MICRON SEMICONDUCTOR FABRICATION

CLAY, NY

USACE/NYSDEC JOINT PERMIT APPLICATION

PERMIT APPLICATION APPENDIX

VOLUME IV – PART 2

FINAL PUBLIC COMMENT VERSION

APPLICATION NO: LRB-2000-02198

July 7, 2025

Ver. 6.00

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Appendix N

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Micron Four-Fab Central New York Semiconductor Manufacturing Complex

Lower Caughdenoy Creek

Wetland Mitigation Plan

Oswego County, NY

PREPARED BY:

The Wetland Trust, Inc.

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July 2025

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Overview of Stream/Wetland Compensation on Six Mitigation Sites
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Fish Creek- Stream and Wetland Mitigation Plan
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 on 58 mitigation acres toward a total compensation requirement of 405.7 credits (USACE) or 367.6 acres (NYSDEC) 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- and NYSDEC-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

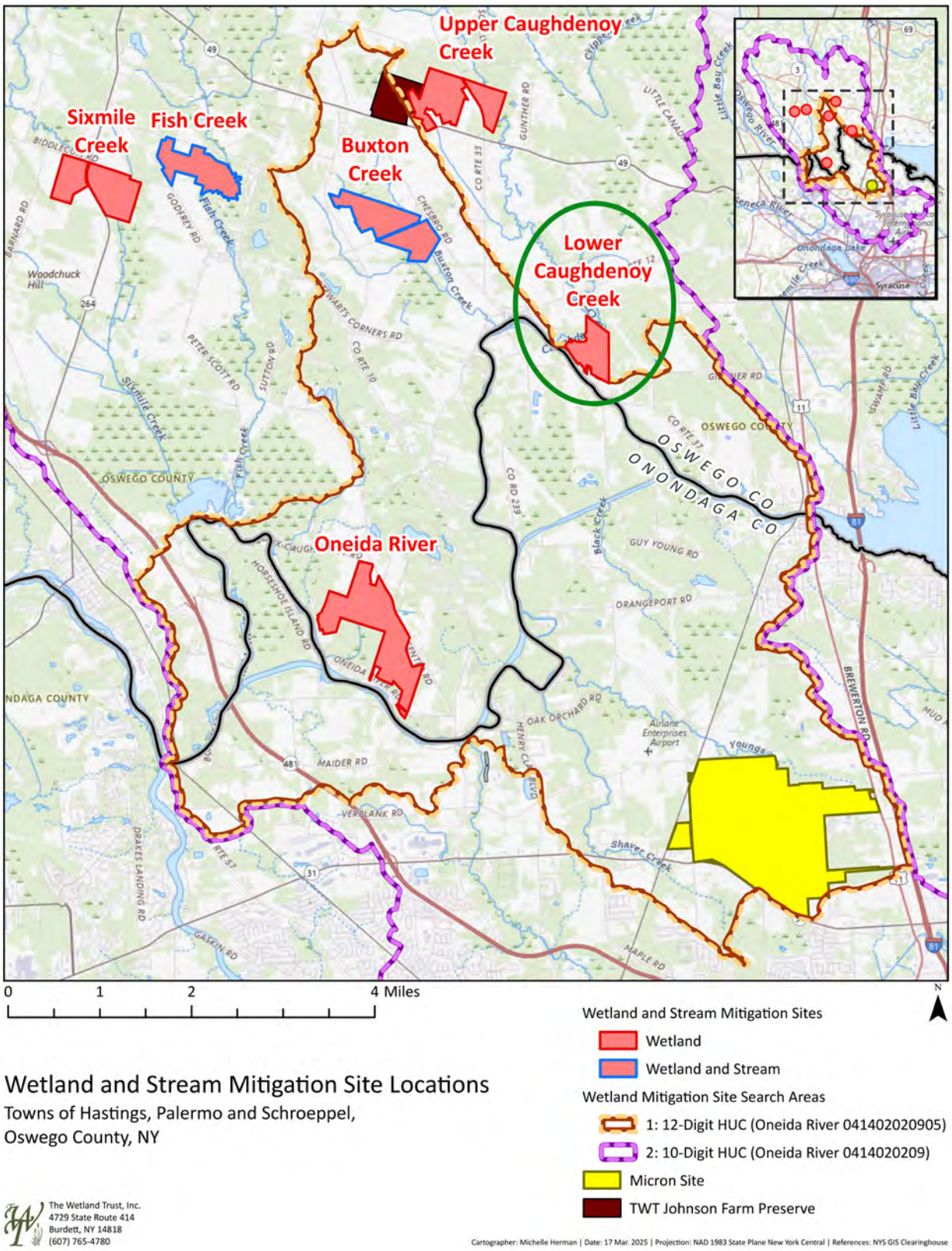
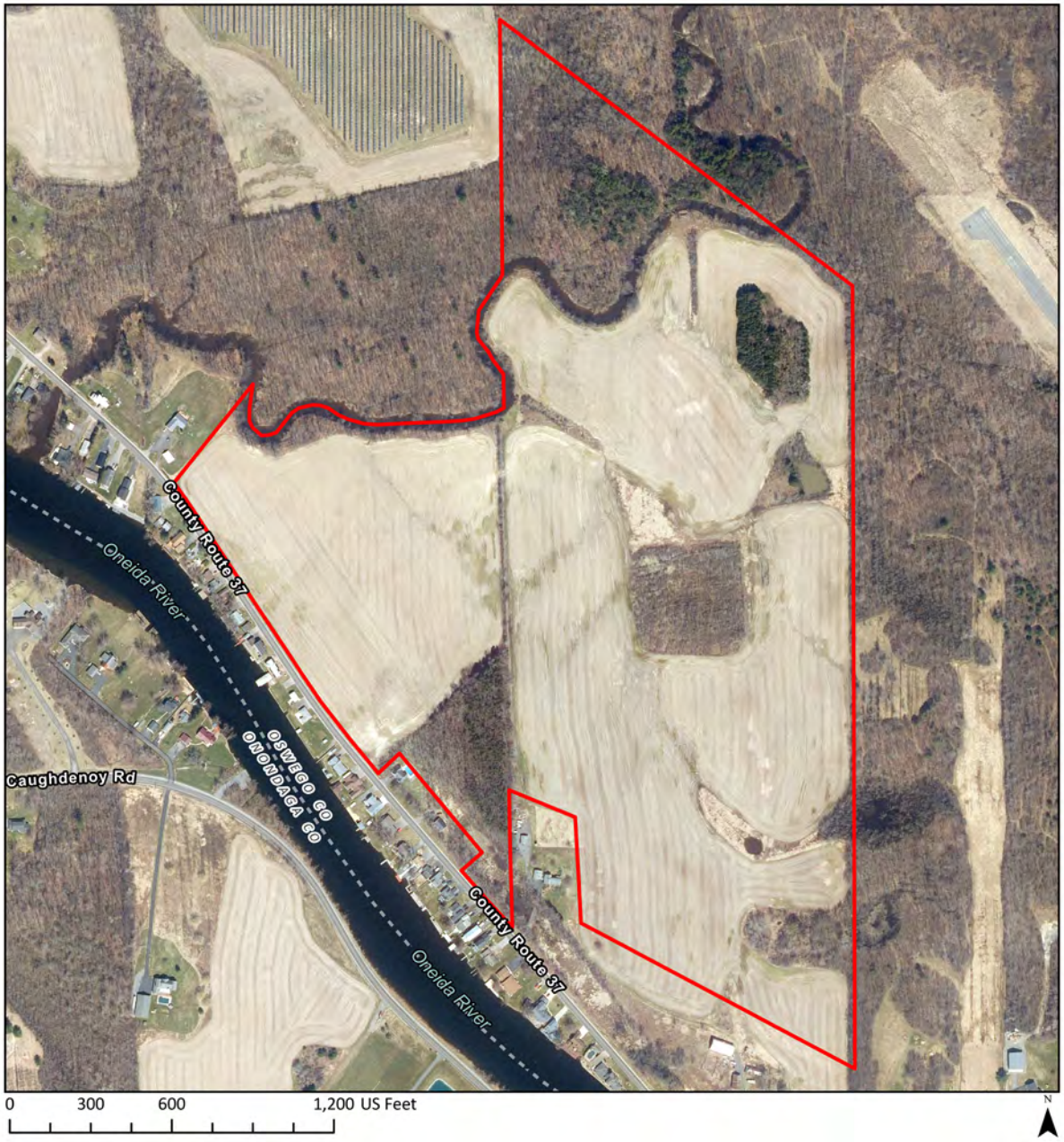


Figure 2-2. Lower Caughdenoy Creek Property (2023)



Imagery (2023)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

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

This site will be protected under Article 24 of the Environmental Conservation Law. 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

