I.

StreamStats Report - Perry Road Site

Region ID: NY
Workspace ID: NY20240930121442615000
Clicked Point (Latitude, Longitude): 43.29456, -76.27451
Time: 2024-09-30 08:15:04 -0400



➕ Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	396375.8	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	4794703.8	meters
CSL1085LO	10-85 slope of lower half of main channel in feet per mile.	100	feet per mi
DRNAREA	Area that drains to a point on a stream	0.28	square miles

Parameter Code	Parameter Description	Value	Unit
EL1200	Percentage of basin at or above 1200 ft elevation	0	percent
FOREST	Percentage of area covered by forest	28.3	percent
JULAVPRE	Mean July Precipitation	3.56	inches
JUNAVPRE	Mean June Precipitation	3.72	inches
JUNMAXTMP	Maximum June Temperature, in degrees F	76.5	degrees F
LAGFACTOR	Lag Factor as defined in SIR 2006-5112	0.00782	dimensionless
LENGTH	Length along the main channel from the measuring location extended to the basin divide	0.82	miles
MAR	Mean annual runoff for the period of record in inches	23	inches
MAYAVPRE	Mean May Precipitation	3.47	inches
PRECIP	Mean Annual Precipitation	42.5	inches
PRJUNAUG00	Basin average mean precip for June to August from PRISM 1971-2000	11.1	inches
SSURGOA	Percentage of area of Hydrologic Soil Type A from SSURGO	3.15	percent
SSURGOB	Percentage of area of Hydrologic Soil Type B from SSURGO	0	percent
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0	percent

› Bankfull Statistics

Bankfull Statistics Parameters [Bankfull Regions 1 and 2 SIR2009 5144]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.28	square miles	0.52	396

Bankfull Statistics Parameters [Interior Plains D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.28	square miles	0.19305	59927.7393

Bankfull Statistics Parameters [Central Lowland P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.28	square miles	0.200772	59927.66594

Bankfull Statistics Parameters [USA Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.28	square miles	0.07722	59927.7393

Bankfull Statistics Disclaimers [Bankfull Regions 1 and 2 SIR2009 5144]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [Bankfull Regions 1 and 2 SIR2009 5144]

Statistic	Value	Unit
Bankfull Area	9.22	ft^2
Bankfull Depth	0.697	ft
Bankfull Streamflow	16.8	ft^3/s
Bankfull Width	13.6	ft

Bankfull Statistics Flow Report [Interior Plains D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	7.5	ft
Bieger_D_channel_depth	1.17	ft
Bieger_D_channel_cross_sectional_area	11.8	ft^2

Bankfull Statistics Flow Report [Central Lowland P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	8.77	ft
Bieger_P_channel_depth	1.49	ft
Bieger_P_channel_cross_sectional_area	11.6	ft^2

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	7.91	ft
Bieger_USA_channel_depth	0.919	ft
Bieger_USA_channel_cross_sectional_area	8.59	ft^2

Bankfull Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
Bankfull Area	9.22	ft^2
Bankfull Depth	0.697	ft
Bankfull Streamflow	16.8	ft^3/s
Bankfull Width	13.6	ft
Bieger_D_channel_width	7.5	ft
Bieger_D_channel_depth	1.17	ft
Bieger_D_channel_cross_sectional_area	11.8	ft^2
Bieger_P_channel_width	8.77	ft
Bieger_P_channel_depth	1.49	ft
Bieger_P_channel_cross_sectional_area	11.6	ft^2
Bieger_USA_channel_width	7.91	ft
Bieger_USA_channel_depth	0.919	ft
Bieger_USA_channel_cross_sectional_area	8.59	ft^2

Bankfull Statistics Citations

Mulvihill, C.I., Baldigo, B.P., Miller, S.J. , and DeKoskie, Douglas,2009, Bankfull Discharge and Channel Characteristics of Streams in New York State: U.S. Geological Survey Scientific Investigations Report 2009-5144, 51 p. (http://pubs.usgs.gov/sir/2009/5144/)

Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p. (https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_cam

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2006 Full Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.28	square miles	0.54	4500
LAGFACTOR	Lag Factor	0.00782	dimensionless	0.004	15.229
STORAGE	Percent Storage	0	percent	0	28.92
FOREST	Percent Forest	28.3	percent	23.83	99.61
PRECIP	Mean Annual Precipitation	42.5	inches	29.49	56.1

Peak-Flow Statistics Disclaimers [2006 Full Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [2006 Full Region 1]

Statistic	Value	Unit
80-percent AEP flood	17.7	ft^3/s
66.7-percent AEP flood	21.2	ft^3/s
50-percent AEP flood	26	ft^3/s
20-percent AEP flood	39.4	ft^3/s
10-percent AEP flood	49.7	ft^3/s
4-percent AEP flood	64.2	ft^3/s
2-percent AEP flood	75.6	ft^3/s
1-percent AEP flood	88.6	ft^3/s
0.5-percent AEP flood	101	ft^3/s

Statistic	Value	Unit
0.2-percent AEP flood	120	ft^3/s

Peak-Flow Statistics Citations

Lumia, Richard, Freehafer, D.A., and Smith, M.J.,2006, Magnitude and Frequency of Floods in New York: U.S. Geological Survey Scientific Investigations Report 2006–5112, 152 p. (http://pubs.usgs.gov/sir/2006/5112/)

Flow-Duration Statistics

Flow-Duration Statistics Parameters [Statewide duration flows excl LongIsl 2014 5220]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.28	square miles	3.14	4780
JUNAVPRE	Mean June Precipitation	3.72	inches	3.59	5.33
CENTROIDX	CENTROIDX	396375.8	meters	166000	658000
CENTROIDY	CENTROIDY	4794703.8	meters	4560000	4920000
CSL1085LO	10-85 slope of lower half of main channel	100	feet per mi	1.56	152
LENGTH	Main Channel Length	0.82	miles	0.88	305
MAR	Mean Annual Runoff in inches	23	inches	11.6	37.4
SSURGOB	SSURGO Percent Hydrologic Soil Type B	0	percent	1.14	65.7
JULAVPRE	Mean July Precipitation	3.56	inches	3.2	5.26
MAYAVPRE	Mean May Precipitation	3.47	inches	3.15	5.68
PRJUNAUG00	Basin average mean precip for June to August	11.1	inches	10.5	15.5
JUNMAXTMP	Maximum June Temperature	76.5	degrees F	68.8	78.8
SSURGOA	SSURGO Percent Hydrologic Soil Type A	3.15	percent	0.62	51.2
EL1200	Percentage of Basin Above 1200 ft	0	percent	0	100

Flow-Duration Statistics Flow Report [Statewide duration flows excl LongIsl 2014 5220]

Statistic	Value	Unit

Flow-Duration Statistics Citations

> Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 6]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.28	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 6]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	2330	ft^3/s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (https://pubs.usgs.gov/wsp/1887/report.pdf)

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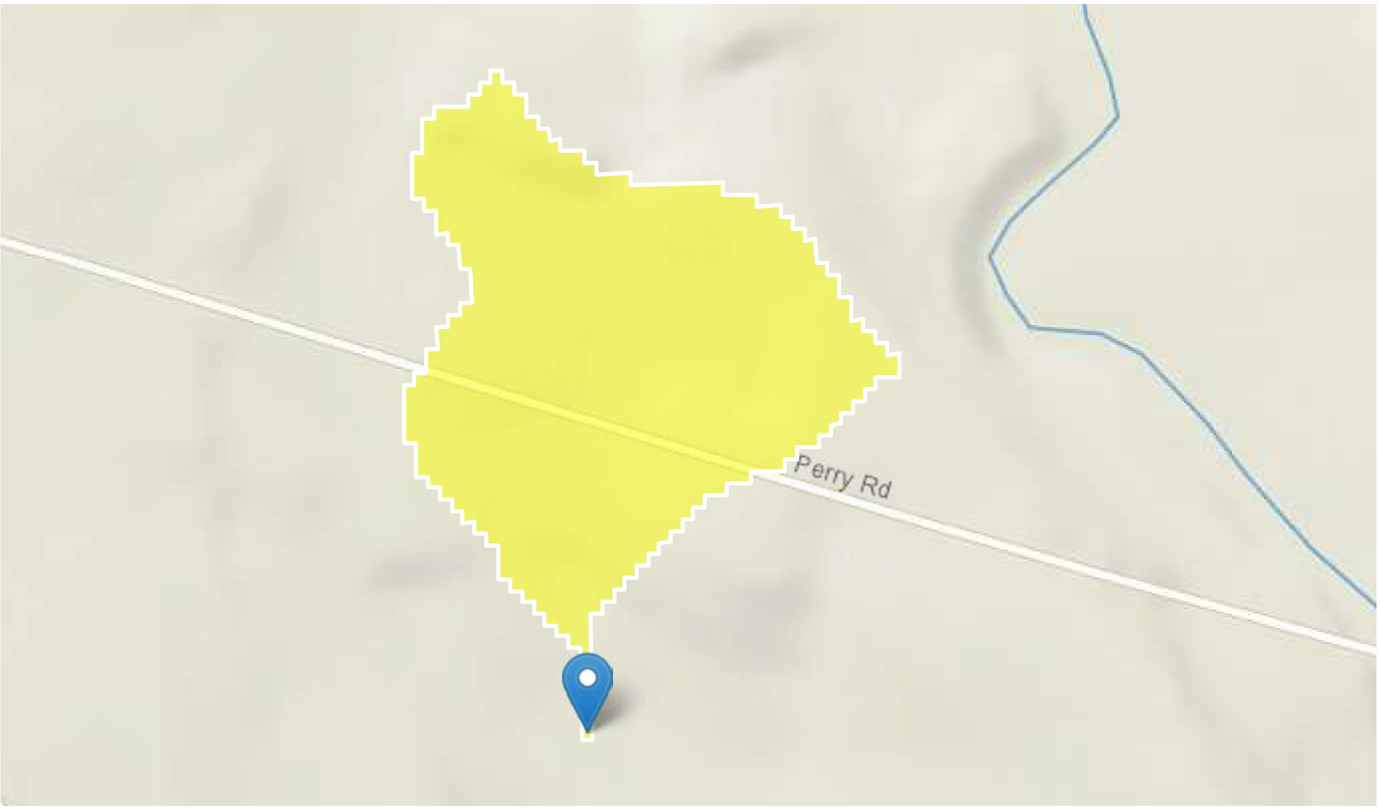
Application Version: 4.24.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

StreamStats Report - Perry Road Northeast Branch

Region ID: NY
Workspace ID: NY20240930174608273000
Clicked Point (Latitude, Longitude): 43.29696, -76.27552
Time: 2024-09-30 13:46:33 -0400



➕ Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	396561.6	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	4794912.2	meters
CSL1085LO	10-85 slope of lower half of main channel in feet per mile.	121	feet per mi
DRNAREA	Area that drains to a point on a stream	0.0454	square miles

Parameter Code	Parameter Description	Value	Unit
EL1200	Percentage of basin at or above 1200 ft elevation	0	percent
FOREST	Percentage of area covered by forest	30.2	percent
JULAVPRE	Mean July Precipitation	3.56	inches
JUNAVPRE	Mean June Precipitation	3.72	inches
JUNMAXTMP	Maximum June Temperature, in degrees F	76.5	degrees F
LAGFACTOR	Lag Factor as defined in SIR 2006-5112	0.0062	dimensionless
LENGTH	Length along the main channel from the measuring location extended to the basin divide	0.46	miles
MAR	Mean annual runoff for the period of record in inches	23	inches
MAYAVPRE	Mean May Precipitation	3.46	inches
PRECIP	Mean Annual Precipitation	42.5	inches
PRJUNAUG00	Basin average mean precip for June to August from PRISM 1971-2000	11.1	inches
SSURGOA	Percentage of area of Hydrologic Soil Type A from SSURGO	9.35	percent
SSURGOB	Percentage of area of Hydrologic Soil Type B from SSURGO	0	percent
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2006 Full Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0454	square miles	0.54	4500
LAGFACTOR	Lag Factor	0.0062	dimensionless	0.004	15.229
STORAGE	Percent Storage	0	percent	0	28.92
FOREST	Percent Forest	30.2	percent	23.83	99.61

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
PRECIP	Mean Annual Precipitation	42.5	inches	29.49	56.1

Peak-Flow Statistics Disclaimers [2006 Full Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [2006 Full Region 1]

Statistic	Value	Unit
80-percent AEP flood	2.94	ft^3/s
66.7-percent AEP flood	3.52	ft^3/s
50-percent AEP flood	4.32	ft^3/s
20-percent AEP flood	6.57	ft^3/s
10-percent AEP flood	8.31	ft^3/s
4-percent AEP flood	10.8	ft^3/s
2-percent AEP flood	12.8	ft^3/s
1-percent AEP flood	15	ft^3/s
0.5-percent AEP flood	17.2	ft^3/s
0.2-percent AEP flood	20.5	ft^3/s

Peak-Flow Statistics Citations

Lumia, Richard, Freehafer, D.A., and Smith, M.J.,2006, Magnitude and Frequency of Floods in New York: U.S. Geological Survey Scientific Investigations Report 2006–5112, 152 p. (http://pubs.usgs.gov/sir/2006/5112/)

Flow-Duration Statistics

Flow-Duration Statistics Parameters [Statewide duration flows excl LongIsl 2014 5220]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0454	square miles	3.14	4780
JUNAVPRE	Mean June Precipitation	3.72	inches	3.59	5.33

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CENTROIDX	CENTROIDX	396561.6	meters	166000	658000
CENTROIDY	CENTROIDY	4794912.2	meters	4560000	4920000
CSL1085LO	10-85 slope of lower half of main channel	121	feet per mi	1.56	152
LENGTH	Main Channel Length	0.46	miles	0.88	305
MAR	Mean Annual Runoff in inches	23	inches	11.6	37.4
SSURGOB	SSURGO Percent Hydrologic Soil Type B	0	percent	1.14	65.7
JULAVPRE	Mean July Precipitation	3.56	inches	3.2	5.26
MAYAVPRE	Mean May Precipitation	3.46	inches	3.15	5.68
PRJUNAUG00	Basin average mean precip for June to August	11.1	inches	10.5	15.5
JUNMAXTMP	Maximum June Temperature	76.5	degrees F	68.8	78.8
SSURGOA	SSURGO Percent Hydrologic Soil Type A	9.35	percent	0.62	51.2
EL1200	Percentage of Basin Above 1200 ft	0	percent	0	100

Flow-Duration Statistics Flow Report [Statewide duration flows excl LongIsl 2014 5220]

Statistic	Value	Unit

Flow-Duration Statistics Citations

Bankfull Statistics

Bankfull Statistics Parameters [Bankfull Regions 1 and 2 SIR2009 5144]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0454	square miles	0.52	396

Bankfull Statistics Parameters [Interior Plains D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0454	square miles	0.19305	59927.7393

Bankfull Statistics Parameters [Central Lowland P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0454	square miles	0.200772	59927.66594

Bankfull Statistics Parameters [USA Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0454	square miles	0.07722	59927.7393

Bankfull Statistics Disclaimers [Bankfull Regions 1 and 2 SIR2009 5144]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [Bankfull Regions 1 and 2 SIR2009 5144]

Statistic	Value	Unit
Bankfull Area	2.61	ft^2
Bankfull Depth	0.383	ft
Bankfull Streamflow	3.59	ft^3/s
Bankfull Width	7.02	ft

Bankfull Statistics Disclaimers [Interior Plains D Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [Interior Plains D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	3.96	ft
Bieger_D_channel_depth	0.828	ft
Bieger_D_channel_cross_sectional_area	5.01	ft^2

Bankfull Statistics Disclaimers [Central Lowland P Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [Central Lowland P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	4.72	ft
Bieger_P_channel_depth	1.09	ft
Bieger_P_channel_cross_sectional_area	5.02	ft^2

Bankfull Statistics Disclaimers [USA Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	4.17	ft
Bieger_USA_channel_depth	0.624	ft
Bieger_USA_channel_cross_sectional_area	3.22	ft^2

Bankfull Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
Bankfull Area	2.61	ft^2
Bankfull Depth	0.383	ft
Bankfull Streamflow	3.59	ft^3/s
Bankfull Width	7.02	ft
Bieger_D_channel_width	3.96	ft
Bieger_D_channel_depth	0.828	ft
Bieger_D_channel_cross_sectional_area	5.01	ft^2
Bieger_P_channel_width	4.72	ft
Bieger_P_channel_depth	1.09	ft

Statistic	Value	Unit
Bieger_P_channel_cross_sectional_area	5.02	ft^2
Bieger_USA_channel_width	4.17	ft
Bieger_USA_channel_depth	0.624	ft
Bieger_USA_channel_cross_sectional_area	3.22	ft^2

Bankfull Statistics Citations

Mulvihill, C.I., Baldigo, B.P., Miller, S.J. , and DeKoskie, Douglas,2009, Bankfull Discharge and Channel Characteristics of Streams in New York State: U.S. Geological Survey Scientific Investigations Report 2009-5144, 51 p. (http://pubs.usgs.gov/sir/2009/5144/)
Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p. (https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_cam

Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 6]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0454	square miles	0.1	10000

Maximum Probable Flood Statistics Disclaimers [Crippen Bue Region 6]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 6]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	457	ft^3/s

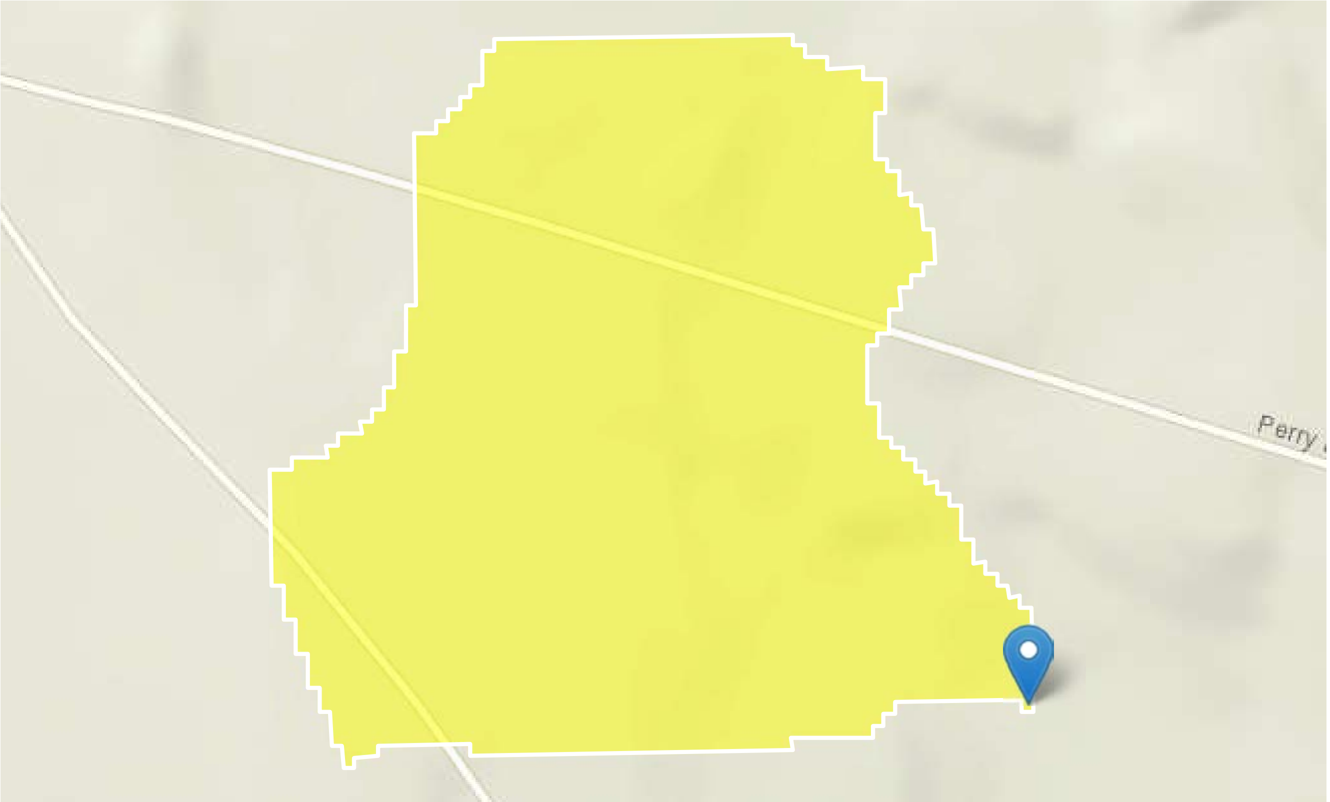
Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (https://pubs.usgs.gov/wsp/1887/report.pdf)

Application Version: 4.24.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats Report - Perry Road Northwest Branch

Region ID: NY
Workspace ID: NY20240930133157664000
Clicked Point (Latitude, Longitude): 43.29689, -76.27578
Time: 2024-09-30 09:32:20 -0400



⊞ Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	396183.8	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	4794819.2	meters
CSL1085LO	10-85 slope of lower half of main channel in feet per mile.	112	feet per mi
DRNAREA	Area that drains to a point on a stream	0.12	square miles

Parameter Code	Parameter Description	Value	Unit
EL1200	Percentage of basin at or above 1200 ft elevation	0	percent
FOREST	Percentage of area covered by forest	33.8	percent
JULAVPRE	Mean July Precipitation	3.56	inches
JUNAVPRE	Mean June Precipitation	3.72	inches
JUNMAXTMP	Maximum June Temperature, in degrees F	76.5	degrees F
LAGFACTOR	Lag Factor as defined in SIR 2006-5112	0.00545	dimensionless
LENGTH	Length along the main channel from the measuring location extended to the basin divide	0.63	miles
MAR	Mean annual runoff for the period of record in inches	23	inches
MAYAVPRE	Mean May Precipitation	3.46	inches
PRECIP	Mean Annual Precipitation	42.5	inches
PRJUNAUG00	Basin average mean precip for June to August from PRISM 1971-2000	11.1	inches
SSURGOA	Percentage of area of Hydrologic Soil Type A from SSURGO	3.95	percent
SSURGOB	Percentage of area of Hydrologic Soil Type B from SSURGO	0	percent
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [2006 Full Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.12	square miles	0.54	4500
LAGFACTOR	Lag Factor	0.00545	dimensionless	0.004	15.229
STORAGE	Percent Storage	0	percent	0	28.92

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
FOREST	Percent Forest	33.8	percent	23.83	99.61
PRECIP	Mean Annual Precipitation	42.5	inches	29.49	56.1

Peak-Flow Statistics Disclaimers [2006 Full Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [2006 Full Region 1]

Statistic	Value	Unit
80-percent AEP flood	7.2	ft^3/s
66.7-percent AEP flood	8.63	ft^3/s
50-percent AEP flood	10.6	ft^3/s
20-percent AEP flood	16.1	ft^3/s
10-percent AEP flood	20.3	ft^3/s
4-percent AEP flood	26.2	ft^3/s
2-percent AEP flood	30.9	ft^3/s
1-percent AEP flood	36.2	ft^3/s
0.5-percent AEP flood	41.4	ft^3/s
0.2-percent AEP flood	49.2	ft^3/s

Peak-Flow Statistics Citations

Lumia, Richard, Freehafer, D.A., and Smith, M.J.,2006, Magnitude and Frequency of Floods in New York: U.S. Geological Survey Scientific Investigations Report 2006–5112, 152 p. (http://pubs.usgs.gov/sir/2006/5112/)

Flow-Duration Statistics

Flow-Duration Statistics Parameters [Statewide duration flows excl LongIsl 2014 5220]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.12	square miles	3.14	4780
JUNAVPRE	Mean June Precipitation	3.72	inches	3.59	5.33
CENTROIDX	CENTROIDX	396183.8	meters	166000	658000
CENTROIDY	CENTROIDY	4794819.2	meters	4560000	4920000
CSL1085LO	10-85 slope of lower half of main channel	112	feet per mi	1.56	152
LENGTH	Main Channel Length	0.63	miles	0.88	305
MAR	Mean Annual Runoff in inches	23	inches	11.6	37.4
SSURGOB	SSURGO Percent Hydrologic Soil Type B	0	percent	1.14	65.7
JULAVPRE	Mean July Precipitation	3.56	inches	3.2	5.26
MAYAVPRE	Mean May Precipitation	3.46	inches	3.15	5.68
PRJUNAUG00	Basin average mean precip for June to August	11.1	inches	10.5	15.5
JUNMAXTMP	Maximum June Temperature	76.5	degrees F	68.8	78.8
SSURGOA	SSURGO Percent Hydrologic Soil Type A	3.95	percent	0.62	51.2
EL1200	Percentage of Basin Above 1200 ft	0	percent	0	100

Flow-Duration Statistics Flow Report [Statewide duration flows excl LongIsl 2014 5220]

Statistic	Value	Unit

Flow-Duration Statistics Citations

Bankfull Statistics

Bankfull Statistics Parameters [Bankfull Regions 1 and 2 SIR2009 5144]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.12	square miles	0.52	396

Bankfull Statistics Parameters [Interior Plains D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.12	square miles	0.19305	59927.7393

Bankfull Statistics Parameters [Central Lowland P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.12	square miles	0.200772	59927.66594

Bankfull Statistics Parameters [USA Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.12	square miles	0.07722	59927.7393

Bankfull Statistics Disclaimers [Bankfull Regions 1 and 2 SIR2009 5144]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [Bankfull Regions 1 and 2 SIR2009 5144]

Statistic	Value	Unit
Bankfull Area	5.12	ft^2
Bankfull Depth	0.528	ft
Bankfull Streamflow	8.2	ft^3/s
Bankfull Width	9.98	ft

Bankfull Statistics Disclaimers [Interior Plains D Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [Interior Plains D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	5.57	ft
Bieger_D_channel_depth	0.997	ft
Bieger_D_channel_cross_sectional_area	7.93	ft^2

Bankfull Statistics Disclaimers [Central Lowland P Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [Central Lowland P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	6.57	ft
Bieger_P_channel_depth	1.29	ft
Bieger_P_channel_cross_sectional_area	7.86	ft^2

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	5.87	ft
Bieger_USA_channel_depth	0.767	ft
Bieger_USA_channel_cross_sectional_area	5.44	ft^2

Bankfull Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
Bankfull Area	5.12	ft^2
Bankfull Depth	0.528	ft
Bankfull Streamflow	8.2	ft^3/s

Statistic	Value	Unit
Bankfull Width	9.98	ft
Bieger_D_channel_width	5.57	ft
Bieger_D_channel_depth	0.997	ft
Bieger_D_channel_cross_sectional_area	7.93	ft^2
Bieger_P_channel_width	6.57	ft
Bieger_P_channel_depth	1.29	ft
Bieger_P_channel_cross_sectional_area	7.86	ft^2
Bieger_USA_channel_width	5.87	ft
Bieger_USA_channel_depth	0.767	ft
Bieger_USA_channel_cross_sectional_area	5.44	ft^2

Bankfull Statistics Citations

Mulvihill, C.I., Baldigo, B.P., Miller, S.J. , and DeKoskie, Douglas,2009, Bankfull Discharge and Channel Characteristics of Streams in New York State: U.S. Geological Survey Scientific Investigations Report 2009-5144, 51 p. (http://pubs.usgs.gov/sir/2009/5144/)
Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p. (https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_cam

Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 6]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.12	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 6]

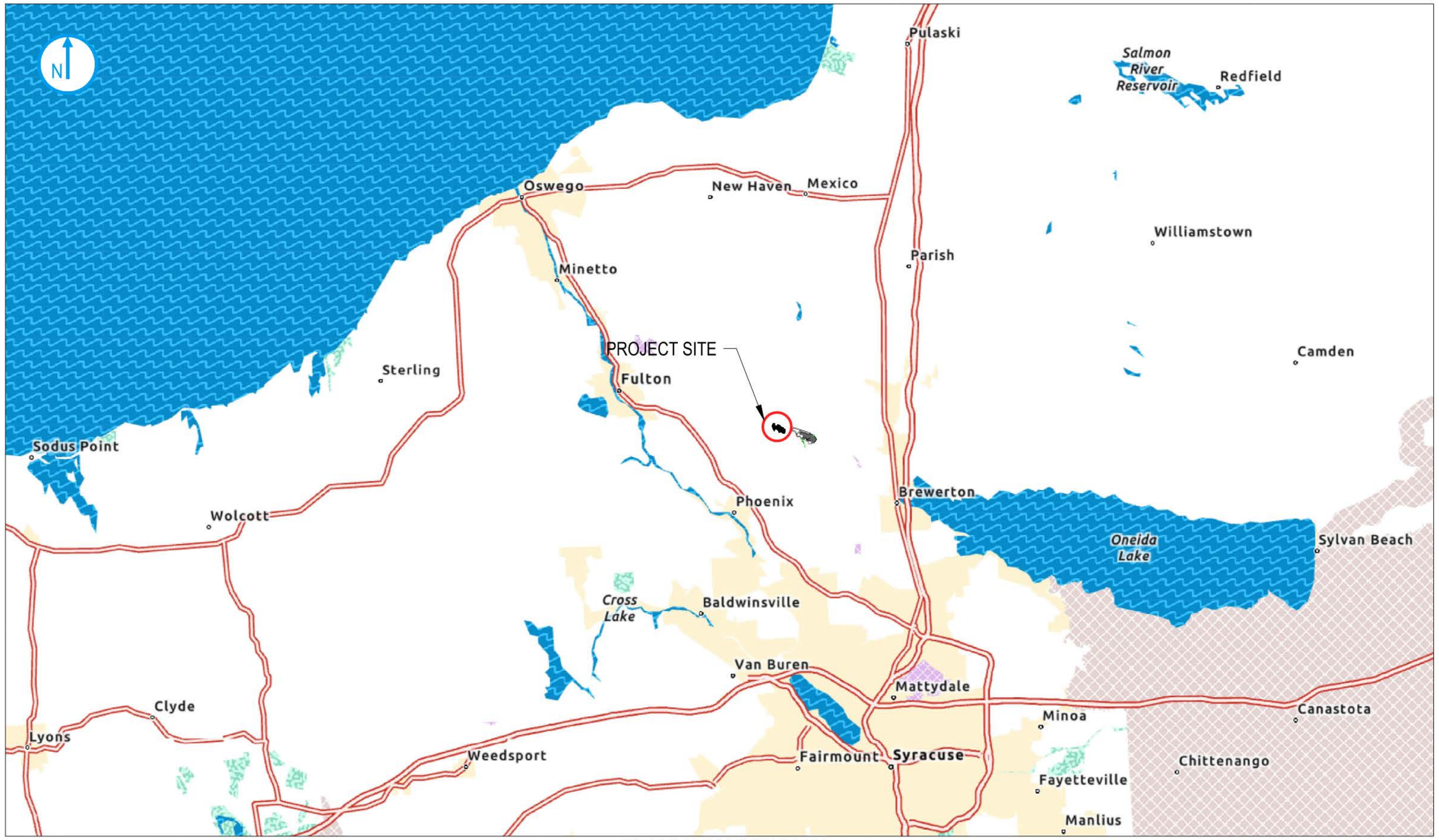
Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	1100	ft^3/s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (https://pubs.usgs.gov/wsp/1887/report.pdf)

Application Version: 4.24.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Appendix J.



SITE LOCATION MAP

26400 0 26400

SCALE: 1"= 5 MILES

INDEX TO DRAWINGS

ABBREVIATIONS:

EG	EXISTING GROUND	STA	STATION
FG	FINISH GROUND	ELEV	ELEVATION
ES	EXISTING STREAM	SQ	SQUARE FEET
DS	DESIGN STREAM	CFPS	CUBIC FEET PER SECOND
NE	NORTHEAST	MAX	MAXIMUM
SE	SOUTHEAST	MIN	MINIMUM
NW	NORTHWEST	DS	DOWNSTREAM
SW	SOUTHWEST	US	UPSTREAM
AVG	AVERAGE	TYP	TYPICAL
FT	FEET	APPR.	APPROXIMATE

THE WETLAND TRUST
STREAM MITIGATION PROJECT
FISH CREEK SITE
PERRY RD, PENNELLVILLE, NY 13132

ALL SITE PLANS IMPLEMENT THE FOLLOWING COORDINATES:
HORIZONTAL: NAD83 NEW YORK STATE PLANES, CENTRAL ZONE, US FOOT
VERTICAL : NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NO.	REV DATE	REVISION	INT.

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Project Details
THE WETLAND TRUST
FISH CREEK SITE STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132

Drawing Title
COVER AND TITLE SHEET

####

Location:
NEW YORK

Designer / Professional Engineer Responsible:
####

####

Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buelow	Approved by P. Domaszczynski	Date ####
Project Status ####	Drawing Number **C-001**			Scale NTS	Sc x / Rev. x

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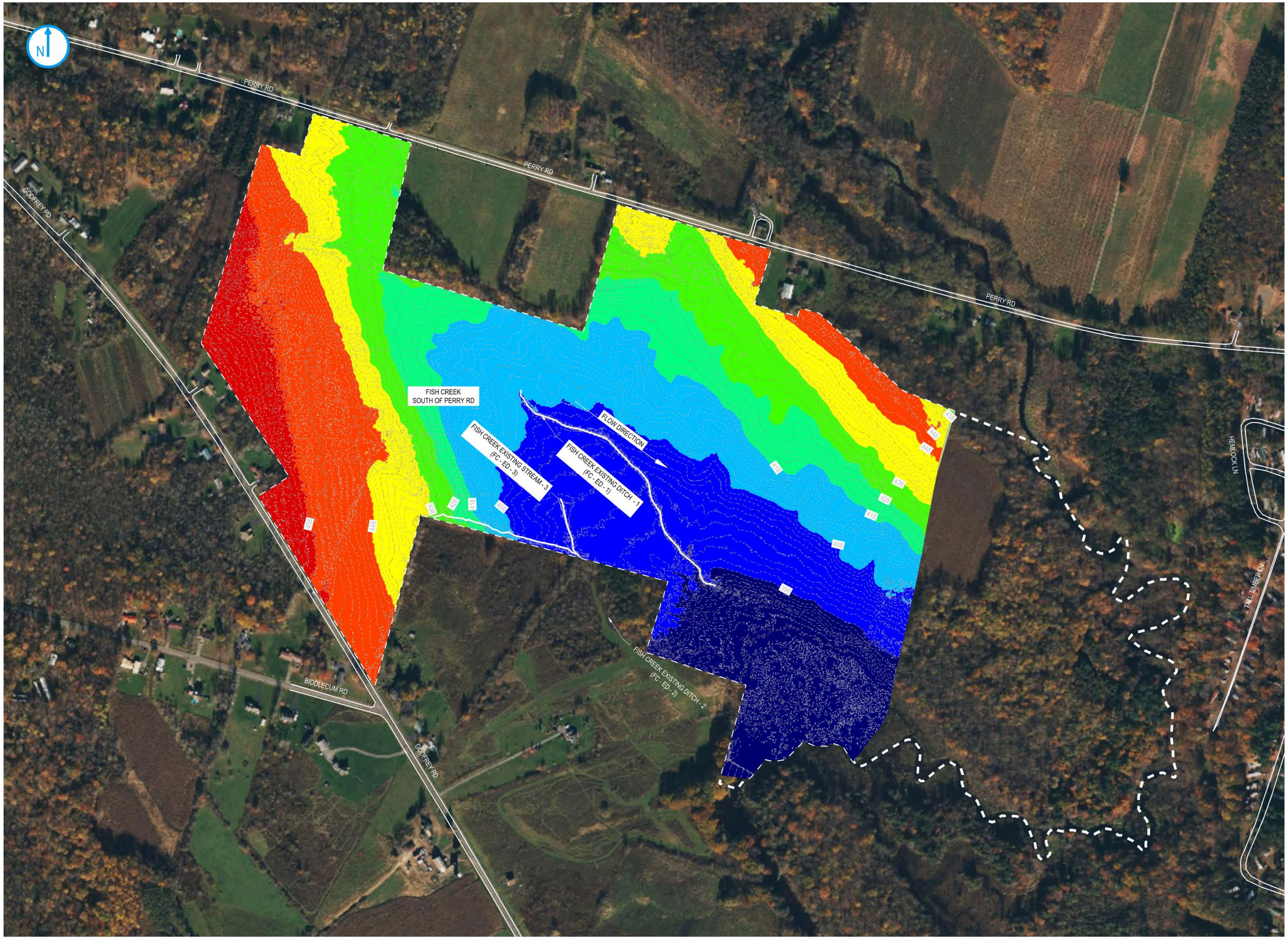

LEGEND:

- - - PROPERTY BOUNDARY (APPROXIMATE)

— EXISTING STREAM ALIGNMENT

Elevations Table

NUMBER	MINIMUM ELEVATION (FT)	MAXIMUM ELEVATION (FT)	AREA (FT^2)	COLOR
1	388.00	398.00	704956.77	■
2	398.00	408.00	1057721.25	🟦
3	408.00	418.00	992942.12	■
4	418.00	428.00	606623.00	🟩
5	428.00	438.00	734665.45	🟩
6	438.00	448.00	719491.44	🟨
7	448.00	458.00	907270.67	🟧
8	458.00	468.00	313431.28	🟥

EXISTING CONDITIONS SITE PLAN

250 0 250
SCALE: 1"=250'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NO.	REV DATE	REVISION	INT.

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Project Details
THE WETLAND TRUST
FISH CREEK SITE STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
EXISTING CONDITIONS SITE PLAN

####
####
####

Location:
####

Designer / Professional Engineer Responsible:
####

Project Number **1940111895**
Designed by S.M. Ahmadi
Drawn by S.M. Ahmadi
Checked by K. Buelow
Approved by P. Domaszczynski
Date ####

Project Status ####
Drawing Number **C-002**
Scale AS NOTED
Sc x
Rev. x

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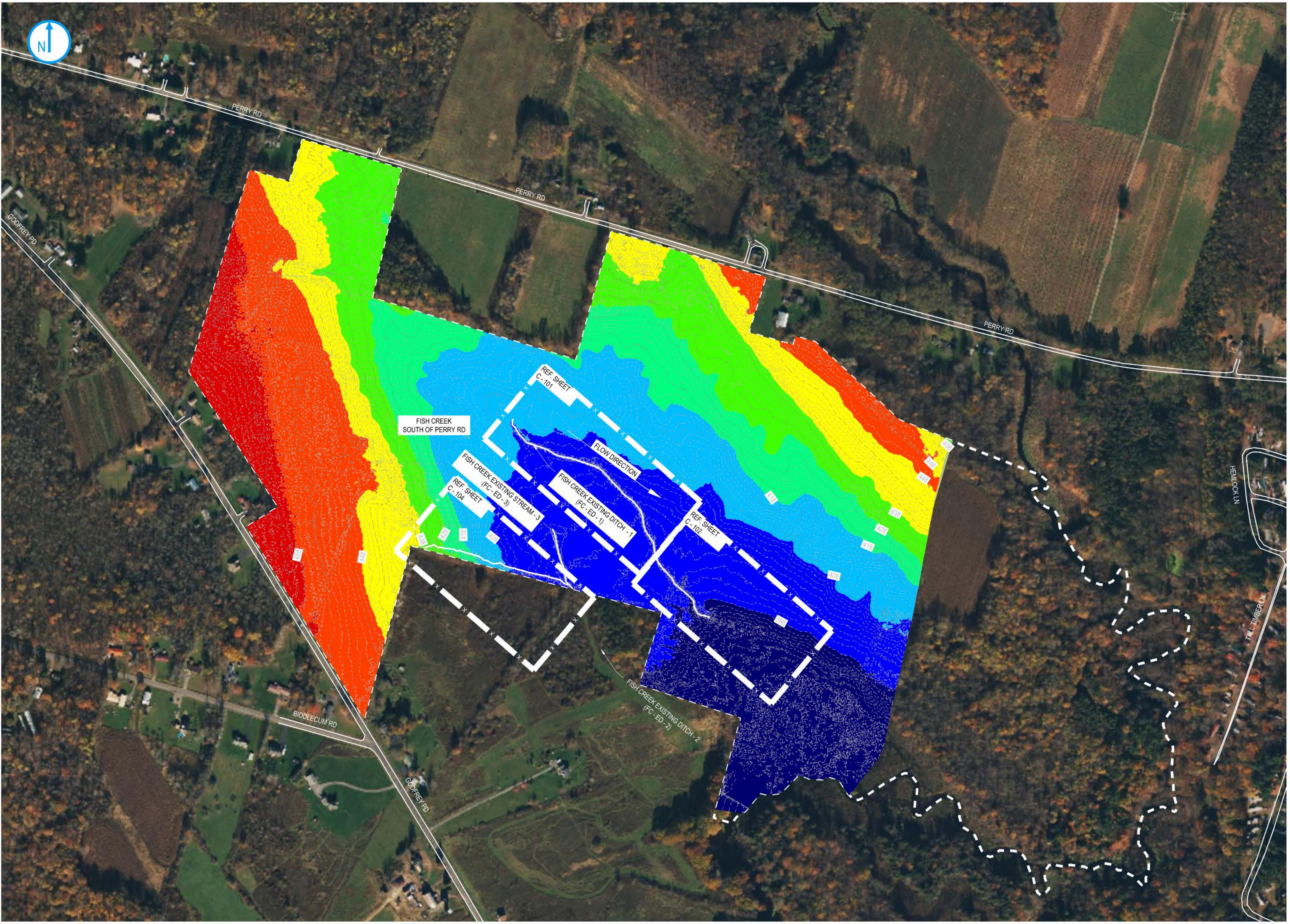

Elevations Table

NUMBER	MINIMUM ELEVATION (FT)	MAXIMUM ELEVATION (FT)	AREA (FT^2)	COLOR
1	388.00	398.00	704956.77	🟦
2	398.00	408.00	1057721.25	🟦
3	408.00	418.00	992942.12	🟦
4	418.00	428.00	606623.00	🟩
5	428.00	438.00	734665.45	🟩
6	438.00	448.00	719491.44	🟨
7	448.00	458.00	907270.67	🟧
8	458.00	468.00	313431.28	🟥

LEGEND

- - - - - PROPERTY BOUNDARY LINE

——— EXISTING STREAM ALIGNMENT

KEY PLAN FOR EXISTING CONDITIONS

250 0 250
SCALE: 1"=250'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NO.	REV DATE	REVISION	INT.

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Project Details
THE WETLAND TRUST
FISH CREEK SITE STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

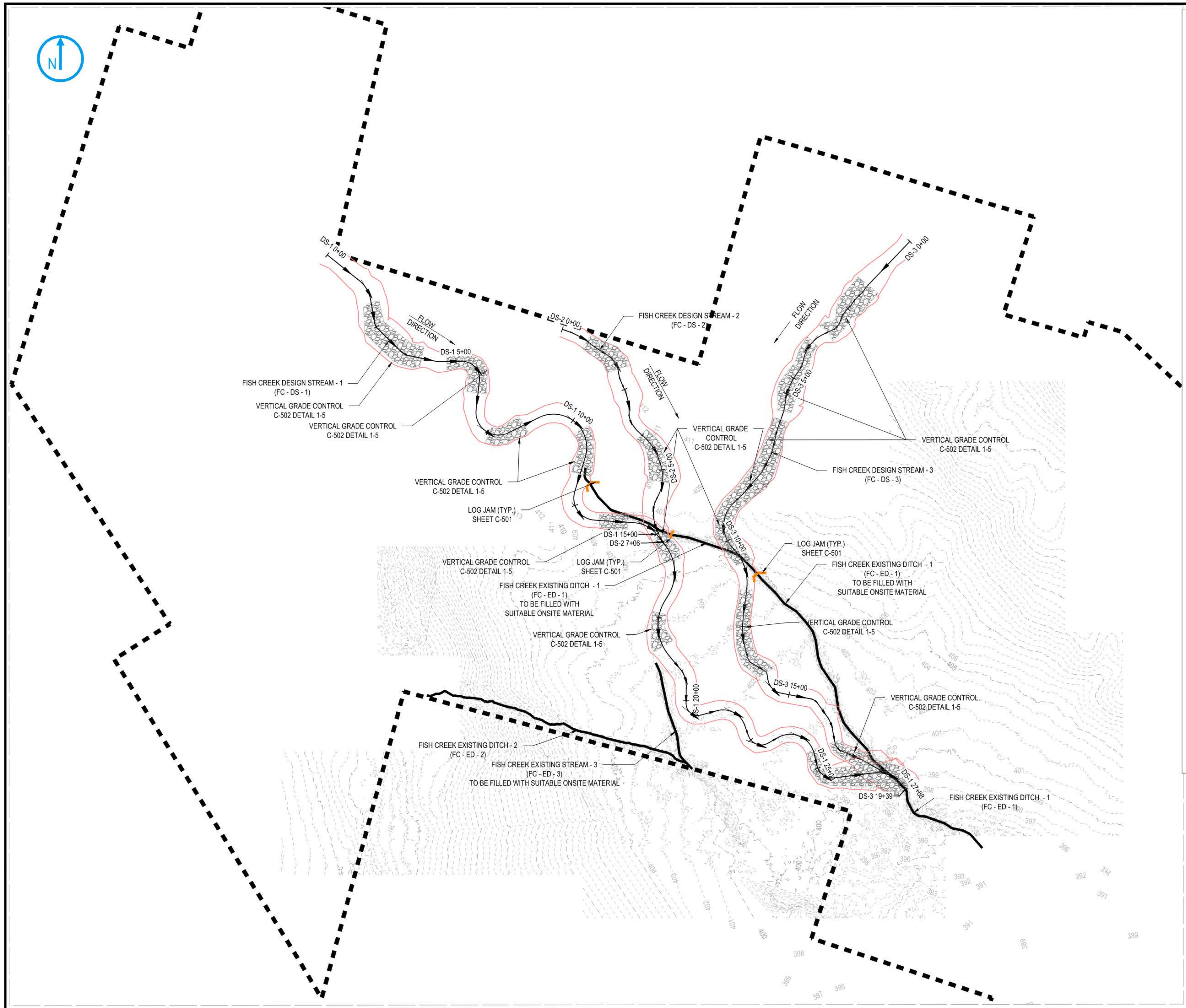
Drawing Title
KEY PLAN FOR EXISTING CONDITIONS

####
####
####

Location:
####

Designer / Professional Engineer Responsible:
####

Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buelow	Approved by P. Domaszczynski	Date ####
Project Status ####	Drawing Number **C-003**			Scale AS NOTED	Sc x
					Rev. x



PROPOSED CONDITION SITE PLAN

150 0 150
SCALE: 1"=150'

NOTES:

1. EXISTING TOPOGRAPHY BASED ON LiDAR DATA COLLECTED BY RAMBOLL ON 11/26/2024. BANKFULL DIMENSIONS BASED ON STREAMSTATS DATA AND FIELD OBSERVATIONS FROM 2024.
2. IMPROVEMENT AND RESTORATION ACTIVITIES WITHIN THE FEDERAL WETLANDS AND WATERCOURSE WILL BE PERFORMED IN ACCORDANCE WITH SECTIONS 401 AND 404 OF THE CLEAN WATER ACT AND OTHER PERMIT CONDITIONS OF THE USACE AND NYSDEC.
3. THE CONTRACTOR SHALL MAINTAIN STREAM FLOW RATES DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL NOT PERFORM CONSTRUCTION ACTIVITIES DURING PERIODS OF PROLONGED PRECIPITATION OR WHEN PROLONGED PRECIPITATION IS FORECASTED. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION OPERATIONS AS REQUIRED TO LIMIT THE MIGRATION OF SILTATION/SEDIMENT DOWNSTREAM OF THE CONSTRUCTION ZONE. SPECIFIC CRITERIA TO BE ADHERED TO INCLUDE THE FOLLOWING:
   - 4.1. TURBIDITY: NO INCREASE IN TURBIDITY 400 FEET DOWNSTREAM OF THE CONSTRUCTION ZONE WHICH WILL CAUSE A SUBSTANTIAL VISIBLE CONTRAST TO NATURAL CONDITIONS.
   - 4.2. SETTLEABLE SOLIDS: NO SETTLEABLE SOLIDS 100 FEET DOWNSTREAM OF THE CONSTRUCTION ZONE WHICH WILL CAUSE DEPOSITION OR IMPAIR THE WATERS FOR THEIR BEST USAGES.
5. IN-STREAM/WETLAND CONSTRUCTION WILL BE PERFORMED ONLY DURING DAYLIGHT HOURS. THE CONTRACTOR SHALL MAINTAIN BY-PASS PUMPING OPERATIONS DURING THE PERFORMANCE OF CONSTRUCTION ACTIVITIES WITHIN THE STREAM/WETLAND. IF CONSTRUCTION OPERATIONS ARE TEMPORARILY SUSPENDED DUE TO NIGHTFALL, BY-PASS PUMPING SHALL BE MAINTAINED, IF REQUIRED. TO MINIMIZE THE DOWNSTREAM TRANSPORT OF SETTLEABLE SOLIDS AND IMPACTS TO STREAM/WETLAND TURBIDITY IN ACCORDANCE WITH NOTE 4.
6. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO COMPLETE CONSTRUCTION OPERATIONS AS EXPEDITIOUSLY AS PRACTICAL SO AS TO MINIMIZE THE DURATION OF DISTURBANCE WITHIN THE STREAM/WETLAND.
7. ALL CONSTRUCTION EQUIPMENT SHALL BE REMOVED FROM THE STREAM/WETLAND UPON COMPLETION OF CONSTRUCTION.
8. ESC FACILITIES (I.E., SILT FENCING, STABILIZED CONSTRUCTION ENTRANCES) SHALL BE MAINTAINED WITHIN THE WORK AREA (I.E., STREAM BANK) EXCEPT AS REQUIRED TO ALLOW EQUIPMENT ACCESS FOR CONSTRUCTION ACTIVITIES AND SHALL BE MAINTAINED UNTIL REVEGETATION IS COMPLETE.
9. THE CONTRACTOR SHALL NOT STORE CHEMICALS, FUELS, OR LUBRICATING OILS WITHIN 100 FEET OF STREAM/WETLAND. WITH THE EXCEPTION OF DEWATERING PUMPS, EQUIPMENT SHALL NOT BE REFUELED WITHIN 100 FEET OF STREAM/WETLAND.
10. EQUIPMENT AND/OR MACHINERY SHALL NOT BE WASHED IN THE STREAM/WETLAND NOR SHALL THE CONTRACTOR PERMIT WATER FROM SUCH ACTIVITIES TO ENTER THE STREAM/WETLAND.
11. THE CONTRACTOR'S STAGING AREA SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM THE STREAM/WETLAND BANK.
12. ALL NECESSARY PRECAUTIONS WILL BE TAKEN TO PRECLUDE CONTAMINATION OF ANY WATERWAYS BY SUSPENDED SOLIDS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS, EPOXY COATINGS, PAINTS, CONCRETE, LEACHATE, OR ANY OTHER ENVIRONMENTALLY DELETERIOUS MATERIALS ASSOCIATED WITH THE PROJECT WORK.
13. THE STREAM BED SHALL BE RESTORED AS SOON AS PRACTICABLE AND STREAM SECTIONS (BED AND BANK) SHALL BE STABILIZED PRIOR TO RESTORING FLOW.
14. CUT OR PRUNE EXISTING STREAM BANK/WETLAND VEGETATION UTILIZING APPROPRIATE PRUNING METHODS.
15. COLLECT AND STOCKPILE EXISTING DOWNED TREES AND COARSE WOODY DEBRIS WITH ROOTWADS INTACT IF POSSIBLE. A MINIMUM OF 15-FT OF TRUNK SHALL BE MAINTAINED ABOVE THE ROOT WAD FOR USE IN CONSTRUCTING THE PROPOSED ENGINEERED LOG JAM AND TO FILL IN THE NEW SECONDARY CHANNEL (SEE C-501).
16. INSTALL THE ENGINEERED LOGJAM TO PERMANENTLY DIRECT FLOW INTO THE HISTORIC CHANNEL AND AWAY FROM THE NEW SECONDARY CHANNEL.
17. FILL THE NEW SECONDARY CHANNEL WITH BEDLOAD AND COARSE WOODY DEBRIS TO TOP OF BANK.
18. STREAM/WETLAND DISTURBANCE CONSTRUCTION SEQUENCE GUIDELINES SHALL BE AS FOLLOWS:
   - 18.1. INSTALL SILT FENCE OR EQUIVALENT AT EDGE OF STREAM/WETLAND TO CONTROL SEDIMENT LADEN RUNOFF TO STREAM/WETLAND.
   - 18.2. COMPLETE STREAM CHANNEL GRADING PER CONSTRUCTION DRAWINGS, GENERALLY WORKING FROM THE DOWNSTREAM END TO UPSTREAM END. FLOW SHALL NOT BE DIRECTED INTO THE PROPOSED CHANNEL UNTIL THE PROPOSED CHANNEL IS STABILIZED.
   - 18.3. INSTALL BY-PASS PUMPING AND SILTATION CONTROL MEASURES AS NECESSARY IN STREAM/WETLAND.
   - 18.4. REMOVE AND DISPOSE OF ANY ACCUMULATED SEDIMENT IN DESIGNATED AREAS OUTSIDE OF WETLANDS ONLY.
   - 18.5. PLANT WOODY VEGETATION AND SEED AND MULCH DISTURBED AREAS.
19. CAREFULLY REMOVE TEMPORARY SILTATION CONTROL MEASURES FROM THE LIMITS OF THE STREAM/WETLAND FLOW AREA.
20. THE CONTRACTOR SHALL SELECT THE NUMBER AND CAPACITY OF BY-PASS PUMPS REQUIRED TO DIVERT STREAM FLOW AROUND THE CONSTRUCTION ZONE.
21. THE CONTRACTOR SHALL OPERATE CONSTRUCTION EQUIPMENT WITHIN THE STREAM BED/WETLAND AS REQUIRED TO COMPLETE WORK. CONSTRUCTION MATS SHALL BE USED AS REQUIRED TO DEVELOP A STABLE BASE FOR THE MOVEMENT OF EQUIPMENT.
22. SANDBAGS SHALL BE FILLED WITH WELL GRADED COARSE SAND HAVING NO MORE THAN 10% (BY WEIGHT) PASSING THE NO. 100 SIEVE.

LEGEND:

—·—	PROPERTY BOUNDARY (APPROXIMATE)
—	MAJOR CONTOUR LINES
—	MINOR CONTOUR LINES
━	EXISTING STREAM
—	PROPOSED STREAM
▨	FILL AREA HATCH
▨	GROUNDWATER DAM
━	LOG JAM
▨	VERTICAL GRADE CONTROL
—	LIMITS OF STREAM WORK

NO.	REV DATE	REVISION	INT.

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

Project Details
THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
PROPOSED CONDITION SITE PLAN

####
####
####

Location:
####

Designer / Professional Engineer Responsible:
####

Project Number	Designed by	Drawn by	Checked by	Approved by	Date
1940111895	S.M. Ahmadi	S.M. Ahmadi	K. Buelow	P. Domaszczynski	####

Project Status	Drawing Number	Scale	Sc	Rev.
####	C-004	AS NOTED	x	x

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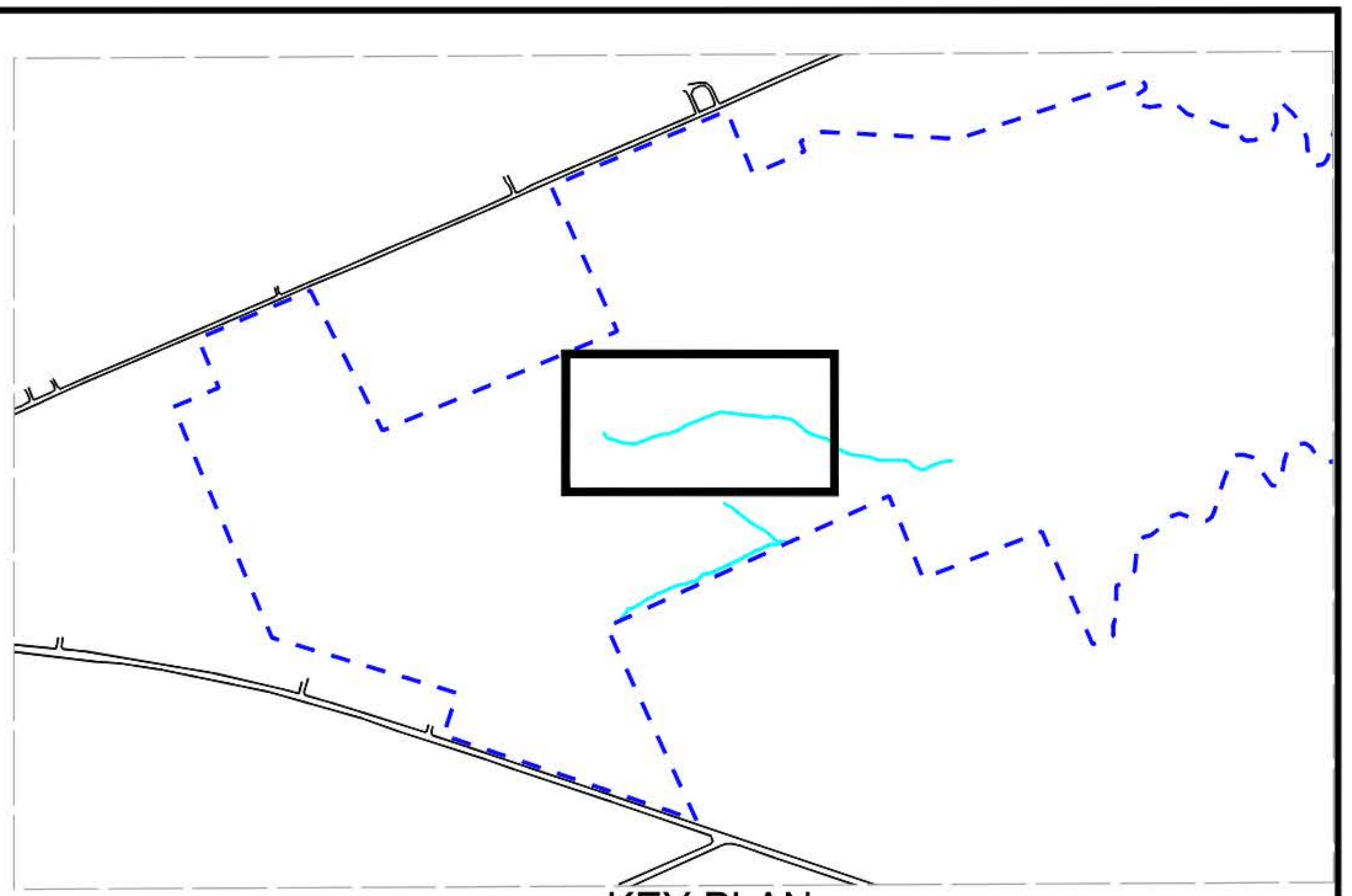


KEY PLAN

600 0 600

SCALE: 1"=600'

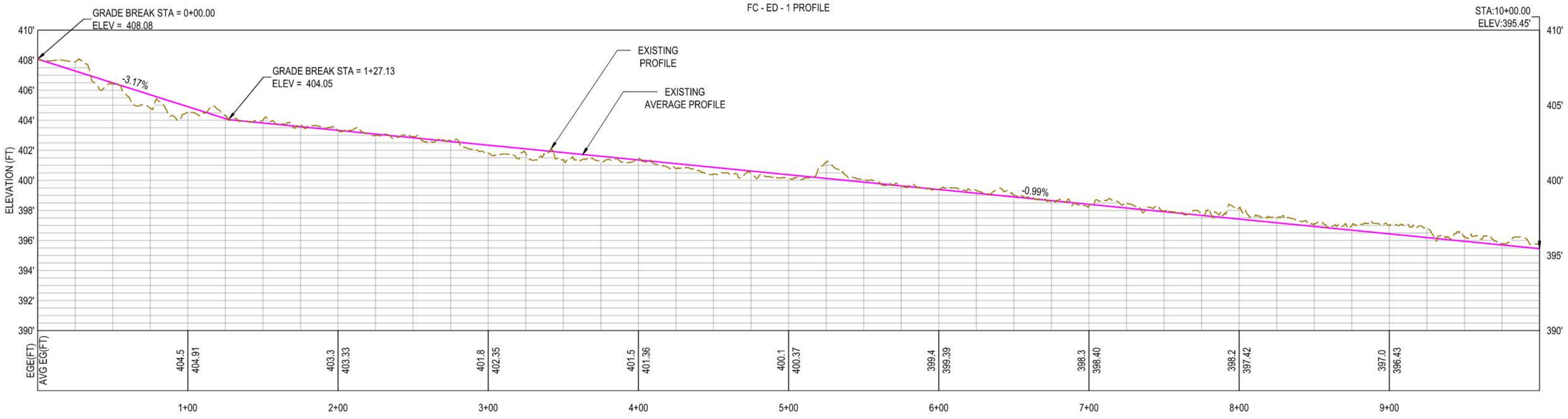
LEGEND:

- PROPERTY BOUNDARY (APPROXIMATE)
- EXISTING STREAM ALIGNMENT

EXISTING PLAN & PROFILE PR - ED - 1

50 0 50

SCALE: 1"=50'



PROFILE STATION 0+00 TO 10+00

50 0 50

SCALE HORZ. 1" = 50'

5' 0 5'

SCALE: VERT. 1"= 5'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NO.	REV DATE	REVISION	INT.

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Project Details
THE WETLAND TRUST
FISH CREEK SITE STREAM MITIGATION
PEERY RD, PENNELLVILLE, NY 13132
####

Drawing Title
EXISTING PLAN & PROFILE PR - DS - 1

####
####
####
####

Location:
NEW YORK

Designer / Professional Engineer Responsible:
####

Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buelow	Approved by P. Domaszczynski	Date 5/13/25	
Project Status ####	Drawing Number **C-101**			Scale AS NOTED	Sc x	Rev. x

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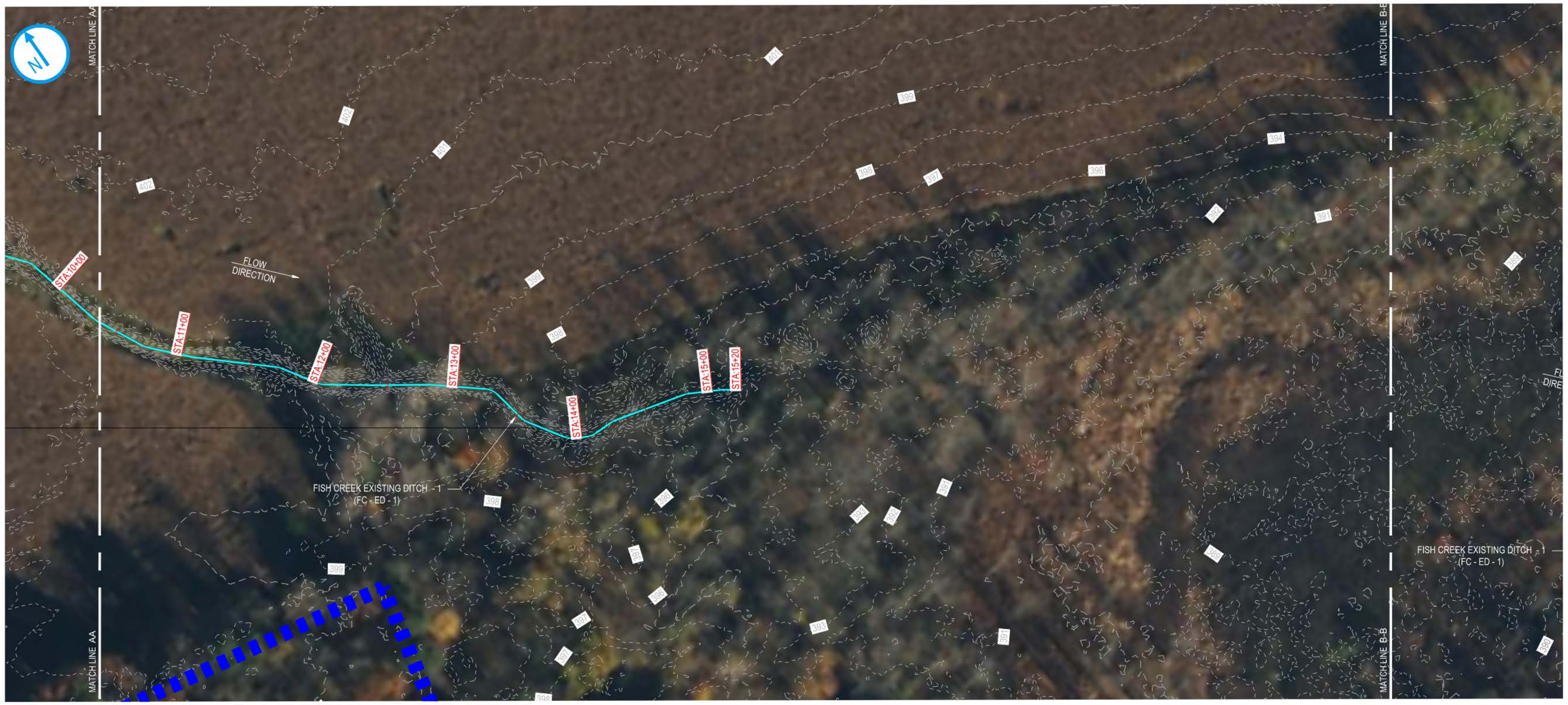

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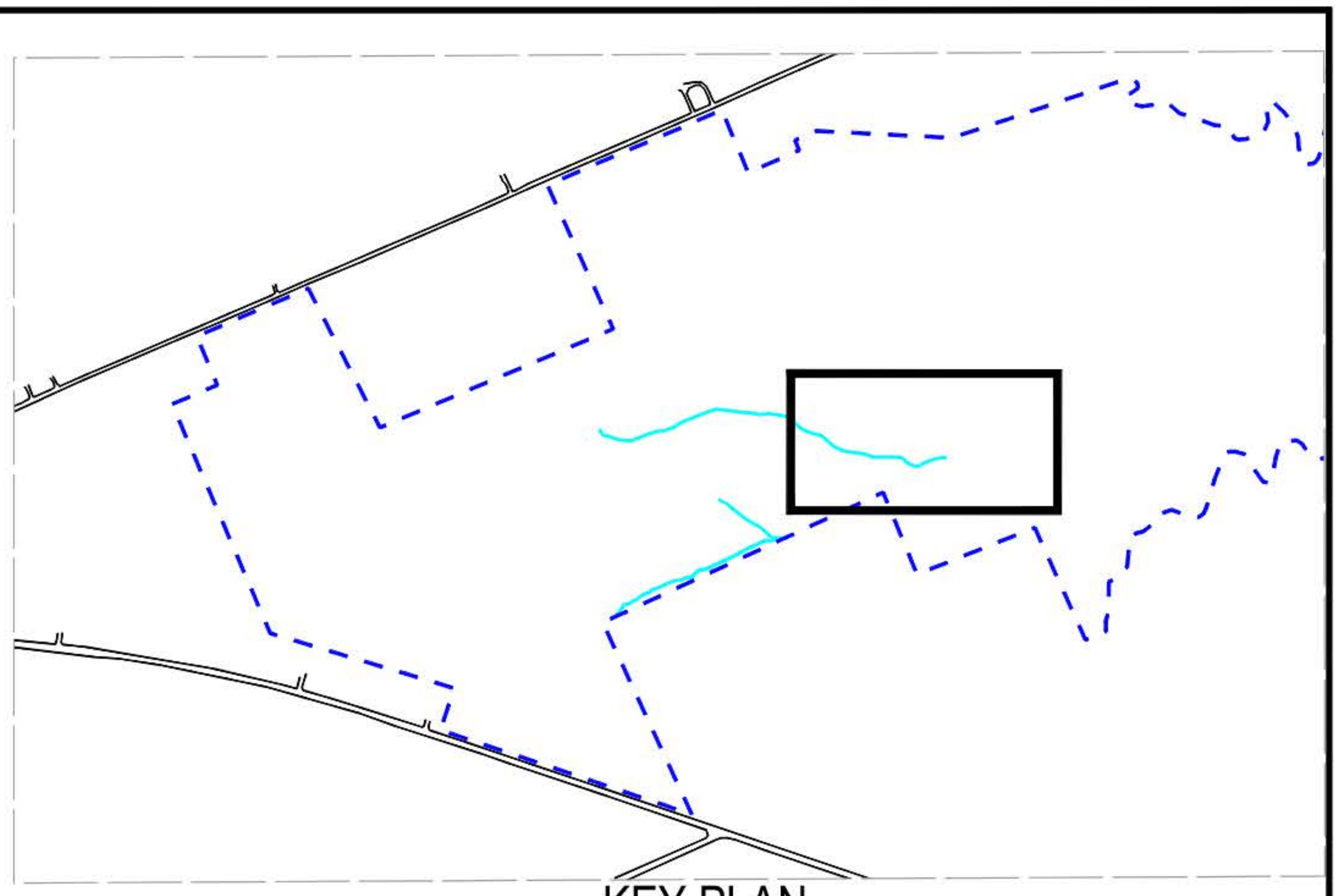
SCALE: 1"=50'

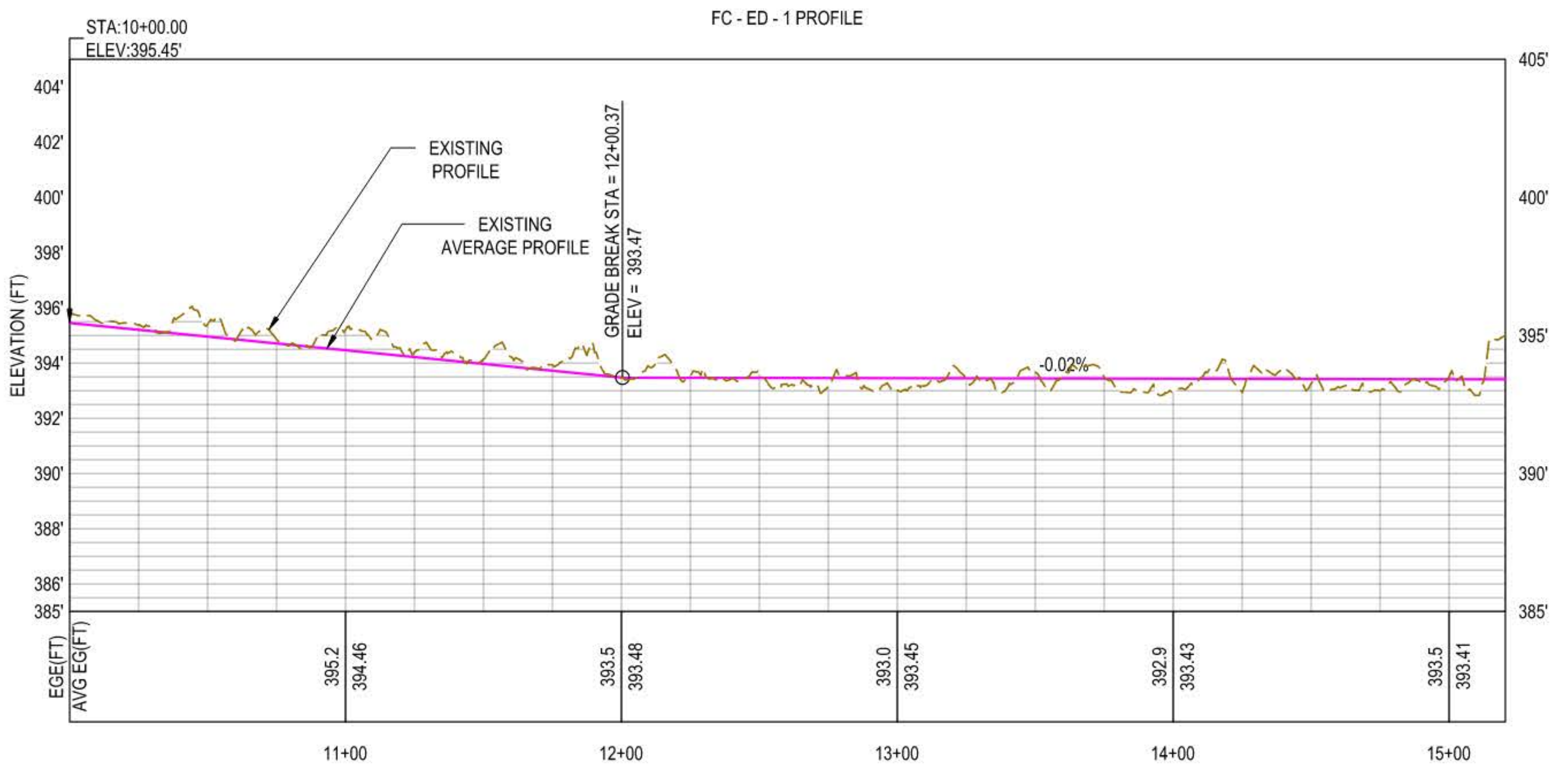


KEY PLAN

600 0 600
SCALE: 1"=600'

LEGEND:

▬ ▬	PROPERTY BOUNDARY (APPROXIMATE)
▬	EXISTING STREAM ALIGNMENT



PROFILE STATION 10+00 TO 20+00

50 0 50
SCALE HORZ. 1" = 50'

5' 0 5'
SCALE: VERT. 1"= 5'

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: 05/13/2025

NO.	REV DATE	REVISION	INT.

Project Details
THE WETLAND TRUST
FISH CREEK SITE STREAM MITIGATION
PEERY RD, PENNELLVILLE, NY 13132
####

Drawing Title
EXISTING PLAN & PROFILE PR - DS - 1

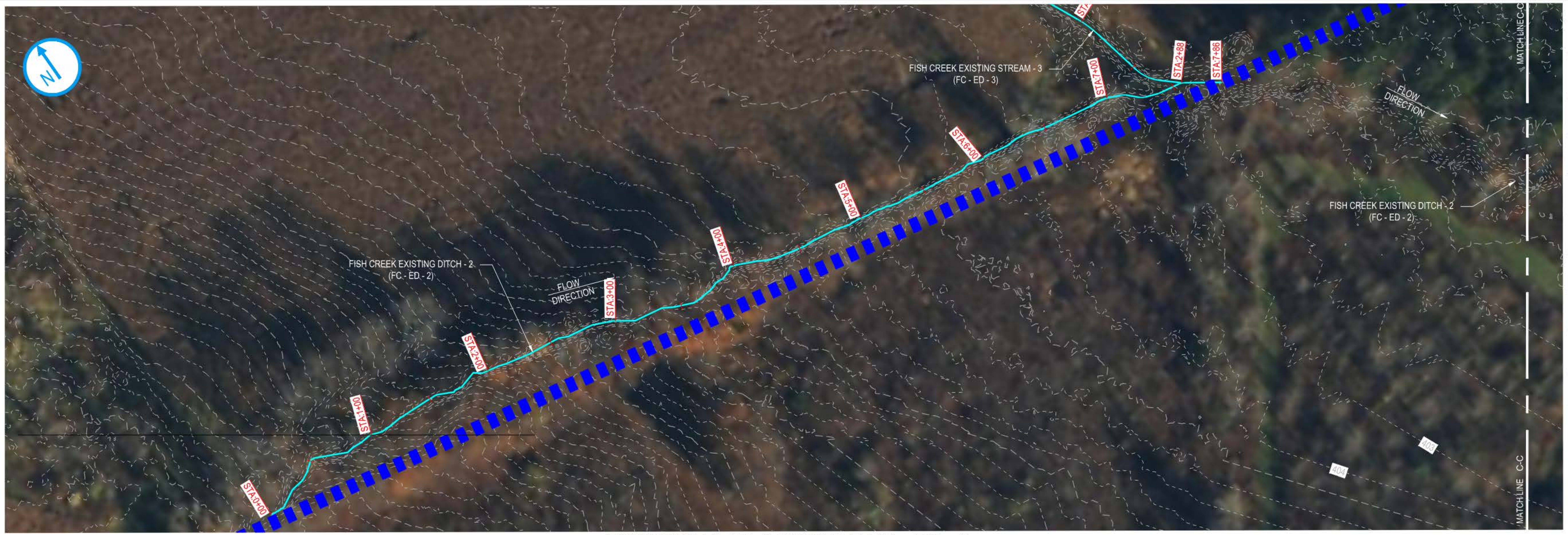
####
####
####
####

Location:
NEW YORK

Designer / Professional Engineer Responsible:
####

Project Number **1940111895**
Designed by S.M. Ahmadi
Drawn by S.M. Ahmadi
Checked by K. Buelow
Approved by P. Domaszczynski
Date 5/13/25

Project Status ####
Drawing Number **C-102**
Scale AS NOTED
Sc x
Rev. x



EXISTING PLAN & PROFILE PR - ED - 2

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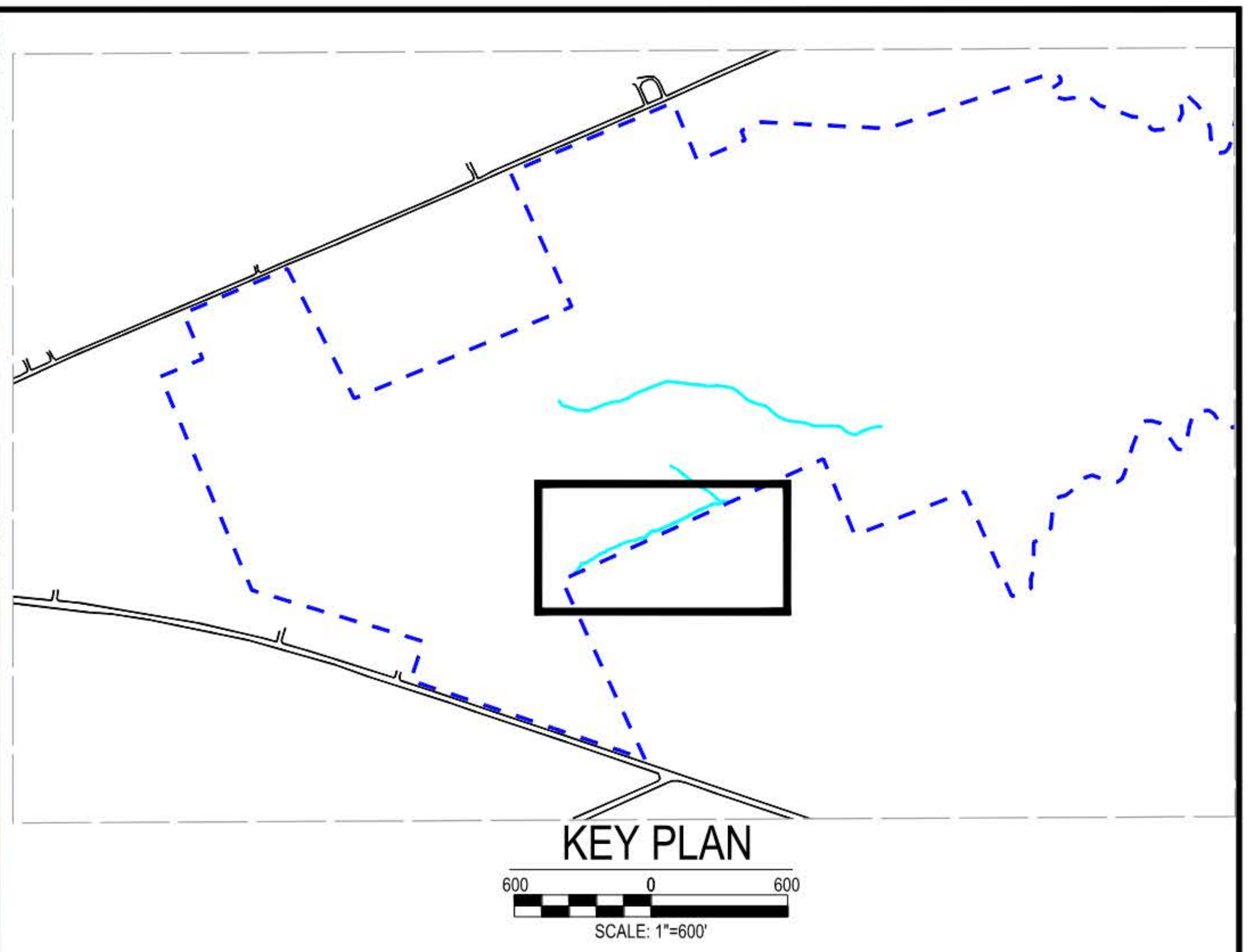
SCALE: 1"=50'

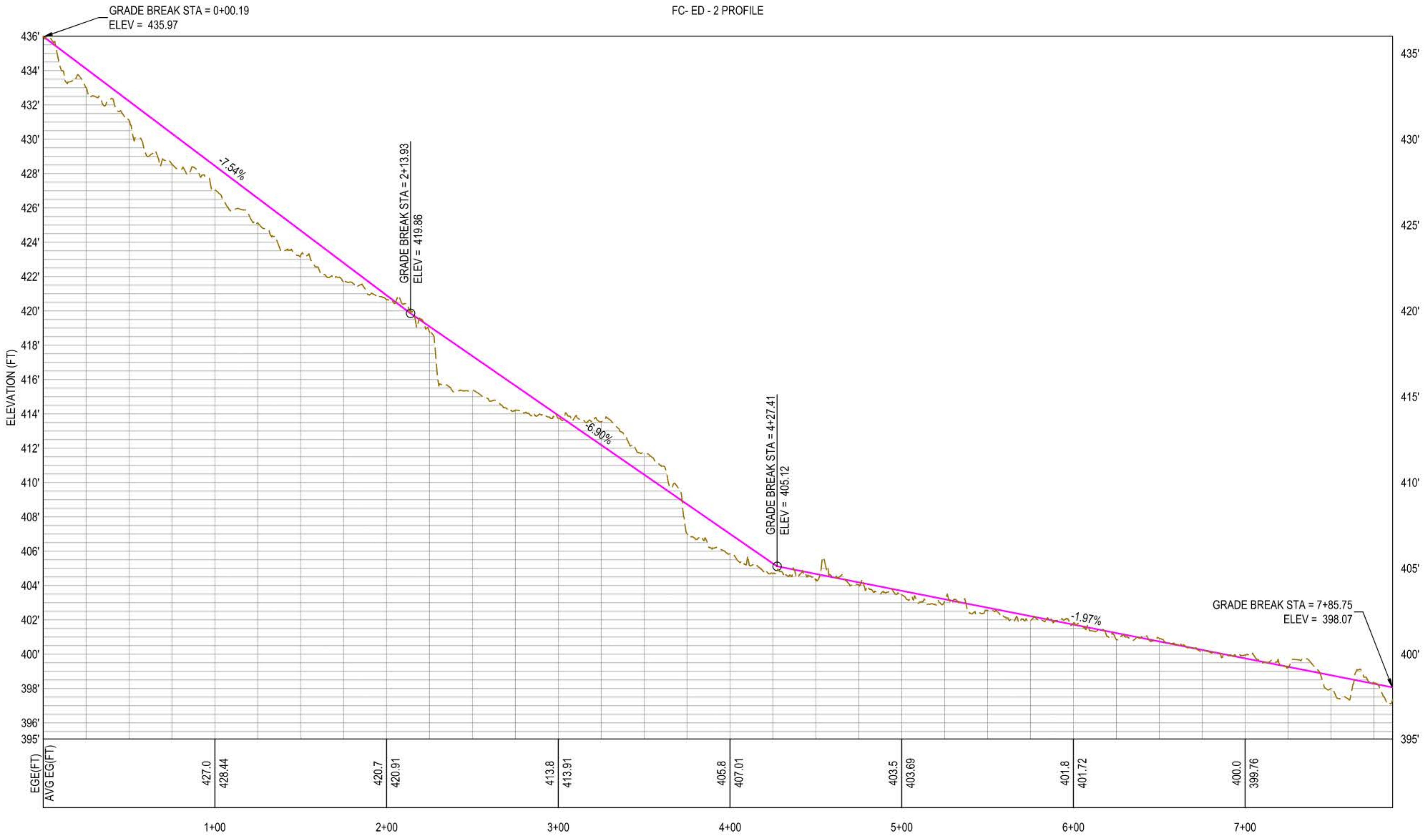


KEY PLAN

600 0 600
SCALE: 1"=600'

LEGEND:

▬ ▬	PROPERTY BOUNDARY (APPROXIMATE)
▬	EXISTING STREAM ALIGNMENT



PROFILE STATION 0+00 TO 10+00

50 0 50
SCALE HORZ. 1" = 50'

5' 0 5'
SCALE: VERT. 1"= 5'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NO.	REV DATE	REVISION	INT.

Project Details
THE WETLAND TRUST
FISH CREEK SITE STREAM MITIGATION
PEERY RD, PENNELLVILLE, NY 13132
####

Drawing Title
EXISTING PLAN & PROFILE PR - DS - 2

####
####
####
####

Location:
NEW YORK

Designer / Professional Engineer Responsible:
####

Project Number **1940111895**
Designed by S.M. Ahmadi
Drawn by S.M. Ahmadi
Checked by K. Buelow
Approved by P. Domaszczynski
Date 5/13/25

Project Status ####
Drawing Number **C-103**
Scale AS NOTED
Sc x
Rev. x

SAVED: 5/13/25 4:49 PM

EXISTING PLAN & PROFILE PR - ED - 3

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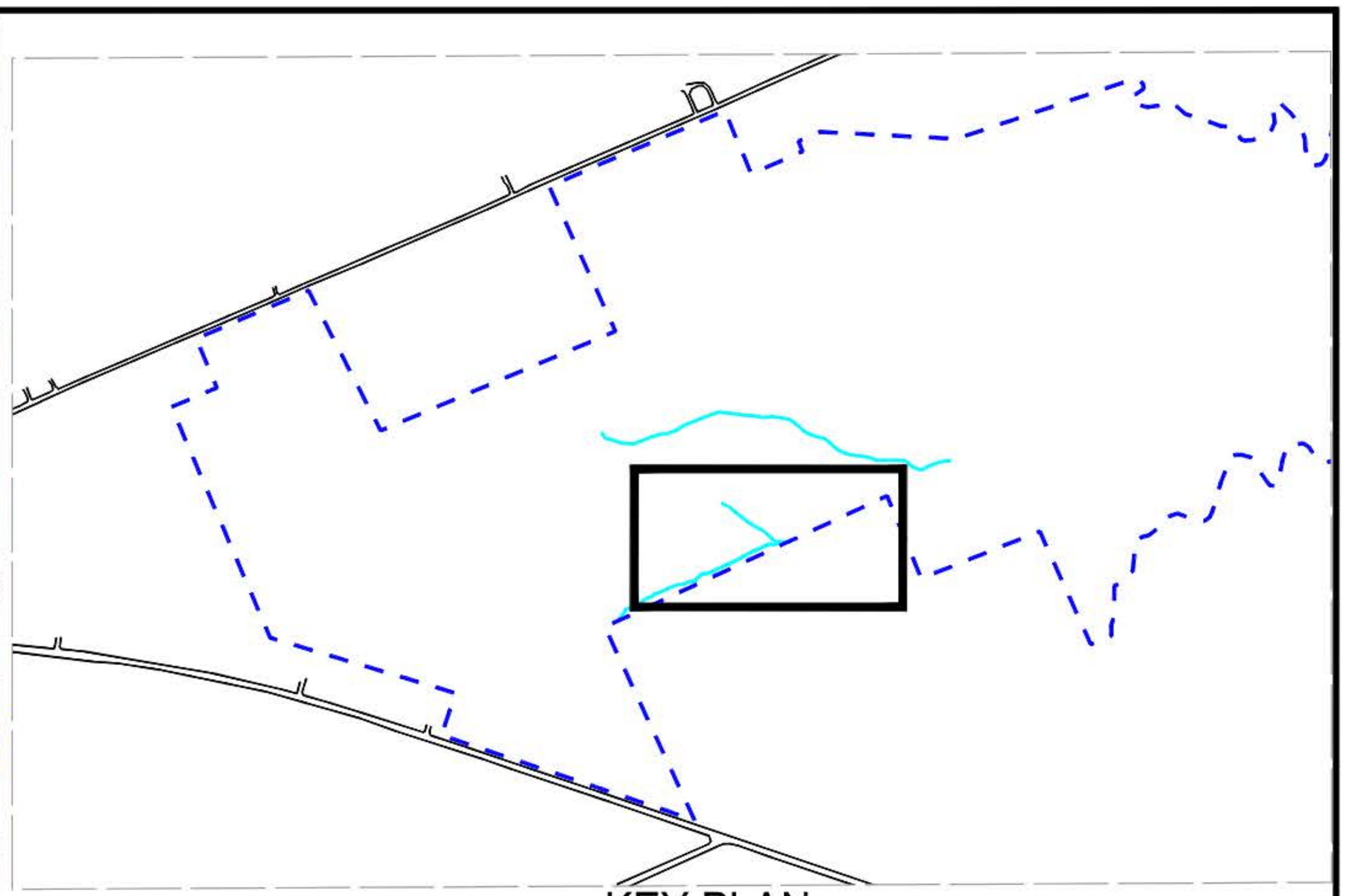
SCALE: 1"=50'



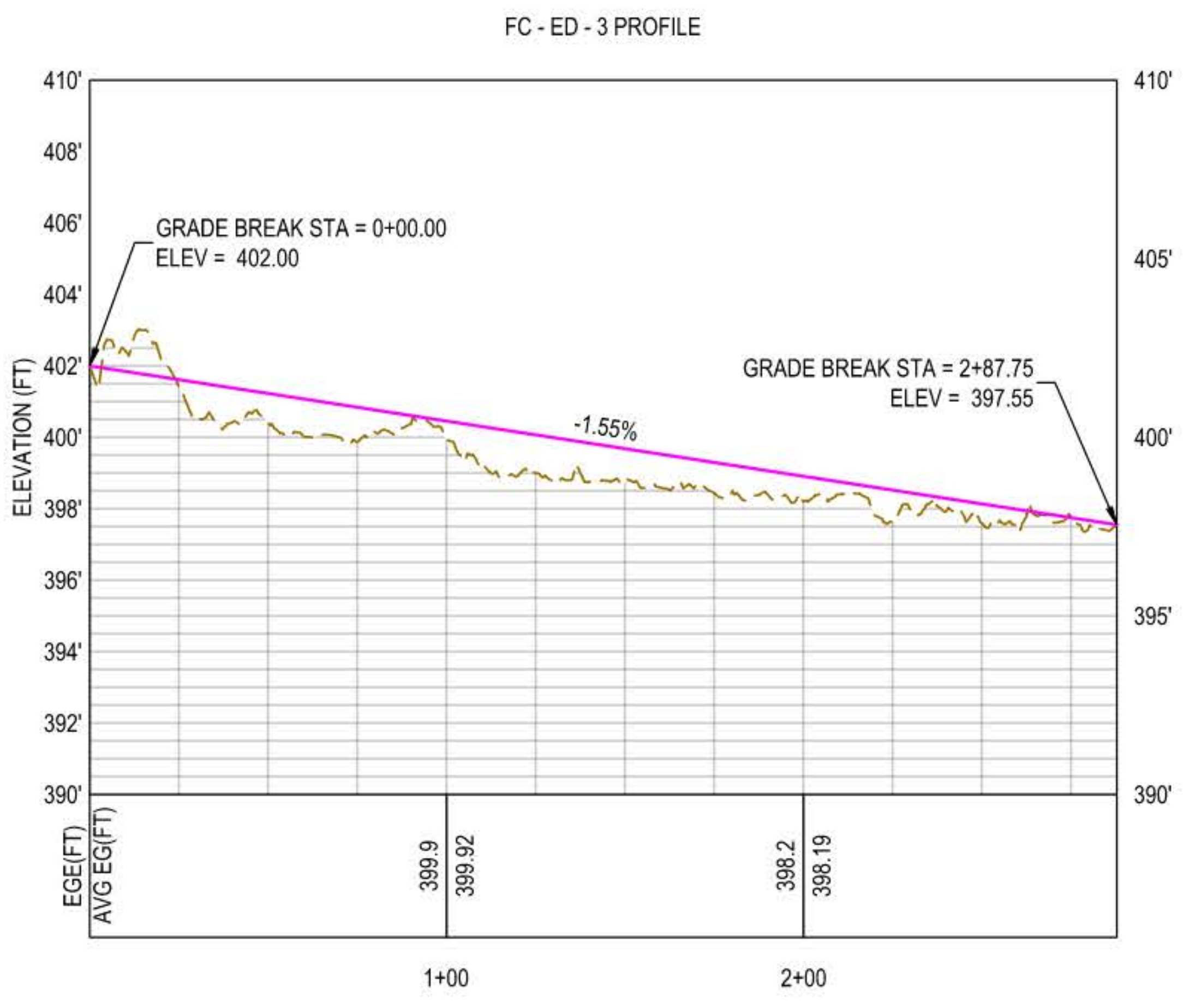
KEY PLAN

600 0 600

SCALE: 1"=600'

LEGEND:

▬ ▬ ▬	PROPERTY BOUNDARY (APPROXIMATE)
▬▬▬	EXISTING STREAM ALIGNMENT



PROFILE STATION 0+00 TO 10+00

50 0 50

SCALE HORZ. 1" = 50'

5' 0 5'

SCALE: VERT. 1"= 5'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NO.	REV DATE	REVISION	INT.

Project Details
THE WETLAND TRUST
FISH CREEK SITE STREAM MITIGATION
PEERY RD, PENNELLVILLE, NY 13132
####

Drawing Title
EXISTING PLAN & PROFILE PR - DS - 3

####
####
####
####

Location:
NEW YORK

Designer / Professional Engineer Responsible:
####

Project Number **1940111895**

Designed by
S.M. Ahmadi

Drawn by
S.M. Ahmadi

Checked by
K. Buelow

Approved by
P. Domaszczynski

Date
5/13/25

Project Status ####

Drawing Number **C-104**

Scale
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Rev.
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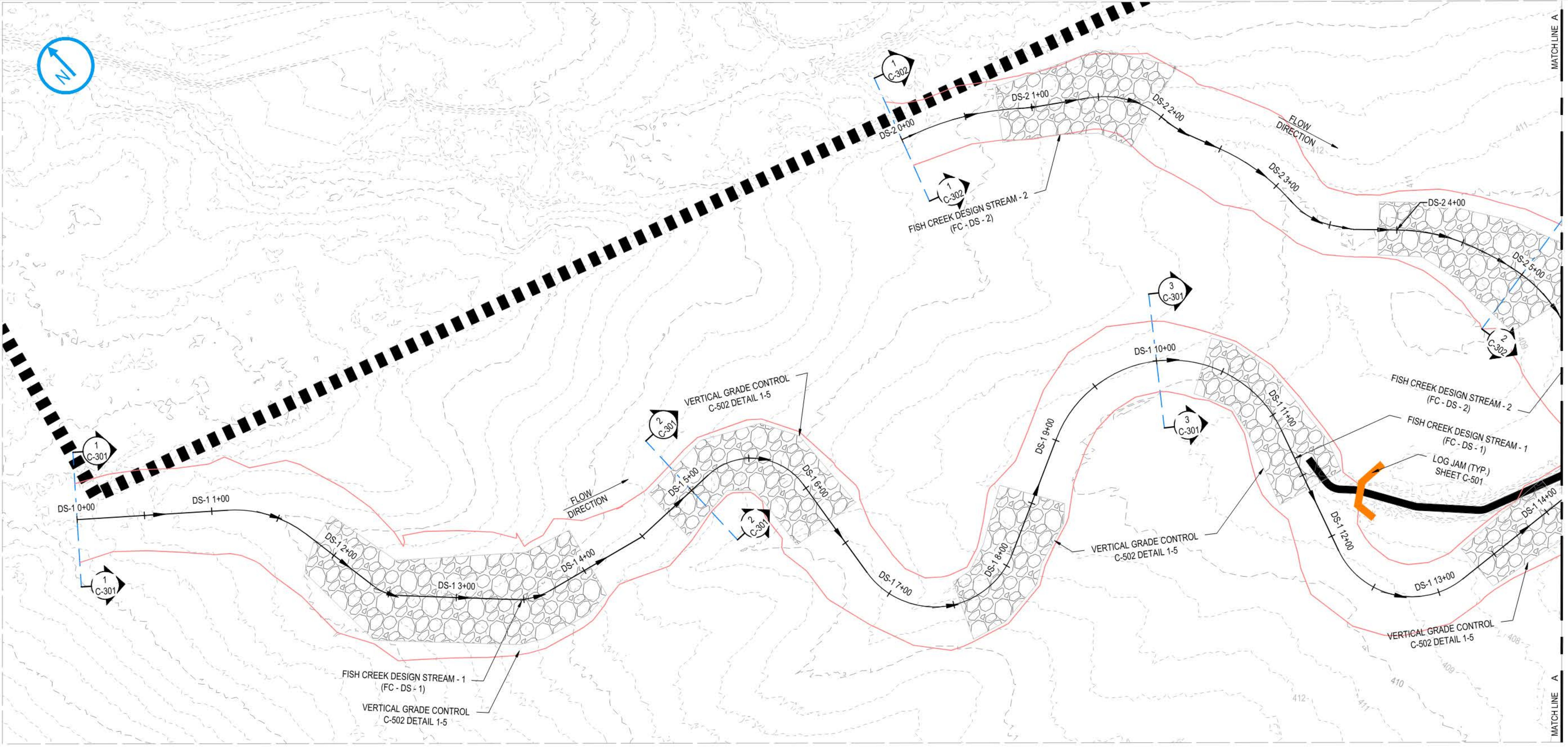
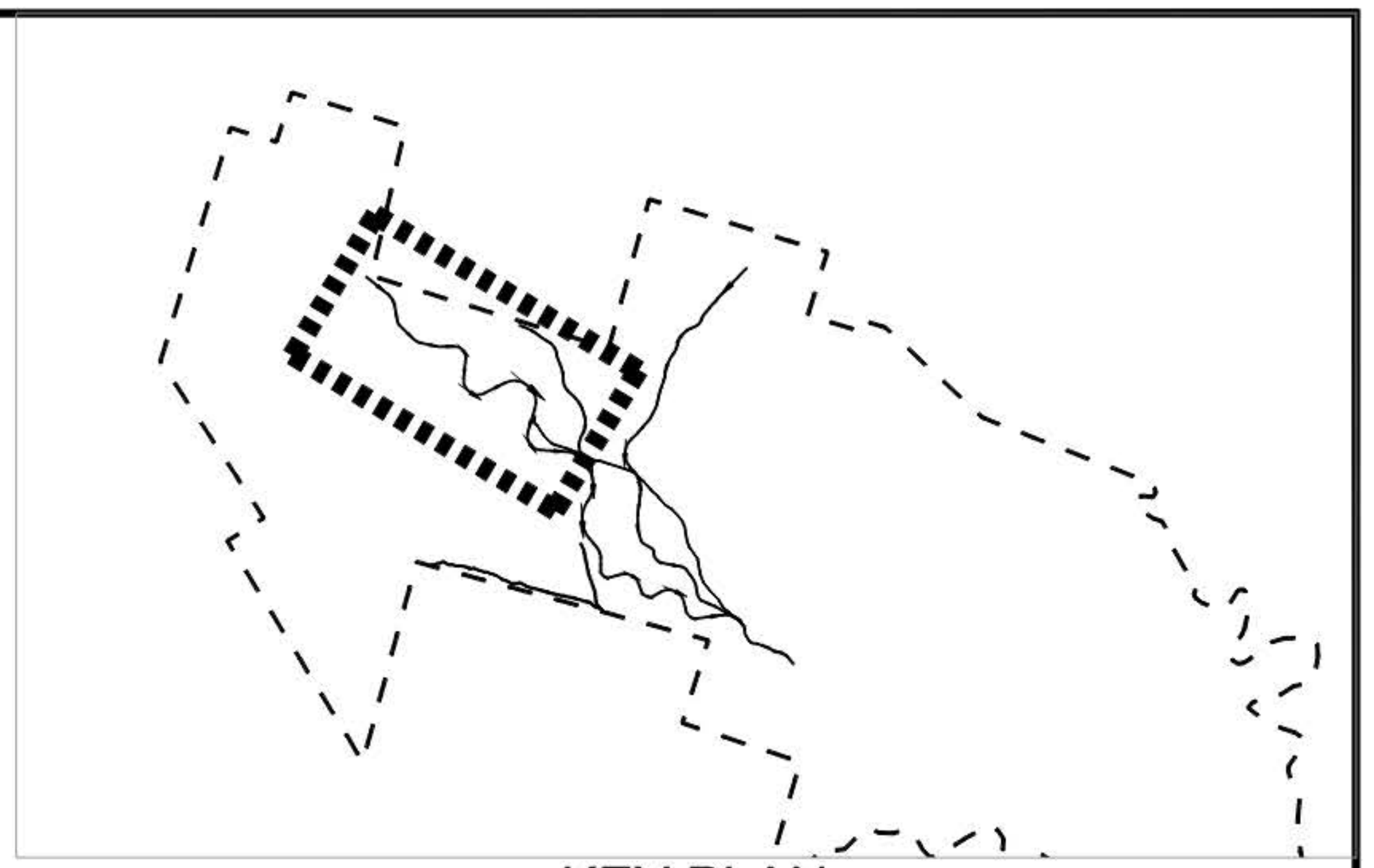


PROPOSED PLAN & PROFILE FC - DS - 1

50 0 50
SCALE: 1"=50'



KEY PLAN

800 0 800
SCALE: 1"=800'

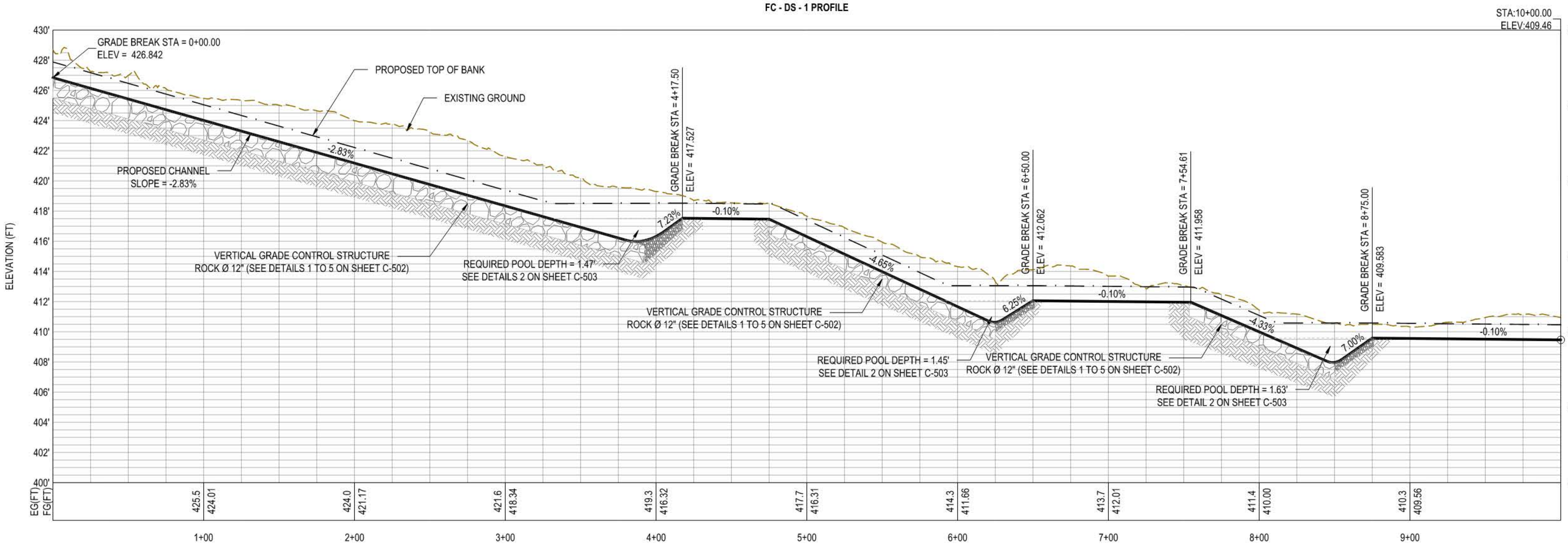
LEGEND:

━ ‒ ━	PROPERTY BOUNDARY (APPROXIMATE)
─	MAJOR CONTOUR LINES
─	MINOR CONTOUR LINES
━	EXISTING STREAM
━►	PROPOSED STREAM
▨	FILL AREA HATCH
▨	GROUNDWATER DAM
━	LOG JAM
▨	VERTICAL GRADE CONTROL
─	LIMITS OF STREAM WORK

NOTES:

1. THE PROPOSED STREAM AND FLOODPLAIN IS DESIGNED TO MAINTAIN THE VOLUME OF FLOW ENTERING AND EXITING THE SITE AS TO EXISTING CONDITION.
2. EXISTING DITCH IS TO BE FILLED AS SHOWN ON THE PLANS USING ONSITE SUITABLE MATERIAL.

FC - DS - 1 PROFILE



PROFILE STATION 0+00 TO 10+00

50 0 50
SCALE HORZ. 1" = 50'

5' 0 5'
SCALE: VERT. 1"= 5'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

NO.	REV DATE	REVISION	INT.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT. THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR TO DETERMINE THE ACTUAL SIZE. DRAWING IS NOT SCALABLE IF NO SCALE BAR IS PRESENT.

Project Details
THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
PROPOSED PLAN & PROFILE FC - DS - 1

####
####
####

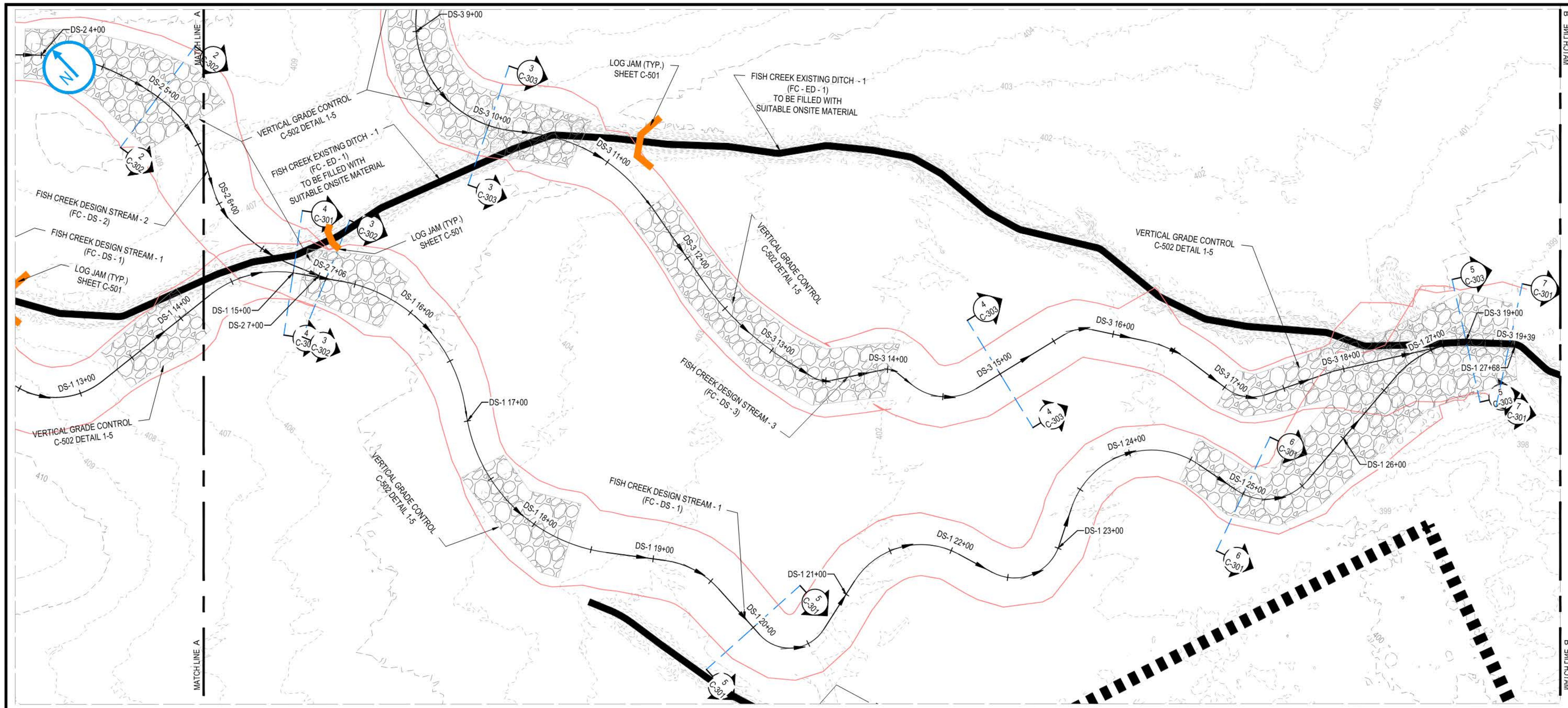
Location: ####

Designer / Professional Engineer Responsible: ####

Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buelow	Approved by P. Domaszczynski	Date ####
Project Status ####	Drawing Number **C-121**			Scale AS NOTED	Sc x Rev. x

SAVED: 5/13/25 5:00 PM

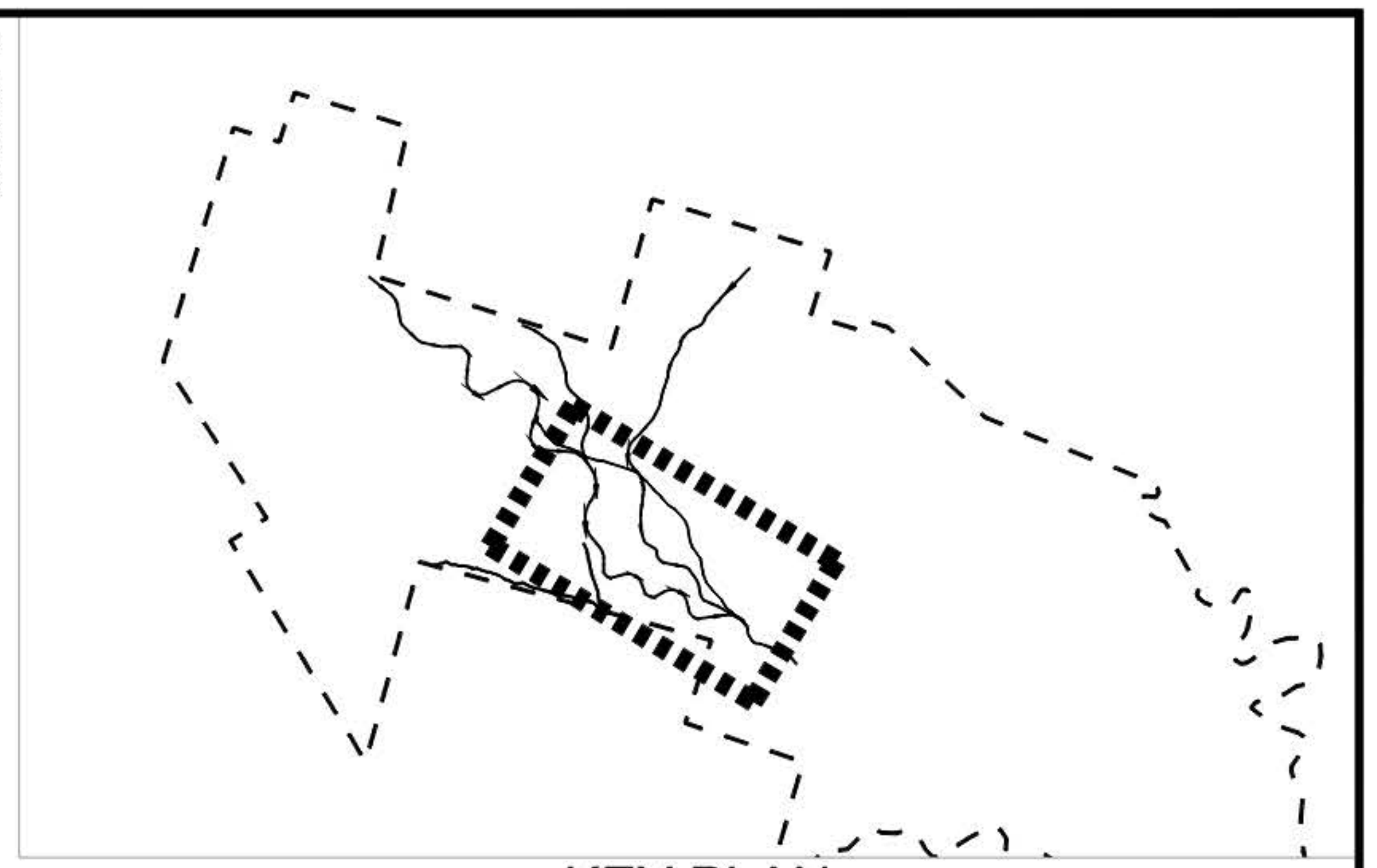
C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES-R08.DWG



PROPOSED PLAN & PROFILE FC - DS - 1

50 0 50

SCALE: 1"=50'



KEY PLAN

800 0 800

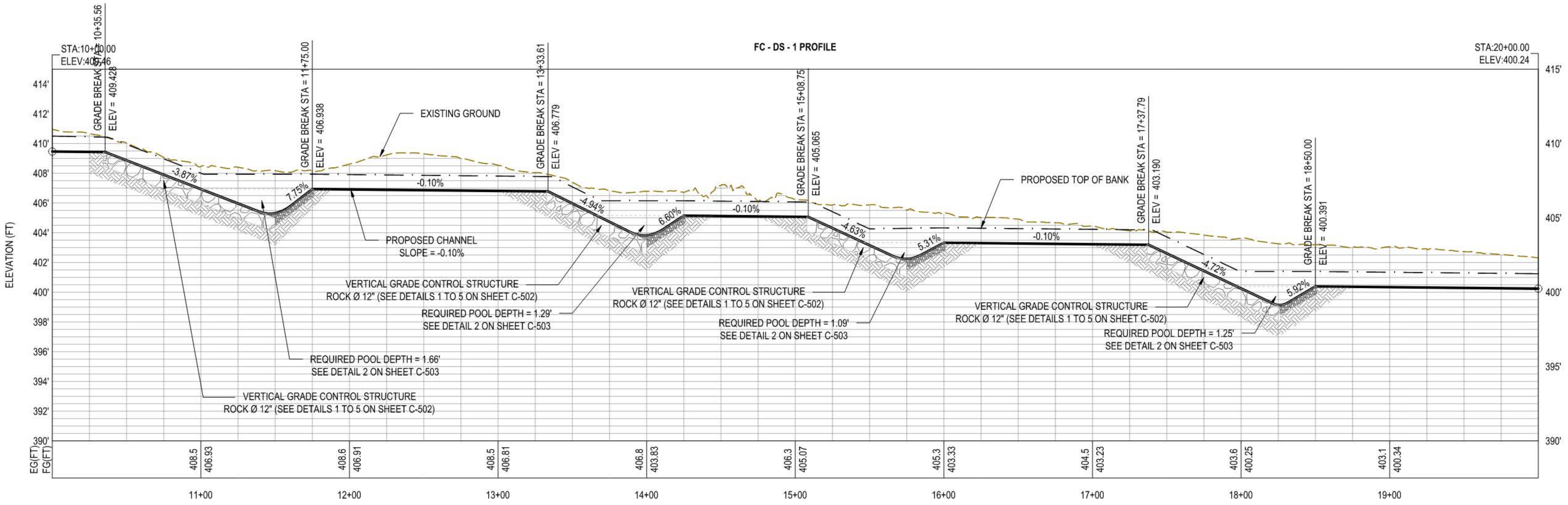
SCALE: 1"=800'

LEGEND:

— · —	PROPERTY BOUNDARY (APPROXIMATE)
—	MAJOR CONTOUR LINES
—	MINOR CONTOUR LINES
▬	EXISTING STREAM
→	PROPOSED STREAM
▨	FILL AREA HATCH
▨	GROUNDWATER DAM
▬	LOG JAM
▨	VERTICAL GRADE CONTROL
—	LIMITS OF STREAM WORK

NOTES:

1. THE PROPOSED STREAM AND FLOODPLAIN IS DESIGNED TO MAINTAIN THE VOLUME OF FLOW ENTERING AND EXITING THE SITE AS TO EXISTING CONDITION.
2. EXISTING DITCH IS TO BE FILLED AS SHOWN ON THE PLANS USING ONSITE SUITABLE MATERIAL.



PROFILE STATION 10+00 TO 20+00

50 0 50

SCALE HORZ. 1" = 50'

5' 0 5'

SCALE: VERT. 1"= 5'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

NO.	REV DATE	REVISION	INT.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT. THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR TO DETERMINE THE ACTUAL SIZE. DRAWING IS NOT SCALABLE IF NO SCALE BAR IS PRESENT.

Project Details

THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title

PROPOSED PLAN & PROFILE FC - DS - 1

####
####
####

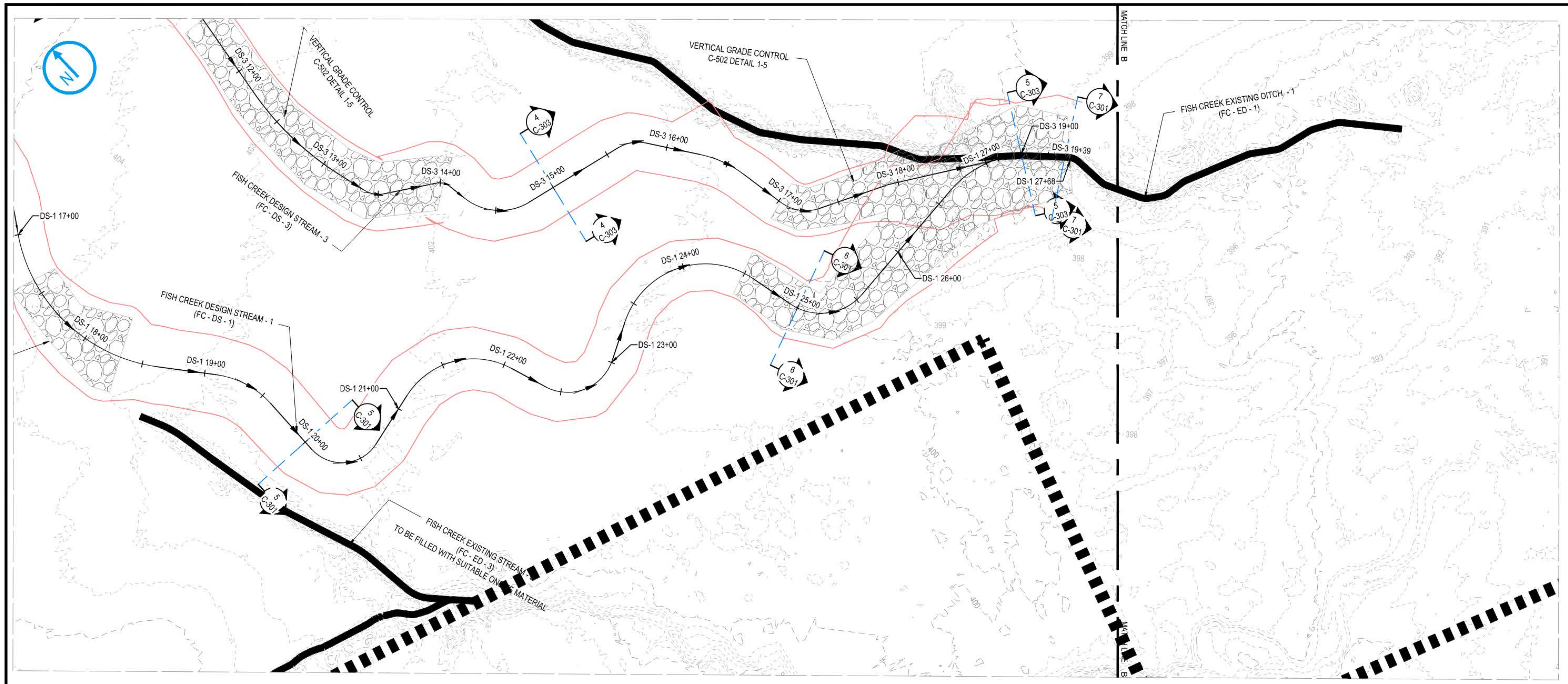
Location:
####

Designer / Professional Engineer Responsible:
####

Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buelow	Approved by P. Domaszczynski	Date ####
Project Status ####	Drawing Number **C-122**			Scale AS NOTED	Sc x Rev. x

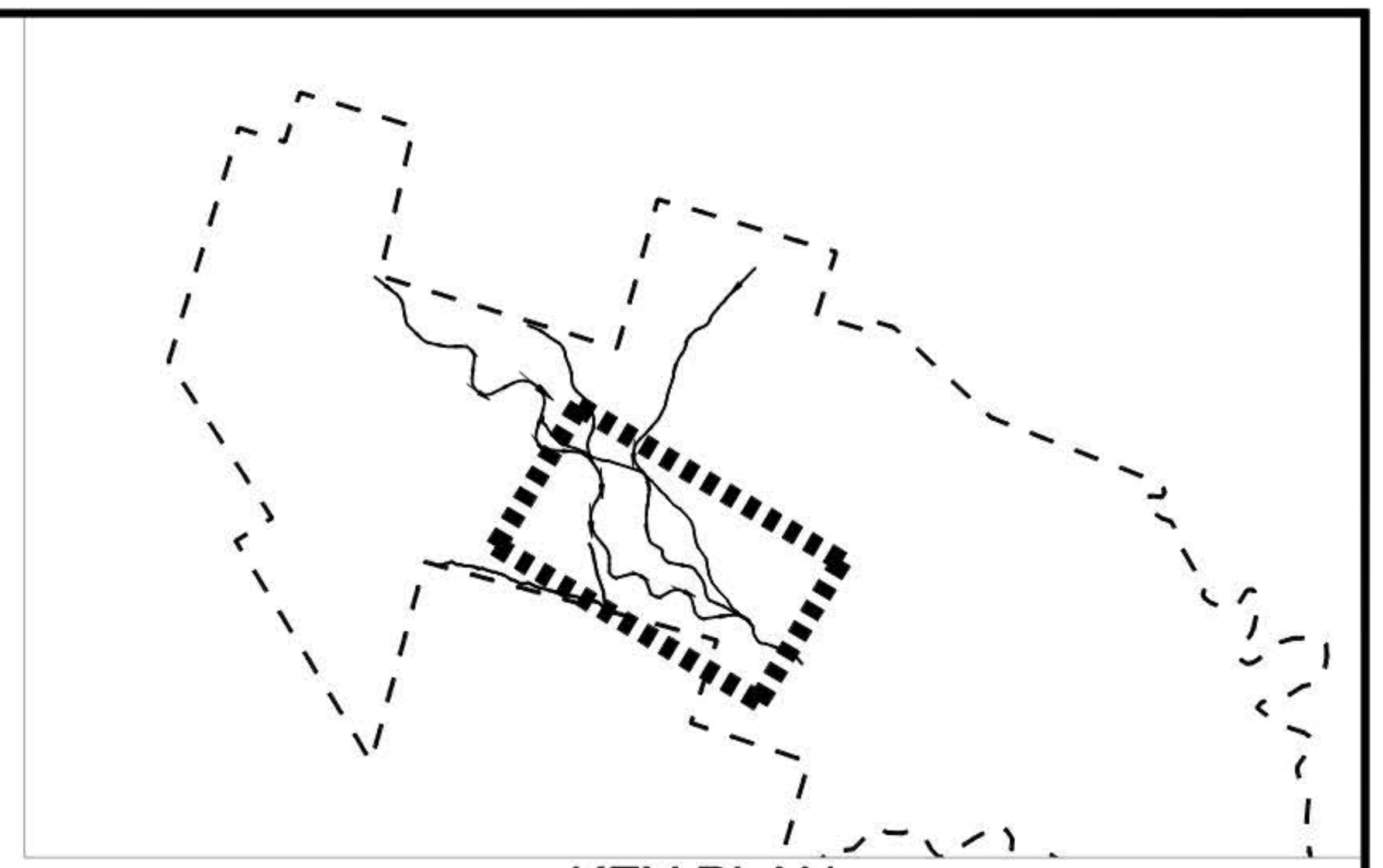
SAVED: 5/13/25 5:00 PM

C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES-R08.DWG



PROPOSED PLAN & PROFILE FC - DS - 1

50 0 50
SCALE: 1"=50'



KEY PLAN

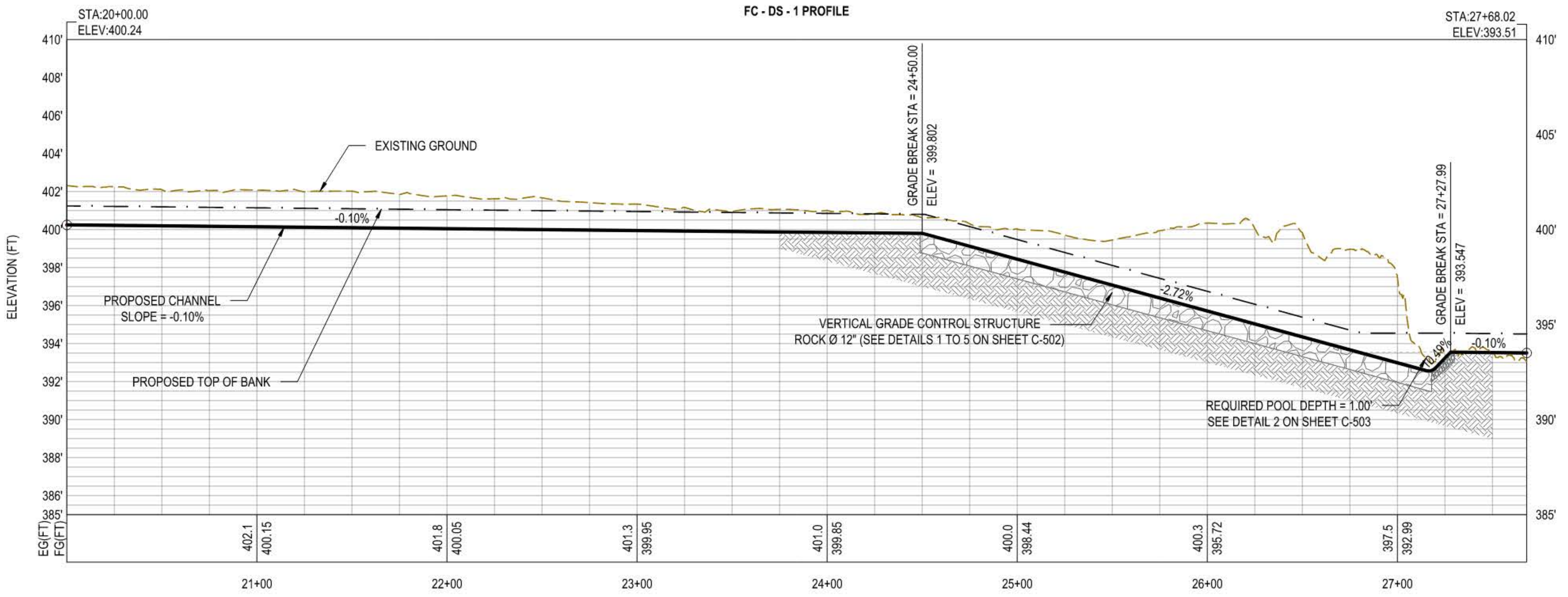
800 0 800
SCALE: 1"=800'

LEGEND:

▬ ▪ ▬	PROPERTY BOUNDARY (APPROXIMATE)
─	MAJOR CONTOUR LINES
─	MINOR CONTOUR LINES
▬	EXISTING STREAM
─►	PROPOSED STREAM
▨	FILL AREA HATCH
▨	GROUNDWATER DAM
▬	LOG JAM
▨	VERTICAL GRADE CONTROL
─	LIMITS OF STREAM WORK

NOTES:

1. THE PROPOSED STREAM AND FLOODPLAIN IS DESIGNED TO MAINTAIN THE VOLUME OF FLOW ENTERING AND EXITING THE SITE AS TO EXISTING CONDITION.
2. EXISTING DITCH IS TO BE FILLED AS SHOWN ON THE PLANS USING ONSITE SUITABLE MATERIAL.



PROFILE STATION 20+00 TO 24+00

50 0 50
SCALE HORZ. 1" = 50'

5' 0 5'
SCALE: VERT. 1"= 5'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

NO.	REV DATE	REVISION	INT.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT. THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR TO DETERMINE THE ACTUAL SIZE. DRAWING IS NOT SCALABLE IF NO SCALE BAR IS PRESENT.

Project Details
THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
PROPOSED PLAN & PROFILE FC - DS - 1

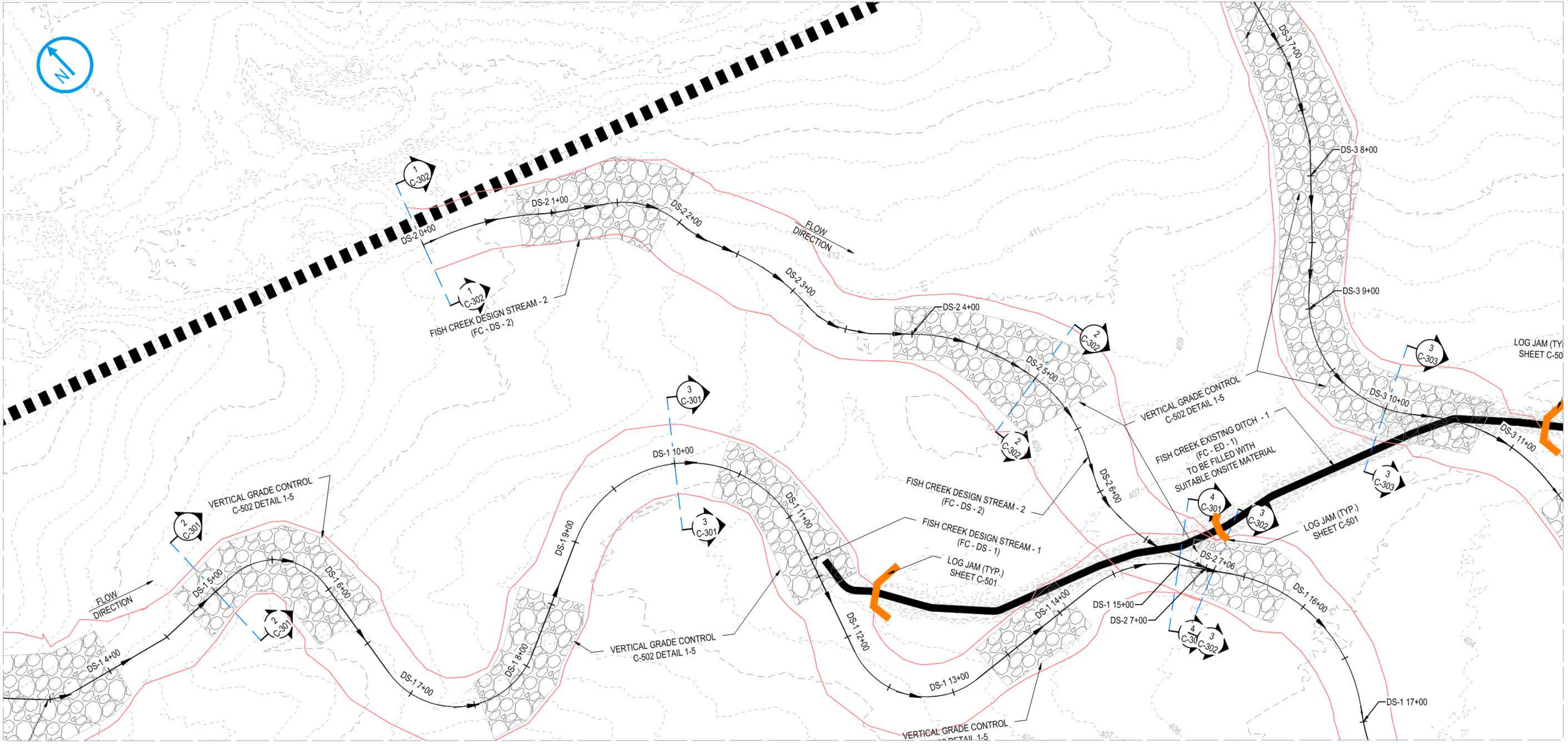
####
####
####

Location: ####

Designer / Professional Engineer Responsible: ####

Project Number: **1940111895**
Designed by: S.M. Ahmadi
Drawn by: S.M. Ahmadi
Checked by: K. Buelow
Approved by: P. Domaszczynski
Date: ####

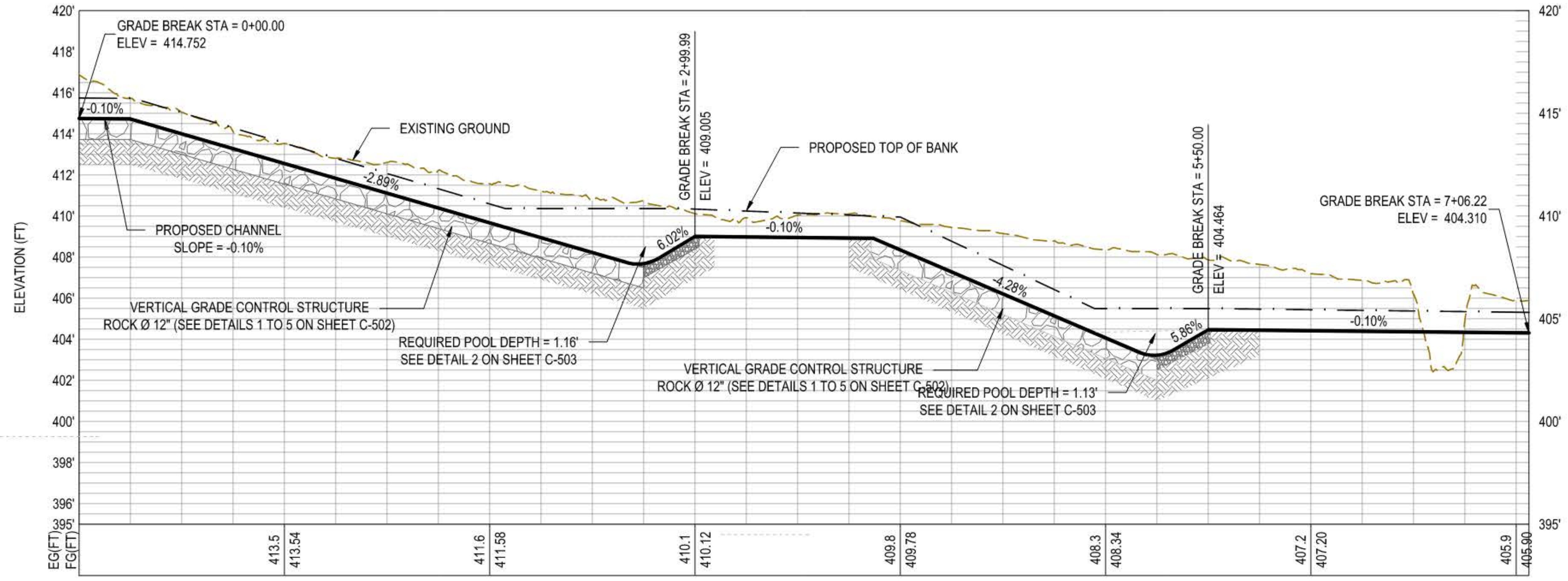
Project Status: ####
Drawing Number: **C-123**
Scale: AS NOTED
Sc: x
Rev.: x



PROPOSED PLAN & PROFILE FC - DS - 2

50 0 50
SCALE: 1"=50'

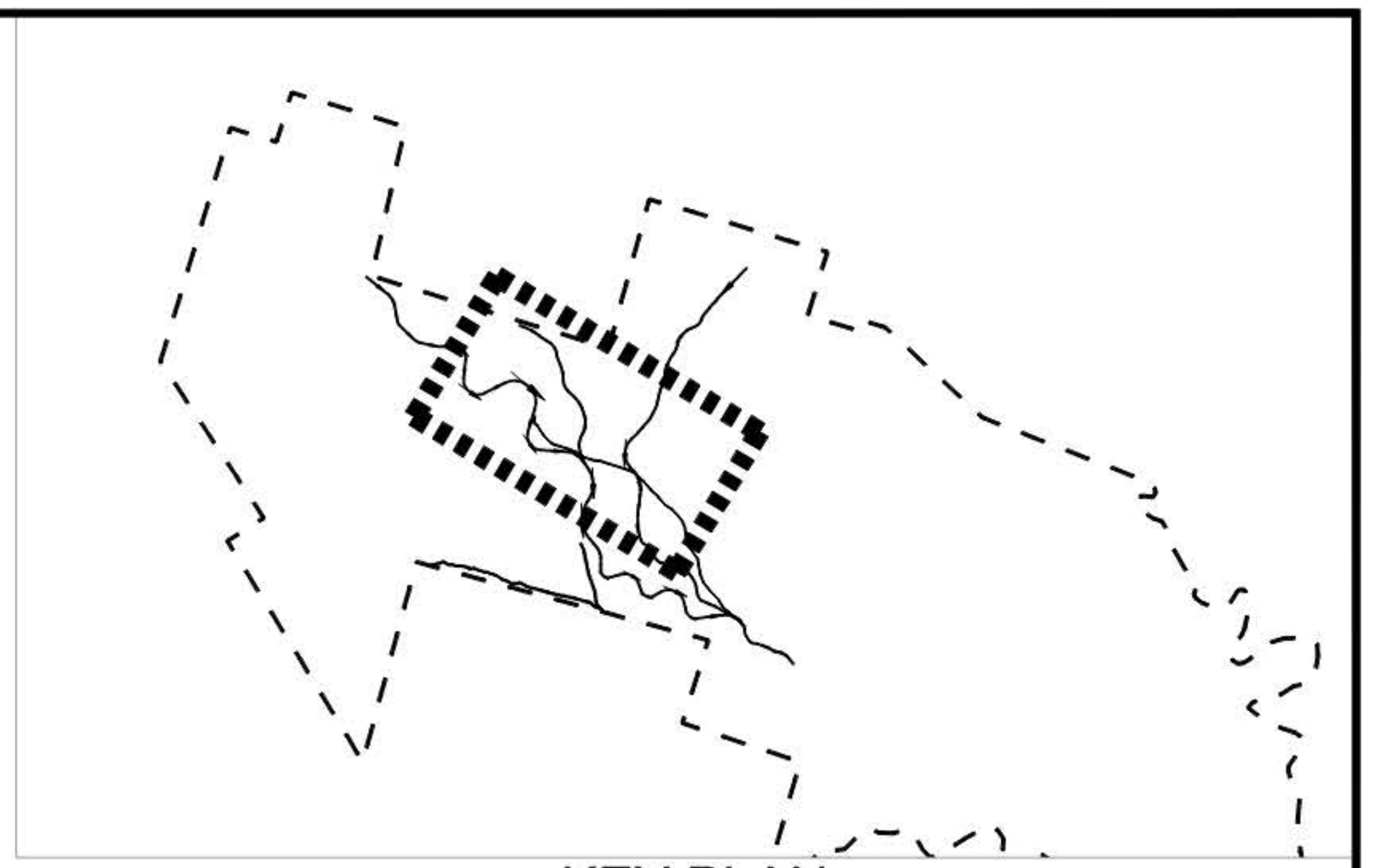
FC - DS - 2 PROFILE



PROFILE STATION 0+00 TO 7+20

50 0 50
SCALE HORZ. 1" = 50'

5' 0 5'
SCALE: VERT. 1"= 5'



KEY PLAN

800 0 800
SCALE: 1"=800'

LEGEND:

▬ · ▬	PROPERTY BOUNDARY (APPROXIMATE)
─	MAJOR CONTOUR LINES
─	MINOR CONTOUR LINES
▬	EXISTING STREAM
─▶─	PROPOSED STREAM
▨	FILL AREA HATCH
▨	GROUNDWATER DAM
▬	LOG JAM
▨	VERTICAL GRADE CONTROL
─	LIMITS OF STREAM WORK

NOTES:

1. THE PROPOSED STREAM AND FLOODPLAIN IS DESIGNED TO MAINTAIN THE VOLUME OF FLOW ENTERING AND EXITING THE SITE AS TO EXISTING CONDITION.
2. EXISTING DITCH IS TO BE FILLED AS SHOWN ON THE PLANS USING ONSITE SUITABLE MATERIAL.

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

NO.	REV DATE	REVISION	INT.

Project Details
THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
PROPOSED PLAN & PROFILE FC - DS - 2

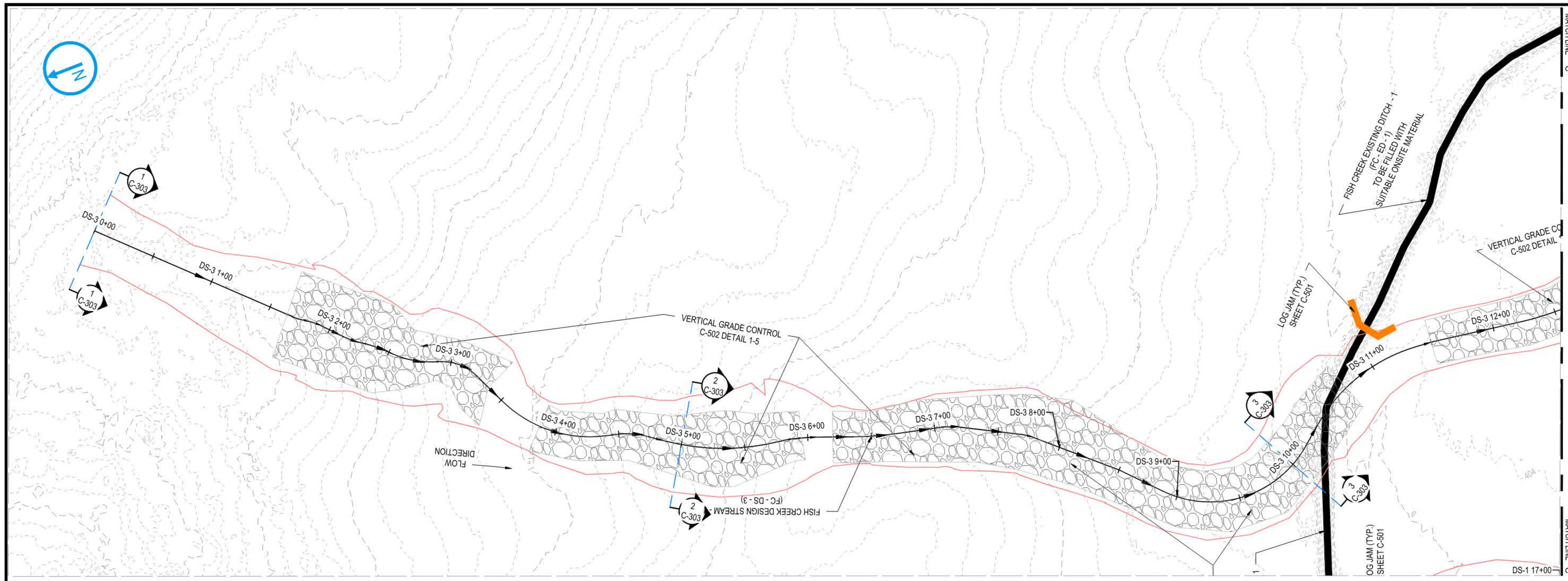
####
####
####

Location:
####

Designer / Professional Engineer Responsible:
####

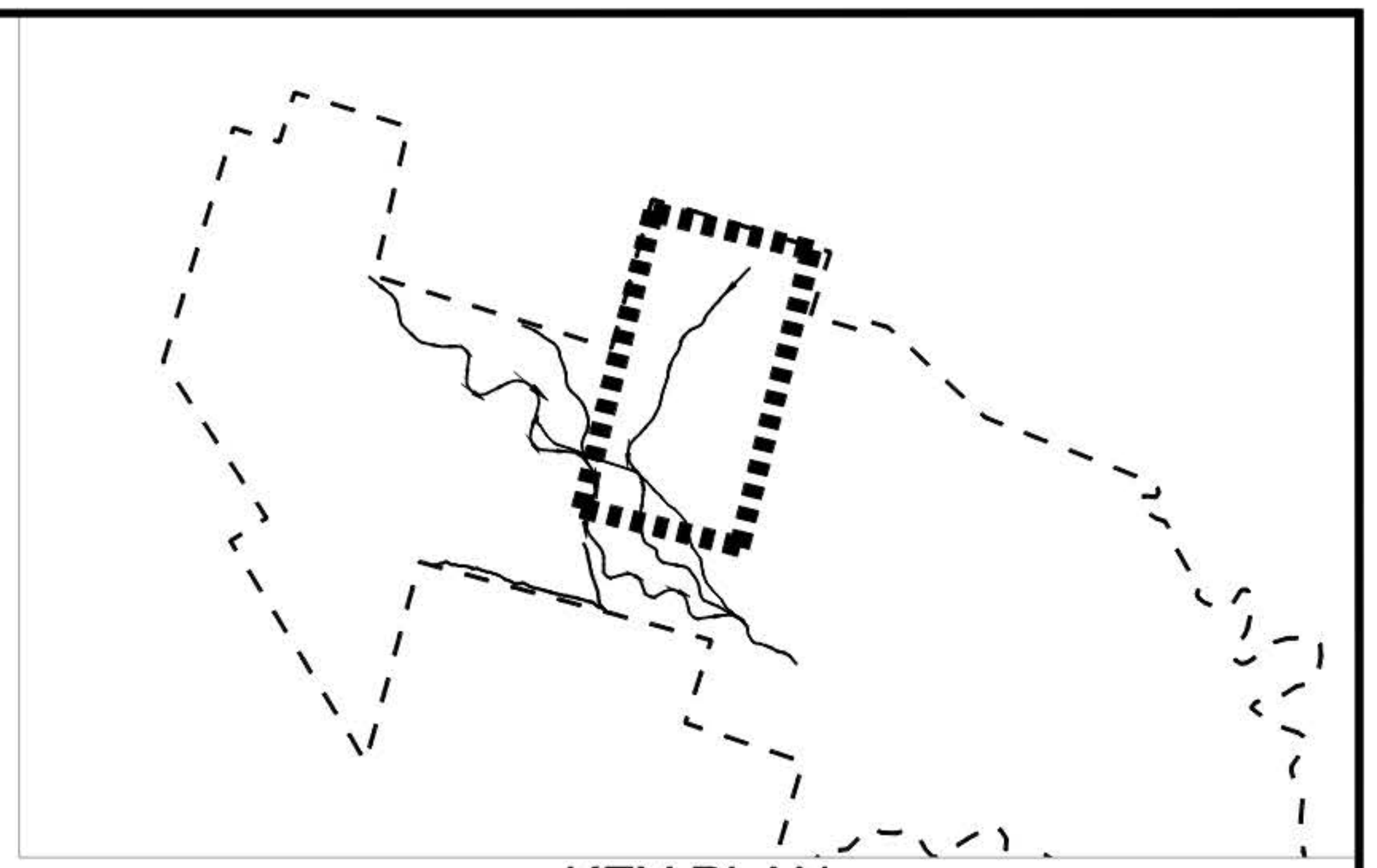
Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buelow	Approved by P. Domaszczynski	Date ####	
Project Status ####	Drawing Number **C-124**			Scale AS NOTED	Sc x	Rev. x

SAVED: 5/13/25 5:00 PM



PROPOSED PLAN & PROFILE FC - DS - 3

50 0 50
SCALE: 1"=50'



KEY PLAN

800 0 800
SCALE: 1"=800'

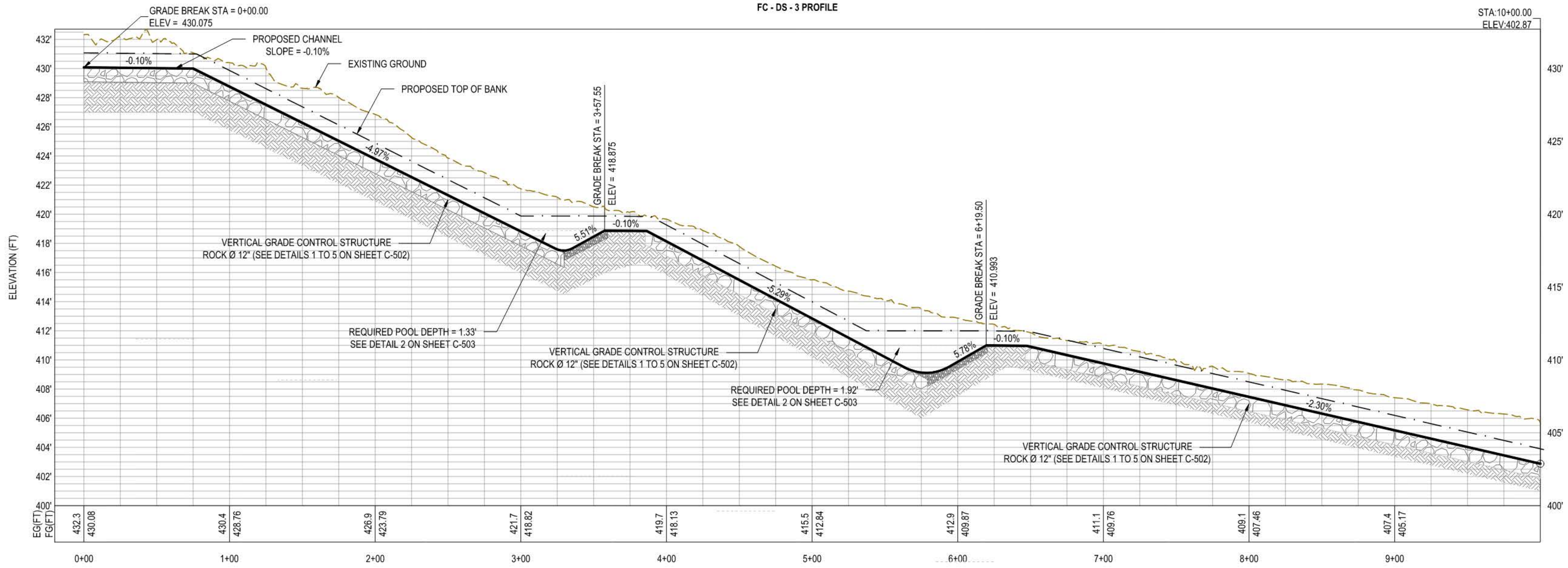
LEGEND:

▬ - ▬	PROPERTY BOUNDARY (APPROXIMATE)
─	MAJOR CONTOUR LINES
─	MINOR CONTOUR LINES
▬	EXISTING STREAM
─▶─	PROPOSED STREAM
▨	FILL AREA HATCH
▨	GROUNDWATER DAM
▬	LOG JAM
▨	VERTICAL GRADE CONTROL
─	LIMITS OF STREAM WORK

NOTES:

1. THE PROPOSED STREAM AND FLOODPLAIN IS DESIGNED TO MAINTAIN THE VOLUME OF FLOW ENTERING AND EXITING THE SITE AS TO EXISTING CONDITION.
2. EXISTING DITCH IS TO BE FILLED AS SHOWN ON THE PLANS USING ONSITE SUITABLE MATERIAL.

FC - DS - 3 PROFILE



PROFILE STATION 0+00 TO 10+00

50 0 50
SCALE HORZ. 1" = 50'

5' 0 5'
SCALE: VERT. 1"= 5'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

NO.	REV DATE	REVISION	INT.

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Project Details
THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
PROPOSED PLAN & PROFILE FC - DS - 3

####
####
####

Location:
####

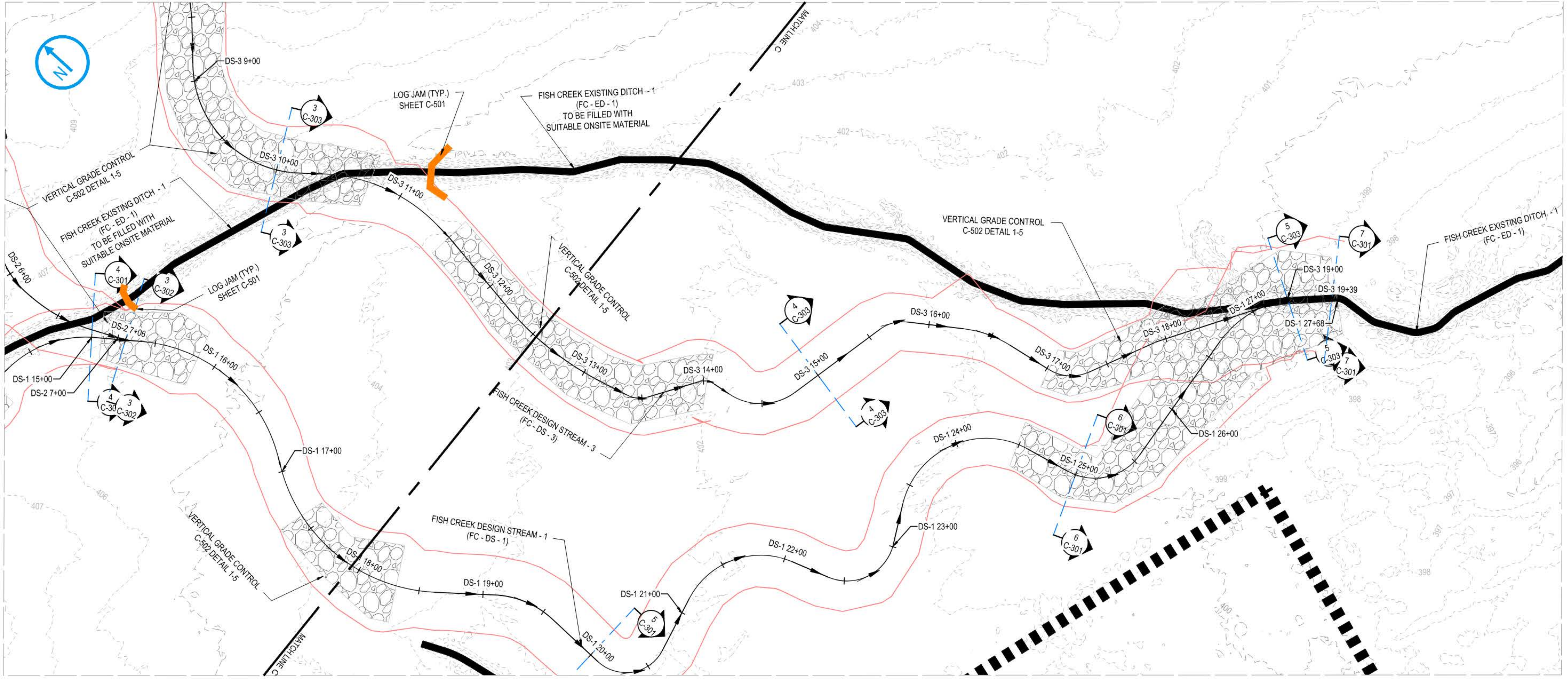
Designer / Professional Engineer Responsible:
####

Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buelow	Approved by P. Domaszczynski	Date ####	
Project Status ####	Drawing Number **C-125**			Scale AS NOTED	Sc x	Rev. x

C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRONDWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES-R08.DWG

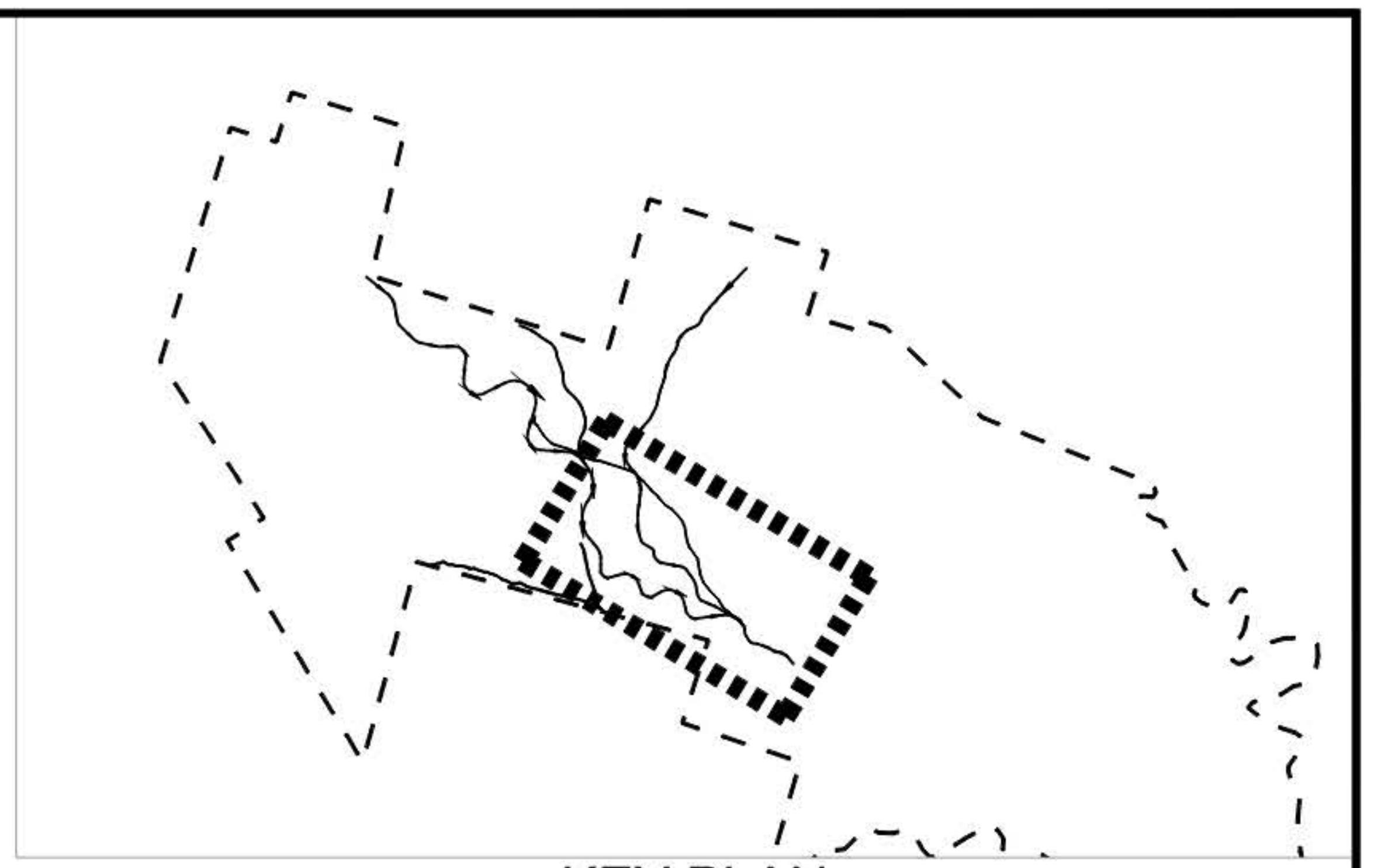
SAVED: 5/13/25 5:00 PM

C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTORATION - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES-R08.DWG



PROPOSED PLAN & PROFILE FC - DS - 3

50 0 50
SCALE: 1"=50'



KEY PLAN

800 0 800
SCALE: 1"=800'

LEGEND:

▬ ▪ ▬	PROPERTY BOUNDARY (APPROXIMATE)
─	MAJOR CONTOUR LINES
─	MINOR CONTOUR LINES
▬	EXISTING STREAM
─▶─	PROPOSED STREAM
▨	FILL AREA HATCH
▨	GROUNDWATER DAM
▬	LOG JAM
▨	VERTICAL GRADE CONTROL
─	LIMITS OF STREAM WORK

NOTES:

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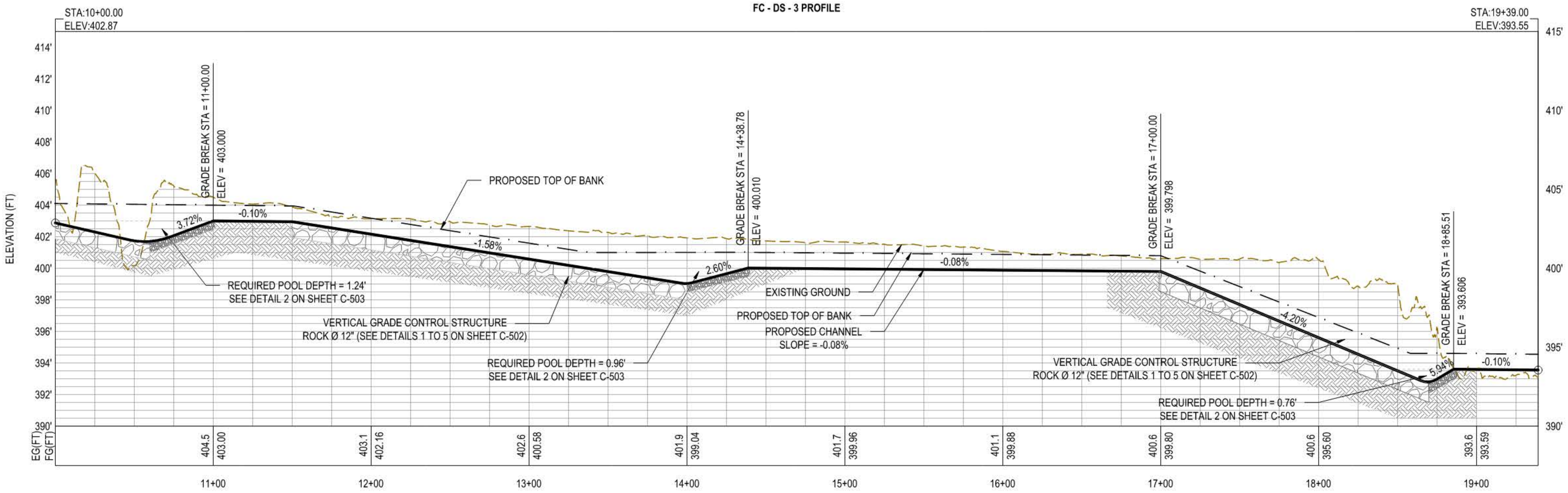
2. EXISTING DITCH IS TO BE FILLED AS SHOWN ON THE PLANS USING ONSITE SUITABLE MATERIAL.



PROFILE STATION 10+00 TO 19+00

50 0 50
SCALE HORZ. 1" = 50'

5' 0 5'
SCALE: VERT. 1"= 5'

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

NO.	REV DATE	REVISION	INT.

Project Details
THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
PROPOSED PLAN & PROFILE FC - DS - 3

####
####
####

Location:
####

Designer / Professional Engineer Responsible:
####

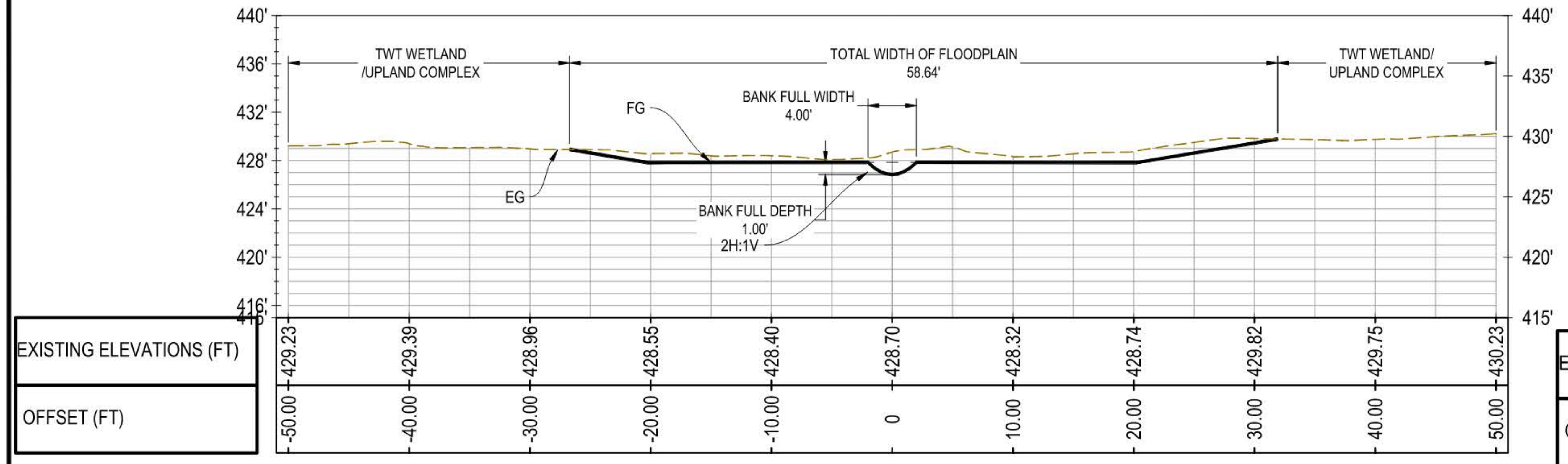
Project Number: **1940111895**
Designed by: S.M. Ahmadi
Drawn by: S.M. Ahmadi
Checked by: K. Buelow
Approved by: P. Domaszczynski
Date: ####

Project Status: ####
Drawing Number: **C-126**
Scale: AS NOTED
Sc: x
Rev.: x

SAVED: 5/13/25 5:00 PM

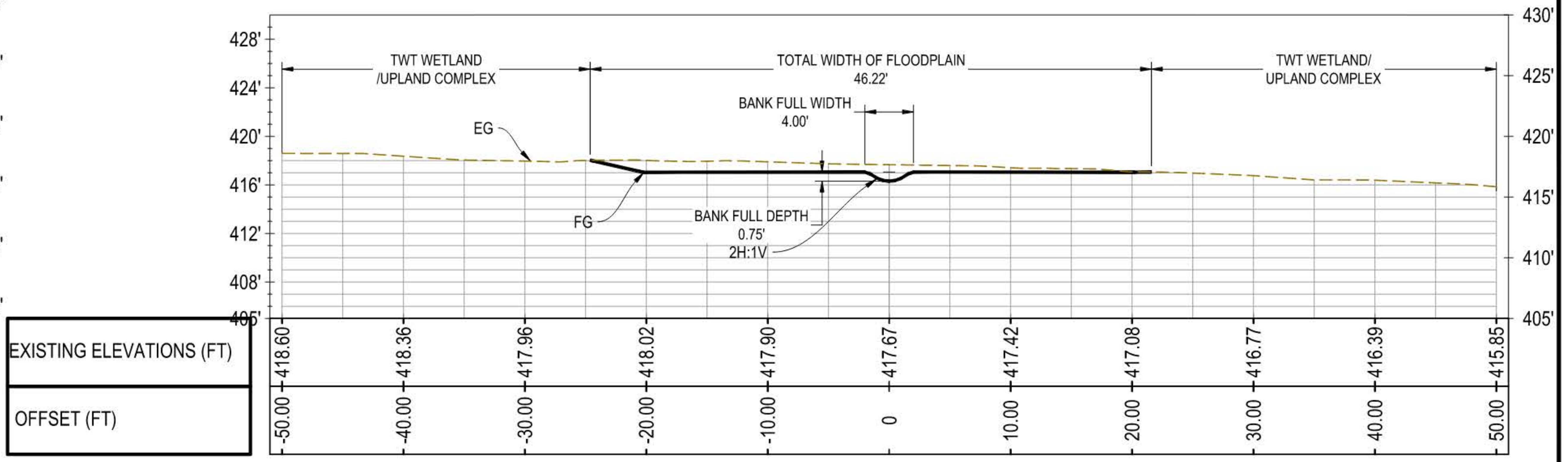
C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES-R08.DWG

SECTION 1 - 1
ST 0+00.00



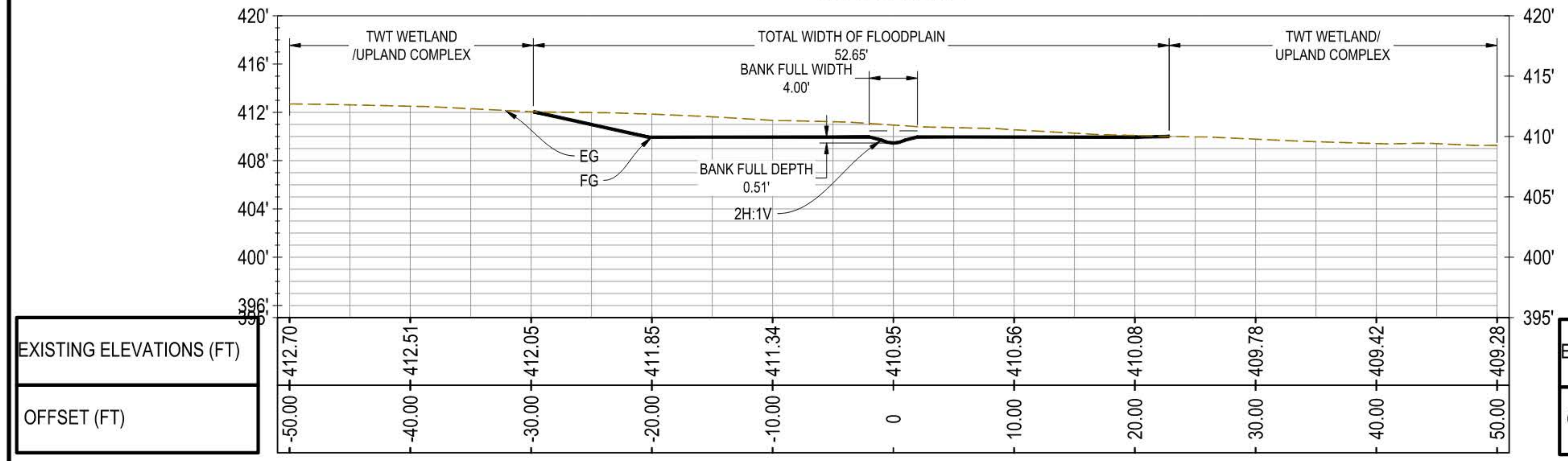
1-1 SECTION FC - DS - 1
1" = 8'
8 0 8

SECTION 2 - 2
ST 5+00.00



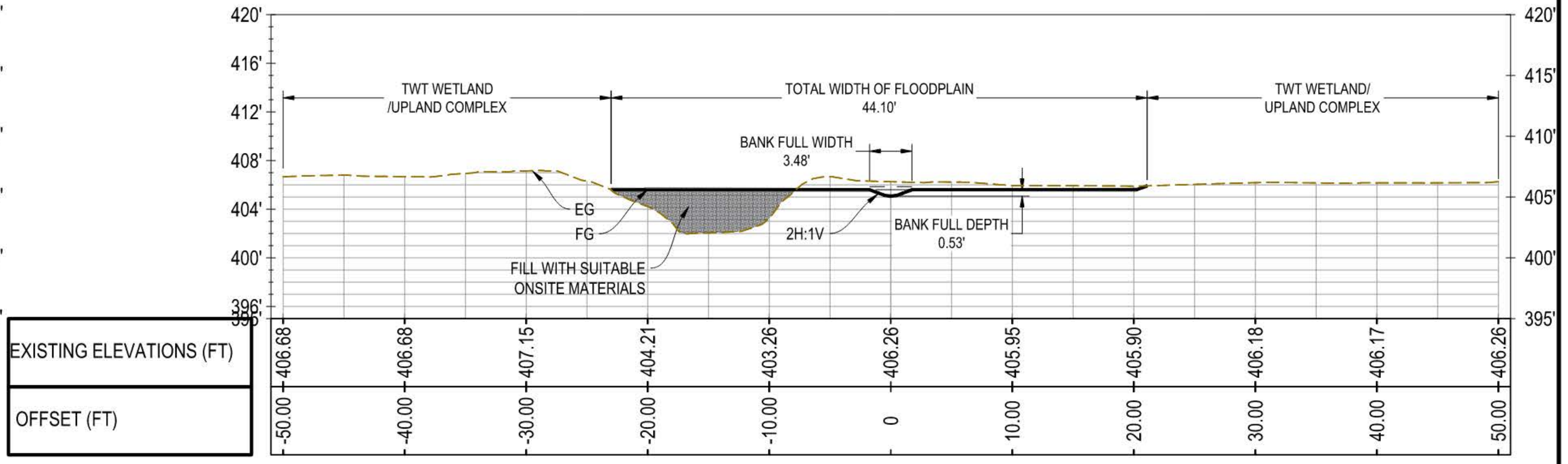
2-2 SECTION FC - DS - 1
1" = 8'
8 0 8

SECTION 3 - 3
ST 10+00.00



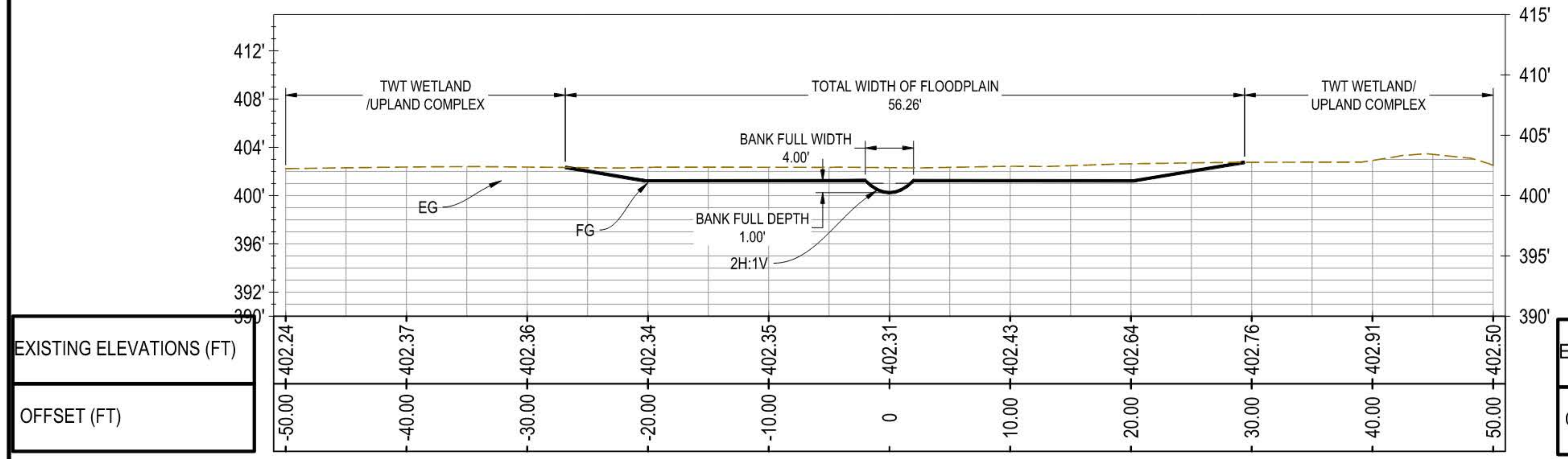
3-3 SECTION FC - DS - 1
1" = 8'
8 0 8

SECTION 4 - 4
ST 15+00.00



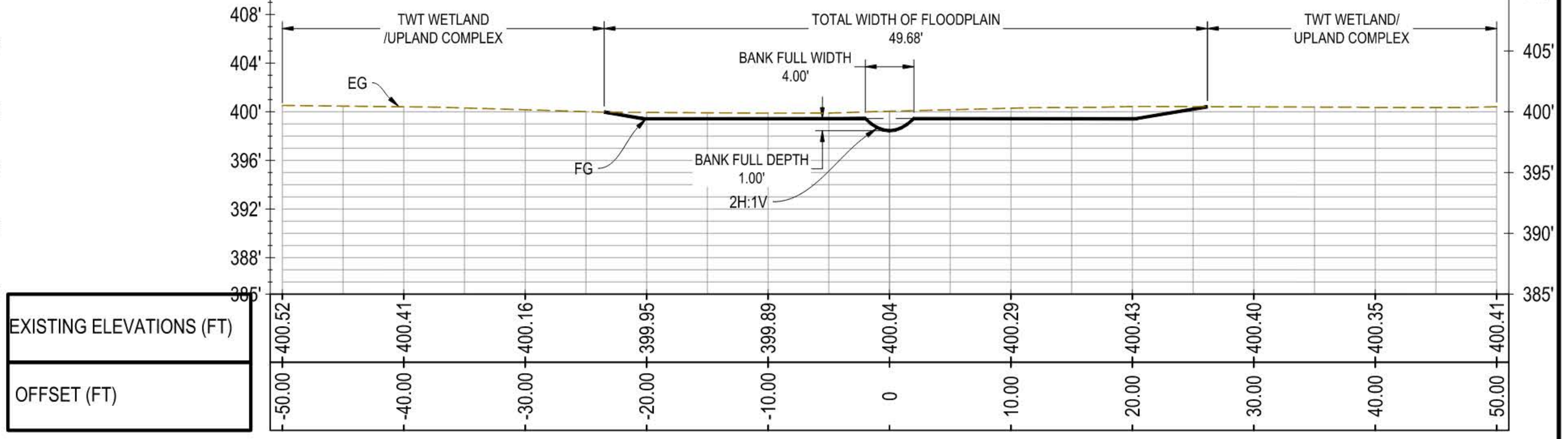
4-4 SECTION FC - DS - 1
1" = 8'
8 0 8

SECTION 5 - 5
ST 20+00.00



5-5 SECTION FC - DS - 1
1" = 8'
8 0 8

SECTION 6 - 6
ST 25+00.00



6-6 SECTION FC - DS - 1
1" = 8'
8 0 8

NO.	REV DATE	REVISION	INT.

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

Project Details
THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
PROPOSED SECTION VIEWS FC - DS - 1

####
####
####

Location:
####

Designer / Professional Engineer Responsible:
####

Project Number 1940111895

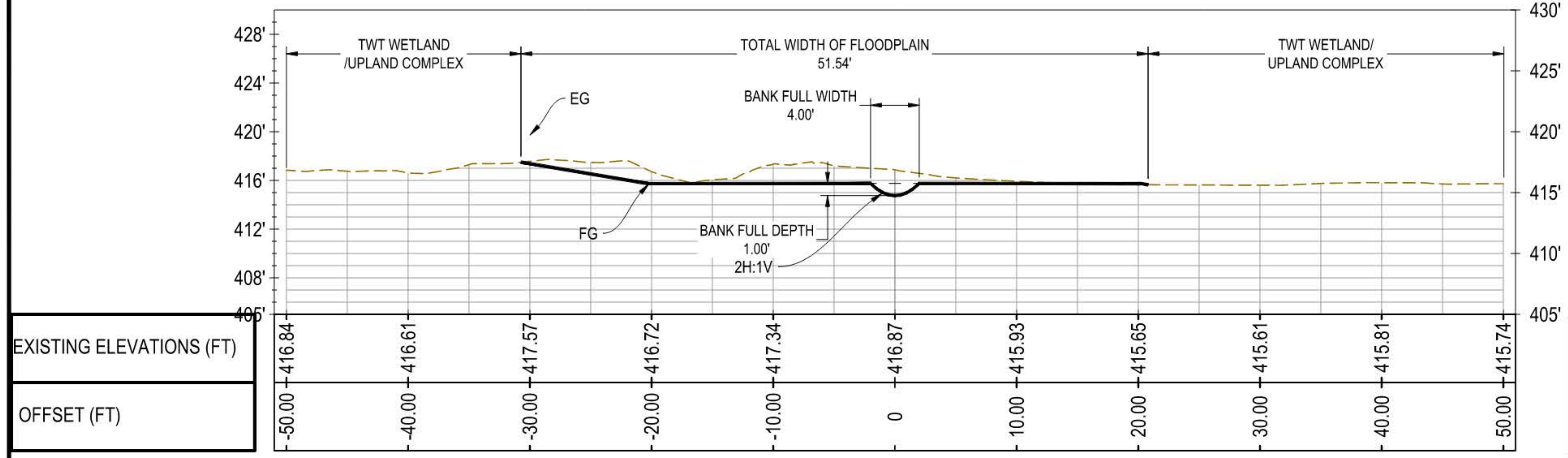
Designed by S.M. Ahmadi
Drawn by S.M. Ahmadi
Checked by K. Buelow
Approved by P. Domaszczynski
Date ####

Project Status ####

Drawing Number C-301

Scale AS NOTED
Sc x
Rev. x

SECTION 1 - 1
ST 0+00.00



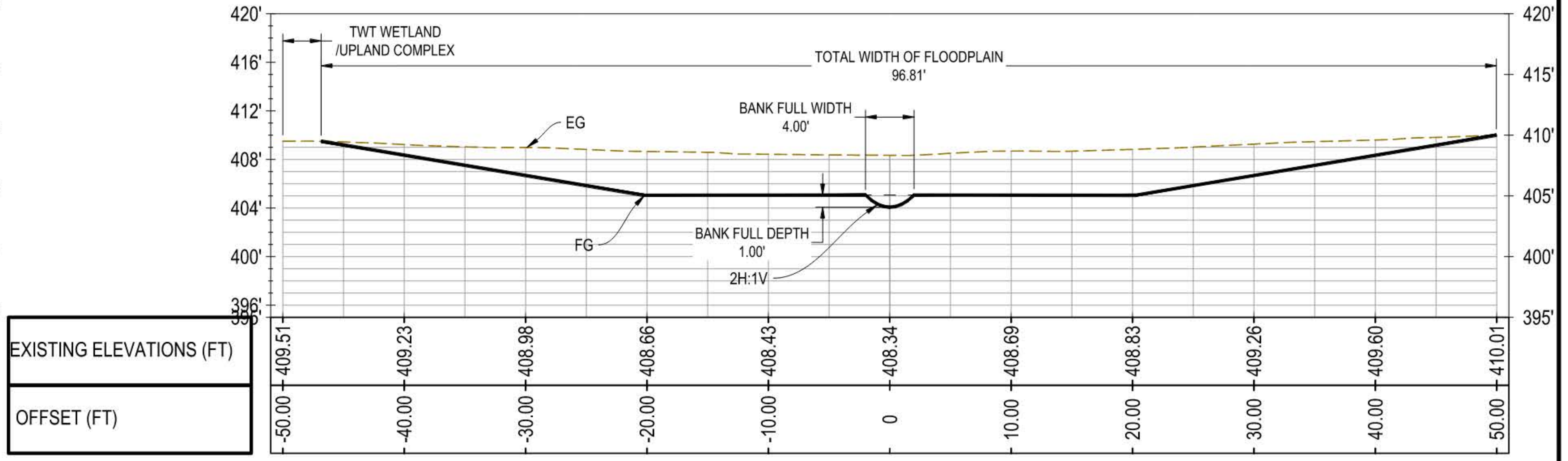
EXISTING ELEVATIONS (FT)	416.84	416.61	417.57	416.72	417.34	416.87	415.93	415.65	415.61	415.81	415.74
OFFSET (FT)	-50.00	-40.00	-30.00	-20.00	-10.00	0	10.00	20.00	30.00	40.00	50.00

1-1 SECTION FC - DS - 2

1" = 8'

8 0 8

SECTION 2 - 2
ST 5+00.00



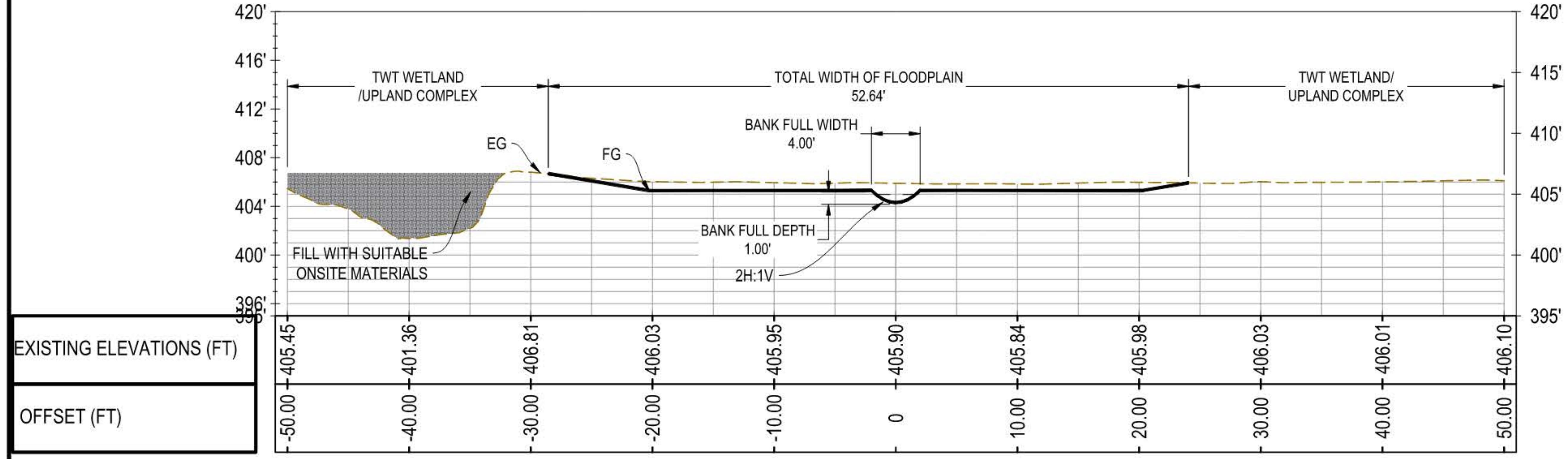
EXISTING ELEVATIONS (FT)	409.51	409.23	408.98	408.66	408.43	408.34	408.69	408.83	409.26	409.60	410.01
OFFSET (FT)	-50.00	-40.00	-30.00	-20.00	-10.00	0	10.00	20.00	30.00	40.00	50.00

2-2 SECTION FC - DS - 2

1" = 8'

8 0 8

SECTION 3 - 3
ST 7+06.22



EXISTING ELEVATIONS (FT)	405.45	401.36	406.81	406.03	405.95	405.90	405.84	405.98	406.03	406.01	406.10
OFFSET (FT)	-50.00	-40.00	-30.00	-20.00	-10.00	0	10.00	20.00	30.00	40.00	50.00

3-3 SECTION FC - DS - 2

1" = 8'

8 0 8

NO.	REV DATE	REVISION	INT.

PRELIMINARY
NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

Project Details
THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
PROPOSED SECTION VIEWS FC - DS - 2

####
####
####

Location:
####

Designer / Professional Engineer Responsible:
####

Project Number: 1940111895

Designed by: S.M. Ahmadi

Drawn by: S.M. Ahmadi

Checked by: K. Buelow

Approved by: P. Domaszczynski

Date: ####

Project Status: ####

Drawing Number: C-302

Scale: AS NOTED

Sc: x

Rev.: x

SAVED: 5/13/25 5:00 PM

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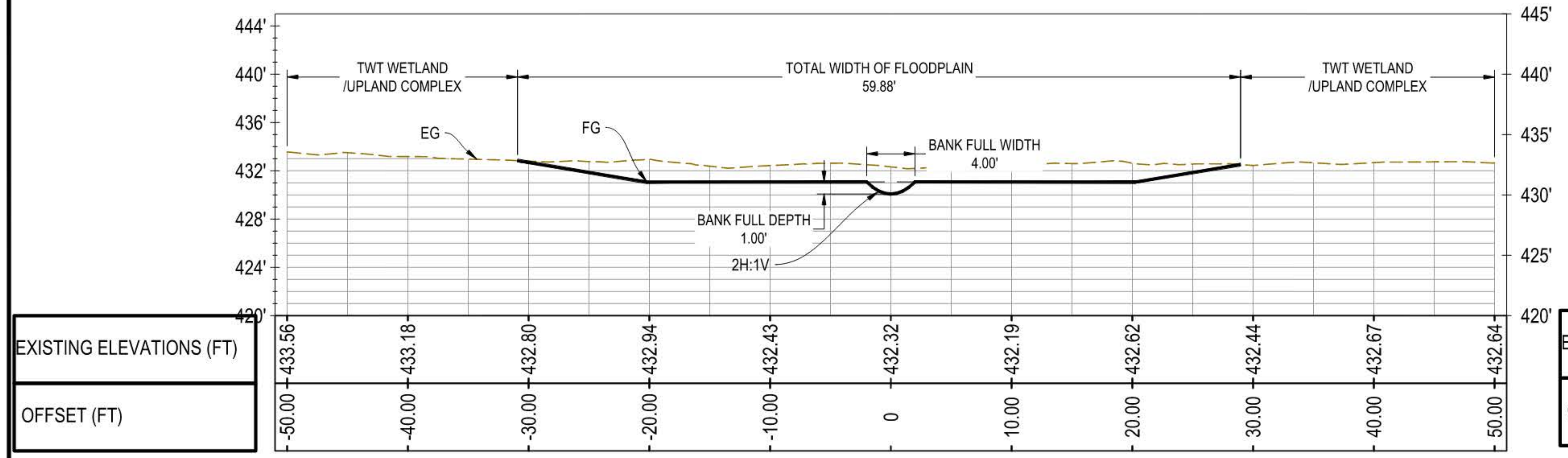

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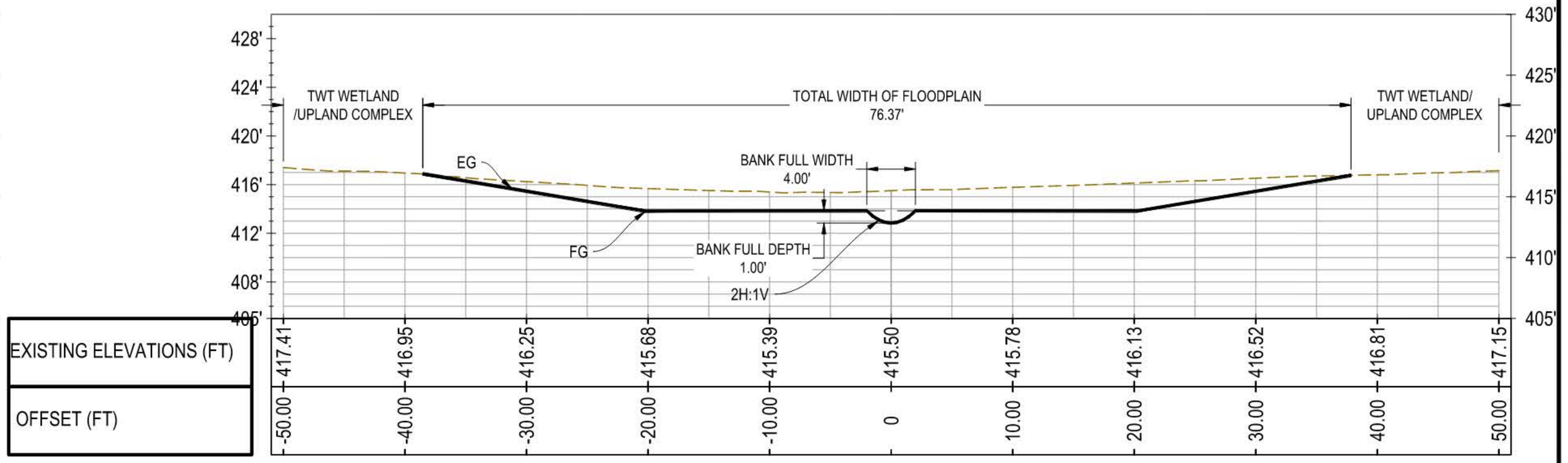

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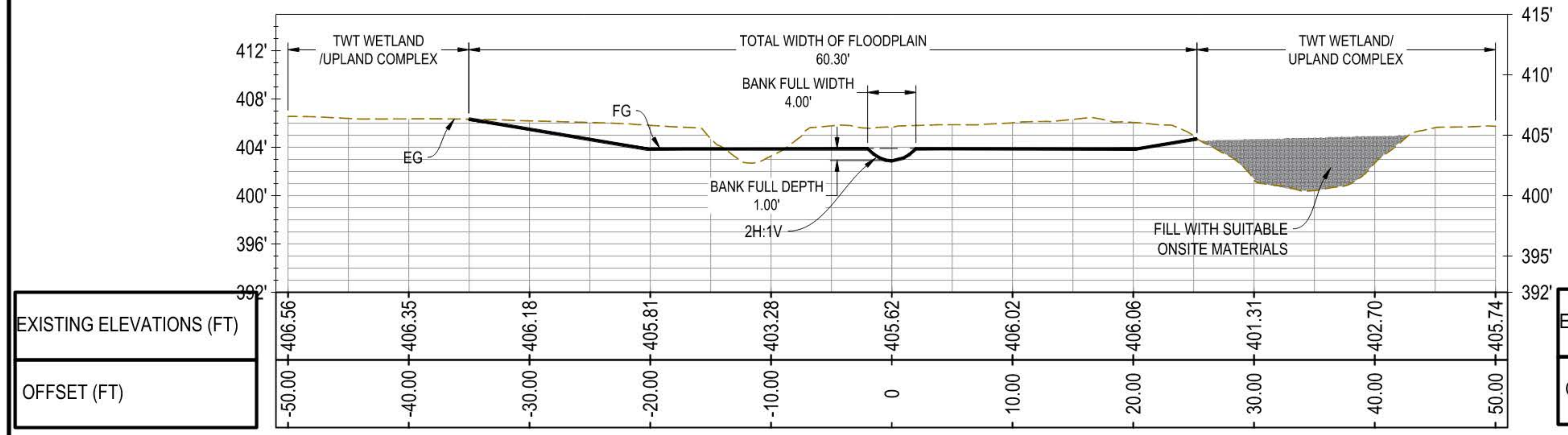

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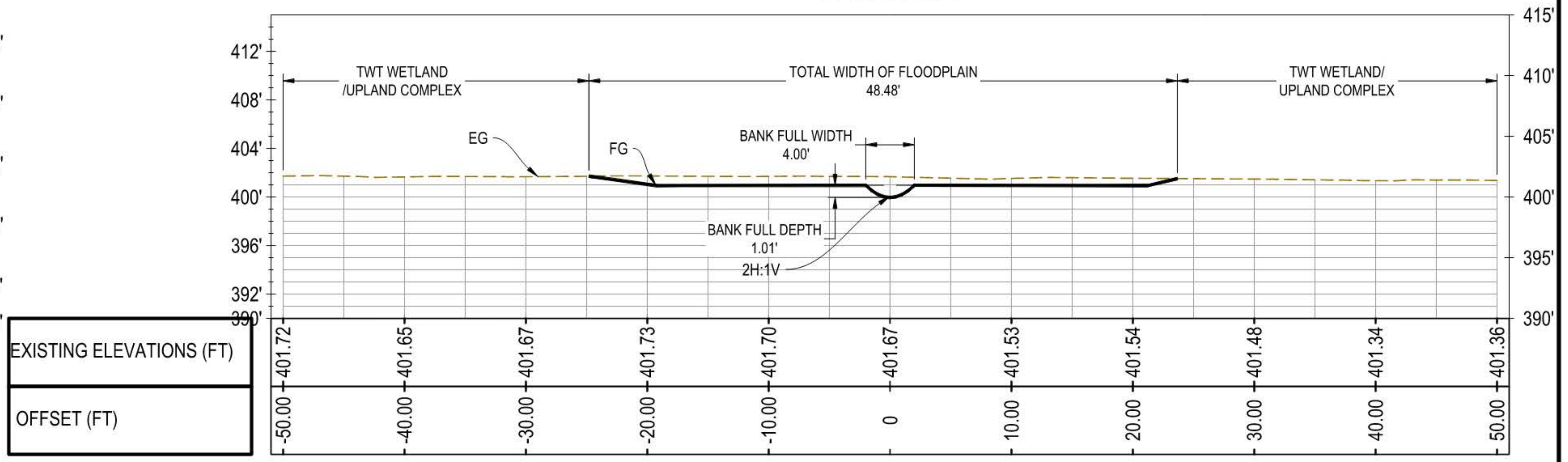

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SECTION 5 - 5
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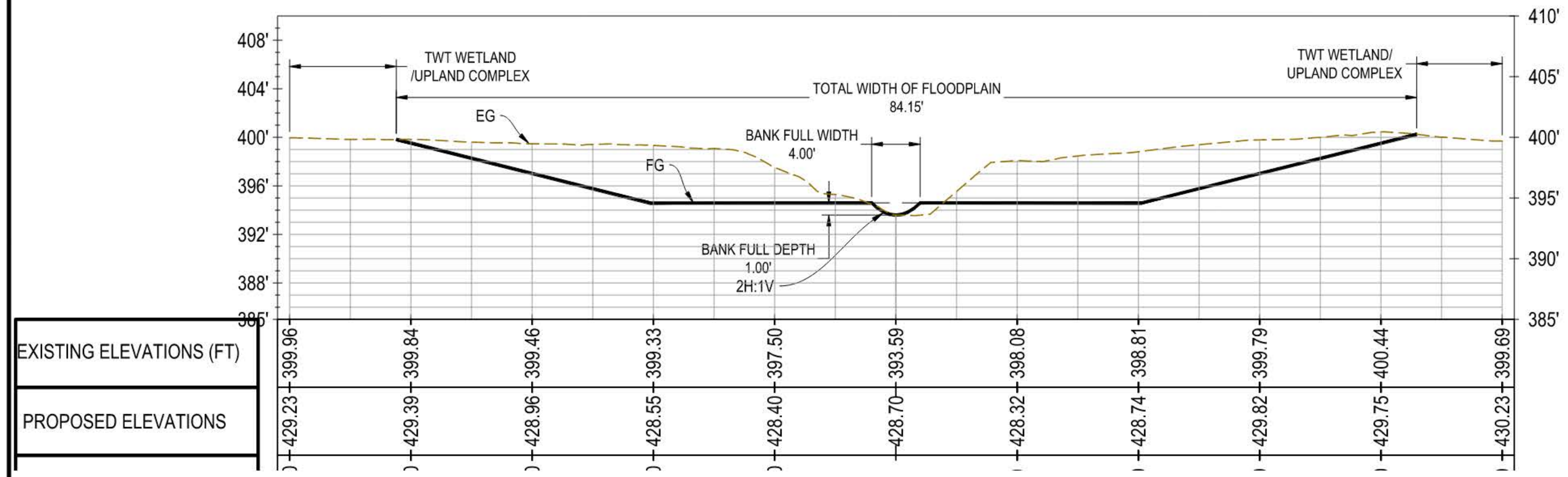

5-5 SECTION FC - DS - 3
1" = 8'

NO.	REV DATE	REVISION	INT.

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NOT FOR
CONSTRUCTION

DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

Project Details
THE WETLAND TRUST
STREAM MITIGATION
PERRY RD, PENNELLVILLE, NY 13132
####

Drawing Title
PROPOSED SECTION VIEWS FC - DS - 3

####
####
####

Location:
####

Designer / Professional Engineer Responsible:
####

Project Number: 1940111895
Project Status: ####

Designed by	Drawn by	Checked by	Approved by	Date
S.M. Ahmadi	S.M. Ahmadi	K. Buelow	P. Domaszczynski	####

Drawing Number: **C-303**

Scale	Sc	Rev.
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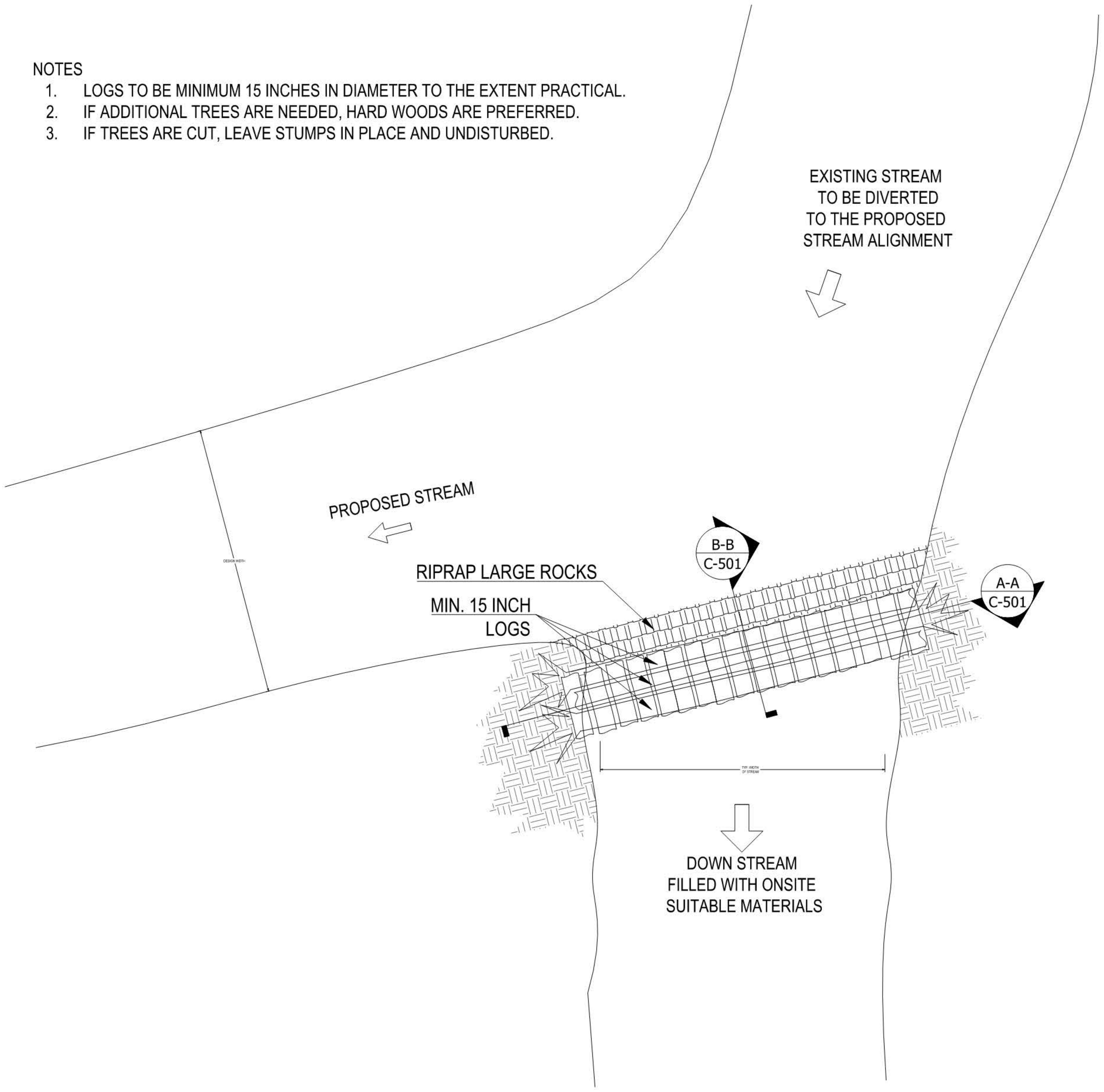
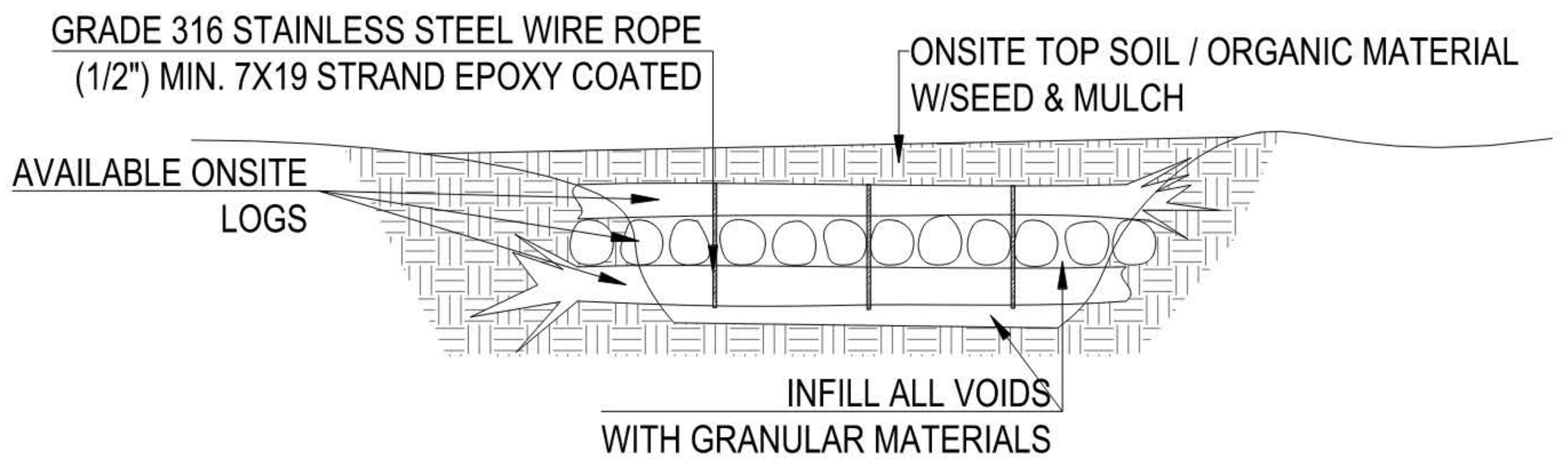
NOTES
1. LOGS TO BE MINIMUM 15 INCHES IN DIAMETER TO THE EXTENT PRACTICAL.
2. IF ADDITIONAL TREES ARE NEEDED, HARD WOODS ARE PREFERRED.
3. IF TREES ARE CUT, LEAVE STUMPS IN PLACE AND UNDISTURBED.

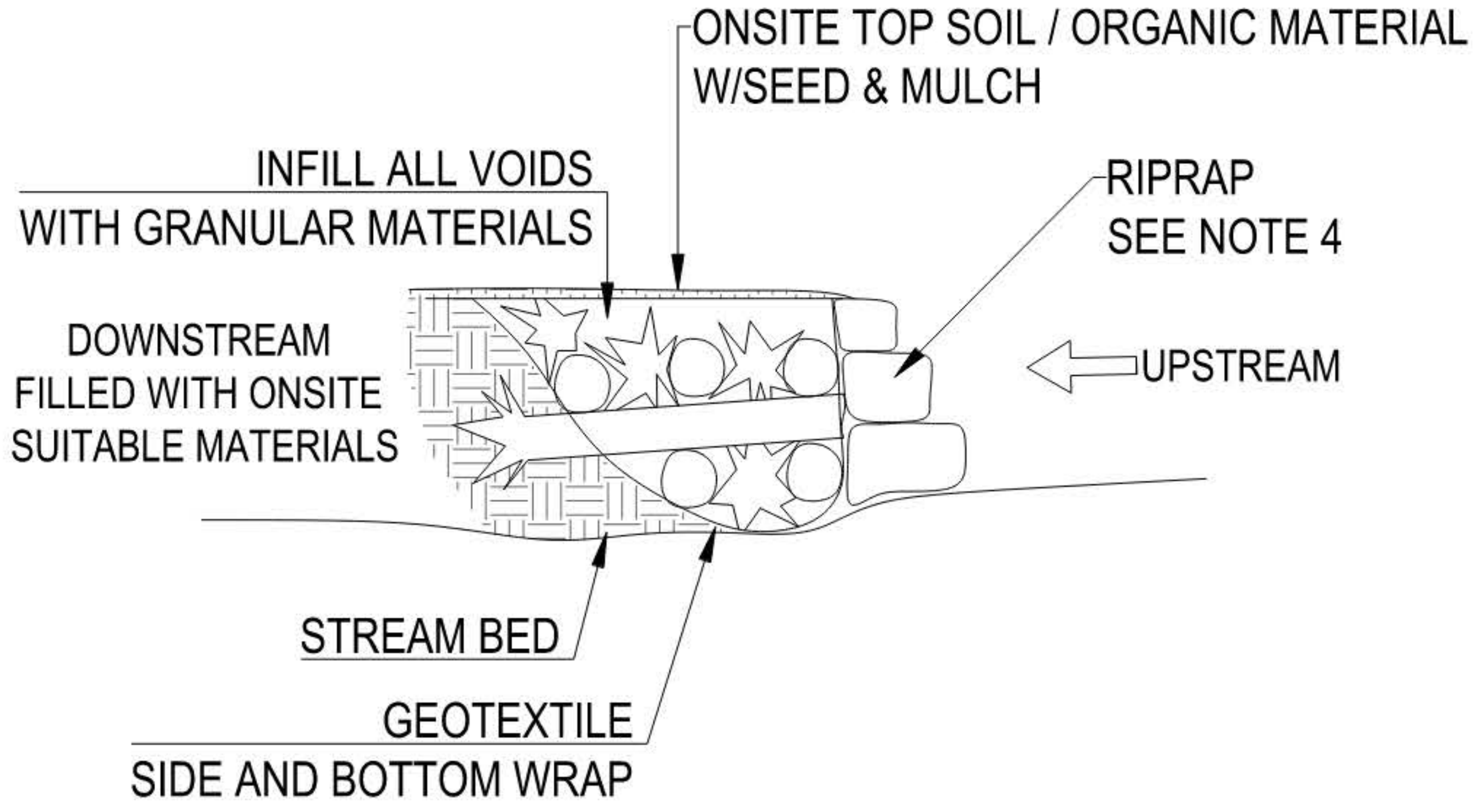


PLAN VIEW - LOG JAM (TYP.)
NOT TO SCALE



NOTES
1. EXISTING DOWNED TREES IF ANY SHALL BE USED TO BUILD THE ENGINEERED LOG JAM.
2. ACCESS THE EXITING CREEK DIVERSION FROM TOP OF BANK TO TOP OF BANK.
3. FIRST ROW OF LOGS SHALL BE PLACED PERPENDICULAR TO THE FLOW.
4. THE SUBSEQUENT LAYER OF LOGS WILL BE PLACED PERPENDICULARLY OVER THE FIRST ROW TO FORM A CRIB FORMATION ON WHICH TO CONTINUE UNTIL TOP OF BANK IS REACHED ON BOTH SIDES.
5. GEOTEXTILE SHALL BE USED TO WRAP THE BOTTOM AND SIDES OF THE LOG SYSTEM. DO NOT COVER THE TOP WITH GEOTEXTILE.
6. INFILL VOIDS BETWEEN THE LOGS WITH AVAILABLE ONSITE MATERIAL.
7. PLACE LARGE/HEAVY RIPRAP ON THE UPSTREAM SIDE OF THE LOG SYSTEM. (3 FEET MIN.) BACKFILL VOIDS WITH BED LOAD MATERIALS.

A-A SECTION
NOT TO SCALE



NOTES
1. BED LOAD MATERIAL SHALL BE PLACED OVER EACH ROW OF LOGS TO FILL VOIDS.
2. ENTIRE SYSTEM SHALL BE TIED WITH GRADE 316 STAINLESS STEEL WIRE ROPE (1/2") MIN. 7X19 STRAND EPOXY COATED.
8. PLACE LARGE/HEAVY RIPRAP ON THE UPSTREAM SIDE OF THE LOG SYSTEM. (3 FEET MIN.) BACKFILL VOIDS WITH BED LOAD MATERIALS.

B-B SECTION
NOT TO SCALE

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

NO.	REV DATE	REVISION	INT.

Project Details
THE WETLAND TRUST
STREAM MITIGATION
Bell Rd, Pennellville, NY 13132
####

Drawing Title
MISCELLANEOUS DETAILS

####
####
####

Location: ####

Designer / Professional Engineer Responsible: ####

Project Number **1940111895**	Designed by ####	Drawn by ####	Checked by ####	Approved by ####	Date ####
Project Status ####	Drawing Number **C-501**			Scale AS NOTED	Sc x / Rev. x

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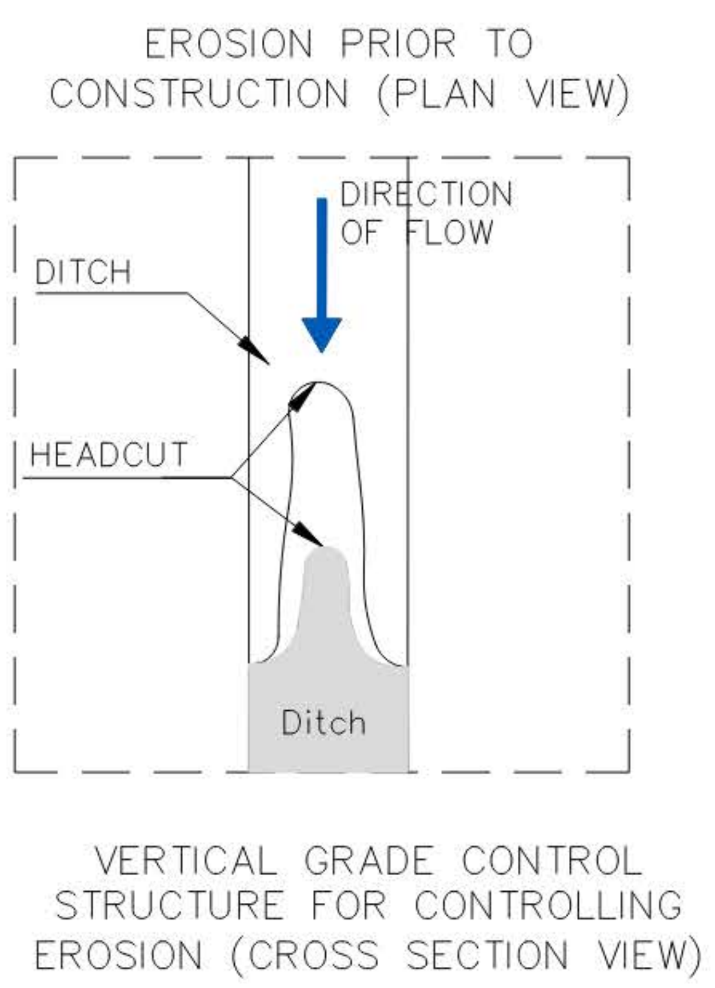
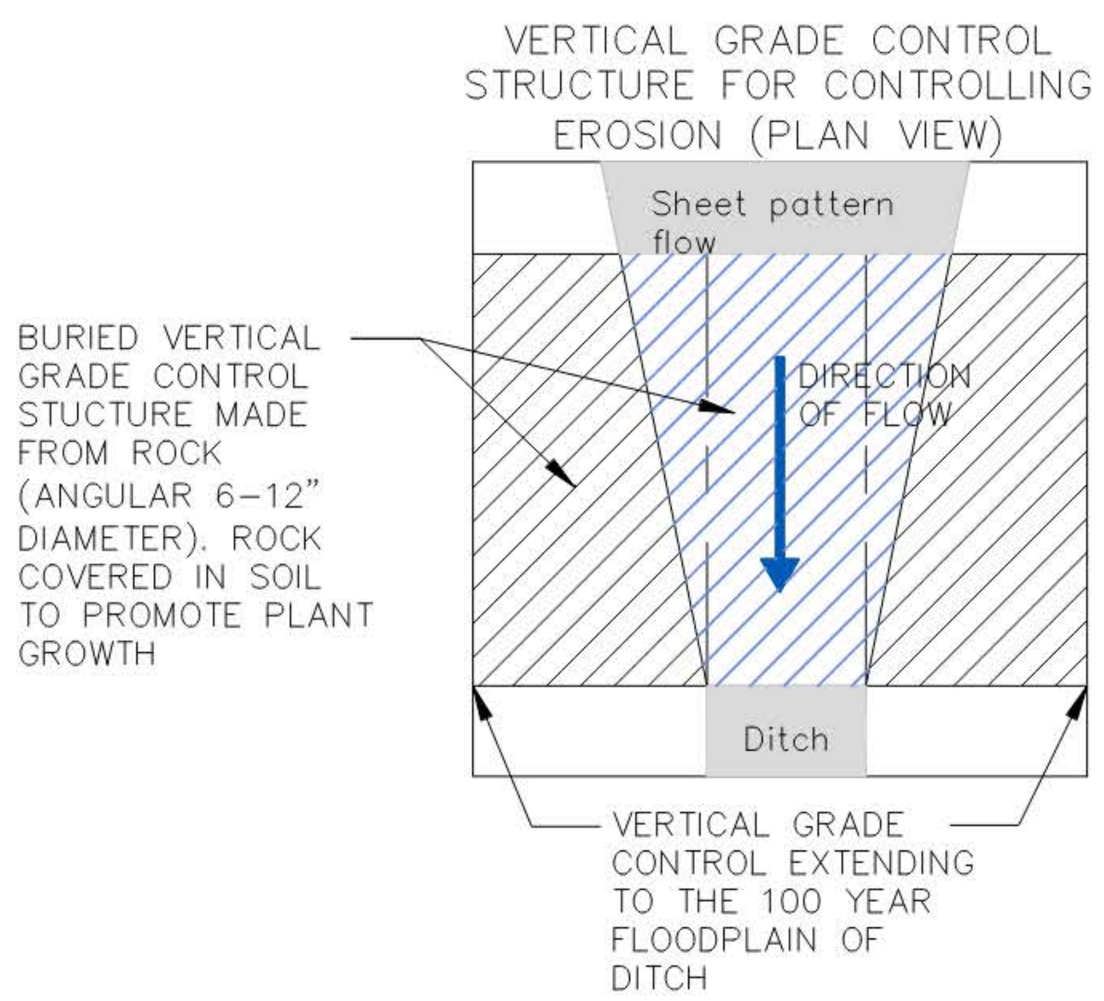


1 VERTICAL GRADE CONTROL
NOT TO SCALE



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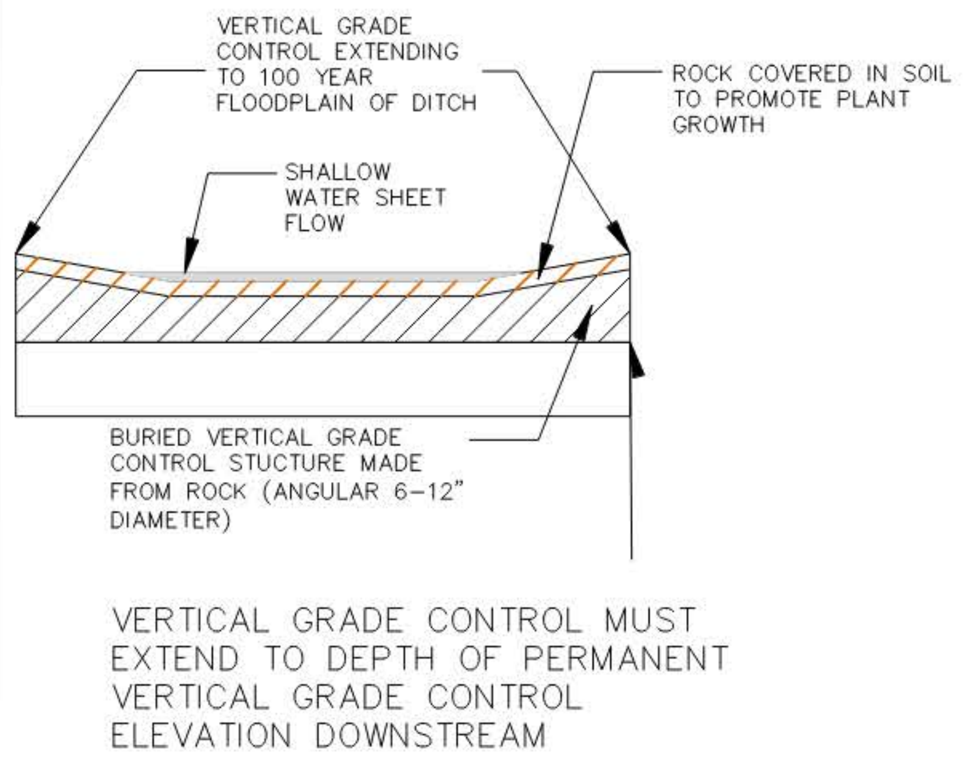
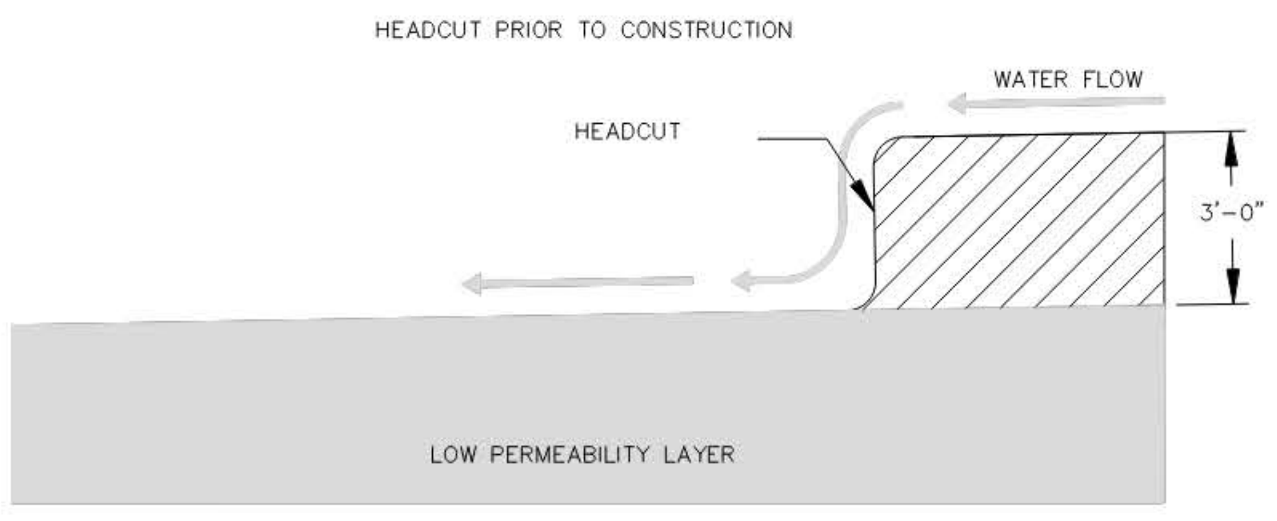


3 VERTICAL GRADE CONTROL
NOT TO SCALE



4 VERTICAL GRADE CONTROL
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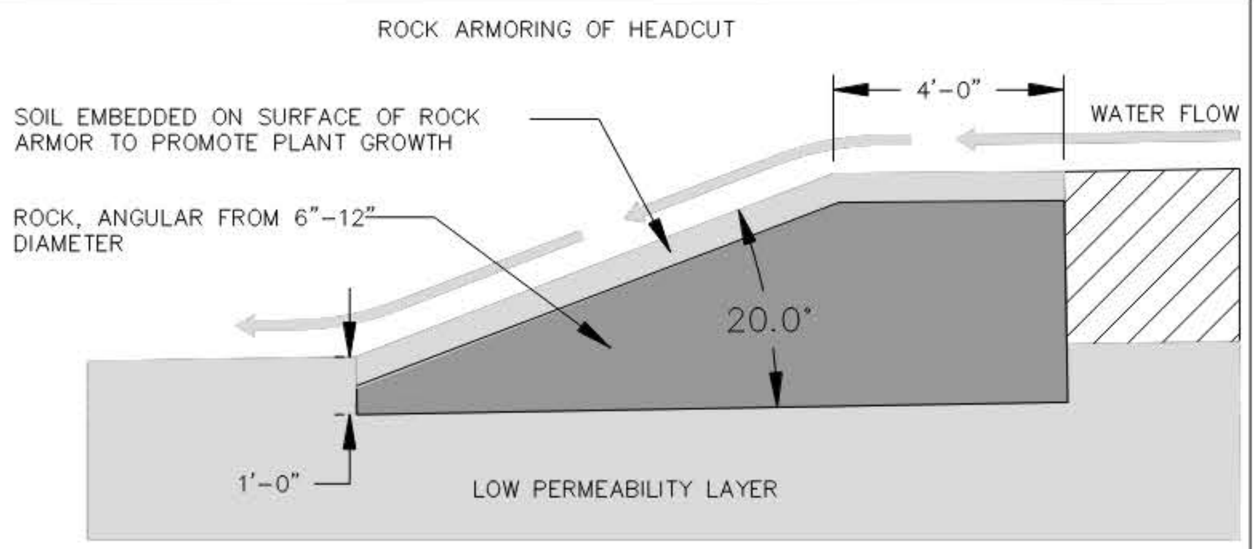
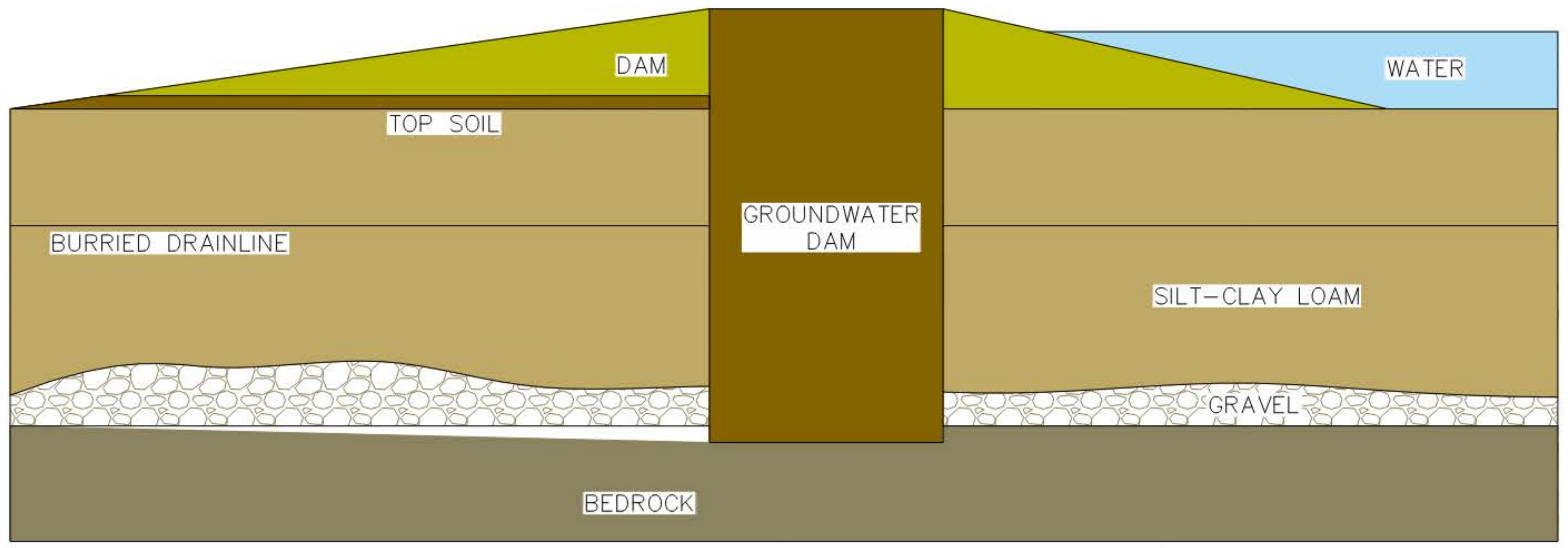
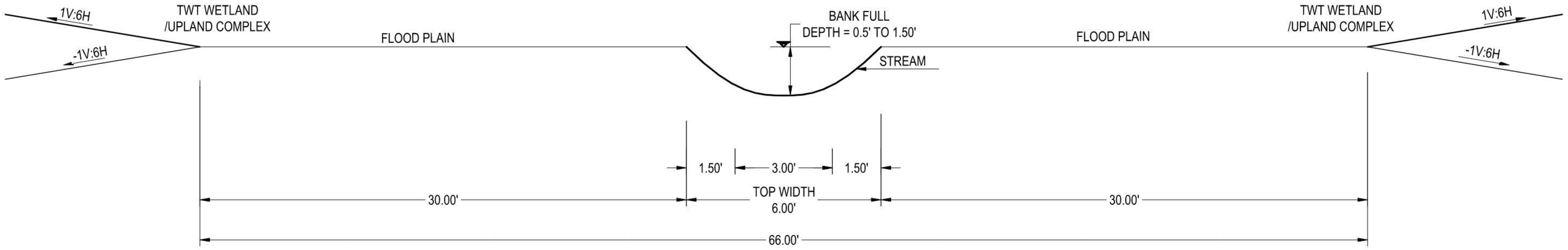


5 VERTICAL GRADE CONTROL
NOT TO SCALE



6 GROUND WATER DAM
NOT TO SCALE



PROPOSED STREAM AND FLOODPLAIN SECTION (TYP.)
NOT TO SCALE

NOTES:
1. DETAILS 1 THROUGH 6 PRESENTED ON THIS SHEET ARE PROVIDED BY TWT.

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

NO.	REV DATE	REVISION	INT.

Project Details
THE WETLAND TRUST
STREAM MITIGATION
Bell Rd, Pennellville, NY 13132
####

Drawing Title
MISCELLANEOUS DETAILS

####
####
####

Location:
####

Designer / Professional Engineer Responsible:
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Project Number **1940111895**
Designed by ####
Drawn by ####
Checked by ####
Approved by ####
Date ####

Project Status ####
Drawing Number **C-502**
Scale AS NOTED
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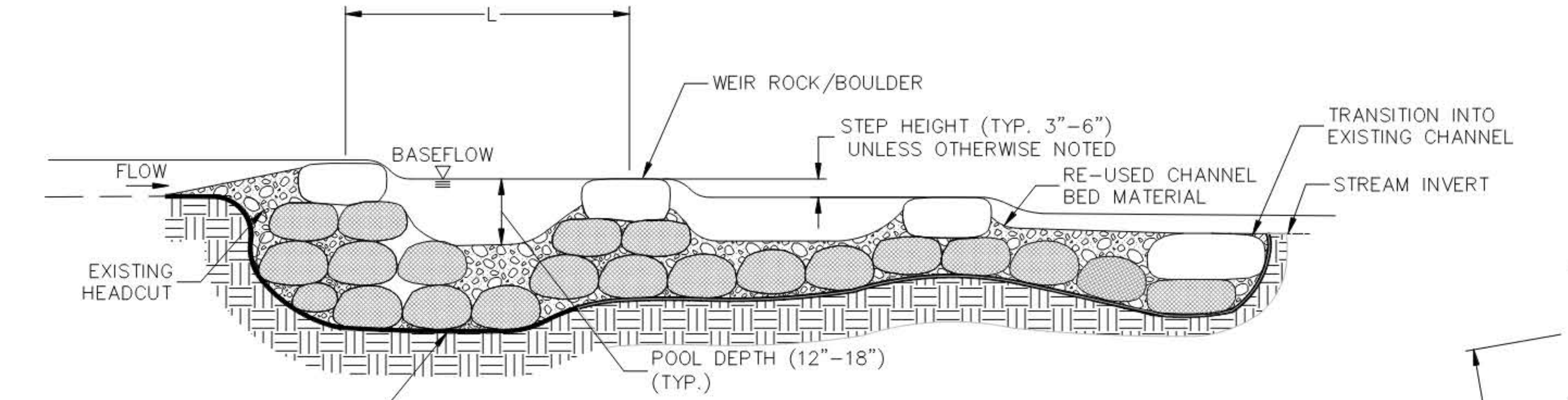
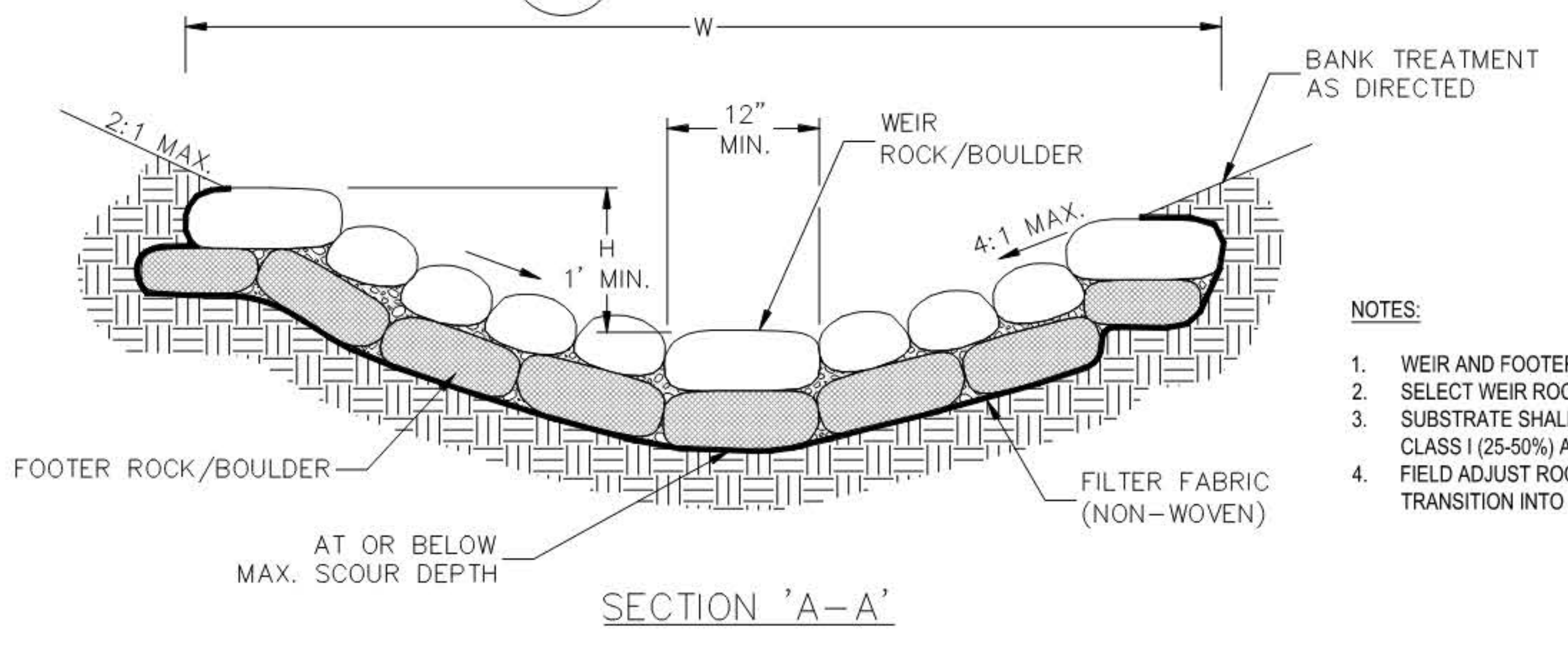


2 PROFILE VIEW - STEP POOL (TYP.)

NOT TO SCALE

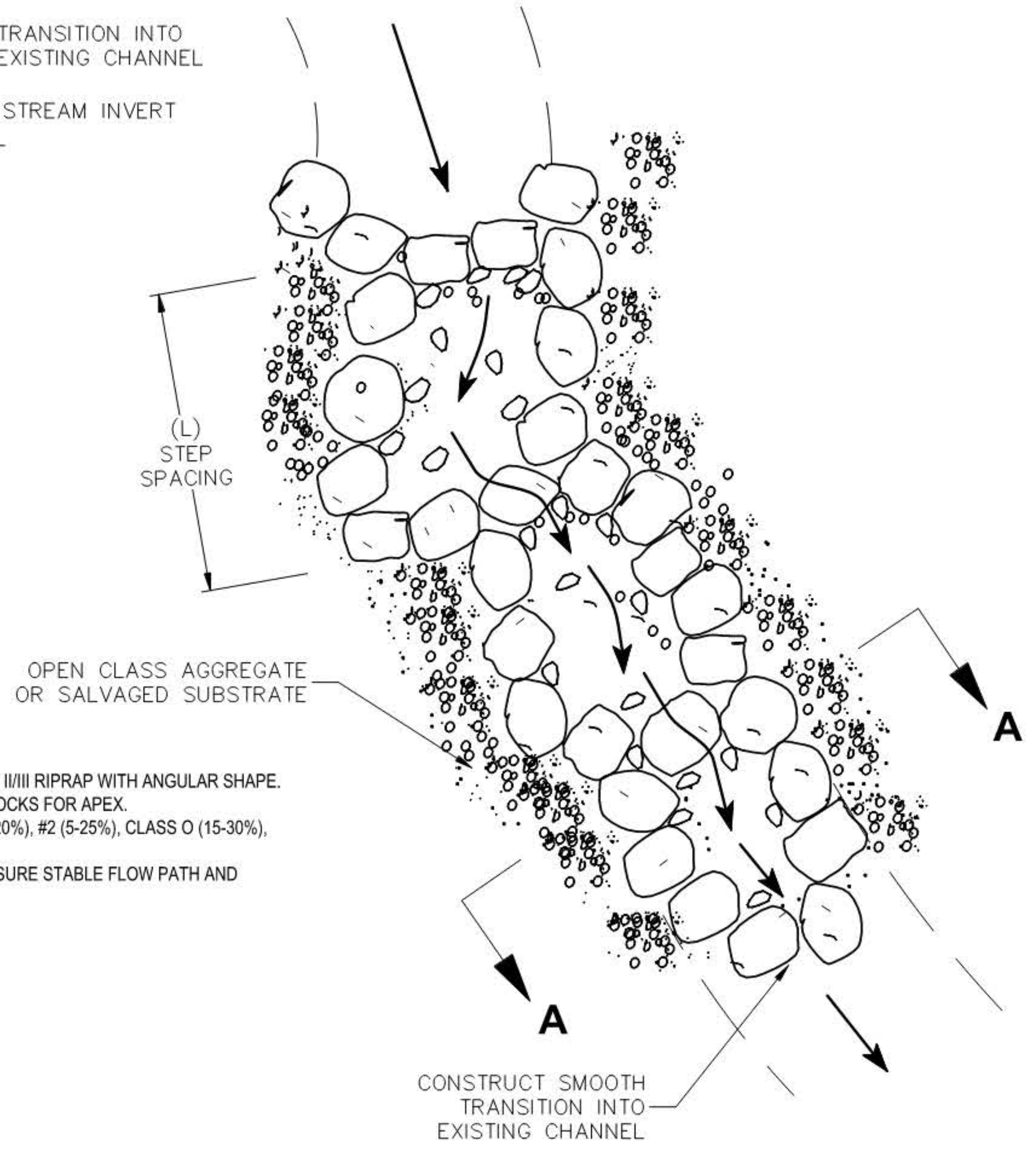


3 SECTION 'A-A'

NOT TO SCALE

NOTES:

1. WEIR AND FOOTER ROCKS TO BE CLASS II/III RIPRAP WITH ANGULAR SHAPE.
2. SELECT WEIR ROCKS TO BE LARGEST ROCKS FOR APEX.
3. SUBSTRATE SHALL BE A MIX OF #57 (10-20%), #2 (5-25%), CLASS O (15-30%), CLASS I (25-50%) AND CLASS II (0-15%).
4. FIELD ADJUST ROCK PLACEMENT TO ENSURE STABLE FLOW PATH AND TRANSITION INTO ADJACENT BANKS.



1 PLAN VIEW - STEP POOL (TYP.)

NOT TO SCALE

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

NO.	REV DATE	REVISION	INT.

Project Details **THE WETLAND TRUST** STREAM MITIGATION Bell Rd, Pennellville, NY 13132 ####	Drawing Title **MISCELLANEOUS DETAILS**			#### ####		
Location: ####	Designer / Professional Engineer Responsible: ####			####		
Project Number **1940111895**	Designed by ####	Drawn by ####	Checked by ####	Approved by ####	Date ####	
Project Status ####	Drawing Number **C-503**			Scale AS NOTED	Sc x	Rev. x

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Appendix K.

Fish Creek
Long Term Management Plan (LTMP)

Oswego County, New York

PREPARED BY:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
www.thewetlandtrust.org

May 2025

1.0 Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Offsite Compensatory Mitigation Project (Project) on behalf of Micron NY Semiconductor Manufacturing, LLC (Micron), has developed a mitigation plan at the Fish Creek Site, town of Schroeppel, Oswego County, New York (Mitigation Site) to develop wetland and stream mitigation acreage that will contribute to the total compensation needs for the construction of a semiconductor fabrication complex in the town of Clay, Onondaga County, NY. This Long-Term Management Plan (LTMP) has been developed based on anticipated monitoring and management activities for the Mitigation Site. Additional details are to be provided, if necessary, throughout the monitoring period and amended or revised as needed and approved by the USACE and NYSDEC. The purpose of the Long-Term Management Plan (LTMP) is to ensure the long-term sustainability of the protected and restored resources after mitigation performance standards have been achieved.

2.0 Responsible Party and Long-Term Steward

Micron is the Responsible Party for all phases of this Permittee Responsible mitigation through monitoring and final acceptance when a Certificate of Completion (or equivalent) will be provided by the agencies. Once the mitigation is complete Micron will transfer long-term management to TWT. As the fee simple owners of the Fish Creek Site, TWT will be the long-term steward and responsible for long-term management of the wetland mitigation site including; identification of needs, development of recommendations, review with regulatory agencies as required, implementation, and efficacy measures. TWT shall implement this LTMP to preserve the habitat and conservation values in accordance with the approved Mitigation Plan, site protection instrument, and this LTMP. Long-term management tasks shall be funded through the Long-Term Management Fund.

3.0 Property Description

3.1 Conservation Values

The Mitigation Site provides an opportunity for restoration of a large stream/wetland complex with approximately 19 acres of wetland re-establishment, 1 acres of rehabilitation, and 6,000 linear ft of restored stream reaches in a previously drained and cultivated landscape. The permanent restoration and subsequent protection of this property has several site-specific conservation values that can be enhanced and maintained.

- ***Hydrologic Function***- Restoring the stream's natural sinuosity and floodplain connection will improve surface water retention, infiltration, and seasonal saturation of soils. Removal of artificial drainage and regrading will help reestablish groundwater-surface water interactions, essential for wetland hydrology.
- ***Water Quality***- Conversion of cropland to wetlands and vegetated buffers will reduce nutrient runoff, sedimentation, and agrochemical inputs into Fish Creek and downstream waters.

3.2 Site Improvements

Summary of site improvements including construction and restoration as per the Mitigation Plan. As-built report should be attached as an Appendix to this LTMP.

4.0 Baseline Conditions

Baseline conditions will be provided here with the as-built and final 10-year report referenced and attached. Conditions will be updated throughout the life of the project.

5.0 Management Activities

The Fish Creek long-term management strategy will ensure the long-term sustainability and ecological performance of the restored and protected aquatic, upland and biological resources long after the active monitoring period has closed. Upon approval of the Mitigation Plan, the proposed wetland restoration will be completed. This restoration will restore approximately 20 acres of diverse, native wetland vegetation communities to support wetland wildlife populations and connectivity to adjacent preserved wetlands. If monitoring finds it necessary, the anticipated long-term management activities include:

- ***Invasive Species Management-*** At the conclusion of the ecological monitoring period, performance standards will be met and native vegetative communities well established. Long-term management will ensure that conservation values are not significantly threatened by invasive vegetation. If warranted, mechanical or chemical management of invasive species will be implemented (see Invasive Species Management Plan).
- ***Spillways and Groundwater Dams-*** The constructed spillways and groundwater dams will be monitored and maintained as needed to maintain structural integrity and contribution toward site-specific conservation values.
- ***Access-*** The main access and parking area will be maintained as needed via mowing or replenishing gravel in appropriate areas. Gates, padlocks, and fences will receive upkeep as needed.
- ***Security and Safety-*** The Fish Creek site will not be open to the public to minimize impacts from human activity and the parcel will be posted for protection against trespassing. Signage posting and unauthorized access will be monitored and appropriately maintained. Trash will be collected on a yearly basis and security increased as warranted in the form of additional gates/locks, cameras, and contact with local authorities.

Any long-term management activities performed will be recorded in an annual report along with any recommendations for future management activities or proposed changes to the LTMP, if warranted.

6.0 Funding

To ensure long-term financial assurance TWT will continue to own the site fee simple in perpetuity. As a 501(c)(3) nonprofit, TWT has received tax-exempt status for the site, which helps assure its long-term protection. TWT has a director-controlled Stewardship Management Investment Account specifically established for the Micron Compensatory Mitigation project with funds provided by Micron Semiconductor Manufacturing LLC. Funds will be deposited into this account with the investment income (investment instruments are low risk and broad-based) used to support permanent long-term management and maintenance. These funds are sufficient to sustain long-term management as outlined in **Table 1**, in which the budget covers long-term management for all six sites combined.

Table 1. Budget estimate for potential long-term management and maintenance tasks, all six Micron Wetland/Stream mitigation sites, a total of 1,328 acres.

Category	Task	Frequency	Estimated Cost per acre	Annualized Cost
Adaptive Management	Replanting	5	$1,800	$7466
	Reshaping terrain	5	$600	$2489
	Invasive species removal	2	$2,100	$21777
Maintenance	Site manipulation	10	$1500	$3111
	Boundary posting	10	$600	$6244
	Other practices	3	$1,320	$9,126
Long-Term Management	Other corrective adaptive management actions to ensure natural stability of site	5	$4,800	$19,910
Monitoring	To determine implementation tasks	1	$18	$25,398
Administration	For all tasks above including tax exempt status	1	$600	$12,444
Total annual budget*				102,500
Total Stewardship investment**				**$4,100,000**

Note: This table is an estimate based on 400 wetland credits @ $8,000 or (equivalent DEC Acres) and 13,500 stream ft @ $60

Micron Central New York Semiconductor Manufacturing Complex

Upper Caughdenoy Creek

Wetland Mitigation Plan

Oswego County, NY

PREPARED BY:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
www.thewetlandtrust.org

May 2025

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List of Related Documents

Overview of Stream/Wetland Compensation on Six Mitigation Sites
Buxton Creek- Stream and Wetland Mitigation Plan
Fish Creek- Stream and Wetland Mitigation Plan
Lower Caughdenoy Creek Wetland Mitigation Plan
Sixmile Creek Wetland Mitigation Plan
Oneida River Wetland Mitigation Plan

1. Introduction and Objectives

Six sites in Oswego County make up the Permittee Responsible Offsite Compensatory Mitigation Project (Project) for the Micron NY Semiconductor Manufacturing, LLC (Micron) semiconductor fabrication site in the town of Clay, Onondaga County, New York. The Upper Caughdenoy Creek Wetland Mitigation Plan (UCC Plan) location is along County Route 33 and State Route 49 in the Towns of Hastings, Palermo, and Schroeppel NY. The Project will address the total mitigation need for wetland credits and stream restoration to meet Micron permit requirements. The final number of credits required for compensation is still pending as of the drafting of this plan, however, an Overview document accompanying the six plans will be updated with final credit accounting. TWT submits this UCC Plan as one of six plans to satisfy Project mitigation needs and in fulfillment of the requirements of 33 C.F.R. Part 332 (2024).

This Upper Caughdenoy Creek Plan focuses on wetland mitigation components. The objectives are to develop approximately 59.8 wetland mitigation credits (USACE) or 86.7 mitigation acres (NYSDEC) toward a total compensation requirement of 414 credits/acres for the entire project. This includes:

- Re-establish wetlands to generate 49.1 USACE wetland credits equivalent to the creation of 49.1 NYSDEC wetland mitigation acres, including:
    - 14.8 acres of PEM - Shallow Emergent Marsh
    - 19.1 acres of PEM - Deep Emergent Marsh
    - 2.5 acres of PSS – Scrub-Shrub
    - 12.7 acres of PFO - Red Maple Hardwood Swamp
- Rehabilitate wetlands of the above cover types to generate 10.74 USACE wetland credits equivalent to the enhancement of 37.6 NYSDEC wetland mitigation acres.
- Establish 80.7 acres of upland buffer habitat, including:
    - 53.1 acres of herbaceous buffer habitat
    - 27.6 acres of shrub/forest buffer habitat

The distribution of wetland types may change due to balancing distribution among the other five mitigation plans in development. The distribution of wetland cover types, mitigation type, and acreage is dependent on site-specific characteristics which ultimately determine what wetlands are suitable at specific locations.

2. Site Description

The Upper Caughdenoy Creek Site is approximately 238.2 acres in size in the Towns of Hastings, Palermo and Schroeppel, Oswego County, New York (**Figure 2-1**). The Site is within the Oneida River 10-digit HUC (0414020209) watershed, and the U.S. Geological Survey 7.5-minute quadrangle indexed as Central Square. Coordinates for the approximate center of the Site are: [43.30603022, -76.21720126] (**Figure 2-2**).

2.1 Site Selection

The Upper Caughdenoy Creek Mitigation Site was selected along with five other sites to satisfy compensatory mitigation requirements for Micron Campus Impacts using site selection protocols described in Section 2.1 and 4.1 of the Micron Overview of Stream/Wetland Compensation on Six Mitigation Sites document. This Site is particularly well suited for wetland restoration with a combination of:

- flat topography with the majority of slopes being less than 2 percent,
- thick clay layers near the surface,
- large area with opportunity to support expansive wetland connectivity,
- opportunity to reverse extensive agricultural ditching to restore hydrology.

2.2 Site Protection

The Wetland Trust, Inc. (TWT) is a 501(c)(3) nonprofit corporation and qualifying conservation organization (NYS ECL) whose mission is the protection, conservation, and restoration of wetlands and other critical habitat. TWT owns the Upper Caughdenoy Creek site fee simple and in perpetuity, with provisions to transfer to other similar nonprofits its lands and stewardship funds should TWT fail. All sites will receive the same protection. There are two layers of protection for this site:

> First, TWT will own the Upper Caughdenoy Creek mitigation site in perpetuity. TWT's vested interest in the site through fee-simple ownership reduces the risk of failure to satisfy performance standards.
>
> Second, TWT will file a USACE-approved Conservation Easement (CE, **Appendix A**) with the Oswego County Clerk. The Wetland Conservancy, Inc. (TWC), P.O. Box 220, Burdett, NY 14818-0220, a 501(c)(3) nonprofit corporation and qualifying conservation organization (NYS ECL), will be the easement holder. The easement will cite specific conditions and prohibitions and apply to the credit generating areas of the site. The site plan provides the rationale for the easement and assists in its enforcement. The CE names the USACE and NYSDEC as third-party enforcement entities.

With the exception of activities approved as part of this Project permit or other activities approved by the USACE and NYSDEC, no further alterations within the easement boundary shall occur.

Figure 2-1. Wetland Mitigation Sites Location Overview

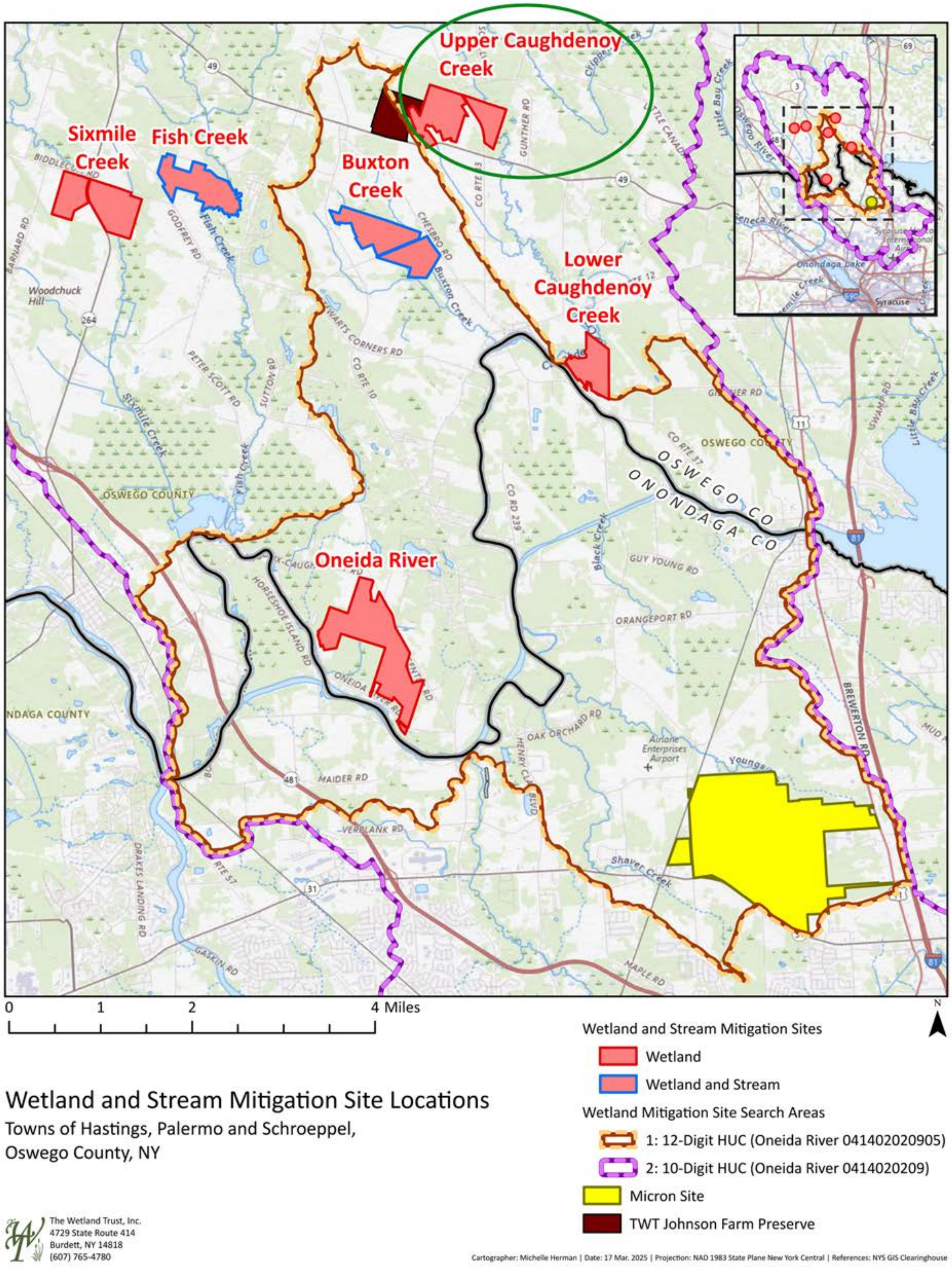
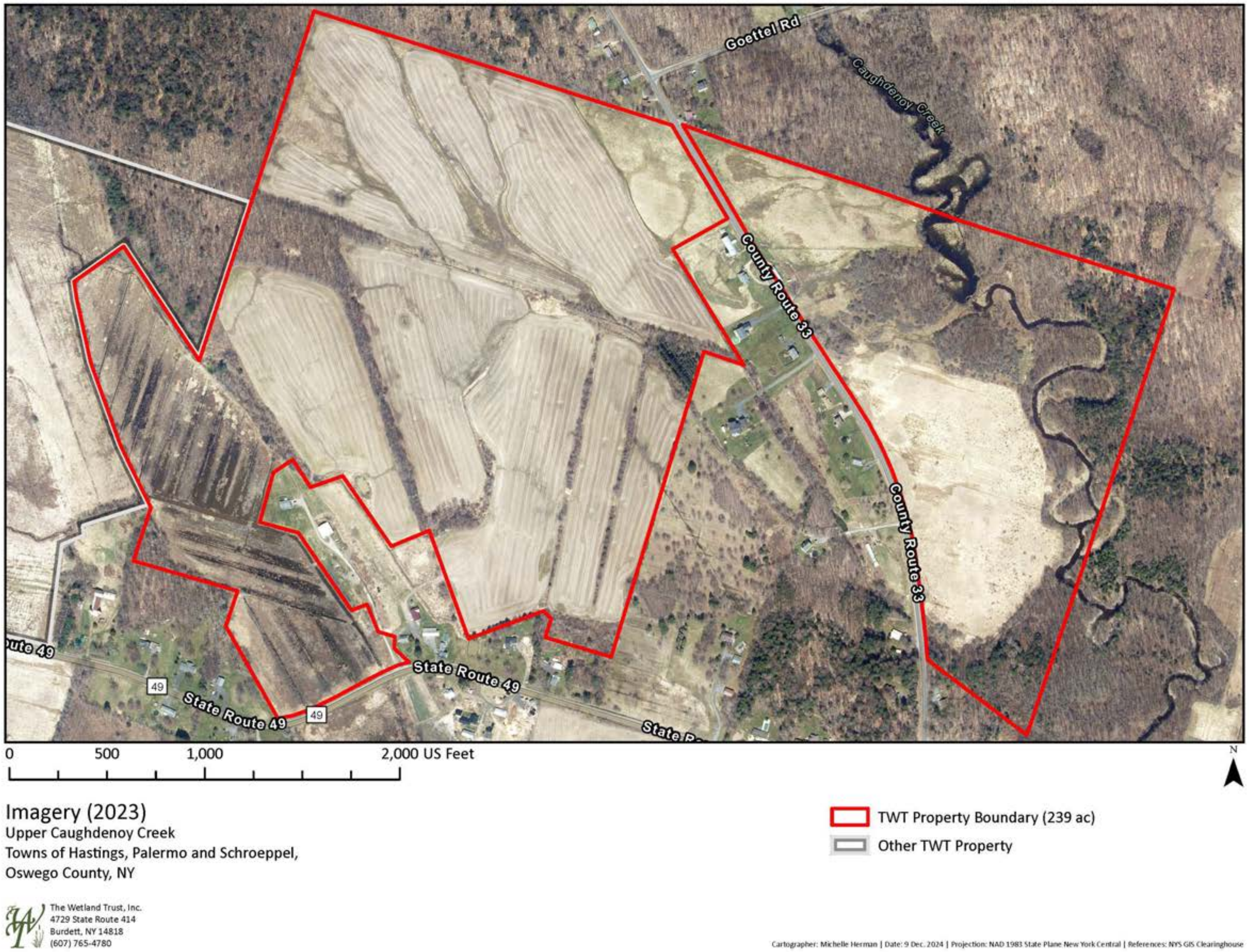


Figure 2-2. Upper Caughdenoy Creek Property (2023)



3. Baseline Information

3.1 Land Use History

Historic

A review of historic and modern aerial photographs (**Appendix B**) was conducted to understand the property's land use history. The property area was likely first logged in the late 18th century or early 19th century. The first aerial imagery available in 1955 shows almost the entire parcel in agricultural use. Borders of fields and land directly adjacent to Caughdenoy Creek are forested, this remains largely unchanged to the modern day, with marginal increases in forested area. An apple orchard was established on the parcel east of Country Route 33 between 1955 and 1978 and expanded by 2003. By 2003, cattle are being raised on the land in the northern fields. By 2003 a small pond has also appeared near the barn adjacent to the field (likely for the cattle), which appears to either fill or dry gradually, disappearing entirely by 2019. Beginning in 2015 farming rows follow the contours of the land rather than the property boundary, which stops the natural drainage paths from being tilled and filled each year leading them to be more pronounced. The muck farm to the west of the property boundary was farmed until 2011 and has been allowed to go fallow.

Current Use

Current land use is primarily dedicated to commercial crop production, with fields planted in corn and soybeans and some areas used for cattle grazing. Grading and drainage infrastructure are actively maintained to optimize field conditions and enhance agricultural productivity. The forested and wettest portions of the property, mainly along Caughdenoy Creek, remain forested. The muck farm has been fallow since 2012 and is now extensively colonized by invasive hydrophytic species.

3.2 Soils

USDA Natural Resources Conservation Service (NRCS) soil mapping of the site is summarized in **Table 3-1** and **Figure 3-1** below. The Site contains a complex mosaic of soil types that reflect the area's glacial history and topographic variation. The most prevalent soils include Madalin silt loam, a moderately well-drained alluvial soil, which occurs extensively across the central lowlands. Rhinebeck silt loam and Hudson silt loam, both somewhat poorly to poorly drained soils, are also widespread. In contrast, Ira gravelly fine sandy loam, occurring in multiple slope classes (0–15%), dominates the upland areas and ridges, especially in the eastern and northern portions of the site. Carlisle muck and Palms muck, both highly organic hydric soils, are limited in extent but ecologically significant, although these areas have been highly impacted by invasive hydrophytes, they have potential for enhancement. Canandaigua silt loam, a poorly drained mineral soil, also contributes substantially to the site's wetland potential. Along the stream corridor and flood-prone areas, Fluvaquents and Udifluvents occur, reflecting frequent overbank flooding and sediment deposition.

Table 3-1. Soil Series Mapped within the Mitigation Area

Series	Symbol	Acres	% of Area	Drainage Class	Hydrologic Soil Group
Canandaigua silt loam	Cd	6.45	2.70%	Moderately well drained	C/D
Carlisle muck	Ce	7.41	3.10%	Moderately well drained	A/D
Fluvaquents and Udifluvents, frequently flooded	FA	2.21	0.92%	Moderately well drained	B/D
Hudson silt loam, 2-6% slopes	HuB	6.63	2.78%	Somewhat poorly drained	C/D
Ira-Sodus gravelly fine sandy loams, rolling	IsC	0.02	0.01%	Somewhat poorly drained	D
Ira and Sodus very stony soils, moderately steep	IUD	0.65	0.27%	Moderately well drained	D
Ira gravelly fine sandy loam, 0-3% slopes	IrA	5.83	2.44%	Poorly drained	D
Ira gravelly fine sandy loam, 3-8% slopes	IrB	34.62	14.49%	Very poorly drained	D
Ira gravelly fine sandy loam, 8-15% slopes	IrC	2.31	0.97%	Poorly drained	D
Madalin silt loam, 0-3% slopes	Ma	28.81	12.05%	Moderately well drained	C/D
Middlebury loam	Mf	1.69	0.71%	Excessively drained	B/D
Minoa very fine sandy loam	Mn	5.00	2.09%	Moderately well drained	B/D
Palms muck	Pa	18.52	7.75%	Well drained	B/D
Rhinebeck silt loam, 0-2% slopes	RhA	28.76	12.03%	Somewhat poorly drained	C/D
Rhinebeck silt loam, 2-6% slopes	RhB	63.59	26.61%	Moderately well drained	C/D
Scriba gravelly fine sandy loam, 0-8% slopes	ScB	20.41	8.54%	Somewhat poorly drained	C/D
Sodus gravelly fine sandy loam, 8-15% slopes	SgC	5.69	2.38%	Very poorly drained	C
Windsor loamy fine sand, rolling	WnC	0.39	0.16%	Poorly drained	A

A 4-foot-long open-faced clay auger was used to sample soils across the mitigation area. Locations of soil test pits and the description of soil textures and depth to groundwater are detailed in **Figure 3-1** below.

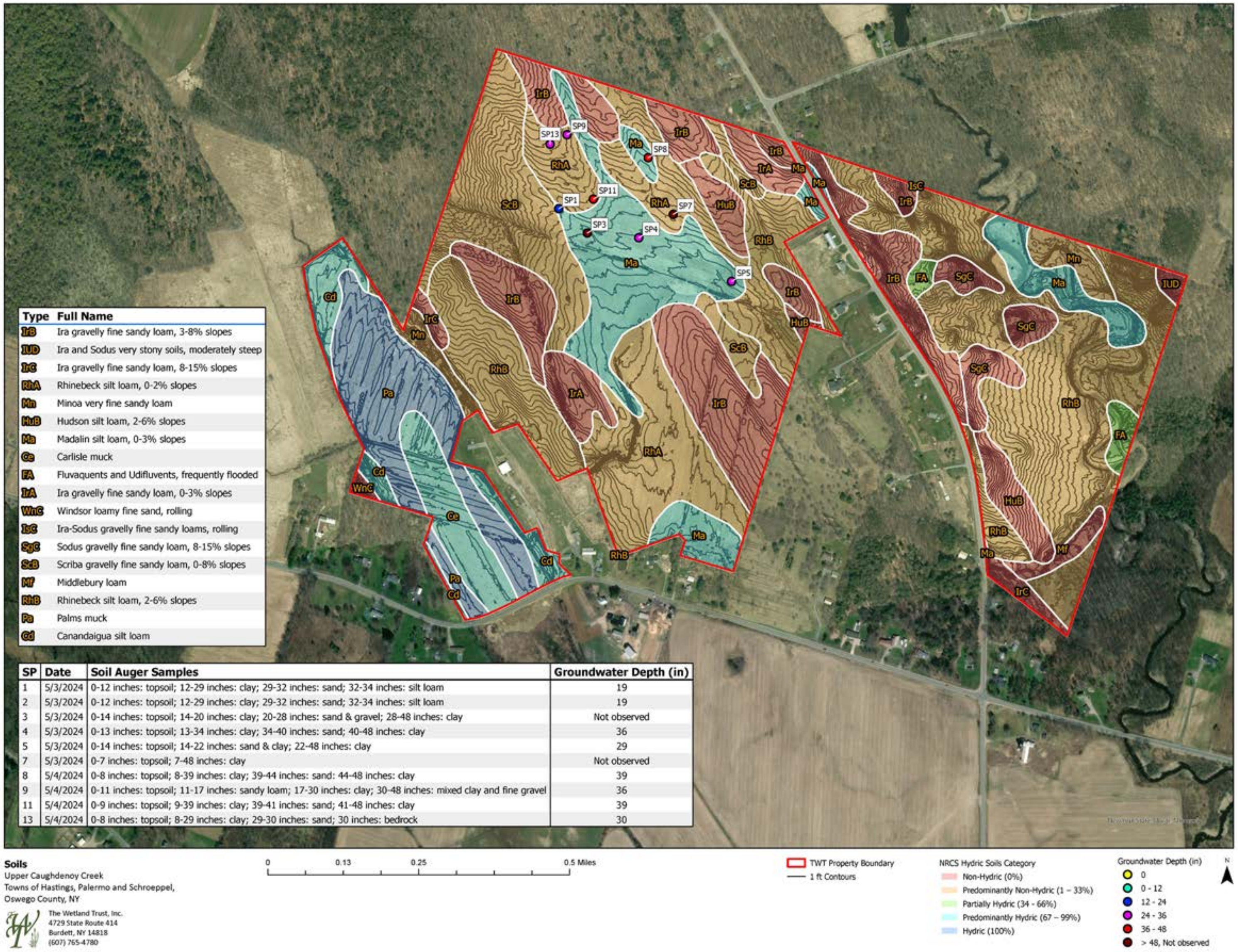
3.3 Wetlands and Hydrology

Hydrological characteristics at Upper Caughdenoy Creek were determined by TWT through wetland and aquatic resource delineations, aerial imagery interpretation, review of regulatory maps, wetland design field assessments which included a series of soil test pits, and interviews with previous property owners.

Federally mapped wetlands are located onsite (**Figure 3-2**). Existing wetlands, streams, and drainage features were delineated in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and Regional Supplement. Field visits for delineation concurrence by USACE and NYSDEC were conducted in August 2024 with final concurrence and pending as of this writing. All field data points were recorded with a centimeter-level accurate GNSS receiver and mapped in ArcGIS Pro. See **Figure 3-3** for mapped wetlands and drainage features and **Appendix C** for delineated features summary table and data sheets.

The site's hydrology is influenced by a combination of surface water runoff, shallow groundwater, and historical agricultural modifications (drainage patterns and flow directions in **Figure 3-3**). Hydrological characteristics at the site are described in three general areas:

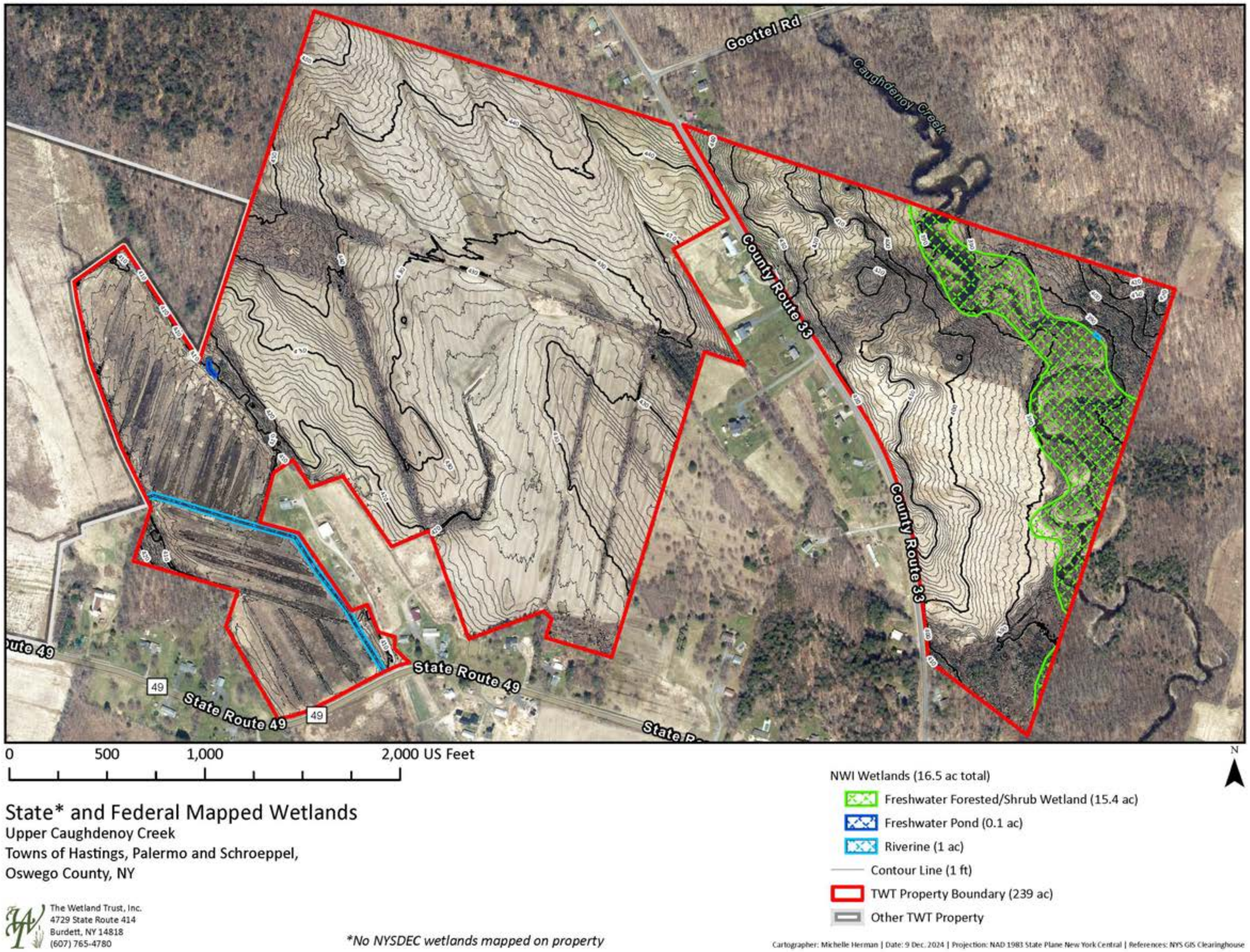
Figure 3-1. Upper Caughdenoy Creek Soils



Type	Full Name
IrB	Ira gravelly fine sandy loam, 3-8% slopes
IUD	Ira and Sodus very stony soils, moderately steep
IrC	Ira gravelly fine sandy loam, 8-15% slopes
RhA	Rhinebeck silt loam, 0-2% slopes
Mn	Minoa very fine sandy loam
HuB	Hudson silt loam, 2-6% slopes
Ma	Madalin silt loam, 0-3% slopes
Ce	Carlisle muck
FA	Fluvaquents and Udifluvents, frequently flooded
IrA	Ira gravelly fine sandy loam, 0-3% slopes
WnC	Windsor loamy fine sand, rolling
IsC	Ira-Sodus gravelly fine sandy loams, rolling
SgC	Sodus gravelly fine sandy loam, 8-15% slopes
ScB	Scriba gravelly fine sandy loam, 0-8% slopes
Mf	Middlebury loam
RhB	Rhinebeck silt loam, 2-6% slopes
Pa	Palms muck
Cd	Canandaigua silt loam

SP	Date	Soil Auger Samples	Groundwater Depth (in)
1	5/3/2024	0-12 inches: topsoil; 12-29 inches: clay; 29-32 inches: sand; 32-34 inches: silt loam	19
2	5/3/2024	0-12 inches: topsoil; 12-29 inches: clay; 29-32 inches: sand; 32-34 inches: silt loam	19
3	5/3/2024	0-14 inches: topsoil; 14-20 inches: clay; 20-28 inches: sand & gravel; 28-48 inches: clay	Not observed
4	5/3/2024	0-13 inches: topsoil; 13-34 inches: clay; 34-40 inches: sand; 40-48 inches: clay	36
5	5/3/2024	0-14 inches: topsoil; 14-22 inches: sand & clay; 22-48 inches: clay	29
7	5/3/2024	0-7 inches: topsoil; 7-48 inches: clay	Not observed
8	5/4/2024	0-8 inches: topsoil; 8-39 inches: clay; 39-44 inches: sand: 44-48 inches: clay	39
9	5/4/2024	0-11 inches: topsoil; 11-17 inches: sandy loam; 17-30 inches: clay; 30-48 inches: mixed clay and fine gravel	36
11	5/4/2024	0-9 inches: topsoil; 9-39 inches: clay; 39-41 inches: sand; 41-48 inches: clay	39
13	5/4/2024	0-8 inches: topsoil; 8-29 inches: clay; 29-30 inches: sand; 30 inches: bedrock	30

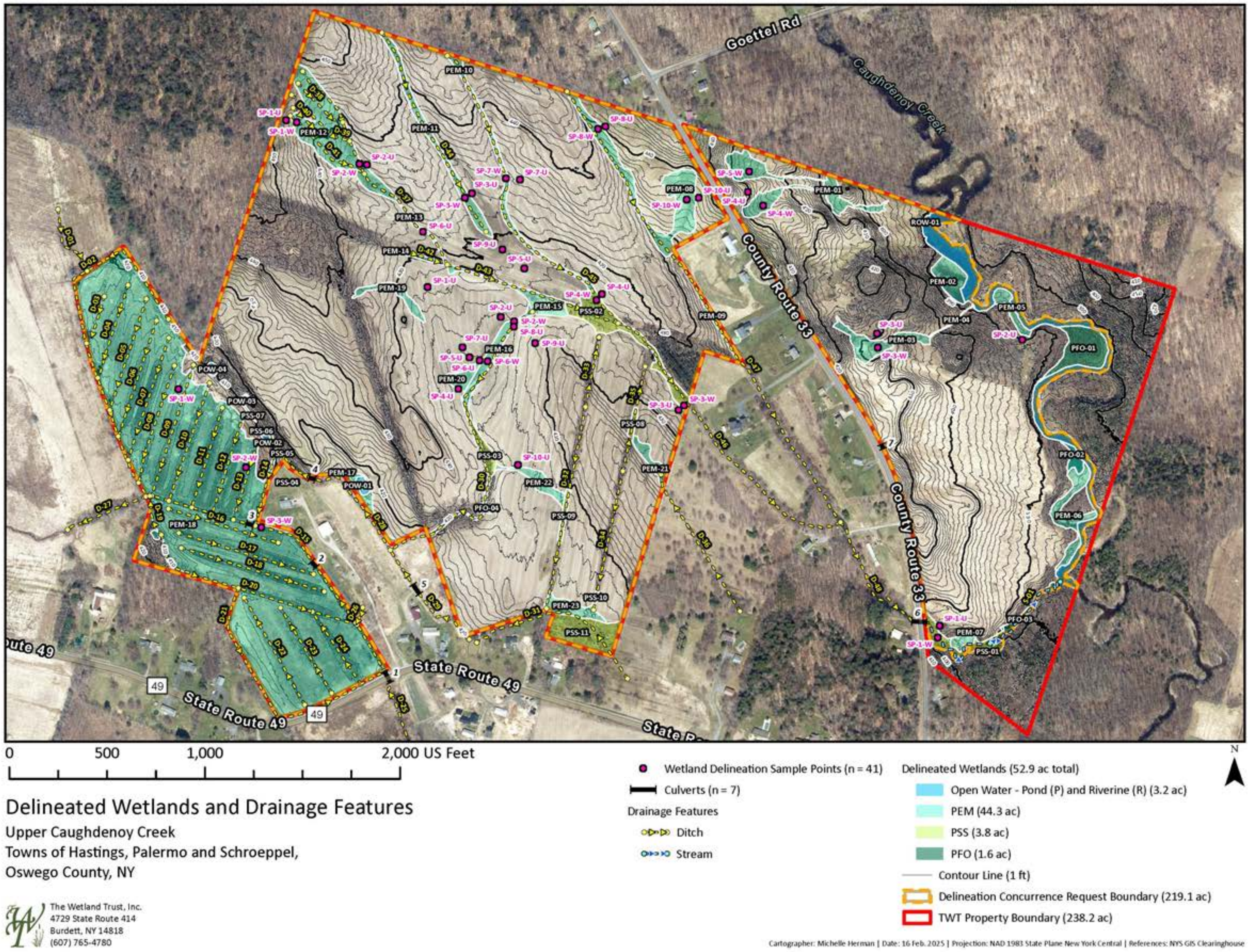
Figure 3-2. State and Federal Mapped Wetlands



*No NYSDEC wetlands mapped on property

Cartographer: Michelle Herman | Date: 9 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Figure 3-3. Delineated Wetlands and Drainage Features



Delineated Wetlands and Drainage Features
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 16 Feb. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Area 1 (far western portion, muck farm): This former muck farm contains wetland PEM-18, primarily supported by groundwater with additional surface runoff from higher elevations to the east and south. An altered, unmapped stream channel—visible on historical maps and the NWI—crosses under NYS Route 49. Flows have been diverted by constructed ditches, including reach D-27. Restoration efforts here will focus on disabling existing drainage and monitoring groundwater.

Area 2 (central potion, between NYS Route 49 and County Route 33): This central area has mixed surface and groundwater influences. Heavy clay soils and shallow slopes contribute to wetland hydrology, with runoff generally flowing east toward Area 3, though some drains west into Area 1.

Area 3 (east of County Route 33): This area drains east toward Caughdenoy Creek, which lies well below the elevation of proposed wetland establishment zones. Wetlands here are influenced by surface runoff and poorly drained clay soils.

Hydrology at the site will continue to be monitored until work begins. Staff gauges, groundwater monitoring wells, and a rain gauge will be installed at the site in spring 2025.

Staff Gauges

Staff gauges will be installed at Upper Caughdenoy Creek for the purpose of measuring water levels in the streams, ditches, and ponds, providing critical data to monitor surface water dynamics and its relationship to groundwater monitoring well data. A total of 6 staff gauges will be strategically installed based on hydrology, field observations, contour maps, and wetland and stream design plans. Placement will ensure easy accessibility and unobstructed views to accommodate both drone and physical observations. Approximate elevations derived from GIS data will be field verified during installation using survey grade GPS. Details in **Table 3-2** below and **Figure 3-4**.

Table 3-2. Staff Gauge Locations

Gauge Number	Elevation (ft)	Latitude	Longitude	Description
1	401.99	43.30424372	-76.22556607	Culvert expelling water from the West field
2	402.79	43.3038449	-76.22371667	Culvert in West field
3	403.10	43.30325091	-76.22251684	Culvert in West field
4	403.69	43.30181476	-76.22122111	Culvert supplying water to the West field
5	416.63	43.3044004	-76.22159539	Middle of a made pond near drainage channel at Center field
6	417.74	43.30372123	-76.22024462	Drainage expelling water from Center field

Monitoring Wells

Up to 7 groundwater monitoring wells using Onset HOBO water level dataloggers will be strategically placed across the site to capture critical groundwater data every four hours, with locations informed by hydrology and drainage patterns, soil delineations, and observed site characteristics. Elevations will be verified during installation to ensure accuracy, and placement adjustments may be made based on field findings. Any changes will be documented in the as built report. See **Table 3-3** and **Figure 3-4** for details.

Table 3-3. Monitoring Well Location

Well #	Elevation (ft)	Latitude	Longitude	Location	Description
1	404.37	43.3052511	-76.2249742	West field	Gather groundwater data from East field
2	418.78	43.30506179	-76.22247678	Center field	Near planned wetland S-07; located on rocky soils
3	425.89	43.30421866	-76.22047655	Center field	Near planned wetland S-09
4	443.51	43.30983986	-76.22135294	North field	Near planned wetland W-14; highest elevation point
5	432.44	43.30800742	-76.22083784	North field	Near planned wetland W-04
6	403.82	43.30409992	-76.21030372	East field	Near planned wetland E-17; located on rocky soils
7	435.00	43.30830836	-76.21551861	East field	Near planned wetland E-13; lowest elevation point, adjacent to Creek

Rain Gauge

One HOBO Rain Gauge Data Logger (RG3) is installed at the site to measure precipitation on-site (coordinates: 43.305458, -76.223911) and has been recording data since April 28, 2025. This data will support the interpretation of hydrologic responses observed in monitoring wells and staff gauges. This device will not be used in peak winter as it cannot measure snow, only rainfall.

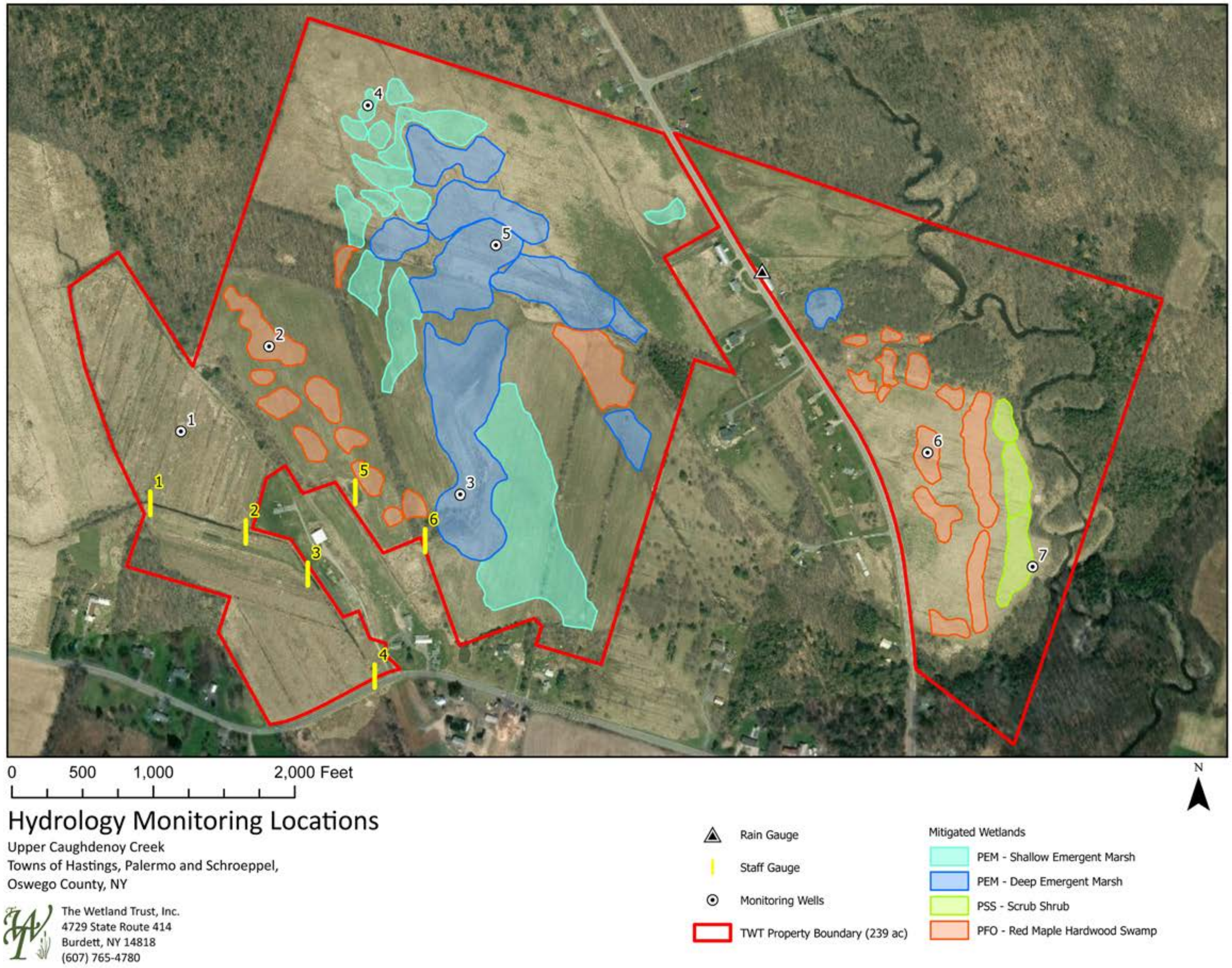
3.4 Existing Wildlife

Various wildlife, including amphibian, reptile, bird, and mammal species, have been recorded at the Upper Caughdenoy Creek mitigation site, either through visual or auditory observations. Amphibians were identified by sight using egg mass, juvenile, or adult presence and by sound if mating calls were discernible. Four main species were noted at this site, including the American toad (*Anaxyrus americanus*), gray treefrog (*Dryophytes versicolor*), northern green frog (*Lithobates clamitans melanota*), and northern leopard frog (*Lithobates pipiens*), all of which are secure both statewide and globally. One reptile species, the eastern garter snake (*Thamnophis sirtalis sirtalis*), was visually identified at this site.

Numerous bird species were observed at the Upper Caughdenoy Creek mitigation site using both visual and auditory identification. Several species of note include the American pipit (*Anthus rubescens*), tufted titmouse (*Baeolophus bicolor*), Canada goose (*Branta canadensis*), and killdeer (*Charadrius vociferus*), all of which are secure both statewide and globally or of least conservation concern. Additionally, the bald eagle (*Haliaeetus leucocephalus*), which is a threatened species in New York State, has been documented at the Upper Caughdenoy Creek mitigation site.

Various mammal species were also observed within this site and the immediate area either directly or indirectly (i.e., scat, footprints, etc.), including the white-tailed deer (*Odocoileus virginianus*), coyote (*Canis latrans*), North American beaver (*Castor canadensis*), raccoon (*Procyon lotor*), and

Figure 3-4. Upper Caughdenoy Creek Hydrology Monitoring Locations



eastern cottontail (*Sylvilagus floridanus*), all of which are of least conservation concern. See **Appendix D** for the full list.

3.4.1 Federally Listed Species and Habitat Consideration

Consultation has been initiated with the U.S. Fish and Wildlife Service (USFWS) in accordance with Section 7 of the Endangered Species Act to ensure that the proposed stream/wetland mitigation activities will not adversely affect federally listed species or their critical habitats. Coordination is ongoing, and any conservation measures or recommendations provided by USFWS will be incorporated into the project design and implementation, as appropriate. The official species list generated through the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) system is included in **Appendix D.**

3.5 Existing Vegetation

The Upper Caughdenoy Creek site features a mix of agricultural, upland, and wetland ecosystems. A large portion of the site is currently cultivated as a soybean (*Glycine max*) field, resulting in limited vegetative diversity within the agricultural zone. Surrounding the field and perimeter are delineated wetlands that support a combination of native and invasive plant species. Native vegetation, including white turtle head (*Chelone glabra*), allegheny monkey flower (*Mimulus ringens*), and blue vervain (*Verbena hastata*), contribute vital habitat and ecological functions. A complete list of species observed at the UCC site can be found in **Appendix D**.

3.6 Invasive Species

Key invasives of Upper Caughdenoy Creek include purple loosestrife (*Lythrum salicaria*) affecting 29.93 acres, reed canary grass (*Phalaris arundinacea*) affecting 6.59 acres, common reed (*Phragmites australis*) affecting 3.80 acres, and cattail (*Typha* spp) affecting 2.99 acres. In addition to these dominant species, other invasive plants present in the area include creeping bentgrass (*Agrostis stolonifera*), reed sweet grass (*Glyceria maxima*), honeysuckle (*Lonicera* spp.), creeping jenny (*Lysimachia nummularia*), Timothy grass (*Phleum pratense*), Kentucky bluegrass (*Poa pratensis*), creeping buttercup (*Ranunculus repens*), common buckthorn (*Rhamnus cathartica*), and multiflora rose (*Rosa multiflora*). Refer to the Invasive Species Management Plan in **Appendix E** for baseline maps of existing key invasive species.

Table 3-4. Invasive Species Coverage at Upper Caughdenoy Creek

Invasive Species	1-5% Cover (Acres)	5-25% Cover (Acres)	>25% Cover (Acres)	Total Affected Area (Acres)
Reed Canary Grass (*Phalaris arundinacea*)	1.63	1.09	3.87	6.59
Purple Loosestrife (*Lythrum salicaria*)	5.67	22.85	1.40	29.93
Cattail (Typha sp.)	0.67	2.24	0.08	2.99
Common Reed (*Phragmites australis*)	0.02	0.40	3.38	3.80

3.7 Cultural and Historic Considerations

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), initial consultation was initiated with the New York State Historic Preservation Office (NY SHPO) in August 2024 to assess the potential for the proposed mitigation site to affect historic properties or cultural resources. August 09 and September 09, 2024 letters from NY SHPO indicated that no historic properties or cultural resources would be affected by this project. Further tribal consultation with Onondaga Nation required a Phase 1A Report of the site to show why no field work was proposed. A Phase 1A Report was submitted on [date to be inserted- this is still in progress], 2025 (**Appendix F**).

4. Wetland Credit Accounting

The USACE and NYSDEC will determine credit generation based on wetland acres that meet or exceed performance standards and proposed credit ratios (**Table 4-1**). One-to-one ratios are based on re-establishment (or restoration) of the specific cover types targeted to replace lost functions. 3.5-to-one ratios are based on rehabilitation of existing wetlands and were informed by numerous discussions with regulatory agencies. The final credit generation will be adjusted based on monitoring results and meeting the performance standards of the mitigation site.

Figure 4-1. USACE Wetland Credit Generation and NYSDEC Mitigation Acreage

Wetland type Cowardin	**Cover type** Edinger	**Mitigation Type** NYSDEC	**Acres**	**Mitigation type** USACE	**USACE Ratio** (Acre:Credit)	**Credits**
PEM	**Shallow emergent marsh**	Restoration	14.8	Re-establishment	1:1	14.8
		Enhancement	1.4	Rehabilitation	3.5:1	0.4
	Deep emergent marsh	Restoration	19.1	Re-establishment	1:1	19.1
		Enhancement	3.3	Rehabilitation	3.5:1	0.94
PFO	**Red maple- hardwood swamp**	Restoration	12.7	Re-establishment	1:1	12.7
		Enhancement	0.2	Rehabilitation	3.5:1	0.06
PSS	**Scrub shrub**	Restoration	2.5	Re-establishment	1:1	2.5
		Enhancement	32.7	Rehabilitation	3.5:1	9.34
		Total	**86.7***			**59.8**

* total amount of NYSDEC mitigation acres.

Open water areas (deep water aquatic habitats and vegetated shallows) greater than 0.1 contiguous acre will only be credited where they equal 10% or less of the total wetland creation and re-establishment areas or so long as they are part of a well-integrated complex of open water and emergent vegetation. Deepwater aquatic habitat is defined as any open water area that is either a) permanently inundated at mean annual water depths >6.6 ft, lacks soil, and/or is either unvegetated or supports only floating or submersed macrophytes, or b) permanently inundated areas ≤6.6 ft in depth that do not support rooted-emergent or woody plant species. Areas ≤6.6 ft mean annual depth that support only submergent aquatic plants are vegetated shallows, not wetlands. The 2 acres of open water (POW) that will be impacted will be accommodated by POW areas within the wetlands where they are not counted toward the credit total.

5. Wetland Mitigation Work Plan

The wetland mitigation work plan at Upper Caughdenoy Creek will focus on re-establishing naturally appearing and functioning wetlands. Work methods include disabling existing drainage tiles, disabling ditches, restoring shallow basins and the natural rims of drained and filled wetlands, and restoring microtopography as described throughout this section. These methods will ensure the target hydrology is met, supporting a diverse community of hydrophytic vegetation. The treatment of existing invasive vegetation will begin prior to construction to minimize the extent of spread to work areas. Seeding and planting will be completed after all grading is complete.

Wetlands were designed at the site in May 2024 by TWT staff. Field design forms were filled out for each wetland polygon **(Appendix G)**. Determination of the types of wetlands to be re-established for each area within the Upper Caughdenoy Creek Site is based on the cover types outlined in Ecological Communities of New York State (Edinger, 2014) and is guided by the number of acres of each wetland type necessary to meet mitigation requirements for the Micron impacts.

Approximately 14.8 acres of shallow emergent marsh, 19.1 acres of deep emergent marsh, 2.5 acres of scrub-shrub, and 12.7 acres of red maple hardwood swamp will be re-established with an additional 37.6 acres of rehabilitation of these cover types **(Figure 5-1)**. The following characteristics guide the locations of each type of wetland to be re-established.

Red Maple-Hardwood Swamp

- Poorly drained depressions
- Usually inorganic soils with peat, if present, that is less than 20 cm deep
- Occasionally on muck or shallow peat, that is typically acidic to circumneutral

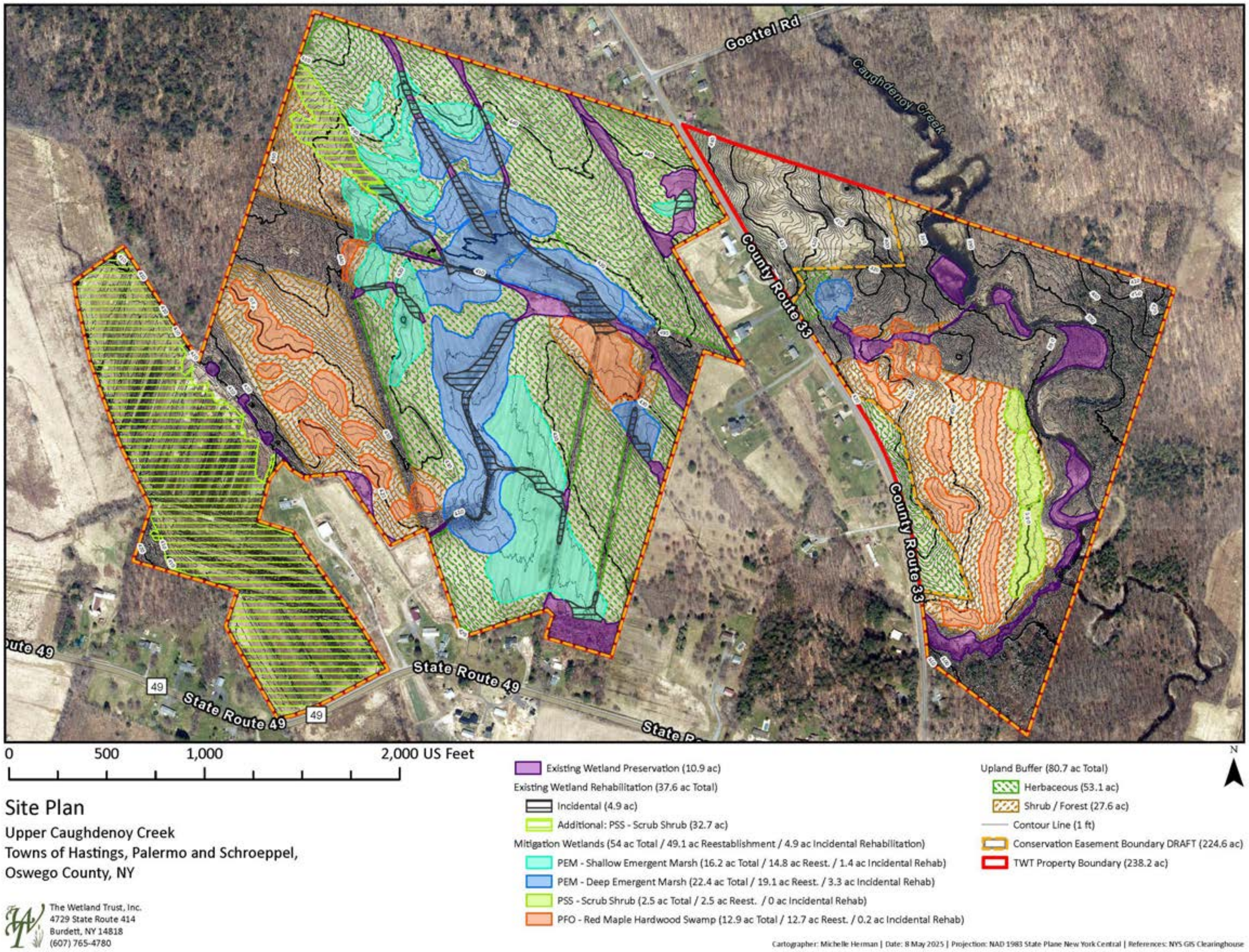
Deep Emergent Marsh

- Often placed so they are visible to the public
- Prioritized for building within grassland areas
- Mineral soils or fine-grained organic soils
- Substrate is flooded by waters that are not subject to violent wave action

Shallow Emergent Marsh

- Often placed so they are visible to the public
- Prioritized for building within grasslands
- Occurs on mineral soil or deep muck soils (rather than true peat)
- Permanently saturated and seasonally flooded

Figure 5-1. Upper Caughdenoy Creek Site Plan



Shrub Swamp

- Often occurs along the shore a lake, river, or stream
- In wet depressions or valleys not associated with lakes, or as a transition zone between a marsh, fen, or bog and a swamp or upland community
- Substrate is usually mineral soil or muck

Equipment operators will include local construction and farming personnel, including those currently farming the sites, and TWT staff. The on-site experience of farming and local knowledge of the operators will maximize productivity and work quality. Prior to construction, work areas will be mowed and/or crops harvested to increase visibility. One or more parking/staging areas for heavy equipment and vehicles will be designated as necessary, avoiding any identified wetlands or aquatic resources. TWT staff will be onsite every day to direct and oversee construction. No tree removal is planned. Should any tree removal be necessary, it will only occur after November 1st.

5.1 Invasive Vegetation Control

Prior to the initiation of earthwork, invasive vegetative species will be controlled following strategies outlined in the Invasive Species Monitoring Plan (ISMP, **Appendix E**). This Upper Caughenoy Creek ISMP details the target species, timing, and control methods. Methods may include mechanical removal, such as hand-pulling or mowing and chemical treatments using targeted herbicides. These actions will occur during the appropriate season of the target species to maximize effectiveness. Invasive species control will avoid soil disturbance, reduce seed dispersal, and limit impacts on local resources. All treated areas will be monitored to ensure the effectiveness of the control measures, and follow-up treatments will be applied as necessary.

5.2 Grading Plan

Basin and berm construction

A shallow basin will be shaped for each designed wetland. The basins will measure 10 feet in diameter to over 200-feet in diameter based on location characteristics and targeted cover type. The basin is dug so that it is deepest in the center in relation to the low edge of the marked perimeter. Basins will range in depth from 1-inch to 36-inches, based on targeted cover type. Refer to **Figures 5-4 and 5-5** for plan view details. Small, earthen berms around the lower two-thirds of the wetland basin will be constructed from 1.0 to 2.0 feet high at a minimum width of 3-feet wide and gradual 5 percent slopes. Core trenches filled with compacted clay layers will be constructed under the berms to disable the buried drainage structures. See **Figures 5-2 and 5-3** for a typical section and plan view.

An excavator and dozer will be used to shape gradual slopes and bays along the inside edge of the constructed wetland for a natural look and function. Elevations are verified during construction using a laser level. Topsoil will be temporarily stored on site and spread in and around the finished wetland basin. Spoil material removed is shaped with gradual slopes so that it appears like natural hummock/hollow and ridges. Operators will aim to create wetlands on top of clay texture spoil material by leveling areas of spread soil and creating shallow basins in the soil.

Figure 5-2. Restored Wetland Section View

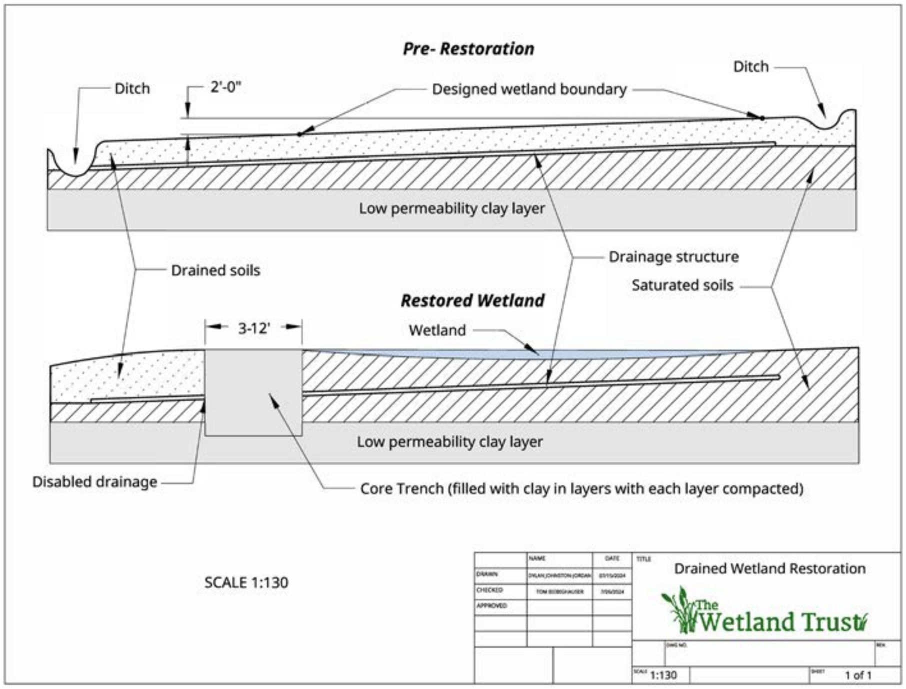


Figure 5-3. Restored Wetland Plan View

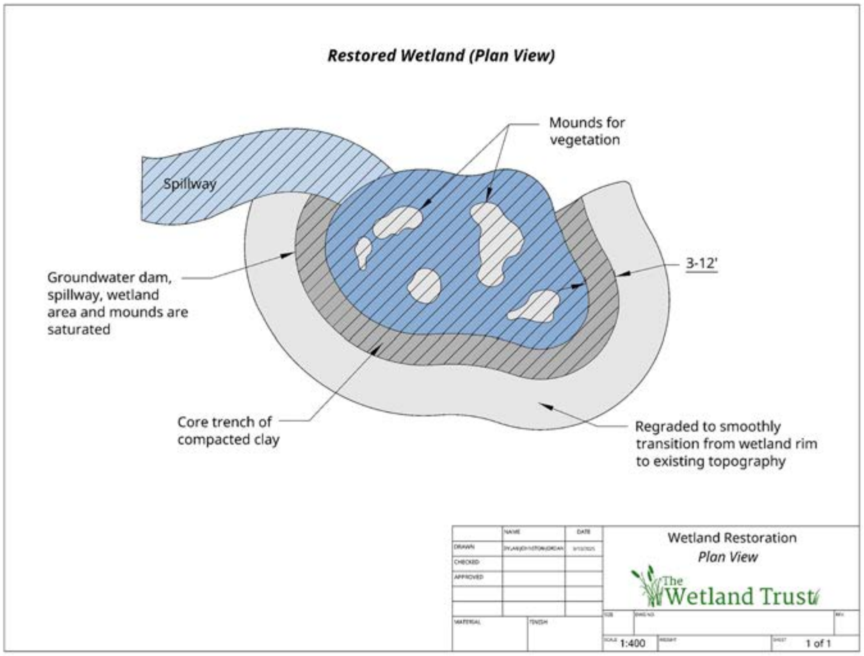


Figure 5-4. Wetland Grading Plan- East

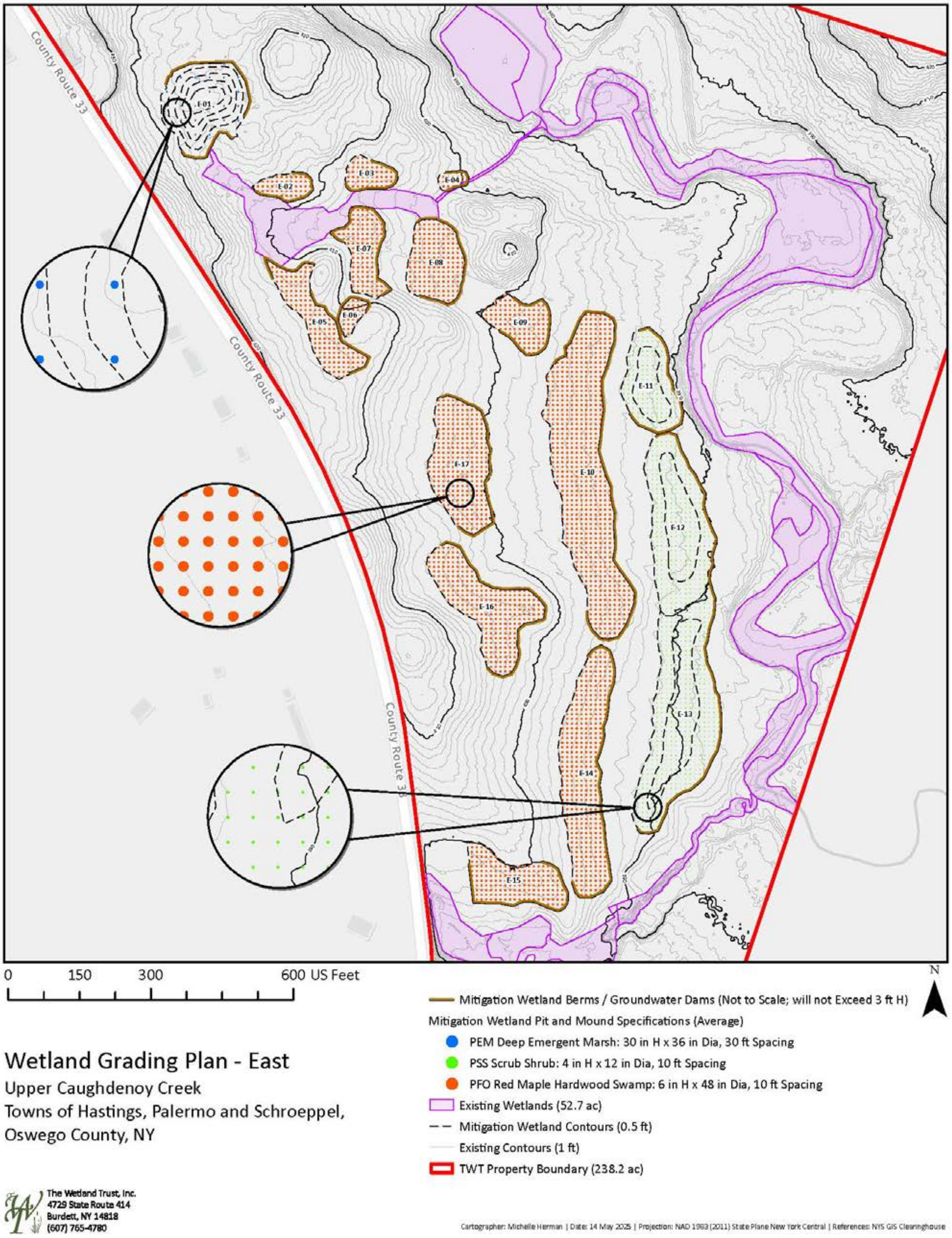
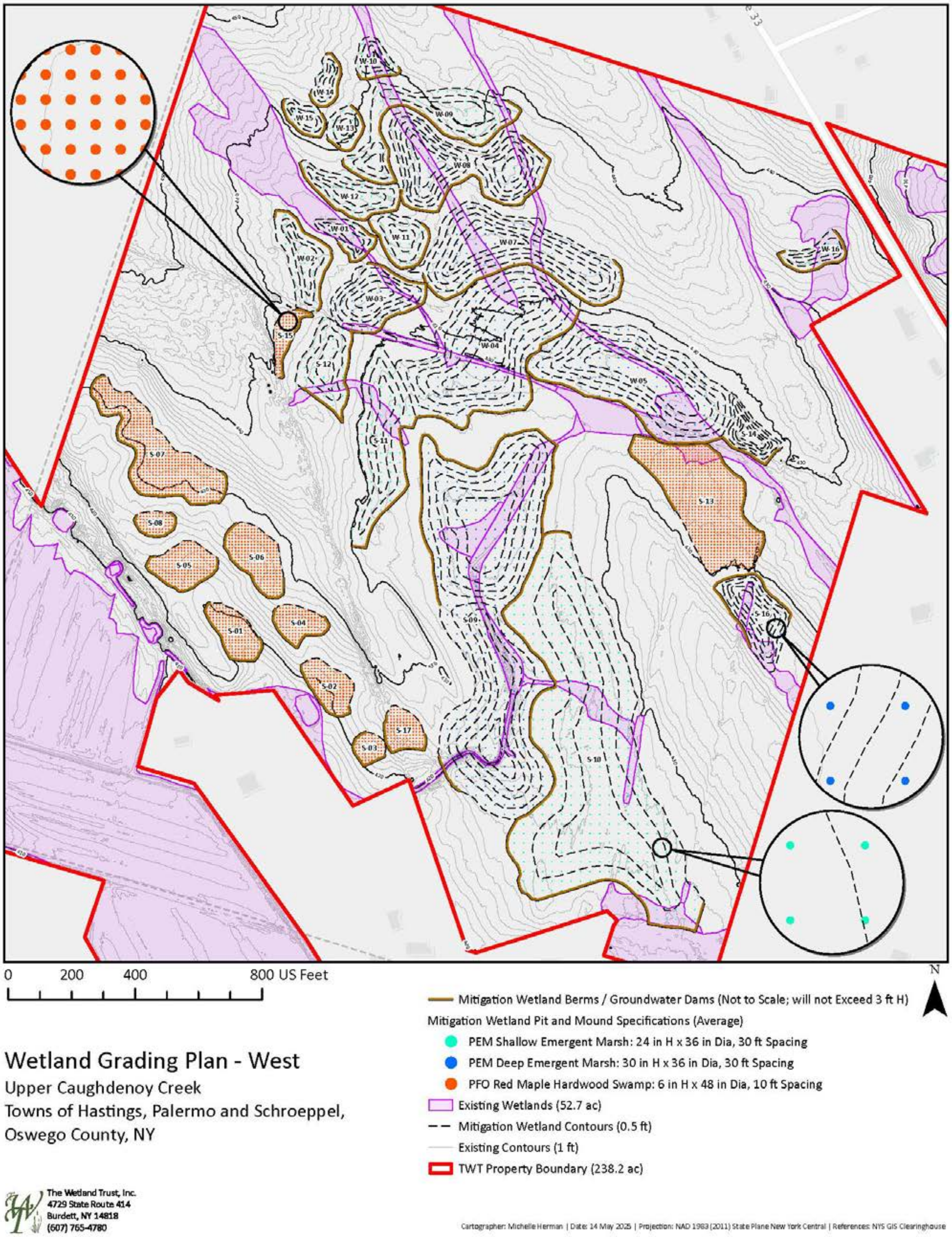


Figure 5-5. Wetland Grading Plan- West



Microtopography restoration

Pit and mound microtopography will be created within each wetland basin, with average specifications depending on the desired wetland type (**Table 5-1**). Emergent basins will generally have the deepest pits, i.e. maximum water depth (approximately 36 inches), and higher and larger mounds (24-30 inches high and 36 inches in diameter) that are spaced farther apart (30 feet) relative to all other wetland types. The remaining PSS and PFO wetland types will have 10-foot-spaced mounds ranging from 4-12 inches high and 12-48 inches in diameter set within 1-6 inches of water. The soil in these features will not be compacted so it can be expected to settle by 50-percent. Typical cross sections for emergent, scrub-shrub, and forested cover types are depicted in **Figures 5-6 to 5-8**.

Table 5-1. Upper Caughdenoy Creek Grading for Wetland Types

Wetland Type	Maximum wetland basin depth (in)	Average individual mound height (in)*	Average mound diameter (in)	Mound Spacing (ft)	Mound Density/acre
PEM – Shallow Emergent Marsh	24	24	36	30	80
PEM – Deep Emergent Marsh	36	30	36	30	40
PFO – Red Maple Hardwood Swamp	1	6	48	10	200
PSS – Scrub-shrub	6	4	12	10	400

*soil is kept uncompacted and will settle by up to 50%

Figure 5-6. Restored Emergent Wetland

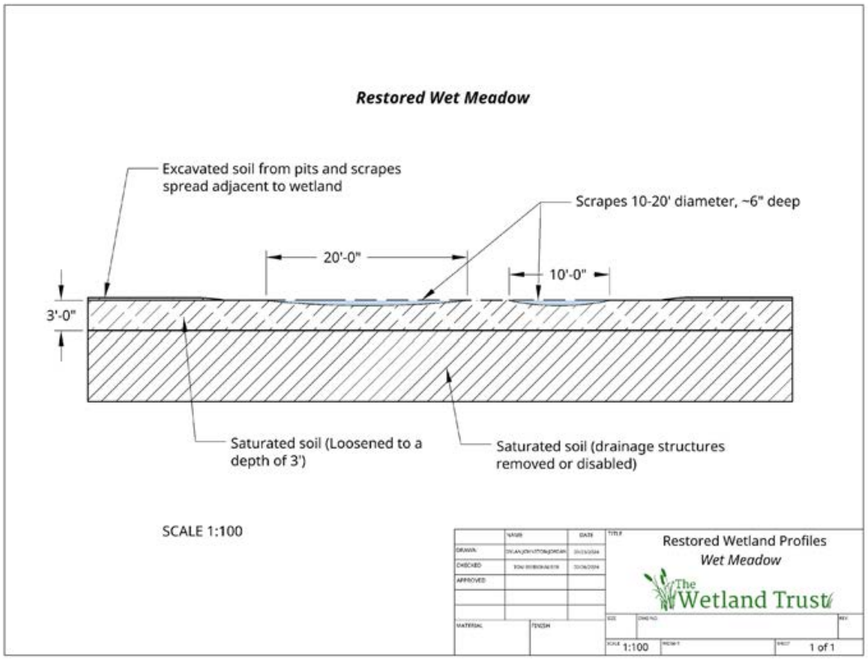


Figure 5-7. Restored Scrub-Shrub Wetland

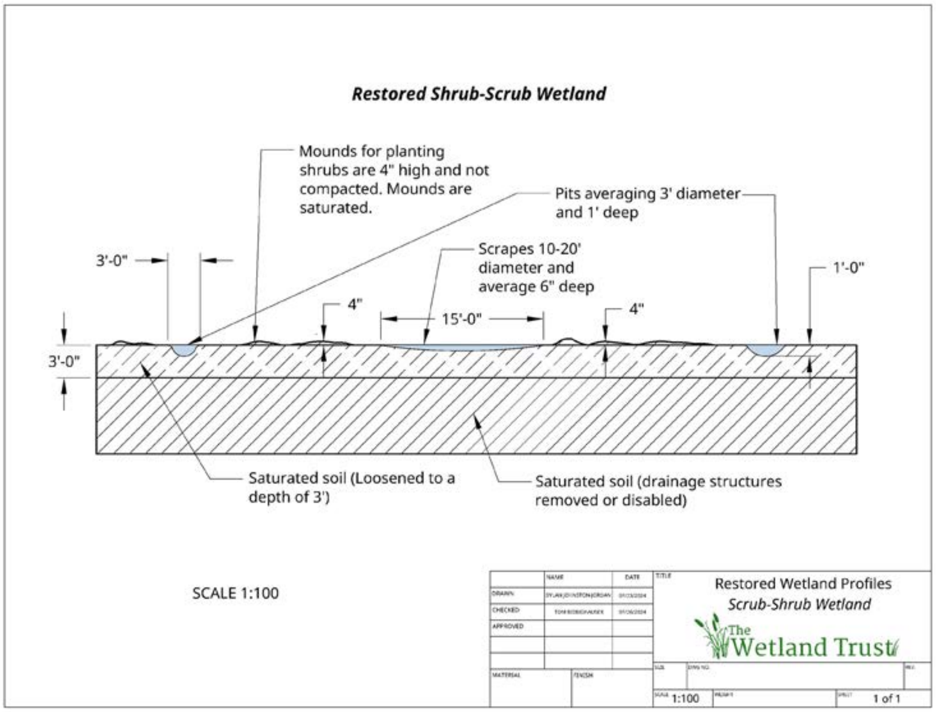
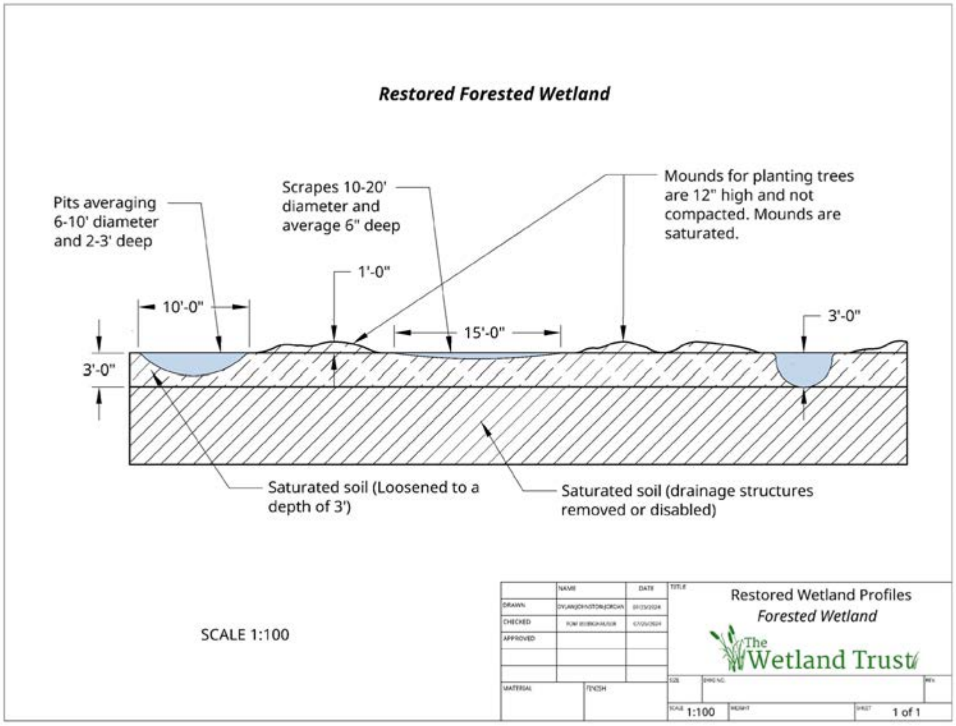
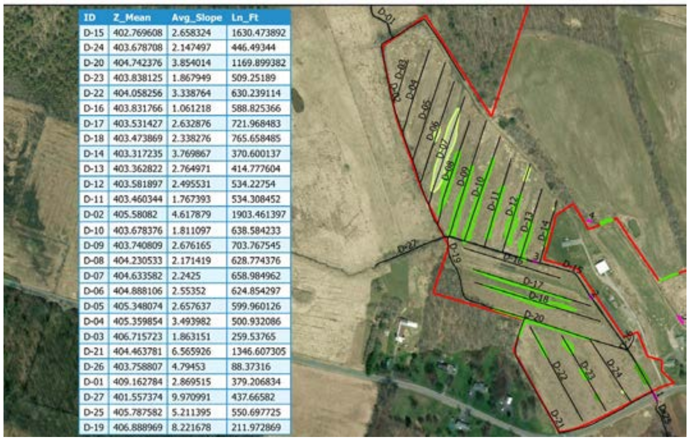


Figure 5-8. Restored Forested Wetland



5.3 Rehabilitation/Restoration of Existing Wetlands

Aside from the incidental rehabilitation (where existing wetlands overlap with designed wetland polygons), additional areas of targeted rehabilitation will occur. The main area, PFO-18, or the muck farm on the westernmost portion, is severely hydrologically altered with over 27 drainage channels with over 17,200 feet. This also includes the channelization of over 2,000 feet of unnamed creek. Current vegetation is dominated by invasive species such as reed canary grass (*Phalaris arundinacea*), purple loosestrife (*Lythrum salicaria*), common reed (*Phalaris arundinacea*), and cattail species (*Typha spp.*). Rehabilitation methods include:



ID	Z_Mean	Avg_Slope	Ln_Ft
D-15	402.769608	2.658324	1630.473892
D-24	403.678708	2.147497	446.49344
D-20	404.742376	3.854014	1169.899382
D-23	403.838125	1.867949	509.25189
D-22	404.058256	3.338764	630.239114
D-16	403.831766	1.061218	588.825366
D-17	403.531427	2.632876	721.968483
D-18	403.473869	2.338276	765.658485
D-14	403.317235	3.769867	370.600137
D-13	403.362822	2.764971	414.777604
D-12	403.581897	2.495531	534.22754
D-11	403.460344	1.767393	534.308452
D-02	405.58082	4.617879	1903.461397
D-10	403.678376	1.811097	638.584233
D-09	403.740809	2.676165	703.767545
D-08	404.230533	2.171419	628.774376
D-07	404.633582	2.2425	658.984962
D-06	404.888106	2.55352	624.854297
D-05	405.348074	2.657637	599.960126
D-04	405.359854	3.493982	500.932086
D-03	406.715723	1.863151	259.53765
D-21	404.463781	6.565926	1346.607305
D-26	403.758807	4.79453	88.37316
D-01	409.162784	2.869515	379.206834
D-27	401.557374	9.970991	437.66582
D-25	405.787582	5.211395	550.697725
D-19	406.888969	8.221678	211.972869

- Hydrology- Restore the 17,211 feet of drainage infrastructure using selective ditch plugs and filling ditches with adjacent materials graded to establish shallow to deep emergent wetland areas as part of/and adjacent to these drainages (30 percent of total area). Low-ground pressure equipment will be utilized for construction.

- Vegetation- Control invasive species including manually and/or chemically removing the species for 3-5 years with yearly adaptations. Native herbaceous and woody plants will be installed once invasives have been controlled. Supplemental planting will likely require additional plantings over multiple years.

5.4 Buffer Establishment

Upland buffers will be established surrounding all re-established, restored, or rehabilitated wetland areas to enhance habitat quality, protect water quality, and improve ecological function. Where buffers surround re-established palustrine emergent (PEM) wetlands, they will be planted with native herbaceous upland species to maintain open habitat structure and provide transitional zones that support pollinators and other wildlife. In areas adjacent to re-established palustrine scrub-shrub (PSS), palustrine forested (PFO) wetlands, or restored stream channels, upland buffers will be planted with native shrub and tree species to create structurally diverse, forested buffer zones. These plantings will promote shading, nutrient uptake, and habitat connectivity.

5.5 Planting Plan

The desired wetland plant community will be established through broadcasting high-quality, native seeds and planting trees and shrubs as per the planting plan in **Table 5-2a-e** below. The objective is to re-establish and rehabilitate high-quality emergent, shrub, and forested wetlands of select communities to replace the lost functions at the Micron Site.

Species proposed are based on many factors including commercial availability, typical species present in similar/local plant communities, species present at the impact site and Mitigation site, species establishment considerations (e.g. rhizomatous), etc. The species listed are not intended to be exclusive and may be supplemented or changed with ecologically similar species.

Spacing is a general recommendation and will be random and not grid like. Site conditions and topographic features will be utilized in plant placements, such as black willow (*Salix nigra*) along riparian features. TWT staff will coordinate and provide guidance to the planting crew prior to the start of work and will be on-site during operations. Pre-staking of planting locations, used to facilitate instruction to planting staff, will be completed as necessary.

The site will also be seeded and planted to increase the likelihood of successfully establishing target species/quantities and to minimize the opportunity for invasive species to become established. Seeding shown are targeted to supplement plantings and will be further customized with distributor based on site factors and seed/plant material availability. The distributor has confirmed that all mixes can be customized as necessary.

Table 5-2a. PEM- Shallow Emergent Marsh Planting List

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Planting Rate
Swamp Milkweed	*Asclepias incarnata*	OBL	6	15-20 pounds/acre
Longhair Sedge	*Carex comosa*	OBL	5	
Fringed Sedge	*Carex crinita*	OBL	5	
Bottlebrush Sedge	*Carex hystericina*	OBL	4	
Shallow Sedge	*Carex lurida*	OBL	3	
Pointed Broom Sedge	*Carex scoparia*	FACW	2	
Upright Sedge	*Carex stricta*	OBL	6	
Hairy-fruited sedge	*Carex trichocarpa*	OBL	5	
Fox Sedge	*Carex vulpinoidea*	FACW	3	
White Turtlehead	*Chelone glabra*	OBL	7	
Swamp Loosestrife	*Decodon verticillatus*	OBL	8	
Three-way Sedge	*Dulichium arundinaceum*	OBL	5	
Common Spikerush	*Eleocharis palustris*	OBL	4	
Riverbank Wildrye	*Elymus riparius*	FACW	5	
Virginia Wildrye	*Elymus virginicus*	FACW	4	
Joe-Pye Weed	*Eupatorium fistulosum*	OBL	6	
Boneset	*Eupatorium perfoliatum*	FACW	4	
Spotted Touch-me-not	*Impatiens capensis*	FACW	2	
Pale Touch-me-not	*Impatiens pallida*	FACW	3	
Northern Blue Flag	*Iris versicolor*	OBL	7	
Canada Rush	*Juncus canadensis*	OBL	5	
Soft Rush	*Juncus effusus*	OBL	3	

Cardinal Flower	*Lobelia cardinalis*	FACW	7	
Great Blue Lobelia	*Lobelia siphilitica*	FACW	6	
Square-stemmed Monkey Flower	*Mimulus ringens*	OBL	5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	
Lizard's Tail	*Saururus cernuus*	OBL	7	
Purple-Stemmed Aster	*Symphyotrichum puniceum*	OBL	4	
Marsh Fern	*Thelypteris palustris*	FACW	4	
Blue Vervain	*Verbena hastata*	FACW	3	

Table 5-2b. Deep Emergent Marsh

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Gray’s Sedge	*Carex grayi*	FACW	5	15-20 pounds/acre
Cartex lacustris	*Carex lacustris*	OBL	5	
Royal Fern	*Osmunda regalis*	OBL	7	
Green Bulrush	*Scirpus atrovirens*	FACW	4	
Woolgrass	*Scirpus cyperinus*	FACW	3	
River Bulrush	*Scirpus fluviatilis*	OBL	6	
Water Parsnip	*Sium suave*	OBL	5	
Bur-reed	*Sparganium americanum*	OBL	5	

Table 5-2c. Scrub Shrub

Common Name	Scientific Name	Wetland Indicator	CoC	Planting/Spacing Rate
Smooth alder	*Alnus serrulata*	OBL	7	400/acre Shrub clusters Trees 10-25 feet apart
Coastal shadbush	*Amelanchier canadensis*	FAC	7	
Chokeberry	*Aronia melanocarpa*	FACW	6	
Purple chokeberry	*Aronia prunifolia*	FACW	7	
Buttonbush	*Cephalanthus occidentalis*	OBL	8	
Silky dogwood	*Cornus amomum*	FACW	5	
Gray dogwood	*Cornus racemosa*	FAC	2	
Red osier dogwood	*Cornus sericea*	FACW	5	
Common winterberry	*Ilex verticillata*	FACW	7	
Northern spicebush	*Lindera benzoin*	FACW	6	
Ninebark	*Physocarpus opulifolius*	FACW	5	

Swamp rose	*Rosa palustris*	FACW	9	
Bebbs willow	*Salix bebbiana*	FACW	3	
Pussy willow	*Salix discolor*	FACW	4	
Silky willow	*Salix sericea*	OBL	6	
Common elderberry	*Sambucus canadensis*	FACW	3	
Meadow-sweet	*Spiraea alba*	FACW	5	
High bush blueberry	*Vaccinium corymbosum*	FACW	6	
Northern wild raisin	*Viburnum cassinoides*	FACW	7	
Arrow-wood	*Viburnum dentatum*	FAC	4	
Nannyberry	*Viburnum Lentago*	FAC	4	
Highbush cranberry	*Viburnum opulus*	FACW	3	

Table 5-2d. PFO- Red Maple Hardwood Swamp

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Red maple	*Acer rubrum*	FAC	2	400/acre Shrub clusters Trees 10-25 feet apart
Silver maple	*Acer saccharinum*	FACW	6	
Ironwood	*Carpinus caroliniana*	FAC	5	
Bitternut hickory	*Carya cordiformis*	FAC	5	
Blackgum	*Nyssa sylvatica*	FAC	7	
American sycamore	*Platanus occidentalis*	FACW	6	
Eastern cottonwood	*Populus deltoides*	FAC	2	
Swamp white oak	*Quercus bicolor*	FACW	7	
American elm	*Ulmus americana*	FACW	3	
Slippery elm	*Ulmus rubra*	FAC	8	

Table 5-2e. Targeted Rehabilitation Areas

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Red Maple	*Acer rubrum*	FAC	2	400/acre Shrub clusters Trees 10-25 feet apart
Chokeberry	*Aronia melanocarpa*	FACW	6	
Buttonbush	*Cephalanthus occidentalis*	OBL	7	
Silky dogwood	*Cornus amomum*	FACW	4	
Red osier dogwood	*Cornus sericea*	FACW	5	
Spicebush	*Lindera benzoin*	FAC	5	
Black gum	*Nyssa sylvatica*	FAC	5	
Swamp white oak	*Quercus bicolor*	FACW	7	
Bur oak	*Quercus macrocarpa*	FAC	6	
Pin oak	*Quercus palustris*	FACW	7	
Black willow	*Salix nigra*	OBL	2	
Elderberry	*Sambucus canadensis*	FACW	3	

5.5 Timing and Sequence

Micron’s large project size will require a phased approach for construction; and the wetland mitigation effort will follow a similar phased approach consistent with regulatory requirements. See 33 C.F.R. § 332.3(m) “Implementation of the compensatory mitigation project shall be, to the maximum extent practicable, in advance of **or concurrent with the activity causing the authorized impacts**.” The UCC Site will be the fifth site developed which is proposed to begin in the third construction year (**Table 5-3**).

Table 5-3. Mitigation Site Sequence

Site Name	2025	2026	2027	2028	2029	2030	2031 ~	∞ In Perpetuity
Buxton Creek Stream and Wetlands		**Construction begins**						
Oneida River Wetlands		**Construction begins**						
Lower Caughdenoy Creek Wetlands		**Construction begins**						
Fish Creek Stream and Wetlands			**Construction begins**					
Upper Caughdenoy Creek Wetlands				**Construction begins**	**Monitoring, maintenance, and adaptive management after construction for a 15-year period* after approved as-built (not to scale)**			**Permanent stewardship begins after monitoring period ends, pending agency approval**
Sixmile Creek Wetlands					**Construction begins**			

The construction sequence at UCC follows that shown in **Table 5-4**. The site will be constructed in approximately one year with the following spring dedicated to planting that will initiate the monitoring and maintenance window to meet success criteria. Planting in the fall may occur if it is advantageous to plant establishment.

The mitigation work plan at UCC will be phased in several steps. The treatment of existing invasive vegetation will begin as early as possible to minimize spread to work areas once agricultural activities cease and the wetlands are constructed. Seeding and planting will be completed after all grading is complete.

Table 5-4. Construction Sequence

Activity	Timing	Phase
Invasive species management.	Spring Year 1*	Pre-construction
Work area layout and preparation, SWPPP implementation.	Spring Year 1	Pre-construction
Groundwater dam installation, basin excavation, pond and ditch filling. Erosion control seeding.	Summer Year 1	Construction Phase I: Earthwork
Final grading to develop microtopography, loosening of soil as necessary.	Summer Year 1	Construction Phase II: Topography Enhancement

Seeding, planting, and mulching per planting plan and SWPPP, placement of woody debris for a natural look	Fall Year 1	Construction Phase III: Seeding & Planting
Removal of all construction materials and general site clean-up. Erosion and sediment control structures (silt fencing) will be removed once site is stabilized.	Fall Year 1	Post-construction
*invasive species management will likely begin prior to this time with repeat treatments		

5.6 Sediment and erosion control measures

All erosion and sediment control practices will be installed as specified by the Stormwater Pollution Prevention Plan (SWPPP, **Appendix H**) prior to any ground disturbance. The limit of disturbance and spoil deposition areas will be clearly marked to ensure ground disturbances are minimized. Temporary erosion and sedimentation control measures in and around mitigation sites will receive consistent and constant inspection and maintenance by qualified personnel. Spoil and sediment collected will be removed and placed upland in a manner that prevents erosion and transportation of sediment to a waterway or wetland. All erosion and sediment control devices and structures will be removed once full stabilization is achieved and no later than three full growing seasons after the planting of the mitigation site.

6. Performance Standards

Success within the mitigation sites is based on wetland acreage meeting the USACE criteria for the three parameters described in the 1987 Corps of Engineers Wetland Delineation Manual and 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, or any amendments thereto. Mitigation success will also depend on the establishment of wetland community types that replace in form and function the impacted wetlands. Credits generated are determined by acreage meeting the following parameters, in addition to the final vegetative goals:

- Hydrology: the wetland area is inundated, or the water table is ≤12 inches below the soil surface for ≥14 consecutive days during the growing season at a minimum frequency of 5 years in 10. Any combination of inundation or shallow water table is acceptable in meeting the 14-day minimum requirement. For wetland re-establishment areas, deepwater aquatic habitats and/or vegetated shallows will only be credited where they equal 10% or less of the re-establishment areas on the site and are part of a well-integrated complex. Vegetated shallows and/or deep-water habitats over 0.1 acre in size will be mapped in each monitoring report/delineation. It is not anticipated that any such aquatic habitats will develop at the site.
- Vegetation: the wetland area demonstrates a relative dominance of Facultative (FAC) or wetter plant coverage, meeting one or more USACE Wetland Determination Data Form Hydrophytic Vegetation Indicators.
- Soils: the wetland area contains soil profiles that demonstrate one or more USACE Wetland Determination Data Form Hydric Soil Indicators.

By the end of the 15-year monitoring period, the site shall meet or exceed the following vegetative performance standards (see also **Table 6-1**):

- **Palustrine Emergent Wetland (PEM):** The areas meeting palustrine emergent wetland criteria will have ninety percent (90%) relative cover of wetland work areas by native hydrophytes (FAC, FACW, or OBL). Monitoring will be conducted yearly with interim targets of 20% relative cover after the first full year after planting, 40% by Year 3, 60% by Year 5, and 80% by Year 7, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met. Final performance standards met at 10 years.

  Deep emergent and shallow emergent marsh (Edinger et al. 2014) are the targeted cover types for PEM areas.
  - Shallow marshes will be 6 inches to 3 feet deep with exposed soils in the summer and very variable in species.
  - Deep emergent marshes will be 6 inches to 6 feet deep, less likely to have exposed soils, and very variable in species, with species more likely to be submerged or floating.
- **Palustrine Scrub Shrub (PSS)**: The areas meeting palustrine scrub shrub criteria will have at least 400 native shrubs/trees per acre, and those stems will display normal and healthy growth, free of disease and pests. At least 280 of those stems will be native shrub species. Stem density monitoring will be conducted biannually, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.
- **Palustrine Forest (PFO)**: The areas meeting palustrine forest criteria will have a minimum of 400 native, live, and healthy (disease- and pest-free) woody plants growing per acre. At least 280 of these will be native tree species. Stem density monitoring will be conducted biannually for a period of 15 years, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.

  Because tree height is an important factor in reducing long-term herbivory and ensuring overall success, monitoring will also occur for a period of 15 years, with average tree height targets within planting areas at 2 ft. by the 3rd year of vegetation growth, 3 ft. by the 5th year of vegetation growth, 4 ft. by the 7th year of vegetation growth, 6 ft. by the 10th year of vegetation growth, 8 ft by the 12th year, and 9 ft by the 15th year. The wetland forest types targeted are:
  - Floodplain Forest, will be planted adjacent to streams
  - Red-maple hardwood swamp- can be characterized by being seasonally flooded with hummocks and hollows, and red maple will most likely be the dominant canopy tree. Although ash may be abundant, those species are no longer planted.
- **Invasive Species**

  - Wetland acreage will have a final target of less than 5% relative cover of all non-Typha invasive plant species such as, but not limited to: purple loosestrife, common reed, and reed canarygrass. Interim targets will be 15% the first year following planting, 15% by Year 3, 12.5% by Year 5 and 10% by Year 7.
  - Due to the difficulty of distinguishing the three species of cattails, as well as the likelihood that at least one of these will be present in many types of New York wetlands, the total relative cover of all invasive species, including cattails, will be less than 10%. Interim targets will be 20% the first year following planting, 18.5% by Year 3, 15% by Year 5 and 12.5% by Year 7.
- **VIBI:** The vegetation index of biotic integrity "floristic quality" (VIBI-FQ) of the rehabilitated and re-established wetlands will be equal to or greater than 40 by the end of the monitoring period. Final scores will be dependent on baseline VIBI scores and will have a minimum of 10-point increase. VIBI plots will be placed in each cover type for re-establishment and rehabilitation. Interim targets will aim for a score of 15 or more by the first year following planting, ≥20 by Year 3, ≥30 by Year 5, and ≥35 by Year 7.

Table 6-1. Wetland Performance Standards and Interim Goals

Performance Standard	Interim and Final Goals						
	Year 1[1]	Year 3	Year 5	Year 7	Year 10[2]	Year 12	Year 15[3]
Relative cover by native perennial hydrophytes (FAC or wetter)	20%	40%	60%	80%	90%		
Stem density in PSS areas (per acre, at least 280 must be shrub species)	400	400	400	400	400		
Stem density in PFO areas (per acre, at least 280 must be tree species)	400	400	400	400	400	400	400
Tree height in PFO areas	1 ft	2 ft	3 ft	4 ft	6.6 ft	8ft	9ft
Relative cover of all non-Typha invasive plant species in PEM, PSS, and PFO areas	15%	15%	12.5%	10%	5%		
Total relative cover of all invasive species, including Typha spp. in PEM, PSS, and PFO areas	20%	18.5%	15%	12.5%	10%		
VIBI-FQ score	≥15	≥20	≥30	≥35	≥40		

1. First full growing season following planting
2. Final herbaceous/PEM and PSS goals to be met at this time or additional monitoring years added
3. Final PFO (tree height and density) goals to be met at this time

7. Monitoring Requirements

There will be an initial post-construction "as-built" plan sheet of constructed features with 1' contours, map/descriptions of planted materials, wetland delineation by wetland cover type (PEM, PSS, PFO) and other habitat types e.g. tributaries, ditches, vegetated shallows, deepwater, estimates of invasive plant species cover within the re-establishment areas, and other information relevant for monitoring comparison.

Site monitoring begins after construction is completed and continues for ten (10) years unless additional monitoring is required to demonstrate achievement of performance standards. Monitoring information collected will determine if performance standards are being met and inform maintenance tasks or adaptive management needed to help meet those standards.

Each monitoring report will include:

- <u>Work completed, as-builts, and milestones</u>
    - Evaluation of progress toward all performance goals (i.e. Section 6) as appropriate.
    - Report on the status of all erosion control measures on the mitigation site, and any additional temporary measures needed.
    - Weekly mapping of all work completed.
- <u>Hydrological reporting</u>
    - Hydrology data collected from permanent water wells, as well as hydrology information derived from Wetland Determination Data Forms completed throughout the site.
    - Maps showing the location and extent of wetland cover types (PEM, PSS, PFO) and other habitat types (e.g., tributaries, ditches, vegetated shallows, deepwater), locations of monitoring wells, staff gauges, and precipitation gauges.
    - Vegetated shallows and/or deep-water habitats >0.1 acre in size will be mapped and reported.
- <u>Vegetation reporting</u>
    - Description of the general plant health, vigor, and mortality including a prognosis for future survival with qualitative descriptions and photos illustrating tree growth.
    - Relative cover, stem density, and tree height reporting with descriptions of the monitoring protocols used.
    - VIBI scores and data sheets for wetland rehabilitation areas.
- <u>Wildlife reporting</u>
    - List of wildlife observed and other salient biological occurrences.
- <u>Invasive species reporting</u>
    - Relative cover of invasive species with descriptions of the monitoring protocols used.
    - Any areas >0.1 acre that are dominated by invasives will be mapped with acreages.
- <u>Corrective actions proposed/implemented</u>
    - Description of remedial actions completed during the monitoring year. Any measures requiring additional soil manipulation or changes in hydrology, all of which will be undertaken only after written approval from NYSDEC and USACE Buffalo District.
- <u>Other</u>
    - Photographs at permanent photo points.

7.1 Reporting schedule

After an initial Post-Construction As-Built Report, monitoring reports will be submitted by December 31st of the monitoring year to describe conditions in the growing season. All reports in digital format will be submitted to USACE, Regulatory Branch, Auburn Office and NYSDEC, Region 7 Headquarters in Syracuse, with any hard copies provided upon request. All monitoring, reporting, requests, and adaptive management is the responsibility of the permittee, Micron, with implementation by TWT.

Table 10-1. Anticipated Reporting Schedule

Activity	**Years Post Construction**															
Wetland	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Wetland and aquatic resources delineation		X		X		X		X		X	X					
Hydrologic monitoring	*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Vegetation: native and invasive relative cover		X	X	X	X	X	X	X	X	X	X					
Vegetation: woody stem density and tree height		X		X		X		X			X		X			X
Vegetation: VIBI-FQ		X		X		X		X		X	X					
Photo sequence		X		X		X		X			X					
Detailed site mapping		X	X	X	X	X	X	X	X	X		X		X		X
Reports	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
As-built report	X															
Monitoring & management report		X	X	X	X	X		X		X		X		X		X

*Location of wells and gauges will be detailed in the as-built report

If construction takes more than one growing season to be completed, an interim construction report will be submitted and will describe completed tasks and those remaining. The monitoring timeline will begin following the completion of construction and planting activities described herein.

8. Maintenance Plan

Periodic maintenance activities will be expected to occur following initial construction and planting to ensure long-term viability of the restored and protected resources on the project sites. Below are descriptions outlining the projected maintenance activities during the monitoring period. Any maintenance activities undertaken will be documented in the appropriate monitoring report along with a discussion of any anticipated maintenance to be completed in future years. Significant adjustments such as earthwork will require USACE and DEC approval.

8.1 Hydrology Maintenance

Immediately following construction and throughout the 10-year monitoring period, TWT will monitor the development of site hydrology to ensure that adequate and anticipated hydrology has been restored. It is understood that wetland hydrology may take time to develop, sometimes years, and the desired hydrology or hydric soils may not be achieved until later in the monitoring period. Factors that could negatively impact the intended hydrology include erosion of spillways, failed ditch plugs, compromised groundwater dams, unidentified drainage tiles, and wildlife activity (i.e. beaver and muskrats). If hydrology standards are not being met, TWT will determine if more time is needed for development or make the appropriate adjustments as soon as practicable, preferably before vegetation establishment to minimize disturbance. Possible maintenance actions addressing hydrology issues include:

- Reinforcing spillways with rock or installing other vertical grade control structures,
- Adjusting height/depth of ditch fill or groundwater dams,
- Additional drain tile searches,
- Trapping and/or relocating nuisance wildlife.

8.2 Vegetation Maintenance

The development of a healthy and diverse native vegetative community is crucial for the success of this wetland restoration project, therefore, TWT will closely monitor vegetative establishment following initial planting/seeding and throughout the 10-year monitoring period. Regular maintenance is intended to ensure the health and survival of native woody plants and herbaceous species, to limit the establishment and spread of invasive plant species, and to keep performance standard progress on track. Maintenance actions for vegetative community health include:

- Herbivory prevention- Whitetail deer are a major threat to plant diversity (Blossey et al. 2024). TWT, to the degree practical, will install deer fence along the entirety of the wetland compensation areas with commercial grade 8 ft deer fence. The fence will stay on site for the project duration. To ensure other wildlife's free passage, the fence bottom will be raised to allow small mammals and herpetofauna to pass (about 6 inches),
- Tree and shrub maintenance to combat disease, herbivory, or competition from other plants,
- Supplemental planting/seeding of native trees, shrubs, or herbaceous vegetation,
- Managing invasive species as needed through mechanical or chemical control using aquatic-safe herbicides by a licensed applicator.

8.3 General Site Maintenance

General site maintenance is anticipated to occur regularly throughout the 10-year monitoring period and beyond. As the fee-simple owner of the site, TWT bears responsibility for all non-ecological maintenance tasks, including but not limited to fence and gate upkeep, structural maintenance where applicable, signage installation, monitoring for vandalism, and maintaining trail/security cameras if deemed necessary.

9. Long Term Management Plan

The purpose of the Long-Term Management Plan (LTMP) is to ensure the long-term sustainability of the protected and restored resources after mitigation performance standards have been achieved. The LTMP has been included in **Appendix I**. As the site develops and matures, the LTMP will be amended as needed to include relevant information. After the monitoring period has ended, TWT will prepare a final LTMP to be submitted with the project's final monitoring report that will be reviewed and approved by the USACE. The final LTMP will address the site-specific future needs of the project based upon conditions at the time of the active period closeout.

9.1 Responsible Party

Micron is the Responsible Party for all phases of this permittee responsible mitigation through monitoring and final acceptance when a Certificate of Completion (or an equivalent) will be provided by the agencies. Once the mitigation is complete Micron will transfer long-term management to TWT.

9.2 Long-Term Monitoring and Management Activities

The LTMP includes the anticipated long-term monitoring and management activities and their estimated costs. These activities will be adjusted as needed throughout and after the active ecological monitoring period.

9.3 Long-Term Funding Mechanism

TWT has a director-controlled Stewardship Management Investment Account specifically established for Micron mitigation projects. This account's investment income will come from investment instruments that are low-risk and broad-based, (e.g., TWT may use 30-year Treasury Bonds) to support permanent long-term management and maintenance as described in the final LTMP. The entirety of the account will be funded before implementation starts at $8,000/credit (or per DEC restoration/creation acre) for the wetland compensation and $60/ft for stream compensation. The funding level designed in the Long-Term Management Budget in the LTMP is sufficient to sustain the long-term management of all of Micron's wetland and stream compensation. This fund will also have a clause in TWT's Bylaws that provides for its transfer along with the Micron lands to another NGO should that issue arise.

10. Adaptive Management Plan

Beyond the anticipated maintenance needs detailed in Section 8, preparedness for unexpected changes in site conditions is imperative to the continued success of the project. This adaptive management strategy outlines the approach for addressing potential challenges and unexpected changes, including those related to fire, climate change, disease, and other factors. Continuous monitoring to inform the adaptation of management strategies will ensure that the protected and restored resources remain resilient and meet long-term conservation goals. Potential challenges warranting adaptive management include:

- **Fire**: The effects of a significant fire event can lead to negative impacts on a young, re-established wetland. Fire can scorch and kill newly planted or immature vegetation, particularly woody species like trees and shrubs. The loss of vegetative cover can lead to increased soil erosion resulting in potential sedimentation issues to connected water bodies. Fire can create favorable conditions for invasive species as well as affect soil structure and permeability thereby altering hydrology. In the event of a significant fire event, TWT will address the loss of plants, erosion, and any other impacts and determine the appropriate adaptive management approach such as replanting, stabilizing soils, and/or monitoring water quality to facilitate recovery.
- **Climate change**: Changes in precipitation and temperatures associated with climate change can significantly affect wetland mitigation sites through a variety of mechanisms, impacting the hydrology, vegetation, wildlife, and overall ecological functions. To adaptively manage the impacts of climate change on wetland mitigation sites, TWT can implement strategies such as altered water management practices and management of vegetative communities with an emphasis on native species resilient to climate variability and extremes.
- **Disease**: Unforeseen damage to wildlife, vegetation, and ecosystem services is possible via disease or pests. Pathogen spread or a pest invasion can decrease plant diversity and biomass, disrupting the wetland’s structural integrity and the success of mitigation performance standards. Monitoring and early detection will be key to assessing such an event and implementing adaptive management strategies such as replanting (i.e. with hardier, disease-resistant species), sanitation processes and controlling the spread.
- **Flood**: Though wetlands aid in flood attenuation, a significant flooding event can have negative effects on a young wetland mitigation project. High energy floodwaters can cause soil erosion and sedimentation, leading to the damage of plant roots and flooding of vegetation. Ditch plugs or groundwater dams/low earthen berms that were installed during construction may fail or breach under serious flooding events. In such an event, TWT will determine the appropriate adaptive management action including replanting of the site, soil stabilization, or re-construction of ditch plugs and groundwater dams.

11. Financial Assurances

The short-term financial assurances for this compensatory mitigation plan will include individual performance bonds for each mitigation site to ensure compliance with permit requirements and project success. Experienced insurance brokers with the Great American Insurance Group will assist in preparing these financial assurances by providing guidance on structuring the performance bonds and ensuring they meet regulatory expectations. This approach ensures that each mitigation site is financially secured independently, providing clear accountability and reducing risk for both regulatory agencies and stakeholders.

12. References

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Appendix A.

CONSERVATION EASEMENT

On lands of The Wetland Trust, Inc.

557 County Route 33, Town of Hastings,

Palermo, Schroeppel, Oswego County, NY

covering a 224.3-acre portion of

Tax Parcels 257.-2-05.02, 257.00-02-22, 257.00-02-15.111, 257.000-02-17, 257.00-02-17.02 and 257.00-03-01

THIS DECLARATION OF CONSERVATION EASEMENT is made as of the _____ day of ________202_, by The Wetland Trust, Inc. (the "Grantor"), a New York not-for-profit with offices at 4729 State Route 414, Burdett, NY 14818, for the benefit of, but not the burden upon, The Wetland Conservancy, Inc. (the "Holder"), a New York not-for-profit entity having its office at P.O. Box 220, Burdett, New York 14818.

WHEREAS, Grantor is the owner in fee simple of approximately 238.2 acres of certain real property located in the Town of Hastings, Palermo, Schroeppel, County of Oswego, and State of New York, of which property is covered by this conservation easement and more fully described in Schedule A and annexed hereto (the "Protected Property"), and

WHEREAS, The Wetland Trust, Inc., a non-profit 501(c)(3) organization, is providing compensatory mitigation services to Micron New York Semiconductor Manufacturing LLC, with principal offices at 8000 South Federal Way, Boise, Idaho, 83716 for unavoidable adverse impacts to waters of the United States authorized under Section 404 of the Clean Water Act (33 U.S.C. § 1344) , and/or Sections 9 or 10 of the Rivers and Harbors Act (33 U.S.C. §§ 401, 403); and impacts to jurisdiction waters of New York State authorized under …….

WHEREAS, the Protected Property is to be protected in perpetuity through this Conservation Easement for those purposes as described in the Micron Upper Caughdenoy Creek Mitigation Plan, attached to this CE, pursuant to which The Wetland Trust, Inc., has committed to permanently protect and maintain a mitigation project on the Protected Property; and

WHEREAS, in relation to the compensatory mitigation activities, the Protected Property is subject to the conditions of the Mitigation plan, and any Federal or NY State Permit; and

WHEREAS, to ensure the long-term protection of the Protected Property, Grantor agrees to restrict ownership and use of the Protected Property: in order to protect, restore, and maintain the chemical, physical, and biological integrity of waters of the United States including wetlands through the control of discharges of dredged or fill material located on the Protected Property; in accordance with the common law and with the Conservation Easements provisions of New York Environmental Conservation Law ("**ECL**") Article 49, Title 3; in recognition of the continuing benefit to scenic and natural resources and the environment; and as a condition of being issued the Permit; and

WHEREAS, Grantor desires to declare, create, and convey to the Holder a Conservation Easement placing certain limitations and affirmative obligations on the Protected Property for the purpose of maintaining the Protected Property substantially in its natural condition, in perpetuity; and

WHEREAS, the purposes of this Conservation Easement are to protect the scenic, natural resource, and aquatic resource values of the Protected Property including native flora and fauna and the ecological processes that support them, diverse forest types and conditions, soil productivity, biological diversity, water quality, and aquatic habitats including wetlands; and

WHEREAS, the Holder is a 501 ©(3) not-for-profit corporation and is qualified to hold a Conservation Easement in accordance with ECL Section 49-0305; and

WHEREAS, Grantor agrees, in accordance with ECL Section 49-0305.5, that rights of enforcement of the terms of this Conservation Easement shall be held by the Holder, and that the USACE, NYSDEC or other appropriate enforcement agencies of the United States or New York State hold rights of enforcement under the Permit; and

NOW, THEREFORE, for the foregoing consideration, and in further consideration of the restrictions, rights, and agreements herein, and for the purposes of preservation, protection, and conservation of the Protected Property and the conservation and wildlife resources thereon, Grantor hereby creates, gives, grants, bargains, and conveys to the Holder a perpetual easement in, to, over, and across the Protected Property subject to the Permit, , and any current and future modifications thereto.

A. RESTRICTIONS

Grantor shall ensure compliance with the following Restrictions on the Protected Property, which shall run with the Protected Property in perpetuity, and be binding on the Grantor, the Holder, and their respective successors, assigns, lessees, and other occupiers and users. These Restrictions are subject to Grantor's Reserved Rights, which follow.

1. **General**. There shall be no future fillings, flooding, excavating, mining, or drilling; no removal of natural materials (soil, sand, gravel, rock, minerals, etc.); no dumping of materials; and no alteration of the topography which would materially affect the Protected Property in any manner, except as authorized by the Permit, , and any modifications thereof.

2. **Waters and Wetlands**. In addition to the general restrictions above, within the Protected Property there shall be no draining, dredging, damming, or impounding; no changing the grade or elevation, impairing the flow or circulation of waters, or reducing the reach of waters; and no other discharges or activity requiring a permit under applicable water pollution control laws and regulations, except as authorized by the Permit, and any modifications thereof.

3. **Trees/Vegetation**. On the Protected Property there shall be no clearing, burning, cutting, or destroying of trees or vegetation, except as may be necessary to protect public health or safety or as authorized by the Permit, and any modifications thereof; there shall be no planting or introduction of non-native or exotic species of trees or vegetation.

4. **Waste Disposal.** There shall be no disposal or storage of liquid or solid waste or other unsightly, hazardous, toxic or offensive material on the Protected Property.

5. **Uses**. No agricultural, animal husbandry, industrial, residential development, mining, logging, or commercial activity shall be undertaken or allowed on the Protected Property.

6. **Structures**. There shall be no construction, erection, or placement of buildings, billboards, or any other structures, to include fences, parking lots, trailers, mobile homes, camping accommodations, or recreational vehicles, or additions to existing structures, on the Protected Property, except as authorized by the Permit, and any modifications thereof.

7. **New Roads**. There shall be no construction of new roads, trails, or walkways on the Protected Property

without the prior written approval (including approval of the manner of construction) of the Holder and the USACE and NYSDEC

8. **Utilities**. There shall be no construction or placement of utilities or related facilities (including telecommunications towers and antennas) in, over, or under the Protected Property without the prior written approval (including approval of the manner of construction) of the Holder, the USACE and the NYSDEC.

9. **Pest Control**. There shall be no application of pesticides or biological controls, including controls of problem vegetation, on the Protected Property without prior written approval (including approval of the manner of application) of the Holder, the USACE, the NYSDEC or as authorized by the Permit, and any modifications thereof.

10. **Vehicular Use**. There shall be no use of any motorized vehicle or motorized equipment, and no use of any non-motorized bicycle anywhere on the Protected Property, except in the case of emergency, for the purpose of enforcement of applicable laws and regulations, for the purpose of monitoring compliance with the purposes of this Conservation Easement, or as authorized by the Permit, and any modifications thereof.

11. **Subdivision**. There shall be no division or subdivision of the Protected Property.

12. **Marking**. The Grantor shall mark the limits of the Protected Property in a manner approved by the Holder, USACE, and NYSDEC and shall maintain the marking in place so as to notify the public that the Protected Property is an area preserved for conservation purposes.

13. **Other Prohibitions**. Any other use of, or activity on, the Protected Property which is or may become inconsistent with the purposes of the Conservation Easement, the preservation of the Protected Property substantially in its natural condition, or the protection of its environmental systems, is prohibited, except as authorized by the Permit, and any modifications thereof.

B. RESERVED RIGHTS OF GRANTOR

Grantor reserves the right to engage in all acts or uses not prohibited by the Restrictions, which are not inconsistent with the Purpose of this Conservation Easement, the preservation of the Protected Property substantially in its natural condition, and the protection of its environmental systems, and which do not interfere with any obligations under the Permit, and any modifications or amendments thereof. Nothing herein shall be deemed to modify or amend any other or additional agreements between or among Grantor, the Holder, and/or the USACE and NYSDEC. In the event any of Grantor's acts or uses on the Protected Property are subject to review under the New York State Environmental Quality Review Act (SEQRA), Grantee and the Holder shall be designated as interested parties and notified of the review process.

C. GENERAL PROVISIONS

The following General Provisions shall be binding upon the Grantor and the Grantor's heirs, successors, grantees, transferees, administrators, assigns, lessees, licensees and agents, and shall inure to the benefit of the Holder, USACE and NYSDEC, and the heirs, successors, grantees, transferees, administrators, assigns, lessees, licensees and agents of the Holder, USACE and NYSDEC:

1. **Rights of Access and Entry.** The Holder, USACE and NYSDEC shall have the right to enter and go upon the Protected Property for purposes of monitoring and inspection, and to take actions necessary to verify compliance with the Restrictions. The Holder shall also have rights of visual access and view, and the right to enter and go upon the Protected Property for purposes of making scientific or educational observations and studies, and taking samples, in such a manner as will not disturb the quiet enjoyment of the Protected Property by Grantor. No right of access or entry by the general public to any portion of the Protected Property is conveyed by this Conservation Easement.

2. **Enforcement.** Grantor acknowledges and agrees that the Holder's, USACE's and NYSDEC's remedies at law for any violation of this Conservation Easement are inadequate. In the event of a breach of any of the Restrictions set forth above, the Holder, USACE, or NYSDEC will notify the Grantor in writing of the breach. The Grantor shall have thirty (30) days after receipt of such notice to undertake actions that are reasonably calculated to promptly correct the conditions constituting the breach. If the Grantor fails to commence such corrective action within thirty (30) days, or fails to complete the necessary corrective action, the Holder, USACE, or NYSDEC may undertake such actions, including legal proceedings, as are necessary to effect such corrective action. Among other relief, the Holder, USACE, NYSDEC shall be entitled to specific performance

of the terms of this Conservation Easement and to a complete restoration of the Protected Property, correcting damage caused by any breach of the Restrictions. Breaches of the General Provisions of this Conservation Easement shall be actionable without notice. The costs of a breach, correction or restoration, including reasonable Holder expenses, expert or consultant expenses, court costs and attorneys' fees, shall be paid by the Grantor. Enforcement shall be at the discretion of the Holder, USACE, or NYSDEC. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel or waiver. The Holder, USACE, or NYSDEC's enforcement rights are in addition to, and shall not limit, enforcement rights available under other provisions of law or equity, or under any applicable permit or certification. Failure to timely enforce compliance with this Conservation Easement or the use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any provision of this Conservation Easement.

Events Beyond Grantor's Control. Nothing herein shall be construed to authorize the Holder or the USACE to institute any proceedings against Grantor for any changes to the Protected Property caused by acts of God or circumstances beyond the Grantor's control such as earthquake, fire, flood, storm, war, civil disturbance, strike, or similar causes.

3. **Obligations of Ownership.** Grantor is responsible for payment of all real estate taxes, assessments, fees, or other charges levied upon the Protected Property, and Grantor will provide copies of receipts evidencing payment of any such charges upon request of the Holder, USACE, or NYSDEC. Any liens, mortgages or other encumbrances affecting the Protected Property shall be subject to the terms of this Conservation Easement. The Holder, USACE, or NYSDEC shall not be responsible for any costs or liability of any kind related to the ownership, operation, insurance, upkeep, or maintenance of the Protected Property, except as expressly provided herein. Nothing herein shall relieve the Grantor of the obligation to comply with federal, state, or local laws, regulations, and permits that may apply to the exercise of ownership, or rights under this Conservation Easement, by Grantor.

4. **Recording.** The Grantor shall have this Conservation Easement duly recorded and indexed as such in the Office of the County Clerk of Oswego County, New York, as described in ECL Section 49-0305.4. Upon recording, the Grantor shall forward a copy of this Conservation Easement as recorded to the Holder, USACE, and NYSDEC and, as described in ECL Section 49-0305.4, the New York Department of Environmental Conservation.

5. **Extinguishment.** In the event that changed conditions render impossible the continued use of

the Protected Property for conservation purposes, this Conservation Easement may only be extinguished, in whole or in part, by judicial proceeding under authority of ECL Section 49-0307. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to amend or terminate this Conservation Easement.

6. **Eminent Domain.** If all or part of the Protected Property is taken in the exercise of eminent domain so as to substantially abrogate the Restrictions imposed by this Conservation Easement, the Grantor and the Holder shall promptly notify the USACE and NYSDEC and shall join in appropriate actions at the time of such taking to recover the full value of the taking, and all incidental and direct damages due to the taking. Each party shall be responsible for its own costs in any such legal proceeding.

7. **Proceeds of Taking.** This Conservation Easement constitutes a real property interest immediately vested in the Holder. In the event that all or a portion of this Protected Property is sold, exchanged, or involuntarily converted following an extinguishment or the exercise of eminent domain, the Holder shall be entitled to the fair market value of this Conservation Easement. The parties stipulate that the fair market value of this Conservation Easement shall be determined by identifying the fair market value of the Protected Property unencumbered by this Conservation Easement (minus any increase in value after the date of this grant attributable to improvements) and subtracting the value of the Protected Property with the Conservation Easement at the time of this grant. The values at the time of this grant shall be the values used, or which would have been used, to calculate a deduction for federal income tax purposes, pursuant to Section l70(h) of the Internal Revenue Code (whether the grant is eligible or ineligible for such a deduction). The Holder shall use its share of the proceeds in a manner consistent with the purposes of this Conservation Easement.

8. **Notification.** Any notice, request for approval, or other communication required under this Conservation Agreement shall be sent by registered or certified mail, postage prepaid, to the following addresses (or such address as may be hereafter specified by notice pursuant to this paragraph):

To Grantor:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, New York 14818

To Holder:

The Wetlands Conservancy, Inc
P.O. Box 220
Burdett, New York 14818

To the USACE:

U.S. Army Corps of Engineers, New York District ATTN:

Regulatory Branch
Room 1937, 26 Federal Plaza
New York, NY 10278-0090

And

U.S. Army Corps of Engineers, Buffalo District ATTN:

Regulatory Branch
1776 Niagara Street
Buffalo, NY 14207-3199

To the NYSDEC:

?

9. **Assignment.** This Conservation Easement is transferable, but only to a holder qualified under ECL Section 49-0305.3, and approved in writing by the USACE and NYSDEC before transfer. As a condition of such transfer, the transferee shall agree to all of the restrictions, rights, and provisions herein, and to continue to carry out the purposes of this Conservation Easement. Assignments shall be accomplished by amendment of this Conservation Easement in accordance with Section C, Paragraph 14. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to assign this Conservation Easement.

10. **Failure of Holder.** If at any time the Holder is unable or fails to enforce this Conservation Easement, or if the Holder ceases to be a holder qualified under ECL Section 49-0305, and if within a reasonable period of time after the occurrence of one of these events the Holder fails to make an assignment pursuant to paragraph 10, then the Holder’s interest shall become vested in another holder, as approved by the USACE and NYSDEC, qualified in accordance with an appropriate (e.g., cy pres) proceeding, to be brought by the Grantor in a court of competent jurisdiction, or by Holder, USACE, and NYSDEC finding a replacement entity agreeable to USACE and NYSDEC

11. **Subsequent Transfer.** This Conservation Easement shall be perpetual and run with the land and shall be binding upon all future owners of any interest in the Protected Property. The conveyance of any portion of or any interest in the Protected Property, by sale, exchange, devise or gift, shall be

made by an instrument which expressly provides that the interest thereby conveyed is subject to this Conservation Easement, without modification or amendment of the terms of this Easement, and such instrument shall expressly incorporate this Conservation Easement by reference, specifically setting forth the date, office, liber and page of the recording of this Conservation Easement. The failure of any such instrument to comply with the provisions hereof shall not affect the validity or enforceability of this Conservation Easement, nor shall such failure affect the Holder's or the USACE' rights hereunder. No less than thirty (30) days prior to conveyance of any interest in the Protected Property, Grantor (to include any successor Grantor) shall notify the Holder, USACE, and NYSDEC of such intended conveyance, providing the full names and mailing addresses of all Grantees, and the individual principals thereof, under any such conveyance. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to transfer the Protected Property.

12. No **Merger of Interests.** In the event the same person or entity ever simultaneously holds an interest in the Protected Property under this Conservation Easement, and holds the underlying title in fee, the parties intend that the separate interests shall not merge.

13. **Amendment.** This Conservation Easement may be amended in accordance with ECL Section 49-0307, but only in a writing signed by the Grantor and the Holder, or their successors or assigns, and approved in writing by the USACE and NYSDEC, its successors or assigns; provided such amendment does not affect the qualification of this Conservation Easement or the status of the Holder under ECL Section 49-0305 or any other applicable law; and provided such amendment is consistent with the conservation purposes of this grant and its perpetual duration. Any amendment to this Conservation Easement shall be recorded and provided to the Holder, the USACE and the New York State Department of Environmental Conservation, in the manner set forth in paragraph C-5 above. In accordance with 33 C.F.R. 332.7(a)(3), USACE and NYSDEC must be provided 60-day advance notification before any action is taken to amend this Conservation Easement.

14. **Severability.** Should a court of competent jurisdiction find any separate part of this Conservation Easement void or unenforceable le, the remainder shall continue in full force and effect.

15. **Warranties by Grantor.** Grantor warrants that it owns the Protected Property in fee simple, and that Grantor owns all interests in the Protected Property that may be impaired by the granting of this Conservation Easement. Grantor further warrants that there are no outstanding mortgages, tax liens, encumbrances , or other interests in the Protected Property that have not been expressly subordinated to this Conservation Easement. Grantor further warrants that no structures of any kind, to include roads, trails or walkways, and no violations of restrictions of this of this Conservation Easement exist

on the Protected Property at the time of execution hereof. Grantor further warrants that the Holder shall have the use of and enjoy all the benefits derived from and arising out of this Conservation Easement.

16. **No Gift or Dedication**. Nothing contained in this Conservation Easement shall be deemed to be a gift for dedication of all or any part of either the Permitted Property or the Protected Property to the public, or for public use.

IN WITNESS WHEREOF, Grantor and Holder have executed this Conservation Easement, as of the date written above.

Execution by Grantor: The Wetland Trust, Inc.

By: ________________________________

Title:

STATE OF NEW YORK) ss.:
COUNTY OF Schuyler)

On the __ day of ___________in the year 202_ before me, the undersigned, a notary public in and for said state, personally appeared the Grantor _____________, __________ of The Wetland Trust, Inc. personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed this instrument.

____
Notary Public Date: ________________________________

Approval and Acceptance by Holder: The Wetland Conservancy, Inc.

By: ________________________________

Title: Chair

STATE OF NEW YORK) ss:

COUNTY OF Tompkins)

On the __day of ____________in the year 202_ before me, the undersigned, a notary public in and for said state, personally appeared the Holder **Aaron Ristow**, Chair of The Wetland Conservancy, Inc. personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed this instrument.

________________________________ ________________________________

Notary Public Date

Schedule A. Legal description of parcel to be covered by this Conservation Easement.

Upper Caughdenoy Creek, 557 County Road 37

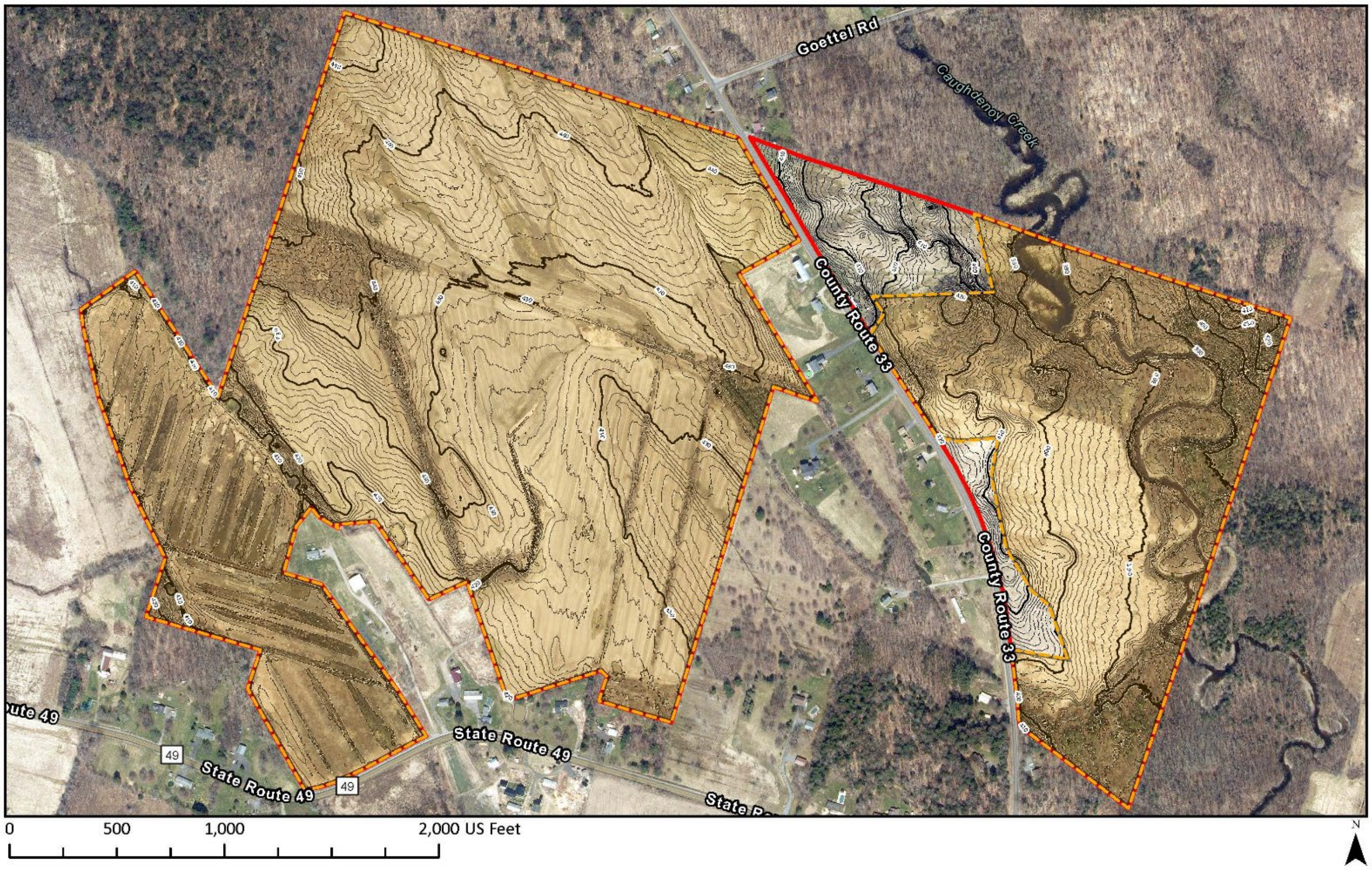
Town of Hastings, Palermo, and Schroeppel, Oswego County, NY

covering a *224.3*-acre portion

of Tax Parcels 257.-2-05.02, 257.00-02-22, 257.00-02-15.111, 257.000-02-17, 257.00-02-17.02 and 257.00-03-01

ALL THAT TRACT OR PARCEL OF LAND,

[Left intentionally blank- awaiting boundary survey with descriptions of metes and bounds]



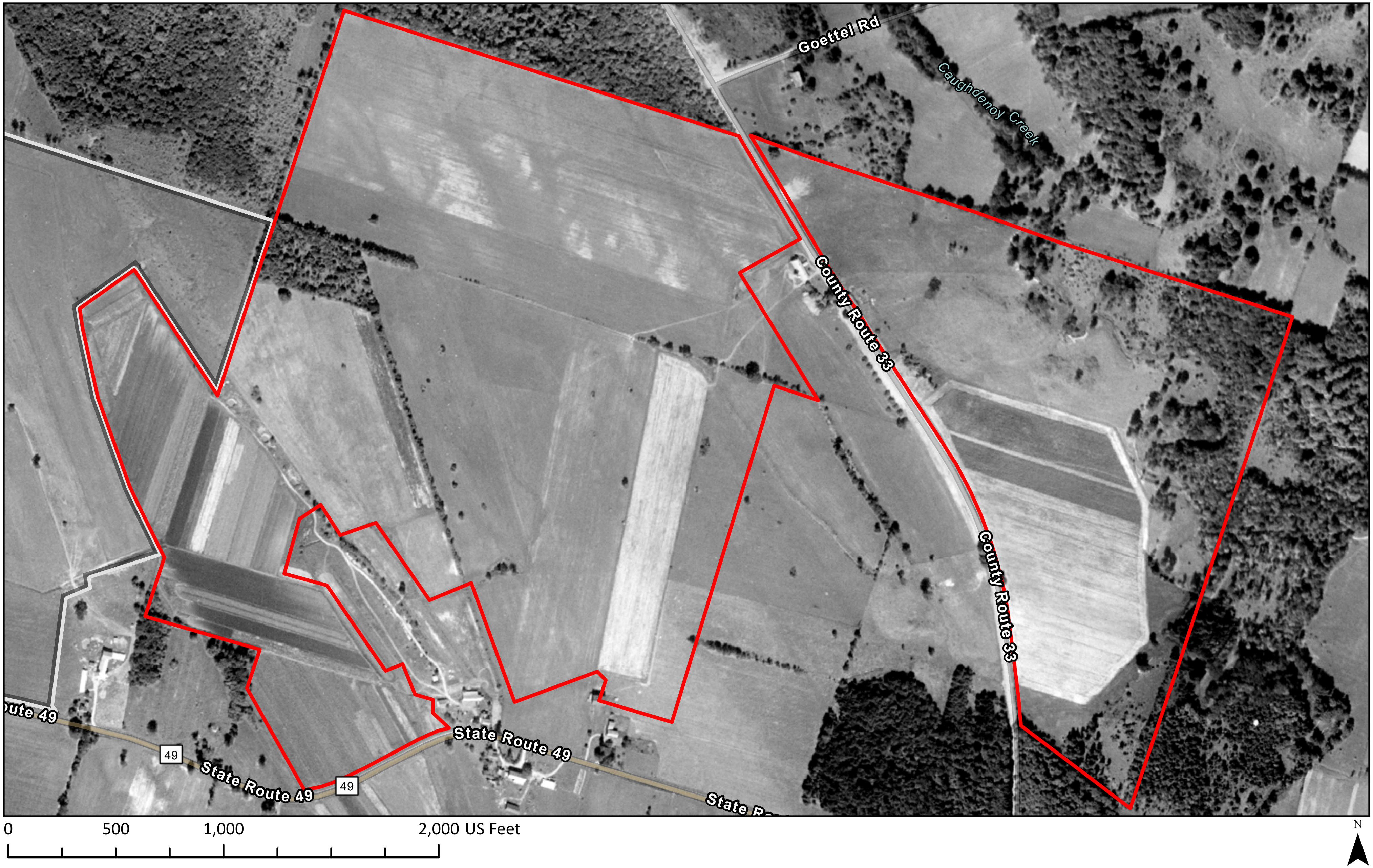
Conservation Easement

Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 20 Mar. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Appendix B.



Imagery (1955)

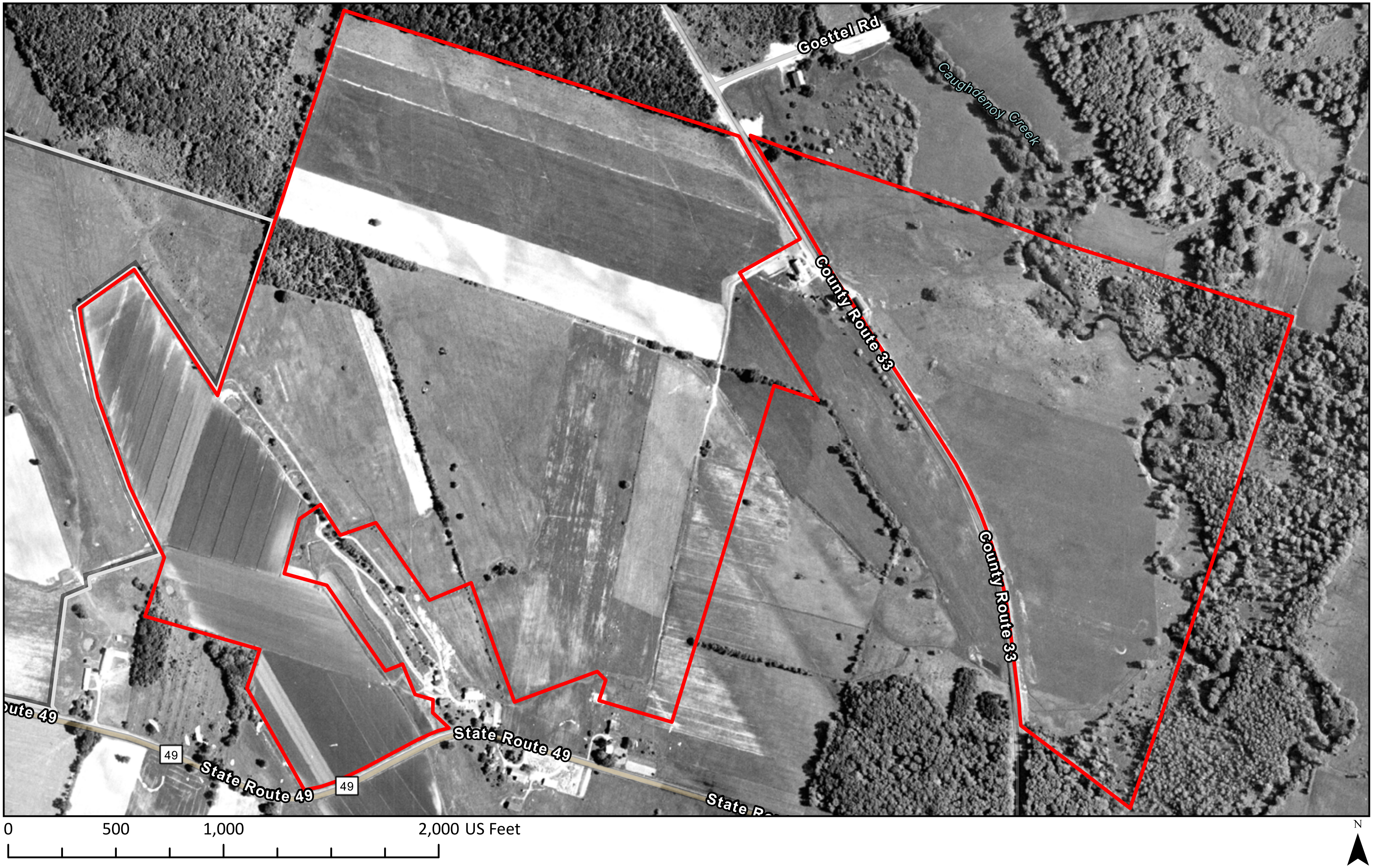
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

🟥 TWT Property Boundary (239 ac)

▭ Other TWT Property

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 9 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



Imagery (1959)

Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

🟥 TWT Property Boundary (239 ac)
▭ Other TWT Property

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 9 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Imagery (1994)

Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

🟥 TWT Property Boundary (239 ac)

⬜ Other TWT Property

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 9 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

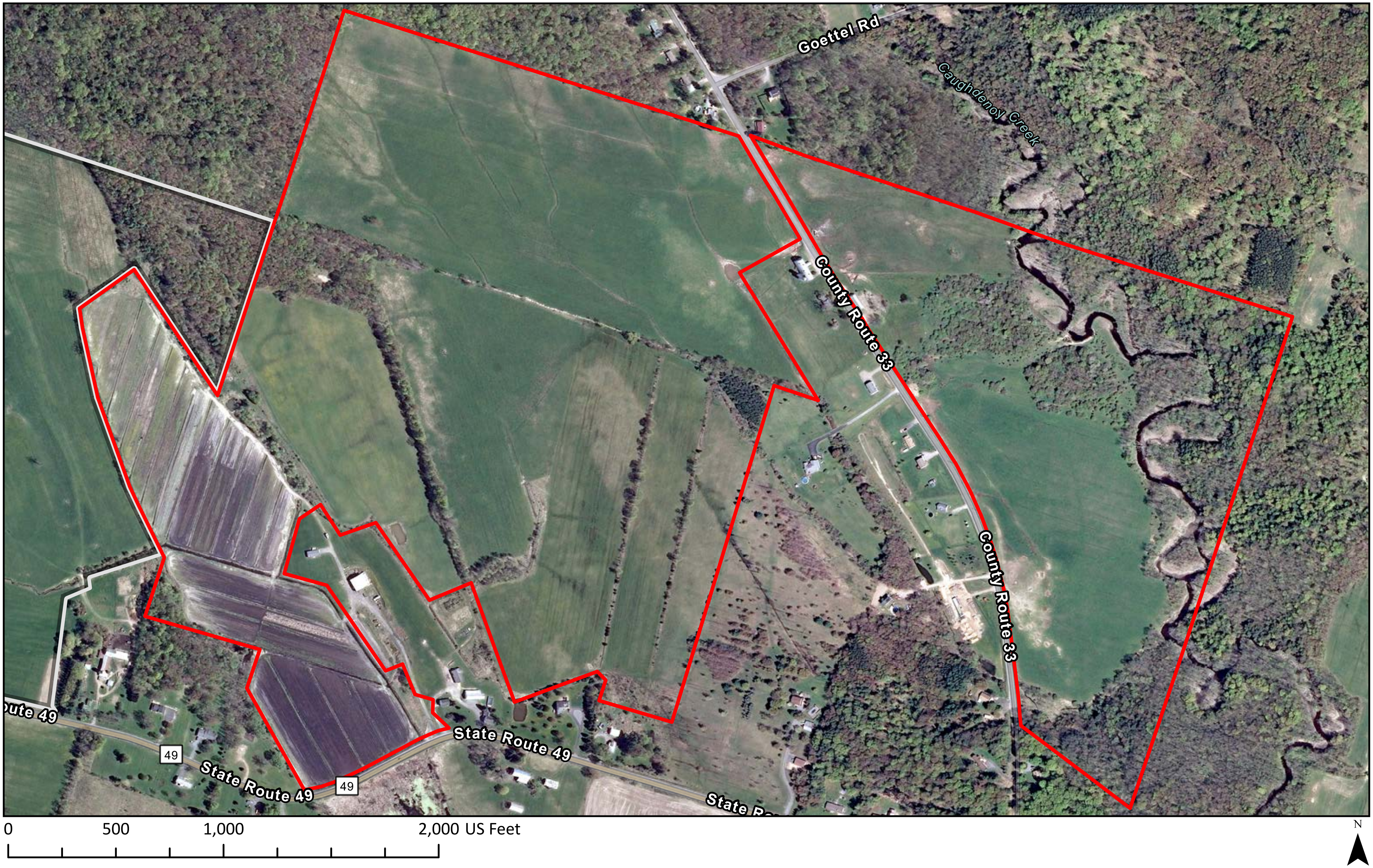
Imagery (2006)

Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

🟥 TWT Property Boundary (239 ac)
▭ Other TWT Property

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 9 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



Imagery (2011)

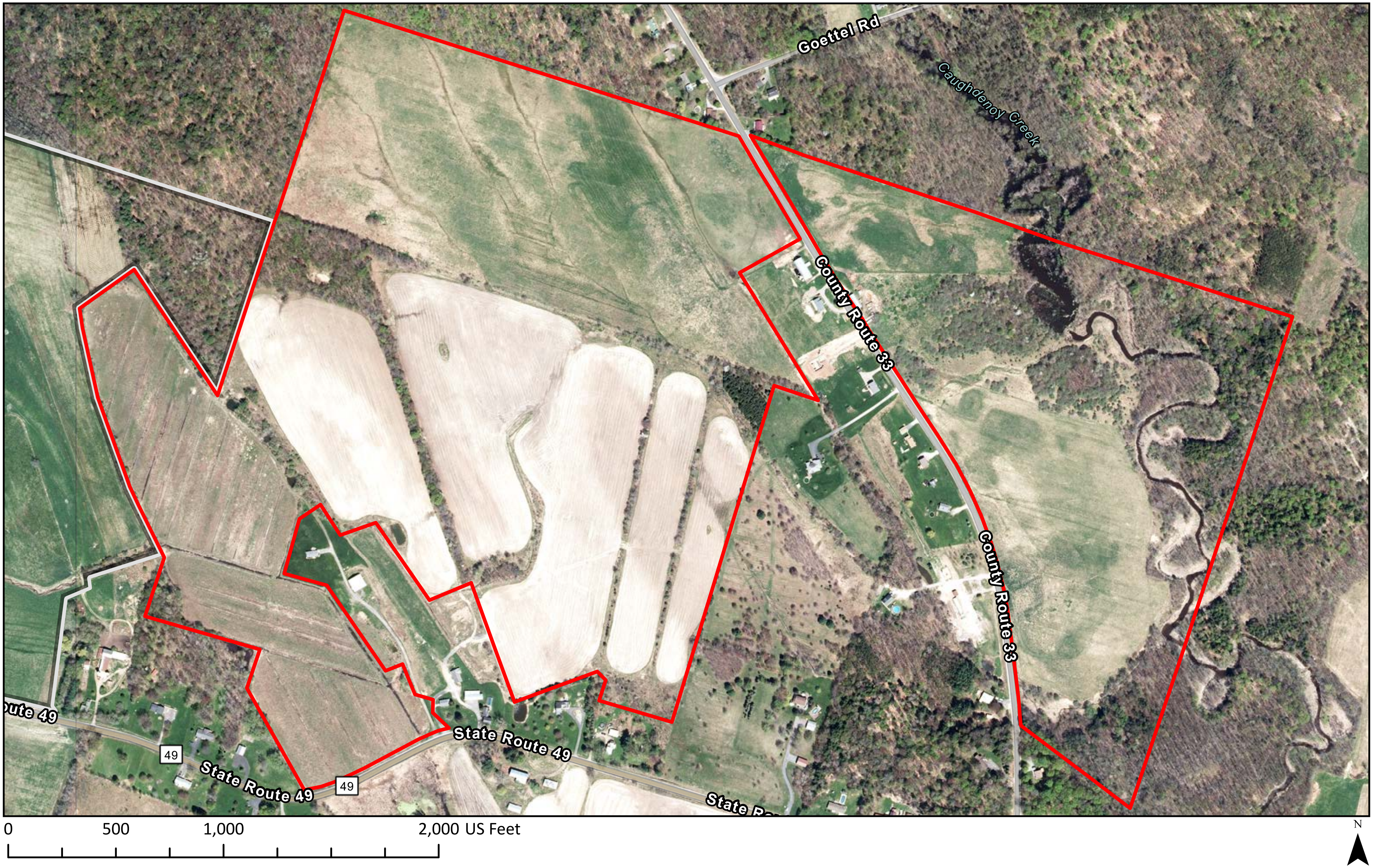
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

🟥 TWT Property Boundary (239 ac)

⬜ Other TWT Property

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 9 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



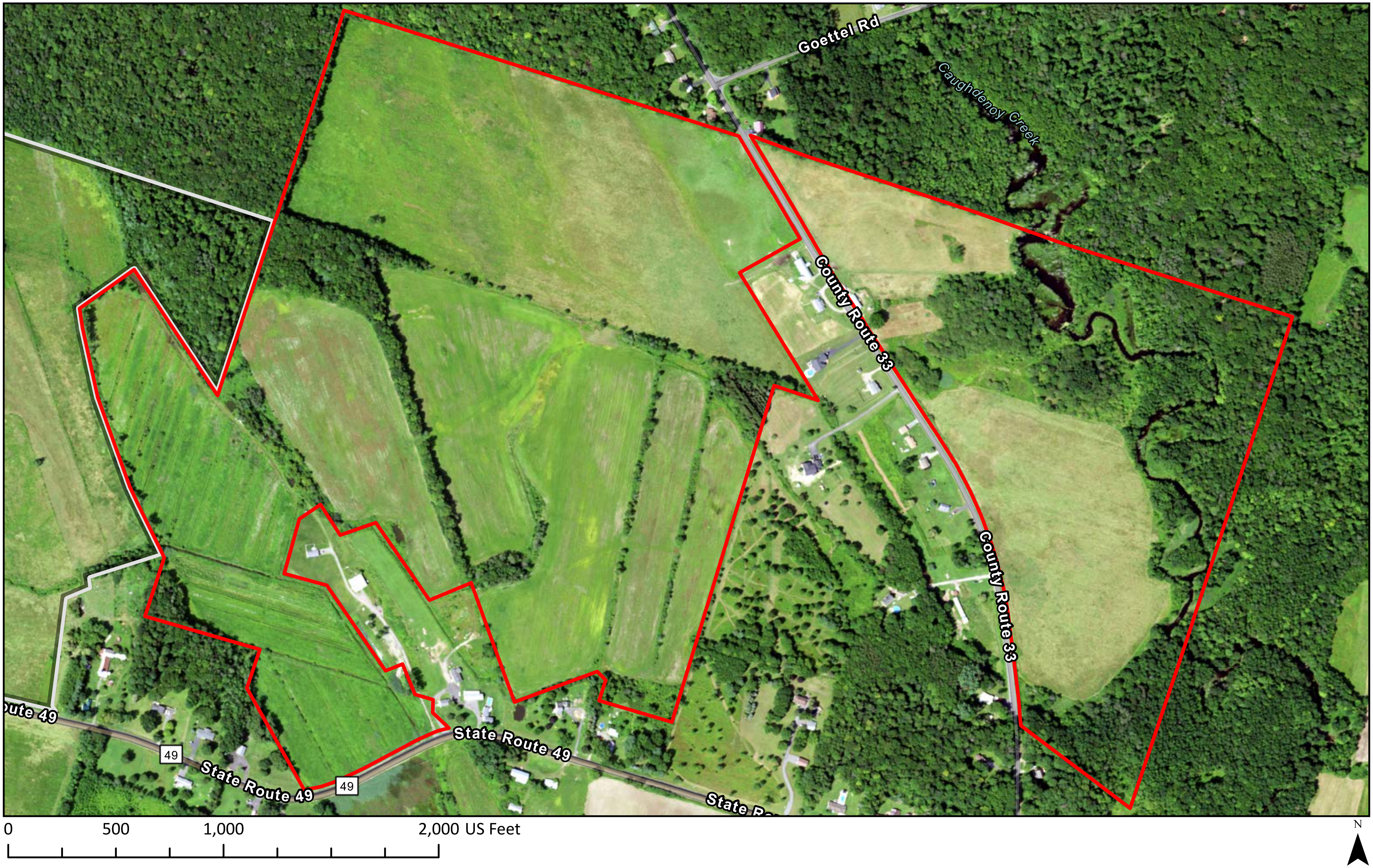
Imagery (2015)

Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

- TWT Property Boundary (239 ac)
- Other TWT Property

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 9 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



Imagery (2019)

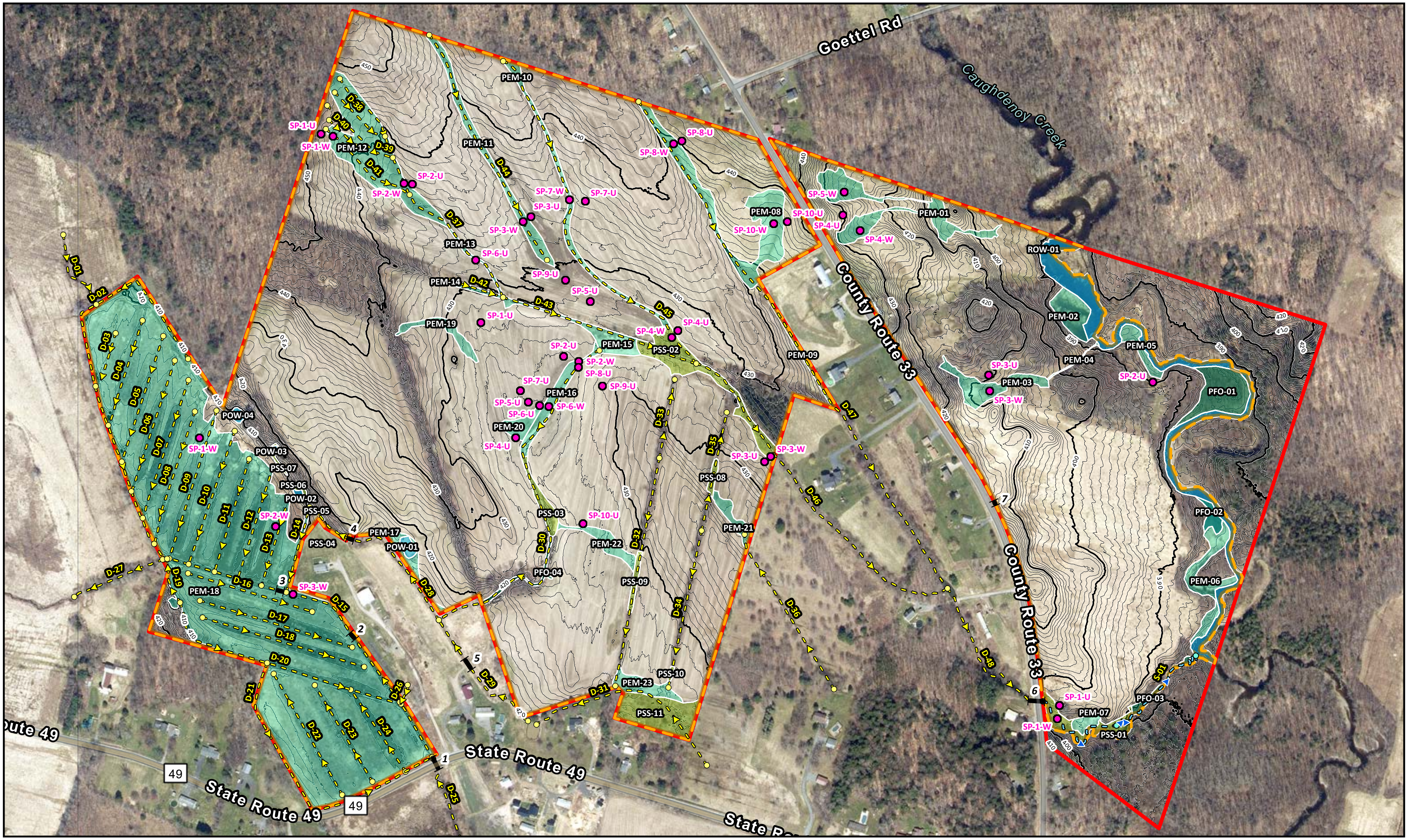
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

🟥 TWT Property Boundary (239 ac)
▢ Other TWT Property

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 9 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Appendix C.



● Wetland Delineation Sample Points (n = 41)

▬ Culverts (n = 7)

Drainage Features

- Ditch
- Stream

Delineated Wetlands (52.9 ac total)

- Open Water - Pond (P) and Riverine (R) (3.2 ac)
- PEM (44.3 ac)
- PSS (3.8 ac)
- PFO (1.6 ac)

— Contour Line (1 ft)

▭ Delineation Concurrence Request Boundary (219.1 ac)

▭ TWT Property Boundary (238.2 ac)

Delineated Wetlands and Drainage Features

Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 16 Feb. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Upper Caughdenoy Creek Wetland Delineation Summary Table

ID	Wetland Type Cowardin	Cover Type Edinger	Acres	Linear Feet	Notes	Flow Regime
1	Culvert	-	-	48.4393796524	State Route 49 crossing, conveys main flow into PEM-18.	-
2	Culvert	-	-	21.1676347679	Farm equipment crossing over main ditch in PEM-18.	-
3	Culvert	-	-	19.4775479786	Farm equipment crossing over main ditch in PEM-18.	-
4	Culvert	-	-	16.9527775743	Farm equipment crossing over D-28.	-
5	Culvert	-	-	42.6668525503	Farm equipment crossing over D-29.	-
6	Culvert	-	-	59.4055915463	County Route 33 crossing connecting D-48 to S-01.	-
7	Culvert	-	-	8.23706868519	24 in diameter concrete. Parallels County Route 33, for side of road drainage and farm equipment access into field.	-
D-01	Ditch	Ditch / artificial intermittent stream	-	379.2068336	Conveys hydrology from adjacent TWT Johnson Farm Preserve into PEM-18.	Intermittent
D-02	Ditch	Ditch / artificial intermittent stream	-	1903.461397	Northern perimeter ditch around PEM-18, receives drainage from D-01 and numerous interior field ditches (D-03 through D-08).	Intermittent
D-03	Ditch	Ditch / artificial intermittent stream	-	259.5376501	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-04	Ditch	Ditch / artificial intermittent stream	-	500.9320859	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-05	Ditch	Ditch / artificial intermittent stream	-	599.9601262	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-06	Ditch	Ditch / artificial intermittent stream	-	624.854297	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-07	Ditch	Ditch / artificial intermittent stream	-	658.9849618	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-08	Ditch	Ditch / artificial intermittent stream	-	628.7743762	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-09	Ditch	Ditch / artificial intermittent stream	-	703.7675455	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-10	Ditch	Ditch / artificial intermittent stream	-	638.5842333	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-11	Ditch	Ditch / artificial intermittent stream	-	534.3084518	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-12	Ditch	Ditch / artificial intermittent stream	-	534.2275397	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-13	Ditch	Ditch / artificial intermittent stream	-	414.7776044	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-14	Ditch	Ditch / artificial intermittent stream	-	370.600137	Deep, narrow ditch dug using "lands" technique. Along edge of adjacent landowner's yard. Possibly receives drainage from D-28.	Intermittent
D-15	Ditch	Ditch / artificial intermittent stream	-	1630.473892	Deep, narrow ditch that conveys the main flow through PEM-18, from Culvert 1 to exit from property into adjacent TWT Johnson Farm Preserve via D-27.	Intermittent
D-16	Ditch	Ditch / artificial intermittent stream	-	588.8253659	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-17	Ditch	Ditch / artificial intermittent stream	-	721.9684829	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-18	Ditch	Ditch / artificial intermittent stream	-	765.658485	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-19	Ditch	Ditch / artificial intermittent stream	-	211.9728691	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-20	Ditch	Ditch / artificial intermittent stream	-	1169.899382	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-21	Ditch	Ditch / artificial intermittent stream	-	1346.607305	Southern perimeter ditch around PEM-18.	Intermittent
D-22	Ditch	Ditch / artificial intermittent stream	-	630.2391139	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-23	Ditch	Ditch / artificial intermittent stream	-	509.2518905	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-24	Ditch	Ditch / artificial intermittent stream	-	446.4934399	Shallow, narrow ditch dug using "lands" technique. Interior field ditch of PEM-18.	Intermittent
D-25	Ditch	Ditch / artificial intermittent stream	-	550.6977248	Flows to Culvert 1 and connects to D-15. Main drainage flow into PEM-18.	Intermittent
D-26	Ditch	Ditch / artificial intermittent stream	-	88.37315962	Small drainage flowing from adjacent landowner's yard to D-15.	Intermittent
D-27	Ditch	Ditch / artificial intermittent stream	-	437.6658198	Main outlet of PEM-18. Flows East to West into adjacent TWT Johnson Farm Preserve.	Intermittent
D-28	Ditch	Ditch / artificial intermittent stream	-	837.9436303	Conveys flow from D-29 and D-30 to muck field, probably D-14 specifically.	Intermittent
D-29	Ditch	Ditch / artificial intermittent stream	-	636.9093689	Flows into D-28 from an off-site pond.	Intermittent
D-30	Ditch	Ditch / artificial intermittent stream	-	1752.894926	Deep, narrow ditch that conveys hydrology from PEM-15 South to D-28 through active agricultural field. Bank height ranges from 3 in at northern end to 8 ft at southern end.	Intermittent
D-31	Ditch	Ditch / artificial intermittent stream	-	970.6115646	Edge of South field. Flows from off-site into PSS-11 and PEM-23, then exits property and flows into off-site pond.	Intermittent
D-32	Ditch	Ditch / artificial intermittent stream	-	1052.391944	Within one of two eastern hedgerows in South field, flows South. Small drainage indentations.	Intermittent
D-33	Ditch	Ditch / artificial intermittent stream	-	362.9690333	Within one of two eastern hedgerows in South field, flows North. Small drainage	Intermittent

					indentations.	
D-34	Ditch	Ditch / artificial intermittent stream	-	727.1332627	Within one of two eastern hedgerows in South field, flows South. Small drainage indentations.	Intermittent
D-35	Ditch	Ditch / artificial intermittent stream	-	548.135989	Within one of two eastern hedgerows in South field, flows North. Small drainage indentations.	Intermittent
D-36	Ditch	Ditch / artificial intermittent stream	-	815.7621233	Flows northwest from off-site into PEM-21.	Intermittent
D-37	Ditch	Ditch / artificial intermittent stream	-	1280.434655	Conveys main flow from PEM-12 to PEM-14.	Intermittent
D-38	Ditch	Ditch / artificial intermittent stream	-	309.0170145	Past attempted drainage of PEM-12 based on aerial photos. Flows to D-37.	Intermittent
D-39	Ditch	Ditch / artificial intermittent stream	-	387.9004552	Past attempted drainage of PEM-12 based on aerial photos. Flows to D-37.	Intermittent
D-40	Ditch	Ditch / artificial intermittent stream	-	168.2363297	Past attempted drainage of PEM-12 based on aerial photos. Flows to D-37.	Intermittent
D-41	Ditch	Ditch / artificial intermittent stream	-	493.9500579	Past attempted drainage of PEM-12 based on aerial photos. Flows to D-37.	Intermittent
D-42	Ditch	Ditch / artificial intermittent stream	-	249.3332573	Slight depression separating North and South fields. Flows East to D-43.	Intermittent
D-43	Ditch	Ditch / artificial intermittent stream	-	927.6366024	Separates North and South fields. Collects drainage from North field and conveys to D-46.	Intermittent
D-44	Ditch	Ditch / artificial intermittent stream	-	1160.670326	Drains North field, flowing South. No discernible surface connection to D-45 or D-43, but suspected underground connections to D-45.	Intermittent
D-45	Ditch	Ditch / artificial intermittent stream	-	1732.690919	Drains North field, flowing South to D-46. No discernible surface connection to D-44, but suspected underground connection.	Intermittent
D-46	Ditch	Ditch / artificial intermittent stream	-	1633.296044	Conveys drainage from North field off-site to D-48 and ultimately Caughdenoy Creek.	Intermittent
D-47	Ditch	Ditch / artificial intermittent stream	-	2625.27083	Conveys drainage from North field off-site to D-48 and ultimately Caughdenoy Creek.	Intermittent
D-48	Ditch	Ditch / artificial intermittent stream	-	743.9731544	Conveys drainage from North field off-site to Culvert 6, S-01, and Caughdenoy Creek.	Intermittent
S-01	Stream	Stream	-	1178.55	Continuation of D-48 flow from County Route 33 (Culvert 6) to Caughdenoy Creek. This channel segment appears less modified / disturbed than those upstream of Rt.33 culvert.	Intermittent
PEM-01	PEM	Shallow emergent	1.43544010697	-	In cow pasture adjacent to County Route 33.	Intermittent
PEM-02	PEM	Shallow emergent	0.577897850946	-	Annually flooded wet meadow along Caughdenoy Creek.	Intermittent
PEM-03	PEM	Shallow emergent	0.694070740263	-	Swale in hayfield, noticeably wet and soft compared to surrounding areas of field. Drains East to PEM-04.	Intermittent
PEM-04	PEM	Shallow emergent	0.0357929610267	-	Wet connection between PEM-03 and Caughdenoy Creek.	Intermittent
PEM-05	PEM	Shallow emergent	0.291124540909	-	Caughdenoy Creek floodplain.	Intermittent
PEM-06	PEM	Shallow emergent	0.788225132934	-	Caughdenoy Creek floodplain. Mostly PEM with a few scattered mature trees.	Intermittent
PEM-07	PEM	Shallow emergent	0.175503267895	-	South end of East field. Adjacent to S-01 corridor.	Intermittent
PEM-08a	PEM	Shallow emergent	0.98	-	Wet meadow surrounding D-47. Acts as a border between a former cow pasture and an active agricultural field.	Intermittent
PEM-08b	PEM	Shallow emergent	0.94	-	Wet meadow that was a formerly a cow pasture.	Intermittent
PEM-09	PEM	Shallow emergent	0.242742084635	-	Wet meadow surrounding D-47 at the southeastern corner of the North field. Acts as a border between the active agricultural field and pasture / residential yards.	Intermittent
PEM-10	PEM	Shallow emergent	0.765818502305	-	Wet meadow surrounding D-45, within active agricultural field.	Intermittent
PEM-11	PEM	Shallow emergent	0.979941431428	-	Wet meadow surrounding D-44, within active agricultural field.	Intermittent
PEM-12	PEM	Shallow emergent	2.5407699926	-	Wet meadow that was actively farmed as recently as 2020.	Intermittent
PEM-13	PEM	Shallow emergent	0.109674783198	-	Surface drainage pathway in agricultural field connecting PEM-12 and PEM-14.	Intermittent
PEM-14	PEM	Shallow emergent	0.274695015764	-	Wet meadow around a shallow drainage collecting water from North field.	Intermittent
PEM-15	PEM	Shallow emergent	0.471762632527	-	Wet meadow that receives water from PEM-14 / D-43. High clay content.	Intermittent
PEM-16	PEM	Shallow emergent	0.553645167319	-	Wet meadow surrounding upper half of D-30, within active agricultural field. High clay content with pooling water. Drains to South.	Intermittent
PEM-17	PEM	Shallow emergent	0.333789452099	-	Wet meadow buffering POW-01 from surrounding active agricultural fields. Invaded with Typha and Phalaris arundinacea.	Intermittent
PEM-18	PEM	Reverted drained muckland	30.3379563376	-	"Muck farm" that appears active in all available aerial photos through 2011. Now invaded with Phalaris arundinacea, Lythrum salicaria, etc. More than 20 ditches dug to drain this field. Hydrology from both North and South, ultimately exiting via D-27.	Intermittent
PEM-19	PEM	Shallow emergent	0.345670309249	-	In active agricultural field. Surface drainage pathway from the adjacent upland forest to PEM-20.	Ephemeral
PEM-20	PEM	Shallow emergent	0.284823235973	-	Actively farmed area with high clay, deep ruts and pooling water.	Intermittent
PEM-21	PEM	Shallow emergent	0.287716006114	-	In active agricultural field. Surface drainage pathway from off-site ditch (D-36) flowing to PSS-08.	Intermittent

PEM-22	PEM	Shallow emergent	0.377483653485	-	In active agricultural field with high clay, deep ruts, algal mats and pooling water. Surface drainage pathway from PSS-09 to PSS-03.	Ephemeral
PEM-23	PEM	Shallow emergent	0.458987266564	-	Edge of active agricultural field with high clay, deep ruts, algal mats and pooling water. Receives hydrology from double hedgerow ditches and PSS-11.	Intermittent
PFO-01	PFO	Floodplain forest	1.03386201931	-	Flooded forest along bend of Caughdenoy Creek. West boundary is a steep bank.	Intermittent
PFO-02	PFO	Floodplain forest	0.172090896759	-	Flooded forest along Caughdenoy Creek.	Intermittent
PFO-03	PFO	Floodplain forest	0.191643921679	-	S-01 corridor.	Intermittent
PFO-04	PFO	Red maple- hardwood swamp	0.163272218438	-	Surrounds lower third of D-30. Bordered by active agriculture and upland forest.	Intermittent
POW-01	Open Water - Pond	Farm pond / artificial pond	0.113700392031	-	Farm pond dug between 1959-1981. Surrounded by PEM-17 on the edge of an active agricultural field.	Perennial
POW-02	Open Water - Pond	Farm pond / artificial pond	0.0294873444137	-	Farm pond dug prior to 1955. Surrounded by PSS-06.	Perennial
POW-03	Open Water - Pond	Farm pond / artificial pond	0.0211567599972	-	Farm pond dug prior to 1955. Surrounded by PSS-07.	Perennial
POW-04	Open Water - Pond	Farm pond / artificial pond	0.0717896913839	-	Farm pond dug prior to 1955. Surrounded by steep upland forest on three sides and PEM-18 on the other.	Perennial
PSS-01	PSS	Scrub shrub	0.621106859119	-	S-01 corridor at base of steep mature forested slope.	Intermittent
PSS-02	PSS	Scrub shrub	1.28045510379	-	Surrounds the connection point of D-43, D-45 and D-46. Separates the North and South field.	Intermittent
PSS-03	PSS	Scrub shrub	0.327461913589	-	Surrounds middle third of D-30 with active agriculture on all sides.	Intermittent
PSS-04	PSS	Scrub shrub	0.00566957105561	-	At the base of a steep slope, surrounding D-28.	Intermittent
PSS-05	PSS	Scrub shrub	0.0194708850522	-	At the end of D-28 entering PEM-18.	Intermittent
PSS-06	PSS	Scrub shrub	0.0391226443977	-	Surrounds a farm pond (POW-02). At the base of a steep slope.	Intermittent
PSS-07	PSS	Scrub shrub	0.0497497520029	-	Surrounds a farm pond (POW-03). At the base of a steep slope.	Intermittent
PSS-08	PSS	Scrub shrub	0.100810160765	-	In one of two eastern hedgerows of South field. Receives hydrology from D-35 and PEM-21. Few scattered trees.	Intermittent
PSS-09	PSS	Scrub shrub	0.148755118376	-	In one of two eastern hedgerows of South field. Receives hydrology from D-32.	Intermittent
PSS-10	PSS	Scrub shrub	0.0277291710668	-	In one of two eastern hedgerows of South field. Receives hydrology from D-34.	Intermittent
PSS-11	PSS	Scrub shrub	1.2122438516	-	Off southeastern corner of South field, receives hydrology from the North (D-32, D-34) and South (D-31). Dense shrub canopy.	Intermittent
ROW-01	Open Water - Riverine	Stream	2.81	-	Caughdenoy Creek flowing from North to South.	Perennial

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 East City/County: Oswego Sampling Date: 09/05/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-1-U

Investigator(s): E. Frantz, H. Frantz, D. Johnston-Jordan, K. Hastings Section, Township, Range: Pennellville

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope (%): 3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.302387°N Long: 76.210526°W Datum: WGS84

Soil Map Unit Name: Rhinebeck silt loam, 2-6% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point is in shrub/scrub area between hay field (20 ft away) and Caughdenoy Creek tributary. Unusally wet month of August including one rain event which exceeded normal rainfall for the entire month of August. Does not meet all three criteria.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicator observed.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-1-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Malus domestica*	50	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Rhamnus cathartica*	25	Yes	FAC
2. *Prunus serotina*	5	No	FACU
3. *Fraxinus pennsylvanica*	5	No	FACW
4.			
5.			
6.			
7.			
	35	=Total Cover	
Herb Stratum (Plot size:)			
1. *Geum macrophyllum*	1	No	FACW
2. *Persicaria virginiana*	1	No	FAC
3. *Toxicodendron radicans*	5	Yes	FAC
4. *Lysimachia nummularia*	10	Yes	FACW
5. *Fragaria vesca*	2	No	UPL
6. *Symphyotrichum lateriflorum*	5	Yes	FAC
7. *Agrimonia gryposepala*	1	No	FACU
8.			
9.			
10.			
11.			
12.			
	25	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	80.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	16	x 2 =	32
FAC species	36	x 3 =	108
FACU species	6	x 4 =	24
UPL species	52	x 5 =	260
Column Totals:	110	(A)	424 (B)

Prevalence Index = B/A = 3.85

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
No OBL species were observed but a few low percentage FACW were dominate.

SOIL

Sampling Point: SP-1-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5YR 5/4	100					Loamy/Clayey	Loam
7-15	10YR 7/3	70	10YR 7/6	30			Loamy/Clayey	Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 East City/County: Oswego Sampling Date: 09/05/2024
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-1-W
Investigator(s): E. Frantz, H. Frantz, D. Johnston-Jordan, K. Hastings Section, Township, Range: Pennellville
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope (%): 1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.302221°N Long: 76.210564°W Datum: WGS84
Soil Map Unit Name: Rhinebeck silt loam, 2-6% slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___
If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point is adjacent to mature forested slope. Wet meadow features with scrub/shrub components. Area is 70% wet meadow and 30% shrub. Unusally wet month of August including one rain event which exceeded normal rainfall for the entire month of August.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes X No ___ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sample point is adjacent to tributary of Caughdenoy Creek. A 3ft culvert crosses Route 33 approximately 75 ft upstream.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-1-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Cornus amomum*	15	Yes	FACW
2. *Viburnum lentago*	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Eutrochium purpureum*	60	Yes	FAC
2. *Euthamia graminifolia*	45	Yes	FAC
3. *Toxicodendron radicans*	5	No	FAC
4. *Solidago gigantea*	5	No	FACW
5. *Chelone glabra*	5	No	OBL
6. *Persicaria sagittata*	5	No	OBL
7. *Apocynum cannabinum*	1	No	FAC
8. *Ranunculus repens*	1	No	FAC
9. *Epilobium coloratum*	10	No	OBL
10. *Rumex obtusifolius*	2	No	FAC
11. *Verbena hastata*	1	No	FACW
12. *Lysimachia nummularia*	5	No	FACW
	145	=Total Cover	

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	20	x 1 =	20	
FACW species	26	x 2 =	52	
FAC species	129	x 3 =	387	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	175	(A)	459	(B)

Prevalence Index = B/A = 2.62

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Dead ash (approximately 10 in) present. 100% herbaceous coverage, 30% shrub coverage.

SOIL

Sampling Point: SP-1-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	7.5YR 4/1	97	7.5YR 4/6	3			Loamy/Clayey	Clay Loam
9-15	10YR 5/1	90	10YR 5/6	10			Loamy/Clayey	Sandy Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_X_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 East City/County: Oswego Sampling Date: 09/05/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-2-U

Investigator(s): E. Frantz, H. Frantz, D Johnston-Jordan. K. Hastings Section, Township, Range: Pennellville

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Flat Slope (%): 4

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.306403°N Long: 76.208912°W Datum: WGS84

Soil Map Unit Name: Rhineback silt loam, 2-6% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes ____ No X

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point is elevated 10 ft above Caughdenoy Creek. Area has been cleared for hunting or agriculture. Sample point was selected due to mix of upland and wetland plants. Unusally wet month of August including one rain event which exceeded normal rainfall for the entire month of August. No SP-2-W was taken due to hieght of Caughdenoy Creek bank (10 ft +).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? Yes ____ No X Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators were observed

VEGETATION – Use scientific names of plants.

Sampling Point: SP-2-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Solidago gigantea*	7	No	FACW
2. *Toxicodendron radicans*	2	No	FAC
3. *Prunella vulgaris*	20	No	FAC
4. *Solidago rugosa*	5	No	FAC
5. *Fraxinus pennsylvanica*	3	No	FACW
6. *Euthamia graminifolia*	7	No	FAC
7. *Ranunculus repens*	5	No	FAC
8. *Carex intumescens*	1	No	FACW
9. *Plantago lanceolata*	60	Yes	FACU
10. *Taraxacum officinale*	5	No	FACU
11. *Symphyotrichum lateriflorum*	2	No	FAC
12.			
	117 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	11	x 2 =	22
FAC species	41	x 3 =	123
FACU species	65	x 4 =	260
UPL species	0	x 5 =	0
Column Totals:	117 (A)		405 (B)

Prevalence Index = B/A = 3.46

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
100% Herbaceous coverage. Scattered beyond sample point boundary there is Eutrochium purpureum (Joe Pye) and Eupatorium perfoliatum (Boneset) at 3% coverage. Adjacent to sample point field is a somewhat dense stand of apple trees.

SOIL

Sampling Point: SP-2-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 5/2	100					Loamy/Clayey	Clay Loam
6-14	10YR 5/3	70	10YR 6/6	20			Loamy/Clayey	Clay Loam
			7.5YR 3/1	10				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

____ Histosol (A1)
____ Histic Epipedon (A2)
____ Black Histic (A3)
____ Hydrogen Sulfide (A4)
____ Stratified Layers (A5)
____ Depleted Below Dark Surface (A11)
____ Thick Dark Surface (A12)
____ Sandy Mucky Mineral (S1)
____ Sandy Gleyed Matrix (S4)
____ Sandy Redox (S5)
____ Stripped Matrix (S6)
____ Dark Surface (S7)

____ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
____ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
____ High Chroma Sands (S11) (**LRR K, L)**
____ Loamy Mucky Mineral (F1) (**LRR K, L**)
____ Loamy Gleyed Matrix (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)
____ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

____ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
____ Coast Prairie Redox (A16) (**LRR K, L, R**)
____ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
____ Polyvalue Below Surface (S8) (**LRR K, L**)
____ Thin Dark Surface (S9) (**LRR K, L**)
____ Iron-Manganese Masses (F12) (**LRR K, L, R**)
____ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
____ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________________

Depth (inches): ____________________

Hydric Soil Present? **Yes** ____ **No** X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 East City/County: Oswego Sampling Date: 09/05/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-3-U

Investigator(s): E. Frantz, H. Frantz, D. Johnston-Jordan, K. Hastings Section, Township, Range: Pennellville

Landform (hillside, terrace, etc.): Gentle slope Local relief (concave, convex, none): Flat Slope (%): 5

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.306500 Long: 76.211706 Datum: WGS84

Soil Map Unit Name: RhB: Rhinebeck silt loam, 2-6% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No N (If no, explain in Remarks.)

Are Vegetation Y , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ___ No N

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No X

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Hayfield on gradual slope adjacent to overgrown apple orchard. Unusally wet month of August including one rain event which exceeded normal rainfall for the entire month of August.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP-3-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Dactylis glomerata*	70	Yes	FACU
2. *Phleum pratense*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	90 (A)		360 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
100% herbacious

SOIL

Sampling Point: SP-3-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 4/3	100					Loamy/Clayey	Clay loam
12-16	10YR 5/4	80	10YR 5/8				Loamy/Clayey	Clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

____ Histosol (A1)
____ Histic Epipedon (A2)
____ Black Histic (A3)
____ Hydrogen Sulfide (A4)
____ Stratified Layers (A5)
____ Depleted Below Dark Surface (A11)
____ Thick Dark Surface (A12)
____ Sandy Mucky Mineral (S1)
____ Sandy Gleyed Matrix (S4)
____ Sandy Redox (S5)
____ Stripped Matrix (S6)
____ Dark Surface (S7)
____ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
____ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
____ High Chroma Sands (S11) (**LRR K, L)**
____ Loamy Mucky Mineral (F1) (**LRR K, L**)
____ Loamy Gleyed Matrix (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)
____ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

____ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
____ Coast Prairie Redox (A16) (**LRR K, L, R**)
____ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
____ Polyvalue Below Surface (S8) (**LRR K, L**)
____ Thin Dark Surface (S9) (**LRR K, L**)
____ Iron-Manganese Masses (F12) (**LRR K, L, R**)
____ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
____ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** ____ **No** X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 East City/County: Oswego Sampling Date: 09/05/2024
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-3-W
Investigator(s): E. Frantz, H. Frantz, D. Johnston-Jordan, K. Hastings Section, Township, Range: Pennellville
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.30632 Long: 76.211690 Datum: WGS84
Soil Map Unit Name: Rhinebeck silt loam, 2-6% slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation Y , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes ____ No X
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____
If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Swale in hayfield, noticably wet and soft compared to surrounding areas of field. East end heads toward drainage. Unusally wet month of August including one rain event which exceeded normal rainfall for the entire month of August.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____
Water Table Present? Yes ____ No X Depth (inches): ____
Saturation Present? Yes X No ____ Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Area drains to the east, soils moist to surface, evidence of tractor ruts.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-3-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Lysimachia nummularia*	100	Yes	FACW
2. *Juncus effusus*	15	No	OBL
3. *Lycopus americanus*	3	No	OBL
4. *Galium palustre*	5	No	OBL
5. *Cyperus esculentus*	2	No	FACW
6. *Symphyotrichum patens*	1	No	UPL
7. *Agrostis capillaris*	1	No	FAC
8.			
9.			
10.			
11.			
12.			
	127 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	23	x 1 =	23
FACW species	102	x 2 =	204
FAC species	1	x 3 =	3
FACU species	0	x 4 =	0
UPL species	1	x 5 =	5
Column Totals:	127 (A)		235 (B)

Prevalence Index = B/A = 1.85

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
100% herbaceous coverage

SOIL

Sampling Point: SP-3-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/1	95	10YR 3/6	5			Loamy/Clayey	Clay Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** X **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 East City/County: Oswego Sampling Date: 09/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-4-U

Investigator(s): DJJ Section, Township, Range: Pennellville

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.308498°N Long: 76.214175°W Datum: WGS84

Soil Map Unit Name: Ira gravelly fine sandy loam, 3-8% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes ___ No X

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point is 110 ft. from adjacent road Route 33. Land is in use as a pasture for cattle. Sample point is between SP-4-W and SP-5-W on a convex section of the slope. Unusally wet month of August including one rain event which exceeded normal rainfall for the entire month of August. Vegetation is meeting criteria on one FAC species

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology was observed

VEGETATION – Use scientific names of plants.

Sampling Point: SP-4-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Dactylis glomerata*	90	Yes	FACU
2. *Ranunculus repens*	40	Yes	FAC
3. *Euthamia graminifolia*	4	No	FAC
4. *Solanum carolinense*	2	No	FACU
5. *Rumex crispus*	1	No	FAC
6. *Taraxacum officinale*	1	No	FACU
7. *Juncus effusus*	4	No	OBL
8. *Calystegia sepium*	2	No	FAC
9. *Symphyotrichum lanceolatum*	1	No	FACW
10. *Oxalis corniculata*	1	No	FACU
11. *Solidago canadensis*	1	No	FACU
12. *Deschampsia cespitosa*	1	No	UPL
	148 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	4	x 1 =	4
FACW species	1	x 2 =	2
FAC species	47	x 3 =	141
FACU species	95	x 4 =	380
UPL species	1	x 5 =	5
Column Totals:	148	(A)	532 (B)

Prevalence Index = B/A = 3.59

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
100% herbaceous coverage, area is meeting hydrophytic criteria based on one FAC plant

SOIL

Sampling Point: SP-4-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 3/4	95	7.5YR 5/8	5			Sandy	Sandy Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
Soil is non-hydric.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 East City/County: Oswego Sampling Date: 09/06/2024
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-4-W
Investigator(s): D. Johnston-Jordan Section, Township, Range: Pennellville
Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Concave Slope (%): 5
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.308305°N Long: 76.213884°W Datum: WGS84
Soil Map Unit Name: Ira gravelly fine sandy loam, 3-8% slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ___	**Is the Sampled Area**
Hydric Soil Present?	Yes X No ___	**within a Wetland? Yes X No ___**
Wetland Hydrology Present?	Yes X No ___	If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point is 130 ft. from adjacent road Route 33. Land is in use as a pasture for cattle. Two concave areas SP-4-W and SP-5-W exihibit wetland characteristics. Unusally wet month of August including one rain event which exceeded normal rainfall for the entire month of August.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
X Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 0
Water Table Present? Yes X No ___ Depth (inches): 10
Saturation Present? Yes X No ___ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Saturation Present to surface. Standing water is present in cow hoof prints at the time of the wetland determination.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-4-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Juncus effusus*	35	Yes	OBL
2. *Ranunculus repens*	20	No	FAC
3. *Agrostis gigantea*	80	Yes	FACW
4. *Mimulus ringens*	1	No	OBL
5. *Epilobium coloratum*	1	No	OBL
6. *Solidago gigantea*	1	No	FACW
7. *Epilobium ciliatum*	1	No	FACW
8.			
9. *Cyperus strigosus*	1	No	FACW
10. *Carex ssp.*	1	No	OBL
11. *Eleocharis ssp.*	1	No	OBL
12. *Lysimachia nummularia*	1	No	FACW
	143 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	39	x 1 =	39
FACW species	84	x 2 =	168
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	143	(A)	267 (B)

Prevalence Index = B/A = 1.87

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
100% herbaceous cover. Cattle have been grazing the sample location.

SOIL

Sampling Point: SP-4-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	100					Loamy/Clayey	Clay Loam
9-12	10YR 5/2	40	10YR 4/6	30				
			10YR 3/2	30				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 East City/County: Oswego County Sampling Date: 09/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-5-W

Investigator(s): Dylan Johnston-Jordan, EHF, HEF Section, Township, Range: Pennellville

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.308784°N Long: 76.214151°W Datum: WGS84

Soil Map Unit Name: Rhinebeck silt loam 2-6% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes X No ___

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point is 150 ft. from adjacent road Route 33. Land is in use as a pasture for cattle. Two concave areas SP-4-W and SP-5-W exihibit wetland characteristics. Unusally wet month of August including one rain event which exceeded normal rainfall for the entire month of August.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes X No ___ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Standing water was not present. The water table was not observed at the depths reached for the soil testing, but the soils were somewhat saturated.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-5-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size: 15)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juncus effusus*	60	Yes	OBL
2. *Lysimachia nummularia*	80	Yes	FACW
3. *Solidago gigantea*	5	No	FACW
4. *Symphyotrichum lanceolatum*	6	No	FACW
5. *Agrostis gigantea*	25	No	FACW
6. *Ranunculus repens*	3	No	FAC
7. *Euthamia graminifolia*	1	No	FAC
8. *Cyperus strigosus*	1	No	FACW
9. *Lythrum salicaria*	2	No	OBL
10. *Rumex crispus*	1	No	FAC
11. *Galium palustre*	2	No	OBL
12. *Carex stricta*	1	No	OBL
	187 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:			Multiply by:	
OBL species	65	x 1 =	65	
FACW species	117	x 2 =	234	
FAC species	5	x 3 =	15	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column Totals:	187	(A)	314	(B)

Prevalence Index = B/A = 1.68

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
100% herbaceous cover. Cattle have been grazing the sample location.

SOIL

Sampling Point: SP-5-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	95	5YR 4/6	5			Loamy/Clayey	Clay Loam
14-18	10YR 5/2	50	10YR 4/6	25			Loamy/Clayey	Clay
			10YR 2/1	25				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___
Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Clearly hydric soils with some interesting carbon concreations in the 14-18 in sample

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lapointe City/County: Oswego Sampling Date: 9/13/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-1-W

Investigator(s): EF, HF, DJJ Section, Township, Range: Pennellville

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope (%): 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.305761 Long: -76.225144 Datum: WGS84

Soil Map Unit Name: Palms muck NWI classification: ____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____
If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Selected sample point is adjacent to linear drainage ditches. Entire property has large patches of invasives.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____
Water Table Present? Yes X No ____ Depth (inches): 16
Saturation Present? Yes X No ____ Depth (inches): 12
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
A small amount of standing water is present in the linear ditches in some places but in the areas between the ditches.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-1-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Bidens frondosa*	10	No	FACW
2. *Impatiens capensis*	40	Yes	FACW
3. *Persicaria sagittata*	20	No	OBL
4. *Epilobium coloratum*	1	No	OBL
5. *Lythrum salicaria*	25	No	OBL
6. *Ambrosia artemisiifolia*	50	Yes	FACU
7. *Agrostis gigantea*	1	No	FACW
8.			
9.			
10.			
11.			
12.			
	147 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	46	x 1 =	46
FACW species	51	x 2 =	102
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	147 (A)		348 (B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
100% herbaceous coverage.

SOIL

Sampling Point: SP-1-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	100					Muck	Organic Muck
18-24	N 3/	100					Loamy/Clayey	Clay

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol (A1)
- X Histic Epipedon (A2)
- X Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lapointe City/County: Oswego Sampling Date: 9/13/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-2-W

Investigator(s): EF, HF, DJJ Section, Township, Range: Pennellville

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope (%): 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.304655 Long: -76.223854 Datum: WGS84

Soil Map Unit Name: Palms muck NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes X No ___

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___

If yes, optional Wetland Site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)
Selected sample point is adjacent to linear drainage ditches. Entire property has large patches of invasives, sample point is in a patch of Phalaris arundinacea

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 16

Saturation Present? Yes X No ___ Depth (inches): 12
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
A small amount of standing water is present in the linear ditches in some places but in the areas between the ditches.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-2-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Phalaris arundinacea*	90	Yes	FACW
2. *Impatiens capensis*	2	No	FACW
3. *Scirpus cyperinus*	1	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	93 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW species	92	x 2 =	184
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	93 (A)		185 (B)

Prevalence Index = B/A = 1.99

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Sample point is in a patch of thick Phalaris arundinacea, giving an example of one of the invasive patches.

SOIL

Sampling Point: SP-2-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	100					Muck	Organic Muck
18-24	N 3/	100					Loamy/Clayey	Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol (A1)
X Histic Epipedon (A2)
X Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____

Depth (inches): ____

Hydric Soil Present? **Yes** X **No** ____

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lapointe City/County: Oswego Sampling Date: 9/13/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-3-W

Investigator(s): EF, HF, DJJ Section, Township, Range: Pennellville

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope (%): 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.303811 Long: 76.223563 Datum: WGS84

Soil Map Unit Name: Palms muck NWI classification: ____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes X No ___

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Selected sample point is located in one of the linear drainage ditches. Entire property has large patches of invasives.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): ____

Water Table Present? Yes X No ___ Depth (inches): ____

Saturation Present? Yes X No ___ Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Standing water is present in the ditch

VEGETATION – Use scientific names of plants.

Sampling Point: SP-3-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Persicaria sagittata*	30	Yes	OBL
2. *Leersia oryzoides*	20	Yes	OBL
3. *Bidens cernua*	20	Yes	OBL
4. *Persicaria hydropiper*	10	No	OBL
5. *Sparganium americanum*	5	No	OBL
6. *Persicaria pensylvanica*	3	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	88 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	85	x 1 =	85
FACW species	3	x 2 =	6
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	88 (A)		91 (B)

Prevalence Index = B/A = 1.03

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
60% herbaceous cover.

SOIL

Sampling Point: SP-3-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

____ Histosol (A1)
____ Histic Epipedon (A2)
____ Black Histic (A3)
____ Hydrogen Sulfide (A4)
____ Stratified Layers (A5)
____ Depleted Below Dark Surface (A11)
____ Thick Dark Surface (A12)
____ Sandy Mucky Mineral (S1)
____ Sandy Gleyed Matrix (S4)
____ Sandy Redox (S5)
____ Stripped Matrix (S6)
____ Dark Surface (S7)
____ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
____ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
____ High Chroma Sands (S11) (**LRR K, L)**
____ Loamy Mucky Mineral (F1) (**LRR K, L**)
____ Loamy Gleyed Matrix (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)
____ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

____ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
____ Coast Prairie Redox (A16) (**LRR K, L, R**)
____ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
____ Polyvalue Below Surface (S8) (**LRR K, L**)
____ Thin Dark Surface (S9) (**LRR K, L**)
____ Iron-Manganese Masses (F12) (**LRR K, L, R**)
____ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
____ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: ____________
Depth (inches): ____________

Hydric Soil Present? **Yes** X **No** ____

Remarks:
No soil sample was taken due to sample point being in ditch. Hydric soils are assumed to be present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-1-U
Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ___
Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 1-2
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.307355 Long: -76.219929 Datum: WSG84
Soil Map Unit Name: Scriba gravelly fine sandy loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No X
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils around sample point. Steady rainfall throughout night and morning.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Standing water in tractor ruts that surround sample point approximently 2 inches deep. Sample hole has no water to a depth of 15 inches. No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-1-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Lots of soy litter on ground. No understory vegetation

SOIL

Sampling Point: SP-1-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10yr 3/1	100					Loamy/Clayey	
7-12	10yr 3/1	95	7.5yr 6/4	5			Loamy/Clayey	
12-15	7.5yr 5/2	60	7.5yr 5/6	40			Sandy	Sandy/ loam

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils are more compact at 7 inches and below.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-2-U

Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ______

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.306756 Long: -76.218939 Datum: WSG84

Soil Map Unit Name: Madalin Silt Loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ____

Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

If yes, optional Wetland Site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils around sample point. Steady rainfall throughout the night and morning. Adjacent to a delineated wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes X No ____ Depth (inches): 14

Saturation Present? Yes ____ No X Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Water in hole at 14 inched below surface, tractor ruts have standing water. No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-2-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Soy litters the ground with no understory vegetation.

SOIL

Sampling Point: SP-2-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr 3/1	100					Loamy/Clayey	
8-12	10yr 3/1	95	7.5yr 6/4	5			Loamy/Clayey	
12-16	7.5yr 6/1	70	7.5yr 5/6	30			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
? Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:
No redox in top layer

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-3-U

Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ______

Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2-3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.305435 Long: -76.215527 Datum: WSG84

Soil Map Unit Name: Rhinebeck Silt Loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No X
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils. Sample point is in tractor turn around. Slightly sloping towards wetland to the Northeast.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern. Steady rainfall throughout the night and morning. Water pooling in tractor ruts but does not contribute to hydrology at sample point.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-3-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Lots of soy litter on the ground. No understory vegetation

SOIL

Sampling Point: SP-3-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr 4/2	100					Loamy/Clayey	
8-12	10yr 6/2	70	7.5yr 5/6	30			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** ____ **No** X

Remarks:
No redox in top layer

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-3-W

Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ____

Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3055 Long: -76.215423 Datum: WSG84

Soil Map Unit Name: Rhinebeck Silt Loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ____

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Shrub wetland on the edge of a drain that has been manipulated/ dug out in the past. Approximently 10 feet away from drain. Adjacent to an agriculture farm field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 1

Water Table Present? Yes X No ____ Depth (inches): 10

Saturation Present? Yes ____ No X Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Standing water within the plot. Water in hole 10 inches below surface. No oxidized root channels

VEGETATION – Use scientific names of plants.

Sampling Point: SP-3-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Cornus amomum*	30	Yes	FACW
2. *Viburnum dentatum*	5	No	FAC
3. *Cornus racemosa*	25	Yes	FAC
4. *Lonicera tatarica*	5	No	FACU
5. *Salix spp.*	15	No	FACW
6.			
7.			
	80 =Total Cover		

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Solidago gigantea*	20	Yes	FACW
2. *Leersia oryzoides*	2	No	OBL
3. *Symphyotrichum lanceolatum*	20	Yes	FACW
4. *Fragaria vesca*	5	No	UPL
5. *Taraxacum officinale*	1	No	FACU
6. *Carex spp.*	1	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	49 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	2	x 1 =	2	
FACW species	86	x 2 =	172	
FAC species	30	x 3 =	90	
FACU species	6	x 4 =	24	
UPL species	5	x 5 =	25	
Column Totals:	129	(A)	313	(B)

Prevalence Index = B/A = 2.43

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
50% herbaceous, 80% shrub

SOIL

Sampling Point: SP-3-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr 3/1	95	10yr 5/6	5			Loamy/Clayey	
8-12	10yr 4/1	90	7.5yr 5/2	5			Loamy/Clayey	
			10yr 6/3	5				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_X_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______________________

Depth (inches): ______________________

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:
Redox in top layer

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-4-U
Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ______
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.305747 Long: 43.305747 Datum: WSG84
Soil Map Unit Name: Madalin Silt Loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No X
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils around sample point. Adjacent to a ditch that ranges from 8-0 feet deep

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern. Steady rainfall throughout the night and morning. Water pooling in tractor ruts does not reflect hydrology observations at sample point. No saturation or water in the test pit.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-4-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Lots of soy litter on the ground. No understory vegetation

SOIL

Sampling Point: SP-4-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 3/1	100					Loamy/Clayey	
6-9	10yr 4/1	90	7.5yr 5/6	10			Loamy/Clayey	Clay
9-12	7.5yr 5/2	80	7.5yr 5/7	20			Loamy/Clayey	Clay

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Dense clay below 6 inches

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-5-U
Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ______
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.306189 Long: -76.219544 Datum: WSG84
Soil Map Unit Name: Madalin Silt Loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No X
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils around sample point. adjacent to a ditch that ranges from 8-0 feet deep.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern. Steady rainfall throughout the night and morning. Water pooling in tractor ruts does not reflect hydrology observations at sample point. No saturation or water in the test pit.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-5-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Lots of soy litter on the ground. No understory vegetation

SOIL

Sampling Point: SP-5-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 3/1	100					Loamy/Clayey	
6-9	10yr 4/1	90	7.5yr 5/6	10			Loamy/Clayey	
9-12	7.5yr 5/2	60	7.5yr 5/6	40			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: ___
Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-6-U
Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ____
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.306146 Long: 43.306146 Datum: WSG84
Soil Map Unit Name: Rhinebeck Silt Loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**		
Hydric Soil Present?	Yes X	No ____	**within a Wetland?**	**Yes** ____	**No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____		

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils. Sample point was picked on area with no tractor ruts but ruts surround point. Adjacent ditch is 6 inches deep but gets as deep as 8 feet.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

____ Surface Water (A1)
____ High Water Table (A2)
____ Saturation (A3)
____ Water Marks (B1)
____ Sediment Deposits (B2)
____ Drift Deposits (B3)
____ Algal Mat or Crust (B4)
____ Iron Deposits (B5)
____ Inundation Visible on Aerial Imagery (B7)
____ Sparsely Vegetated Concave Surface (B8)

____ Water-Stained Leaves (B9)
____ Aquatic Fauna (B13)
____ Marl Deposits (B15)
____ Hydrogen Sulfide Odor (C1)
____ Oxidized Rhizospheres on Living Roots (C3)
____ Presence of Reduced Iron (C4)
____ Recent Iron Reduction in Tilled Soils (C6)
____ Thin Muck Surface (C7)
____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

____ Surface Soil Cracks (B6)
____ Drainage Patterns (B10)
____ Moss Trim Lines (B16)
____ Dry-Season Water Table (C2)
____ Crayfish Burrows (C8)
____ Saturation Visible on Aerial Imagery (C9)
____ Stunted or Stressed Plants (D1)
____ Geomorphic Position (D2)
____ Shallow Aquitard (D3)
____ Microtopographic Relief (D4)
____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern. Steady rainfall throughout the night and morning. Water pooling in tractor ruts does not reflect hydrology observations at sample point. No saturation or water in the test pit.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-6-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Lots of soy litter on the ground. No understory vegetation

SOIL

Sampling Point: SP-6-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 3/1	100					Loamy/Clayey	
6-10	10yr 4/1	90	7.5yr 5/6	10			Loamy/Clayey	
10-15	7.5yr 5/2	60	7.5yr 5/6	40			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-6-W

Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ____

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.306134 Long: 43.306134 Datum: WSG84

Soil Map Unit Name: Rhinebeck Silt Loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ____

Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X
Hydric Soil Present?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils around sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes X	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 1

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern. Steady rainfall throughout the night and morning. Standing surface water in areas where there was no disturbance from tractor.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-6-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No understory vegetation

SOIL

Sampling Point: SP-6-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 3/1	100					Loamy/Clayey	
6-9	10yr 4/1	95	7.5yr 5/6	5			Loamy/Clayey	
9-12	7.5yr 5/2	55	7.5yr 5/6	45			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
X Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-7-U

Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.306331 Long: 43.306331 Datum: WSG84

Soil Map Unit Name: Madaline Silt Loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No X

Hydric Soil Present? Yes X No ___

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving compacted soils. This area is unique because of the saturation and water table at 10 inches but unknown duration. Not a wetland because of the lack of any other hydrology indicators, the quality of soy bean growth, and landscape position in comparason to known wetland areas. proposed we review this area with agencies to discuss wetland boundary confirmation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes X No ___ Depth (inches): 10
Saturation Present? Yes X No ___ Depth (inches): 10
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern. Steady rainfall throughout the night and morning. Wate in hole 10 inches below surface.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-7-U

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size: ____)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Lots of soy litter on the ground. No understory vegetation

SOIL

Sampling Point: SP-7-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 3/3	97	7.5yr 4/4	3			Loamy/Clayey	
6-12	10yr 3/1	90	7.5yr 4/5	10			Loamy/Clayey	Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7)
☐ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ High Chroma Sands (S11) (**LRR K, L)**
☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type:
Depth (inches):

Hydric Soil Present? **Yes** X **No** ____

Remarks:
Clay becomes more dense below 6 inches.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-8-U
Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ___
Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none): None Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.30662 Long: -76.218688 Datum: WSG84
Soil Map Unit Name: Madaline Silt Loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ___
Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No X
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils. Sample point adjacent to farm ditch to the South and wetland to the North. We included a small drainage feature as wetland connecting the two prominant wetland areas that are north and south of sample point, reguardless of call this point an upland sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern. Steady rainfall throughout the night and morning. Water pooling in tractor ruts does not reflect hydrology observations at sample point. Sample point is within what was a likely drainage featureand we suspect that there is tiled drinage in this area.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-8-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Lots of soy litter on the ground. No understory vegetation

SOIL

Sampling Point: SP-8-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5yr 3/1	100					Loamy/Clayey	
6-12	7.5yr 4/1	95	7.5yr 4/4	5			Loamy/Clayey	
12-15	7.5yr 6/1	85	7.5yr 5/6	15			Loamy/Clayey	Clay

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:
No water in hole

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-9-U

Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ____

Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.306386 Long: -76.218281 Datum: WSG84

Soil Map Unit Name: Ira gravelly fone sandy loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X
Hydric Soil Present?	Yes X	No ____
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils around sample point. Uphill area sloped to the west towards farm ditch

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern. Steady rainfall throughout the night and morning. Limited tractor rutting

VEGETATION – Use scientific names of plants.

Sampling Point: SP-9-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Lots of soy litter on the ground. No understory vegetation

SOIL

Sampling Point: SP-9-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5yr 4/4	100					Loamy/Clayey	
6-12	7.5yr 5/2	95	7.5yr 5/6	5			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ☐ High Chroma Sands (S11) (**LRR K, L)**
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ________

Depth (inches): ________

Hydric Soil Present? **Yes** X **No** ____

Remarks:
Rocky soils

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Route 33 City/County: Hastings/ Oswego Sampling Date: 11/06/2024
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-10-U
Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ___
Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none): None Slope (%): 1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.304674 Long: -76.218621 Datum: WSG84
Soil Map Unit Name: Rhinebeck Silt Loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation Y , Soil Y , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No X
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field planted with Soybeans. Field has been harvested and plowed annually for the past 70+ years resulting in disturbed vegetation and soil. Recently harvested with large combines/ tractors leaving deep ruts and compacted soils around sample point. 8ft deep ditch to West of sample point

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Soils are damp but not saturated. Steady rainfall throughout the night and morning leaving shallow puddles on undisturbed field surface. Samll amount of algal, not mats, sparce around sample point. No oxidized root channels. Water pooling in tractor ruts does not reflect hydrology observations at sample point.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-10-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Soy was thriving and tall. Lots of soy litter on the ground. No understory vegetation

SOIL

Sampling Point: SP-10-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5yr 4/1						Loamy/Clayey	
6-12	7.5yr 3/1	95	5yr 4/4	5			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 05/23/2024
Applicant/Owner: The Wetland Trust, Inc. State: NY Sampling Point: SP1-U
Investigator(s): E. Frantz, H. Frantz, K. Gerhardt, M. Herman, G. Deyo Section, Township, Range: ____
Landform (hillside, terrace, etc.): Edge of woods Local relief (concave, convex, none): None Slope (%): 4-5
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3095349717 Long: -76.2230525117 Datum: WGS 84
Soil Map Unit Name: ScB: Scriba gravelly fine sandy loam, 0-8% slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ____
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X
If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Edge of western boundary woods (top of drainage); becoming drier upland forest.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____
Water Table Present? Yes ____ No X Depth (inches): ____
Saturation Present? Yes ____ No X Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No water observed in soil test pit.

VEGETATION – Use scientific names of plants.

Sampling Point: SP1-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size: 5 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Solidago rugosa*	80	Yes	FAC
2. *Anthoxanthum odoratum*	60	Yes	FACU
3. *Onoclea sensibilis*	10	No	FACW
4. *Juncus effusus*	3	No	OBL
5. *Acer rubrum*	1	No	FAC
6. *Carya cordiformis*	1	No	FAC
7. *Solidago gigantea*	1	No	FACW
8.			
9.			
10.			
11.			
12.			
	156 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	3	x 1 =	3
FACW species	11	x 2 =	22
FAC species	82	x 3 =	246
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	156	(A)	511 (B)

Prevalence Index = B/A = 3.28

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)
Only 2 dominant species, one being FAC and the other being FACU. Sample plot excluding edge of woods, containing Populus tremuloides (quaking aspen; FACU), Betula populifolia (gray birch; FAC), Acer rubrum (red maple; FAC), Carya cordiformis (bitter-nut hickory; FAC), and Fagus grandifolia (American beech; FACU).

SOIL

Sampling Point: SP1-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loamy/Clayey	
6-12	10YR 3/3	85	10YR 4/4	15				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Aquitard

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
Soil test pit at 43.309030, -76.222594 in agricultural field approximately 70 yards from western forest boundary: 5YR 4/3 (70%) 5YR 5/4 (30%).
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 05/23/2024
Applicant/Owner: The Wetland Trust, Inc. State: NY Sampling Point: SP1-W
Investigator(s): E. Frantz, H. Frantz, K. Gerhardt, M. Herman, G. Deyo Section, Township, Range: ___
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 4-5
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3095055350 Long: -76.2228483133 Datum: WGS 84
Soil Map Unit Name: ScB: Scriba gravelly fine sandy loam, 0-8% slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___
If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Near western property line (dry, forested area); drainage area surrounded by agriculture.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
X Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
X Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes X No ___ Depth (inches): 5
Saturation Present? Yes X No ___ Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No visible channels; wet meadow; depression area/drainage between 2 agricultural fields.

VEGETATION – Use scientific names of plants.

Sampling Point: SP1-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size: 5 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Onoclea sensibilis*	30	Yes	FACW
2. *Solidago rugosa*	35	Yes	FAC
3. *Solidago gigantea*	15	No	FACW
4. *Juncus effusus*	15	No	OBL
5. *Ranunculus*	3	No	
6. *Carex vulpinoidea*	3	No	OBL
7. *Agrostis gigantea*	1	No	FACW
8. *Glyceria striata*	1	No	OBL
9. *Liriodendron tulipifera*	1	No	FACU
10. *Acer rubrum*	1	No	FAC
11. *Anthoxanthum odoratum*	1	No	FACU
12.			
	106 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	19	x 1 =	19
FACW species	46	x 2 =	92
FAC species	36	x 3 =	108
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	103	(A)	227 (B)

Prevalence Index = B/A = 2.20

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
100% herbaceous; wet meadow.

SOIL

Sampling Point: SP1-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 3/2	100					Loamy/Clayey	Surface soil; organic
1-10	10YR 3/2	100					Loamy/Clayey	
10-14	10YR 5/2	80	7.5YR 5/8	20	D	M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7)
☐ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ High Chroma Sands (S11) (**LRR K, L)**
☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Aquitard

Depth (inches):

Hydric Soil Present? **Yes** X **No**

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 05/23/2024
Applicant/Owner: The Wetland Trust, Inc. State: NY Sampling Point: SP2-U
Investigator(s): E. Frantz, H. Frantz, K. Gerhardt, M. Herman, G. Deyo Section, Township, Range: ___
Landform (hillside, terrace, etc.): Field Local relief (concave, convex, none): None Slope (%): 3-5
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3089054850 Long: -76.2215030800 Datum: WGS 84
Soil Map Unit Name: RhA: Rhinebeck silt loam, 0-2% slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X
Hydric Soil Present?	Yes ___	No X	
Wetland Hydrology Present?	Yes ___	No X	If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): 15
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP2-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Anthoxanthum odoratum*	65	Yes	FACU
2. *Solidago canadensis*	30	Yes	FACU
3. *Ranunculus*	8	No	
4. *Dactylis glomerata*	5	No	FACU
5. *Taraxacum officinale*	2	No	FACU
6. *Trifolium pratense*	2	No	FACU
7. *Plantago major*	1	No	FACU
8. *Plantago lanceolata*	1	No	FACU
9. *Rumex crispus*	1	No	FAC
10.			
11.			
12.			
	115	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	1	x 3 =	3
FACU species	106	x 4 =	424
UPL species	0	x 5 =	0
Column Totals:	107	(A)	427 (B)

Prevalence Index = B/A = 3.99

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP2-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-7	5YR 3/3	85	5YR 4/6	15				
7-14	5YR 4/3	70	5YR 4/6	30				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

____ Histosol (A1)
____ Histic Epipedon (A2)
____ Black Histic (A3)
____ Hydrogen Sulfide (A4)
____ Stratified Layers (A5)
____ Depleted Below Dark Surface (A11)
____ Thick Dark Surface (A12)
____ Sandy Mucky Mineral (S1)
____ Sandy Gleyed Matrix (S4)
____ Sandy Redox (S5)
____ Stripped Matrix (S6)
____ Dark Surface (S7)

____ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
____ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
____ High Chroma Sands (S11) (**LRR K, L)**
____ Loamy Mucky Mineral (F1) (**LRR K, L**)
____ Loamy Gleyed Matrix (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)
____ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

____ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
____ Coast Prairie Redox (A16) (**LRR K, L, R**)
____ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
____ Polyvalue Below Surface (S8) (**LRR K, L**)
____ Thin Dark Surface (S9) (**LRR K, L**)
____ Iron-Manganese Masses (F12) (**LRR K, L, R**)
____ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
____ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
____ Red Parent Material (F21)
____ Very Shallow Dark Surface (TF12)
____ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____

Depth (inches): ____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 05/23/2024

Applicant/Owner: The Wetland Trust, Inc. State: NY Sampling Point: SP2-W

Investigator(s): E. Frantz, H. Frantz, K. Gerhardt, M. Herman, G. Deyo Section, Township, Range: ___

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2-3

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3089156317 Long: -76.2216442967 Datum: WGS 84

Soil Map Unit Name: ScB: Scriba gravelly fine sandy loam, 0-8% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ___

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes X No ___

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 25

Saturation Present? Yes X No ___ Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SP2-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size: 5 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carex stipata*	65	Yes	OBL
2. *Solidago gigantea*	50	Yes	FACW
3. *Juncus effusus*	10	No	OBL
4. *Eupatorium perfoliatum*	10	No	FACW
5. *Onoclea sensibilis*	8	No	FACW
6. *Carex pseudocyperus*	5	No	OBL
7. *Acer rubrum*	2	No	FAC
8. *Ranunculus*	2	No	
9.			
10.			
11.			
12.			
	152 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	68	x 2 =	136
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	150	(A)	222 (B)

Prevalence Index = B/A = 1.48

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Wet meadow.

SOIL

Sampling Point: SP2-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 3/2	90	7.5YR 5/8	10				
15-18	10YR 3/1	98	10R 4/6	2				
18-20	10YR 5/1	50	10YR 3/6	50				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7)

☐ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
☐ High Chroma Sands (S11) (**LRR K, L)**
☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
☐ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ____

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/23/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP3U

Investigator(s): EF,HF,KH Section, Township, Range: ____

Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none): none Slope (%): 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3084951887 Long: -76.2194849133 Datum: WGS 84

Soil Map Unit Name: Ma: Madalin silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No x

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes ____ No x

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Rolling topography, 20 feet away from drainage swale

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____

Water Table Present? Yes ____ No x Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No x Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP3U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
Soy bean is thriving, 30 + inches tall

SOIL

Sampling Point: SP3U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5yr 3/1	90	7.5yr 4/4	10			Loamy/Clayey	
12-14	7.5yr 5/2	90	7.5yr 4/6	10				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ☐ High Chroma Sands (S11) (**LRR K, L)**
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** X **No**

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Below 16 inches we are encountering more sandy soils, soils moist at 20 inches

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/23/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP3W

Investigator(s): EF,HF,KH Section, Township, Range: ____

Landform (hillside, terrace, etc.): Drainage Swale Local relief (concave, convex, none): concave Slope (%): 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3084342863 Long: -76.2196189063 Datum: WGS 84

Soil Map Unit Name: Madalin silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes x No ____
Hydric Soil Present? Yes x No ____
Wetland Hydrology Present? Yes x No ____

Is the Sampled Area within a Wetland? **Yes** x **No** ____
If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- x Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____
Water Table Present? Yes ____ No x Depth (inches): ____
Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** x **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Area is acting as a drainage feature, wet swale,drainage patterns

VEGETATION – Use scientific names of plants.

Sampling Point: SP3W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Euthamia graminifolia*	25	No	FAC
2. *Solidago gigantea*	40	Yes	FACW
3. *Eupatorium perfoliatum*	5	No	FACW
4. *Leersia oryzoides*	40	Yes	OBL
5. *Juncus effusus*	1	No	OBL
6. *Symphyotrichum lanceolatum*	10	No	FACW
7. *Carex lurida*	5	No	OBL
8. *Phalaris arundinacea*	1	No	FACW
9.			
10.			
11.			
12.			
	127	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	46	x 1 =	46
FACW species	56	x 2 =	112
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	127	(A)	233 (B)

Prevalence Index = B/A = 1.83

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP3W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	7.5yr 3/1	90	7.5yr 4/6	10			Loamy/Clayey	
17-24	7.5yr 6/1	80	7.5yr 5/6	20				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Soils becoming more clay as we go deeper

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner   City/County: Hastings/Oswego   Sampling Date: 7/23/24

Applicant/Owner: The Wetland Trust inc.   State: NY   Sampling Point: SP4U

Investigator(s): EF,HF,KH   Section, Township, Range: ____

Landform (hillside, terrace, etc.): ____   Local relief (concave, convex, none): none   Slope (%): 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101   Lat: 43.3070703858   Long: -76.2169925395   Datum: WGS 84

Soil Map Unit Name: Madalin silt loam   NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No x

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes ____ No x

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point selected based upon arial photographs wet signature, Soy bean is thriving in this location

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

____ Surface Water (A1)
____ High Water Table (A2)
____ Saturation (A3)
____ Water Marks (B1)
____ Sediment Deposits (B2)
____ Drift Deposits (B3)
____ Algal Mat or Crust (B4)
____ Iron Deposits (B5)
____ Inundation Visible on Aerial Imagery (B7)
____ Sparsely Vegetated Concave Surface (B8)

____ Water-Stained Leaves (B9)
____ Aquatic Fauna (B13)
____ Marl Deposits (B15)
____ Hydrogen Sulfide Odor (C1)
____ Oxidized Rhizospheres on Living Roots (C3)
____ Presence of Reduced Iron (C4)
____ Recent Iron Reduction in Tilled Soils (C6)
____ Thin Muck Surface (C7)
____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

____ Surface Soil Cracks (B6)
____ Drainage Patterns (B10)
____ Moss Trim Lines (B16)
____ Dry-Season Water Table (C2)
____ Crayfish Burrows (C8)
____ Saturation Visible on Aerial Imagery (C9)
____ Stunted or Stressed Plants (D1)
____ Geomorphic Position (D2)
____ Shallow Aquitard (D3)
____ Microtopographic Relief (D4)
____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____

Water Table Present? Yes ____ No x Depth (inches): ____

Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP4U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
Soy bean thriving

SOIL

Sampling Point: SP4U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5yr 5/1	80	2.5yr 4/4	20			Loamy/Clayey	
12-16	10yr 5/3	90	10yr 5/8	10			Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** X **No**

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Soils look very similar below 10 inches

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/23/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP4W

Investigator(s): EF,HF,KH Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3069857092 Long: -76.2170981020 Datum: WGS 84

Soil Map Unit Name: Madalin silt loam NWI classification: ___

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes X No ___

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
oxidized root channels, Appears recent rain event water was at surface,soil is moist, 1-2 foot lower small maintaned ditch in center of feature

VEGETATION – Use scientific names of plants.

Sampling Point: SP4W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Agrostis gigantea*	60	Yes	FACW
2. *Symphyotrichum lanceolatum*	40	Yes	FACW
3. *Cyperus esculentus*	3	No	FACW
4. *Persicaria sagittata*	1	No	OBL
5. *Carex scoparia*	1	No	FACW
6. *Juncus effusus*	3	No	OBL
7.			
8.			
9.			
10.			
11.			
12.			
	108 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	4	x 1 =	4
FACW species	104	x 2 =	208
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	108	(A)	212 (B)

Prevalence Index = B/A = 1.96

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** __

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP4W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5yr 4/1	95	2.5yr 4/6	5			Loamy/Clayey	
8-13	2.5yr 4/1	70	2.5yr 4/6	30			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___
Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/23/2024

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP5U

Investigator(s): EF,HF,KH Section, Township, Range: Town of Hasting

Landform (hillside, terrace, etc.): ______ Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3074362815 Long: -76.2184815063 Datum: WGS 84

Soil Map Unit Name: Madalin silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes x No ___

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No x

Hydric Soil Present? Yes x No ___

Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)
Seledcted location based upon arial photographs wet signature,

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP5U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Glycine max*	90	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	90	x 5 =	450
Column Totals:	90 (A)		450 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP5U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	7.5yr 4/1	90	7.5yr 4/6	10			Loamy/Clayey	
9-14	2.5y 6/3	80	5yr 4/6	20			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** x **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/23/2024

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP6U

Investigator(s): EF,HF,KH Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3079588018 Long: -76.2204291663 Datum: WGS 84

Soil Map Unit Name: Madalin silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No x

Hydric Soil Present? Yes x No ___

Wetland Hydrology Present? Yes ___ No ___

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Seledcted location based upon arial photographs wet signature, Area 10-20 feet wide from drainage down to hedgerow, it is presumed that all areas within agricultural areas have some degree of disturbance to 3 parameters

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP6U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Glycine max*	80	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	80	x 5 =	400
Column Totals:	80	(A)	400 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
vegatation is 12-16 inches tall, adjacent 20 feet away vegatation is 30 inches +, Yellowing vegatation

SOIL

Sampling Point: SP6U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5yr 3/1	80	7.5yr 4/4	20			Loamy/Clayey	
8-11	2.5y 6/1	70	7.5yr 5/6	30			Loamy/Clayey	
11-16	2.5y 6/1	90	5yr 4/6	10			Sandy	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
X Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________________

Depth (inches): ____________________

Hydric Soil Present? **Yes** x **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Horizon depths shallow due to periodic flood events

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/23/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP7U
Investigator(s): EF,HF,KH Section, Township, Range: ___
Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none): none Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3086843768 Long: -76.2185588172 Datum: WGS 84
Soil Map Unit Name: RhA: Rhinebeck silt loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No x
Hydric Soil Present? Yes x No ___
Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
75 feet from drainage swale in agricultural field

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology, no drainage patterns

VEGETATION – Use scientific names of plants.

Sampling Point: SP7U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100	(A)	500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP7U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10yr 4/2	90	7.5yr 4/6	10			Loamy/Clayey	
7-15	7.5yr 4/3	70	7.5yr 4/6	30			Loamy/Clayey	
15-18	7.5yr 6/1	80	7.5yr 5/6	20			Sandy	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/23/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP8U
Investigator(s): EF,HF,KH Section, Township, Range: ____
Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none none Slope (%) 1-3
Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: ____ Long: ____ Datum: WGS 84
Soil Map Unit Name Madalin silt loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes ___ No x
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)
Just above area of wet meadow where it sits more concave

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
x Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ____
Water Table Present? Yes ___ No x Depth (inches): ____
Saturation Present? Yes ___ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology except for oxidized root channels

VEGETATION – Use scientific names of plants.

Sampling Point: SP8U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Agrostis gigantea*	25	Yes	FACW
2. *Carex vulpinoidea*	3	No	OBL
3. *Symphyotrichum lanceolatum*	15	No	FACW
4. *Oxalis stricta*	1	No	FACU
5. *Ranunculus acris*	3	No	FAC
6. *Juncus effusus*	1	No	OBL
7. *Agrostis stolonifera*	40	Yes	FACW
8.			
9.			
10.			
11.			
12.			
	88	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	4	x 1 =	4
FACW specie	80	x 2 =	160
FAC species	3	x 3 =	9
FACU species	1	x 4 =	4
UPL species	0	x 5 =	0
Column Totals	88 (A)		177 (B)

Prevalence Index = B/A = 2.01

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP8U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10yr 4/3	90	10yr 4/4	10			Loamy/Clayey	
10-16	10yr 4/3	60	10yr 4/4	40			Loamy/Clayey	
16-18	10yr 6/2	80	10yr 5/6	20			Sandy	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) moist soil below 20 inches

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/23/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP9W

Investigator(s): EF,HF,KH Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none concave Slope (%) 1-3

Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: ___ Long: ___ Datum: WGS 84

Soil Map Unit Name Madalin silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes x No ___
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
moist soil to the surface, no standing water, no water in the hole

VEGETATION – Use scientific names of plants.

Sampling Point: SP9W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratu (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Agrostis gigantea*	10	No	FACW
2. *Carex vulpinoidea*	15	No	OBL
3. *Juncus effusus*	3	No	OBL
4. *Agrostis stolonifera*	70	Yes	FACW
5. *Lonicera tatarica*	1	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	99 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	18	x 1 =	18
FACW specie	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	1	x 4 =	4
UPL species	0	x 5 =	0
Column Totals	99 (A)		182 (B)

Prevalence Index = B/A = 1.84

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide support data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP9W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	7.5yr 4/2	90	7.5yr 4/6	10			Loamy/Clayey	
9-15	7.5yr 6/1	75	7.5yr 5/4	25			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_x_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) The deeper we dig the more pure clay we find

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/23/2024

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP9U

Investigator(s): EF,HF,KH Section, Township, Range: ____

Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none Concave Slope (%) 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: ____ Long: ____ Datum: WGS 84

Soil Map Unit Name Madalin silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____ , Soil ____ , or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes x No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X
If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)
Seledcted location based upon arial photographs wet signature

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____
Water Table Present? Yes ____ No x Depth (inches): ____
Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? Yes ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP9U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP9U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	7.5yr 4/1	80	7.5yr 4/6	20			Loamy/Clayey	
9-14	2.5y 6/3	80	5yr 4/6	20			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** x **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Appendix D.

Category	Common Name	Scientific Name	Conservation Status	Indicator Status	Native	Buxton Creek	Lower Caughdenoy Creek	Oneida River	Fish Creek	Upper Caughdenoy Creek	Sixmile Creek
Amphibian	American toad	*Anaxyrus americanus*	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓	✓	✓	
Amphibian	gray treefrog	*Dryophytes versicolor*	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Amphibian	northern green frog	*Lithobates clamitans melanc*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓	✓	
Amphibian	northern leopard frog	*Lithobates pipiens*	S5 G5: secure in NYS and globally	-	Yes		✓		✓	✓	
Amphibian	wood frog	*Lithobates sylvaticus*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	red-winged blackbird	*Agelaius phoeniceus*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	wood duck	*Aix sponsa*	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	mallard	*Anas platyrhynchos*	S5 G5: secure in NYS and globally	-	Yes			✓			✓
Bird	American pipit	*Anthus rubescens*	Least concern	-	Yes			✓		✓	✓
Bird	sandhill crane	*Antigone canadensis*	S1B G5: critically imperiled (breeding) in NYS and secure globally	-	Yes			✓			
Bird	great blue heron	*Ardea herodias*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	tufted titmouse	*Baeolophus bicolor*	S5 G5: secure in NYS and globally	-	Yes			✓		✓	
Bird	Canada goose	*Branta canadensis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓		✓	✓
Bird	red-tailed hawk	*Buteo jamaicensis*	S5 G5: secure in NYS and globally	-	Yes			✓			✓
Bird	green heron	*Butorides virescens*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	northern cardinal	*Cardinalis cardinalis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	turkey vulture	*Cathartes aura*	S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			✓
Bird	killdeer	*Charadrius vociferus*	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Bird	northern harrier	*Circus hudsonius*	(NYS Threatened Species) S3B, S3N G5: vulnerable (breeding/non-breeding) in NYS and secure globally	-	Yes				✓		✓
Bird	northern flicker	*Colaptes auratus*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	American crow	*Corvus brachyrhynchos*	S5 G5: secure in NYS and globally	-	Yes			✓	✓		
Bird	blue jay	*Cyanocitta cristata*	S5 G5: secure in NYS and globally	-	Yes		✓	✓			
Bird	pileated woodpecker	*Dryocopus pileatus*	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	gray catbird	*Dumetella carolinensis*	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓	✓	✓			
Bird	willow flycatcher	*Empidonax traillii*	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓					
Bird	rusty blackbird	*Euphagus carolinus*	(NYS High Priority Species of Greatest Conservation Need) S2B G4: imperiled (breeding) in NYS and apparently secure globally	-	Yes			✓			
Bird	common yellowthroat	*Geothlypis trichas*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	bald eagle	*Haliaeetus leucocephalus*	(NYS Threatened Species) S2S3B, S2N G5: imperiled/vulnerable (breeding) and imperiled (non-breeding) in NYS, secure globally	-	Yes			✓		✓	✓
Bird	barn swallow	*Hirundo rustica*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	wood thrush	*Hylocichla mustelina*	S5B G4: secure (breeding) in NYS and apparently secure globally	-	Yes			✓	✓		
Bird	Baltimore oriole	*Icterus galbula*	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓		✓			
Bird	belted kingfisher	*Megaceryle alcyon*	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	red-bellied woodpecker	*Melanerpes carolinus*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	wild turkey	*Meleagris gallopavo*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	song sparrow	*Melospiza melodia*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	great crested flycatcher	*Myiarchus crinitus*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	osprey	*Pandion haliaetus*	(NYS Species of Special Concern) S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			
Bird	rose-breasted grosbeak	*Pheucticus ludovicianus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	eastern towhee	*Pipilo erythrophthalmus*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓				

Bird	American woodcock	*Scolopax minor*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	yellow warbler	*Setophaga petechia*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	eastern bluebird	*Sialia sialis*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	American goldfinch	*Spinus tristis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	European starling	*Sturnus vulgaris*	SNA G5: not applicable in NYS and secure globally	-	No				✓		
Bird	solitary sandpiper	*Tringa solitaria*	Least concern	-	Yes			✓			
Bird	American robin	*Turdus migratorius*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	eastern kingbird	*Tyrannus tyrannus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	warbling vireo	*Vireo gilvus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	mourning dove	*Zenaida macroura*	S5 G5: secure in NYS and globally	-	Yes			✓			
Fish	brown bullhead	*Ameiurus nebulosus*	Least concern	-	Yes		✓				
Fungi	morel	*Morchella esculenta*	-	-	Yes		✓				
Mammal	coyote	*Canis latrans*	Least concern	-	Yes		✓		✓		
Mammal	North American beaver	*Castor canadensis*	Least concern	-	Yes		✓				
Mammal	North American porcupine	*Erethizon dorsatum*	Least concern	-	Yes						✓
Mammal	white-tailed deer	*Odocoileus virginianus*	Least concern	-	Yes	✓	✓	✓	✓	✓	✓
Mammal	raccoon	*Procyon lotor*	Least concern	-	Yes		✓		✓	✓	
Mammal	eastern cottontail	*Sylvilagus floridanus*	Least concern	-	Yes			✓	✓		
Plant	box elder	*Acer negundo*	-	FAC	Yes						✓
Plant	red maple	*Acer rubrum*	-	FAC	Yes		✓	✓	✓	✓	✓
Plant	silver maple	*Acer saccharinum*	-	FACW	Yes		✓	✓			
Plant	sugar maple	*Acer saccharum*	-	FACU	Yes				✓		
Plant	common yarrow	*Achillea millefolium*	-	FACU	Yes		✓				
Plant	sweet flag	*Acorus calamus*	-	OBL	No		✓	✓			
Plant	common agrimony	*Agrimonia gryposepala*	-	FACU	Yes			✓		✓	
Plant	Rhode Island bentgrass	*Agrostis capillaris*	-	FAC	No					✓	
Plant	redtop	*Agrostis gigantea*	-	FACW	No	✓	✓			✓	✓
Plant	creeping bent	*Agrostis stolonifera*	-	FACW	No	✓				✓	
Plant	American water plantain	*Alisma subcordatum*	-	OBL	Yes		✓				
Plant	speckled alder	*Alnus incana*	-	FACW	Yes			✓			
Plant	New York fern	*Amauropelta noveboracensi*	-	FAC	Yes			✓			
Plant	common ragweed	*Ambrosia artemisiifolia*	-	FACU	Yes			✓		✓	
Plant	downy serviceberry	*Amelanchier arborea*	-	FACU	Yes		✓				
Plant	hog peanut	*Amphicarpaea bracteata*	-	FAC	Yes		✓				
Plant	Canada anemone	*Anemone canadensis*	-	FACW	Yes		✓				
Plant	sweet vernal grass	*Anthoxanthum odoratum*	-	FACU	No	✓	✓	✓		✓	
Plant	Indian hemp	*Apocynum cannabinum*	-	FAC	Yes			✓		✓	
Plant	swamp milkweed	*Asclepias incarnata*	-	OBL	Yes			✓			
Plant	common milkweed	*Asclepias syriaca*	-	UPL	Yes		✓	✓			✓
Plant	yellow birch	*Betula alleghaniensis*	-	FAC	Yes				✓		
Plant	gray birch	*Betula populifolia*	-	FAC	Yes					✓	
Plant	nodding beggar ticks	*Bidens cernua*	-	OBL	Yes					✓	
Plant	devil's beggar ticks	*Bidens frondosa*	-	FACW	Yes			✓		✓	
Plant	hairy brome	*Bromus commutatus*	-	-	No			✓			
Plant	smooth brome	*Bromus inermis*	-	-	No		✓	✓			
Plant	common woodland sedge	*Carex blanda*	-	FAC	Yes		✓				
Plant	bristly sedge	*Carex comosa*	-	OBL	Yes			✓			
Plant	fringed sedge	*Carex crinita*	-	OBL	Yes		✓	✓			
Plant	large yellow sedge	*Carex flava*	-	OBL	Yes			✓			
Plant	graceful sedge	*Carex gracillima*	-	FACU	Yes			✓			
Plant	lake sedge	*Carex lacustris*	-	OBL	Yes						✓
Plant	bladder sedge	*Carex intumescens*	-	FACW	Yes		✓	✓		✓	
Plant	hop sedge	*Carex lupulina*	-	OBL	Yes		✓	✓			
Plant	sallow sedge	*Carex lurida*	-	OBL	Yes			✓			
Plant	troublesome sedge	*Carex molesta*	-	FAC	Yes			✓			
Plant	cyperus-like sedge	*Carex pseudocyperus*	-	OBL	Yes					✓	
Plant	broom sedge	*Carex scoparia*	-	FACW	Yes		✓	✓			✓
Plant	awl-fruited sedge	*Carex stipata*	-	OBL	Yes			✓		✓	
Plant	tussock sedge	*Carex stricta*	-	OBL	Yes				✓	✓	✓
Plant	fox sedge	*Carex vulpinoidea*	-	OBL	Yes		✓	✓		✓	✓
Plant	ironwood	*Carpinus caroliniana*	-	FAC	Yes				✓	✓	
Plant	bitternut hickory	*Carya cordiformis*	-	FAC	Yes		✓			✓	
Plant	shagbark hickory	*Carya ovata*	-	FACU	Yes		✓	✓	✓	✓	
Plant	buttonbush	*Cephalanthus occidentalis*	-	OBL	Yes		✓				
Plant	white turtle head	*Chelone glabra*	-	OBL	Yes			✓		✓	
Plant	lamb's quarters	*Chenopodium album*	-	FACU	No					✓	
Plant	enchanter's nightshade	*Circaea canadensis*	-	FACU	Yes		✓	✓			
Plant	bull thistle	*Cirsium vulgare*	-	FACU	No		✓				

Plant	silky dogwood	*Cornus amomum*	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	gray dogwood	*Cornus racemosa*	-	FAC	Yes		✓	✓	✓		✓
Plant	red-osier dogwood	*Cornus sericea*	-	FACW	Yes						✓
Plant	hawthorn	*Crataegus sp.*	-	-	-		✓				✓
Plank	common yellow nut sedge	*Cyperus esculentus*	-	FACW	Yes			✓		✓	
Plant	false yellow nut sedge	*Cyperus strigosus*	-	FACW	Yes			✓		✓	
Plant	orchard grass	*Dactylis glomerata*	-	FACU	No	✓				✓	
Plant	wild carrot	*Daucus carota*	-	UPL	No		✓				
Plant	water willow	*Decodon verticillatus*	-	OBL	Yes			✓			✓
Plant	tufted hair grass	*Deschampsia cespitosa*	-	-	Yes					✓	
Plant	digit grass	*Digitaria eriantha*	-	-	No		✓				
Plant	smooth crab grass	*Digitaria ischaemum*	-	FACU	No			✓			
Plant	tall flat-topped white aster	*Doellingeria umbellata*	-	FACW	Yes					✓	
Plant	common wood fern	*Dryopteris intermedia*	-	FAC	Yes		✓				✓
Plant	autumn olive	*Elaeagnus umbellata*	-	-	No		✓				
Plant	blunt spike rush	*Eleocharis obtusa*	-	OBL	Yes		✓			✓	✓
Plant	fringed wilowherb	*Epilobium ciliatum*	-	FACW	Yes					✓	
Plant	purpleleaf willowherb	*Epilobium coloratum*	-	OBL	Yes		✓	✓		✓	
Plant	field horsetail	*Equisetum arvense*	-	FAC	Yes				✓	✓	✓
Plant	scouringrush horsetail	*Equisetum hyemale*	-	FAC	Yes	✓			✓		
Plant	annual daisy fleabane	*Erigeron annuus*	-	FACU	Yes			✓			
Plant	small daisy fleabane	*Erigeron strigosus*	-	FACU	Yes			✓			
Plant	yellow trout lily	*Erythronium americanum*	-	-	Yes		✓		✓		
Plant	boneset	*Eupatorium perfoliatum*	-	FACW	Yes			✓		✓	✓
Plant	common flat-topped goldenrod	*Euthamia graminifolia*	-	FAC	Yes					✓	
Plant	spotted Joe Pye weed	*Eutrochium maculatum*	-	OBL	Yes	✓					
Plant	American beech	*Fagus grandifolia*	-	FACU	Yes				✓	✓	
Plant	common wild strawberry	*Fragaria virginiana*	-	FACU	Yes		✓			✓	✓
Plant	glossy buckthorn	*Frangula alnus*	-	FAC	No		✓				
Plant	white ash	*Fraxinus americana*	-	FACU	Yes		✓				✓
Plant	green ash	*Fraxinus pennsylvanica*	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	hedge bedstraw	*Galium album*	-	FACU	Yes	✓		✓		✓	
Plant	common marsh bedstraw	*Galium palustre*	-	OBL	Yes		✓			✓	
Plant	yellow avens	*Geum aleppicum*	-	FAC	Yes		✓	✓			
Plant	white avens	*Geum canadense*	-	FAC	Yes			✓			✓
Plant	town avens	*Geum urbanum*	-	-	No		✓	✓			
Plant	American manna grass	*Glyceria maxima*	-	OBL	No			✓		✓	
Plant	fowl manna grass	*Glyceria striata*	-	OBL	Yes		✓	✓		✓	
Plant	soybean	*Glycine max*	-	-	-	✓	✓	✓	✓	✓	✓
Plant	marsh cubweed	*Gnaphalium uliginosum*	-	FAC	No			✓			
Plant	dame's rocket	*Hesperis matronalis*	-	FACU	No	✓					
Plant	common frogbit	*Hydrocharis morsus-ranae*	-	OBL	No			✓			
Plant	Eurasian live forever	*Hylotelephium telephium*	-	-	No				✓		
Plant	St. John's wort	*Hypericum sp.*	-	-	-						✓
Plant	spotted jewelweed	*Impatiens capensis*	-	FACW	Yes	✓	✓	✓		✓	
Plant	blue flag	*Iris versicolor*	-	OBL	Yes		✓				
Plant	soft rush	*Juncus effusus*	-	OBL	Yes	✓	✓	✓	✓	✓	✓
Plant	path rush	*Juncus tenuis*	-	FAC	Yes			✓			✓
Plant	rice cut grass	Leersia oryzoides	-	OBL	Yes					✓	✓
Plant	spicebush	*Lindera benzoin*	-	FACW	Yes		✓	✓			
Plant	tulip poplar	*Liriodendron tulipifera*	-	FACU	Yes	✓				✓	
Plant	Indian tobacco	*Lobelia inflata*	-	FACU	Yes			✓			
Plant	great blue lobelia	*Lobelia siphilitica*	-	FACW	Yes						✓
Plant	tall rye grass	*Lolium arundinace*	-	FACU	No			✓			
Plant	Japanese honeysuckle	*Lonicera japonica*	-	FACU	No		✓				
Plant	honeysuckle	*Lonicera spp.*	-	-	No	✓	✓	✓	✓	✓	✓
Plant	Tatarian honeysuckle	*Lonicera tatarica*	-	FACU	No		✓	✓			✓
Plant	water purslane	*Ludwigia palustris*	-	OBL	Yes	✓		✓		✓	
Plant	water whorehound	*Lycopus americanus*	-	OBL	Yes			✓		✓	
Plant	moneywort	*Lysimachia nummularia*	-	FACW	No	✓	✓		✓	✓	
Plant	purple loosestrife	*Lythrum salicaria*	-	OBL	No	✓	✓	✓	✓	✓	
Plant	Canada mayflower	*Maianthemum canadense*	-	FACU	Yes				✓		
Plant	ostrich fern	*Matteuccia struthiopteris*	-	FAC	Yes			✓			
Plant	white sweet clover	*Melilotus albus*	-	FACU	No						✓
Plant	Allegheny monkey flower	*Mimulus ringens*	-	OBL	Yes					✓	
Plant	blackgum	*Nyssa sylvatica*	-	FAC	Yes			✓			
Plant	sensitive fern	*Onoclea sensibilis*	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	royal fern	*Osmunda regalis*	-	OBL	Yes			✓			
Plant	cinnamon fern	*Osmundastrum cinnamome*	-	FACW	Yes			✓			
Plant	yellow wood sorrel	*Oxalis dillenii*	-	FACU	Yes		✓			✓	
Plant	fall panic grass	*Panicum dichotomiflorum*	-	FACW	Yes						✓
Plant	Virginia creeper	*Parthenocissus quinquefolia*	-	FACU	Yes		✓	✓			
Plant	green arrow arum	*Peltandra virginica*	-	OBL	Yes		✓				
Plant	water pepper	*persicaria hydropiper*	-	OBL	No					✓	

Plant	lady's thumb	*Persicaria maculosa*	-	FAC	No			✓			
Plant	arrow-leaved tearthumb	*Persicaria sagittata*	-	OBL	Yes			✓			
Plant	jumpseed	*Persicaria virginiana*	-	FAC	Yes		✓	✓		✓	
Plant	reed canary grass	*Phalaris arundinacea*	-	FACW	No	✓	✓	✓	✓	✓	✓
Plant	common Timothy	*Phleum pratense*	-	FACU	No		✓			✓	
Plant	common reed	*Phragmites australis*	-	FACW	No	✓	✓	✓			
Plant	pokeweed	*Phytolacca americana*	-	FACU	Yes			✓			
Plant	Norway spruce	*Picea abies*	-	-	No		✓	✓	✓		
Plant	red spruce	*Picea rubens*	-	FACU	Yes		✓				
Plant	white pine	*Pinus strobus*	-	FACU	Yes		✓		✓		
Plant	English plantain	*Plantago lanceolata*	-	FACU	No	✓	✓		✓	✓	
Plant	common plantain	*Plantago major*	-	FACU	No	✓			✓	✓	✓
Plant	northern tubercled orchid	*Platanthera flava*	-	FACW	Yes			✓			
Plant	annual blue grass	*Poa annua*	-	FACU	No				✓		
Plant	wood bluegrass	*Poa nemoralias*	-	FACU	No			✓			
Plant	common Kentucky blue grass	*Poa pratensis*	-	FACU	No		✓			✓	✓
Plant	mayapple	*Podophyllum peltatum*	-	FACU	Yes			✓	✓		
Plant	eastern cottonwood	*Populus deltoides*	-	FAC	Yes		✓		✓		
Plant	quaking aspen	*Populus tremuloides*	-	FACU	Yes	✓	✓	✓	✓	✓	✓
Plant	oldfield cinquefoil	*Potentilla simplex*	-	FACU	Yes		✓				
Plant	Eurasian selfheal	*prunella vulgaris*	-	FAC	No					✓	
Plant	pin cherry	*Prunus pensylvanica*	-	FACU	Yes		✓				
Plant	black cherry	*Prunus serotina*	-	FACU	Yes		✓	✓	✓	✓	
Plant	bracken fern	*Pteridium aquilinum*	-	FACU	Yes			✓			
Plant	white oak	*Quercus alba*	-	FACU	Yes		✓				
Plant	red oak	*Quercus rubra*	-	FACU	Yes		✓	✓			
Plant	tall buttercup	*Ranunculus acris*	-	FAC	No	✓	✓			✓	
Plant	creeping buttercup	*Ranunculus repens*	-	FAC	No					✓	
Plant	cursed crowfoot	*Ranunculus sceleratus*	-	OBL	Yes	✓			✓		
Plant	Japanese knotweed	*Reynoutria japonica*	-	FACU	No				✓		
Plant	alder buckthorn	*Rhamnus alnifolia*	-	OBL	Yes		✓				
Plant	buckthorn	*Rhamnus cathartica*	-	FAC	No		✓	✓		✓	✓
Plant	staghorn sumac	*Rhus typhina*	-	-	Yes		✓				
Plant	multiflora rose	*Rosa multiflora*	-	FACU	No	✓	✓	✓	✓	✓	✓
Plant	swamp rose	*Rosa palustris*	-	OBL	Yes				✓		✓
Plant	common blackberry	*Rubus allegheniensis*	-	FACU	Yes		✓	✓			
Plant	swamp dewberry	*Rubus hispidus*	-	FACW	Yes			✓			
Plant	red raspberry	*Rubus ideaus*	-	FACU	No		✓	✓			
Plant	dwarf raspberry	*Rubus pubescens*	-	FACW	Yes			✓			
Plant	sheep sorrel	*Rumex acetosella*	-	FACU	No			✓			
Plant	curly dock	*Rumex crispus*	-	FAC	No	✓	✓	✓		✓	✓
Plant	broad-leaved dock	*Rumex obtusifolius*	-	FAC	No		✓			✓	
Plant	swamp dock	*Rumex verticillatus*	-	OBL	Yes			✓			
Plant	Bebb's willow	*Salix bebbiana*	-	FACW	Yes			✓			
Plant	pussy willow	*Salix discolor*	-	FACW	Yes		✓	✓	✓		
Plant	black willow	*Salix nigra*	-	OBL	Yes		✓				
Plant	basket willow	*Salix purpurea*	-	FACW	No			✓			
Plant	common elderberry	*Sambucus nigra*	-	FACW	Yes				✓		
Plant	lizard's tail	*Saururus cernuus*	-	OBL	Yes		✓				
Plant	soft-stemmed bulrush	*Schoenoplectus tabernaemc*	-	OBL	Yes			✓			
Plant	dark-green bulrush	*Scirpus atrovirens*	-	OBL	Yes		✓	✓			
Plant	woolgrass	*Scirpus cyperinus*	-	OBL	Yes		✓		✓	✓	✓
Plant	mad dog skullcap	*Scutellaria lateriflora*	-	OBL	Yes			✓			
Plant	horse nettle	*Solanum carolinense*	-	FACU	Yes					✓	
Plant	bitter-sweet nightshade	*Solanum dulcamara*	-	FAC	No		✓	✓			
Plant	tall goldenrod	*Solidago altissima*	-	FACU	Yes		✓				✓
Plant	Canada goldenrod	*Solidago canadensis*	-	FACU	Yes	✓		✓		✓	
Plant	swamp goldenrod	*Solidago gigantea*	-	FACW	Yes		✓			✓	✓
Plant	common wrinkle-leaved goldenr	*Solidago rugosa*	-	FAC	Yes	✓	✓	✓		✓	✓
Plant	spiny-leaved sow thistle	*Sonchus asper*	-	FACU	No			✓	✓		
Plant	green-fruited bur-reed	*Sparganium chlorocarpum*	-	OBL	Yes			✓			
Plant	grass-leaved stitchwort	*Stellaria graminea*	-	UPL	No					✓	
Plant	white panicle aster	*Symphyotrichum lanceolatu*	-	FACW	Yes			✓		✓	✓
Plant	calico aster	*Symphyotrichum laterifloru*	-	FAC	Yes		✓			✓	
Plant	new england aster	*Symphyotrichum novae-angl*	-	FACW	Yes						✓
Plant	purple-stemmed aster	*Symphyotrichum puniceum*	-	OBL	Yes	✓		✓		✓	✓
Plant	skunk cabbage	*Symplocarpus foetidus*	-	OBL	Yes				✓		
Plant	common dandelion	*Taraxacum officinale*	-	FACU	No	✓	✓	✓	✓	✓	✓
Plant	marsh fern	*Thelypteris palustris*	-	FACW	Yes		✓				
Plant	American basswood	*Tilia americana*	-	FACU	Yes			✓			
Plant	poison ivy	*Toxicodendron radicans*	-	FAC	Yes	✓	✓	✓	✓	✓	✓
Plant	red clover	*Trifolium pratense*	-	FACU	No	✓			✓	✓	✓
Plant	white clover	*Trifolium repens*	-	FACU	No	✓	✓			✓	✓
Plant	red trillium	*Trillium erectum*	-	FACU	Yes				✓		

Plant	white trillium	*Trillium grandiflorum*	-	-	Yes				✓		
Plant	eastern hemlock	*Tsuga canadensis*	-	FACU	Yes				✓	✓	
Plant	tower mustard	*Turritis glabra*	-	UPL	No			✓			
Plant	coltsfoot	*Tussilago farfara*	-	FACU	No		✓				
Plant	narrowleaf cattail	*Typha angustifolia*	-	OBL	No			✓			✓
Plant	hybrid cattail	*Typha glauca*	-	OBL	No	✓	✓	✓			
Plant	wide-leaved cattail	*Typha latifolia*	-	OBL	Yes		✓	✓			
Plant	cattail	*Typha sp.*	-	OBL	-	✓	✓	✓	✓	✓	✓
Plant	American elm	*Ulmus americana*	-	FACW	Yes		✓	✓	✓		✓
Plant	false hellebore	*Veratrum viride*	-	FACW	Yes				✓		
Plant	moth mullein	*Verbascum blattaria*	-	FACU	No			✓			
Plant	blue vervain	*Verbena hastata*	-	FACW	Yes	✓	✓			✓	
Plant	smooth arrowwood	*Viburnum dentatum*	-	FAC	Yes	✓	✓	✓		✓	✓
Plant	nannyberry	*Viburnum lentago*	-	FAC	Yes		✓	✓		✓	✓
Plant	tufted vetch	*Vicia cracca*	-	-	No			✓			✓
Plant	common blue violet	*Viola sororia*	-	FAC	Yes		✓				
Plant	riverbank grape	*Vitis riparia*	-	FAC	Yes		✓	✓			✓
Reptile	painted turtle	*Chrysemys picta*	S5 G5: secure in NYS and globally	-	Yes		✓				
Reptile	eastern garter snake	*Thamnophis sirtalis sirtalis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓		✓	

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To: 04/11/2025 15:39:33 UTC
Project code: 2025-0082147
Project Name: Micron Stream and Wetland Mitigation

Federal Nexus: yes
Federal Action Agency (if applicable): Army Corps of Engineers

Subject: Technical assistance for 'Micron Stream and Wetland Mitigation'

Dear Kirsten Gerhardt:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on April 11, 2025, for “Micron Stream and Wetland Mitigation” (here forward, Project). This project has been assigned Project Code 2025-0082147 and all future correspondence should clearly reference this number.

The Service developed the IPaC system and associated species’ determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northeast Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative effect(s)), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17). Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no further consultation with, or concurrence from, the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical

habitat, formal consultation is required (except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect (NLAA)" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13]).

The IPaC results indicated the following species is (are) potentially present in your project area and, based on your responses to the Service's Northeast DKey, you determined the proposed Project will have the following effect determinations:

Species	**Listing Status**	**Determination**
Indiana Bat (*Myotis sodalis*)	Endangered	May affect

<u>Consultation with the Service is not complete.</u>Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of "May Affect". Please contact our New York Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Bog Buck Moth *Hemileuca maia menyanthevora (=H. iroquois)* Endangered
- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference the Project Code associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Micron Stream and Wetland Mitigation

2. Description

The following description was provided for the project 'Micron Stream and Wetland Mitigation':

> This is a stream and wetland mitigation project in which restoration will occur across six sites. On average, one site will be constructed per year, making the construction period a total of six years approximately. All six sites are located in Hastings or Schroeppel in Oswego County, NY. Two of the sites will undergo stream restoration, one for a degraded portion of Buxton Creek, the other for a degraded portion of Fish Creek. Here, the stream restoration will be integrated with wetland restoration to create a functioning stream/wetland complex. The remaining four sites will be for wetland restoration only.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.29530445,-76.2730783955508,14z

QUALIFICATION INTERVIEW

1. As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?

   Yes

2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

   Note: This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

   No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project?

   No

5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

   Note: If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

   Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

   No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

   No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

9. Is the lead federal action agency the Natural Resources Conservation Service?

   No

10. Will the proposed project involve the use of herbicide where listed species are present?

    Yes

11. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

    No

12. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

    Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

13. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

    Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

14. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

    For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

    No

15. Will the proposed project affect wetlands where listed species are present?

    This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

    Yes

16. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

    Yes

17. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?

    Yes

18. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

    No

19. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

    No

20. Will the proposed project involve the removal of excess sediment or debris, dredging or in-stream gravel mining where listed species may be present?

    No

21. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

    Note New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

    No

22. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

    No

23. Will the proposed project involve blasting where listed species may be present?

    No

24. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

    No

25. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

    Note: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream.

    Yes

26. Will the proposed project impact streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography?

    Yes

27. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

    No

28. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

    Yes

29. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

    No

30. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?

    Automatically answered
    No

31. [Semantic] Does the project intersect the Indiana bat AOI?

    Automatically answered
    Yes

32. Is the action area within 0.5 mile radius of any known hibernacula (caves or mines) openings or underground features?
    Note: If you are unsure, contact the appropriate Ecological Services Field Office before continuing through the key.

    No

33. Are trees present within the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter), answer "Yes". If you are unsure, answer “Yes.” Or refer to Appendix A of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for definitions and an assessment form that will assist you in determining if suitable habitat is present within your project's action area. Suitable summer habitat for Indiana bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat

    Yes

34. Is the action area within known occupied Indiana bat habitat? Known occupied Indiana bat habitat includes established conservation buffers (10-mile buffer around Phase 1 or Phase 2 hibernacula, 5-mile buffer around Phase 3 or Phase 4 hibernacula; 5-mile buffer around Indiana bat captures or detections; 2.5-mile buffer around known roosts).

    Yes

35. [Semantic] Does the project intersect the Indiana bat critical habitat?

    Automatically answered
    No

36. [Semantic] Does the project intersect the candy darter critical habitat?

    Automatically answered
    No

37. [Semantic] Does the project intersect the diamond darter critical habitat?

    Automatically answered
    No

38. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?

    Automatically answered
    No

39. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

    Automatically answered
    No

40. Do you have any other documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

1. Approximately how many acres of trees would the proposed project remove?

   .1

2. Approximately how many total acres of disturbance are within the disturbance/construction limits of the proposed project?

   500

3. Briefly describe the habitat within the construction/disturbance limits of the project site.

   Active soybean fields and man-made agricultural drainages. Some existing wetlands of degraded quality that will ultimately be rehabilitated.

IPAC USER CONTACT INFORMATION

Agency: The Wetland Trust, Inc.
Name: Kirsten Gerhardt
Address: 4729 State Route 414
City: Burdett
State: NY
Zip: 14818
Email kirsten.gerhardt@gmail.com
Phone: 3028242336

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To: 04/11/2025 15:07:39 UTC
Project Code: 2025-0082147
Project Name: Micron Stream and Wetland Mitigation

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

PROJECT SUMMARY

Project Code: 2025-0082147
Project Name: Micron Stream and Wetland Mitigation
Project Type: Restoration / Enhancement - Wetland
Project Description: This is a stream and wetland mitigation project in which restoration will occur across six sites. On average, one site will be constructed per year, making the construction period a total of six years approximately. All six sites are located in Hastings or Schroeppel in Oswego County, NY. Two of the sites will undergo stream restoration, one for a degraded portion of Buxton Creek, the other for a degraded portion of Fish Creek. Here, the stream restoration will be integrated with wetland restoration to create a functioning stream/wetland complex. The remaining four sites will be for wetland restoration only.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.29530445,-76.2730783955508,14z

Counties: Oswego County, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Bog Buck Moth *Hemileuca maia menyanthevora (=H. iroquois)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8023	Endangered
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: The Wetland Trust, Inc.
Name: Kirsten Gerhardt
Address: 4729 State Route 414
City: Burdett
State: NY
Zip: 14818
Email kirsten.gerhardt@gmail.com
Phone: 3028242336

Appendix E.

Upper Caughdenoy Creek
Invasive Species Management Plan (ISMP)

Oswego County, New York

PREPARED BY:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
www.thewetlandtrust.org

May 2025

1. Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Mitigation (PRM) package on behalf of Micron NY Semiconductor Manufacturing, LLC, is proposing to develop wetland mitigation acres/credits at their Upper Caughdenoy Creek Site in the Towns of Hastings, Palermo and Schroeppel, Oswego County, New York. The Mitigation Plan (Plan) at Upper Caughdenoy Creek will contribute toward the fulfillment of required wetland mitigation for impacts associated with the Micron Semiconductor Fabrication Campus project (Proposed Development) in the town of Clay, Onondaga County, New York. This Plan will incorporate wetland Re-establishment, Rehabilitation, Enhancement, and Preservation, which involves disturbance to soil during grading activities. As part of the Performance Standards for this Mitigation Plan, invasive species-specific standards must be met. The following is the Invasive Species Management Plan (ISMP) for this Site. It contains the practices and procedures TWT proposes to implement to control the presence and spread of invasive species.

This ISMP will improve ecological outcomes by using a combination of mechanical, biological, cultural, and chemical controls to manage invasive species while minimizing environmental disturbance. By prioritizing early detection, habitat restoration, and targeted interventions, this ISMP is designed to reduce reliance on herbicides, lower the risk of non-target impacts, and promote the long-term success of native vegetation. This adaptive approach enhances wetland resilience, supports biodiversity, and ensures compliance with mitigation performance standards in a sustainable and cost-effective manner.

1.1 Purpose and Goal

- **Adaptive Management Framework:** This plan operates under an adaptive management strategy, ensuring that invasive species control efforts are adjusted based on monitoring results, site conditions, and evolving regulatory guidance. Preventing the establishment or spread of invasive species at this Site relies upon:
    - Thorough baseline information data collection,
    - Avoiding and/or treating existing invasive species populations,
    - Incorporating construction techniques into the Plan that minimize conditions that are favorable for invasive species colonization, and
    - Implementing thorough monitoring and maintenance practices throughout the life of the Project and beyond.
- **Long-Term Ecological Success:** The presence of invasive plant species can degrade wetland function by outcompeting native vegetation, altering soil and water chemistry, and reducing habitat quality for wildlife. This ISMP aims to restore and sustain native plant communities using minimal environmental disturbance construction techniques per the Mitigation Plan.
- The goal of this ISMP is to minimize presence and prevent expansion of invasive species within the Mitigation Site not only during the monitoring period, but in perpetuity, as TWT is the long-term owner and steward. Invasive species control will be considered successful only if invasive species are kept at or below the threshold outlined in Section 6 of the Mitigation Plan for the work areas and 0% net increase in invasive species found elsewhere at the Site is realized. Annual monitoring will help determine whether goals are being met. If it is determined the Site is not on track with its goals, TWT will submit

a revised Management Plan and implement Adaptive Management strategies that are approved by USACE and NYSDEC.

1.2 Regulatory Compliance

This ISMP seeks to meet specific performance standards set by the USACE and NYSDEC as a condition of permit approval. These include thresholds for native plant diversity, invasive species control, and hydrological function.

Invasive species targeted by this ISMP are based on those regulated by NYS Regulation 6 NYCRR Part 575 List of Prohibited and Regulated Invasive Plants, developed by the New York Invasive Species Council and New York Department of Environmental Conservation (NYSDEC) and any others identified by NYSDEC or USACE.

2. Identification

Four key invasive plant species regulated by NYCRR Part 575 were identified at the Site during baseline data collection. Key invasive plants include purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), and cattail (*Typha* spp.). These species are highly competitive, forming dense monocultures that outcompete native vegetation, diminish biodiversity, and disrupt wetland functionality. These species are found in most wetland areas on-site and adjacent on wetlands, affecting over 43 acres at the Upper Caughdenoy Creek Site at the time of data collection. In addition to these dominant species, other invasive plants present in the area include creeping bentgrass (*Agrostis stolonifera*), reed sweet grass (*Glyceria maxima*), honeysuckle (*Lonicera spp.*), creeping jenny *(Lysimachia nummularia)*, Timothy grass (*Phleum pratense*), Kentucky bluegrass (*Poa pratensis*), creeping buttercup (*Ranunculus repens*), common buckthorn (*Rhamnus cathartica)*, and multiflora rose (*Rosa multiflora*). These species, their common characteristics and their typical locations are provided in Table 2-1 below. Additional invasive plant species have the potential of occurring at the site, particularly in the post-construction and long-term monitoring phase of this plan. These additional species may require treatment if they meet action thresholds outlined in **Section 6-1**, in which case they will be included in future versions of this plan and treated.

Table 2-1. Invasive Species at the Upper Caughdenoy Creek Site 2024			
Species	**Common Characteristics**	**Photo ID**	**Typical Location**
Common Reed (Phragmites australis)	A perennial grass that can grow over 15 feet tall, forming dense stands with hollow stems and blue-green leaves up to 20 inches long. It spreads through seeds, rhizomes, and stolons, often outcompeting native vegetation in wetlands.		Tidal and non-tidal marshes, lakes, swales, and backwater areas of rivers, and streams
Reed Canary Grass (Phalaris arundinacea)	A tall, perennial grass that grows 2 to 6 feet high, with rough, flat leaves and dense flower clusters that turn beige as they mature. It thrives in wetlands and spreads aggressively through seeds and rhizomes, forming dense stands that outcompete native vegetation.		Wet habitats such as wetlands, moist meadows, and riparian areas
Cattail (Typha spp.)	Tall, perennial wetland plants characterized by their long, narrow, sword-like leaves and distinctive brown, cylindrical flower spikes. They thrive in shallow waters of marshes, ponds, and lakes, spreading through both wind-dispersed seeds and extensive rhizome networks, often forming dense stands that can outcompete other vegetation.		Wetland habitats, including marshes, river and stream banks, pond edges, lakes, ditches, and reservoirs
Purple Loosestrife (Lythrum salicaria)	An erect, branching perennial native to Europe, Asia, and northern Africa, characterized by dense, woody rootstocks that can produce multiple stems, lance-shaped leaves arranged oppositely or alternately, and showy purple flowers with 5-7 petals clustered on tall spikes. This invasive species thrives in wetlands and moist soils, rapidly displacing native vegetation and disrupting local ecosystems.		Wetland habitats, including marshes, pond and lakeshores, stream and riverbanks, and ditches. Also spreads in upland soils, allowing it to spread into meadows and pastures.

3. Pre-Construction Phase

3.1 Baseline Data Collection

Baseline data collection will identify existing invasive communities within the mitigation site. This process will involve field surveys using GIS mapping, orthoimagery using drones, and photographic documentation to establish the extent and density of invasive species populations. Baseline surveys will include mapping of invasive species distribution with percentage cover estimates. The data collected will be used to inform the site preparation and treatment strategies outlined in later sections of this ISMP. See **Figures 8-1 to 8-4** in **Section 8** for invasive species maps.

3.2 Site Preparation & Prevention Measures

Prior to construction, invasive species control measures will be implemented to prevent the spread and establishment of problematic species. These measures will include:

- **Pre-Treatment of Invasives**: Identified invasive species populations will be treated before ground disturbance begins. This may include manual removal, herbicide application, or smothering techniques depending on the species and infestation severity.
- **Equipment Cleaning Protocols:** Any construction equipment arriving on-site will be inspected and cleaned to remove soil, plant material, or seeds that may introduce invasive species.

4. Construction Phase

To minimize the introduction and spread of invasive species during construction activities, the following best practices will be implemented:

- **Minimize Disturbance**: Clearing and grading activities will be restricted to designated project areas, reducing soil disturbance that can facilitate invasive species establishment.
- **Erosion and Sediment Control**: Use of weed-free erosion control materials, such as straw mulch, biodegradable mats, and hydroseeding with native plant mixes, will prevent soil erosion while avoiding the introduction of invasive species.
- **Construction Site Hygiene**: All machinery and equipment will be cleaned before entering and leaving the site, particularly when working in or near known invasive species populations.
- **Hydrology Management**: The project aims to restore natural hydrological conditions where feasible, as proper hydrology can prevent the establishment of invasive wetland species.
- **Native Plant Seeding**: Following ground disturbance, native plants will be seeded and planted in treated areas to prevent re-colonization by invasive species.

5. Post-Construction Phase

5.1 Monitoring for Early Detection

To ensure invasive species control measures remain effective, post-construction monitoring will be conducted. Monitoring efforts will include:

- **GPS Mapping and Photo Documentation**: Recording any changes in invasive species distribution.
- **Upstream and Adjacent Area Inspections**: Identifying potential new sources of invasive species propagules.
- **Disturbance Event Tracking**: Observing site conditions after events like flooding or drought, which may encourage invasive species spread.

5.2 Long-Term Monitoring & Adaptive Management

- Yearly Assessments: Evaluate treatment effectiveness and native vegetation recovery.
- Implement additional treatment as needed.
- Adjust Control Strategies: Based on monitoring results, refine methods to reduce reliance on chemical treatments.

6. Treatment Thresholds and Control Strategies

6.1 Treatment Thresholds

Control measures will be implemented when specific action thresholds are met, ensuring timely intervention to prevent invasive species from undermining mitigation success. The following triggers initiate management actions:

1. **Invasive Species Coverage Threshold**
    - If invasive species exceed **10% of total vegetative cover** within mitigation areas, management efforts (e.g., mechanical, chemical, or biological control) are required.

Table 6-1. Invasive Species Coverage Targets	**Year 1**	**Year 3**	**Year 5**	**Year 7**	**Year 10**
Non-*Typha* Invasive Species (e.g., purple loosestrife, common reed, reed canarygrass)	≤ 15%	≤ 15%	≤ 12.5%	≤ 10%	< 5% cover
All Invasive Species including *Typha* spp.	≤ 20%	≤ 18.5%	≤ 15%	≤ 12.5%	< 10% cover

    - Annual monitoring data, including vegetation surveys and aerial imagery, will be used to determine exceedance.

2. **Failure to Meet Native Vegetation Performance Standards**
    - If native plant cover falls below required thresholds (typically **70% native cover** or a minimum diversity standard set in the mitigation permit), corrective action is necessary.

   - This includes replanting, selective herbicide application, or modifying site conditions to support native species.

3. **Encroachment of Invasives into Priority Habitat Areas**
   - If invasive species are detected in areas designated for high-value habitat (e.g., scrub-shrub wetlands, emergent wetlands, etc) treatment measures will be implemented to prevent establishment.
4. **New Invasive Species Detection**
   - Any newly introduced invasive species not previously recorded on-site will trigger an immediate assessment and control response to prevent spread.
5. **Regulatory Non-Compliance or Agency Notification**
   - If annual monitoring reports indicate performance standards are not being met or if USACE/NYSDEC identifies deficiencies, corrective action is required to maintain compliance.

By adhering to these action thresholds, this ISMP ensures that invasive species are proactively managed, wetland functions are maintained, and regulatory compliance is achieved.

6.2 Summary of Treatment Timing & Methods

A combination of mechanical, cultural, biological, and chemical control methods will be used depending on species, infestation size, and site conditions.

Table 6-2. Treatment Timing & Methods Summary Table

Species	Best Treatment Time	Mechanical	Chemical	Biological	Cultural
Phragmites	Late summer - fall	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	None approved for use in the US	Planting Natives for Competition
Reed Canary Grass	Spring & Fall	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	None available	Planting Natives for Competition, Prescribed burn
Cattails	Mid-late summer	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	Muskrat/waterfowl	Planting Natives for Competition
Purple Loosestrife	Mid-late summer	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	Loosestrife beetles	Planting Natives for Competition

6.2.1 *Phragmites australis* (Common Reed)

Control Approach:

Best Time for Treatment: Late summer to early fall (when carbohydrates are translocating to rhizomes).

1. Mechanical Control:
    - Cutting & Flooding: Cutting stems at water level during late summer combined with water level manipulation can drown rhizomes.
    - Smothering: Small patches can be covered with black plastic or heavy mulch to prevent regrowth.
2. Chemical Control: *(Only if necessary, as a last resort in sensitive areas)*
    - Glyphosate-basedand/or Imazapyr-Based application (spot treatment):
        - Apply to standing Phragmites in late summer/early fall using backpack sprayers, drones or wicking methods to minimize non-target impacts.
    - Follow-up with mechanical removal of dead stalks in the winter.
3. Cultural & Biological Control:
    - Promote competition by seeding native sedges, rushes, and forbs.
    - Biological control species may be utilized for targeted control.

6.2.2 *Phalaris arundinacea* (Reed Canary Grass)

Control Approach:

Best Time for Treatment: Early spring (before seed set) and late fall (targeting rhizomes).

1. Mechanical Control:
    - Mowing in early spring and late summer to deplete energy reserves.
    - Hand-pulling small infestations before seed set.
    - Covering with tarps or thick mulch to shade out new shoots.
2. Chemical Control: *(Selective use in dense monocultures if needed)*
    - Glyphosate application in fall when nutrients are moving into rhizomes.
    - Use wiping techniques instead of spraying to reduce non-target impact.
3. Cultural & Biological Control:

- Planting native sedges & rushes to outcompete Phalaris.
- Prescribed fire in late spring can reduce seed production.

6.2.3 *Typha spp.* (Cattails)

Control Approach:

Best Time for Treatment: Mid-to-late summer when plants are transporting nutrients downward.

1. Mechanical Control:
   - Cut stems below water level to drown rhizomes.
   - Excavation in high-density areas, followed by native planting.
2. Chemical Control: *(For monocultures in restoration sites if needed)*
   - Glyphosate-based pesticide applied to standing plants in late summer.
   - Follow-up by removing dead biomass to prevent thick mats from suppressing native growth.
3. Cultural & Biological Control:
   - Encourage muskrat or waterfowl activity in natural systems to suppress regrowth.

6.2.4 *Lythrum salicaria* (Purple Loosestrife)

Control Approach:

Best Time for Treatment: Mid-to-late summer before seed dispersal.

1. Mechanical Control:
   - Hand-pull small infestations, removing all roots.
   - Cut flower heads before seed drop to prevent spread.
2. Biological Control (Preferred Method):
   - Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
   - Releases should be monitored over multiple years to assess impact.
3. Chemical Control: *(For large stands if necessary)*
   - Spot treat with glyphosate-based pesticide in late summer.
   - Follow-up by seeding native competitors.

6.3 Pesticide Selection and Application Guidelines

When chemical control is necessary, pesticides will be carefully selected to minimize environmental impact while effectively managing invasive species. The selection and application methods will be determined based on site-specific conditions, regulatory requirements, and best management practices to ensure effective control while reducing unintended ecological impacts.

- **Target-Specific Formulations:** Only herbicides approved for use in wetland environments will be used, with preference given to herbicides that have minimal impact on non-target species.
- **Reduced Persistence and Toxicity:** Herbicides with low residual activity and rapid breakdown in soil and water will be favored to prevent long-term contamination.
- **Application Methods Based on Site Conditions:** Techniques such as cut-stump treatments, wick application, and spot spraying will be prioritized over broadcast spraying, depending on the infestation size, proximity to sensitive habitats, and hydrological conditions.

All pesticides will be applied **in accordance with the label and all applicable federal, state, and local regulations** to ensure compliance and environmental protection.

All pesticide applications will be conducted by New York State Certified Pesticide Applicators or individuals working under the direct supervision of a certified applicator, in compliance with New York Environmental Conservation Law (ECL) Article 33 and 6 NYCRR Part 325. This ensures that all chemical treatments are applied safely, legally, and in accordance with state regulations governing pesticide use in wetland environments.

7.0 Reporting

The Wetland Trust, Inc. will provide an annual wetland restoration monitoring report which details the status of invasive plant species and all control measures. This report will be submitted by December 31st each year to USACE and NYSDEC.

8. Maps and Figures

Figure 8-1. Purple Loosestrife Percent Cover

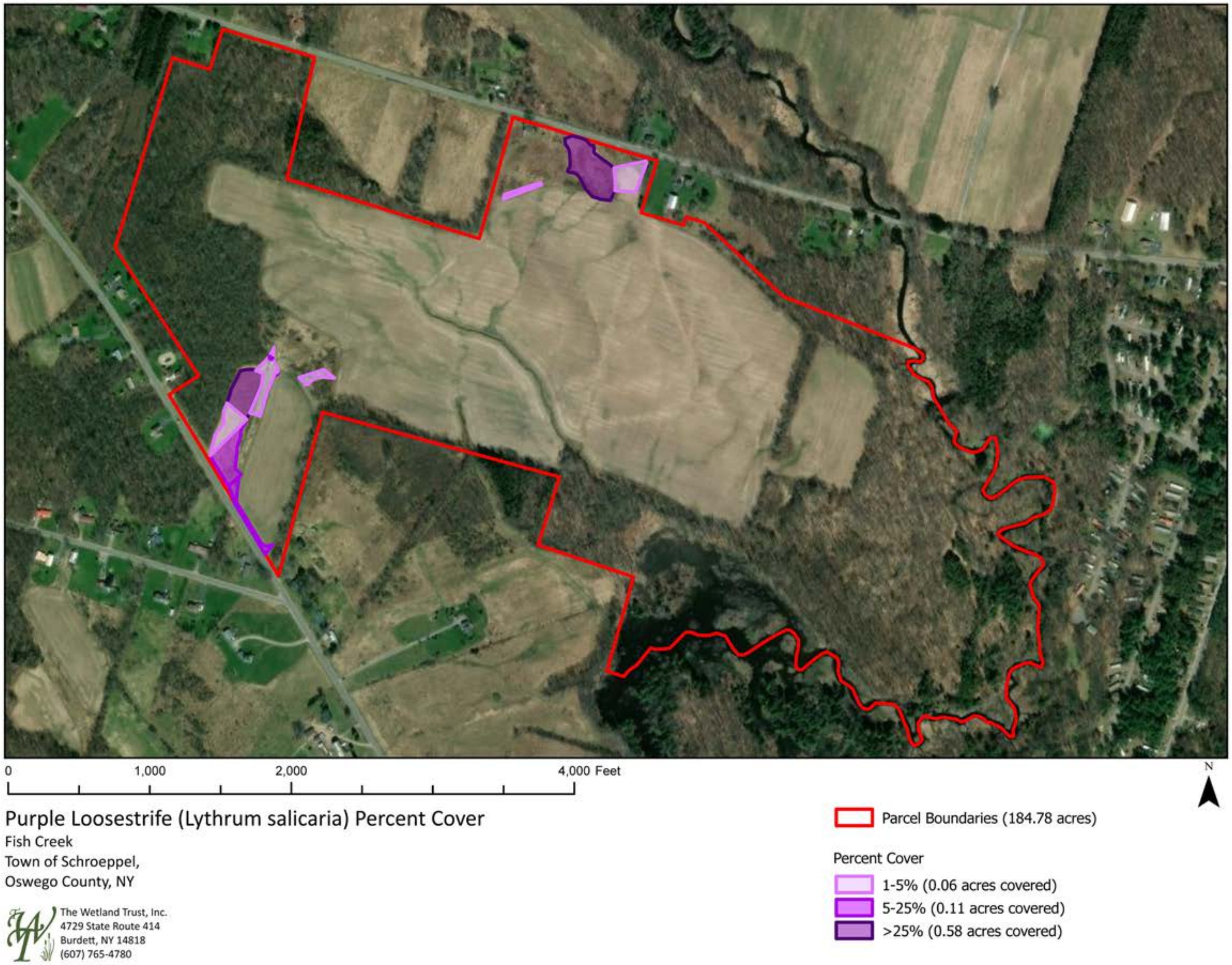


Figure 8-2. Reed Canary Grass Percent Cover

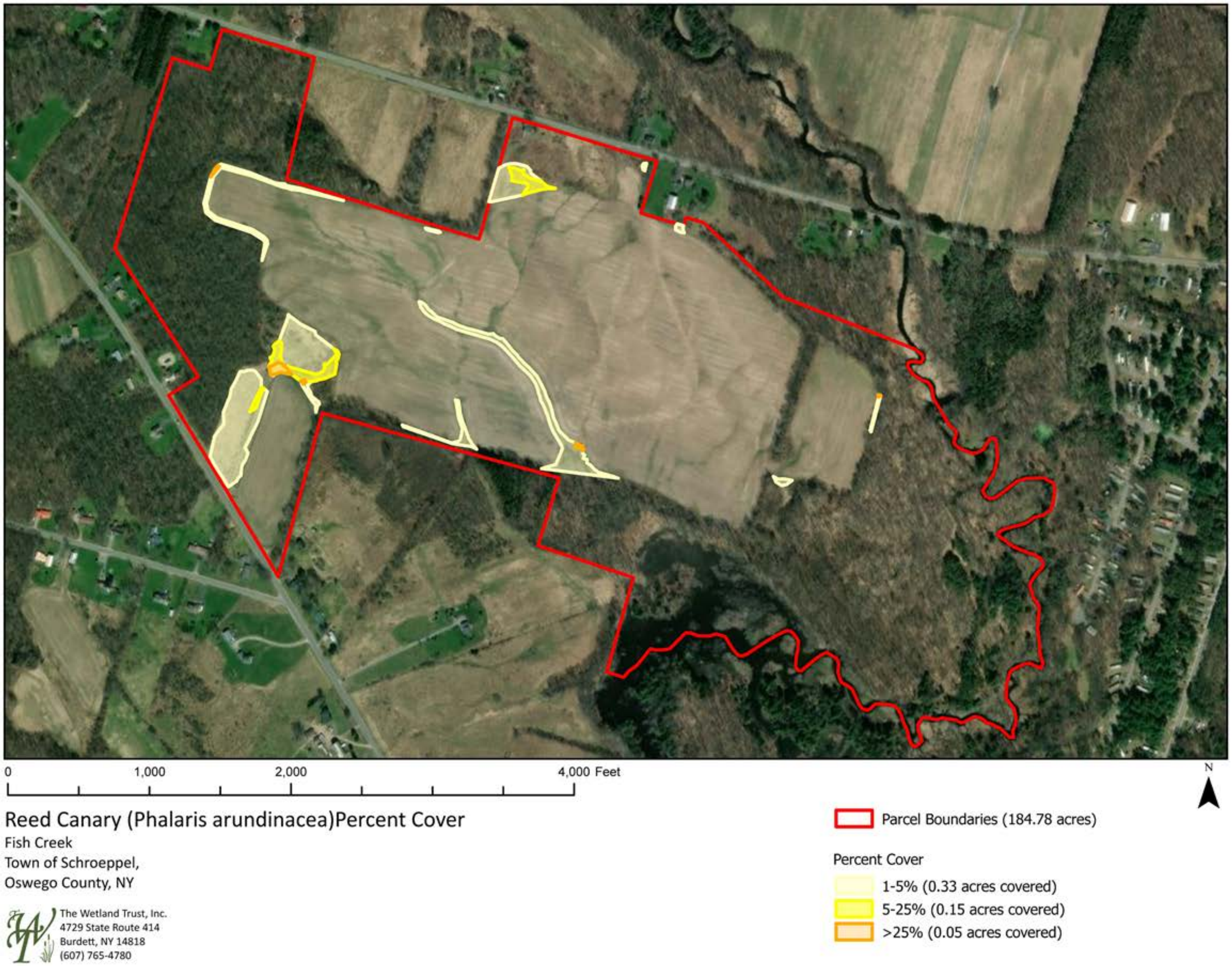


Figure 8-3. Phragmites Percent Cover

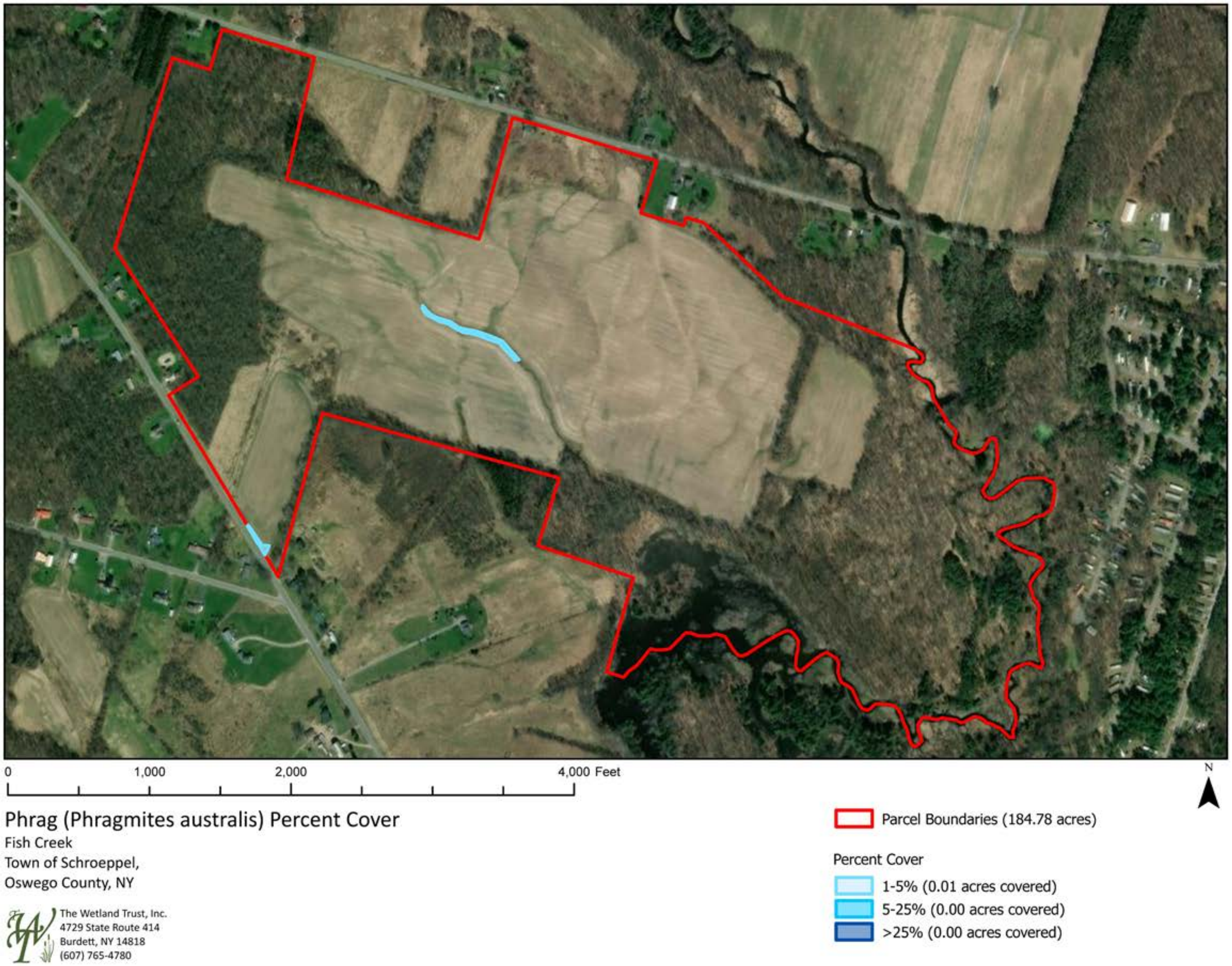


Figure 8-4. Cattail Percent Cover

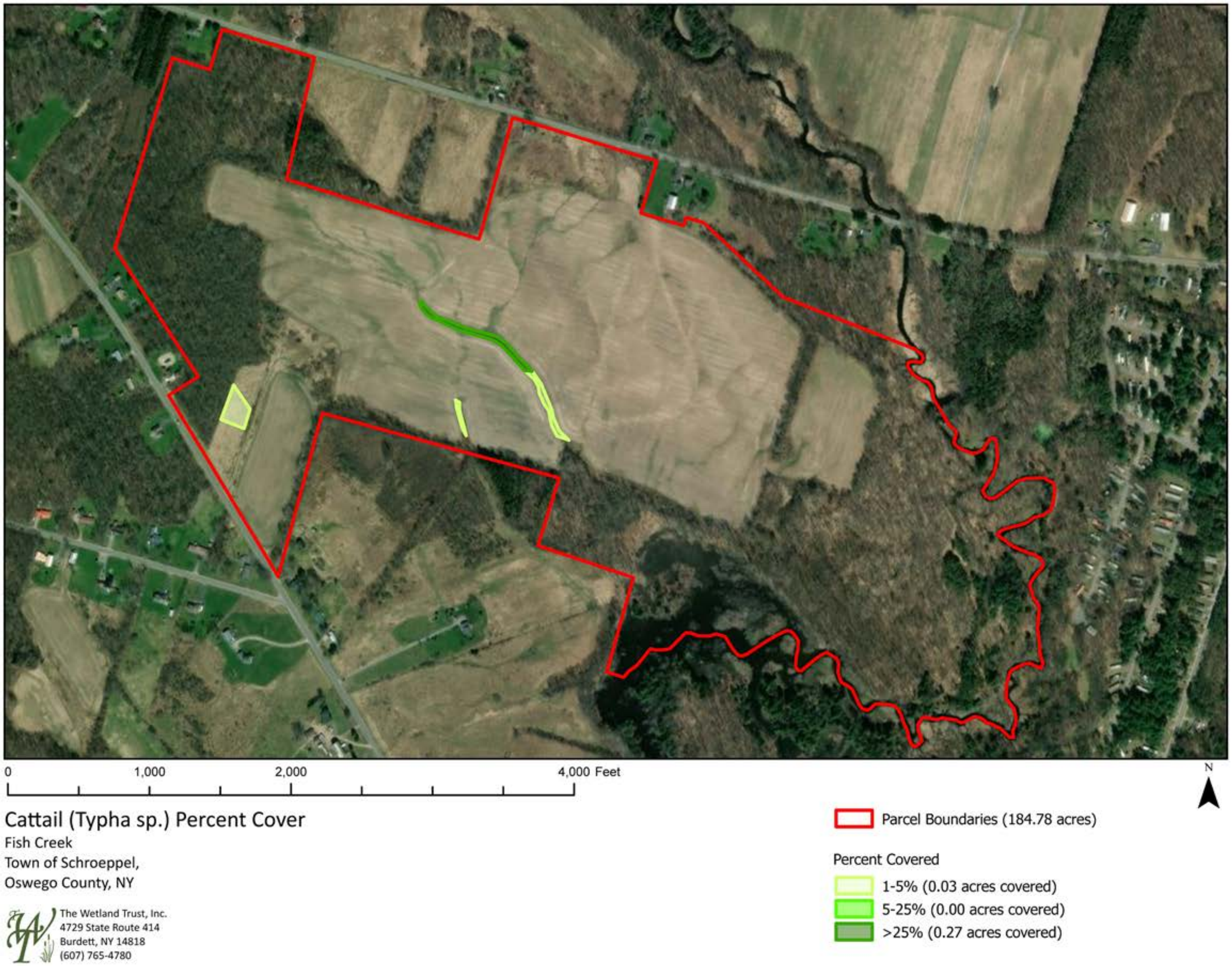


Table 8-1: Invasive Species Coverage at Upper Caughdenoy Creek

Invasive Species	**1-5% Cover (Affected**	**5-25% Cover (Affected**	**>25% Cover (Affected**	**Total Area (Affected Acres)**
Reed Canary Grass (*Phalaris arundinacea*)	1.63	1.09	3.87	6.59
Purple Loosestrife (*Lythrum salicaria*)	5.67	22.85	1.40	29.93
Cattail (Typha sp.)	0.67	2.24	0.08	2.99
Common Reed (*Phragmites australis*)	0.02	0.40	3.38	3.80

Appendix F.

New York State Parks, Recreation and Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

September 09, 2024

Kirsten Gerhardt
Restoration Ecologist
The Wetland Trust
4729 NY 414
Burdett, NY 14818

Re: USACE
Booth Wetland Restoration Project
24PR08086

Dear Kirsten Gerhardt:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

Based upon this review, it is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Bradley Russell at the following email address:

Bradley.Russell@parks.ny.gov

Sincerely,

Roger Daniel Mackay

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

100 YEARS
New York State Parks, Recreation and Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

September 09, 2024

Kirsten Gerhardt
Restoration Ecologist
The Wetland Trust
4729 NY 414
Burdett, NY 14818

Re: USACE
LaPointe Wetland Restoration
24PR08085

Dear Kirsten Gerhardt:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

Based upon this review, it is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Bradley Russell at the following email address:

Bradley.Russell@parks.ny.gov

Sincerely,

Roger Daniel Mackay

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

100 YEARS
New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

August 09, 2024

Kirsten Gerhardt
Restoration Ecologist
The Wetland Trust
4729 NY 414
Burdett, NY 14818

Re: USACE
Route 33 Wetland Restoration
24PR07284

Dear Kirsten Gerhardt:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

Based upon this review, it is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Bradley Russell at the following email address:

Bradley.Russell@parks.ny.gov

Sincerely,

Roger Daniel Mackay

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

New York State Parks, Recreation and Historic Preservation
100 YEARS

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

September 09, 2024

Kirsten Gerhardt
Restoration Ecologist
The Wetland Trust
4729 NY 414
Burdett, NY 14818

Re: USACE
Wisner East Wetland Restoration Project
24PR08091

Dear Kirsten Gerhardt:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

Based upon this review, it is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Bradley Russell at the following email address:

Bradley.Russell@parks.ny.gov

Sincerely,

Roger Daniel Mackay

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

Appendix G.

Wetland Design Form

Site Name: Wisner 1	**Date: 05-03-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field planted to soybeans.**

Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.

Plant species: Bare ground that is now planted to soybeans	**How the planned wetland is marked on the ground: Orange wire flags**
Invasive species: Reed Canary grass on neighboring private land.	**Groundwater elevation in test hole? 19-inches below the surface.**
Hydric soil present near the surface? No	**Elevation-change upper to lower edge of designed wetland: 2.0-feet**

Test Hole location: 43.308288°N 76.221014°W
Soil texture: 0-12-inches = topsoil, 12-29-inches = clay, 29-32-inches = sand, 32-34-inches = silt loam.

Rock armor the inlet and outlet for the wetland? Yes
Inlet: 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet³/27 feet³/yard³ = 33 yards³ x 1.5 tons/yard³ = 50 tons
Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet³/27 feet³/yard³ = 33 yards³ x 1.5 tons/yard³ = 50 tons
Total = 100 tons

Head-cuts located uphill or downhill of the planned wetland. Yes, in the ditch.

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Spread soil to the south. Shape and armor with rock an inlet and an outlet. Add pits, scrapes, and mounds and then plant with native trees and shrubs.

Wisner 1

Wisner 1

Wetland Design Form

Site Name: Wisner 2

Date: 05-03-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field planted to soybeans.

Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.

Plant species: Bare ground that is now planted to soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: Reed Canary grass on neighboring private land.

Groundwater elevation in test hole? 19-inches below the surface.

Hydric soil present near the surface? No

Elevation-change upper to lower edge of designed wetland: 2.0-feet

Test Hole location: 43.308288°N 76.221014°W (Same as for Wisner 1)
Soil texture: 0-12-inches = topsoil, 12-29-inches = clay, 29-32-inches = sand, 32-34-inches = silt loam.

Rock armor the inlet and outlet for the wetland? No

Head-cuts located uphill or downhill of the planned wetland. None

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Build an above ground dam that is no higher than 12-inches. Spread soil to the south into buffer. Add pits, scrapes, and mounds and then plant with native trees and shrubs.

Wisner 2

Wisner 2

Wetland Design Form

Site Name: Wisner 3

Date: 05-03-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field planted to soybeans.

Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.

Plant species: Bare ground that is now planted to soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: Reed Canary grass on neighboring private land.

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? No

Elevation-change upper to lower edge of designed wetland: 1.5-feet

Test Hole location: 43.307863°N 76.220329°W
Soil texture: 0-14-inches = topsoil, 14-20-inches = clay, 20-28-inches sand & gravel, 28-inches -48-inches = clay.

Rock armor the inlet and outlet for the wetland? Yes
Inlet: 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 100 tons

Head-cuts located uphill or downhill of the planned wetland. Yes, in the ditch.

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Shape and armor with rock an inlet and an outlet. Spread soil to the south into buffer. Add pits, scrapes, and mounds and then plant with native trees and shrubs.


Wisner 3


Wisner 3

Wetland Design Form

Site Name: Wisner 4

Date: 05-03-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field planted to soybeans.

Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.

Plant species: Bare ground that is now planted to soybeans

How the planned wetland is marked on the ground: White wire flags

Invasive species: Reed Canary grass on neighboring private land.

Groundwater elevation in test hole? 36-inches below the surface.

Hydric soil present near the surface? No

Elevation-change upper to lower edge of designed wetland: 1.5-feet

Test Hole location: 43.307781°N 76.219098°W
Soil texture: 0-13-inches = topsoil, 13-34-inches = clay, 34-40-inches = sand, 40-48-inches = clay.

Rock armor the inlet and outlet for the wetland? Yes
Inlet: 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 100 tons

Head-cuts located uphill or downhill of the planned wetland. Yes, in the ditch.

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 10-inches. Spread soil to the south. Shape and armor with rock an inlet and an outlet. Add pits, scrapes, and mounds and then plant with native trees and shrubs.

Wisner 4

Wisner 4

Wetland Design Form

Site Name: Wisner 5	**Date: 05-03-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field planted to soybeans.**
Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.	
Plant species: Bare ground that is now planted to soybeans	**How the planned wetland is marked on the ground: White wire flags**
Invasive species: Reed Canary grass on neighboring private land.	**Groundwater elevation in test hole? 29-inches below the surface.**
Hydric soil present near the surface? No	**Elevation-change upper to lower edge of designed wetland: 1.5-feet**
Test Hole location: 43.307020°N 76.216876°W **Soil texture: 0-14-inches = topsoil, 14-22-inches sand & clay, 22-48-inches = clay.**	
Rock armor the inlet and outlet for the wetland? Yes **Inlet: 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons** **Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons** **Total = 100 tons**	
Head-cuts located uphill or downhill of the planned wetland. Yes, in the ditch.	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 10-inches. Spread soil to the south into the buffer. Shape and armor with rock an inlet and an outlet. Add pits, scrapes, and mounds and then plant with native trees and shrubs.	

Wisner 5

Wisner 5

Wetland Design Form

Site Name: Wisner 7

Date: 05-03-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dan Kwasnowski (The Wetland Trust), Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field planted to soybeans. The wetland would cross and disable two ditches.

Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.

Plant species: Bare ground that is now planted to soybeans

How the planned wetland is marked on the ground: Orange & pink wire flags

Invasive species: Reed canary grass and purple loosestrife on neighboring private land.

Groundwater elevation in test hole? None

Hydric soil present near the surface? No

Elevation-change upper to lower edge of designed wetland: 2.0-feet

Test Hole location: 43.308189°N 76.218271°W
Soil texture: 0-7-inches = topsoil, 7-48-inches = clay.

Rock armor the inlet and outlet for the wetland? Yes
Inlet: 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 100 tons

Head-cuts located uphill or downhill of the planned wetland. Yes, in the ditch.

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Spread soil uphill to north. Shape and armor with rock an inlet and an outlet. Add pits, scrapes, and mounds and then plant with native trees and shrubs.

Wisner 7

Wisner 7 (digging soil test hole)

Wetland Design Form

Site Name: Wisner 8	**Date: 05-04-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field planted to soybeans. The wetland would cross and disable two ditches.**
Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.	
Plant species: Bare ground that is now planted to soybeans	**How the planned wetland is marked on the ground: White wire flags**
Invasive species:	**Groundwater elevation in test hole? 39-inches below the surface**
Hydric soil present near the surface? No	**Elevation-change upper to lower edge of designed wetland: 2.0-feet**
Test Hole location: 43.309175°N 76.218873°W **Soil texture: 0-8-inches = topsoil, 8-39-inches = clay, 39-44-inches = sand, 44-48-inches = clay.**	
Rock armor the inlet and outlet for the wetland? Yes **Inlet: 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons** **Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons** **Total = 100 tons**	
Head-cuts located uphill or downhill of the planned wetland. None	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Spread uphill to the southeast and east. Shape and armor with rock an inlet and an outlet. Add pits, scrapes, and mounds and then plant with native trees and shrubs.	

Wisner 8

Wisner 8

Wetland Design Form

Site Name: Wisner 9

Date: 05-04-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field planted to soybeans. The wetland would cross and disable two ditches.

Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.

Plant species: Bare ground that is now planted to soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species:

Groundwater elevation in test hole? 36-inches below the surface

Hydric soil present near the surface? No

Elevation-change upper to lower edge of designed wetland: 1.5-feet

Test Hole location: 43.309575°N 76.220818°W

Soil texture: 0-11-inches = topsoil, 11-17-inches = sandy loam, 17-30 inches = clay, 30-48-inches = mixed clay and fine gravel.

Rock armor the inlet and outlet for the wetland? Yes

Inlet: 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons

Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons

Total = 100 tons

Head-cuts located uphill or downhill of the planned wetland. None

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 10-inches. Spread soil uphill to the north. Shape and armor with rock an inlet and an outlet. Add pits, scrapes, and mounds and then plant with native trees and shrubs.

Wisner 9

Wisner 9

Wetland Design Form

Site Name: Wisner 10

Date: 05-04-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field planted to soybeans. The wetland would cross and disable one ditch.

Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.

Plant species: Bare ground that is now planted to soybeans

How the planned wetland is marked on the ground: Pink wire flags

Invasive species:

Groundwater elevation in test hole? Not determined.

Hydric soil present near the surface? No

Elevation-change upper to lower edge of designed wetland: 2.0-feet

Test Hole location: Not dug
Soil texture: Like Wisner 9

Rock armor the inlet and outlet for the wetland? Yes
Inlet: 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet^3/27 feet^3/yard^3 = 33 yards^3 x 1.5 tons/yard^3 = 50 tons
Total = 100 tons

Head-cuts located uphill or downhill of the planned wetland. None

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Spread soil east or west uphill. Shape and armor with rock an inlet and an outlet. Add pits, scrapes, and mounds and then plant with native trees and shrubs.

Wisner 10

Wisner 10

Wetland Design Form

Site Name: Wisner 11	**Date: 05-04-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field planted to soybeans.**
Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.	
Plant species: Bare ground that is now planted to soybeans	**How the planned wetland is marked on the ground: Orange and pink wire flags**
Invasive species:	**Groundwater elevation in test hole? 39-inches below surface.**
Hydric soil present near the surface? No	**Elevation-change upper to lower edge of designed wetland: 2.0-feet**
Test Hole location: 43.308454°N 76.220184°W **Soil texture: 0-9-inches = topsoil, 9-39-inches = clay, 39-41-inches – sand, 41-48-inches = clay**	
Rock armor the inlet and outlet for the wetland? Not needed.	
Head-cuts located uphill or downhill of the planned wetland. None	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Spread soil to the Southwest. Add pits, scrapes, and mounds and then plant with native trees and shrubs.	

Wisner 11

Wisner 11

Wetland Design Form

Site Name: Wisner 12	**Date: 05-04-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field planted to soybeans.**
Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.	
Plant species: Bare ground that is now planted to soybeans	**How the planned wetland is marked on the ground: White wire flags**
Invasive species:	**Groundwater elevation in test hole? Not determined**
Hydric soil present near the surface? No	**Elevation-change upper to lower edge of designed wetland: 2.0-feet**
Test Hole location: Not dug **Soil texture: Like Wisner 11**	
Rock armor the inlet and outlet for the wetland? Not needed.	
Head-cuts located uphill or downhill of the planned wetland. None	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Spread soil to the Southwest. Add pits, scrapes, and mounds and then plant with native trees and shrubs.	

Wisner 12

Wisner 12

Site Name: Wisner 13	**Date: 05-04-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field planted to soybeans.**
Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.	
Plant species: Bare ground that is now planted to soybeans	**How the planned wetland is marked on the ground: White wire flags**
Invasive species:	**Groundwater elevation in test hole? 30-inches below surface.**
Hydric soil present near the surface? No	**Elevation-change upper to lower edge of designed wetland: 2.0-feet**
Test Hole location: 43.309410°N 76.221220°W **Soil texture: 0-8-inches = topsoil, 8-29-inches clay, 29-30-inches = sand, 30-inches bedrock.**	
Rock armor the inlet and outlet for the wetland? Not needed.	
Head-cuts located uphill or downhill of the planned wetland. None	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Spread soil to the South. Add pits, scrapes, and mounds and then plant with native trees and shrubs.	

Wisner 13

Wisner 13

Wetland Design Form

Site Name: Wisner 14	**Date: 05-04-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field planted to soybeans.**
Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.	
Plant species: Bare ground that is now planted to soybeans	**How the planned wetland is marked on the ground: White wire flags**
Invasive species:	**Groundwater elevation in test hole? Not determined**
Hydric soil present near the surface? No	**Elevation-change upper to lower edge of designed wetland: 2.0-feet**
Test Hole location: Not dug **Soil texture: Like Wisner 13**	
Rock armor the inlet and outlet for the wetland? Not needed.	
Head-cuts located uphill or downhill of the planned wetland. None	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Spread soil downhill to the south. Add pits, scrapes, and mounds and then plant with native trees and shrubs.	

Wisner 14

Wisner 14

Wetland Design Form

Site Name: Wisner 15	**Date: 05-04-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Michelle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field planted to soybeans.**
Evidence of historic drainage or filling: Ditches are present in each drainage and along the south edge of the property. The ditches may serve as outlets for buried drainage systems and drain historic natural wetland basins. Basins have been filled and land sloped so it will drain for farming.	
Plant species: Bare ground that is now planted to soybeans	**How the planned wetland is marked on the ground: Pink wire flags**
Invasive species:	**Groundwater elevation in test hole? Not determined**
Hydric soil present near the surface? No	**Elevation-change upper to lower edge of designed wetland: 2.0-feet**
Test Hole location: Not dug **Soil texture: Like Wisner 13 & 14**	
Rock armor the inlet and outlet for the wetland? Not needed.	
Head-cuts located uphill or downhill of the planned wetland. None	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Build a groundwater dam along the lower perimeter of the wetland being built. Fill ditch. Build an above ground dam that is no higher than 12-inches. Spread soil downhill to the south. Add pits, scrapes, and mounds and then plant with native trees and shrubs.	

Wisner 15

Wisner 15

Appendix H.

Appendix I.

Upper Caughdenoy Creek
Long Term Management Plan (LTMP)

Oswego County, New York

PREPARED BY:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
www.thewetlandtrust.org

May 2025

1.0 Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Offsite Compensatory Mitigation Project (Project) on behalf of Micron NY Semiconductor Manufacturing, LLC (Micron), has developed a mitigation plan at the Upper Caughdenoy Creek Site, towns of Hastings, Palermo and Schroeppel, Oswego County, New York (Mitigation Site) to develop wetland acreage that will contribute to the total compensation needs for the construction of a semiconductor fabrication complex in the town of Clay, Onondaga County, NY. This Long-Term Management Plan (LTMP) has been developed based on anticipated monitoring and management activities for the Mitigation Site. Additional details are to be provided, if necessary, throughout the monitoring period and amended or revised as needed and approved by the USACE and NYSDEC. The purpose of the Long-Term Management Plan (LTMP) is to ensure the long-term sustainability of the protected and restored resources after mitigation performance standards have been achieved.

2.0 Responsible Party and Long-Term Steward

Micron is the Responsible Party for all phases of this Permittee Responsible mitigation through monitoring and final acceptance when a Certificate of Completion (or equivalent) will be provided by the agencies. Once the mitigation is complete Micron will transfer long-term management to TWT. As the fee simple owners of the Upper Caughdenoy Creek Site, TWT will be the long-term steward and responsible for long-term management of the wetland mitigation site including identification of needs, development of recommendations, review with regulatory agencies as required, implementation, and efficacy measures. TWT shall implement this LTMP to preserve the habitat and conservation values in accordance with the approved Mitigation Plan, site protection instrument, and this LTMP. Long-term management tasks shall be funded through the Long-Term Management Fund.

3.0 Property Description

3.1 Conservation Values

The Mitigation Site provides an opportunity for restoration of a large stream/wetland complex with approximately 49 acres of wetland re-establishment, and 5 acres of rehabilitation in a previously drained and cultivated landscape. The permanent restoration and subsequent protection of this property has several site-specific conservation values that can be enhanced and maintained.

- ***Hydrologic Function***- Restoring the wetlands will improve surface water retention, infiltration, and seasonal saturation of soils. Removal of artificial drainage and regrading will help reestablish groundwater-surface water interactions, essential for wetland hydrology.
- ***Water Quality***- Conversion of cropland to wetlands and vegetated buffers will reduce nutrient runoff, sedimentation, and agrochemical inputs into Upper Caughdenoy Creek and downstream waters.

3.2 Site Improvements

Summary of site improvements including construction and restoration as per the Mitigation Plan. As-built report should be attached as an Appendix to this LTMP.

4.0 Baseline Conditions

Baseline conditions will be provided here with the as-built and final 10-year report referenced and attached. Conditions will be updated throughout the life of the project.

5.0 Management Activities

The Upper Caughdenoy Creek long-term management strategy will ensure the long-term sustainability and ecological performance of the restored and protected aquatic, upland and biological resources long after the active monitoring period has closed. Upon approval of the Mitigation Plan, the proposed wetland restoration will be completed. This restoration will restore or rehabilitate approximately 87 acres of diverse, native wetland vegetation communities to support wetland wildlife populations and connectivity to adjacent preserved wetlands. If monitoring finds it necessary, the anticipated long-term management activities include:

- ***Invasive Species Management-*** At the conclusion of the ecological monitoring period, performance standards will be met and native vegetative communities well established. Long-term management will ensure that conservation values are not significantly threatened by invasive vegetation. If warranted, mechanical or chemical management of invasive species will be implemented (see Invasive Species Management Plan).
- ***Spillways and Groundwater Dams-*** The constructed spillways and groundwater dams will be monitored and maintained as needed to maintain structural integrity and contribution toward site-specific conservation values.
- ***Access-*** The main access and parking area will be maintained as needed via mowing or replenishing gravel in appropriate areas. Gates, padlocks, and fences will receive upkeep as needed.
- ***Security and Safety-*** The Upper Caughdenoy Creek site will not be open to the public to minimize impacts from human activity and the parcel will be posted for protection against trespassing. Signage posting and unauthorized access will be monitored and appropriately maintained. Trash will be collected on a yearly basis and security increased as warranted in the form of additional gates/locks, cameras, and contact with local authorities.

Any long-term management activities performed will be recorded in an annual report along with any recommendations for future management activities or proposed changes to the LTMP, if warranted.

6.0 Funding

To ensure long-term financial assurance TWT will continue to own the site fee simple in perpetuity. As a 501(c)(3) nonprofit, TWT has received tax-exempt status for the site, which helps assure its long-term protection. TWT has a director-controlled Stewardship Management Investment Account specifically established for the Micron Compensatory Mitigation project with funds provided by Micron Semiconductor Manufacturing LLC. Funds will be deposited into this account with the investment income (investment instruments are low risk and broad-based) used to support permanent long-term management and maintenance. These funds are sufficient to sustain long-term management as outlined in **Table 1**, in which the budget covers long-term management for all six sites combined.

Table 1. Budget estimate for potential long-term management and maintenance tasks, all six Micron Wetland/Stream mitigation sites, a total of 1,328 acres.

Category	Task	Frequency	Estimated Cost per acre	Annualized Cost
Adaptive Management	Replanting	5	$1,800	$7466
	Reshaping terrain	5	$600	$2489
	Invasive species removal	2	$2,100	$21777
Maintenance	Site manipulation	10	$1500	$3111
	Boundary posting	10	$600	$6244
	Other practices	3	$1,320	$9,126
Long-Term Management	Other corrective adaptive management actions to ensure natural stability of site	5	$4,800	$19,910
Monitoring	To determine implementation tasks	1	$18	$25,398
Administration	For all tasks above including tax exempt status	1	$600	$12,444
Total annual budget*				102,500
Total Stewardship investment**				**$4,100,000**

Note: This table is an estimate based on 400 wetland credits @ $8,000 or (equivalent DEC Acres) and 13,500 stream ft @ $60

Micron Central New York Semiconductor Manufacturing Complex

Lower Caughdenoy Creek

Wetland Mitigation Plan

Oswego County, NY

PREPARED BY:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
www.thewetlandtrust.org

May 2025

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Upper Caughdenoy Creek Wetland Mitigation Plan
Sixmile Creek Wetland Mitigation Plan
Oneida River Wetland Mitigation Plan

1. Introduction and Objectives

Six sites in Oswego County make up the Permittee Responsible Offsite Compensatory Mitigation Project (Project) for the Micron NY Semiconductor Manufacturing, LLC (Micron) semiconductor fabrication site in the town of Clay, Onondaga County, New York. The Lower Caughdenoy Creek Wetland Mitigation Plan (LCC Plan) location is along County Route 37 in the Town of Hastings, Oswego County, NY. The Project will address the total mitigation need for wetland credits and stream restoration to meet Micron permit requirements. The final number of credits required for compensation is still pending as of the drafting of this plan, however, an Overview document accompanying the six plans will be updated with final credit accounting. TWT submits this LCC Plan as one of six plans to satisfy Project mitigation needs and in fulfillment of the requirements of 33 C.F.R. Part 332 (2024).

This Lower Caughdenoy Creek Plan focuses on wetland mitigation components only. The objectives of the LCC Plan are to develop approximately 53.3 wetland mitigation credits (USACE) or 58 mitigation acres (NYSDEC) toward a total compensation requirement of 414 credits/acres for the entire project. This includes:

- Re-establish wetlands to generate 51.5 USACE wetland credits equivalent to the creation of 51.5 NYSDEC wetland mitigation acres, including:
    - 3.3 acres of PEM - Shallow Emergent Marsh
    - 2.4 acres of PEM - Deep Emergent Marsh
    - 0.35 acres of PSS – Scrub-Shrub
    - 11.2 acres of PFO - Floodplain Forest
    - 34.2 acres of PFO - Red Maple Hardwood Swamp
- Rehabilitate wetlands of the above cover types to generate 1.9 USACE wetland credits equivalent to the enhancement of 6.5 NYSDEC wetland mitigation acres.
- Establish 28.7 acres of upland buffer habitat, including:
    - 3.6 acres of herbaceous buffer habitat
    - 25.1 acres of shrub/forest buffer habitat

The distribution of wetland types may change due to balancing distribution among the other five mitigation plans in development. The distribution of wetland cover types, mitigation type, and acreage is dependent on site-specific characteristics which ultimately determine what wetlands are suitable at specific locations.

2. Site Description

The Lower Caughdenoy Creek Site is approximately 118 acres in size in the Town of Hastings, Oswego County, New York (**Figure 2-1**). The Site is within the Oneida River 10-digit HUC (0414020209) watershed, and the U.S. Geological Survey 7.5-minute quadrangle indexed as Central Square. Coordinates for the approximate center of the Site are: [43.26633486, -76.18747077]. The Site is located along County Route 37 which is adjacent to the Oneida River. Caughdenoy Creek meanders across the northern portion of the property (**Figure 2-2**).

2.1 Site Selection

The Lower Caughdenoy Creek Mitigation Site was selected along with five other sites to satisfy compensatory mitigation requirements for Micron Campus Impacts using site selection protocols described in Section 2.1 and 4.1 of the Micron Overview of Stream/Wetland Compensation on Six Mitigation Sites document. This Site is particularly well suited for wetland restoration with a combination of:

- very flat topography,
- thick clay and compacted sand/clay layers near the surface,
- large area with opportunity to support expansive wetland connectivity

2.2 Site Protection

The Wetland Trust, Inc. (TWT) is a 501(c)(3) nonprofit corporation and qualifying conservation organization (NYS ECL) whose mission is the protection, conservation, and restoration of wetlands and other critical habitat. TWT owns the Lower Caughdenoy Creek site fee simple and in perpetuity, with provisions to transfer to other similar nonprofits its lands and stewardship funds should TWT fail. All sites will receive the same protection. There are two layers of protection for this site:

> First, TWT will own the LCC mitigation site in perpetuity. TWT's vested interest in the site through fee-simple ownership reduces the risk of failure to satisfy performance standards.
>
> Second, TWT will file a USACE-approved Conservation Easement (CE, **Appendix A**) with the Oswego County Clerk. The Wetland Conservancy, Inc. (TWC), P.O. Box 220, Burdett, NY 14818-0220, a 501(c)(3) nonprofit corporation and qualifying conservation organization (NYS ECL), will be the easement holder. The easement will cite specific conditions and prohibitions and apply to the credit generating areas of the site. The site plan provides the rationale for the easement and assists in its enforcement. The CE names the USACE and NYSDEC as third-party enforcement entities.

Figure 2-1. Wetland Mitigation Sites Location Overview

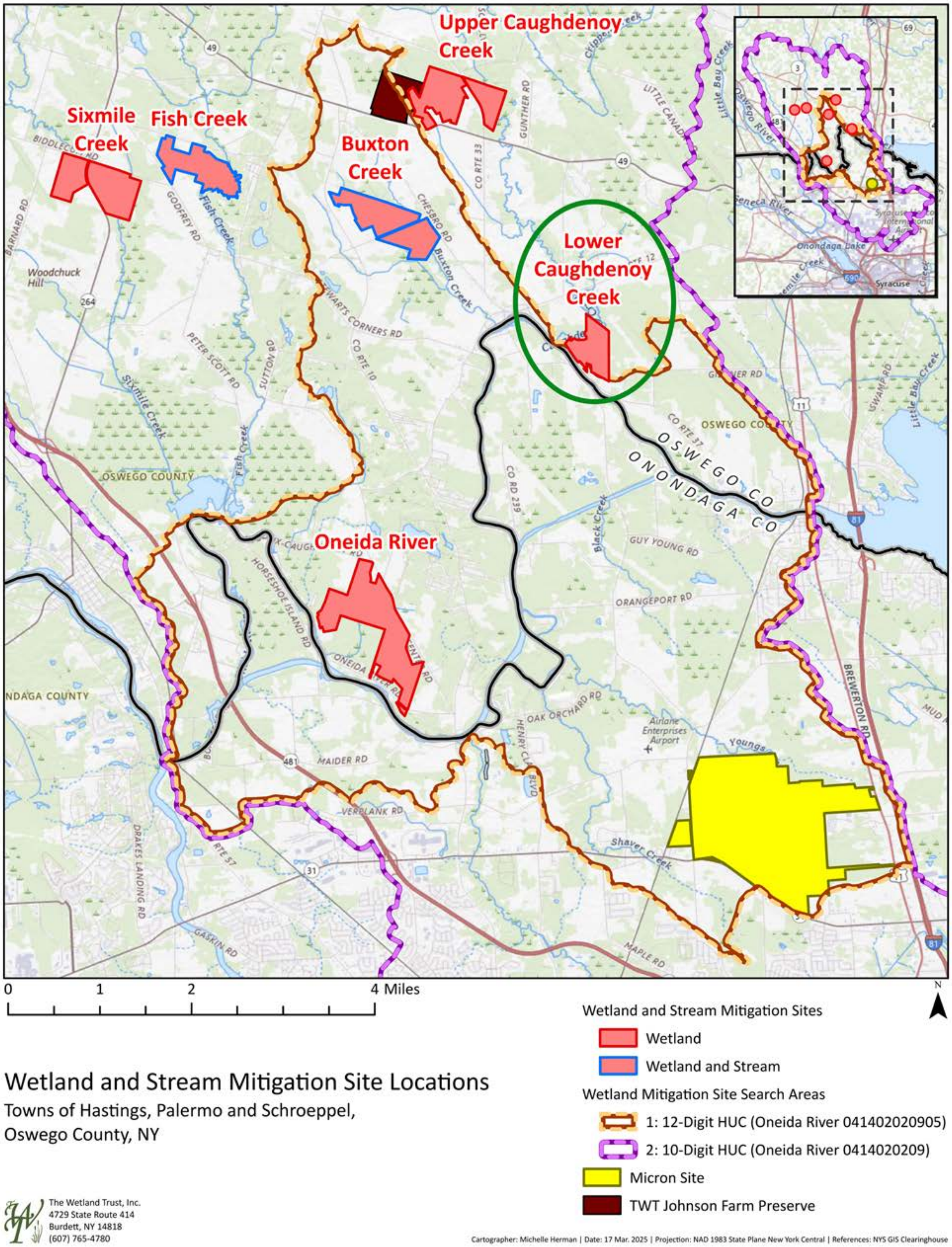
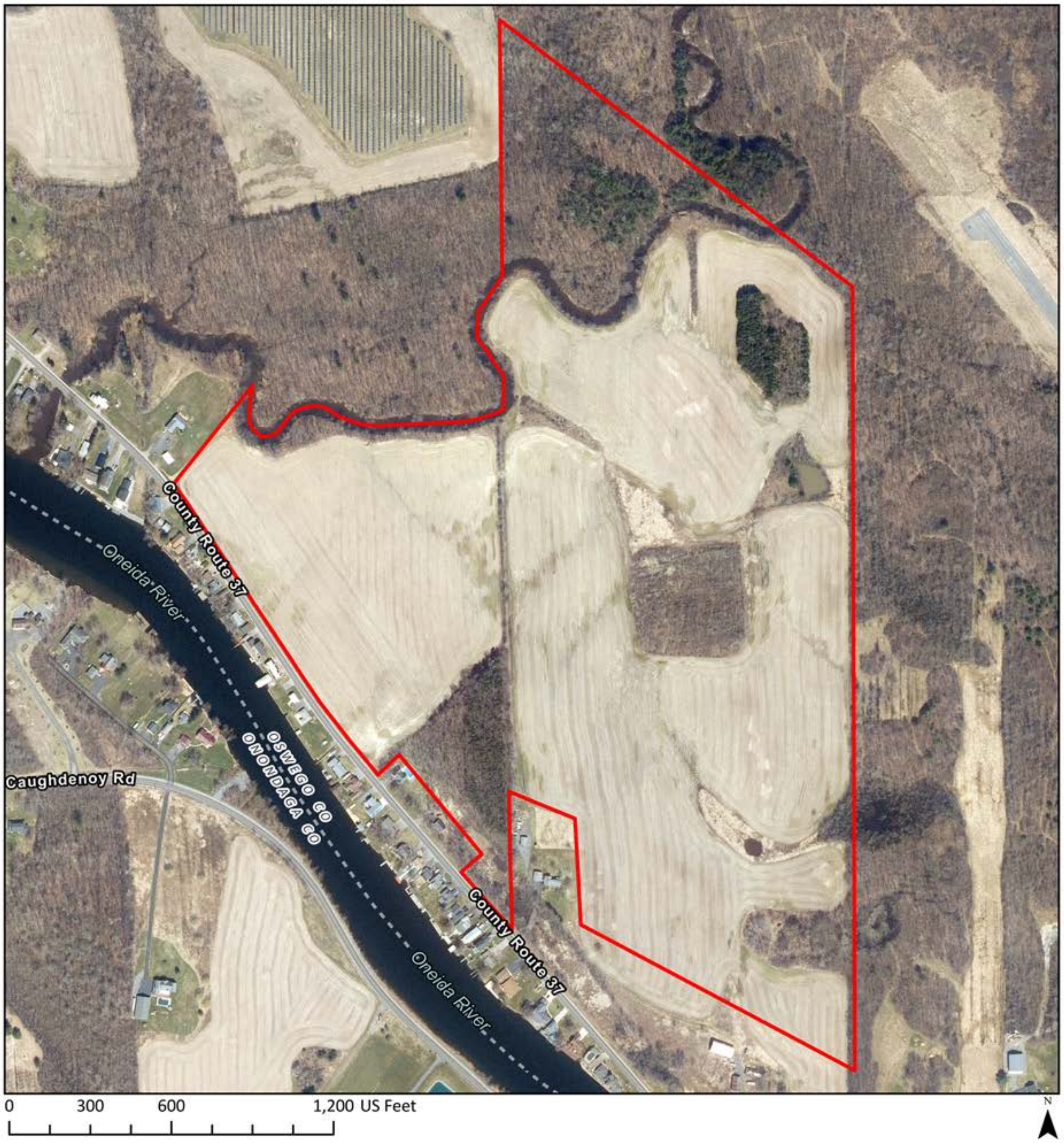


Figure 2-2. Lower Caughdenoy Creek Property (2023)



Imagery (2023)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

🟥 TWT Property Boundary (118.1 ac)

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 4 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

With the exception of activities approved as part of this Project permit or other activities approved by the USACE and NYSDEC, no further alterations within the easement boundary shall occur.

3. Baseline Information

3.1 Land Use History

Historic

A review of historic aerial photographs (**Appendix B**) was conducted to understand the property's land use history. Early aerial photos show a local landscape largely denuded of forest, with only sparse tree coverage in the immediate vicinity of Caughdenoy Creek. The earliest available aerial imagery (1951) depicts the entire region in agricultural use, with nearly the entire property under cultivation. Linear features suggest efforts to drain the land. Between 1978 and 1994, a triangular section on the southwestern edge of the property near the Oneida River and a rectangular section in the northeastern part near Caughdenoy Creek were converted into pine tree farms. These areas remain forested in 2024. Between 2011 and 2013, a 0.375-acre square in the center of the eastern field was allowed to go fallow.

By 1966, a sand pit was excavated in the southeastern section. This sand pit and its adjacent area have since been used as the land’s "farm dump," where a wide variety of agricultural machinery has been deposited. Additionally, between 1978 and 1994, two ponds were created on the eastern edge of the property. By 2023, the fingers of land between these ponds and the adjacent scrub/forest on the property boundary were no longer in agricultural use.

Current Use

Current land use is primarily dedicated to commercial crop production, with fields planted in corn and soybeans. Grading and drainage infrastructure are actively maintained to optimize field conditions and enhance agricultural productivity. Successional vegetation development and forest growth continues in areas that have been allowed to regrow.

3.2 Soils

USDA Natural Resources Conservation Service (NRCS) soil mapping of the site is summarized in **Table 3-1** and **Figure 3-1** below. The Lower Caughdenoy Creek site has relatively uniform soils, with 85.64 acres (76.21% of the total area) consisting of Rhinebeck silt loam. The other significant soil type present is Madalin silt loam at 23.64 acres (20.02% of the total area). Only 3% of the land on the property is characterized as well drained, with most of the site being very poorly, poorly, or somewhat poorly drained. The land is predominantly flat with gentle slopes.

Table 3-1. Soil Series Mapped within the Mitigation Area

Series	Symbol	Acres	% of Area	Drainage Class	Hydrologic Soil Group
Fonda mucky silt loam	Fn	0.91	0.77%	Very poorly drained	C/D
Hudson silt loam, 2-6% slopes	HuB	3.54	3.00%	Moderately well drained	C/D
Madalin silt loam, 0-3% slopes	Ma	23.64	20.02%	Poorly drained	C/D
Rhinebeck silt loam, 0-2% slopes	RhA	61.66	52.23%	Somewhat poorly drained	C/D
Rhinebeck silt loam, 2-6% slopes	RhB	28.33	23.98%	Somewhat poorly drained	C/D

A 4-foot-long open-faced clay auger was used to sample soils across the property, revealing clay layers sufficient for holding water on site in every test hole. Locations of soil test pits and the description of soil textures and depth to groundwater are detailed in **Figure 3-1** below.

3.3 Wetlands and Hydrology

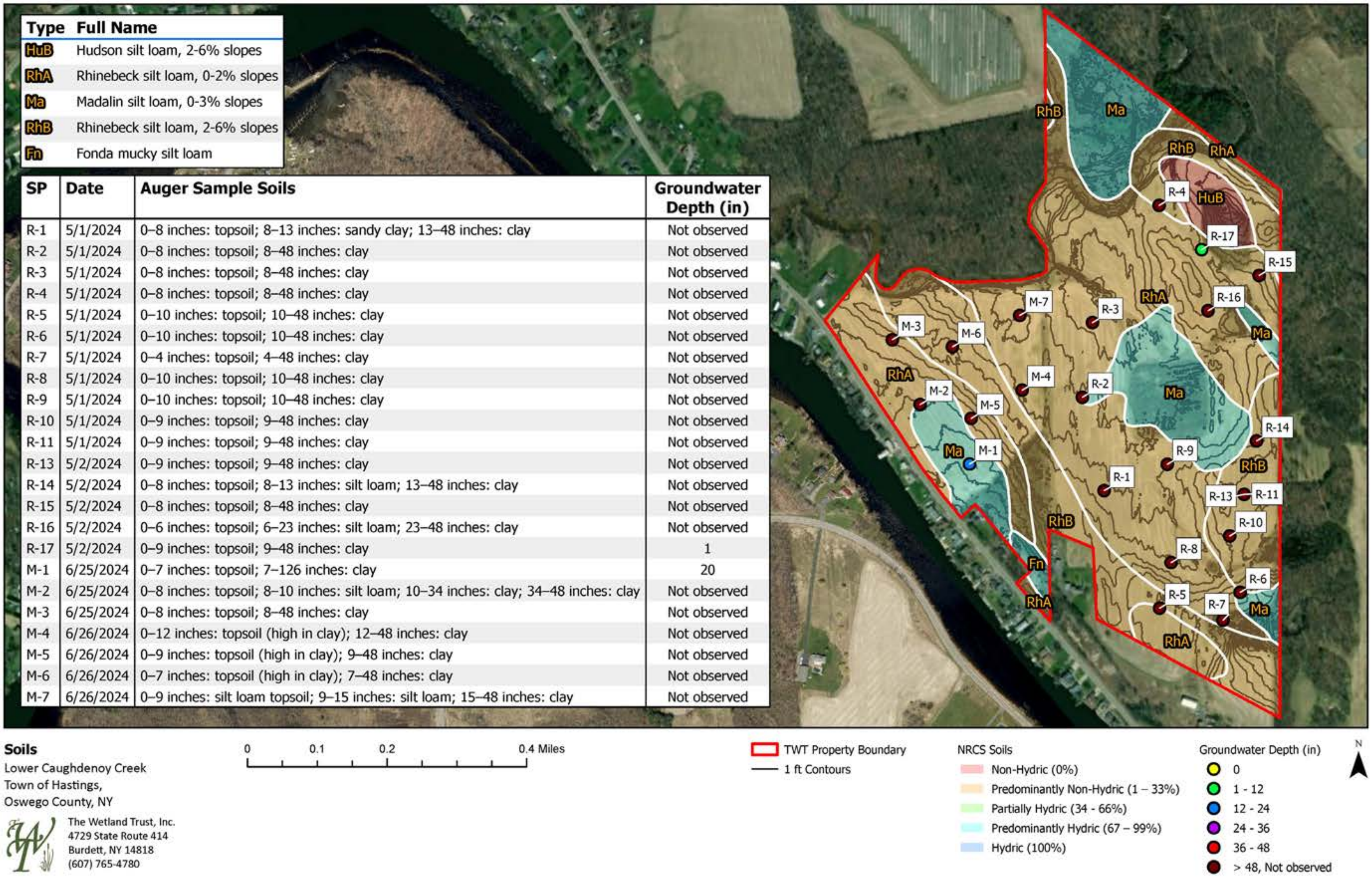
Hydrological characteristics at Lower Caughdenoy Creek were determined by TWT through wetland and aquatic resource delineations, aerial imagery interpretation, review of regulatory maps, wetland design field assessments which included a series of soil test pits, and interviews with previous and adjacent property owners.

Federally mapped wetlands are located on site (**Figure 3-2**). Existing wetlands, streams, and drainage features were delineated in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and Regional Supplement. Field visits for delineation concurrence by USACE and NYSDEC were conducted in August 2024 with final concurrence and pending as of this writing. All field data points were recorded with a centimeter-level accurate GNSS receiver and mapped in ArcGIS Pro. See **Figure 3-3** for mapped wetlands and drainage features and **Appendix C** for delineated features summary table and data sheets.

Caughdenoy Creek borders the north side of the site at approximately 370 feet in elevation, and the Oneida River lies just southwest of the property at around 369 feet. Existing on-site wetlands range from 370 to 378 feet in elevation and may have limited hydrologic connectivity to these surface waters. However, the dominant factor influencing wetland hydrology across the site is the presence of clay loam to clay soils, typically within 10 inches of the surface.

Drainage features such as D-03 and D-13 (**Figure 3-3**), combined with heavy clay soils, support wetland areas including PEM-05a, PEM-05b, and PEM-06. PEM-09 and PEM-10 may receive some groundwater influence from the Oneida River, but site observations—such as crop stress, soil cracking, and algal mats—indicate poor drainage due primarily to shallow clay soils. D-03 through D-13 may represent a remnant natural tributary to Caughdenoy Creek, whereas D-14 is a

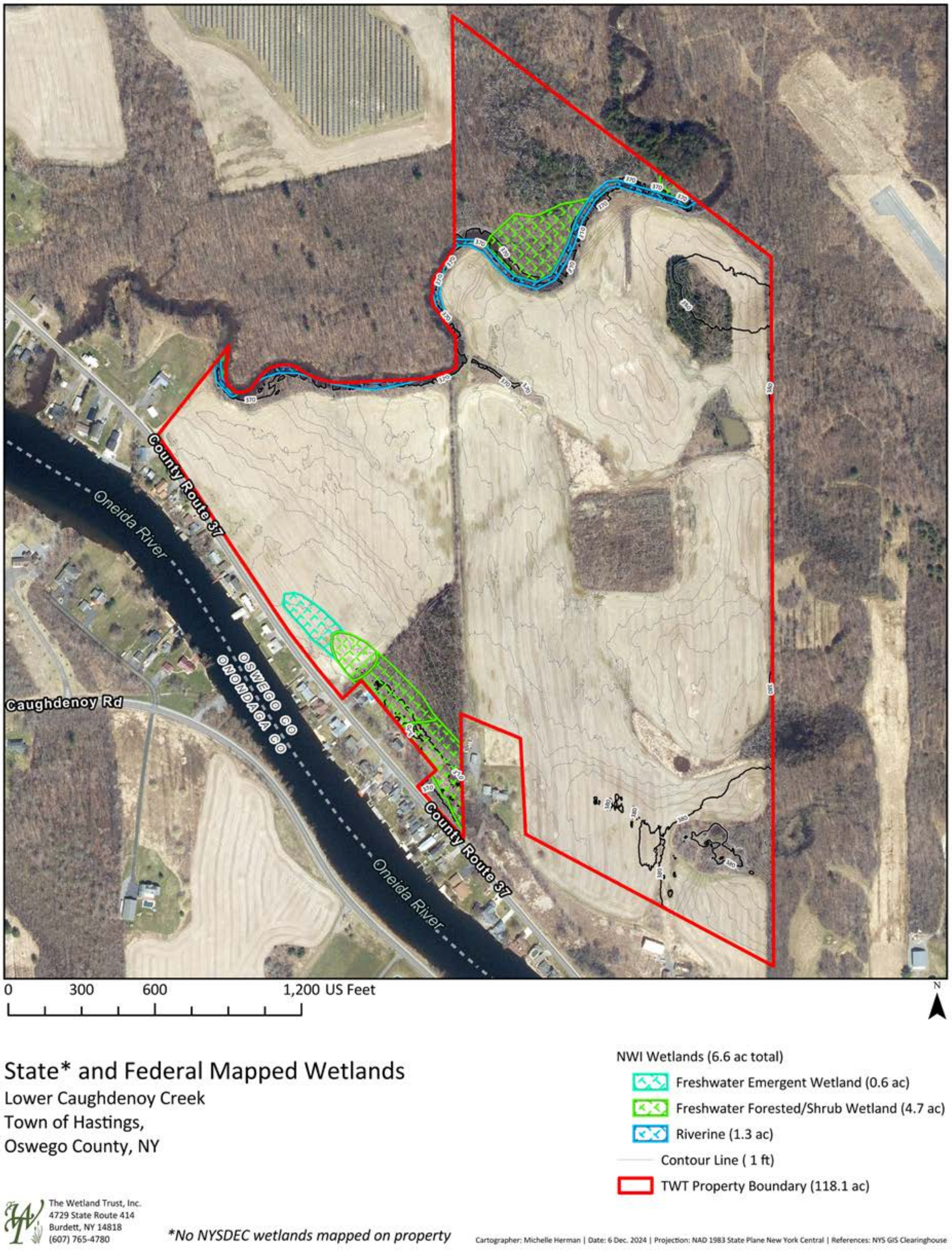
Figure 3-1. Lower Caughdenoy Creek Soils



Type	Full Name
HuB	Hudson silt loam, 2-6% slopes
RhA	Rhinebeck silt loam, 0-2% slopes
Ma	Madalin silt loam, 0-3% slopes
RhB	Rhinebeck silt loam, 2-6% slopes
Fn	Fonda mucky silt loam

SP	Date	Auger Sample Soils	Groundwater Depth (in)
R-1	5/1/2024	0–8 inches: topsoil; 8–13 inches: sandy clay; 13–48 inches: clay	Not observed
R-2	5/1/2024	0–8 inches: topsoil; 8–48 inches: clay	Not observed
R-3	5/1/2024	0–8 inches: topsoil; 8–48 inches: clay	Not observed
R-4	5/1/2024	0–8 inches: topsoil; 8–48 inches: clay	Not observed
R-5	5/1/2024	0–10 inches: topsoil; 10–48 inches: clay	Not observed
R-6	5/1/2024	0–10 inches: topsoil; 10–48 inches: clay	Not observed
R-7	5/1/2024	0–4 inches: topsoil; 4–48 inches: clay	Not observed
R-8	5/1/2024	0–10 inches: topsoil; 10–48 inches: clay	Not observed
R-9	5/1/2024	0–10 inches: topsoil; 10–48 inches: clay	Not observed
R-10	5/1/2024	0–9 inches: topsoil; 9–48 inches: clay	Not observed
R-11	5/1/2024	0–9 inches: topsoil; 9–48 inches: clay	Not observed
R-13	5/2/2024	0–9 inches: topsoil; 9–48 inches: clay	Not observed
R-14	5/2/2024	0–8 inches: topsoil; 8–13 inches: silt loam; 13–48 inches: clay	Not observed
R-15	5/2/2024	0–8 inches: topsoil; 8–48 inches: clay	Not observed
R-16	5/2/2024	0–6 inches: topsoil; 6–23 inches: silt loam; 23–48 inches: clay	Not observed
R-17	5/2/2024	0–9 inches: topsoil; 9–48 inches: clay	1
M-1	6/25/2024	0–7 inches: topsoil; 7–126 inches: clay	20
M-2	6/25/2024	0–8 inches: topsoil; 8–10 inches: silt loam; 10–34 inches: clay; 34–48 inches: clay	Not observed
M-3	6/25/2024	0–8 inches: topsoil; 8–48 inches: clay	Not observed
M-4	6/26/2024	0–12 inches: topsoil (high in clay); 12–48 inches: clay	Not observed
M-5	6/26/2024	0–9 inches: topsoil (high in clay); 9–48 inches: clay	Not observed
M-6	6/26/2024	0–7 inches: topsoil (high in clay); 7–48 inches: clay	Not observed
M-7	6/26/2024	0–9 inches: silt loam topsoil; 9–15 inches: silt loam; 15–48 inches: clay	Not observed

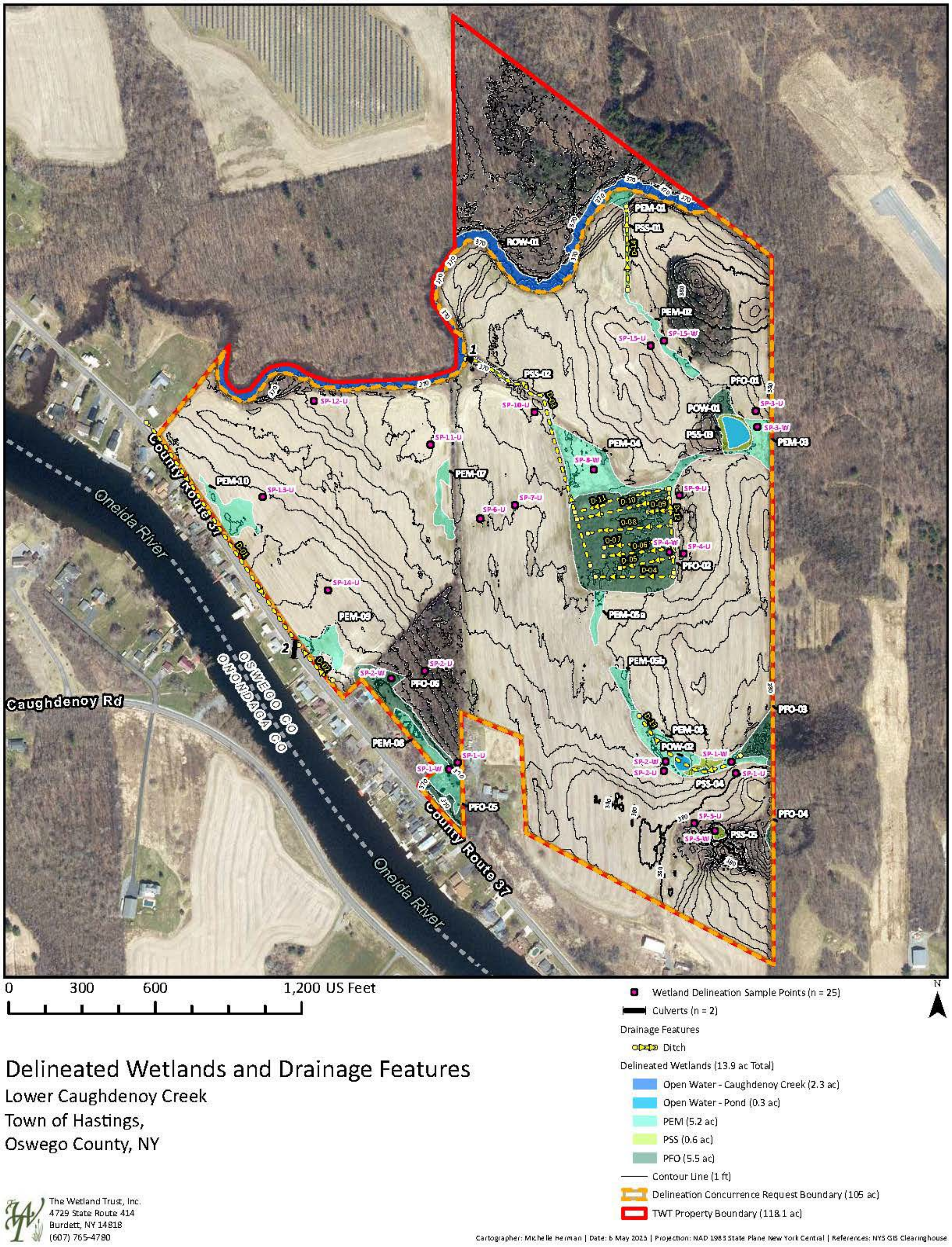
Figure 3-2. State and Federal Mapped Wetlands



*No NYSDEC wetlands mapped on property

Cartographer: Michelle Herman | Date: 6 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Figure 3-3. Delineated Wetlands and Drainage Features



constructed swale with no signs of being a natural feature. Western wetland areas like PFO-05 and PEM-10 may have historically connected to the Oneida River before the construction of County Route 37 and surrounding development.

Hydrology at the site will continue to be monitored until work begins. Groundwater monitoring wells and a rain gauge will be installed at the site in spring 2025. No staff gauges are proposed on this site based on current site conditions and the limited relationship between site hydrology and Caughdenoy Creek. If further investigation and comments require a staff gauge, one or two will be placed in Caughdenoy Creek and the plan will be adjusted

Monitoring Wells

Four groundwater monitoring wells using Onset HOBO water level dataloggers will be strategically placed across the site to capture critical groundwater data every four hours, with locations informed by hydrology and drainage patterns, soil delineations, and observed site characteristics. Elevations will be verified during installation to ensure accuracy, and placement adjustments may be made based on field findings. Any changes will be documented in the as-built report. See **Table 3-3** and **Figure 3-4** for details.

Table 3-3. Monitoring Well Location

Well #	Elevation (ft)	Latitude	Longitude	Description
1	373.35	43.26571742	-76.19041613	Near wetland M-05, determines groundwater on West side
2	373.04	43.26803153	-76.18722095	Near wetland R-03, determines groundwater on North side
3	376.88	43.2653242	-76.1846052	Near wetland R-14, determines groundwater on East side
4	376.22	43.26379919	-76.18712522	Between wetland R-01 and R-08, determines groundwater South side

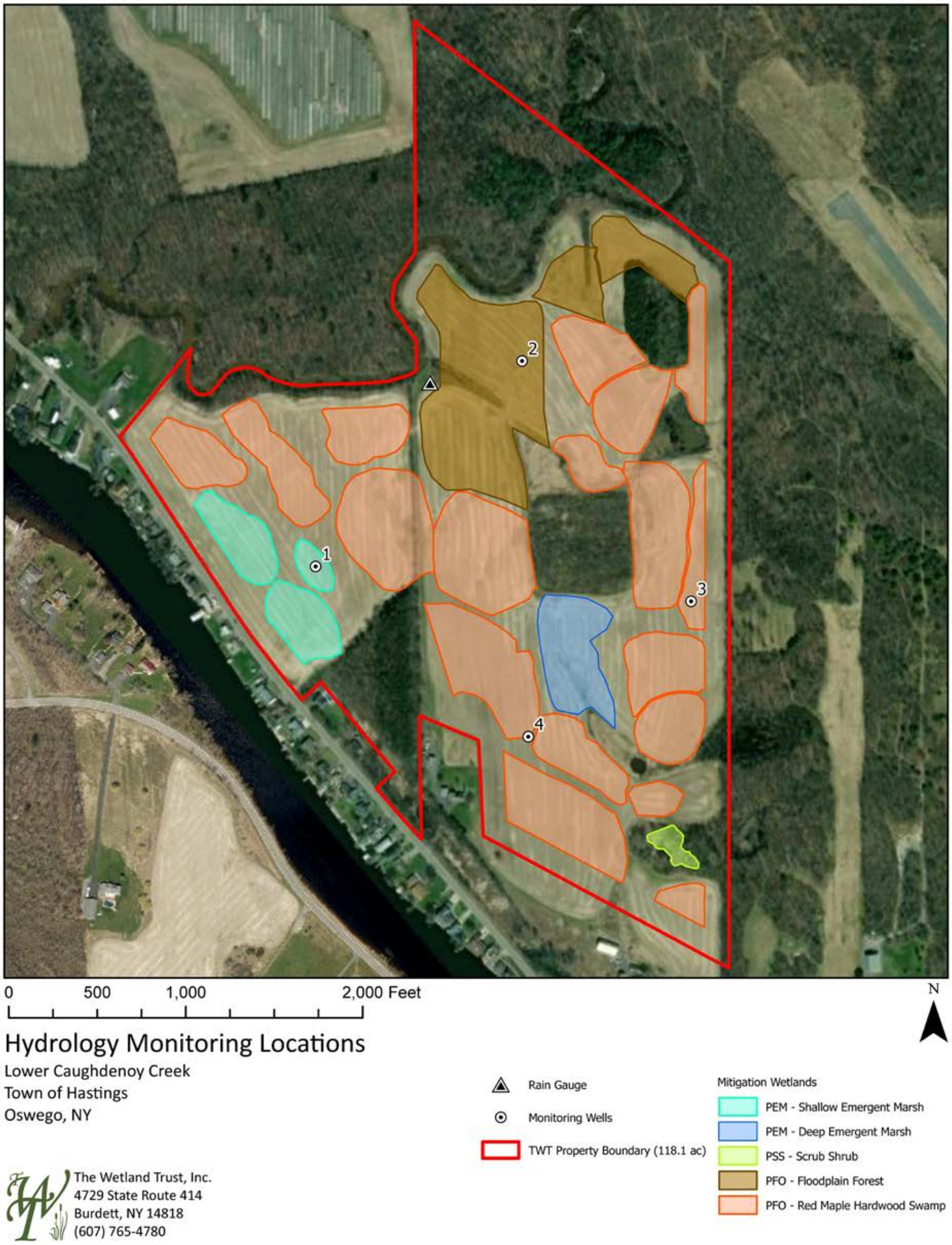
Rain Gauge

One HOBO Rain Gauge Data Logger (RG3) is installed at the site to measure precipitation on-site (coordinates: 43.267800, -76.188647, Elevation: 373.51) and has been recording data since April 28, 2025. This data will support the interpretation of hydrologic responses observed in monitoring wells and staff gauges. This device will not be used in peak winter as it cannot measure snow, only rainfall.

3.4 Existing Wildlife

Various wildlife, including amphibian, reptile, fish, bird, and mammal species, have been recorded at the Lower Caughdenoy Creek mitigation site, either through visual or auditory observations. Amphibians were identified by sight using egg mass, juvenile, or adult presence and by sound if mating calls were discernible. Four main species were noted at this site, including the American toad (*Anaxyrus americanus*), gray treefrog (*Dryophytes versicolor*), northern green frog (*Lithobates clamitans melanota*), and northern leopard frog (*Lithobates pipiens*), all of which are secure both statewide and globally. Two reptile species, the painted turtle (*Chrysemys picta*) and eastern garter snake (*Thamnophis sirtalis sirtalis*), and one fish species, the brown bullhead

Figure 3-4. Lower Caughdenoy Creek Hydrology Monitoring Locations



(*Ameiurus nebulosus*), were visually identified at this site. These species are secure both statewide and globally or of least conservation concern.

Numerous bird species were observed at the Lower Caughdenoy Creek mitigation site through both visual and auditory identification. Notable species include the red-winged blackbird, wood duck, Canada goose, northern cardinal, and pileated woodpecker. All observed species are considered secure both statewide and globally. Various mammal species were also observed at this site either directly or indirectly (i.e., scat, footprints, etc.), including the white-tailed deer (*Odocoileus virginianus*), coyote (*Canis latrans*), North American beaver (*Castor canadensis*), and raccoon (*Procyon lotor*), all of which are of least conservation concern. See **Appendix D** for the full list of observed wildlife.

3.4.1 Federally Listed Species and Habitat Consideration

Consultation has been initiated with the U.S. Fish and Wildlife Service (USFWS) in accordance with Section 7 of the Endangered Species Act to ensure that the proposed stream/wetland mitigation activities will not adversely affect federally listed species or their critical habitats. Coordination is ongoing, and any conservation measures or recommendations provided by USFWS will be incorporated into the project design and implementation, as appropriate. The official species list generated through the U.S. Fish and Wildlife Service’s Information for Planning and Consultation (IPaC) system is included in **Appendix D.**

3.5 Existing Vegetation

The Lower Caughdenoy Creek site features a mix of agricultural, upland, and wetland ecosystems. A large portion of the site is currently cultivated as a soybean (*Glycine max*) field, resulting in limited vegetative diversity within the agricultural zone. Surrounding the field and perimeter are delineated wetlands that support a combination of native and invasive plant species. Native vegetation, including Canada anemone (*Anemone canadensis*), blue flag (*Iris versicolor*), yellow trout lily (*Erythronium americanum*) contributes vital habitat and ecological functions in these areas. A complete list of species observed at the Lower Caughdenoy Creek site can be found in **Appendix D**.

3.6 Invasive Species

The key invasives of Lower Caughdenoy Creek include glossy buckthorn (*Frangula alnus*) affecting 8.81 acres, purple loosestrife (*Lythrum salicaria*) affecting 1.62 acres, reed canary grass (*Phalaris arundinacea*) affecting 6.00 acres, common reed (*Phragmites australis*) affecting 0.60 acres, and cattail (*Typha spp*) affecting 0.07 acres (**Table 3-4**). In addition to these dominant species, other invasive plants present in the area include smooth brome (*Bromus inermis*), bull thistle (*Cirsium vulgare*), autumn olive (*Elaeagnus umbellata*), honeysuckle (*Lonicera spp*.), moneywort (*Lysimachia nummularia*), common Timothy (*Phleum pratense*), common Kentucky bluegrass (*Poa pratensis*), buckthorn (*Rhamnus cathartica*), multiflora rose (*Rosa multiflora*), bittersweet nightshade (Solanum dulcamara). Refer to **Appendix E** for baseline maps of key invasive species extent.

Table 3-4. Invasive Species Coverage at Lower Caughdenoy Creek

Invasive Species	1-5% Cover (Acres)	5-25% Cover (Acres)	>25% Cover (Acres)	Total Affected Area (Acres)
Glossy Buckthorn (*Frangula alnus*)	4.29	3.79	0.73	8.81
Common Reed (*Phragmites australis*)	0.48	0.02	0.10	0.60
Reed Canary Grass (*Phalaris arundinacea*)	4.37	0.17	1.46	6.00
Purple Loosestrife (*Lythrum salicaria*)	1.32	0.15	0.15	1.62
Cattail (Typha sp.)	0.00	0.01	0.06	0.07

3.7 Cultural and Historic Considerations

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), initial consultation was initiated with the New York State Historic Preservation Office (NY SHPO) in August 2024 to assess the potential for the proposed mitigation site to affect historic properties or cultural resources. An August 14, 2024 letter from NY SHPO recommended a Phase IA/IB archaeological survey for components of the project that will involve ground disturbance. Further tribal consultation required Onondaga Nation presence for the field surveys. A Phase 1A/1B Work plan was submitted on April 8th, 2025 (**Appendix F**) with Phase 1B field work completed on May 1st, 2025. No sites were identified.

4. Wetland Credit Accounting

The USACE and NYSDEC will determine credit generation based on wetland acres that meet or exceed performance standards and proposed credit ratios (**Table 4-1**). One-to-one ratios are based on re-establishment (or creation) of the specific cover types targeted to replace lost functions. 3.5-to-one ratios are based on rehabilitation of existing wetlands and were informed by numerous discussions with regulatory agencies. The final credit generation will be adjusted based on monitoring results and meeting the performance standards of the mitigation site.

Figure 4-1. USACE Wetland Credit Generation and NYSDEC Mitigation Acreage

Wetland type Cowardin	**Cover type** Edinger	**Mitigation Type** NYSDEC	**Acres**	**Mitigation type** USACE	**USACE Ratio** (Acre:Credit)	**Credits**
PEM	**Shallow emergent marsh**	Restoration	3.3	Re-establishment	1:1	3.3
		Enhancement	0.3	Rehabilitation	3.5:1	0.09
	Deep emergent marsh	Restoration	2.4	Re-establishment	1:1	2.4
		Enhancement	0.3	Rehabilitation	3.5:1	0.09
PFO	**Floodplain forest**	Restoration	11.2	Re-establishment	1:1	11.2
		Enhancement	0.2	Rehabilitation	3.5:1	0.06
	Red maple- hardwood swamp	Restoration	34.2	Re-establishment	1:1	34.2

		Enhancement	5.7	Rehabilitation	3.5:1	1.63
PSS	**Scrub shrub**	Restoration	0.35	Re-establishment	1:1	0.35
		Enhancement	0.05	Rehabilitation	3.5:1	0.01
Total			**58***			**53.3**
* total amount of NYSDEC mitigation acres						

Open water areas (deep water aquatic habitats and vegetated shallows) greater than 0.1 contiguous acre will only be credited where they equal 10% or less of the total wetland creation and re-establishment areas or so long as they are part of a well-integrated complex of open water and emergent vegetation. Deepwater aquatic habitat is defined as any open water area that is either a) permanently inundated at mean annual water depths >6.6 ft, lacks soil, and/or is either unvegetated or supports only floating or submersed macrophytes, or b) permanently inundated areas ≤6.6 ft in depth that do not support rooted-emergent or woody plant species. Areas ≤6.6 ft mean annual depth that support only submergent aquatic plants are vegetated shallows, not wetlands. The 2 acres of open water (POW) that will be impacted will be accommodated by POW areas within the wetlands where they are not counted toward the credit total.

5. Wetland Mitigation Work Plan

The wetland mitigation work plan at Lower Caughdenoy Creek will focus on re-establishing naturally appearing and functioning wetlands. Work methods include removing or disabling existing drainage tiles, disabling ditches, restoring shallow basins and the natural rims of drained and filled wetlands, and restoring microtopography as described throughout this section. These methods will ensure the target hydrology is met, supporting a diverse community of hydrophytic vegetation. The treatment of existing invasive vegetation will begin prior to construction to minimize the extent of spread to work areas. Seeding/planting will be completed after all grading is complete.

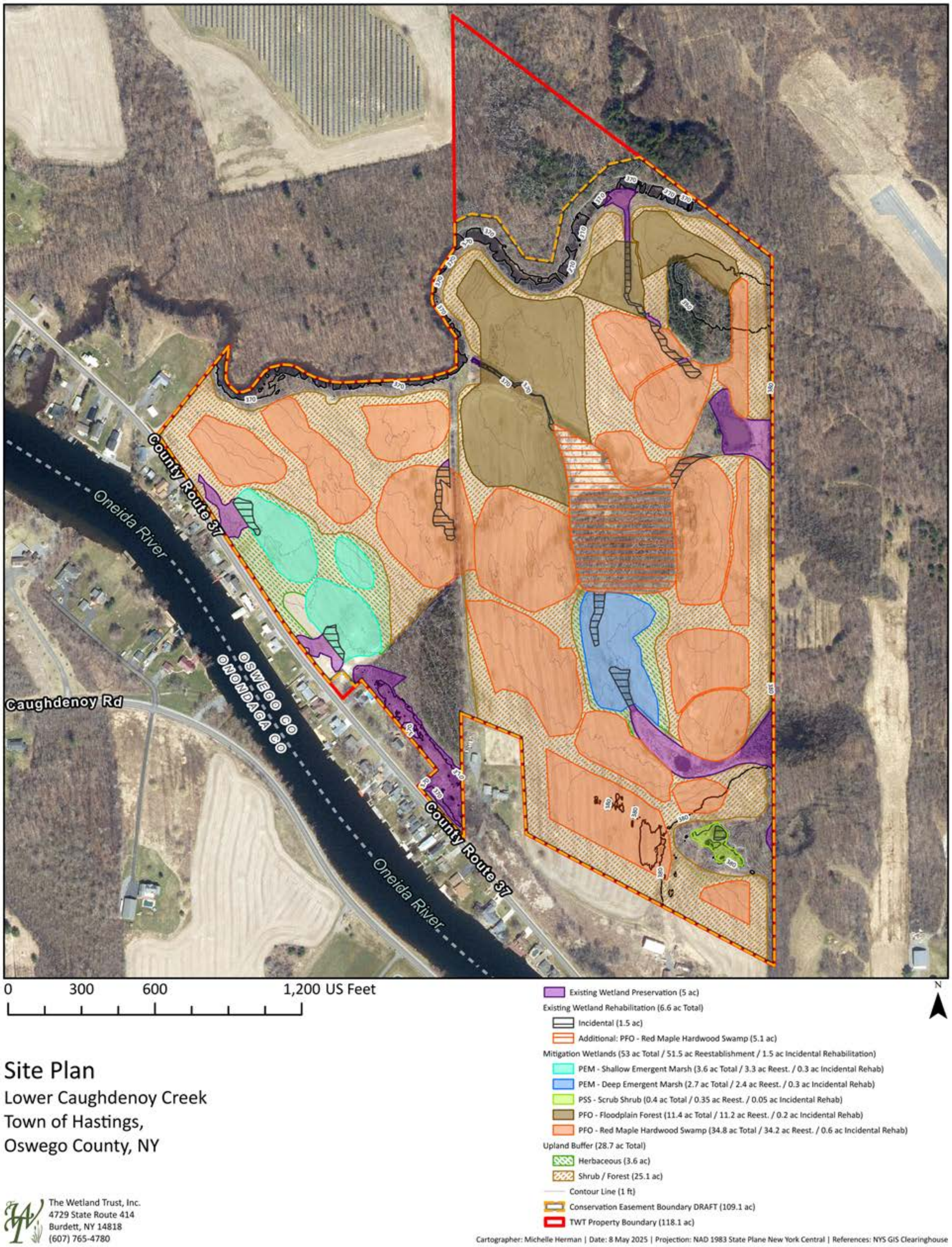
Wetlands were designed at the site in May and June 2024 by TWT staff. Field design forms were filled out for each wetland polygon **(Appendix G)**. Determination of the types of wetlands to be re-established for each area within the Lower Caughdenoy Creek Site is based on the cover types outlined in Ecological Communities of New York State (Edinger, 2014) and is guided by the number of acres of each wetland type necessary to meet mitigation requirements for the Micron impacts.

Approximately 3.3 acres of shallow emergent marsh, 2.4 acres of deep emergent marsh, 0.35 acres of scrub-shrub, 11.2 acres of floodplain forest and 34.2 acres of red maple hardwood swamp will be re-established with an additional 6.5 acres of rehabilitation of these cover types **(Figure 5-1)**. The following characteristics guide the locations of each type of wetland to be re-established.

<u>Floodplain Forest</u>

- Low terraces of river floodplains, and the floodplains of stream restoration areas

Figure 5-1. Lower Caughdenoy Creek Site Plan



- Low areas of inundation in spring and irregular inundation of high areas
- Mineral soils

Red Maple-Hardwood Swamp

- Poorly drained depressions
- Usually inorganic soils with peat, if present, that is less than 20 cm deep
- Occasionally on muck or shallow peat, that is typically acidic to circumneutral

Deep Emergent Marsh

- Often placed so they are visible to the public
- Prioritized for building within grassland areas
- Mineral soils or fine-grained organic soils
- Substrate is flooded by waters that are not subject to violent wave action

Shallow Emergent Marsh

- Often placed so they are visible to the public
- Prioritized for building within grasslands
- Occurs on mineral soil or deep muck soils (rather than true peat)
- Permanently saturated and seasonally flooded

Shrub Swamp

- Often occurs along the shore a lake, river, or stream
- In wet depressions or valleys not associated with lakes, or as a transition zone between a marsh, fen, or bog and a swamp or upland community
- Substrate is usually mineral soil or muck

Equipment operators will include local construction and farming personnel, including those currently farming the sites, and TWT staff. The on-site experience of farming and local knowledge of the operators will maximize productivity and work quality. Prior to construction, work areas will be mowed and/or crops harvested to increase visibility. One or more parking/staging areas for heavy equipment and vehicles will be designated as necessary, avoiding any identified wetlands or aquatic resources. TWT staff will be onsite every day to direct and oversee construction. No tree removal is planned. Should any tree removal be necessary, it will only occur after November 1st.

5.1 Invasive Vegetation Control

Prior to the initiation of earthwork, invasive vegetative species will be controlled following strategies outlined in the Invasive Species Monitoring Plan (ISMP, **Appendix E**). This LCC ISMP details the target species, timing, and control methods. Methods may include mechanical removal, such as hand-pulling or mowing and chemical treatments using targeted herbicides. These actions will occur during the appropriate season of the target species to maximize effectiveness. Invasive species control will avoid soil disturbance, reduce seed dispersal, and limit impacts on local resources. All treated areas will be monitored to ensure the effectiveness of the control measures, and follow-up treatments will be applied as necessary.

5.2 Grading Plan: Re-establishment Wetlands

Basin and berm construction

A shallow basin will be shaped for each designed wetland. The basins will measure 10 feet in diameter to over 200-feet in diameter based on location characteristics and targeted cover type. The basin is dug so that it is deepest in the center in relation to the low edge of the marked perimeter. Basins will range in depth from 1-inch to 36-inches, based on targeted cover type. Refer to **Figures 5-4** for plan view details. Small, earthen berms around the lower two-thirds of the wetland basin will be constructed from 1.0 to 2.0 feet high at a minimum width of 3-feet wide and gradual 5 percent slopes. Core trenches filled with compacted clay layers will be constructed under the berms to disable the buried drainage structures. See **Figures 5-1 and 5-2** for a typical section and plan view.

An excavator and dozer will be used to shape gradual slopes and bays along the inside edge of the constructed wetland for a natural look and function. Elevations are verified during construction using a laser level. Topsoil will be temporarily stored on site and spread in and around the finished wetland basin. Spoil material removed is shaped with gradual slopes so that it appears like natural hummock/hollow and ridges. Operators will aim to create wetlands on top of clay texture spoil material by leveling areas of spread soil and creating shallow basins in the soil.

Figure 5-1. Restored Wetland Section View

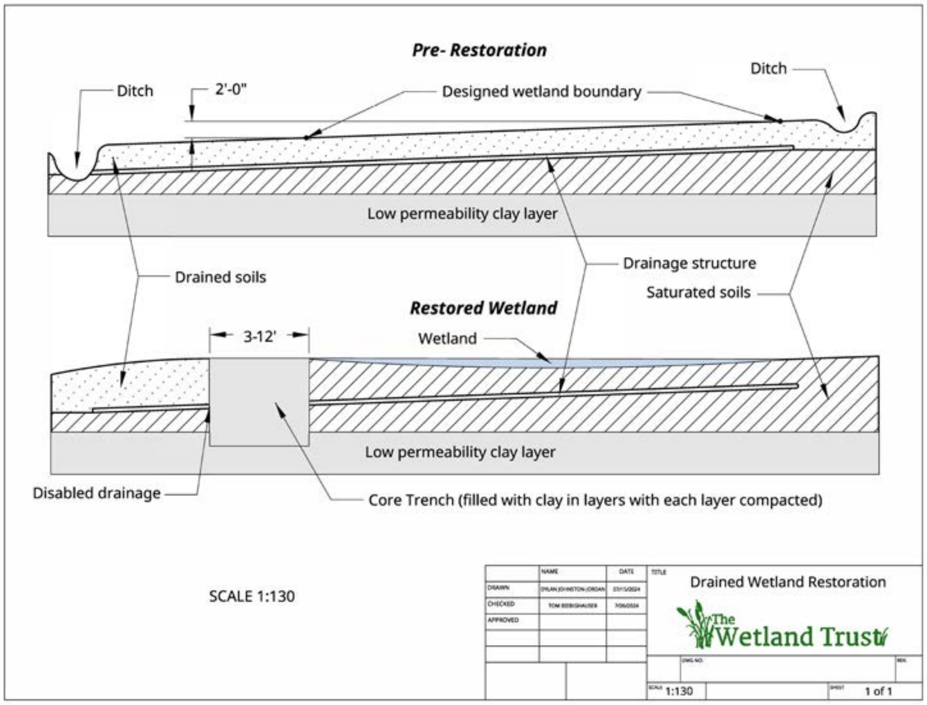
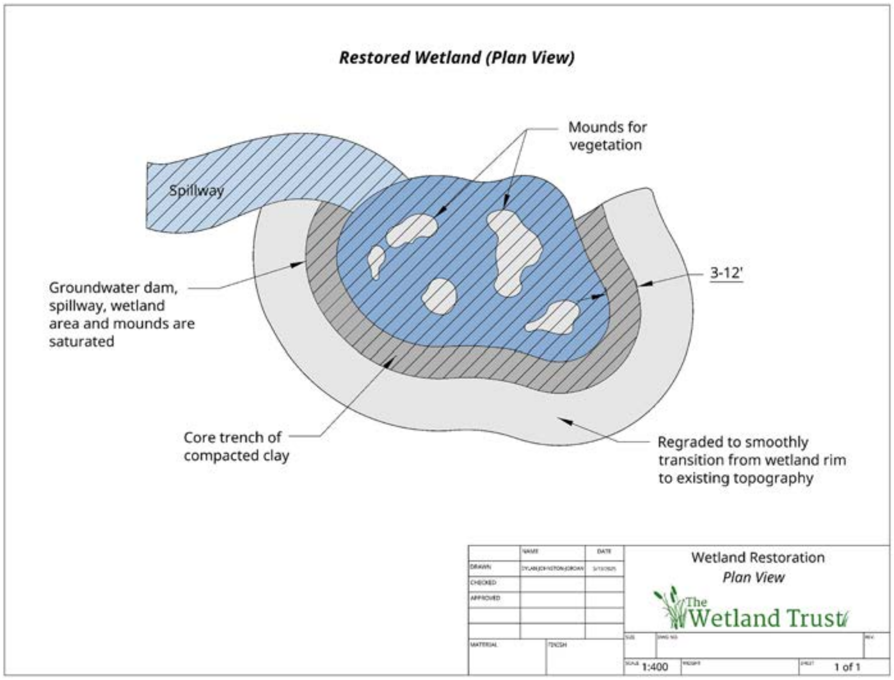


Figure 5-2. Restored Wetland Plan View



Microtopography restoration

Pit and mound microtopography will be created within each wetland basin, with average specifications depending on the desired wetland type (**Table 5-1**). Emergent basins will generally have the deepest pits, i.e. maximum water depth (approximately 36 inches), and higher and larger mounds (24-30 inches high and 36 inches in diameter) that are spaced farther apart (30 feet) relative to all other wetland types. The remaining PSS and PFO wetland types will have 10-foot-spaced mounds ranging from 4-12 inches high and 12-48 inches in diameter set within 1-6 inches of water. The soil in these features will not be compacted so it can be expected to settle by 50-percent. Typical cross sections for emergent, scrub-shrub, and forested cover types are depicted in **Figures 5-6 to 5-8**.

Table 5-1. Lower Caughdenoy Creek Grading for Wetland Types

Wetland Type	Maximum wetland basin depth (in)	Average individual mound height (in)*	Average mound diameter (in)	Mound Spacing (ft)	Mound Density/acre
PEM – Shallow Emergent Marsh	24	24	36	30	80
PEM – Deep Emergent Marsh	36	30	36	30	40
PFO – Floodplain Forest	4	12	36	10	200
PFO – Red Maple Hardwood Swamp	1	6	48	10	200
PSS – Scrub-shrub	6	4	12	10	400

*soil is kept uncompacted and will settle by up to 50%

Figure 5-4. Wetland Grading Plan

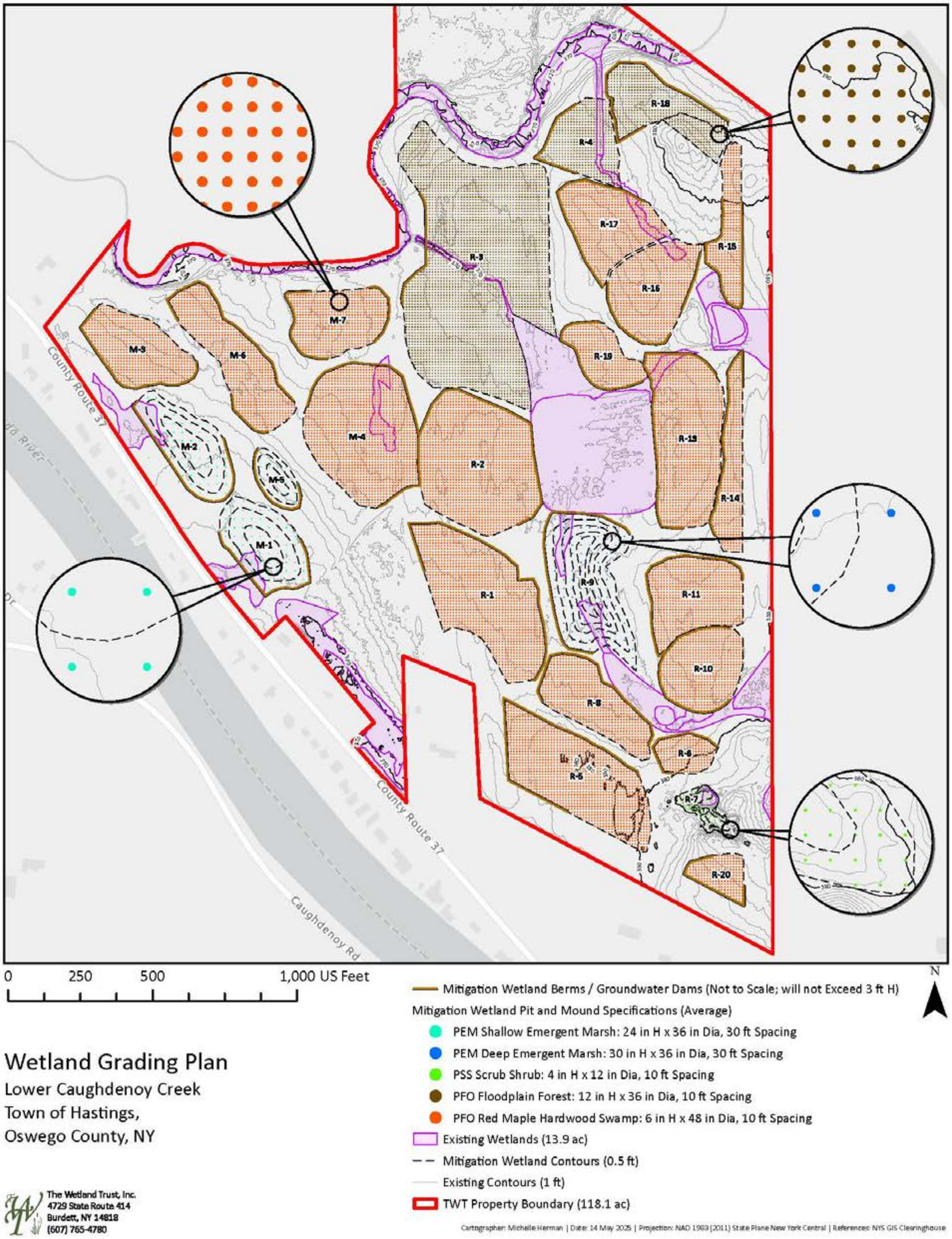


Figure 5-6. Restored Emergent Wetland

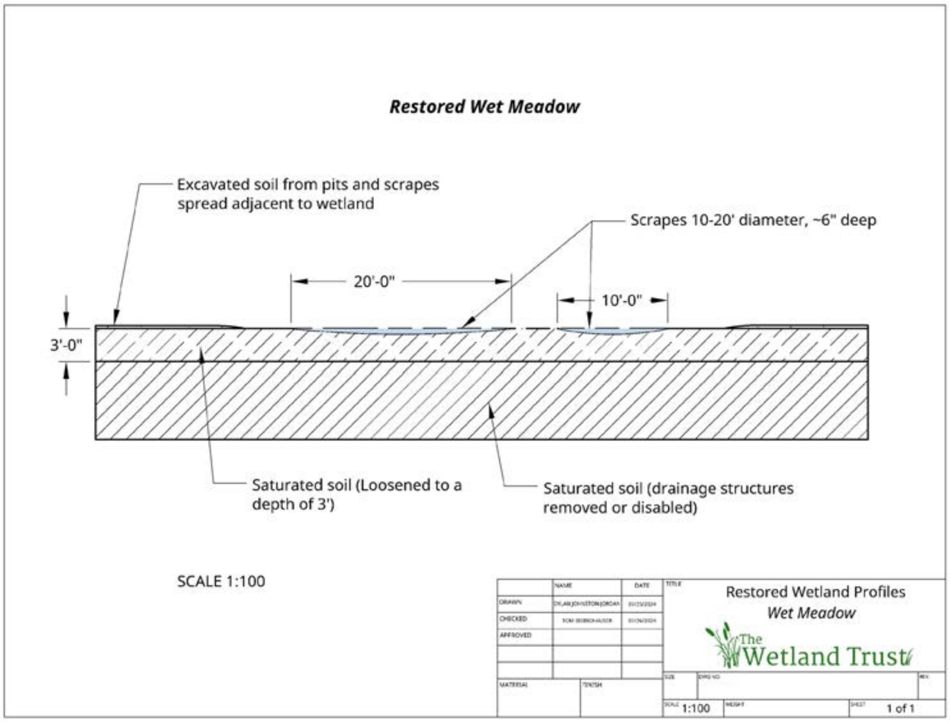


Figure 5-7. Restored Scrub-Shrub Wetland

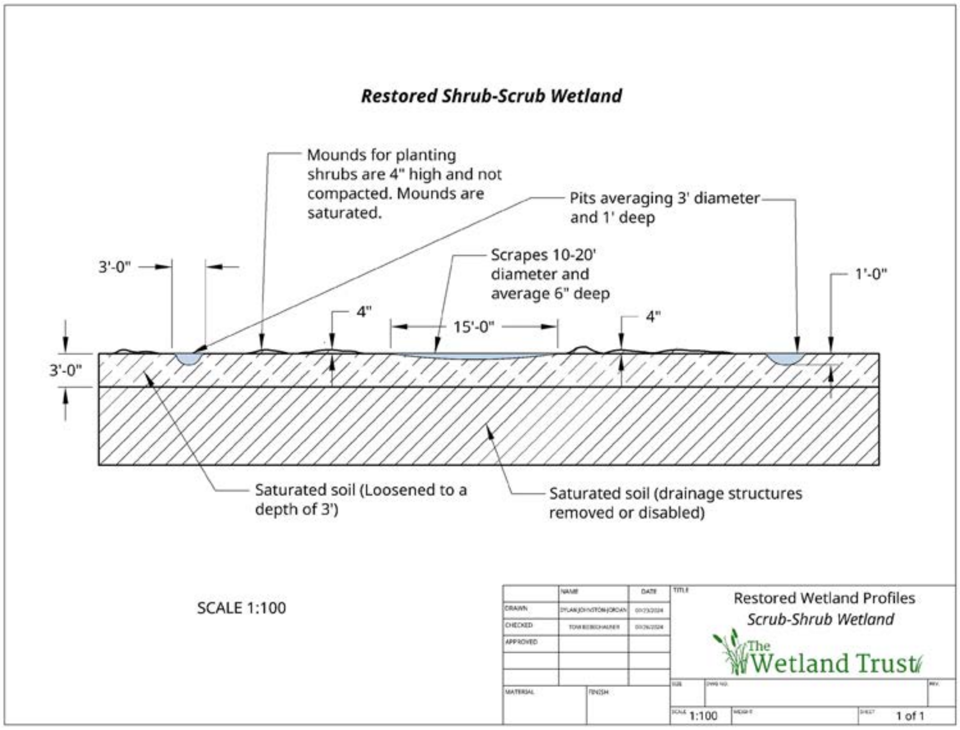
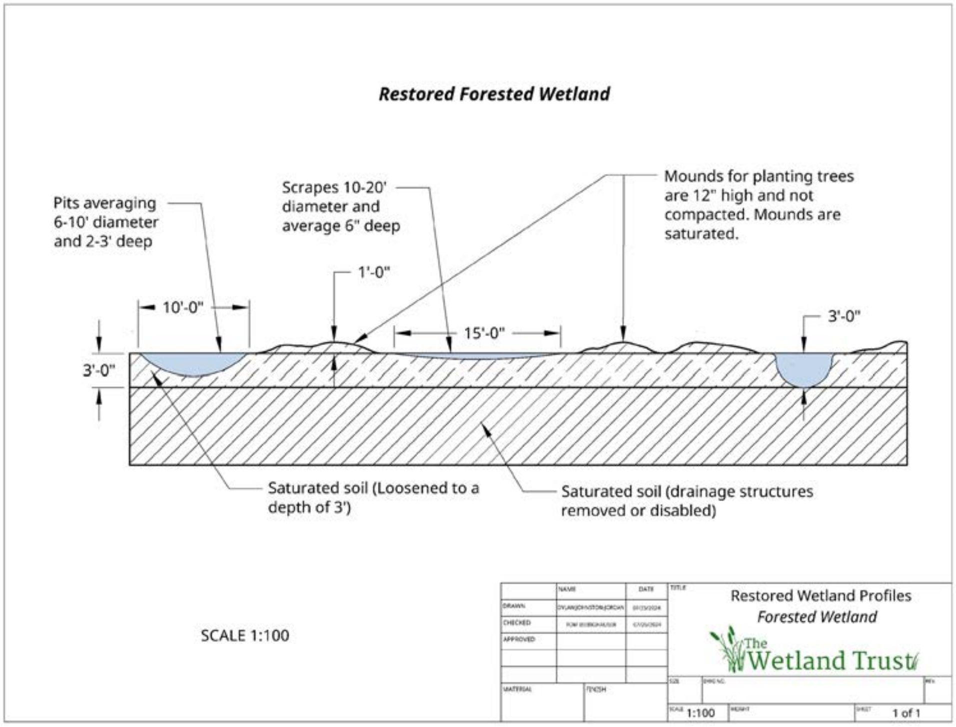


Figure 5-8. Restored Forested Wetland



5.3 Rehabilitation/Restoration of Existing Wetlands

Aside from the incidental rehabilitation (where existing wetlands overlap with designed wetland polygons), additional areas of targeted rehabilitation will occur. The main area, PFO-02 and PEM-04, is a forested patch in the center of the property that was a former pine tree farm that grades out into a degraded emergent wetland to the north. PFO-02 has concentrated agriculture drainage of over 3,700 linear feet of drainage with possible buried drainage features also present. PEM-04 is currently dominated by invasives; purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), reed canary (*Phalaris arundinacea)*, cattail species (*Typha spp*), and glossy buckthorn (*Frangula anlus*). Rehabilitation methods include:

- Hydrology- Select ditch plugs where drainage features are altering existing hydrology.
- Vegetation- Control invasive species including manually and/or chemically removing the species. Native herbaceous and woody plants will be installed once invasives have been controlled.

5.4 Buffer Establishment

Upland buffers will be established surrounding all re-established, restored, or rehabilitated wetland areas to enhance habitat quality, protect water quality, and improve ecological function. Where buffers surround re-established palustrine emergent (PEM) wetlands, they will be planted with native herbaceous upland species to maintain open habitat structure and provide transitional zones that support pollinators and other wildlife. In areas adjacent to re-established palustrine scrub-shrub (PSS), palustrine forested (PFO) wetlands, or restored stream channels, upland buffers will be planted with native shrub and tree species to create structurally diverse, forested buffer zones. These plantings will promote shading, nutrient uptake, and habitat connectivity.

5.5 Planting Plan

The desired wetland plant community will be established through broadcasting high-quality, native seeds and planting trees and shrubs as per the planting plan in **Table 5-2a-f** below. The objective is to re-establish and rehabilitate high-quality emergent, shrub, and forested wetlands of select communities to replace the lost functions at the Micron Site.

Species proposed are based on many factors including commercial availability, typical species present in similar/local plant communities, species present at the impact site and Mitigation site, species establishment considerations (e.g. rhizomatous), etc. The species listed are not intended to be exclusive and may be supplemented or changed with ecologically similar species.

Spacing is a general recommendation and will be random and not grid like. Site conditions and topographic features will be utilized in plant placements, such as black willow (*Salix nigra*) along riparian features. TWT staff will coordinate and provide guidance to the planting crew prior to the start of work and will be on-site during operations. Pre-staking of planting locations, used to facilitate instruction to planting staff, will be completed as necessary.

The site will also be seeded and planted to increase the likelihood of successfully establishing target species/quantities and to minimize the opportunity for invasive species to become established. Seeding shown are targeted to supplement plantings and will be further customized with distributor based on site factors and seed/plant material availability. The distributor has confirmed that all mixes can be customized as necessary.

Table 5-2a. PEM- Shallow Emergent Marsh Planting List

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Planting Rate
Swamp Milkweed	*Asclepias incarnata*	OBL	6	15-20 pounds/acre
Longhair Sedge	*Carex comosa*	OBL	5	
Fringed Sedge	*Carex crinita*	OBL	5	
Bottlebrush Sedge	*Carex hystericina*	OBL	4	
Shallow Sedge	*Carex lurida*	OBL	3	
Pointed Broom Sedge	*Carex scoparia*	FACW	2	
Upright Sedge	*Carex stricta*	OBL	6	
Hairy-fruited sedge	*Carex trichocarpa*	OBL	5	

Fox Sedge	*Carex vulpinoidea*	FACW	3	
White Turtlehead	*Chelone glabra*	OBL	7	
Swamp Loosestrife	*Decodon verticillatus*	OBL	8	
Three-way Sedge	*Dulichium arundinaceum*	OBL	5	
Common Spikerush	*Eleocharis palustris*	OBL	4	
Riverbank Wildrye	*Elymus riparius*	FACW	5	
Virginia Wildrye	*Elymus virginicus*	FACW	4	
Joe-Pye Weed	*Eupatorium fistulosum*	OBL	6	
Boneset	*Eupatorium perfoliatum*	FACW	4	
Spotted Touch-me-not	*Impatiens capensis*	FACW	2	
Pale Touch-me-not	*Impatiens pallida*	FACW	3	
Northern Blue Flag	*Iris versicolor*	OBL	7	
Canada Rush	*Juncus canadensis*	OBL	5	
Soft Rush	*Juncus effusus*	OBL	3	
Cardinal Flower	*Lobelia cardinalis*	FACW	7	
Great Blue Lobelia	*Lobelia siphilitica*	FACW	6	
Square-stemmed Monkey Flower	*Mimulus ringens*	OBL	5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	
Lizard's Tail	*Saururus cernuus*	OBL	7	
Purple-Stemmed Aster	*Symphyotrichum puniceum*	OBL	4	
Marsh Fern	*Thelypteris palustris*	FACW	4	
Blue Vervain	*Verbena hastata*	FACW	3	

Table 5-2b. Deep Emergent Marsh

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Gray's Sedge	*Carex grayi*	FACW	5	15-20 pounds/acre
Cartex lacustris	*Carex lacustris*	OBL	5	
Royal Fern	*Osmunda regalis*	OBL	7	
Green Bulrush	*Scirpus atrovirens*	FACW	4	
Woolgrass	*Scirpus cyperinus*	FACW	3	
River Bulrush	*Scirpus fluviatilis*	OBL	6	
Water Parsnip	*Sium suave*	OBL	5	
Bur-reed	*Sparganium americanum*	OBL	5	

Table 5-2c. Scrub Shrub

Common Name	Scientific Name	Wetland Indicator	CoC	Planting/Spacing Rate
Smooth alder	*Alnus serrulata*	OBL	7	400/acre Shrub clusters Trees 10-25 feet apart
Coastal shadbush	*Amelanchier canadensis*	FAC	7	
Chokeberry	*Aronia melanocarpa*	FACW	6	
Purple chokeberry	*Aronia prunifolia*	FACW	7	
Buttonbush	*Cephalanthus occidentalis*	OBL	8	
Silky dogwood	*Cornus amomum*	FACW	5	
Gray dogwood	*Cornus racemosa*	FAC	2	
Red osier dogwood	*Cornus sericea*	FACW	5	
Common winterberry	*Ilex verticillata*	FACW	7	
Northern spicebush	*Lindera benzoin*	FACW	6	
Ninebark	*Physocarpus opulifolius*	FACW	5	
Swamp rose	*Rosa palustris*	FACW	9	
Bebbs willow	*Salix bebbiana*	FACW	3	
Pussy willow	*Salix discolor*	FACW	4	
Silky willow	*Salix sericea*	OBL	6	
Common elderberry	*Sambucus canadensis*	FACW	3	
Meadow-sweet	*Spiraea alba*	FACW	5	
High bush blueberry	*Vaccinium corymbosum*	FACW	6	
Northern wild raisin	*Viburnum cassinoides*	FACW	7	
Arrow-wood	*Viburnum dentatum*	FAC	4	
Nannyberry	*Viburnum Lentago*	FAC	4	
Highbush cranberry	*Viburnum opulus*	FACW	3	

Table 5-2d. PFO- Floodplain Forest

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Boxelder	*Acer negundo*	FACW	0	400/acre Shrub clusters Trees 10-25 feet apart
Red maple	*Acer rubrum*	FAC	1	
Silver maple	*Acer saccharinum*	OBL	2	
Grey birch	*Betula populifolia*	FAC	4	
Hackberry	*Celtis occidentalis*	FAC	4	
Buttonbush	*Cephalanthus occidentalis*	OBL	8	

Silky dogwood	*Cornus amomum*	FACW	5	
Red osier dogwood	*Cornus sericea*	FACW	4	
Green ash	*Fraxinus pennsylvanica*	FACW	2	
Spicebush	*Lindera benzoin*	FACW	6	
Black gum	*Nyssa sylvatica*	FAC	5	
Ninebark	*Physocarpus opulifolius*	FACW	5	
American sycamore	*Platanus occidentalis*	FACW	3	
Eastern cottonwood	*Populus deltoides*	FAC	2	
Swamp white oak	*Quercus bicolor*	FACW	7	
Bur oak	*Quercus macrocarpa*	FAC	6	
Pin oak	*Quercus palustris*	FACW	7	
Black willow	*Salix nigra*	OBL	3	

Table 5-2e. PFO- Red Maple Hardwood Swamp

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Red maple	*Acer rubrum*	FAC	2	400/acre Shrub clusters Trees 10-25 feet apart
Silver maple	*Acer saccharinum*	FACW	6	
Ironwood	*Carpinus caroliniana*	FAC	5	
Bitternut hickory	*Carya cordiformis*	FAC	5	
Blackgum	*Nyssa sylvatica*	FAC	7	
American sycamore	*Platanus occidentalis*	FACW	6	
Eastern cottonwood	*Populus deltoides*	FAC	2	
Swamp white oak	*Quercus bicolor*	FACW	7	
American elm	*Ulmus americana*	FACW	3	
Slippery elm	*Ulmus rubra*	FAC	8	

Table 5-2f. Targeted Rehabilitation Areas

Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate
Red Maple	*Acer rubrum*	FAC	2	400/acre Shrub clusters Trees 10-25 feet apart
Chokeberry	*Aronia melanocarpa*	FACW	6	
Buttonbush	*Cephalanthus occidentalis*	OBL	7	
Silky dogwood	*Cornus amomum*	FACW	4	
Red osier dogwood	*Cornus sericea*	FACW	5	
Spicebush	*Lindera benzoin*	FAC	5	
Black gum	*Nyssa sylvatica*	FAC	5	

Swamp white oak	*Quercus bicolor*	FACW	7
Bur oak	*Quercus macrocarpa*	FAC	6
Pin oak	*Quercus palustris*	FACW	7
Black willow	*Salix nigra*	OBL	2
Elderberry	*Sambucus canadensis*	FACW	3

5.5 Timing and Sequence

Micron's large project size will require a phased approach for construction; and the wetland mitigation effort will follow a similar phased approach consistent with regulatory requirements. See 33 C.F.R. § 332.3(m) "Implementation of the compensatory mitigation project shall be, to the maximum extent practicable, in advance of **or concurrent with the activity causing the authorized impacts**." The LCC Site will be the one of the first sites developed along with Buxton Creek and Oneida River (**Table 5-3**).

Table 5-3. Mitigation Site Sequence

Site Name	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031 ~**	**∞ In Perpetuity**
Buxton Creek Stream and Wetlands		**Construction begins**						
Oneida River Wetlands		**Construction begins**						
Lower Caughdenoy Creek Wetlands		**Construction begins**		**Monitoring, maintenance, and adaptive management after construction for a 15-year period* after approved as-built (not to scale)**				**Permanent stewardship begins after monitoring period ends, pending agency approval**
Fish Creek Stream and Wetlands			**Construction begins**					
Upper Caughdenoy Creek Wetlands				**Construction begins**				
Sixmile Creek Wetlands					**Construction begins**			

The construction sequence at LCC follows that shown in **Table 5-4**. The site will be constructed in approximately one year with the following spring dedicated to planting that will initiate the 10-year monitoring and maintenance window to meet success criteria. Planting in the fall may occur if it is advantageous to plant establishment.

The mitigation work plan at LCC will be phased in several steps. The treatment of existing invasive vegetation will begin as early as possible to minimize spread to work areas once agricultural activities cease and the wetlands are constructed. Seeding and planting will be completed after all grading is complete.

Table 5-4. LCC Construction Sequence

Activity	**Timing**	**Phase**
Invasive species management.	Spring Year 1*	Pre-construction

Work area layout and preparation, SWPPP implementation.	Spring Year 1	Pre-construction
Groundwater dam installation, basin excavation, pond and ditch filling. Erosion control seeding.	Summer Year 1	Construction Phase I: Earthwork
Final grading to develop microtopography, loosening of soil as necessary.	Summer Year 1	Construction Phase II: Topography Enhancement
Seeding, planting, and mulching per planting plan and SWPPP, placement of woody debris for a natural look	Fall Year 1	Construction Phase III: Seeding & Planting
Removal of all construction materials and general site clean-up. Erosion and sediment control structures (silt fencing) will be removed once site is stabilized.	Fall Year 1	Post-construction
*invasive species management will likely begin prior to this time with repeat treatments		

5.6 Sediment and erosion control measures

All erosion and sediment control practices will be installed as specified by the Stormwater Pollution Prevention Plan (SWPPP, **Appendix H**) prior to any ground disturbance. The limit of disturbance and spoil deposition areas will be clearly marked to ensure ground disturbances are minimized. Temporary erosion and sedimentation control measures in and around mitigation sites will receive consistent and constant inspection and maintenance by qualified personnel. Spoil and sediment collected will be removed and placed upland in a manner that prevents erosion and transportation of sediment to a waterway or wetland. All erosion and sediment control devices and structures will be removed once full stabilization is achieved and no later than three full growing seasons after the planting of the mitigation site.

6. Performance Standards

Success within the mitigation sites is based on wetland acreage meeting the USACE criteria for the three parameters described in the 1987 Corps of Engineers Wetland Delineation Manual and 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, or any amendments thereto. Mitigation success will also depend on the establishment of wetland community types that replace in form and function the impacted wetlands. Credits generated are determined by acreage meeting the following parameters, in addition to the final vegetative goals:

- Hydrology: the wetland area is inundated, or the water table is ≤12 inches below the soil surface for ≥14 consecutive days during the growing season at a minimum frequency of 5 years in 10. Any combination of inundation or shallow water table is acceptable in meeting the 14-day minimum requirement. For wetland re-establishment areas, deepwater aquatic habitats and/or vegetated shallows will only be credited where they equal 10% or less of the re-establishment areas on the site and are part of a well-integrated complex. Vegetated shallows and/or deep-water habitats over 0.1 acre in size will be mapped in each monitoring report/delineation. It is not anticipated that any such aquatic habitats will develop at the site.

- Vegetation: the wetland area demonstrates a relative dominance of Facultative (FAC) or wetter plant coverage, meeting one or more USACE Wetland Determination Data Form Hydrophytic Vegetation Indicators.
- Soils: the wetland area contains soil profiles that demonstrate one or more USACE Wetland Determination Data Form Hydric Soil Indicators.

By the end of the 15-year monitoring period, the site shall meet or exceed the following vegetative performance standards (see also **Table 6-1**):

- **Palustrine Emergent Wetland (PEM):** The areas meeting palustrine emergent wetland criteria will have ninety percent (90%) relative cover of wetland work areas by native hydrophytes (FAC, FACW, or OBL). Monitoring will be conducted yearly with interim targets of 20% relative cover after the first full year after planting, 40% by Year 3, 60% by Year 5, and 80% by Year 7, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met. Final performance standards met at 10 years.

  Deep emergent and shallow emergent marsh (Edinger et al. 2014) are the targeted cover types for PEM areas.
    - Shallow marshes will be 6 inches to 3 feet deep with exposed soils in the summer and very variable in species.
    - Deep emergent marshes will be 6 inches to 6 feet deep, less likely to have exposed soils, and very variable in species, with species more likely to be submerged or floating.
- **Palustrine Scrub Shrub (PSS)**: The areas meeting palustrine scrub shrub criteria will have at least 400 native shrubs/trees per acre, and those stems will display normal and healthy growth, free of disease and pests. At least 280 of those stems will be native shrub species. Stem density monitoring will be conducted biannually, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.
- **Palustrine Forest (PFO)**: The areas meeting palustrine forest criteria will have a minimum of 400 native, live, and healthy (disease- and pest-free) woody plants growing per acre. At least 280 of these will be native tree species. Stem density monitoring will be conducted biannually for a period of 15 years, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.

  Because tree height is an important factor in reducing long-term herbivory and ensuring overall success, monitoring will also occur for a period of 15 years, with average tree height targets within planting areas at 2 ft. by the 3rd year of vegetation growth, 3 ft. by the 5th year of vegetation growth, 4 ft. by the 7th year of vegetation growth, 6 ft. by the 10th year of vegetation growth, 8 ft by the 12th year, and 9 ft by the 15th year. The wetland forest types targeted are:

  - Floodplain Forest, will be planted adjacent to streams
  - Red-maple hardwood swamp- can be characterized by being seasonally flooded with hummocks and hollows, and red maple will most likely be the dominant canopy tree. Although ash may be abundant, those species are no longer planted.
- **Invasive Species**
  - Wetland acreage will have a final target of less than 5% relative cover of all non-Typha invasive plant species such as, but not limited to: purple loosestrife, common reed, and reed canarygrass. Interim targets will be 15% the first year following planting, 15% by Year 3, 12.5% by Year 5 and 10% by Year 7.
  - Due to the difficulty of distinguishing the three species of cattails, as well as the likelihood that at least one of these will be present in many types of New York wetlands, the total relative cover of all invasive species, including cattails, will be less than 10%. Interim targets will be 20% the first year following planting, 18.5% by Year 3, 15% by Year 5 and 12.5% by Year 7.
- **VIBI:** The vegetation index of biotic integrity "floristic quality" (VIBI-FQ) of the rehabilitated and re-established wetlands will be equal to or greater than 40 by the end of the monitoring period. Final scores will be dependent on baseline VIBI scores and will have a minimum of 10-point increase. VIBI plots will be placed in each cover type for re-establishment and rehabilitation. Interim targets will aim for a score of 15 or more by the first year following planting, ≥20 by Year 3, ≥30 by Year 5, and ≥35 by Year 7.

Table 6-1. Wetland Performance Standards and Interim Goals

Performance Standard	Interim and Final Goals						
	Year 1[1]	Year 3	Year 5	Year 7	Year 10[2]	Year 12	Year 15[3]
Relative cover by native perennial hydrophytes (FAC or wetter)	20%	40%	60%	80%	90%		
Stem density in PSS areas (per acre, at least 280 must be shrub species)	400	400	400	400	400		
Stem density in PFO areas (per acre, at least 280 must be tree species)	400	400	400	400	400	400	400
Tree height in PFO areas	1 ft	2 ft	3 ft	4 ft	6.6 ft	8ft	9ft
Relative cover of all non-Typha invasive plant species in PEM, PSS, and PFO areas	15%	15%	12.5%	10%	5%		
Total relative cover of all invasive species, including Typha spp. in PEM, PSS, and PFO areas	20%	18.5%	15%	12.5%	10%		
VIBI-FQ score	≥15	≥20	≥30	≥35	≥40		

1. First full growing season following planting
2. Final herbaceous/PEM and PSS goals to be met at this time or additional monitoring years added
3. Final PFO (tree height and density) goals to be met at this time

7. Monitoring Requirements

There will be an initial post-construction "as-built" plan sheet of constructed features with 1' contours, map/descriptions of planted materials, wetland delineation by wetland cover type (PEM, PSS, PFO) and other habitat types e.g. tributaries, ditches, vegetated shallows, deepwater, estimates of invasive plant species cover within the re-establishment areas, and other information relevant for monitoring comparison.

Site monitoring begins after construction is completed and continues for ten (10) years unless additional monitoring is required to demonstrate achievement of performance standards. Monitoring information collected will determine if performance standards are being met and inform maintenance tasks or adaptive management needed to help meet those standards.

Each monitoring report will include:

- <u>Work completed, as-builts, and milestones</u>
    - Evaluation of progress toward all performance goals (i.e. Sections 6 and 9) as appropriate.
    - Report on the status of all erosion control measures on the mitigation site, and any additional temporary measures needed.
    - Weekly mapping of all work completed.
- <u>Hydrological reporting</u>
    - Hydrology data collected from permanent water wells, as well as hydrology information derived from Wetland Determination Data Forms completed throughout the site.
    - Maps showing the location and extent of wetland cover types (PEM, PSS, PFO) and other habitat types (e.g., tributaries, ditches, vegetated shallows, deepwater), locations of monitoring wells, staff gauges, and precipitation gauges.
    - Vegetated shallows and/or deep-water habitats >0.1 acre in size will be mapped and reported.
- <u>Vegetation reporting</u>
    - Description of the general plant health, vigor, and mortality including a prognosis for future survival with qualitative descriptions and photos illustrating tree growth.
    - Relative cover, stem density, and tree height reporting with descriptions of the monitoring protocols used.
    - VIBI scores and data sheets for wetland rehabilitation areas.
- <u>Wildlife reporting</u>
    - List of wildlife observed and other salient biological occurrences.
- <u>Invasive species reporting</u>
    - Relative cover of invasive species with descriptions of the monitoring protocols used.

  - Any areas >0.1 acre that are dominated by invasives will be mapped with acreages.
- <u>Corrective actions proposed/implemented</u>
  - Description of remedial actions completed during the monitoring year. Any measures requiring additional soil manipulation or changes in hydrology, all of which will be undertaken only after written approval from NYSDEC and USACE Buffalo District.
- <u>Other</u>
  - Photographs at permanent photo points.

7.1 Reporting schedule

After an initial Post-Construction As-Built Report, monitoring reports will be submitted by December 31st of the monitoring year to describe conditions in the growing season. All reports in digital format will be submitted to USACE, Regulatory Branch, Auburn Office and NYSDEC, Region 7 Headquarters in Syracuse, with any hard copies provided upon request. All monitoring, reporting, requests, and adaptive management is the responsibility of the permittee, Micron, with implementation by TWT.

Table 7-1. Anticipated Reporting Schedule

Activity	**Years Post Construction**															
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Wetland and aquatic resources delineation		X		X		X		X		X	X					
Hydrologic monitoring	*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Vegetation: native and invasive relative cover		X	X	X	X	X	X	X	X	X	X					
Vegetation: woody stem density and tree height		X		X		X		X			X		X			X
Vegetation: VIBI-FQ		X		X		X		X		X	X					
Photo sequence		X		X		X		X			X					
Detailed site mapping		X	X	X	X	X	X	X	X	X	X		X			X
Reports	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
As-built report	X															
Monitoring & management report		X	X	X	X	X		X		X		X		X		X

*Location of wells and gauges will be detailed in the as-built report

If construction takes more than one growing season to be completed, an interim construction report will be submitted and will describe completed tasks and those remaining. The monitoring timeline will begin following the completion of construction and planting activities described herein.

8. Maintenance Plan

Periodic maintenance activities will be expected to occur following initial construction and planting to ensure long-term viability of the restored and protected resources on the project sites. Below are descriptions outlining the projected maintenance activities during the monitoring period. Any maintenance activities undertaken will be documented in the appropriate monitoring report along with a discussion of any anticipated maintenance to be completed in future years. Significant adjustments such as earthwork will require USACE and DEC approval.

8.1 Hydrology Maintenance

Immediately following construction and throughout the 10-year monitoring period, TWT will monitor the development of site hydrology to ensure that adequate and anticipated hydrology has been restored. It is understood that wetland hydrology may take time to develop, sometimes years, and the desired hydrology or hydric soils may not be achieved until later in the monitoring period. Factors that could negatively impact the intended hydrology include erosion of spillways, failed ditch plugs, compromised groundwater dams, unidentified drainage tiles, and wildlife activity (i.e. beaver and muskrats). If hydrology standards are not being met, TWT will determine if more time is needed for development or make the appropriate adjustments as soon as practicable, preferably before vegetation establishment to minimize disturbance. Possible maintenance actions addressing hydrology issues include:

- Reinforcing spillways with rock or installing other vertical grade control structures,
- Adjusting height/depth of ditch fill or groundwater dams,
- Additional drain tile searches,
- Trapping and/or relocating nuisance wildlife.

8.2 Vegetation Maintenance

The development of a healthy and diverse native vegetative community is crucial for the success of this wetland restoration project, therefore, TWT will closely monitor vegetative establishment following initial planting/seeding and throughout the 10-year monitoring period. Regular maintenance is intended to ensure the health and survival of native woody plants and herbaceous species, to limit the establishment and spread of invasive plant species, and to keep performance standard progress on track. Maintenance actions for vegetative community health include:

- Herbivory prevention- Whitetail deer are a major threat to plant diversity (Blossey et al. 2024). TWT, to the degree practical, will install deer fence along the entirety of the wetland compensation areas with commercial grade 8 ft deer fence. The fence will stay on site for the project duration. To ensure other wildlife's free passage, the fence bottom will be raised to allow small mammals and herpetofauna to pass (about 6 inches),
- Tree and shrub maintenance to combat disease, herbivory, or competition from other plants,

- Supplemental planting/seeding of native trees, shrubs, or herbaceous vegetation,
- Managing invasive species as needed through mechanical or chemical control using aquatic-safe herbicides by a licensed applicator.

8.3 General Site Maintenance

General site maintenance is anticipated to occur regularly throughout the 10-year monitoring period and beyond. As the fee-simple owner of the site, TWT bears responsibility for all non-ecological maintenance tasks, including but not limited to fence and gate upkeep, structural maintenance where applicable, signage installation, monitoring for vandalism, and maintaining trail/security cameras if deemed necessary.

9. Long Term Management Plan

The purpose of the Long-Term Management Plan (LTMP) is to ensure the long-term sustainability of the protected and restored resources after mitigation performance standards have been achieved. The LTMP has been included in **Appendix I**. As the site develops and matures, the LTMP will be amended as needed to include relevant information. After the monitoring period has ended, TWT will prepare a final LTMP to be submitted with the project’s final monitoring report that will be reviewed and approved by the USACE. The final LTMP will address the site-specific future needs of the project based upon conditions at the time of the active period closeout.

9.1 Responsible Party

Micron is the Responsible Party for all phases of this permittee responsible mitigation through monitoring and final acceptance when a Certificate of Completion (or an equivalent) will be provided by the agencies. Once the mitigation is complete Micron will transfer long-term management to TWT.

9.2 Long-Term Monitoring and Management Activities

The LTMP includes the anticipated long-term monitoring and management activities and their estimated costs. These activities will be adjusted as needed throughout and after the active ecological monitoring period.

9.3 Long-Term Funding Mechanism

TWT has a director-controlled Stewardship Management Investment Account specifically established for Micron mitigation projects. This account’s investment income will come from investment instruments that are low-risk and broad-based, (e.g., TWT may use 30-year Treasury Bonds) to support permanent long-term management and maintenance as described in the final LTMP. The entirety of the account will be funded before implementation starts at $8,000/credit (or per DEC restoration/creation acre) for the wetland compensation and $60/ft for stream compensation. The funding level designed in the Long-Term Management Budget in the LTMP is sufficient to sustain the long-term management of all of Micron's wetland and stream compensation. This fund will also have a clause in TWT's Bylaws that provides for its transfer along with the Micron lands to another NGO should that issue arise.

10. Adaptive Management Plan

Beyond the anticipated maintenance needs detailed in Section 11, preparedness for unexpected changes in site conditions is imperative to the continued success of the project. This adaptive management strategy outlines the approach for addressing potential challenges and unexpected changes, including those related to fire, climate change, disease, and other factors. Continuous monitoring to inform the adaptation of management strategies will ensure that the protected and restored resources remain resilient and meet long-term conservation goals. Potential challenges warranting adaptive management include:

- **Fire**: The effects of a significant fire event can lead to negative impacts on a young, re-established wetland. Fire can scorch and kill newly planted or immature vegetation, particularly woody species like trees and shrubs. The loss of vegetative cover can lead to increased soil erosion resulting in potential sedimentation issues to connected water bodies. Fire can create favorable conditions for invasive species as well as affect soil structure and permeability thereby altering hydrology. In the event of a significant fire event, TWT will address the loss of plants, erosion, and any other impacts and determine the appropriate adaptive management approach such as replanting, stabilizing soils, and/or monitoring water quality to facilitate recovery.
- **Climate change**: Changes in precipitation and temperatures associated with climate change can significantly affect wetland mitigation sites through a variety of mechanisms, impacting the hydrology, vegetation, wildlife, and overall ecological functions. To adaptively manage the impacts of climate change on wetland mitigation sites, TWT can implement strategies such as altered water management practices and management of vegetative communities with an emphasis on native species resilient to climate variability and extremes.
- **Disease**: Unforeseen damage to wildlife, vegetation, and ecosystem services is possible via disease or pests. Pathogen spread or a pest invasion can decrease plant diversity and biomass, disrupting the wetland's structural integrity and the success of mitigation performance standards. Monitoring and early detection will be key to assessing such an event and implementing adaptive management strategies such as replanting (i.e. with hardier, disease-resistant species), sanitation processes and controlling the spread.
- **Flood**: Though wetlands aid in flood attenuation, a significant flooding event can have negative effects on a young wetland mitigation project. High energy floodwaters can cause soil erosion and sedimentation, leading to the damage of plant roots and flooding of vegetation. Ditch plugs or groundwater dams/low earthen berms that were installed during construction may fail or breach under serious flooding events. In such an event, TWT will

determine the appropriate adaptive management action including replanting of the site, soil stabilization, or re-construction of ditch plugs and groundwater dams.

11. Financial Assurances

The short-term financial assurances for this compensatory mitigation plan will include individual performance bonds for each mitigation site to ensure compliance with permit requirements and project success. Experienced insurance brokers with the Great American Insurance Group will assist in preparing these financial assurances by providing guidance on structuring the performance bonds and ensuring they meet regulatory expectations. This approach ensures that each mitigation site is financially secured independently, providing clear accountability and reducing risk for both regulatory agencies and stakeholders.

12. References

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Appendix A.

CONSERVATION EASEMENT

On lands of The Wetland Trust, Inc.

195 County Road 37, Town of Hastings, Oswego

County, NY

covering a 109.1-acre portion of

Tax Parcels 292.-1-2 and 292.00-01-10

THIS DECLARATION OF CONSERVATION EASEMENT is made as of the _____ day of ________202_, by The Wetland Trust, Inc. (the "Grantor"), a New York not-for-profit with offices at 4729 State Route 414, Burdett, NY 14818, for the benefit of, but not the burden upon, The Wetland Conservancy, Inc. (the "Holder"), a New York not-for-profit entity having its office at P.O. Box 220, Burdett, New York 14818.

WHEREAS, Grantor is the owner in fee simple of approximately 118.1 acres of certain real property located in the Town of Hastings, County of Oswego, and State of New York, of which property is covered by this conservation easement and more fully described in Schedule A and annexed hereto (the "Protected Property"), and

WHEREAS, The Wetland Trust, Inc., a non-profit 501(c)(3) organization, is providing compensatory mitigation services to Micron New York Semiconductor Manufacturing LLC, with principal offices at 8000 South Federal Way, Boise, Idaho, 83716 for unavoidable adverse impacts to waters of the United States authorized under Section 404 of the Clean Water Act (33 U.S.C. § 1344) , and/or Sections 9 or 10 of the Rivers and Harbors Act (33 U.S.C. §§ 401, 403); and impacts to jurisdiction waters of New York State authorized under …….

WHEREAS, the Protected Property is to be protected in perpetuity through this Conservation Easement for those purposes as described in the Micron Lower Caughdenoy Creek Mitigation Plan, attached to this CE, pursuant to which The Wetland Trust, Inc., has committed to permanently protect and maintain a mitigation project on the Protected Property; and

WHEREAS, in relation to the compensatory mitigation activities, the Protected Property is subject to the conditions of the Mitigation plan, and any Federal or NY State Permit; and

WHEREAS, to ensure the long-term protection of the Protected Property, Grantor agrees to restrict ownership and use of the Protected Property: in order to protect, restore, and maintain the chemical, physical, and biological integrity of waters of the United States including wetlands through the control of discharges of dredged or fill material located on the Protected Property; in accordance with the common law and with the Conservation Easements provisions of New York Environmental Conservation Law ("**ECL**") Article 49, Title 3; in recognition of the continuing benefit to scenic and natural resources and the environment; and as a condition of being issued the Permit; and

WHEREAS, Grantor desires to declare, create, and convey to the Holder a Conservation Easement placing certain limitations and affirmative obligations on the Protected Property for the purpose of maintaining the Protected Property substantially in its natural condition, in perpetuity; and

WHEREAS, the purposes of this Conservation Easement are to protect the scenic, natural resource, and aquatic resource values of the Protected Property including native flora and fauna and the ecological processes that support them, diverse forest types and conditions, soil productivity, biological diversity, water quality, and aquatic habitats including wetlands; and

WHEREAS, the Holder is a 501 ©(3) not-for-profit corporation and is qualified to hold a Conservation Easement in accordance with ECL Section 49-0305; and

WHEREAS, Grantor agrees, in accordance with ECL Section 49-0305.5, that rights of enforcement of the terms of this Conservation Easement shall be held by the Holder, and that the USACE, NYSDEC or other appropriate enforcement agencies of the United States or New York State hold rights of enforcement under the Permit; and

NOW, THEREFORE, for the foregoing consideration, and in further consideration of the restrictions, rights, and agreements herein, and for the purposes of preservation, protection, and conservation of the Protected Property and the conservation and wildlife resources thereon, Grantor hereby creates, gives, grants, bargains, and conveys to the Holder a perpetual easement in, to, over, and across the Protected Property subject to the Permit, , and any current and future modifications thereto.

A. RESTRICTIONS

Grantor shall ensure compliance with the following Restrictions on the Protected Property, which shall run with the Protected Property in perpetuity, and be binding on the Grantor, the Holder, and their respective successors, assigns, lessees, and other occupiers and users. These Restrictions are subject to Grantor's Reserved Rights, which follow.

1. **General**. There shall be no future fillings, flooding, excavating, mining, or drilling; no removal of natural materials (soil, sand, gravel, rock, minerals, etc.); no dumping of materials; and no alteration of the topography which would materially affect the Protected Property in any manner, except as authorized by the Permit, , and any modifications thereof.

2. **Waters and Wetlands**. In addition to the general restrictions above, within the Protected Property there shall be no draining, dredging, damming, or impounding; no changing the grade or elevation, impairing the flow or circulation of waters, or reducing the reach of waters; and no other discharges or activity requiring a permit under applicable water pollution control laws and regulations, except as authorized by the Permit, and any modifications thereof.

3. **Trees/Vegetation**. On the Protected Property there shall be no clearing, burning, cutting, or destroying of trees or vegetation, except as may be necessary to protect public health or safety or as authorized by the Permit, and any modifications thereof; there shall be no planting or introduction of non-native or exotic species of trees or vegetation.

4. **Waste Disposal.** There shall be no disposal or storage of liquid or solid waste or other unsightly, hazardous, toxic or offensive material on the Protected Property.

5. **Uses**. No agricultural, animal husbandry, industrial, residential development, mining, logging, or commercial activity shall be undertaken or allowed on the Protected Property.

6. **Structures**. There shall be no construction, erection, or placement of buildings, billboards, or any other structures, to include fences, parking lots, trailers, mobile homes, camping accommodations, or recreational vehicles, or additions to existing structures, on the Protected Property, except as authorized by the Permit, and any modifications thereof.

7. **New Roads**. There shall be no construction of new roads, trails, or walkways on the Protected Property

without the prior written approval (including approval of the manner of construction) of the Holder and the USACE and NYSDEC

8. **Utilities**. There shall be no construction or placement of utilities or related facilities (including telecommunications towers and antennas) in, over, or under the Protected Property without the prior written approval (including approval of the manner of construction) of the Holder, the USACE and the NYSDEC.

9. **Pest Control**. There shall be no application of pesticides or biological controls, including controls of problem vegetation, on the Protected Property without prior written approval (including approval of the manner of application) of the Holder, the USACE, the NYSDEC or as authorized by the Permit, and any modifications thereof.

10. **Vehicular Use**. There shall be no use of any motorized vehicle or motorized equipment, and no use of any non-motorized bicycle anywhere on the Protected Property, except in the case of emergency, for the purpose of enforcement of applicable laws and regulations, for the purpose of monitoring compliance with the purposes of this Conservation Easement, or as authorized by the Permit, and any modifications thereof.

11. **Subdivision**. There shall be no division or subdivision of the Protected Property.

12. **Marking**. The Grantor shall mark the limits of the Protected Property in a manner approved by the Holder, USACE, and NYSDEC and shall maintain the marking in place so as to notify the public that the Protected Property is an area preserved for conservation purposes.

13. **Other Prohibitions**. Any other use of, or activity on, the Protected Property which is or may become inconsistent with the purposes of the Conservation Easement, the preservation of the Protected Property substantially in its natural condition, or the protection of its environmental systems, is prohibited, except as authorized by the Permit, and any modifications thereof.

B. RESERVED RIGHTS OF GRANTOR

Grantor reserves the right to engage in all acts or uses not prohibited by the Restrictions, which are not inconsistent with the Purpose of this Conservation Easement, the preservation of the Protected Property substantially in its natural condition, and the protection of its environmental systems, and which do not interfere with any obligations under the Permit, and any modifications or amendments thereof. Nothing herein shall be deemed to modify or amend any other or additional agreements between or among Grantor, the Holder, and/or the USACE and NYSDEC. In the event any of Grantor's acts or uses on the Protected Property are subject to review under the New York State Environmental Quality Review Act (SEQRA), Grantee and the Holder shall be designated as interested parties and notified of the review process.

C. GENERAL PROVISIONS

The following General Provisions shall be binding upon the Grantor and the Grantor's heirs, successors, grantees, transferees, administrators, assigns, lessees, licensees and agents, and shall inure to the benefit of the Holder, USACE and NYSDEC, and the heirs, successors, grantees, transferees, administrators, assigns, lessees, licensees and agents of the Holder, USACE and NYSDEC:

1. **Rights of Access and Entry.** The Holder, USACE and NYSDEC shall have the right to enter and go upon the Protected Property for purposes of monitoring and inspection, and to take actions necessary to verify compliance with the Restrictions. The Holder shall also have rights of visual access and view, and the right to enter and go upon the Protected Property for purposes of making scientific or educational observations and studies, and taking samples, in such a manner as will not disturb the quiet enjoyment of the Protected Property by Grantor. No right of access or entry by the general public to any portion of the Protected Property is conveyed by this Conservation Easement.

2. **Enforcement.** Grantor acknowledges and agrees that the Holder's, USACE's and NYSDEC's remedies at law for any violation of this Conservation Easement are inadequate. In the event of a breach of any of the Restrictions set forth above, the Holder, USACE, or NYSDEC will notify the Grantor in writing of the breach. The Grantor shall have thirty (30) days after receipt of such notice to undertake actions that are reasonably calculated to promptly correct the conditions constituting the breach. If the Grantor fails to commence such corrective action within thirty (30) days, or fails to complete the necessary corrective action, the Holder, USACE, or NYSDEC may undertake such actions, including legal proceedings, as are necessary to effect such corrective action. Among other relief, the Holder, USACE, NYSDEC shall be entitled to specific performance

of the terms of this Conservation Easement and to a complete restoration of the Protected Property, correcting damage caused by any breach of the Restrictions. Breaches of the General Provisions of this Conservation Easement shall be actionable without notice. The costs of a breach, correction or restoration, including reasonable Holder expenses, expert or consultant expenses, court costs and attorneys' fees, shall be paid by the Grantor. Enforcement shall be at the discretion of the Holder, USACE, or NYSDEC. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel or waiver. The Holder, USACE, or NYSDEC's enforcement rights are in addition to, and shall not limit, enforcement rights available under other provisions of law or equity, or under any applicable permit or certification. Failure to timely enforce compliance with this Conservation Easement or the use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any provision of this Conservation Easement.

Events Beyond Grantor's Control. Nothing herein shall be construed to authorize the Holder or the USACE to institute any proceedings against Grantor for any changes to the Protected Property caused by acts of God or circumstances beyond the Grantor's control such as earthquake, fire, flood, storm, war, civil disturbance, strike, or similar causes.

3. **Obligations of Ownership.** Grantor is responsible for payment of all real estate taxes, assessments, fees, or other charges levied upon the Protected Property, and Grantor will provide copies of receipts evidencing payment of any such charges upon request of the Holder, USACE, or NYSDEC. Any liens, mortgages or other encumbrances affecting the Protected Property shall be subject to the terms of this Conservation Easement. The Holder, USACE, or NYSDEC shall not be responsible for any costs or liability of any kind related to the ownership, operation, insurance, upkeep, or maintenance of the Protected Property, except as expressly provided herein. Nothing herein shall relieve the Grantor of the obligation to comply with federal, state, or local laws, regulations, and permits that may apply to the exercise of ownership, or rights under this Conservation Easement, by Grantor.

4. **Recording.** The Grantor shall have this Conservation Easement duly recorded and indexed as such in the Office of the County Clerk of Oswego County, New York, as described in ECL Section 49-0305.4. Upon recording, the Grantor shall forward a copy of this Conservation Easement as recorded to the Holder, USACE, and NYSDEC and, as described in ECL Section 49-0305.4, the New York Department of Environmental Conservation.

5. **Extinguishment.** In the event that changed conditions render impossible the continued use of

the Protected Property for conservation purposes, this Conservation Easement may only be extinguished, in whole or in part, by judicial proceeding under authority of ECL Section 49-0307. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to amend or terminate this Conservation Easement.

6. **Eminent Domain.** If all or part of the Protected Property is taken in the exercise of eminent domain so as to substantially abrogate the Restrictions imposed by this Conservation Easement, the Grantor and the Holder shall promptly notify the USACE and NYSDEC and shall join in appropriate actions at the time of such taking to recover the full value of the taking, and all incidental and direct damages due to the taking. Each party shall be responsible for its own costs in any such legal proceeding.

7. **Proceeds of Taking.** This Conservation Easement constitutes a real property interest immediately vested in the Holder. In the event that all or a portion of this Protected Property is sold, exchanged, or involuntarily converted following an extinguishment or the exercise of eminent domain, the Holder shall be entitled to the fair market value of this Conservation Easement. The parties stipulate that the fair market value of this Conservation Easement shall be determined by identifying the fair market value of the Protected Property unencumbered by this Conservation Easement (minus any increase in value after the date of this grant attributable to improvements) and subtracting the value of the Protected Property with the Conservation Easement at the time of this grant. The values at the time of this grant shall be the values used, or which would have been used, to calculate a deduction for federal income tax purposes, pursuant to Section l70(h) of the Internal Revenue Code (whether the grant is eligible or ineligible for such a deduction). The Holder shall use its share of the proceeds in a manner consistent with the purposes of this Conservation Easement.

8. **Notification.** Any notice, request for approval, or other communication required under this Conservation Agreement shall be sent by registered or certified mail, postage prepaid, to the following addresses (or such address as may be hereafter specified by notice pursuant to this paragraph):

To Grantor:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, New York 14818

To Holder:

The Wetlands Conservancy, Inc
P.O. Box 220
Burdett, New York 14818

To the USACE:

U.S. Army Corps of Engineers, New York District ATTN:

Regulatory Branch
Room 1937, 26 Federal Plaza
New York, NY 10278-0090

And

U.S. Army Corps of Engineers, Buffalo District ATTN:

Regulatory Branch
1776 Niagara Street
Buffalo, NY 14207-3199

To the NYSDEC:

?

9. **Assignment.** This Conservation Easement is transferable, but only to a holder qualified under ECL Section 49-0305.3, and approved in writing by the USACE and NYSDEC before transfer. As a condition of such transfer, the transferee shall agree to all of the restrictions, rights, and provisions herein, and to continue to carry out the purposes of this Conservation Easement. Assignments shall be accomplished by amendment of this Conservation Easement in accordance with Section C, Paragraph 14. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to assign this Conservation Easement.

10. **Failure of Holder.** If at any time the Holder is unable or fails to enforce this Conservation Easement, or if the Holder ceases to be a holder qualified under ECL Section 49-0305, and if within a reasonable period of time after the occurrence of one of these events the Holder fails to make an assignment pursuant to paragraph 10, then the Holder's interest shall become vested in another holder, as approved by the USACE and NYSDEC, qualified in accordance with an appropriate (e.g., cy pres) proceeding, to be brought by the Grantor in a court of competent jurisdiction, or by Holder, USACE, and NYSDEC finding a replacement entity agreeable to USACE and NYSDEC

11. **Subsequent Transfer.** This Conservation Easement shall be perpetual and run with the land and shall be binding upon all future owners of any interest in the Protected Property. The conveyance of any portion of or any interest in the Protected Property, by sale, exchange, devise or gift, shall be

made by an instrument which expressly provides that the interest thereby conveyed is subject to this Conservation Easement, without modification or amendment of the terms of this Easement, and such instrument shall expressly incorporate this Conservation Easement by reference, specifically setting forth the date, office, liber and page of the recording of this Conservation Easement. The failure of any such instrument to comply with the provisions hereof shall not affect the validity or enforceability of this Conservation Easement, nor shall such failure affect the Holder's or the USACE' rights hereunder. No less than thirty (30) days prior to conveyance of any interest in the Protected Property, Grantor (to include any successor Grantor) shall notify the Holder, USACE, and NYSDEC of such intended conveyance, providing the full names and mailing addresses of all Grantees, and the individual principals thereof, under any such conveyance. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to transfer the Protected Property.

12. No **Merger of Interests.** In the event the same person or entity ever simultaneously holds an interest in the Protected Property under this Conservation Easement, and holds the underlying title in fee, the parties intend that the separate interests shall not merge.

13. **Amendment.** This Conservation Easement may be amended in accordance with ECL Section 49-0307, but only in a writing signed by the Grantor and the Holder, or their successors or assigns, and approved in writing by the USACE and NYSDEC, its successors or assigns; provided such amendment does not affect the qualification of this Conservation Easement or the status of the Holder under ECL Section 49-0305 or any other applicable law; and provided such amendment is consistent with the conservation purposes of this grant and its perpetual duration. Any amendment to this Conservation Easement shall be recorded and provided to the Holder, the USACE and the New York State Department of Environmental Conservation, in the manner set forth in paragraph C-5 above. In accordance with 33 C.F.R. 332.7(a)(3), USACE and NYSDEC must be provided 60-day advance notification before any action is taken to amend this Conservation Easement.

14. **Severability.** Should a court of competent jurisdiction find any separate part of this Conservation Easement void or unenforceable le, the remainder shall continue in full force and effect.

15. **Warranties by Grantor.** Grantor warrants that it owns the Protected Property in fee simple, and that Grantor owns all interests in the Protected Property that may be impaired by the granting of this Conservation Easement. Grantor further warrants that there are no outstanding mortgages, tax liens, encumbrances , or other interests in the Protected Property that have not been expressly subordinated to this Conservation Easement. Grantor further warrants that no structures of any kind, to include roads, trails or walkways, and no violations of restrictions of this of this Conservation Easement exist

on the Protected Property at the time of execution hereof. Grantor further warrants that the Holder shall have the use of and enjoy all the benefits derived from and arising out of this Conservation Easement.

16. **No Gift or Dedication**. Nothing contained in this Conservation Easement shall be deemed to be a gift for dedication of all or any part of either the Permitted Property or the Protected Property to the public, or for public use.

IN WITNESS WHEREOF, Grantor and Holder have executed this Conservation Easement, as of the date written above.

Execution by Grantor: The Wetland Trust, Inc.

By: ________________________________

Title:

STATE OF NEW YORK) ss.:

COUNTY OF Schuyler)

On the __day of ___________in the year 202_ before me, the undersigned, a notary public in and for said state, personally appeared the Grantor _____________, __________ of The Wetland Trust, Inc. personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed this instrument.

____

Notary Public Date: ________________________________

Approval and Acceptance by Holder: The Wetland Conservancy, Inc.

By: _________________________________

Title: Chair

STATE OF NEW YORK) ss:

COUNTY OF Tompkins)

On the __day of ____________in the year 202_ before me, the undersigned, a notary public in and for said state, personally appeared the Holder **Aaron Ristow**, Chair of The Wetland Conservancy, Inc. personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed this instrument.

_________________________________ _________________________________

Notary Public Date

Schedule A. Legal description of parcel to be covered by this Conservation Easement.

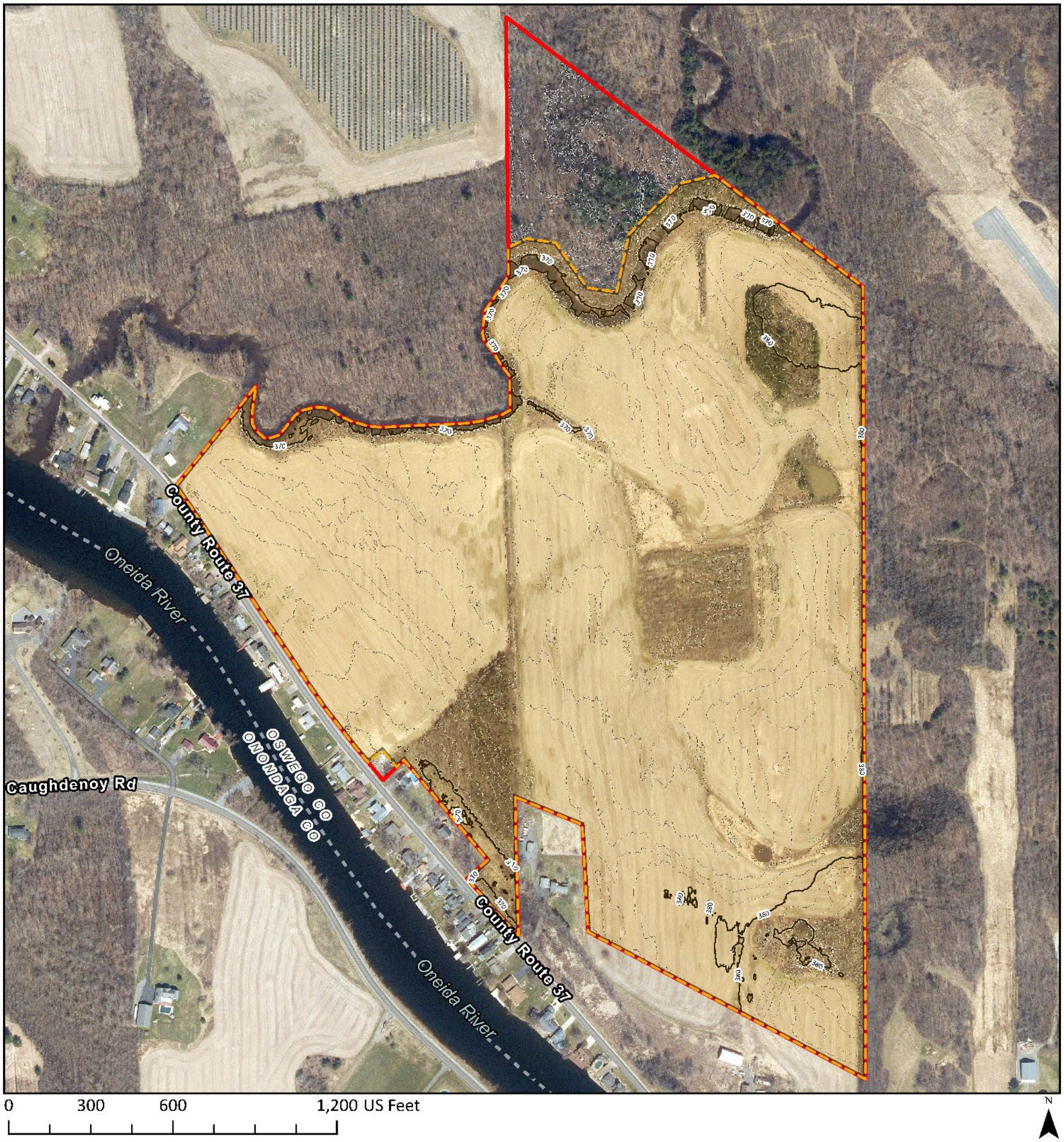
Lower Caughdenoy Creek, 195 County Road 37

Town of Hastings, Oswego County, NY, covering a *109.1*-acre portion

of Tax Parcels 292.-1-2 and 292.00-01-10

ALL THAT TRACT OR PARCEL OF LAND,

[Left intentionally blank- awaiting boundary survey with descriptions of metes and bounds]



Contour Line (1 ft)
🟧 Conservation Easement Boundary DRAFT (109.1 ac)
🟥 TWT Property Boundary (118.1 ac)

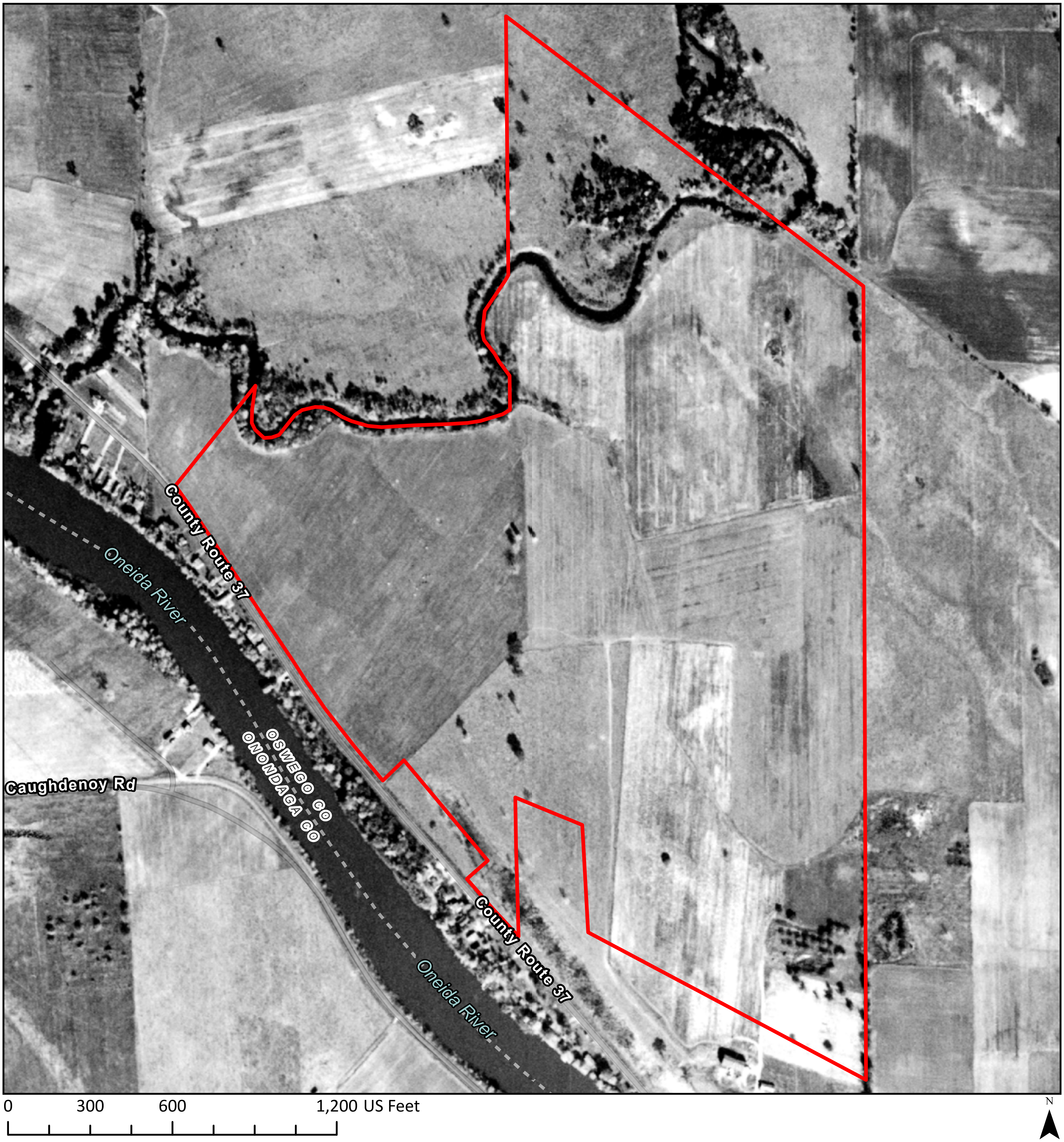
Conservation Easement

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 20 Mar. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Appendix B.



▭ TWT Property Boundary (118.1 ac)

Imagery (1951)

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 26 Mar. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

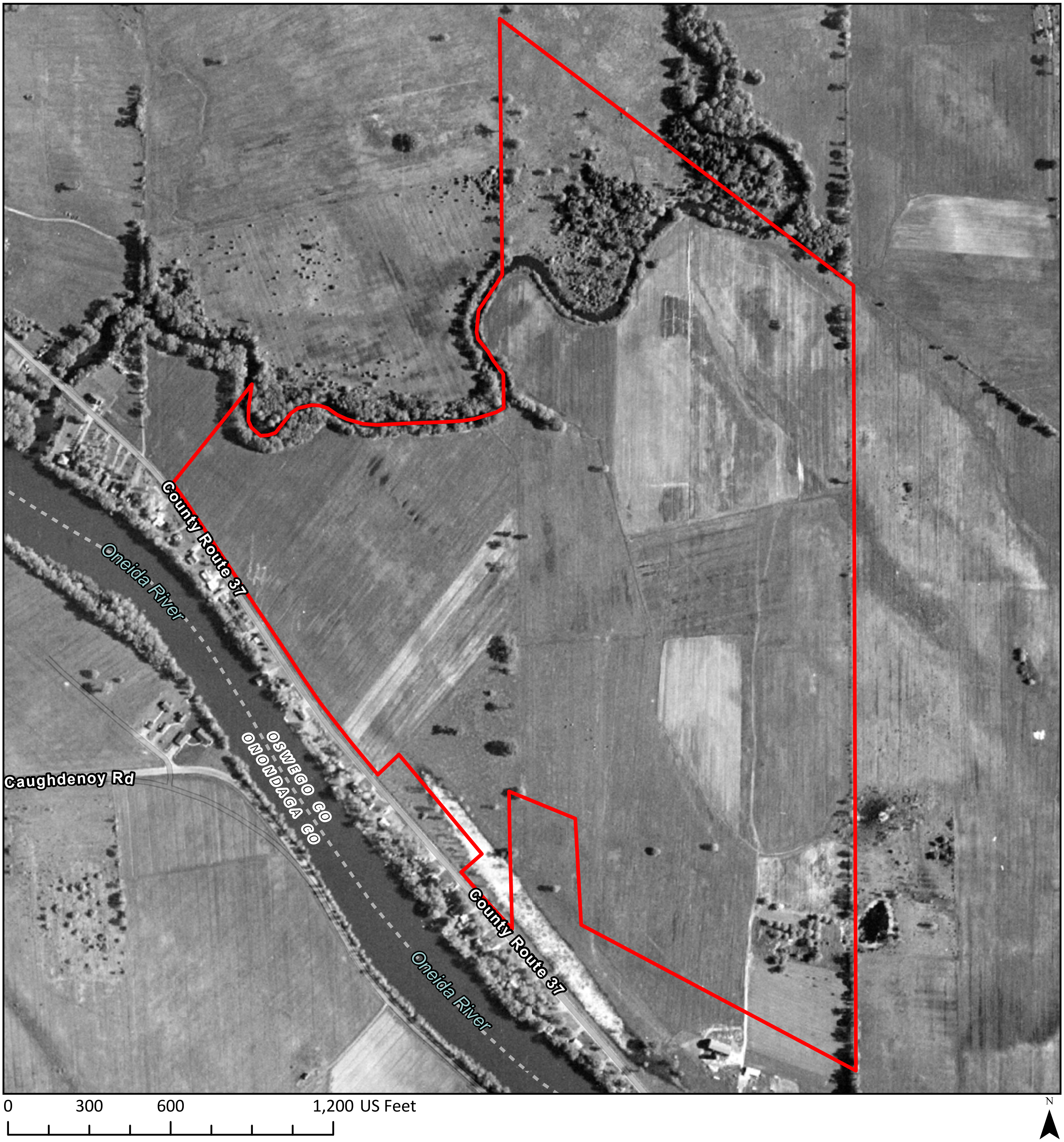
Imagery (1955)

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

🟥 TWT Property Boundary (118.1 ac)

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 10 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



🟥 TWT Property Boundary (118.1 ac)

Imagery (1959)

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 4 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

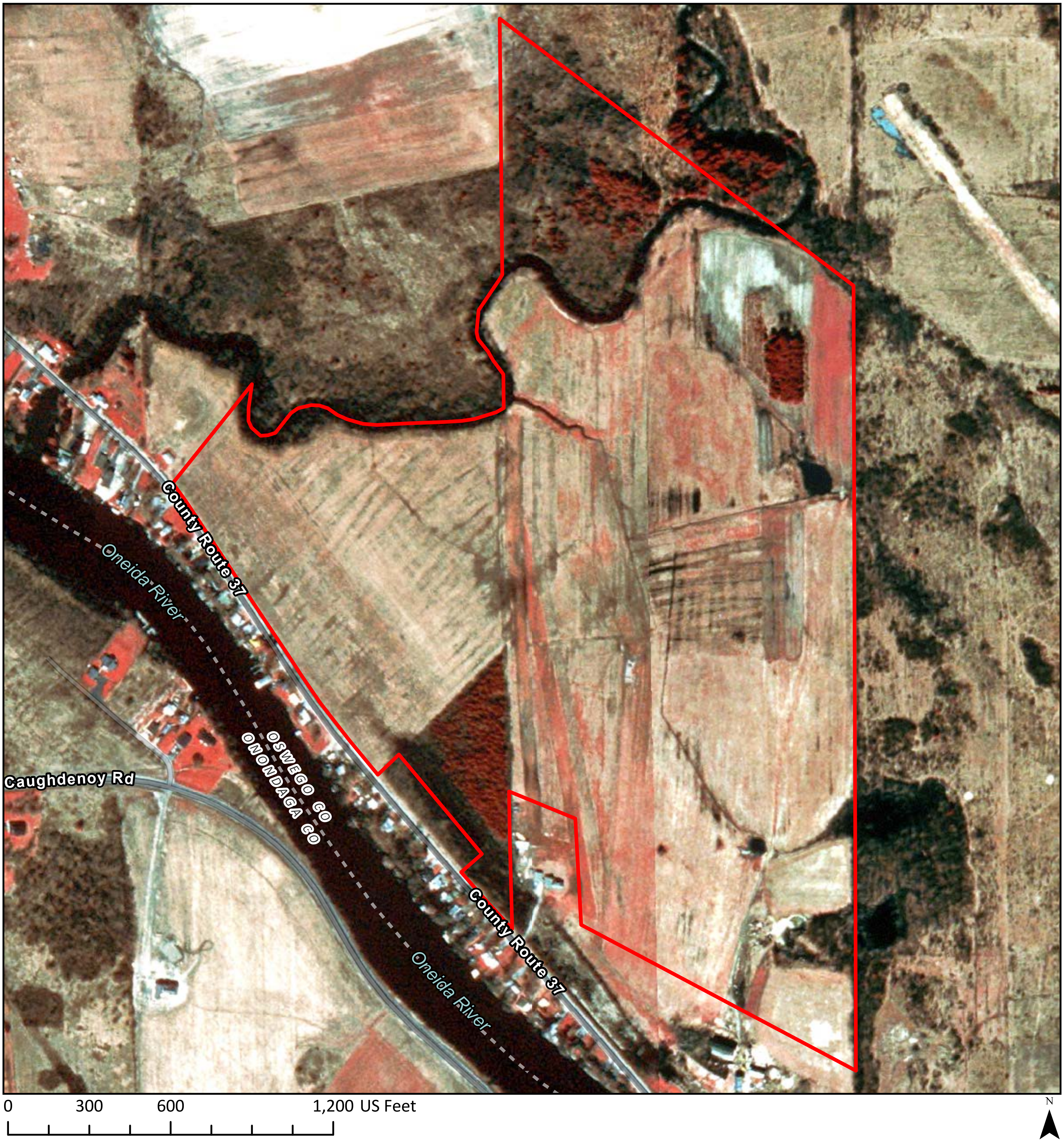
🟥 TWT Property Boundary (118.1 ac)

Imagery (1966)

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 26 Mar. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



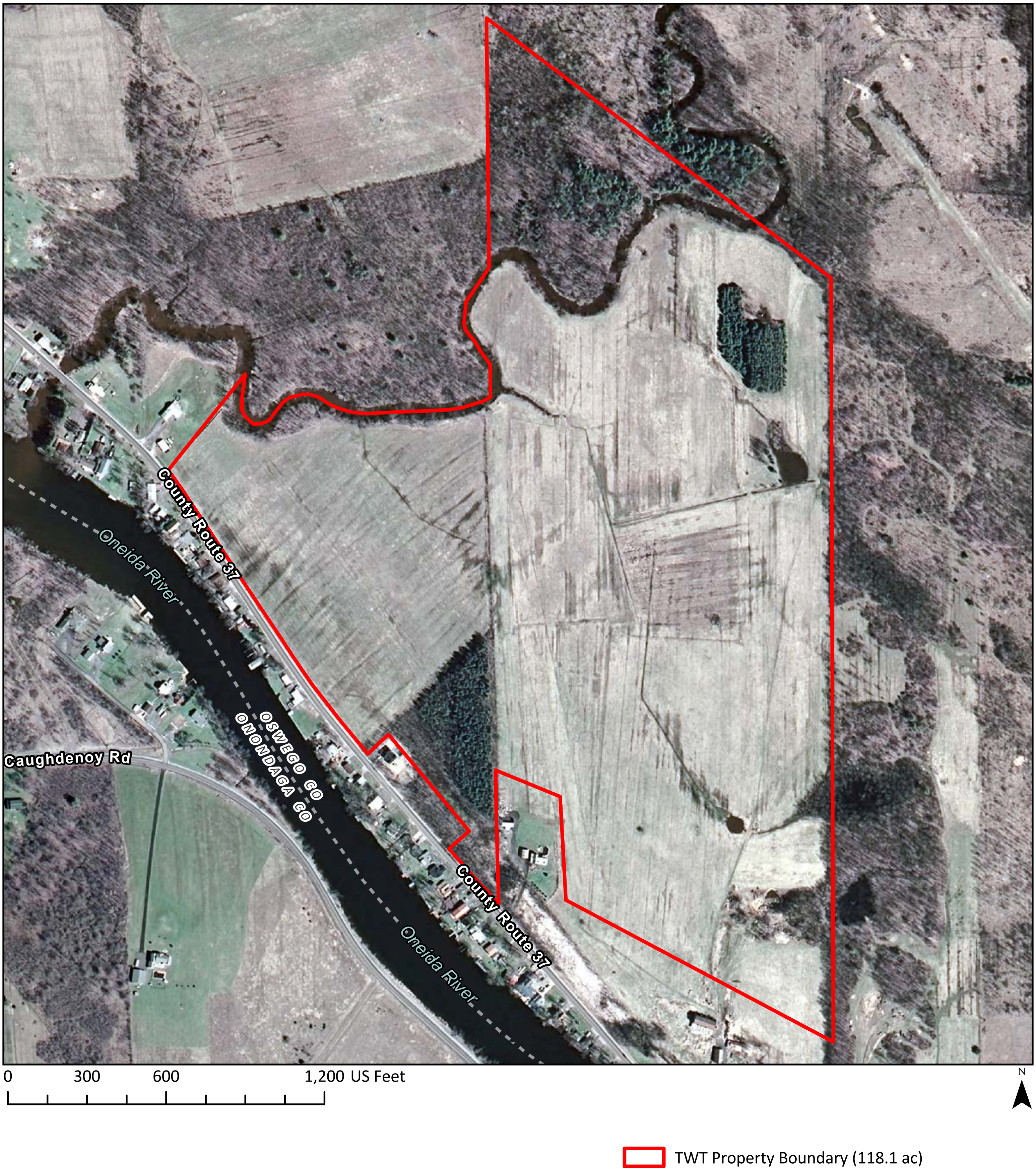
🟥 TWT Property Boundary (118.1 ac)

Imagery (1994)

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 4 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

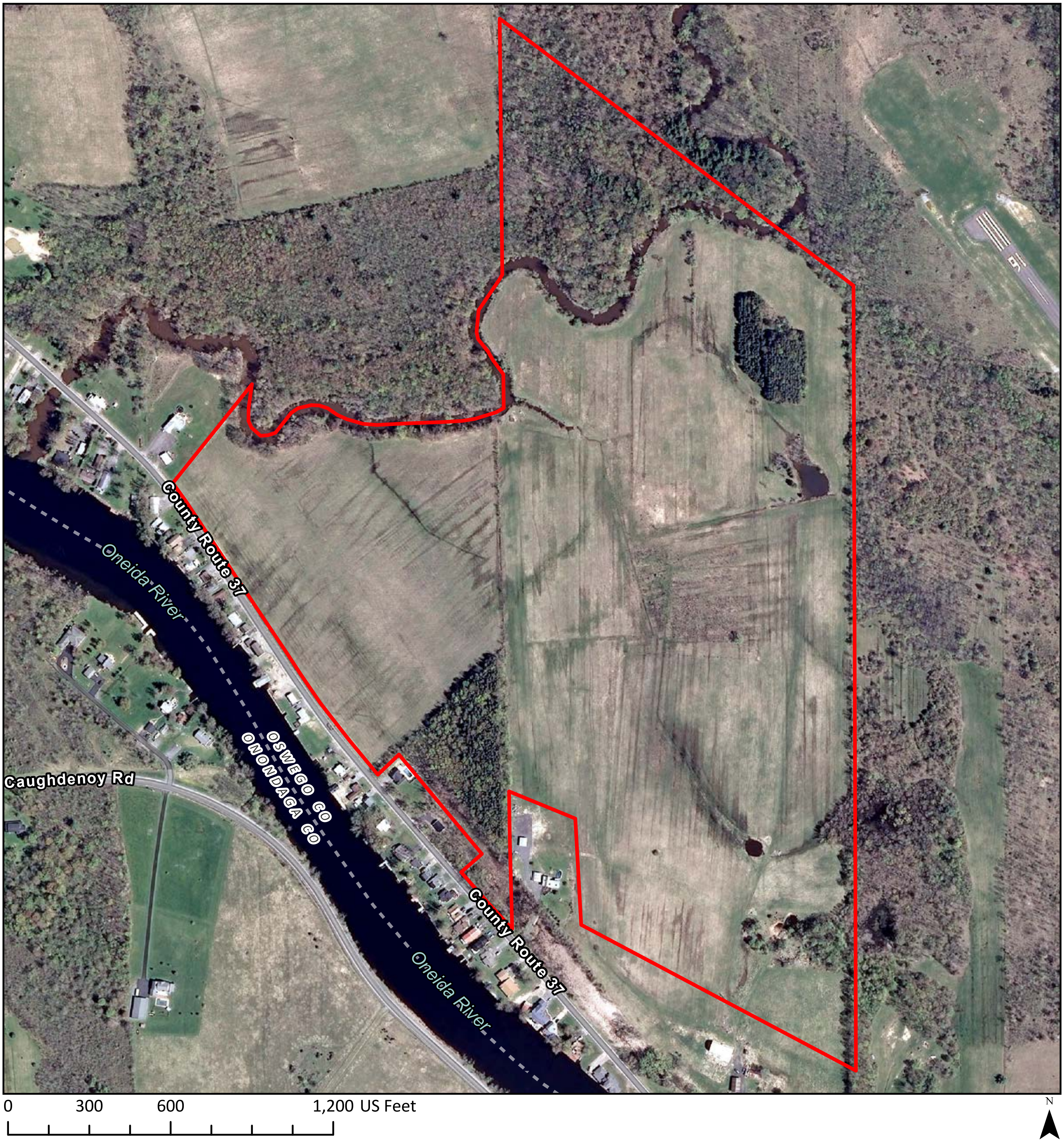


Imagery (2006)

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 4 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse



🟥 TWT Property Boundary (118.1 ac)

Figure : Imagery (2011)

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 4 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Figure : Imagery (2015)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

▭ TWT Property Boundary (118.1 ac)

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 4 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

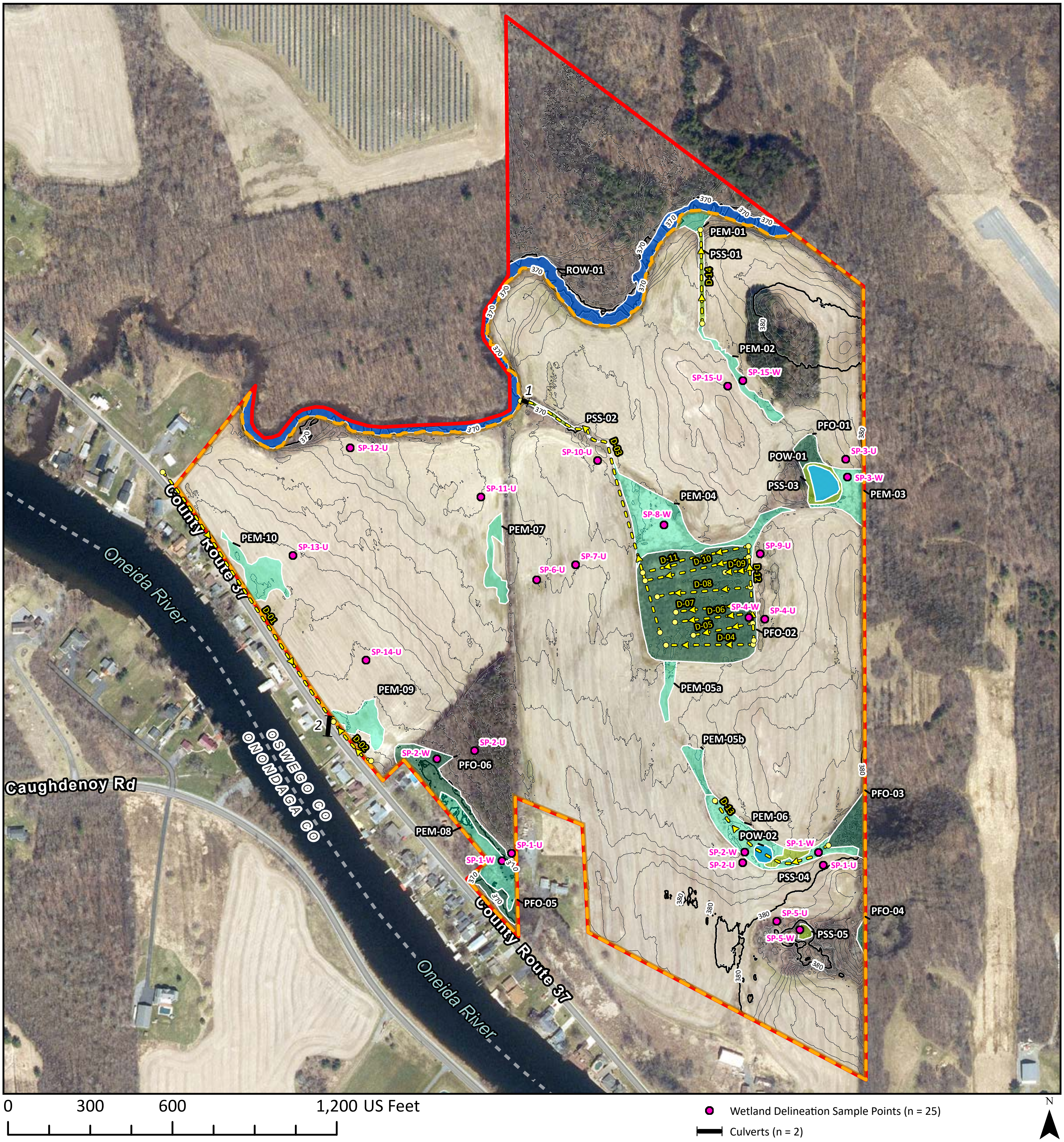
🟥 TWT Property Boundary (118.1 ac)

Figure : Imagery (2019)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 4 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Appendix C.



● Wetland Delineation Sample Points (n = 25)

Culverts (n = 2)

Drainage Features

Ditch

Delineated Wetlands (13.9 ac Total)

🟦 Open Water - Caughdenoy Creek (2.3 ac)

🟦 Open Water - Pond (0.3 ac)

🟩 PEM (5.2 ac)

🟩 PSS (0.6 ac)

🟩 PFO (5.5 ac)

Contour Line (1 ft)

Delineation Concurrence Request Boundary (105 ac)

🟥 TWT Property Boundary (118.1 ac)

Delineated Wetlands and Drainage Features

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

Cartographer: Michelle Herman | Date: 6 May 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Lower Caughdenoy Creek Wetland Delineation Summary Table

ID	Wetland Type Cowardin	Cover Type Edinger	Acres	Linear Feet	Notes	Flow Regime
1	Culvert	-	-	11.2822067523	Connects D-03 to ROW-01 (Caughdenoy Creek). Major drainage point for East field.	-
2	Culvert	-	-	61.3619301787	Outlet point is approximate; it is assumed this conveys drainage from West field under County Route 37 to Oneida River.	-
D-01	Ditch	Ditch / artificial intermittent stream	-	1104.28791431	Roadside ditch between West field and County Route 37. Flows to Culvert 2.	Intermittent
D-02	Ditch	Ditch / artificial intermittent stream	-	200.766272653	Roadside ditch between West field and County Route 37. Flows to Culvert 2.	Intermittent
D-03	Ditch	Ditch / artificial intermittent stream	-	1089.16266084	Conveys main flow through East field. Flows through PFO-02, PEM-04, and PSS-02 ending at ROW-01 (Caughdenoy Creek).	Intermittent
D-04	Ditch	Ditch / artificial intermittent stream	-	318.443278397	Narrow dug ditch based on past aerial photos; probable attempt to drain PFO-02 for agriculture.	Intermittent
D-05	Ditch	Ditch / artificial intermittent stream	-	220.927146094	Narrow dug ditch based on past aerial photos; probable attempt to drain PFO-02 for agriculture.	Intermittent
D-06	Ditch	Ditch / artificial intermittent stream	-	285.054607247	Narrow dug ditch based on past aerial photos; probable attempt to drain PFO-02 for agriculture.	Intermittent
D-07	Ditch	Ditch / artificial intermittent stream	-	277.561807517	Narrow dug ditch based on past aerial photos; probable attempt to drain PFO-02 for agriculture.	Intermittent
D-08	Ditch	Ditch / artificial intermittent stream	-	343.194909444	Narrow dug ditch based on past aerial photos; probable attempt to drain PFO-02 for agriculture.	Intermittent
D-09	Ditch	Ditch / artificial intermittent stream	-	89.0408267489	Narrow dug ditch based on past aerial photos; probable attempt to drain PFO-02 for agriculture.	Intermittent
D-10	Ditch	Ditch / artificial intermittent stream	-	386.999705549	Narrow dug ditch based on past aerial photos; probable attempt to drain PFO-02 for agriculture.	Intermittent
D-11	Ditch	Ditch / artificial intermittent stream	-	405.11799772	Narrow dug ditch based on past aerial photos; probable attempt to drain PFO-02 for agriculture.	Intermittent
D-12	Ditch	Ditch / artificial intermittent stream	-	344.453939608	Narrow dug ditch based on past aerial photos; probable attempt to drain PFO-02 for agriculture.	Intermittent
D-13	Ditch	Ditch / artificial intermittent stream	-	531.571593916	Narrow dug ditch based on past aerial photos; conveys drainage from PFO-03 into dug pond POW-02.	Intermittent
D-14	Ditch	Ditch / artificial intermittent stream	-	342.618208786	Narrow dug ditch in hedgerow conveying drainage from north end of East field into PEM-01 and then ROW-01 (Caughdenoy Creek).	Intermittent
PEM-01	PEM	Shallow emergent	0.153356131767	-	Wet meadow adjacent to Caughdenoy Creek, receives hydrology from PSS-01 / D-14.	Intermittent
PEM-02	PEM	Shallow emergent	0.281787	-	Wet finger extending from PSS-01 to an isolated wet area. Deep tractor ruts and pockets of water with	Intermittent

ID	Wetland Type Cowardin	Cover Type Edinger	Acres	Linear Feet	Notes	Flow Regime
					approximately 30% wetland plant cover and no plant growth on remainder.	
PEM-03	PEM	Shallow emergent	0.40658318083	-	Past agricultural area dominated by reed canary grass. Located East of a dug farm pond (POW-01).	Intermittent
PEM-04	PEM	Shallow emergent	1.34632405721	-	Wet meadow with a high percentage of invasive species cover, surrounded by an active agricultural field to the West, North, and East and a young forested wetland to the South. Area in agriculture within the last decade.	Intermittent
PEM-05a	PEM	Shallow emergent	0.171942318667	-	Narrow wetland extension connected to PFO-02 that is actively farmed. Signs of drainage, high water table, stressed soybean, algal mats, and some soil cracking.	Ephemeral
PEM-05b	PEM	Shallow emergent	0.18	-	Narrow wetland extension from PEM-6 that is actively farmed. Signs of drainage, high water table, stressed soybean, algal mats, and some soil cracking.	Intermittent
PEM-06	PEM	Shallow emergent	0.8	-	Wetland finger dominated by reed canary grass, also containing a small pocket of shrubs (PSS-04), a dug farm pond (POW-02) and a ditch (D-13). Receives hydrology from PFO-03.	Intermittent
PEM-07	PEM	Shallow emergent	0.29155995698	-	Isolated within active agricultural field. Pooled water, stunted soybeans, and Ranunculus sceleratus (OBL species).	Ephemeral
PEM-08	PEM	Shallow emergent	0.650077782172	-	Long narrow emergent wetland contained within PFO-05 and PFO-06 that parallels County Route 37. Dominated by Typha.	Perennial
PEM-09	PEM	Shallow emergent	0.385745072255	-	Isolated within active agricultural field with stunted, yellowing soybeans and periodic high water table. Soil is cracking and has a high clay content. County Route 37 on south side.	Ephemeral
PEM-10	PEM	Shallow emergent	0.518762341597	-	Isolated within active agricultural field with stunted, yellowing soybeans and periodic high water table. Soil is cracking and has a high clay content. County Route 37 on south side.	Ephemeral
PFO-01	PFO	nan	0.188650123073	-	Young PFO north of dug pond (POW-01), upland shrub area to Southwest and active agricultural field to North and East.	Intermittent
PFO-02	PFO	nan	3.8632536503	-	Young PFO with shrubby understory, completely surrounded by active agricultural field. Area was cleared and farmed as recently as 2006, with numerous ditches.	Intermittent
PFO-03	PFO	Floodplain forest	0.388041551705	-	Western tip of larger off-site PFO to East. Provides hydrology to PEM-06. Active agricultural field to North and South.	Intermittent

ID	Wetland Type Cowardin	Cover Type Edinger	Acres	Linear Feet	Notes	Flow Regime
PFO-04	PFO	Red maple- hardwood swamp	0.0637994098502	-	Western extent of larger off-site PFO to East, set within upland forest.	Intermittent
PFO-05	PFO	Red maple- hardwood swamp	0.230238581564	-	Along County Route 37. PSS understory, with PEM-08 to North.	Intermittent
PFO-06	PFO	Red maple- hardwood swamp	0.72088814606	-	Bordered by forested upland along northern side, phragmites at West edge and PEM-08 along southern side.	Intermittent
POW-01	Open Water - Pond	Farm pond / artificial pond	0.229462867112	-	Farm pond dug between 1959-1985. Algal growth, surrounded by invasive shrubs. Pond's water table is 2 ft lower than the adjacent sample point (SP-3-W).	Perennial
POW-02	Open Water - Pond	Farm pond / artificial pond	0.084617724755	-	Farm pond dug between 1986-1994. Overgrown with invasive cattails. Within PEM-06.	Perennial
PSS-01	PSS	Scrub Shrub	0.15506690592	-	Hedgerow dominated by invasive Frangula alnus. Contains D-14, which flows North to Caughdenoy Creek.	Intermittent
PSS-02	PSS	Scrub Shrub	0.0893681700536	-	Borders a ditch (D-03), with active agricultural field to North, East, and South. Dominated by Frangula alnus and Typha.	Intermittent
PSS-03	PSS	Scrub Shrub	0.157825243747	-	Surrounds a farm pond (POW-01).	Intermittent
PSS-04	PSS	Scrub Shrub	0.10667344984	-	Small shrubby area within wet meadow (PEM-06). POW-02 to the West.	Intermittent
PSS-05	PSS	Scrub Shrub	0.0495067617453	-	"Sand pit" - abandoned former small mine area and farm dump site. Concave depression exposing groundwater 6–12 ft below existing adjacent ground. Vegetation approximately 20 years old. Excavated surplus sandy soil was piled onto higher ground.	Perennial
ROW-01	Open Water - Riverine	Deep water river	2.33937608544	-	Caughdenoy Creek channel flowing West to Oneida River.	n/a

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Meyers City/County: Oswego Sampling Date: 6/3/24
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP1U
Investigator(s): EF, HF, KH, DJJ Section, Township, Range: ____
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none none Slope (%): 1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2634687500 Long: -76.1888638200 Datum: WGS84
Soil Map Unit Name Fn: Fonda mucky silt loam NWI classification: Yes: PSS1/EM5E Freshwater Forested/Shrub Wetland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ____
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No x

Is the Sampled Area within a Wetland? **Yes** ____ **No** X
If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)
- Forested area
- Dominated by red spruce
- Sparsely vegetated

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ____ No x Depth (inches): ____
Water Table Present? Yes ____ No x Depth (inches): ____
Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology presant

VEGETATION – Use scientific names of plants.

Sampling Point: SP1U

Tree Stratum (Plot size: 15)	Absolute % Cover	Dominant	Indicator Status
1. *Picea abies*	40	Yes	UPL
2. *Acer rubrum*	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	60	=Total Cover	

Sapling/Shrub Stratum (Plot size: 6)			
1. *Lonicera tatarica*	1	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	1	=Total Cover	

Herb Stratum (Plot size: 6)			
1. *Fraxinus pennsylvanica*	10	Yes	FACW
2. *Geum urbanum*	1	No	UPL
3. *Toxicodendron radicans*	2	Yes	FAC
4. *Symphyotrichum lateriflorum*	1	No	FAC
5. *Taraxacum officinale*	1	No	FACU
6. *Lysimachia nummularia*	1	No	FACW
7. *Oxalis dillenii*	1	No	FACU
8. *Circaea canadensis*	2	Yes	FACU
9. *Vitis riparia*	1	No	FAC
10.			
11.			
12.			
	20	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	11	x 2 =	22
FAC species	24	x 3 =	72
FACU species	5	x 4 =	20
UPL species	41	x 5 =	205
Column Totals	81	(A)	319 (B)

Prevalence Index = B/A = 3.94

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

- Dominated by red spruce
- Sparsely vegetated
- Pine needles littered the ground
- 75% tree cover, 1% shrub, 25% herb cover

SOIL

Sampling Point: SP1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2								Organic layer
2-8	7.5yr 3/3	100						
8-16	7.5yr 5/3	95	7.5yr 5/8	5				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? Yes ______ **No** X

Remarks:
no signs of hydric soil indicators

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Meyers City/County: Oswego Sampling Date: 6/3/24
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP1W
Investigator(s): HF, KH, GD, DJJ Section, Township, Range: ____
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2634026432 Long: --76.1889977173 Datum: WGS84
Soil Map Unit Name: Fonda mucky silt loam NWI classification: Yes: PSS1/EM5E Freshwater Forested/Shrub Wetland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____
If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
•Edge of small pond covered by emergent vegetation
•Adjacent to wooded forest
•Road on other side of pond

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
X Surface Water (A1)
___ High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
X Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
X Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes X No ____ Depth (inches): 1in
Water Table Present? Yes X No ____ Depth (inches): <6
Saturation Present? Yes X No ____ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
•Surface water present when stepping down
•Shallow pond near us, <6in deep

VEGETATION – Use scientific names of plants.

Sampling Point: SP1W

Tree Stratum (Plot size: 15)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	5	Yes	FACW
2. *Acer saccharinum*	5	Yes	FACW
3. *Ulmus americana*	1	No	FACW
4.			
5.			
6.			
7.			
	11	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cephalanthus occidentalis*	25	Yes	OBL
2. *Fraxinus pennsylvanica*	20	Yes	FACW
3. *Cornus amomum*	2	No	FACW
4. *Rhamnus alnifolia*	2	No	OBL
5.			
6.			
7.			
	49	=Total Cover	
Herb Stratum (Plot size: 6)			
1. *Onoclea sensibilis*	70	Yes	FACW
2. *Thelypteris palustris*	8	No	FACW
3. *Symphyotrichum boreale*	5	No	OBL
4. *Viburnum dentatum*	8	No	FAC
5. *Typha X glauca*	5	No	OBL
6. *Carex sp.*	20	No	
7. *Rumex obtusifolius*	1	No	FAC
8. *Saururus cernuus*	1	No	OBL
9. *Impatiens capensis*	2	No	FACW
10. *Acorus calamus*	1	No	OBL
11.			
12.			
	121	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	39	x 1 =	39
FACW species	113	x 2 =	226
FAC species	9	x 3 =	27
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	161	(A)	292 (B)

Prevalence Index = B/A = 1.81

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

- 10% tree cover, 50% shrub, 100% herb
- Invasive species are not dominate but present; cattail
- Unknown carex, no inflorescence

SOIL

Sampling Point: SP1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-7								Organic
7-16	7.5yr 2.5/1	100					Loamy/Clayey	
16-22	7.5yr 4/1	95	7.5yr 5/6	5			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
High in clay content.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Meyer City/County: Oswego Sampling Date: 6/4/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP2U

Investigator(s): KH, EF, HF. DJJ Section, Township, Range: ___

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none none Slope (%) 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2645077432 Long: -76.1893666222 Datum: WGS84

Soil Map Unit Name Rhinebeck silt loam NWI classification: No

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ___

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Edge of Norway spruce/ mix of upland species.
Sparsely vegetated on the ground.
Lots of leaf litter.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___
Water Table Present? Yes ___ No ___ Depth (inches): ___
Saturation Present? Yes ___ No ___ Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No wetland hydrology or drainge indicators present

VEGETATION – Use scientific names of plants.

Sampling Point: SP2U

Tree Stratum (Plot size: 15)	Absolute % Cover	Dominant	Indicator Status
1. *Acer rubrum*	10	No	FAC
2. *Ulmus americana*	30	Yes	FACW
3. *Fraxinus pennsylvanica*	10	No	FACW
4. *Picea abies*	25	Yes	UPL
5.			
6.			
7.			
	75	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size: 5)			
1. *Viburnum dentatum*	1	No	FAC
2. *Toxicodendron radicans*	2	Yes	FAC
3. *Solidago sp.*	1	No	
4. *Cornus racemosa*	2	Yes	FAC
5. *Prunus serotina*	5	Yes	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	11	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	15	x 3 =	45
FACU species	5	x 4 =	20
UPL species	25	x 5 =	125
Column Totals	85 (A)		270 (B)

Prevalence Index = B/A = 3.18

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** __

Remarks: (Include photo numbers here or on a separate sheet.)
- 75% tree, 20% vegetation, 30% tree debris
- 40% dead ash, standing and fallen over
- Sparsely vegetated due to leaf/needle litter and fallen trees/ branches

SOIL

Sampling Point: SP2U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10yr 2/2	100						
5-14	10yr 2/2	50	10yr 5/6	30				
			10yr 4/6	20				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Soils indicate depleted matrix, no other hydric indicators present, matrix and redox colors 50% chroma<2 and 50>2, border linr hydric

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Meyers City/County: Oswego Sampling Date: 6/4/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP2W

Investigator(s): KH, HF, EH, DJJ Section, Township, Range: ___

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none non Slope (%) 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2644180000 Long: =B17-76.1898801400 Datum: WGS84

Soil Map Unit Name Madalin silt loam NWI classification: No

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ___

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes X No ___

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? Yes X **No** ___

If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Edge of a frag wall that is west, twards the road. Forrested, shrubby area, sparsely vegetated

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? Yes ___ No ___ Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology recorded, assume hydrology is present due to hydric vegetation and soil.

VEGETATION – Use scientific names of plants.

Sampling Point: SP2W

Tree Stratum (Plot size: 15)	Absolute % Cover	Dominant	Indicator Status
1. *Acer rubrum*	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	

Sapling/Shrub Stratum (Plot size: 6)			
1. *Lindera benzoin*	3	No	FACW
2. *Lonicera japonica*	15	Yes	FACU
3. *Rhamnus cathartica*	3	No	FAC
4.			
5.			
6.			
7.			
	21	=Total Cover	

Herb Stratum (Plot size: 6)			
1. *Persicaria virginiana*	30	Yes	FAC
2. *Oxalis dillenii*	1	No	FACU
3. *Fraxinus pennsylvanica*	5	No	FACW
4. *Geum urbanum*	1	No	UPL
5. *Toxicodendron radicans*	5	No	FAC
6. *Viburnum dentatum*	1	No	FAC
7. *Lysimachia nummularia*	1	No	FACW
8. *Fragaria virginiana*	1	No	FACU
9. *Picea abies*	3	No	UPL
10. *Carex blanda*	1	No	FAC
11.			
12.			
	49	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	9	x 2 =	18
FAC species	70	x 3 =	210
FACU species	17	x 4 =	68
UPL species	4	x 5 =	20
Column Totals	100	(A)	316 (B)

Prevalence Index = B/A = 3.16

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Herbaceous cover is dominated by jump seed

SOIL

Sampling Point: SP2W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-5	10yr 2/2	100					Loamy/Clayey	
5-12	10yr 2/2	50	10yr 6/8	40			Loamy/Clayey	
			10yr 6/2	10				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? Yes X **No** ___

Remarks:
5-12in had three colors and high in clay

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio/Meyer City/County: Hastings/Oswego Sampling Date: 7/26/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP11U
Investigator(s): EF,HF,KH,GD Section, Township, Range: ____
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none none Slope (%) 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2670478700 Long: -76.1892630237 Datum: WGS 84
Soil Map Unit Name RhA: Rhinebeck silt loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ____
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ____ No x
Hydric Soil Present? Yes x No ____
Wetland Hydrology Present? Yes ____ No x

Is the Sampled Area within a Wetland? **Yes** ____ **No** X
If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ____ No x Depth (inches): ____
Water Table Present? Yes ____ No x Depth (inches): ____
Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP11U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Soy bean is thriving, 24 + inches tall, 100% herb cover

SOIL

Sampling Point: SP11U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 4/2	95	7.5yr 6/8	5			Loamy/Clayey	
6-12	10yr 5/1	85	7.5yr 5/8	15			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Dry soils

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wisner City/County: Hastings/Oswego Sampling Date: 7/26/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP12U

Investigator(s): EF,HF,KH,GD Section, Township, Range: ____

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none ____ Slope (%): 1-2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2675460530 Long: -76.19110510162 Datum: WGS 84

Soil Map Unit Name RhA: Rhinebeck silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ____

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ____ No x

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes ____ No x

Is the Sampled Area within a Wetland? Yes ____ No X

If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point taken in soy bean field, sparceley vegatated, hillside draining toward creek, natural forested area 30 feet away from sample point, upland species growing at a lower elevation than sample point

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____

Water Table Present? Yes ____ No x Depth (inches): ____

Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? Yes ____ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP12U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)

Prevalence Index worksheet:

Total % Cover of:			Multiply by:	
OBL species	0	x 1 =	0	
FACW specie	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	100	x 5 =	500	
Column Totals	100	(A)	500	(B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
100% herb cover, soy bean stunted in growth

SOIL

Sampling Point: SP12U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr 4/1	80	7.5yr 5/6	20			Loamy/Clayey	
8-14	10yr 6/1	65	7.5yr 5/8	35				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** X **No** ____

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio/Meyer City/County: Hastings/Oswego Sampling Date: 7/23/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP13U

Investigator(s): EF,HF,KH,GD Section, Township, Range: ______

Landform (hillside, terrace, etc.): ______ Local relief (concave, convex, none none Slope (%) 0-1

Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: 43.2664710508 Long: -76.1918441360 Datum: WGS 84

Soil Map Unit Name RhA: Rhinebeck silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x

Hydric Soil Present? Yes x No ___

Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID ______

Remarks: (Explain alternative procedures here or in a separate report.)
Slight depression in ag field

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP13U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	10	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW specie	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals	10 (A)		50 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide support data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
soy bean yellowing and smaller in growth

SOIL

Sampling Point: SP13U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 4/2	95	7.5yr 6/8	5			Loamy/Clayey	
6-12	10yr 5/1	85	7.5yr 5/8	15				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ☐ High Chroma Sands (S11) (**LRR K, L)**
- ☐ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** X **No** ____

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Below 16 inches we are encountering more sandy soils, soils moist at 20 inches

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio/Meyer City/County: Hastings/Oswego Sampling Date: 7/26/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP14U

Investigator(s): EF,HF,KH,GD Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none none Slope (%) 0-1

Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: 43.2654188557 Long: -76.1908480967 Datum: WGS 84

Soil Map Unit Name Ma: Madalin silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x

Hydric Soil Present? Yes x No ___

Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? Yes ___ No X

If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
larger depression roughly less than 1 acre

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology

VEGETATION – Use scientific names of plants.

Sampling Point: SP14U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1. *Glycine max*	75	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	=Total Cover	

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	75	x 5 =	375	
Column Totals	75	(A)	375	(B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
Soy bean thriving

SOIL

Sampling Point: SP14U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 4/2	95	7.5yr 6/8	5			Loamy/Clayey	
6-12	10yr 5/1	85	7.5yr 5/8	15				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_x_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___
Depth (inches): ___

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Central Square Sampling Date: 6/4/24
Applicant/Owner: the Wetland Trust State: NY Sampling Point: SP1U
Investigator(s): KH, EF, HF, DJJ Section, Township, Range: ____
Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none none Slope (%) 2-6
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2633441380 Long: --76.1845950707 Datum: WGS84
Soil Map Unit Name Rhineback silt loam NWI classification: No
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present?	Yes ____	No x
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X
If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)
- Soy bean agriculture field
- Surrounded by wetlands on three sides

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology present

VEGETATION – Use scientific names of plants.

Sampling Point: SP1U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	25	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	25	x 5 =	125
Column Totals	25 (A)		125 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
Soy beans were sprouting with no other vegetation

SOIL

Sampling Point: SP1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5yr 5/4	100						
7-11	10yr 6/3	50	7.5yr 5/6	50			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? Yes ____ **No** X

Remarks:
no signs of hydric soil indicators

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Central Square Sampling Date: 6/4/24
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP1W
Investigator(s): KH, EF, HF, DJJ Section, Township, Range: ___
Landform (hillside, terrace, etc.): Slight concave Local relief (concave, convex, none concave Slope (%) 2-6
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.263472 Long: -76.184659 Datum: WGS84
Soil Map Unit Name Rhineback silt loam NWI classification: No
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Finger of wetland with wetland species surrounding
Influenced by modified drainage
Leads to natural wetland to the east
Agricultural surrounding
Pond at tip of finger

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes X No ___ Depth (inches): 2
Saturation Present? Yes X No ___ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Shallow aquiclude; strong clay layer 5in from surface layer

VEGETATION – Use scientific names of plants.

Sampling Point: SP1W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size: 6)			
1. *Fraxinus pennsylvanica*	5	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5 =Total Cover		

Herb Stratum (Plot size: 6)			
1. *Phalaris arundinacea*	90	Yes	FACW
2. *Carex crinita*	2	No	OBL
3. *Impatiens capensis*	2	No	FACW
4. *Iris versicolor*	1	No	OBL
5. *Typha latifolia*	5	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	8	x 1 =	8
FACW species	97	x 2 =	194
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	105	(A)	202 (B)

Prevalence Index = B/A = 1.92

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
overall: 95% Herbaceous, 5% shrub

SOIL

Sampling Point: SP1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2								Organic
2-10	10yr 5/2	95	7.5yr 5/6	5			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
x Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
? Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** X **No**

Remarks:
soils are gleyed, heavy in clay below 2 inches. 2-10 is 95% "gley1 4/10y" the computer will not let me input that.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Central Square Sampling Date: 6/4/24

Applicant/Owner: the Wetland Trust State: NY Sampling Point: SP1U

Investigator(s): KH, EF, HF, DJJ Section, Township, Range: ____

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none none Slope (%) 0-2

Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: 43.2633724997 Long: -76.185700 Datum: WGS84

Soil Map Unit Name RhA: Rhinebeck silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y , Soil Y , or Hydrology Y significantly disturbed? Are “Normal Circumstances” present? Yes X No ____

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ____ No x

Hydric Soil Present? Yes ____ No x

Wetland Hydrology Present? Yes ____ No x

Is the Sampled Area within a Wetland? Yes ____ No X

If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)
Soy bean agriculture field

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____

Water Table Present? Yes ____ No x Depth (inches): ____

Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? Yes ____ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology present

VEGETATION – Use scientific names of plants.

Sampling Point: SP1U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)			
1. *Glycine max*	25	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25 =Total Cover		

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW specie	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	25	x 5 =	125
Column Totals	25 (A)		125 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
Soy beans were sprouting with no other vegetation

SOIL

Sampling Point: SP1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-7	7.5yr 5/4	100						
7-11	10yr 6/3	50	7.5yr 5/6	50			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** ___ **No** x

Remarks:
no signs of hydric soil indicators

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Central Square Sampling Date: 6/4/24

Applicant/Owner: The wetland Trust State: NY Sampling Point: SP2W

Investigator(s): KH, EF, HF, DJJ Section, Township, Range: ___

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none none Slope (%) 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2634781647 Long: -76.1856710790 Datum: WGS84

Soil Map Unit Name RhA: Rhinebeck silt loam NWI classification: No

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation Y , Soil Y , or Hydrology Y significantly disturbed? Are “Normal Circumstances” present? Yes X No ___

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
•Small patch of phragmites 100 yards away
•Area dominated by reed canary grass
•Surrounded by agricultural

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
X Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
x Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
X Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes X No ___ Depth (inches): 0-2
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
•Saturated: water is sitting on surface by clay is lower so it’s not penetrating
•Man made pond 25ft away, 1ft lower than sample point

VEGETATION – Use scientific names of plants.

Sampling Point: SP2W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size: 6)			
1. *Phragmites australis*	95	Yes	FACW
2. *Onoclea sensibilis*	3	No	FACW
3. *Solidago gigantea*	1	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	99	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	99	x 2 =	198
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	99	(A)	198 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

- No trees or shrub layer
- Wet meadow/ shallow emergent

SOIL

Sampling Point: SP2W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5yr 5/1	60	7.5yr 4/6	40				
5-10	7.5yr 5/1	90	7.5yr 4/6	10				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ___

Remarks:
12in gleyed

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Centeral Square Sampling Date: 6/4/24
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP3U
Investigator(s): KH, EF, HF, DJJ Section, Township, Range: ___
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none non Slope (%) 1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2674085830 Long: -76.1842608337 Datum: WGS84
Soil Map Unit Name RhA: Rhinebeck silt loam NWI classification: No
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology Y significantly disturbed? Are “Normal Circumstances” present? Yes Y No ___
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Soy bean agricultural field
Wetland starts at plowed interface

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology present

VEGETATION – Use scientific names of plants.

Sampling Point: SP3U

	Absolute % Cover	Dominant	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Glycine max*	10	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW specie	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals	10 (A)		50 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
Soy beans just starting to sprout

SOIL

Sampling Point: SP3U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 6/3	80	10yr 4/6	20				
6-10	10yr 4/2	80	10yr 4/6	20				
10-12	10yr 5/3	70	10yr 4/6	30			Sandy	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ______

Remarks:
B horixon appears to by hydric

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio   City/County: Central Square   Sampling Date: 6/4/24

Applicant/Owner: The Wetland Trust   State: NY   Sampling Point: SP3W

Investigator(s): KH, EF, HF, DJJ   Section, Township, Range: ____

Landform (hillside, terrace, etc.): flat   Local relief (concave, convex, none non   Slope (%) 1

Subregion (LRR or MLRA) LRR L, MLRA 101   Lat: 43.267231   Long: -76.184238   Datum: WGS84

Soil Map Unit Name RhA: Rhinebeck silt loam   NWI classification: No

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are “Normal Circumstances” present? Yes X No ____

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)

- Dominated by reed canary grass
- Pond 35ft away, 2ft lower than sample point

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
X Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two require

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? Yes ____ No X Depth (inches): ____

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

- Based on soil and location of the pond, assume hydrology is present on some level
- No drainage pattern

VEGETATION – Use scientific names of plants.

Sampling Point: SP3W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size: 6)	Absolute % Cover	Dominant	Indicator Status
1. *Fraxinus pennsylvanica*	2	No	FACW
2. *Lonicera tatarica*	1	No	FACU
3.			
4.			
5.			
6.			
7.			
	3 =Total Cover		

Herb Stratum (Plot size: 6)	Absolute % Cover	Dominant	Indicator Status
1. *Solidago gigantea*	25	Yes	FACW
2. *Phalaris arundinacea*	70	Yes	FACW
3. *Carex vulpinoidea*	1	No	OBL
4. *Onoclea sensibilis*	5	No	FACW
5. *Agrostis gigantea*	2	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	103 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW species	104	x 2 =	208
FAC species	0	x 3 =	0
FACU species	1	x 4 =	4
UPL species	0	x 5 =	0
Column Totals	106	(A)	213 (B)

Prevalence Index = B/A = 2.01

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
No tree or much of shrubs. Dominated by herb cover, mostly invasive reed canary grass

SOIL

Sampling Point: SP3W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
4-6	7.5yr 4/1	70	7.5yr 5/6	30			Loamy/Clayey	
6-12	7.5yr 5/1	90	7.5yr 5/6	10			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____________

Depth (inches): ____________

Hydric Soil Present? **Yes** X **No** ___

Remarks:
solid clay at 16inches

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Central Square Sampling Date: 6/6/24
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP4U
Investigator(s): KH, EF, HF, DJJ Section, Township, Range: ___
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none non Slope (%): 1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2658108630 Long: -76.1853804555 Datum: WGS84
Soil Map Unit Name Ma: Madalin silt loam NWI classification: No
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No ___ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes Y No ___
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Agricultural field, plowed and planted with soy beans

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology present

VEGETATION – Use scientific names of plants.

Sampling Point: SP4U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	25	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW specie	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	25	x 5 =	125
Column Totals	25 (A)		125 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide support data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No vegetation present, on July 1 soy bean approximately 1 foot high

SOIL

Sampling Point: SP4U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10yr 4/2	90	10yr 4/6	10			Loamy/Clayey	
4-10	10yr 4/1	80	10yr 4/6	20			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
High in clay

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Central Square Sampling Date: 4/6/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP4W

Investigator(s): KH, EF, HF, DJJ Section, Township, Range: ______

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none non Slope (%) 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.265828 Long: -76.185599 Datum: WGS84

Soil Map Unit Name Ma: Madalin silt loam, NWI classification: No

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ___

Hydric Soil Present? Yes X No ___

Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___

If yes, optional Wetland Site ID ______

Remarks: (Explain alternative procedures here or in a separate report.)

- Shrubby, young forested wetland
- Surrounded by agriculture

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** x **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Tight clay soil.likely presistant water seasonaly,

VEGETATION – Use scientific names of plants.

Sampling Point: SP4W

Tree Stratum (Plot size: 15)	Absolute % Cover	Dominant	Indicator Status
1. *Ulmus americana*	5	No	FACW
2. *Fraxinus pennsylvanica*	30	Yes	FACW
3. *Acer rubrum*	10	Yes	FAC
4.			
5.			
6.			
7.			
	45	=Total Cover	
Sapling/Shrub Stratum (Plot size: 6)			
1. *Cornus racemosa*	60	Yes	FAC
2. *Viburnum dentatum*	20	No	FAC
3. *Cornus amomum*	20	No	FACW
4. *Frangula alnus*	2	No	FAC
5.			
6.			
7.			
	102	=Total Cover	
Herb Stratum (Plot size: 6)			
1. *Solidago altissima*	50	Yes	FACU
2. *Fragaria virginiana*	10	No	FACU
3. *Potentilla simplex*	5	No	FACU
4. *Oxalis dillenii*	1	No	FACU
5. *Juncus effusus*	1	No	OBL
6. *Anthoxanthum odoratum*	1	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	68	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW specie	55	x 2 =	110
FAC species	92	x 3 =	276
FACU species	67	x 4 =	268
UPL species	0	x 5 =	0
Column Totals	215 (A)		655 (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide support data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
- Trees <6 in diameter
- 30% forest canopy, 80% shrub, 85% shrub cover

SOIL

Sampling Point: SP4W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					Loamy/Clayey	
4-10	10yr 4/2	80	10yr 4/6	20			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Central Square Sampling Date: 6/7/24

Applicant/Owner: The Wetlamd Trust State: NY Sampling Point: SP5U

Investigator(s): KH, EF, HF, DJJ Section, Township, Range: ___

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none non Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2627750700 Long: -76.1852347900 Datum: WGS84

Soil Map Unit Name RhA: Rhinebeck silt loam, 0-2% slopes NWI classification: No

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation Y , Soil Y , or Hydrology Y significantly disturbed? Are “Normal Circumstances” present? Yes X No ___

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No X

Hydric Soil Present? Yes ___ No X

Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)

- Upper edge of mining pit
- Clearing to drive in and out

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology, no saturated soils

VEGETATION – Use scientific names of plants.

Sampling Point: SP5U

Tree Stratum (Plot size: 15)	Absolute % Cover	Dominant	Indicator Status
1. *Prunus serotina*	20	Yes	FACU
2. *Fraxinus pennsylvanica*	15	No	FACW
3. *Populus tremuloides*	3	No	FACU
4. *Acer rubrum*	5	No	FAC
5. *Populus deltoides*	35	Yes	FAC
6.			
7.			
	78	=Total Cover	

Sapling/Shrub Stratum (Plot size: 6)			
1. *Rhus typhina*	5	No	UPL
2. *Lonicera tatarica*	20	Yes	FACU
3. *Fraxinus americana*	10	Yes	FACU
4.			
5.			
6.			
7.			
	35	=Total Cover	

Herb Stratum (Plot size: 6)			
1. *Carex scoparia*	5	No	FACW
2. *Anthoxanthum odoratum*	3	No	FACU
3. *Fragaria virginiana*	15	Yes	FACU
4. *Solidago altissima*	30	Yes	FACU
5. *Oxalis dillenii*	1	No	FACU
6. *Hieracium sp.*	2	No	
7. *Daucus carota*	5	No	UPL
8. *Ranunculus acris*	1	No	FAC
9. *Phleum pratense*	1	No	FACU
10. *Vitis riparia*	1	No	FAC
11. *Plantago lanceolata*			FACU
12.			
	64	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	42	x 3 =	126
FACU species	103	x 4 =	412
UPL species	10	x 5 =	50
Column Totals	175	(A)	628 (B)

Prevalence Index = B/A = 3.59

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
Tree Ash is dead

SOIL

Sampling Point: SP5U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5yr 4/4	100						
6-10	7.5yr 6/6	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** ___ **No** x

Remarks:
No hydric soils

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Central Square Sampling Date: 6/7/24
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP5W
Investigator(s): KH, Ef, Hf, DJJ Section, Township, Range: ___
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none concave Slope (%) 1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.262698 Long: -76.184921 Datum: WSG84
Soil Map Unit Name RhA: Rhinebeck silt loam NWI classification: ___
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation x , Soil x , or Hydrology x significantly disturbed? Are “Normal Circumstances” present? Yes ___ No x
Are Vegetation ___ , Soil x , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes X No ___
Hydric Soil Present? Yes x No ___
Wetland Hydrology Present? Yes X No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Old mined, farm dump area. Mined to be a concave hole exposing groundwater 6-12 ft below top of ridge. Approximately 20 years old due to grown up trees. Sandy soil was scraped out and piled on higher ground. Mine was 50-60ft wide. Has been abandoned and growing vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)
X High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes x No ___ Depth (inches): 3
Water Table Present? Yes x No ___ Depth (inches): 3
Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
- Standing water present
- 12-16in below sample
- Sand saturated at 12in
- Water sits in pools

VEGETATION – Use scientific names of plants.

Sampling Point: SP5W

Tree Stratum (Plot size: 10)	Absolute % Cover	Dominant	Indicator Status
1. *Acer rubrum*	10	Yes	FAC
2. *Salix sp.*	10	Yes	
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	

Sapling/Shrub Stratum (Plot size: 10)			
1. *Salix sp.*	80	Yes	
2. *Acer rubrum*	10	No	FAC
3. *Fraxinus pennsylvanica*	10	No	FACW
4. *Prunus pensylvanica*	5	No	FACU
5.			
6.			
7.			
	105	=Total Cover	

Herb Stratum (Plot size: 10)			
1. *Onoclea sensibilis*	40	Yes	FACW
2. *Lysimachia nummularia*	40	Yes	FACW
3. *Glyceria striata*	15	No	OBL
4. *Juncus effusus*	1	No	OBL
5. *Cornus amomum*	1	No	FACW
6. *Acer rubrum*	1	No	FAC
7.			
8.			
9.			
10.			
11.			
12.			
	98	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	16	x 1 =	16
FACW specie	91	x 2 =	182
FAC species	21	x 3 =	63
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals	133 (A)		281 (B)

Prevalence Index = B/A = 2.11

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
- 10ft radius for vegetation
- Approximately10% shrub, 80% herb, 20% trees

SOIL

Sampling Point: SP5W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1								Duff
1-12	7.5YR 4/4							

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** X **No**

Remarks:
Over 5 feet of surface soils removed, sampling starts in C layer, assuming soils are hydric based on veg. and hydrology

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Hastings/Oswego Sampling Date: 7/23/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP6U
Investigator(s): EF,HF,KH Section, Township, Range: ___
Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none concave Slope (%) 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: ___ Long: ___ Datum: WGS 84
Soil Map Unit Name RhA: Rhinebeck silt loamx NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ___
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ___ No x
Hydric Soil Present? Yes x No ___
Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Ag field, relatively flat with minor slopes and deppressions,sample point in slight depression,similar soils to adjacent areas with thiving soy bean

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)

___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
x Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
no saturation some water in low portion of depression due to recent rain fall

VEGETATION – Use scientific names of plants.

Sampling Point: SP6U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP6U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10yr 3/2	70	7.5yr 4/6	30			Loamy/Clayey	
12-16	2.5yr 5/1	80	7.5yr 5/8	20			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_x_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Hastings/Oswego Sampling Date: 7/23/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP6U

Investigator(s): EF,HF,KH Section, Township, Range: ____

Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none concave Slope (%) 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: ____ Long: ____ Datum: WGS 84

Soil Map Unit Name RhA: Rhinebeck silt loamx NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ____

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ____ No x
Hydric Soil Present? Yes x No ____
Wetland Hydrology Present? Yes ____ No x

Is the Sampled Area within a Wetland? **Yes** ____ **No** X
If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)
Ag field, relatively flat with minor slopes and deppressions,sample point in slight depression,similar soils to adjacent areas with thiving soy bean

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____
Water Table Present? Yes ____ No x Depth (inches): ____
Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
no saturation some water in low portion of depression due to recent rain fall

VEGETATION – Use scientific names of plants.

Sampling Point: SP6U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	0	x 2 =	0	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	100	x 5 =	500	
Column Totals	100	(A)	500	(B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP6U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10yr 3/2	90	7.5yr 4/6	10			Loamy/Clayey	
10-16	2.5yr 5/1	80	7.5yr 5/8	20			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_x_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio City/County: Hastings/Oswego Sampling Date: 7/23/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP8W
Investigator(s): EF,HF,KH,GD Section, Township, Range: ___
Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none concave Slope (%) 0-1
Subregion (LRR or MLRA) LRR L, MLRA 101 Lat: ___ Long: ___ Datum: WGS 84
Soil Map Unit Name Madalin silt loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes x No ___
Hydric Soil Present? Yes x No ___
Wetland Hydrology Present? Yes x No ___

Is the Sampled Area within a Wetland? **Yes** X **No** ___
If yes, optional Wetland Site ID ___

Remarks: (Explain alternative procedures here or in a separate report.)
Wet meadow (PEM) with heavy abundance of invasives, surrounded by AG field and forested shrub wetland to the south

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? Yes x No ___ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? **Yes** x **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
soils are moist to the surface B horizon is very dense with clay, recent heavy rains

VEGETATION – Use scientific names of plants.

Sampling Point: SP8W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Phalaris arundinacea*	90	Yes	FACW
2. *Scirpus cyperinus*	1	No	OBL
3. *Lythrum salicaria*	3	No	OBL
4. *Solidago gigantea*	2	No	FACW
5. *Carex lurida*	1	No	OBL
6. *Symphyotrichum puniceum*	2	No	OBL
7.			
8.			
9.			
10.			
11.			
12.			
	99	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	7	x 1 =	7
FACW species	92	x 2 =	184
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	99 (A)		191 (B)

Prevalence Index = B/A = 1.93

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
100% herb growth

SOIL

Sampling Point: SP8W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	5yr 5/1	80	5yr 5/6	20			Loamy/Clayey	
9-13	2.5y 6/1	70	7.5yr 5/6	30			Loamy/Clayey	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_x_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
_?_ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______________

Depth (inches): ______________

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio/Meyer City/County: Hastings/Oswego Sampling Date: 7/26/24
Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP9U
Investigator(s): EF,HF,KH,GD Section, Township, Range: ____
Landform (hillside, terrace, etc.): ____ Local relief (concave, convex, none Concave Slope (%) 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: ____ Long: ____ Datum: WGS 84
Soil Map Unit Name Madalin silt loam NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are “Normal Circumstances” present? Yes x No ____
Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features,

Hydrophytic Vegetation Present? Yes ____ No x
Hydric Soil Present? Yes x No ____
Wetland Hydrology Present? Yes ____ No x

Is the Sampled Area within a Wetland? **Yes** ____ **No** X
If yes, optional Wetland Site ID ____

Remarks: (Explain alternative procedures here or in a separate report.)
Slightly lower area in the field, Adjacent forested area, Sample point taken in lowest area in field, Ag field run-off location

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ____ No x Depth (inches): ____
Water Table Present? Yes ____ No x Depth (inches): ____
Saturation Present? Yes ____ No x Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No signs of wetland hydrology, No water and no saturation

VEGETATION – Use scientific names of plants.

Sampling Point: SP9U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size:)			
1. *Glycine max*	50	Yes	UPL
2. *Cyperus esculentus*	10	No	FACW
3. *Echinochloa crus-galli*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species	0	x 1 =	0	
FACW species	10	x 2 =	20	
FAC species	5	x 3 =	15	
FACU species	0	x 4 =	0	
UPL species	50	x 5 =	250	
Column Totals	65	(A)	285	(B)

Prevalence Index = B/A = 4.38

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
100% vegatation

SOIL

Sampling Point: SP9U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10yr 4/1	90	7.5yr 4/6	10			Loamy/Clayey	
9-16	7.5yr 5/2	65	7.5yr 5/6	35				

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio/Meyer City/County: Hastings/Oswego Sampling Date: 7/26/24

Applicant/Owner: The Wetland Trust inc. State: NY Sampling Point: SP10U

Investigator(s): EF,HF,KH,GD Section, Township, Range: ___

Landform (hillside, terrace, etc.): ___ Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.2674077333 Long: -76.1876614477 Datum: WGS 84

Soil Map Unit Name: RhA: Rhinebeck silt loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)

Are Vegetation n , Soil n , or Hydrology n significantly disturbed? Are "Normal Circumstances" present? Yes x No ___

Are Vegetation n , Soil n , or Hydrology n naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No x

Hydric Soil Present? Yes x No ___

Wetland Hydrology Present? Yes ___ No x

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
Slight depression in field, some water standing in the lowest point, adjacent wetland has goldenrod growing

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes ___ No x Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Surface water 10 feet away from SP due to recent rainfall, No water in the hole

VEGETATION – Use scientific names of plants.

Sampling Point: SP10U

Tree Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Glycine max*	50	Yes	UPL
2. *Cyperus esculentus*	2	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	52 =Total Cover		

Woody Vine Stratum (Plot size: ______)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	50	x 5 =	250
Column Totals:	52	(A)	254 (B)

Prevalence Index = B/A = 4.88

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)
Soy bean yellow and stunted in growth

SOIL

Sampling Point: SP10U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10yr 4/2	95	7.5yr 6/8	5			Loamy/Clayey	
7-14	10yr 5/1	60	7.5yr 5/8	40			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_x_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______________

Depth (inches): ______________

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lower Caughdenoy Creek City/County: Oswego/ Hastings Sampling Date: 4/25/25
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-15-U
Investigator(s): E. Frantz, K. Hastinhs Section, Township, Range: ___
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.268148 Long: 43.268148 Datum: WSG81
Soil Map Unit Name: Rhinebeck silt loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No ___ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes Y No ___
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ___ No X
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes ___ No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X
If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)
In the fall of 2024 the field was planted with soy beans. Soy bean was thriving in this area with no other understory growth. This area is adjacent to a upland forested area. Agriculture field gets harvested and plowed annually for the past 70+ years resulting in disturbed vegetation, soil and hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ___ No ___ Depth (inches): ___
Water Table Present? Yes ___ No ___ Depth (inches): ___
Saturation Present? Yes ___ No ___ Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No hydrology indicators. No oxidized root channels, no saturation, no signs of drainage patterns. Soil is cracked from tractor ruts

VEGETATION – Use scientific names of plants.

Sampling Point: SP-15-U

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
1. *Glycine max*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No vegetation on 4/25/25. In 2024 soy beans were thriving, this data is included on this data sheet.

SOIL

Sampling Point: SP-15-U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr 5/3	100					Loamy/Clayey	Clay
8-12	10yr 7/2	60	10yr 6/8	40			Loamy/Clayey	Clay

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ______

Remarks:
Clay to 48 inches. Carbon layer at 8 inches

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lower Caughdenoy Creek City/County: Oswego/ Hastings Sampling Date: 4/25/25
Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-15-W
Investigator(s): E. Frantz, K. Hastings Section, Township, Range: ______
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0-2
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.268202 Long: 43.268202 Datum: WSG81
Soil Map Unit Name: Rhinebeck silt loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No ____ (If no, explain in Remarks.)
Are Vegetation Y , Soil Y , or Hydrology Y significantly disturbed? Are “Normal Circumstances” present? Yes Y No ____
Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____
If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Agriculture field, Soy beans had a yellowing trail connecting two wetlands. No understory of growth. Adjacent to upland forested area. Agriculture field gets harvested and plowed annually for the past 70+ years resulting in disturbed vegetation, soil and hydrology

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
		____ Surface Soil Cracks (B6)
X Surface Water (A1)	____ Water-Stained Leaves (B9)	____ Drainage Patterns (B10)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Moss Trim Lines (B16)
____ Saturation (A3)	____ Marl Deposits (B15)	____ Dry-Season Water Table (C2)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Crayfish Burrows (C8)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Saturation Visible on Aerial Imagery (C9)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Stunted or Stressed Plants (D1)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Geomorphic Position (D2)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	____ Shallow Aquitard (D3)
____ Inundation Visible on Aerial Imagery (B7)	____ Other (Explain in Remarks)	____ Microtopographic Relief (D4)
____ Sparsely Vegetated Concave Surface (B8)		____ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes X No ____ Depth (inches): <4in
Water Table Present? Yes ____ No X Depth (inches): ____
Saturation Present? Yes X No ____ Depth (inches): 0-4
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Water pooling in tractor ruts up to 4 inches deep, this condition appears to be separate from the actual water table.

VEGETATION – Use scientific names of plants.

Sampling Point: SP-15-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Glycine max*	40	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40 =Total Cover		

Woody Vine Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	40 (A)		200 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
in 2024 soy bean was stressed and yellowing

SOIL

Sampling Point: SP-15-W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 5/2	10					Loamy/Clayey	Clay
6-14	10yr 5/2	40	10yr 6/3	20			Loamy/Clayey	Clay
			10yr 5/8	20				Carbon fragments were the remaining 20%

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)

___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Appendix D.

Category	Common Name	Scientific Name	Conservation Status	Indicator Status	Native	Buxton Creek	Lower Caughdenoy Creek	Oneida River	Fish Creek	Upper Caughdenoy Creek	Sixmile Creek
Amphibian	American toad	*Anaxyrus americanus*	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓	✓	✓	
Amphibian	gray treefrog	*Dryophytes versicolor*	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Amphibian	northern green frog	*Lithobates clamitans melanc*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓	✓	
Amphibian	northern leopard frog	*Lithobates pipiens*	S5 G5: secure in NYS and globally	-	Yes		✓		✓	✓	
Amphibian	wood frog	*Lithobates sylvaticus*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	red-winged blackbird	*Agelaius phoeniceus*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	wood duck	*Aix sponsa*	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	mallard	*Anas platyrhynchos*	S5 G5: secure in NYS and globally	-	Yes			✓			✓
Bird	American pipit	*Anthus rubescens*	Least concern	-	Yes			✓		✓	✓
Bird	sandhill crane	*Antigone canadensis*	S1B G5: critically imperiled (breeding) in NYS and secure globally	-	Yes			✓			
Bird	great blue heron	*Ardea herodias*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	tufted titmouse	*Baeolophus bicolor*	S5 G5: secure in NYS and globally	-	Yes			✓		✓	
Bird	Canada goose	*Branta canadensis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓		✓	✓
Bird	red-tailed hawk	*Buteo jamaicensis*	S5 G5: secure in NYS and globally	-	Yes			✓			✓
Bird	green heron	*Butorides virescens*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	northern cardinal	*Cardinalis cardinalis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	turkey vulture	*Cathartes aura*	S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			✓
Bird	killdeer	*Charadrius vociferus*	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Bird	northern harrier	*Circus hudsonius*	(NYS Threatened Species) S3B, S3N G5: vulnerable (breeding/non-breeding) in NYS and secure globally	-	Yes				✓		✓
Bird	northern flicker	*Colaptes auratus*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	American crow	*Corvus brachyrhynchos*	S5 G5: secure in NYS and globally	-	Yes			✓	✓		
Bird	blue jay	*Cyanocitta cristata*	S5 G5: secure in NYS and globally	-	Yes		✓	✓			
Bird	pileated woodpecker	*Dryocopus pileatus*	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	gray catbird	*Dumetella carolinensis*	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓	✓	✓			
Bird	willow flycatcher	*Empidonax traillii*	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓					
Bird	rusty blackbird	*Euphagus carolinus*	(NYS High Priority Species of Greatest Conservation Need) S2B G4: imperiled (breeding) in NYS and apparently secure globally	-	Yes			✓			
Bird	common yellowthroat	*Geothlypis trichas*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	bald eagle	*Haliaeetus leucocephalus*	(NYS Threatened Species) S2S3B, S2N G5: imperiled/vulnerable (breeding) and imperiled (non-breeding) in NYS, secure globally	-	Yes			✓		✓	✓
Bird	barn swallow	*Hirundo rustica*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	wood thrush	*Hylocichla mustelina*	S5B G4: secure (breeding) in NYS and apparently secure globally	-	Yes			✓	✓		
Bird	Baltimore oriole	*Icterus galbula*	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓		✓			
Bird	belted kingfisher	*Megaceryle alcyon*	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	red-bellied woodpecker	*Melanerpes carolinus*	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	wild turkey	*Meleagris gallopavo*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	song sparrow	*Melospiza melodia*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	great crested flycatcher	*Myiarchus crinitus*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	osprey	*Pandion haliaetus*	(NYS Species of Special Concern) S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			
Bird	rose-breasted grosbeak	*Pheucticus ludovicianus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	eastern towhee	*Pipilo erythrophthalmus*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓				

Bird	American woodcock	*Scolopax minor*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	yellow warbler	*Setophaga petechia*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	eastern bluebird	*Sialia sialis*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	American goldfinch	*Spinus tristis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	European starling	*Sturnus vulgaris*	SNA G5: not applicable in NYS and secure globally	-	No				✓		
Bird	solitary sandpiper	*Tringa solitaria*	Least concern	-	Yes			✓			
Bird	American robin	*Turdus migratorius*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	eastern kingbird	*Tyrannus tyrannus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	warbling vireo	*Vireo gilvus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	mourning dove	*Zenaida macroura*	S5 G5: secure in NYS and globally	-	Yes			✓			
Fish	brown bullhead	*Ameiurus nebulosus*	Least concern	-	Yes		✓				
Fungi	morel	*Morchella esculenta*	-	-	Yes		✓				
Mammal	coyote	*Canis latrans*	Least concern	-	Yes		✓		✓		
Mammal	North American beaver	*Castor canadensis*	Least concern	-	Yes		✓				
Mammal	North American porcupine	*Erethizon dorsatum*	Least concern	-	Yes						✓
Mammal	white-tailed deer	*Odocoileus virginianus*	Least concern	-	Yes	✓	✓	✓	✓	✓	✓
Mammal	raccoon	*Procyon lotor*	Least concern	-	Yes		✓		✓	✓	
Mammal	eastern cottontail	*Sylvilagus floridanus*	Least concern	-	Yes			✓	✓		
Plant	box elder	*Acer negundo*	-	FAC	Yes						✓
Plant	red maple	*Acer rubrum*	-	FAC	Yes		✓	✓	✓	✓	✓
Plant	silver maple	*Acer saccharinum*	-	FACW	Yes		✓	✓			
Plant	sugar maple	*Acer saccharum*	-	FACU	Yes				✓		
Plant	common yarrow	*Achillea millefolium*	-	FACU	Yes		✓				
Plant	sweet flag	*Acorus calamus*	-	OBL	No		✓	✓			
Plant	common agrimony	*Agrimonia gryposepala*	-	FACU	Yes			✓		✓	
Plant	Rhode Island bentgrass	*Agrostis capillaris*	-	FAC	No					✓	
Plant	redtop	*Agrostis gigantea*	-	FACW	No	✓	✓			✓	✓
Plant	creeping bent	*Agrostis stolonifera*	-	FACW	No	✓				✓	
Plant	American water plantain	*Alisma subcordatum*	-	OBL	Yes		✓				
Plant	speckled alder	*Alnus incana*	-	FACW	Yes			✓			
Plant	New York fern	*Amauropelta noveboracensi*	-	FAC	Yes			✓			
Plant	common ragweed	*Ambrosia artemisiifolia*	-	FACU	Yes			✓		✓	
Plant	downy serviceberry	*Amelanchier arborea*	-	FACU	Yes		✓				
Plant	hog peanut	*Amphicarpaea bracteata*	-	FAC	Yes		✓				
Plant	Canada anemone	*Anemone canadensis*	-	FACW	Yes		✓				
Plant	sweet vernal grass	*Anthoxanthum odoratum*	-	FACU	No	✓	✓	✓		✓	
Plant	Indian hemp	*Apocynum cannabinum*	-	FAC	Yes			✓		✓	
Plant	swamp milkweed	*Asclepias incarnata*	-	OBL	Yes			✓			
Plant	common milkweed	*Asclepias syriaca*	-	UPL	Yes		✓	✓			✓
Plant	yellow birch	*Betula alleghaniensis*	-	FAC	Yes				✓		
Plant	gray birch	*Betula populifolia*	-	FAC	Yes					✓	
Plant	nodding beggar ticks	*Bidens cernua*	-	OBL	Yes					✓	
Plant	devil's beggar ticks	*Bidens frondosa*	-	FACW	Yes			✓		✓	
Plant	hairy brome	*Bromus commutatus*	-	-	No			✓			
Plant	smooth brome	*Bromus inermis*	-	-	No		✓	✓			
Plant	common woodland sedge	*Carex blanda*	-	FAC	Yes		✓				
Plant	bristly sedge	*Carex comosa*	-	OBL	Yes			✓			
Plant	fringed sedge	*Carex crinita*	-	OBL	Yes		✓	✓			
Plant	large yellow sedge	*Carex flava*	-	OBL	Yes			✓			
Plant	graceful sedge	*Carex gracillima*	-	FACU	Yes			✓			
Plant	lake sedge	*Carex lacustris*	-	OBL	Yes						✓
Plant	bladder sedge	*Carex intumescens*	-	FACW	Yes		✓	✓		✓	
Plant	hop sedge	*Carex lupulina*	-	OBL	Yes		✓	✓			
Plant	sallow sedge	*Carex lurida*	-	OBL	Yes			✓			
Plant	troublesome sedge	*Carex molesta*	-	FAC	Yes			✓			
Plant	cyperus-like sedge	*Carex pseudocyperus*	-	OBL	Yes					✓	
Plant	broom sedge	*Carex scoparia*	-	FACW	Yes		✓	✓			✓
Plant	awl-fruited sedge	*Carex stipata*	-	OBL	Yes			✓		✓	
Plant	tussock sedge	*Carex stricta*	-	OBL	Yes				✓	✓	✓
Plant	fox sedge	*Carex vulpinoidea*	-	OBL	Yes		✓	✓		✓	✓
Plant	ironwood	*Carpinus caroliniana*	-	FAC	Yes				✓	✓	
Plant	bitternut hickory	*Carya cordiformis*	-	FAC	Yes		✓			✓	
Plant	shagbark hickory	*Carya ovata*	-	FACU	Yes		✓	✓	✓	✓	
Plant	buttonbush	*Cephalanthus occidentalis*	-	OBL	Yes		✓				
Plant	white turtle head	*Chelone glabra*	-	OBL	Yes			✓		✓	
Plant	lamb's quarters	*Chenopodium album*	-	FACU	No					✓	
Plant	enchanter's nightshade	*Circaea canadensis*	-	FACU	Yes		✓	✓			
Plant	bull thistle	*Cirsium vulgare*	-	FACU	No		✓				

Plant	silky dogwood	*Cornus amomum*	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	gray dogwood	*Cornus racemosa*	-	FAC	Yes		✓	✓	✓		✓
Plant	red-osier dogwood	*Cornus sericea*	-	FACW	Yes						✓
Plant	hawthorn	*Crataegus sp.*	-	-	-		✓				✓
Plank	common yellow nut sedge	*Cyperus esculentus*	-	FACW	Yes			✓		✓	
Plant	false yellow nut sedge	*Cyperus strigosus*	-	FACW	Yes			✓		✓	
Plant	orchard grass	*Dactylis glomerata*	-	FACU	No	✓				✓	
Plant	wild carrot	*Daucus carota*	-	UPL	No		✓				
Plant	water willow	*Decodon verticillatus*	-	OBL	Yes			✓			✓
Plant	tufted hair grass	*Deschampsia cespitosa*	-	-	Yes					✓	
Plant	digit grass	*Digitaria eriantha*	-	-	No		✓				
Plant	smooth crab grass	*Digitaria ischaemum*	-	FACU	No			✓			
Plant	tall flat-topped white aster	*Doellingeria umbellata*	-	FACW	Yes					✓	
Plant	common wood fern	*Dryopteris intermedia*	-	FAC	Yes		✓				✓
Plant	autumn olive	*Elaeagnus umbellata*	-	-	No		✓				
Plant	blunt spike rush	*Eleocharis obtusa*	-	OBL	Yes		✓			✓	✓
Plant	fringed wilowherb	*Epilobium ciliatum*	-	FACW	Yes					✓	
Plant	purpleleaf willowherb	*Epilobium coloratum*	-	OBL	Yes		✓	✓		✓	
Plant	field horsetail	*Equisetum arvense*	-	FAC	Yes				✓	✓	✓
Plant	scouringrush horsetail	*Equisetum hyemale*	-	FAC	Yes	✓			✓		
Plant	annual daisy fleabane	*Erigeron annuus*	-	FACU	Yes			✓			
Plant	small daisy fleabane	*Erigeron strigosus*	-	FACU	Yes			✓			
Plant	yellow trout lily	*Erythronium americanum*	-	-	Yes		✓		✓		
Plant	boneset	*Eupatorium perfoliatum*	-	FACW	Yes			✓		✓	✓
Plant	common flat-topped goldenrod	*Euthamia graminifolia*	-	FAC	Yes					✓	
Plant	spotted Joe Pye weed	*Eutrochium maculatum*	-	OBL	Yes	✓					
Plant	American beech	*Fagus grandifolia*	-	FACU	Yes				✓	✓	
Plant	common wild strawberry	*Fragaria virginiana*	-	FACU	Yes		✓			✓	✓
Plant	glossy buckthorn	*Frangula alnus*	-	FAC	No		✓				
Plant	white ash	*Fraxinus americana*	-	FACU	Yes		✓				✓
Plant	green ash	*Fraxinus pennsylvanica*	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	hedge bedstraw	*Galium album*	-	FACU	Yes	✓		✓		✓	
Plant	common marsh bedstraw	*Galium palustre*	-	OBL	Yes		✓			✓	
Plant	yellow avens	*Geum aleppicum*	-	FAC	Yes		✓	✓			
Plant	white avens	*Geum canadense*	-	FAC	Yes			✓			✓
Plant	town avens	*Geum urbanum*	-	-	No		✓	✓			
Plant	American manna grass	*Glyceria maxima*	-	OBL	No			✓		✓	
Plant	fowl manna grass	*Glyceria striata*	-	OBL	Yes		✓	✓		✓	
Plant	soybean	*Glycine max*	-	-	-	✓	✓	✓	✓	✓	✓
Plant	marsh cubweed	*Gnaphalium uliginosum*	-	FAC	No			✓			
Plant	dame's rocket	*Hesperis matronalis*	-	FACU	No	✓					
Plant	common frogbit	*Hydrocharis morsus-ranae*	-	OBL	No			✓			
Plant	Eurasian live forever	*Hylotelephium telephium*	-	-	No				✓		
Plant	St. John's wort	*Hypericum sp.*	-	-	-						✓
Plant	spotted jewelweed	*Impatiens capensis*	-	FACW	Yes	✓	✓	✓		✓	
Plant	blue flag	*Iris versicolor*	-	OBL	Yes		✓				
Plant	soft rush	*Juncus effusus*	-	OBL	Yes	✓	✓	✓	✓	✓	✓
Plant	path rush	*Juncus tenuis*	-	FAC	Yes			✓			✓
Plant	rice cut grass	Leersia oryzoides	-	OBL	Yes					✓	✓
Plant	spicebush	*Lindera benzoin*	-	FACW	Yes		✓	✓			
Plant	tulip poplar	*Liriodendron tulipifera*	-	FACU	Yes	✓				✓	
Plant	Indian tobacco	*Lobelia inflata*	-	FACU	Yes			✓			
Plant	great blue lobelia	*Lobelia siphilitica*	-	FACW	Yes						✓
Plant	tall rye grass	*Lolium arundinace*	-	FACU	No			✓			
Plant	Japanese honeysuckle	*Lonicera japonica*	-	FACU	No		✓				
Plant	honeysuckle	*Lonicera spp.*	-	-	No	✓	✓	✓	✓	✓	✓
Plant	Tatarian honeysuckle	*Lonicera tatarica*	-	FACU	No		✓	✓			✓
Plant	water purslane	*Ludwigia palustris*	-	OBL	Yes	✓		✓		✓	
Plant	water whorehound	*Lycopus americanus*	-	OBL	Yes			✓		✓	
Plant	moneywort	*Lysimachia nummularia*	-	FACW	No	✓	✓		✓	✓	
Plant	purple loosestrife	*Lythrum salicaria*	-	OBL	No	✓	✓	✓	✓	✓	
Plant	Canada mayflower	*Maianthemum canadense*	-	FACU	Yes				✓		
Plant	ostrich fern	*Matteuccia struthiopteris*	-	FAC	Yes			✓			
Plant	white sweet clover	*Melilotus albus*	-	FACU	No						✓
Plant	Allegheny monkey flower	*Mimulus ringens*	-	OBL	Yes					✓	
Plant	blackgum	*Nyssa sylvatica*	-	FAC	Yes			✓			
Plant	sensitive fern	*Onoclea sensibilis*	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	royal fern	*Osmunda regalis*	-	OBL	Yes			✓			
Plant	cinnamon fern	*Osmundastrum cinnamome*	-	FACW	Yes			✓			
Plant	yellow wood sorrel	*Oxalis dillenii*	-	FACU	Yes		✓			✓	
Plant	fall panic grass	*Panicum dichotomiflorum*	-	FACW	Yes						✓
Plant	Virginia creeper	*Parthenocissus quinquefolia*	-	FACU	Yes		✓	✓			
Plant	green arrow arum	*Peltandra virginica*	-	OBL	Yes		✓				
Plant	water pepper	*persicaria hydropiper*	-	OBL	No					✓	

Plant	lady's thumb	*Persicaria maculosa*	-	FAC	No			✓			
Plant	arrow-leaved tearthumb	*Persicaria sagittata*	-	OBL	Yes			✓			
Plant	jumpseed	*Persicaria virginiana*	-	FAC	Yes		✓	✓		✓	
Plant	reed canary grass	*Phalaris arundinacea*	-	FACW	No	✓	✓	✓	✓	✓	✓
Plant	common Timothy	*Phleum pratense*	-	FACU	No		✓			✓	
Plant	common reed	*Phragmites australis*	-	FACW	No	✓	✓	✓			
Plant	pokeweed	*Phytolacca americana*	-	FACU	Yes			✓			
Plant	Norway spruce	*Picea abies*	-	-	No		✓	✓	✓		
Plant	red spruce	*Picea rubens*	-	FACU	Yes		✓				
Plant	white pine	*Pinus strobus*	-	FACU	Yes		✓		✓		
Plant	English plantain	*Plantago lanceolata*	-	FACU	No	✓	✓		✓	✓	
Plant	common plantain	*Plantago major*	-	FACU	No	✓			✓	✓	✓
Plant	northern tubercled orchid	*Platanthera flava*	-	FACW	Yes			✓			
Plant	annual blue grass	*Poa annua*	-	FACU	No				✓		
Plant	wood bluegrass	*Poa nemoralias*	-	FACU	No			✓			
Plant	common Kentucky blue grass	*Poa pratensis*	-	FACU	No		✓			✓	✓
Plant	mayapple	*Podophyllum peltatum*	-	FACU	Yes			✓	✓		
Plant	eastern cottonwood	*Populus deltoides*	-	FAC	Yes		✓		✓		
Plant	quaking aspen	*Populus tremuloides*	-	FACU	Yes	✓	✓	✓	✓	✓	✓
Plant	oldfield cinquefoil	*Potentilla simplex*	-	FACU	Yes		✓				
Plant	Eurasian selfheal	*prunella vulgaris*	-	FAC	No					✓	
Plant	pin cherry	*Prunus pensylvanica*	-	FACU	Yes		✓				
Plant	black cherry	*Prunus serotina*	-	FACU	Yes		✓	✓	✓	✓	
Plant	bracken fern	*Pteridium aquilinum*	-	FACU	Yes			✓			
Plant	white oak	*Quercus alba*	-	FACU	Yes		✓				
Plant	red oak	*Quercus rubra*	-	FACU	Yes		✓	✓			
Plant	tall buttercup	*Ranunculus acris*	-	FAC	No	✓	✓			✓	
Plant	creeping buttercup	*Ranunculus repens*	-	FAC	No					✓	
Plant	cursed crowfoot	*Ranunculus sceleratus*	-	OBL	Yes	✓			✓		
Plant	Japanese knotweed	*Reynoutria japonica*	-	FACU	No				✓		
Plant	alder buckthorn	*Rhamnus alnifolia*	-	OBL	Yes		✓				
Plant	buckthorn	*Rhamnus cathartica*	-	FAC	No		✓	✓		✓	✓
Plant	staghorn sumac	*Rhus typhina*	-	-	Yes		✓				
Plant	multiflora rose	*Rosa multiflora*	-	FACU	No	✓	✓	✓	✓	✓	✓
Plant	swamp rose	*Rosa palustris*	-	OBL	Yes				✓		✓
Plant	common blackberry	*Rubus allegheniensis*	-	FACU	Yes		✓	✓			
Plant	swamp dewberry	*Rubus hispidus*	-	FACW	Yes			✓			
Plant	red raspberry	*Rubus ideaus*	-	FACU	No		✓	✓			
Plant	dwarf raspberry	*Rubus pubescens*	-	FACW	Yes			✓			
Plant	sheep sorrel	*Rumex acetosella*	-	FACU	No			✓			
Plant	curly dock	*Rumex crispus*	-	FAC	No	✓	✓	✓		✓	✓
Plant	broad-leaved dock	*Rumex obtusifolius*	-	FAC	No		✓			✓	
Plant	swamp dock	*Rumex verticillatus*	-	OBL	Yes			✓			
Plant	Bebb's willow	*Salix bebbiana*	-	FACW	Yes			✓			
Plant	pussy willow	*Salix discolor*	-	FACW	Yes		✓	✓	✓		
Plant	black willlow	*Salix nigra*	-	OBL	Yes		✓				
Plant	basket willow	*Salix purpurea*	-	FACW	No			✓			
Plant	common elderberry	*Sambucus nigra*	-	FACW	Yes				✓		
Plant	lizard's tail	*Saururus cernuus*	-	OBL	Yes		✓				
Plant	soft-stemmed bulrush	*Schoenoplectus tabernaemc*	-	OBL	Yes			✓			
Plant	dark-green bulrush	*Scirpus atrovirens*	-	OBL	Yes		✓	✓			
Plant	woolgrass	*Scirpus cyperinus*	-	OBL	Yes		✓		✓	✓	✓
Plant	mad dog skullcap	*Scutellaria lateriflora*	-	OBL	Yes			✓			
Plant	horse nettle	*Solanum carolinense*	-	FACU	Yes					✓	
Plant	bitter-sweet nightshade	*Solanum dulcamara*	-	FAC	No		✓	✓			
Plant	tall goldenrod	*Solidago altissima*	-	FACU	Yes		✓				✓
Plant	Canada goldenrod	*Solidago canadensis*	-	FACU	Yes	✓		✓		✓	
Plant	swamp goldenrod	*Solidago gigantea*	-	FACW	Yes		✓			✓	✓
Plant	common wrinkle-leaved goldenr	*Solidago rugosa*	-	FAC	Yes	✓	✓	✓		✓	✓
Plant	spiny-leaved sow thistle	*Sonchus asper*	-	FACU	No			✓	✓		
Plant	green-fruited bur-reed	*Sparganium chlorocarpum*	-	OBL	Yes			✓			
Plant	grass-leaved stitchwort	*Stellaria graminea*	-	UPL	No					✓	
Plant	white panicle aster	*Symphyotrichum lanceolatu*	-	FACW	Yes			✓		✓	✓
Plant	calico aster	*Symphyotrichum laterifloru*	-	FAC	Yes		✓			✓	
Plant	new england aster	*Symphyotrichum novae-angl*	-	FACW	Yes						✓
Plant	purple-stemmed aster	*Symphyotrichum puniceum*	-	OBL	Yes	✓		✓		✓	✓
Plant	skunk cabbage	*Symplocarpus foetidus*	-	OBL	Yes				✓		
Plant	common dandelion	*Taraxacum officinale*	-	FACU	No	✓	✓	✓	✓	✓	✓
Plant	marsh fern	*Thelypteris palustris*	-	FACW	Yes		✓				
Plant	American basswood	*Tilia americana*	-	FACU	Yes			✓			
Plant	poison ivy	*Toxicodendron radicans*	-	FAC	Yes	✓	✓	✓	✓	✓	✓
Plant	red clover	*Trifolium pratense*	-	FACU	No	✓			✓	✓	✓
Plant	white clover	*Trifolium repens*	-	FACU	No	✓	✓			✓	✓
Plant	red trillium	*Trillium erectum*	-	FACU	Yes				✓		

Plant	white trillium	*Trillium grandiflorum*	-	-	Yes				✓		
Plant	eastern hemlock	*Tsuga canadensis*	-	FACU	Yes				✓	✓	
Plant	tower mustard	*Turritis glabra*	-	UPL	No			✓			
Plant	coltsfoot	*Tussilago farfara*	-	FACU	No		✓				
Plant	narrowleaf cattail	*Typha angustifolia*	-	OBL	No			✓			✓
Plant	hybrid cattail	*Typha glauca*	-	OBL	No	✓	✓	✓			
Plant	wide-leaved cattail	*Typha latifolia*	-	OBL	Yes		✓	✓			
Plant	cattail	*Typha sp.*	-	OBL	-	✓	✓	✓	✓	✓	✓
Plant	American elm	*Ulmus americana*	-	FACW	Yes		✓	✓	✓		✓
Plant	false hellebore	*Veratrum viride*	-	FACW	Yes				✓		
Plant	moth mullein	*Verbascum blattaria*	-	FACU	No			✓			
Plant	blue vervain	*Verbena hastata*	-	FACW	Yes	✓	✓			✓	
Plant	smooth arrowwood	*Viburnum dentatum*	-	FAC	Yes	✓	✓	✓		✓	✓
Plant	nannyberry	*Viburnum lentago*	-	FAC	Yes		✓	✓		✓	✓
Plant	tufted vetch	*Vicia cracca*	-	-	No			✓			✓
Plant	common blue violet	*Viola sororia*	-	FAC	Yes		✓				
Plant	riverbank grape	*Vitis riparia*	-	FAC	Yes		✓	✓			✓
Reptile	painted turtle	*Chrysemys picta*	S5 G5: secure in NYS and globally	-	Yes		✓				
Reptile	eastern garter snake	*Thamnophis sirtalis sirtalis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓		✓	

United States Department of the Interior

FISH AND WILDLIFE SERVICE
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In Reply Refer To: 04/11/2025 15:39:33 UTC
Project code: 2025-0082147
Project Name: Micron Stream and Wetland Mitigation

Federal Nexus: yes
Federal Action Agency (if applicable): Army Corps of Engineers

Subject: Technical assistance for 'Micron Stream and Wetland Mitigation'

Dear Kirsten Gerhardt:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on April 11, 2025, for “Micron Stream and Wetland Mitigation” (here forward, Project). This project has been assigned Project Code 2025-0082147 and all future correspondence should clearly reference this number.

The Service developed the IPaC system and associated species’ determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northeast Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative effect(s)), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17). Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no further consultation with, or concurrence from, the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical

habitat, formal consultation is required (except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect (NLAA)" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13]).

The IPaC results indicated the following species is (are) potentially present in your project area and, based on your responses to the Service's Northeast DKey, you determined the proposed Project will have the following effect determinations:

Species	**Listing Status**	**Determination**
Indiana Bat (*Myotis sodalis*)	Endangered	May affect

Consultation with the Service is not complete. Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of "May Affect". Please contact our New York Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Bog Buck Moth *Hemileuca maia menyanthevora (=H. iroquois)* Endangered
- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference the Project Code associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Micron Stream and Wetland Mitigation

2. Description

The following description was provided for the project 'Micron Stream and Wetland Mitigation':

> This is a stream and wetland mitigation project in which restoration will occur across six sites. On average, one site will be constructed per year, making the construction period a total of six years approximately. All six sites are located in Hastings or Schroeppel in Oswego County, NY. Two of the sites will undergo stream restoration, one for a degraded portion of Buxton Creek, the other for a degraded portion of Fish Creek. Here, the stream restoration will be integrated with wetland restoration to create a functioning stream/wetland complex. The remaining four sites will be for wetland restoration only.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.29530445,-76.2730783955508,14z

QUALIFICATION INTERVIEW

1. As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?

   Yes
2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

   Note: This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

   No
3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes
4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project?

   No
5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

   Note: If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

   Yes
6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

   No
7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

   No
8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No
9. Is the lead federal action agency the Natural Resources Conservation Service?

   No
10. Will the proposed project involve the use of herbicide where listed species are present?

    Yes

11. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

    No

12. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

    Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

13. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

    Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

    No

14. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

    For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

    No

15. Will the proposed project affect wetlands where listed species are present?

    This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

    Yes

16. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

    Yes

17. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?

    Yes

18. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

    No

19. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

    No

20. Will the proposed project involve the removal of excess sediment or debris, dredging or in-stream gravel mining where listed species may be present?

    No

21. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

    Note New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

    No

22. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

    No

23. Will the proposed project involve blasting where listed species may be present?

    No

24. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

    No

25. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

    Note: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream.

    Yes

26. Will the proposed project impact streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography?

    Yes

27. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

    No

28. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

    Yes

29. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

    No

30. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?

    Automatically answered
    No

31. [Semantic] Does the project intersect the Indiana bat AOI?

    Automatically answered
    Yes

32. Is the action area within 0.5 mile radius of any known hibernacula (caves or mines) openings or underground features?
    Note: If you are unsure, contact the appropriate Ecological Services Field Office before continuing through the key.

    No

33. Are trees present within the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter), answer "Yes". If you are unsure, answer “Yes.” Or refer to Appendix A of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for definitions and an assessment form that will assist you in determining if suitable habitat is present within your project's action area. Suitable summer habitat for Indiana bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat

    Yes

34. Is the action area within known occupied Indiana bat habitat? Known occupied Indiana bat habitat includes established conservation buffers (10-mile buffer around Phase 1 or Phase 2 hibernacula, 5-mile buffer around Phase 3 or Phase 4 hibernacula; 5-mile buffer around Indiana bat captures or detections; 2.5-mile buffer around known roosts).

    Yes

35. [Semantic] Does the project intersect the Indiana bat critical habitat?

    Automatically answered
    No

36. [Semantic] Does the project intersect the candy darter critical habitat?

    Automatically answered
    No

37. [Semantic] Does the project intersect the diamond darter critical habitat?

    Automatically answered
    No

38. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?

    Automatically answered
    No

39. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

    Automatically answered
    No

40. Do you have any other documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

1. Approximately how many acres of trees would the proposed project remove?

   .1

2. Approximately how many total acres of disturbance are within the disturbance/construction limits of the proposed project?

   500

3. Briefly describe the habitat within the construction/disturbance limits of the project site.

   Active soybean fields and man-made agricultural drainages. Some existing wetlands of degraded quality that will ultimately be rehabilitated.

IPAC USER CONTACT INFORMATION

Agency:	The Wetland Trust, Inc.
Name:	Kirsten Gerhardt
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Email	kirsten.gerhardt@gmail.com
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LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To: 04/11/2025 15:07:39 UTC
Project Code: 2025-0082147
Project Name: Micron Stream and Wetland Mitigation

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

PROJECT SUMMARY

Project Code:	2025-0082147
Project Name:	Micron Stream and Wetland Mitigation
Project Type:	Restoration / Enhancement - Wetland
Project Description:	This is a stream and wetland mitigation project in which restoration will occur across six sites. On average, one site will be constructed per year, making the construction period a total of six years approximately. All six sites are located in Hastings or Schroeppel in Oswego County, NY. Two of the sites will undergo stream restoration, one for a degraded portion of Buxton Creek, the other for a degraded portion of Fish Creek. Here, the stream restoration will be integrated with wetland restoration to create a functioning stream/wetland complex. The remaining four sites will be for wetland restoration only.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.29530445,-76.2730783955508,14z

Counties: Oswego County, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Bog Buck Moth *Hemileuca maia menyanthevora (=H. iroquois)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8023	Endangered
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: The Wetland Trust, Inc.
Name: Kirsten Gerhardt
Address: 4729 State Route 414
City: Burdett
State: NY
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Appendix E.

Lower Caughdenoy Creek
Invasive Species Management Plan (ISMP)

Oswego County, New York

PREPARED BY:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
www.thewetlandtrust.org

May 2025

1. Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Mitigation (PRM) package on behalf of Micron NY Semiconductor Manufacturing, LLC, is proposing to develop stream and wetland mitigation acres/credits at their Lower Caughdenoy Creek Site in the Town of Hastings, Oswego County, New York. The Mitigation Plan (Plan) at Lower Caughdenoy Creek will contribute toward the fulfillment of required wetland mitigation for impacts associated with the Micron Semiconductor Fabrication Campus project (Proposed Development) in the town of Clay, Onondaga County, New York. This Plan will incorporate wetland Re-establishment, Rehabilitation, Enhancement, and Preservation which involves disturbance to soil during grading activities. As part of the Performance Standards for this Mitigation Plan, invasive species-specific standards must be met. The following is the Invasive Species Management Plan (ISMP) for this Site. It contains the practices and procedures TWT proposes to implement to control the presence and spread of invasive species.

This ISMP will improve ecological outcomes by using a combination of mechanical, biological, cultural, and chemical controls to manage invasive species while minimizing environmental disturbance. By prioritizing early detection, habitat restoration, and targeted interventions, this ISMP is designed to reduce reliance on herbicides, lower the risk of non-target impacts, and promote the long-term success of native vegetation. This adaptive approach enhances wetland resilience, supports biodiversity, and ensures compliance with mitigation performance standards in a sustainable and cost-effective manner.

1.1 Purpose and Goal

- **Adaptive Management Framework:** This plan operates under an adaptive management strategy, ensuring that invasive species control efforts are adjusted based on monitoring results, site conditions, and evolving regulatory guidance. Preventing the establishment or spread of invasive species at this Site relies upon:
  - Thorough baseline information data collection,
  - Avoiding and/or treating existing invasive species populations,
  - Incorporating construction techniques into the Plan that minimize conditions that are favorable for invasive species colonization, and
  - Implementing thorough monitoring and maintenance practices throughout the life of the Project and beyond.
- **Long-Term Ecological Success:** The presence of invasive plant species can degrade wetland function by outcompeting native vegetation, altering soil and water chemistry, and reducing habitat quality for wildlife. This ISMP aims to restore and sustain native plant communities using minimal environmental disturbance construction techniques per the Mitigation Plan.
- The goal of this ISMP is to minimize presence and prevent expansion of invasive species within the Mitigation Site not only during the monitoring period, but in perpetuity, as TWT is the long-term owner and steward. Invasive species control will be considered successful only if invasive species are kept at or below the threshold outlined in Section 6 of the Mitigation Plan for the work areas and 0% net increase in invasive species found elsewhere at the Site is realized. Annual monitoring will help determine whether goals are being met. If it is determined the Site is not on track with its goals, TWT will submit

a revised Management Plan and implement Adaptive Management strategies that are approved by USACE and NYSDEC.

1.2 Regulatory Compliance

This ISMP seeks to meet specific performance standards set by the USACE and NYSDEC as a condition of permit approval. These include thresholds for native plant diversity, invasive species control, and hydrological function.

Invasive species targeted by this ISMP are based on those regulated by NYS Regulation 6 NYCRR Part 575 List of Prohibited and Regulated Invasive Plants, developed by the New York Invasive Species Council and New York Department of Environmental Conservation (NYSDEC) and any others identified by NYSDEC or USACE.

2. Identification

Five key invasive plant species regulated by NYCRR Part 575 were identified at the Site during baseline data collection. Key invasive plants include purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), cattail (*Typha* spp.), and glossy buckthorn (*Frangula alnus*). These species are highly competitive, forming dense monocultures that outcompete native vegetation, diminish biodiversity, and disrupt wetland functionality. These species are found in most wetland areas on-site and adjacent on wetlands, affecting over 13 acres at the Lower Caughdenoy Creek Site at the time of data collection. In addition to these dominant species, other invasive plants present in the area include smooth brome (*Bromus inermis*), bull thistle (*Cirsium vulgare*), autumn olive (*Elaeagnus umbellata*), honeysuckle (*Lonicera spp*.), creeping jenny (*Lysimachia nummularia*), common Timothy (*Phleum pratense*), common Kentucky bluegrass (*Poa pratensis*), buckthorn (*Rhamnus cathartica*), multiflora rose (*Rosa multiflora*), bittersweet nightshade (Solanum dulcamara).

These species, their common characteristics and their typical locations are provided in Table 2-1 below. Additional invasive plant species have the potential of occurring at the site, particularly in the post-construction and long-term monitoring phase of this plan. These additional species may require treatment if they meet action thresholds outlined in **Section 6-1**, in which case they will be included in future versions of this plan and treated.

Table 2-1. Invasive Species at the Lower Caughdenoy Creek Site 2024

Species	Common Characteristics	Photo ID	Typical Location
Glossy Buckthorn (Frangula alnus)	A deciduous shrub or small tree up to 20 feet tall with smooth gray-brown bark and glossy, oval leaves. It produces small greenish-yellow flowers and red to black berries. Leafing out early and holding foliage late into fall gives it a competitive edge. Spreads aggressively via seeds dispersed by birds and mammals.		Found along wetland edges, in damp forests, streambanks, ditches, and other moist, disturbed areas. It often forms dense thickets that crowd out native plants and slow forest regeneration.

Purple Loosestrife (Lythrum salicaria)	An erect, branching perennial native to Europe, Asia, and northern Africa, characterized by dense, woody rootstocks that can produce multiple stems, lance-shaped leaves arranged oppositely or alternately, and showy purple flowers with 5-7 petals clustered on tall spikes. This invasive species thrives in wetlands and moist soils, rapidly displacing native vegetation and disrupting local ecosystems.		Wetland habitats, including marshes, pond and lakeshores, stream and riverbanks, and ditches. Also spreads in upland soils, allowing it to spread into meadows and pastures.
Reed Canary Grass (Phalaris arundinacea)	A tall, perennial grass that grows 2 to 6 feet high, with rough, flat leaves and dense flower clusters that turn beige as they mature. It thrives in wetlands and spreads aggressively through seeds and rhizomes, forming dense stands that outcompete native vegetation.		Wet habitats such as wetlands, moist meadows, and riparian areas
Common Reed (Phragmites australis)	A perennial grass that can grow over 15 feet tall, forming dense stands with hollow stems and blue-green leaves up to 20 inches long. It spreads through seeds, rhizomes, and stolons, often outcompeting native vegetation in wetlands.		Tidal and non-tidal marshes, lakes, swales, and backwater areas of rivers, and streams
Cattail (Typha spp.)	Tall, perennial wetland plants characterized by their long, narrow, sword-like leaves and distinctive brown, cylindrical flower spikes. They thrive in shallow waters of marshes, ponds, and lakes, spreading through both wind-dispersed seeds and extensive rhizome networks, often forming dense stands that can outcompete other vegetation.		Wetland habitats, including marshes, river and stream banks, pond edges, lakes, ditches, and reservoirs

3. Pre-Construction Phase

3.1 Baseline Data Collection

Baseline data collection will identify existing invasive species communities within the mitigation site. This process will involve field surveys using GIS mapping, orthoimagery using drones, and photographic documentation to establish the extent and density of invasive species populations. Baseline surveys will include mapping of invasive species distribution with percentage cover estimates. The data collected will be used to inform the site preparation and treatment strategies outlined in later sections of this ISMP. See **Figures 8-1 through 8-5** in **Section 8** for baseline invasive species maps.

3.2 Site Preparation & Prevention Measures

Prior to construction, invasive species control measures will be implemented to prevent the spread and establishment of problematic species. These measures will include:

- **Pre-Treatment of Invasives**: Identified invasive species populations will be treated before ground disturbance begins. This may include manual removal, herbicide application, or smothering techniques depending on the species and infestation severity.
- **Equipment Cleaning Protocols:** Any construction equipment arriving on-site will be inspected and cleaned to remove soil, plant material, or seeds that may introduce invasive species.

4. Construction Phase

To minimize the introduction and spread of invasive species during construction activities, the following best practices will be implemented:

- **Minimize Disturbance**: Clearing and grading activities will be restricted to designated project areas, reducing soil disturbance that can facilitate invasive species establishment.
- **Erosion and Sediment Control**: Use of weed-free erosion control materials, such as straw mulch, biodegradable mats, and hydroseeding with native plant mixes, will prevent soil erosion while avoiding the introduction of invasive species.
- **Construction Site Hygiene**: All machinery and equipment will be cleaned before entering and leaving the site, particularly when working in or near known invasive species populations.
- **Hydrology Management**: The project aims to restore natural hydrological conditions where feasible, as proper hydrology can prevent the establishment of invasive wetland species.
- **Native Plant Seeding**: Following ground disturbance, native plants will be seeded and planted in treated areas to prevent re-colonization by invasive species.

5. Post-Construction Phase

5.1 Monitoring for Early Detection

To ensure invasive species control measures remain effective, post-construction monitoring will be conducted. Monitoring efforts will include:

- **GPS Mapping and Photo Documentation**: Recording any changes in invasive species distribution.
- **Upstream and Adjacent Area Inspections**: Identifying potential new sources of invasive species propagules.
- **Disturbance Event Tracking**: Observing site conditions after events like flooding or drought, which may encourage invasive species spread.

5.2 Long-Term Monitoring & Adaptive Management

- Yearly Assessments: Evaluate treatment effectiveness and native vegetation recovery.
- Implement additional treatment as needed.
- Adjust Control Strategies: Based on monitoring results, refine methods to reduce reliance on chemical treatments.

6. Treatment Thresholds and Control Strategies

6.1 Treatment Thresholds

Control measures will be implemented when specific action thresholds are met, ensuring timely intervention to prevent invasive species from undermining mitigation success. The following triggers initiate management actions:

1. **Invasive Species Coverage Threshold**
    - If invasive species exceed **10% of total vegetative relative cover** within mitigation areas, management efforts (e.g., mechanical, chemical, or biological control) are required.

Table 6-1. Invasive Species Coverage Targets	**Year 1**	**Year 3**	**Year 5**	**Year 7**	**Year 10**
Non-*Typha* Invasive Species (e.g., purple loosestrife, common reed, reed canarygrass)	≤ 15%	≤ 15%	≤ 12.5%	≤ 10%	< 5% cover
All Invasive Species including *Typha* spp.	≤ 20%	≤ 18.5%	≤ 15%	≤ 12.5%	< 10% cover

    - Annual monitoring data, including vegetation surveys and aerial imagery, will be used to determine exceedance.

2. **Failure to Meet Native Vegetation Performance Standards**
    - If native plant cover falls below required thresholds (typically **85% native cover** or a minimum diversity standard set in the mitigation permit), corrective action is necessary.
    - This includes replanting, selective herbicide application, or modifying site conditions to support native species.

3. **Encroachment of Invasives into Priority Habitat Areas**

  - If invasive species are detected in areas designated for high-value habitat (e.g., scrub-shrub wetlands, emergent wetlands, etc) treatment measures will be implemented to prevent establishment.

4. **New Invasive Species Detection**
   - Any newly introduced invasive species not previously recorded on-site will trigger an immediate assessment and control response to prevent spread.

5. **Regulatory Non-Compliance or Agency Notification**
   - If annual monitoring reports indicate performance standards are not being met or if USACE/NYSDEC identifies deficiencies, corrective action is required to maintain compliance.

By adhering to these action thresholds, this ISMP ensures that invasive species are proactively managed, wetland functions are maintained, and regulatory compliance is achieved.

6.2 Summary of Treatment Timing & Methods

A combination of mechanical, cultural, biological, and chemical control methods will be used depending on species, infestation size, and site conditions.

Table 6-2. Treatment Timing & Methods Summary Table

Species	Best Treatment Time	Mechanical	Chemical	Biological	Cultural
Phragmites	Late summer - fall	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	None approved for use in the US	Planting Natives for Competition
Reed Canary Grass	Spring & Fall	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	None available	Planting Natives for Competition, Prescribed burn
Cattails	Mid-late summer	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	Muskrat/waterfowl	Planting Natives for Competition
Purple Loosestrife	Mid-late summer	Mowing, cutting, hand-pulling	Spot glyphosate or equiv. (if needed)	Loosestrife beetles	Planting Natives for Competition
Glossy Buckthorn	Late summer - fall	Hand-pulling, cutting	Cut-stump or basal bark herbicide (if needed)	None available	Planting Natives for Competition

---

6.2.1 *Phragmites australis* (Common Reed)

Control Approach:

Best Time for Treatment: Late summer to early fall (when carbohydrates are translocating to rhizomes).

1. Mechanical Control:

  - Cutting & Flooding: Cutting stems at water level during late summer combined with water level manipulation can drown rhizomes.
  - Smothering: Small patches can be covered with black plastic or heavy mulch to prevent regrowth.
2. Chemical Control: *(Only if necessary, as a last resort in sensitive areas)*
  - Glyphosate-basedand/or Imazapyr-Based application (spot treatment):
    - Apply to standing Phragmites in late summer/early fall using backpack sprayers, drones or wicking methods to minimize non-target impacts.
  - Follow-up with mechanical removal of dead stalks in the winter.
3. Cultural & Biological Control:
  - Promote competition by seeding native sedges, rushes, and forbs.
  - Biological control species may be utilized for targeted control.

6.2.2 *Phalaris arundinacea* (Reed Canary Grass)

Control Approach:

Best Time for Treatment: Early spring (before seed set) and late fall (targeting rhizomes).

1. Mechanical Control:
  - Mowing in early spring and late summer to deplete energy reserves.
  - Hand-pulling small infestations before seed set.
  - Covering with tarps or thick mulch to shade out new shoots.
2. Chemical Control: *(Selective use in dense monocultures if needed)*
  - Glyphosate application in fall when nutrients are moving into rhizomes.
  - Use wiping techniques instead of spraying to reduce non-target impact.
3. Cultural & Biological Control:
  - Planting native sedges & rushes to outcompete Phalaris.
  - Prescribed fire in late spring can reduce seed production.

6.2.3 *Typha spp.* (Cattails)

Control Approach:

Best Time for Treatment: Mid-to-late summer when plants are transporting nutrients downward.

1. Mechanical Control:
    - Cut stems below water level to drown rhizomes.
    - Excavation in high-density areas, followed by native planting.
2. Chemical Control: *(For monocultures in restoration sites if needed)*
    - Glyphosate-based pesticide applied to standing plants in late summer.
    - Follow-up by removing dead biomass to prevent thick mats from suppressing native growth.
3. Cultural & Biological Control:
    - Encourage muskrat or waterfowl activity in natural systems to suppress regrowth.

6.2.4 *Lythrum salicaria* (Purple Loosestrife)

Control Approach:

Best Time for Treatment: Mid-to-late summer before seed dispersal.

1. Mechanical Control:
    - Hand-pull small infestations, removing all roots.
    - Cut flower heads before seed drop to prevent spread.
2. Biological Control (Preferred Method):
    - Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
    - Releases should be monitored over multiple years to assess impact.
3. Chemical Control: *(For large stands if necessary)*
    - Spot treat with glyphosate-based pesticide in late summer.
    - Follow-up by seeding native competitors.

6.2.5 *Frangula alnus (Glossy Buckthorn)*

Control Approach:

Best Time for Treatment: Late summer to fall when nutrients are translocating to roots.

1. Mechanical Control:
    - Hand-pulling for small plants, ensuring complete root removal to prevent resprouting.

   - Cut-stump method for larger shrubs with follow-up treatments to prevent regrowth.

2. Chemical Control: *(For dense infestations if needed)*
   - Cut-stump herbicide application: Apply glyphosate (20-25%) or triclopyr (15-20%) directly to the freshly cut stump in late summer or fall.
   - Basal bark treatment: Use triclopyr ester in oil applied to the lower 12-18 inches of the bark for trees under 6 inches in diameter.
3. Cultural & Biological Control:

Shading out seedlings by planting native trees and shrubs to reduce light availability

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6.3 Pesticide Selection and Application Guidelines

When chemical control is necessary, pesticides will be carefully selected to minimize environmental impact while effectively managing invasive species. The selection and application methods will be determined based on site-specific conditions, regulatory requirements, and best management practices to ensure effective control while reducing unintended ecological impacts.

- **Target-Specific Formulations:** Only herbicides approved for use in wetland environments will be used, with preference given to herbicides that have minimal impact on non-target species.
- **Reduced Persistence and Toxicity:** Herbicides with low residual activity and rapid breakdown in soil and water will be favored to prevent long-term contamination.
- **Application Methods Based on Site Conditions:** Techniques such as cut-stump treatments, wick application, and spot spraying will be prioritized over broadcast spraying, depending on the infestation size, proximity to sensitive habitats, and hydrological conditions.

All pesticides will be applied **in accordance with the label and all applicable federal, state, and local regulations** to ensure compliance and environmental protection.

All pesticide applications will be conducted by New York State Certified Pesticide Applicators or individuals working under the direct supervision of a certified applicator, in compliance with New York Environmental Conservation Law (ECL) Article 33 and 6 NYCRR Part 325. This ensures that all chemical treatments are applied safely, legally, and in accordance with state regulations governing pesticide use in wetland environments.

7.0 Reporting

The Wetland Trust, Inc. will provide an annual wetland restoration monitoring report which details the status of invasive plant species and all control measures. This report will be submitted by December 31st each year to USACE and NYSDEC.

8. Maps and Figures

Figure 8-1. Baseline Purple Loosestrife Percent Cover (2024)

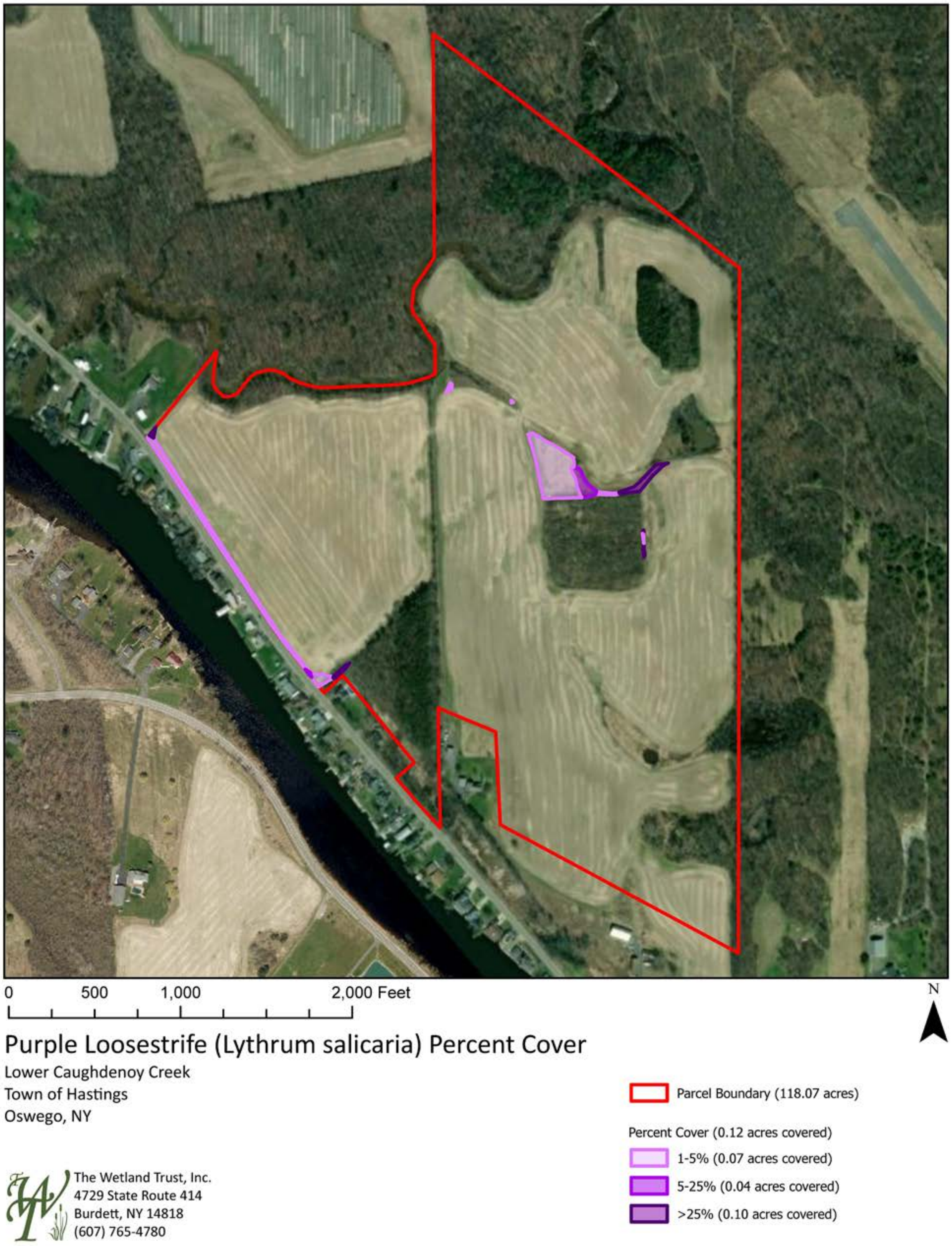

Figure 8-2. Baseline Reed Canary Grass Percent Cover (2024)

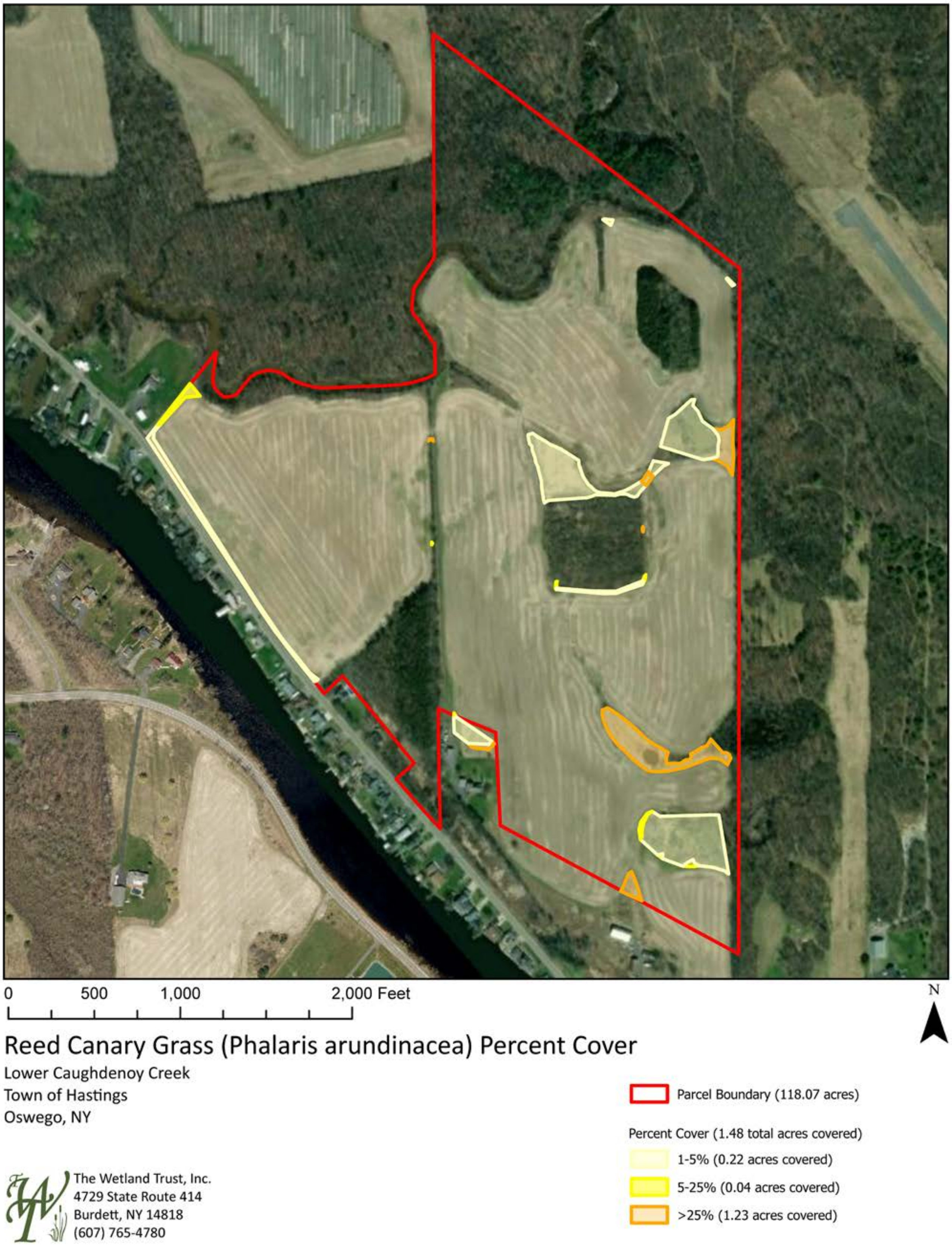

Figure 8-3. Baseline Phragmites Percent Cover (2024)

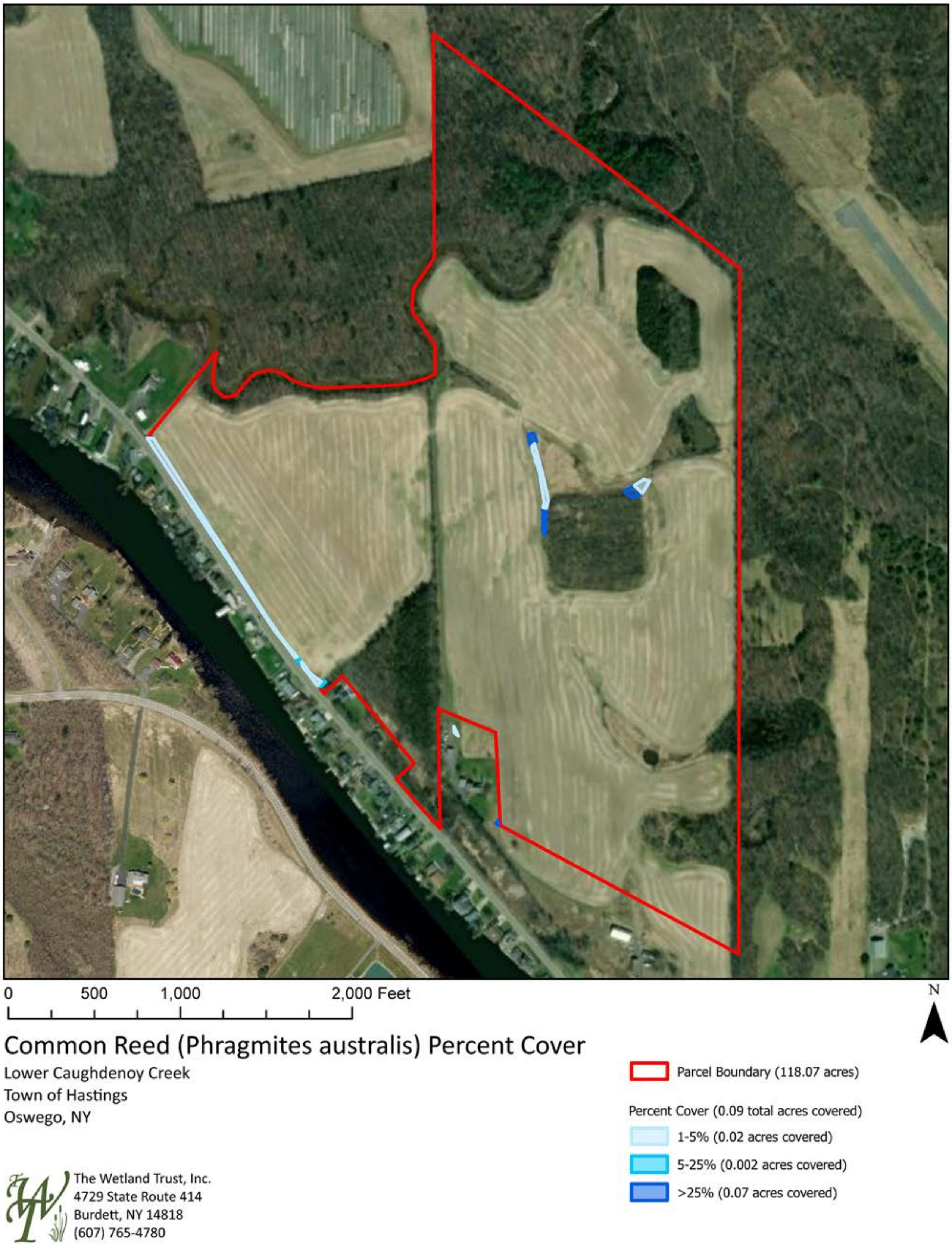

Figure 8-4. Baseline Cattail Percent Cover (2024)

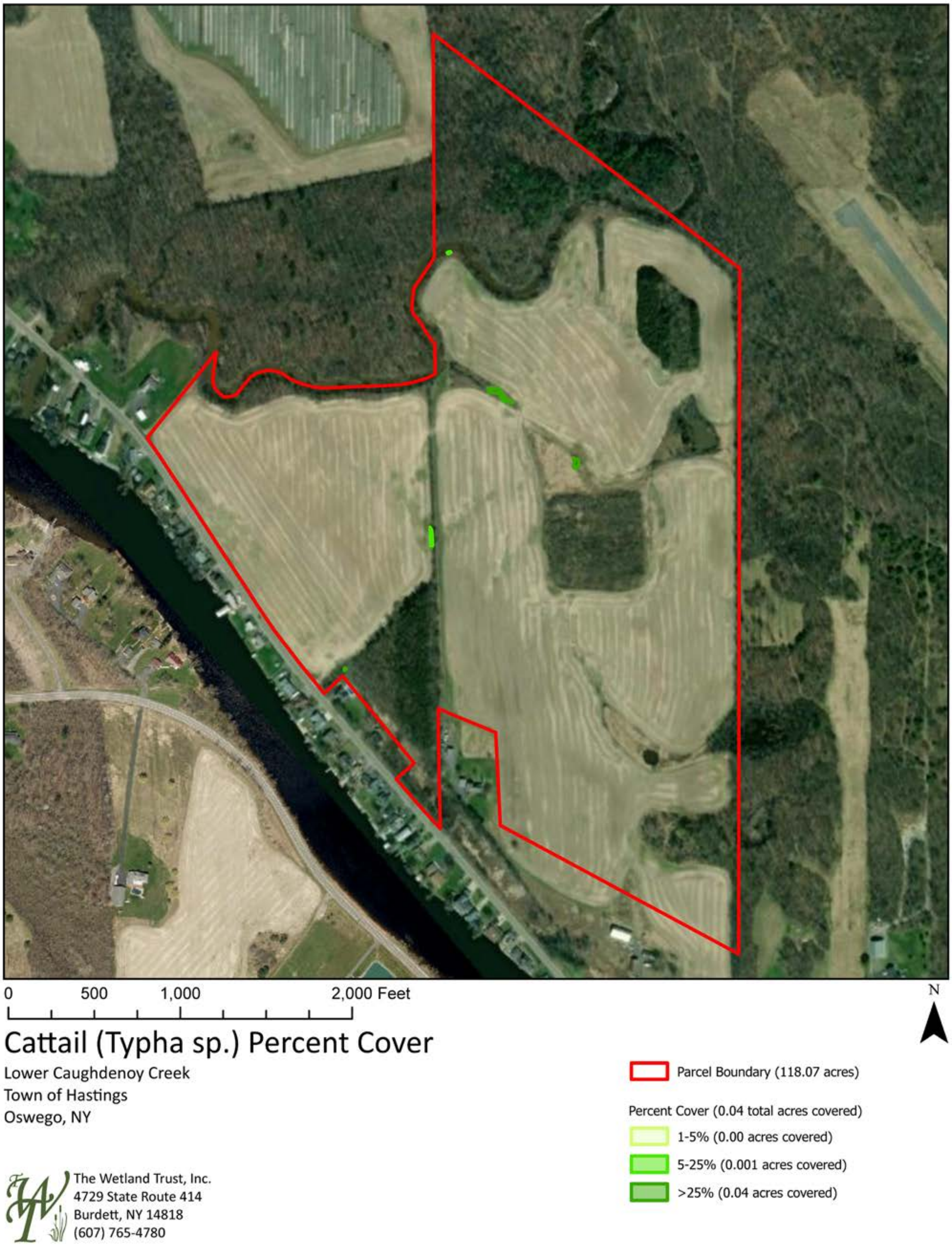

Figure 8-4 Baseline Glossy Buckthorn Percent Cover (2024)

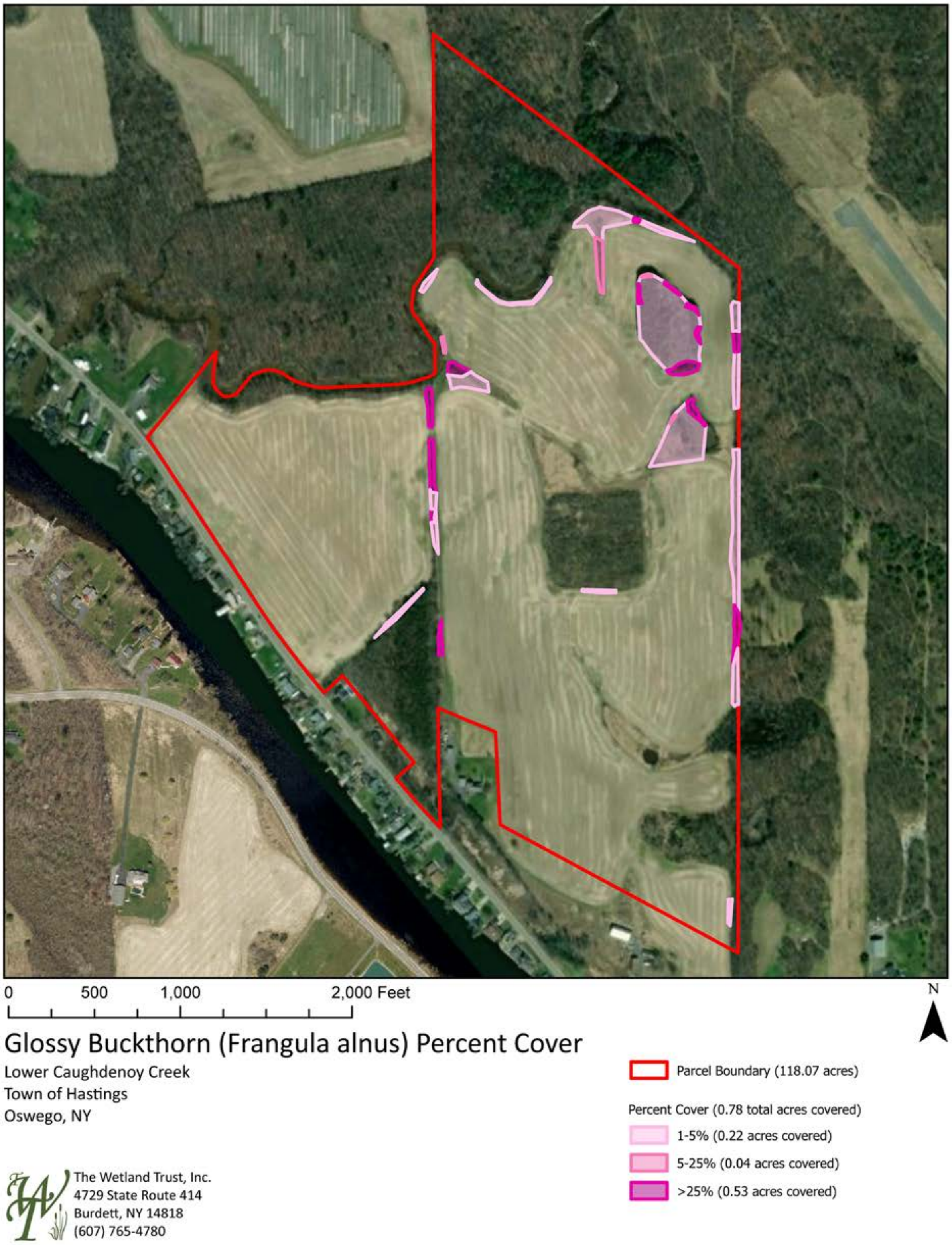

Table 8-1: Invasive Species at Lower Caughdenoy Creek

Invasive Species	**1-5% Cover (Affected**	**5-25% Cover (Affected**	**>25% Cover (Affected**	**Total Area (Affected**
Glossy Buckthorn (*Frangula alnus*)	4.29	0.17	0.73	5.19
Common Reed (*Phragmites australis*)	0.48	0.02	0.10	0.60
Reed Canary Grass (*Phalaris arundinacea*)	4.37	0.17	1.46	6.00
Purple Loosestrife (*Lythrum salicaria*)	1.32	0.15	0.15	1.62
Cattail (Typha sp.)	0.00	0.01	0.06	0.07

Appendix F.

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner *Pro Tempore*

ARCHAEOLOGY COMMENTS

Phase IA/IB Archaeological Survey Recommendation
Project: Caughdenoy Creek Wetland Restoration
PR#: 24PR07317
Date: 08/14/2024

The project is in an archaeologically sensitive area. Therefore, the State Historic Preservation Office/Office of Parks, Recreation and Historic Preservation (SHPO/OPRHP) recommends a Phase IA/IB archaeological survey for components of the project that will involve ground disturbance, unless substantial prior ground disturbance can be documented. A Phase IA/IB survey is designed to determine the presence or absence of archaeological sites or other cultural resources in the project's Area of Potential Effects (APE).

If you consider the entire project area to be disturbed, documentation of the disturbance will need to be reviewed by SHPO/OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition. Documentation of ground disturbance typically consists of soil bore logs, photos, or previous project plans. Agricultural activity is not considered to be substantial ground disturbance.

Please note that in areas with alluvial soils or fill archaeological deposits may exist below the depth of superficial disturbances such as pavement or even deeper disturbances, depending on the thickness of the alluvium or fill. Evaluation of the possible impact of prior disturbance on archaeological sites must consider the depth of potentially culture-bearing deposits and the depth of planned disturbance by the proposed project.

Our office does not conduct archaeological surveys. A 36 CFR 61 qualified archaeologist should be retained to conduct the Phase IA/IB survey.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before archaeological fieldwork is conducted on State-owned land. If any portion of the project includes the lands of New York State, you should contact the SED before initiating survey activities. The SED contact is Christina Rieth and she can be reached at (518) 402-5975 or christina.rieth@nysed.gov. Section 233 permits are not required for projects on private land.

If you have any questions concerning archaeology, please contact Bradley Russell at Bradley.Russell@parks.ny.gov

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor
RANDY SIMONS
Commissioner Pro Tempore

April 24, 2025

Margaret Crawford
U.S. Army Corps of Engineers, Buffalo District, Auburn Field Office
7413 County House Road
Auburn, NY 13021

Re: USACE
Proposed Wetland and Stream Mitigation for the Proposed Micron Semiconductor Fabrication Facility; Department of Army No. LRB-2000-02198
NY
25PR01429

Dear Margaret Crawford:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the provided documentation in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project.

The SHPO has reviewed the *Phase IA Archaeological Survey and Phase IB Work Plan Lower Caughdenoy Creek, Oneida River, and Sixmile Creek Wetland Restoration Project Town of Hastings, Oswego County, New York* prepared by EDR (April 2025; 25SR00145). The SHPO supports the Phase IB testing strategy outlined in the Work Plan.

We understand that the Phase IB archaeological survey will be conducted in coordination with an Onondaga Nation monitor, and if the Oneida Indian Nation or other Indigenous Nations request to have an on-site monitor present during the archaeological testing, such requests will be accommodated.

If you have any questions, I can be reached at Jessica.Schreyer@parks.ny.gov.

Sincerely,

Jessica E. Schreyer

Jessica Schreyer
Archaeology Unit Program Coordinator

Appendix G.

Wetland Design Form

Site Name: Meyers 1	Date: 06-25-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dylan Johnson-Jordan (The Wetland Trust), Kendall Hastings (The Wetland

Objectives: Build a naturally appearing and functioning Forested Wetland for mitigation.	Site Description: An agricultural field planted to soybeans.

Evidence of historic drainage or filling: Ditches are located along the side of County Route 37 and the south edge of the property. It is very possible that buried drainage structures are present.

Plant species: Soybeans	How the planned wetland is marked on the ground: Orange wire
Invasive species: Chufa	Groundwater elevation in test hole? 20-inches (the test hole was left open overnight)
Hydric soil present near the surface? No	Elevation-change from upper to lower edge of designed wetland: 1.7-feet

Test Hole location: 43.265022°N 76.190454°W
Soil texture: 0-7-inches = topsoil, 7-126-inches = clay. Loose layers of clay are transporting water below the surface.

Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

Head-cuts located uphill or downhill of the planned wetland. A head-cut located along Youngs Creek will be controlled as part of this project.

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Avoid building a dam or raising elevations that could flood the neighbor's home or County Route 37. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Be careful not to block the ditch along County Route 37, or the culvert under County Route 37. Level the surface of the ground, add scrapes, pits and mounds (10-foot spacing). Spread the soil that is removed in buffers where possible and away from Highway 37 to make natural ridges in the field higher. Leave gaps between areas of spread soil so water will drain and not back up onto neighbors' land. Plant native trees on the mounds and higher ground.

Meyers 1 Overview

Meyers 1 Ground cover

Wetland Design Form

Site Name: Meyers 2

Date: 06-25-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dylan Johnson-Jordan (The Wetland Trust), Kendall Hastings (The Wetland

Objectives: Build a naturally appearing and functioning Forested Wetland for mitigation.

Site Description: An agricultural field planted to soybeans.

Evidence of historic drainage or filling: Ditches are located along the side of County Route 37 and the south edge of the property. It is very possible that buried drainage structures are present.

Plant species: Soybeans

How the planned wetland is marked on the ground: Pink wire flags

Invasive species: Chufa

Groundwater elevation in test hole? Not found

Hydric soil present near the surface? Yes

Elevation-change from upper to lower edge of designed wetland: 1.5-feet

Test Hole location: 43.265912°N 76.191477°W
Soil texture: 0-8-inches = topsoil, 8-10-inches = silt loam, 10-34-inches = clay, 32-inches-48-inches = clay

Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

Head-cuts located uphill or downhill of the planned wetland. A head-cut located along Youngs Creek will be controlled as part of this project.

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Avoid building a dam or raising elevations that could flood the neighbor's home or County Route 37. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Be careful not to block the ditch along County Route 37, or the culvert under County Route 37. Level the surface of the ground, add scrapes, pits and mounds (10-foot spacing). Spread the soil that is removed in buffers and away from Highway 37 to make natural ridges in the field higher. Leave gaps between areas of spread soil so water will drain and not back up onto neighbors' land. Plant native trees on the mounds and higher ground.

Meyers 2 Overview

Meyers 2 Ground cover

Wetland Design Form

Site Name: Meyers 3	**Date: 06-25-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Dylan Johnson Jordan (The Wetland Trust), Kendall Hastings (The Wetland	
Objectives: Build a naturally appearing and functioning Forested Wetland for mitigation.	**Site Description: An agricultural field planted to soybeans.**
Evidence of historic drainage or filling: Ditches are located along the side of County Route 37 and the south edge of the property. It is very possible that buried drainage structures are present.	
Plant species: Soybeans	**How the planned wetland is marked on the ground: Yellow wire flags**
Invasive species: Chufa. Reed canary grass, purple loosestrife, and narrow leaf cattails growing in the ditch along Highway 37.	**Groundwater elevation in test hole? Not found.**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge of designed wetland: 2.4-feet**
Test Hole location: 43.266889°N 76.192053°W **Soil texture: 0-8-inches = topsoil, 8-48-inches = clay**	
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed	
Head-cuts located uphill or downhill of the planned wetland. A head-cut located along Youngs Creek will be controlled as part of this project.	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Avoid building a dam or raising elevations that could flood the neighbor's home or County Route 37. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Be careful not to block the ditch along County Route 37, or the culvert under County Route 37. Level the surface of the ground, add scrapes, pits and mounds (10-foot spacing). Spread the soil that is removed in buffers and away from Highway 37 to make natural ridges in the field higher. Leave gaps between areas of spread soil so water will drain and not back up onto neighbors' land. Plant native trees on the mounds and higher ground.	

Meyers 3 Overview

Meyers 3 Ground cover

Wetland Design Form

Site Name: Meyers 4	**Date:** 06-26-2024
Landowner: The Wetland Trust	**Designer Name:** Thomas R. Biebighauser
Individuals assisting with the design: Dylan Johnson Jordan (The Wetland Trust), Kendall Hastings (The Wetland	
Objectives: Build a naturally appearing and functioning wetland (Emergent. Forested or Shrub) for mitigation.	**Site Description:** An agricultural field planted to soybeans.
Evidence of historic drainage or filling: A ditch bisects the designed wetland. The ditch will be disabled by this project. It is very possible that buried drainage structures are present. A shallow basin with deep tire ruts is present in the area.	
Plant species: Soybeans	**How the planned wetland is marked on the ground:** Yellow wire flags
Invasive species: Chufa	**Groundwater elevation in test hole?** Not found.
Hydric soil present near the surface? Yes	**Elevation-change from upper to lower edge of designed wetland:** 1.0-feet
Test Hole location: 43.266128°N 76.189365°W **Soil texture:** 0-12-inches = topsoil high in clay, 12-48-inches = clay	
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed	
Head-cuts located uphill or downhill of the planned wetland. A head-cut located along Youngs Creek will be controlled as part of this project.	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Avoid building a dam or raising elevations that could flood neighboring property. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Avoid filling the shallow depression in the area. Level the surface of the ground, add scrapes, pits and mounds that vary from 6-24-inches high. Leave gaps between areas of spread soil so water will drain and not back up onto neighbors' land. Plant trees and shrubs on the mounds.	

Meyers 4 Overview

Meyers 4 Ground cover

Wetland Design Form

Site Name: Meyers 5

Date: 06-26-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dylan Johnson Jordan (The Wetland Trust), Kendall Hastings (The Wetland

Objectives: Build a naturally appearing and functioning wetland (Forested or Shrub) for mitigation.

Site Description: An agricultural field planted to soybeans.

Evidence of historic drainage or filling: It is very possible that buried drainage structures are present. A ditch is located along Highway 37.

Plant species: Soybeans

How the planned wetland is marked on the ground: Yellow wire flags

Invasive species:

Groundwater elevation in test hole? Not found.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Test Hole location: 43.265703°N 76.190420°W
Soil texture: 0-9-inches = topsoil high in clay, 9-48-inches = clay

Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

Head-cuts located uphill or downhill of the planned wetland. A head-cut located along Youngs Creek will be controlled as part of this project.

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Avoid building a dam or raising elevations that could flood neighboring property. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Level the surface of the ground, add scrapes, pits and mounds that vary from 6-24-inches high. Plant trees and shrubs on the mounds. Leave gaps between areas of spread soil so water will drain and not back up onto neighbors' land.

Meyers 5 Overview

Meyers 5 Ground cover

Wetland Design Form

Site Name: Meyers 6	**Date: 06-26-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Dylan Johnson Jordan (The Wetland Trust), Kendall Hastings (The Wetland	
Objectives: Build a naturally appearing and functioning wetland (Forested or Shrub) for mitigation.	**Site Description: An agricultural field planted to soybeans.**
Evidence of historic drainage or filling: It is very possible that buried drainage structures are present. A ditch is located along Highway 37.	
Plant species: Soybeans	**How the planned wetland is marked on the ground: Orange wire flags**
Invasive species:	**Groundwater elevation in test hole? Not found.**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge of designed wetland: 2.0-feet**
Test Hole location: 43.266782°N 76.190809°W **Soil texture: 0-7-inches = topsoil high in clay, 7-48-inches = clay**	
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed	
Head-cuts located uphill or downhill of the planned wetland. A head-cut located along Youngs Creek will be controlled as part of this project.	
Woody debris source: Not available on site. Would need to be brought in by truck.	
Construction notes: Avoid building a dam or raising elevations that could flood neighboring property. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Level the surface of the ground, add scrapes, pits and mounds that vary from 6-24-inches high. Plant trees and shrubs on the mounds. Leave gaps between areas of spread soil so water will drain and not back up onto neighbors' land.	

Meyers 6 Overview

Meyers 6 Ground cover

Wetland Design Form

Site Name: Meyers 7

Date: 06-26-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dylan Johnson Jordan (The Wetland Trust), Kendall Hastings (The Wetland

Objectives: Build a naturally appearing and functioning wetland (Forested or Shrub) for mitigation.

Site Description: An agricultural field planted to soybeans. Located near the primary outlet ditch.

Evidence of historic drainage or filling: It is very possible that buried drainage structures are present. A drainage outlet ditch is located along Youngs Creek
near this planned wetland.

Plant species: Soybeans

How the planned wetland is marked on the ground: Pink wire flags

Invasive species:

Groundwater elevation in test hole? Not found.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge of designed wetland: 2.0-feet

Test Hole location: 43.267256°N 76.189414°W
Soil texture: 0-9-inches = silt loam topsoil, 9-15-inches = silt loam, 15-48-inches = clay

Rock armoring is needed along the length of the spillway (16-feet wide x 50-feet long x 1.5-feet deep)

Head-cuts located uphill or downhill of the planned wetland. A head-cut located along Youngs Creek will be controlled as part of this project.

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Install buried vertical grade control structure using rock. Rock needed for spillway = 12-feet wide x 50-feet long x 1.5-feet deep = 900 feet^3/27feet^3/yard^3 = 33yards^3 x 1.5-tons/yard^3 = 50 tons. Leave gaps between areas of spread soil so water will drain and not back up onto neighbors' land.

Meyers 7 Overview

Meyers 7 Ground cover

Wetland Design Form

Site Name: 8-Meyers Head-cut Control

Date: 06-26-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Dylan Johnson Jordan (The Wetland Trust), Kendall Hastings (The Wetland

Objectives: Protect the wetlands being built by controlling a major head-cut.

Site Description: A head-cut located in the main drainage for the Meyers Field will be controlled.

Evidence of historic drainage or filling: The site is an outlet ditch for a buried drainage system that is eroding. Head-cuts will advance into the field and constructed wetlands unless they are controlled.

Plant species: Soybeans

How the planned is marked on the ground: White wire flags

Invasive species:

Groundwater elevation in test hole? At stream level.

Hydric soil present near the surface? No

Elevation-change in head-cut = 3.2-feet vertical.

Location: 43.267545°N 76.190763°W

Soil texture: Silt loam overlaying clay.

This project involves controlling a major head-cut located in the primary drainage ditch for the property. See the drawing prepared for building buried vertical grade control structures.

Woody debris source: n/a

Construction notes: Rock needed for buried vertical grade control structure = 12-feet wide x 70-feet long x 6.2-feet deep = 5,208feet³/27feet³/yard³ = 193yards³ x 1.5-tons/yard³ = 289 tons.

The white wire flags show where rock would be buried to control the head-cut

The head-cut will destroy the planned wetlands unless it is controlled.

Wetland Design Form

Site Name: R-1 (Bruce Rio Farm)

Date: 05-01-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust), Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field that will be planted to soybeans.

Evidence of historic drainage or filling: Deep ditches in the fields drain water into Youngs Creek along the Northern edge of the property. Buried drainage structures carry water into these ditches. Deep ruts in the field are not holding water, indicating that buried drainage structures are present.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? Not found.

Hydric soil present near the surface? Yes, but not during the growing season.

Elevation-change from upper to lower edge of designed wetland: 1.5-feet

Soil test hole location: 43.264620°N 76.187667°W
Soil texture: 0-8-inches = topsoil, 8-13-inches = sandy clay, 13-48-inches - clay

Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Access the area from the Meyers Farm along the Onieda River Road to avoid damaging Bruce Rio's driveway. Apply gravel to the access road owned by Bruce Rio that borders the west edge of TWT property. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Spread soil that is removed in the buffer along the west side. Build a low dam (1-foot high) with gradual 5-percent slopes using the soil that is removed from building the wetland. Level the surface of the ground, add scrapes, pits and mounds (10-foot spacing). Plant native trees on the mounds and higher ground.

R-1

R-1

Wetland Design Form

Site Name: R-2 (Bruce Rio Farm)	**Date: 05-01-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Harrison Franz (The Wetland Trust), Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field that will be planted to soybeans.**
Evidence of historic drainage or filling: Deep ditches in the fields drain water into Youngs Creek along the Northern edge of the property. Buried drainage structures carry water into these ditches. Deep ruts in the field are not holding water, indicating that buried drainage structures are present.	
Plant species: Soybeans	**How the planned wetland is marked on the ground: Pink wire flags**
Invasive species: none	**Groundwater elevation in test hole? Not found.**
Hydric soil present near the surface? Yes, but not during the growing season.	**Elevation-change from upper to lower edge of designed wetland: 1.3-feet**
Soil test hole location: 43.266021°N 76.188117°W **Soil texture: 0-8-inches = topsoil, 8-48-inches-clay (7-inch-long thin ribbon formed)**	
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed	
Head-cuts located uphill or downhill of the planned wetland. No	
Woody debris source: Not available on site. Would need to be transported to the site.	
Construction notes: Access the area from the Meyers site to avoid damaging Bruce Rio's driveway. Apply gravel to the access road bordering the west edge of the property. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. There is very little room for spreading soil so it will be necessary to level the area and keep most soil within the marked perimeter. Level the surface of the ground, add scrapes, pits and mounds (10-foot spacing). Plant native trees on the mounds and higher ground.	

R-2

R-2 (with soil test hole)

Wetland Design Form

Site Name: R-3 (Bruce Rio Farm)

Date: 05-01-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust), Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field that will be planted to soybeans.

Evidence of historic drainage or filling: A ditch bisects the designed wetland and drains water into Youngs Creek along the Northern edge of the property. Buried drainage structures carry water into this ditch. Deep ruts in the field are not holding water, indicating that buried drainage structures are present.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? Not found.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge = 2.0-feet

Soil test hole location: 43.267148°N 76.187908°W
Soil texture: 0-8-inches = topsoil, 8-48-inches-clay (7-inch-long thin ribbon formed)

Rock armoring or vertical grade control needed at the inlet or outlet. Yes.

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Access the area from the Meyers site to avoid damaging Bruce Rio's driveway. Apply gravel to the access road bordering the west edge of the property. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Remove culvert and build a low dam to fill a section of the ditch with soil. There is very little room for spreading soil so it will be necessary to level the area and keep most soil within the marked perimeter. Some soil may be spread along the Northern edge of the area. Add scrapes, pits and mounds (10-foot spacing). Plant native trees on the mounds and higher ground. A wide spillway that is armored with rock should be built as spillway will serve as the outlet for most of the runoff from the field. Rock needed for spillway = 16-feet wide x 100-feet long x 1.5-feet deep = 2,400 $feet^3$/27$feet^3$/$yard^3$ = 88 $yards^3$ x 1.5-tons/$yard^3$ = 132 tons.

R-3

R-3 (showing the culvert to remove and ditch to fill)

Wetland Design Form

Site Name: R-4 (Bruce Rio Farm)

Date: 05-01 & 02,-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Harrison Franz (The Wetland Trust), Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field that will be planted to soybeans.

Evidence of historic drainage or filling: A ditch bisects the designed wetland and drains water into Youngs Creek along the Northern edge of the property. Buried drainage structures carry water into this ditch. Deep ruts in the field are not holding water, indicating that buried drainage structures are present.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? Not found.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge = 2.0-feet

Soil test hole location: 43.268915°N 76.186527°W
Soil texture: 0-8-inches = topsoil, 8-48-inches-clay (7-inch-long thin ribbon formed)

Rock armoring or vertical grade control needed at the inlet or outlet. Yes.

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Obtain by removing the planted Norway Spruce trees growing next to the planned wetland.

Construction notes: Build a groundwater dam along the lower 2/3-edge of the marked perimeter, staying 50-feet away from the streambank. Build a low dam to fill a section of the ditch with soil. Add scrapes, pits and mounds (10-foot spacing). Plant native trees on the mounds and higher ground. A wide spillway that is armored with rock should be built. Rock needed for spillway = 16-feet wide x 75-feet long x 1.5-feet deep = 1,200 feet^3/27feet^3/yard^3 = 44 yards^3 x 1.5-tons/yard^3 = 66 tons.


R-4


R-4 (showing the ditch to fill)

Wetland Design Form

Site Name: R-5 (Bruce Rio Farm)	**Date: 05-01-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field to be planted to soybeans. Located on a level area of ground in front of Bruce Rio's home.**
Evidence of historic drainage or filling: Deep ruts in the field are not holding water, indicating that buried drainage structures are present.	
Plant species: Soybeans	**How the planned wetland is marked on the ground: Orange wire flags**
Invasive species: none	**Groundwater elevation in test hole? Not found.**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge = 1.5-feet**
Soil test hole location: 43.262848°N 76.186518°W **Soil texture: 0-10-inches = topsoil, 10-48-inches-clay (4-inch-long thin ribbon formed)**	
Rock armoring or vertical grade control needed at the inlet or outlet. No	
Head-cuts located uphill or downhill of the planned wetland. No	
Woody debris source: Not available on site. Would need to be transported to the site.	
Construction notes: Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Spread soil that is removed north on the downhill slope. Leave gaps in the soil to avoid flooding the home. Plant native trees on the mounds and higher ground.	

R-5

R-5 (showing the soil test hole)

Wetland Design Form

Site Name: R-6 (Bruce Rio Farm)

Date: 05-01-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)

Objectives: Build a naturally appearing and functioning Emergent wetland for mitigation.

Site Description: An agricultural field to be planted to soybeans. Near the old sand pit and farm pond.

Evidence of historic drainage or filling: Deep ruts in the field are not holding water, indicating that buried drainage structures are present.

Plant species: Soybeans

How the planned wetland is marked on the ground: White wire flags

Invasive species: none

Groundwater elevation in test hole? Not found.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge = 3.0-feet

Soil test hole location: 43.263087°N 76.184849°W
Soil texture: 0-10-inches = topsoil, 10-48-inches-clay

Rock armoring or vertical grade control needed at the inlet or outlet. No

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Build a low above ground dam and a groundwater dam along the lower 2/3-edge of the marked perimeter. Spread soil that is removed downhill. Leave gaps in the soil to avoid flooding the Bruce Rio home. Plant native trees on the mounds and higher ground.

R-6

R-6

Wetland Design Form

Site Name: R-7 (Bruce Rio Farm)	**Date: 05-01-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: A dug basin, old farm pond, and sand borrow pit that is partially filled with trash.**
Evidence of historic drainage or filling: Ditches are present, and the basin has been used as a dump for the farm.	
Plant species: Maple, aspen.	**How the planned wetland is marked on the ground: Pink wire flags**
Invasive species: Multi-flora rose, honeysuckle	**Groundwater elevation in test hole? 5-feet below the surface.**
Hydric soil present near the surface? Yes, in the dug pit.	**Elevation-change from upper to lower edge = Basin**
Soil test hole location: 43.262666°N 76.185205°W **Soil texture: 0-4-inches = topsoil, 4-48-inches-clay.**	
Rock armoring or vertical grade control needed at the inlet or outlet. No	
Head-cuts located uphill or downhill of the planned wetland. No	
Woody debris source: Not available on the property. Would need to be transported to the site.	
Construction notes: Remove the trash that has been placed in the basin. Reshape the dug basin into a naturally appearing wetland. Shape the surrounding sand banks into turtle nesting habitat.	

R-7

R-7 (showing the dump that would be cleaned and the ditch that would be expanded into a wetland

Wetland Design Form

Site Name: R-8 (Bruce Rio Farm)	**Date: 05-01-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**

Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)

Objectives: Build a naturally appearing and functioning Emergent wetland for mitigation.	**Site Description: An agricultural field to be planted to soybeans.**

Evidence of historic drainage or filling: A drainage ditch is located along the lower edge of the designed wetland. This ditch would not be filled by the project.

Plant species: Soybeans	**How the planned wetland is marked on the ground: Pink wire flags**
Invasive species: none	**Groundwater elevation in test hole? Not found.**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge = 1.5-feet**

Soil test hole location: 43.263536°N 76.186280°W
Soil texture: 0-10-inches = topsoil, 10-48-inches-clay

Rock armoring or vertical grade control needed at the inlet or outlet. No

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on the property. Would need to be transported to the site.

Construction notes: Build a low above ground dam and a groundwater dam along the lower 2/3-edge of the marked perimeter. Spread soil that is removed downhill. Plant native trees on the mounds and higher ground.

R-8

R-8

Wetland Design Form

Site Name: R-9 (Bruce Rio Farm)	Date: 05-01-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning Emergent wetland for mitigation.	Site Description: An agricultural field to be planted to soybeans. Contains deep tire ruts filled with water.
Evidence of historic drainage or filling: The primary drainage ditch for the large field is located within this designed wetland. The ditch should be blocked at the south edge where water enters the wetland, and again at the north or outlet end where water leaves the wetland. Blocking the ditch in both places will restore the historic elevation of groundwater in the field.	
Plant species: Soybeans	How the planned wetland is marked on the ground: Pink wire flags
Invasive species: none	Groundwater elevation in test hole? Not found.
Hydric soil present near the surface? No	Elevation-change from upper to lower edge = 2.0-feet
Soil test hole location: 43.265017°N 76.186358°W Soil texture: 0-10-inches = topsoil, 10-48-inches-clay	
Rock armoring or vertical grade control needed at the inlet or outlet. No	
Head-cuts located uphill or downhill of the planned wetland. No	
Woody debris source: Not available on the property. Would need to be transported to the site.	
Construction notes: Build a low above ground dam and a groundwater dam along the lower 2/3-edge of the marked perimeter. Spread soil that is removed uphill. Plant native trees on the mounds and higher ground.	

R-9

R-9

Wetland Design Form

Site Name: R-10 (Bruce Rio Farm)	**Date: 05-01-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning Emergent wetland for mitigation.	**Site Description: An agricultural field to be planted to soybeans. Adjacent to an old farm pond.**
Evidence of historic drainage or filling: A shallow drainage ditch is located along the uphill edge of the designed wetland along the edge of the woods. This ditch would not be filled because it may affect neighboring property.	
Plant species: Soybeans	**How the planned wetland is marked on the ground: Orange wire flags**
Invasive species: none	**Groundwater elevation in test hole? Not found.**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge = 2.0-feet**
Soil test hole location: 43.263937°N 76.185066°W **Soil texture: 0-9-inches = topsoil, 9-48-inches-clay**	
Rock armoring or vertical grade control needed at the inlet or outlet. No	
Head-cuts located uphill or downhill of the planned wetland. No	
Woody debris source: Not available on the property. Would need to be transported to the site.	
Construction notes: Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Spread soil that is removed in the buffer to the east. Plant native trees and shrubs on the mounds and higher ground.	

R-10

R-10

Wetland Design Form

Site Name: R-11 (Bruce Rio Farm)

Date: 05-01-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field to be planted to soybeans.

Evidence of historic drainage or filling: A shallow drainage ditch is located along the uphill edge of the designed wetland along the edge of the woods. This ditch would not be filled because it may affect neighboring property.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? Not found.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge = 2.0-feet

Soil test hole location: 43.264564°N 76.184768°W
Soil texture: 0-9-inches = topsoil, 9-48-inches-clay

Rock armoring or vertical grade control needed at the inlet or outlet. No

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on the property. Would need to be transported to the site.

Construction notes: Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Spread soil that is removed in the buffer to the east. Plant native trees and shrubs on the mounds and higher ground.

R-11

R-11

Wetland Design Form

Site Name: R-13 (Bruce Rio Farm)

Date: 05-02-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field to be planted to soybeans.

Evidence of historic drainage or filling: A ditch bisects the area. This ditch will be filled and blocked by the project.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? Not found.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge = 1.0-feet

Soil test hole location: 43.264564°N 76.184768°W
Soil texture: 0-9-inches = topsoil, 9-48-inches-clay

Rock armoring or vertical grade control needed at the inlet or outlet. No

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on the property. Would need to be transported to the site.

Construction notes: Build a groundwater dam across the floodplain of the ditch draining the area. Level the area and shape scrapes, pits, and mounds. Do not build a dam. Plant native trees and shrubs on the mounds and higher ground.

R-13

R-13 Showing ditch in the Spring.

Wetland Design Form

Site Name: R-14 (Bruce Rio Farm)

Date: 05-02-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field to be planted to soybeans.

Evidence of historic drainage or filling: Ditches have been dug to drain the field. Buried drainage structures may be present.

Plant species: Soybeans

How the planned wetland is marked on the ground: Orange wire flags

Invasive species: none

Groundwater elevation in test hole? Not found.

Hydric soil present near the surface? No

Elevation-change from upper to lower edge = 2.0-feet

Soil test hole location: 43.265363°N 76.184511°W
Soil texture: 0-8-inches = topsoil, 8-13-inches = Silt Loam, 13-48-inches = Clay

Rock armoring or vertical grade control needed at the inlet or outlet. No

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on the property. Would need to be transported to the site.

Construction notes: Build a groundwater around the lower 2/3 perimeter of the area Level the area and shape scrapes, pits, and mounds. Do not build a dam. Spread soil that is removed over the buffer along the east edge of the area. Plant native trees and shrubs on the mounds and higher ground.

R-14

R-14

Wetland Design Form

Site Name: R-15 (Bruce Rio Farm)	Date: 05-02-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Harrison Franz (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	Site Description: An agricultural field to be planted to soybeans.
Evidence of historic drainage or filling: Ditches have been dug to drain the field. Buried drainage structures may be present. The surface of the ground has been sloped so it will drain. Shallow ditches are located along the edge of the field.	
Plant species: Soybeans	How the planned wetland is marked on the ground: Orange wire flags
Invasive species: none	Groundwater elevation in test hole? Not found.
Hydric soil present near the surface? No	Elevation-change from upper to lower edge = 2.0-feet
Soil test hole location: 43.267859°N 76.184456°W Soil texture: 0-8-inches = topsoil, 8-48-inches = Clay	
Rock armoring or vertical grade control needed at the inlet or outlet. No	
Head-cuts located uphill or downhill of the planned wetland. No	
Woody debris source: Woody debris source: Obtain by removing the planted Norway Spruce trees growing next to the planned wetland.	
Construction notes: Do not build a groundwater dam or an above ground dam. Level the area and excavate shallow scrapes up to 6-inches deep with pits and mounds. Spread soil that is removed over the buffer along the east edge of the area. Plant native trees and shrubs on the mounds and higher ground.	


R-15


R-15

Wetland Design Form

Site Name: R-16 (Bruce Rio Farm)	Date: 05-02-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Harrison Frantz (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	Site Description: An agricultural field to be planted to soybeans.
Evidence of historic drainage or filling: Ditches have been dug to drain the field. Buried drainage structures may be present. The surface of the ground has been sloped so it will drain. Shallow ditches are located along the edge of the field.	
Plant species: Soybeans	How the planned wetland is marked on the ground: Pink wire flags
Invasive species: none	Groundwater elevation in test hole? Not found.
Hydric soil present near the surface? No	Elevation-change from upper to lower edge = 3.0-feet
Soil test hole location: 43.267327°N 76.185515°W Soil texture: 0-8-inches = topsoil, 8-48-inches = Clay	
Rock armoring or vertical grade control needed at the inlet or outlet. No	
Head-cuts located uphill or downhill of the planned wetland. No	
Woody debris source: Woody debris source: Obtain by removing the planted Norway Spruce trees growing next to the planned wetland.	
Construction notes: Build a groundwater dam that will cross the ditch adjacent to the Norway Spruce Plantation. Level the area and excavate shallow scrapes up to 6-inches deep with pits and mounds. Spread soil that is removed downhill along the western edge of the area. Plant native trees and shrubs on the mounds and higher ground.	

R-16

R-16

Wetland Design Form

Site Name: R-17 (Bruce Rio Farm)	**Date: 05-02-2024**
Landowner: The Wetland Trust	**Designer Name: Thomas R. Biebighauser**
Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Harrison Frantz (The Wetland Trust)	
Objectives: Build a naturally appearing and functioning wetland for mitigation.	**Site Description: An agricultural field to be planted to soybeans.**
Evidence of historic drainage or filling: Ditches have been dug to drain the field. Buried drainage structures may be present. The surface of the ground has been sloped so it will drain. Shallow ditches are located along the edge of the field.	
Plant species: Soybeans	**How the planned wetland is marked on the ground: White wire flags**
Invasive species: none	**Groundwater elevation in test hole? 1-inch below surface**
Hydric soil present near the surface? No	**Elevation-change from upper to lower edge = 3.0-feet**
Soil test hole location: 43.268248°N 76.185647°W **Soil texture: 0-6-inches = topsoil, 6-23-inches = Silt Loam, 23-48-inches = clay**	
Rock armoring or vertical grade control needed at the inlet or outlet. No	
Head-cuts located uphill or downhill of the planned wetland. No	
Woody debris source: Woody debris source: Obtain by removing the planted Norway Spruce trees growing next to the planned wetland.	
Construction notes: Build a groundwater dam around the lower 2/3 perimeter of the area. Build an above ground dam no higher than 1.5-feet. Level the area and excavate shallow scrapes up to 6-inches deep with pits and mounds. Spread soil that is removed downhill along the eastern edge of the area. Plant native trees and shrubs on the mounds and higher ground. Also excavate scrapes between R-3 and R-17.	

R-17

R-17

Wetland Design Form

Site Name: R-18 (Bruce Rio Farm)

Date: 05-02-2024

Landowner: The Wetland Trust

Designer Name: Thomas R. Biebighauser

Individuals assisting with the design: Kirsten Gerhart (The Wetland Trust), Harrison Frantz (The Wetland Trust)

Objectives: Build a naturally appearing and functioning wetland for mitigation.

Site Description: An agricultural field to be planted to soybeans.

Evidence of historic drainage or filling: Ditches have been dug to drain the field. Buried drainage structures may be present. The surface of the ground has been sloped so it will drain. Shallow ditches are located along the edge of the field.

Plant species: Soybeans

How the planned wetland is marked on the ground: White wire flags

Invasive species: none

Groundwater elevation in test hole? 1-inch below surface

Hydric soil present near the surface? No

Elevation-change from upper to lower edge = 3.0-feet

Soil test hole location: 43.269413°N 76.185691°W
Soil texture: 0-9-inches = topsoil, 9-48-inches = clay

Rock armoring or vertical grade control needed at the inlet or outlet. No

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Woody debris source: Obtain by removing the planted Norway Spruce trees growing next to the planned wetland.

Construction notes: Build a groundwater dam around the lower 2/3 perimeter of the area. Build an above ground dam no higher than 1.0-feet. Level the area and excavate shallow scrapes up to 6-inches deep with pits and mounds. Spread soil that is removed downhill along the Northern edge of the area. Plant native trees and shrubs on the mounds and higher ground.

R-18

R-18

Appendix H.

Appendix I.

Lower Caughdenoy Creek
Long Term Management Plan (LTMP)

Oswego County, New York

PREPARED BY:

The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
www.thewetlandtrust.org

May 2025

1.0 Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Offsite Compensatory Mitigation Project (Project) on behalf of Micron NY Semiconductor Manufacturing, LLC (Micron), has developed a mitigation plan at the Lower Caughdenoy Creek Site, town of Hastings, Oswego County, New York (Mitigation Site) to develop wetland acreage that will contribute to the total compensation needs for the construction of a semiconductor fabrication complex in the town of Clay, Onondaga County, NY. This Long-Term Management Plan (LTMP) has been developed based on anticipated monitoring and management activities for the Mitigation Site. Additional details are to be provided, if necessary, throughout the monitoring period and amended or revised as needed and approved by the USACE and NYSDEC. The purpose of the Long-Term Management Plan (LTMP) is to ensure the long-term sustainability of the protected and restored resources after mitigation performance standards have been achieved.

2.0 Responsible Party and Long-Term Steward

Micron is the Responsible Party for all phases of this Permittee Responsible mitigation through monitoring and final acceptance when a Certificate of Completion (or equivalent) will be provided by the agencies. Once the mitigation is complete Micron will transfer long-term management to TWT. As the fee simple owners of the Lower Caughdenoy Creek Site, TWT will be the long-term steward and responsible for long-term management of the wetland mitigation site including; identification of needs, development of recommendations, review with regulatory agencies as required, implementation, and efficacy measures. TWT shall implement this LTMP to preserve the habitat and conservation values in accordance with the approved Mitigation Plan, site protection instrument, and this LTMP. Long-term management tasks shall be funded through the Long-Term Management Fund.

3.0 Property Description

3.1 Conservation Values

The Mitigation Site provides an opportunity for restoration of a large stream/wetland complex with approximately 51.5 acres of wetland re-establishment, and 1.5 acres of rehabilitation in a previously drained and cultivated landscape. The permanent restoration and subsequent protection of this property has several site-specific conservation values that can be enhanced and maintained.

- ***Hydrologic Function***- Restoring the wetlands will improve surface water retention, infiltration, and seasonal saturation of soils. Removal of artificial drainage and regrading will help reestablish groundwater-surface water interactions, essential for wetland hydrology.
- ***Water Quality***- Conversion of cropland to wetlands and vegetated buffers will reduce nutrient runoff, sedimentation, and agrochemical inputs into Lower Caughdenoy Creek and downstream waters.

3.2 Site Improvements

Summary of site improvements including construction and restoration as per the Mitigation Plan. As-built report should be attached as an Appendix to this LTMP.

4.0 Baseline Conditions

Baseline conditions will be provided here with the as-built and final 10-year report referenced and attached. Conditions will be updated throughout the life of the project.

5.0 Management Activities

The Lower Caughdenoy Creek long-term management strategy will ensure the long-term sustainability and ecological performance of the restored and protected aquatic, upland and biological resources long after the active monitoring period has closed. Upon approval of the Mitigation Plan, the proposed wetland restoration will be completed. This restoration will restore or rehabilitate approximately 58 acres of diverse, native wetland vegetation communities to support wetland wildlife populations and connectivity to adjacent preserved wetlands. If monitoring finds it necessary, the anticipated long-term management activities include:

- ***Invasive Species Management-*** At the conclusion of the ecological monitoring period, performance standards will be met and native vegetative communities well established. Long-term management will ensure that conservation values are not significantly threatened by invasive vegetation. If warranted, mechanical or chemical management of invasive species will be implemented (see Invasive Species Management Plan).
- ***Spillways and Groundwater Dams-*** The constructed spillways and groundwater dams will be monitored and maintained as needed to maintain structural integrity and contribution toward site-specific conservation values.
- ***Access-*** The main access and parking area will be maintained as needed via mowing or replenishing gravel in appropriate areas. Gates, padlocks, and fences will receive upkeep as needed.
- ***Security and Safety-*** The Lower Caughdenoy Creek site will not be open to the public to minimize impacts from human activity and the parcel will be posted for protection against trespassing. Signage posting and unauthorized access will be monitored and appropriately maintained. Trash will be collected on a yearly basis and security increased as warranted in the form of additional gates/locks, cameras, and contact with local authorities.

Any long-term management activities performed will be recorded in an annual report along with any recommendations for future management activities or proposed changes to the LTMP, if warranted.

6.0 Funding

To ensure long-term financial assurance TWT will continue to own the site fee simple in perpetuity. As a 501(c)(3) nonprofit, TWT has received tax-exempt status for the site, which helps assure its long-term protection. TWT has a director-controlled Stewardship Management Investment Account specifically established for the Micron Compensatory Mitigation project with funds provided by Micron Semiconductor Manufacturing LLC. Funds will be deposited into this account with the investment income (investment instruments are low risk and broad-based) used to support permanent long-term management and maintenance. These funds are sufficient to sustain long-term management as outlined in **Table 1**, in which the budget covers long-term management for all six sites combined.

Table 1. Budget estimate for potential long-term management and maintenance tasks, all six Micron Wetland/Stream mitigation sites, a total of 1,328 acres.

Category	Task	Frequency	Estimated Cost per acre	Annualized Cost
Adaptive Management	Replanting	5	$1,800	$7466
	Reshaping terrain	5	$600	$2489
	Invasive species removal	2	$2,100	$21777
Maintenance	Site manipulation	10	$1500	$3111
	Boundary posting	10	$600	$6244
	Other practices	3	$1,320	$9,126
Long-Term Management	Other corrective adaptive management actions to ensure natural stability of site	5	$4,800	$19,910
Monitoring	To determine implementation tasks	1	$18	$25,398
Administration	For all tasks above including tax exempt status	1	$600	$12,444
Total annual budget*				102,500
Total Stewardship investment**				**$4,100,000**
Note: This table is an estimate based on 400 wetland credits @ $8,000 or (equivalent DEC Acres) and 13,500 stream ft @ $60				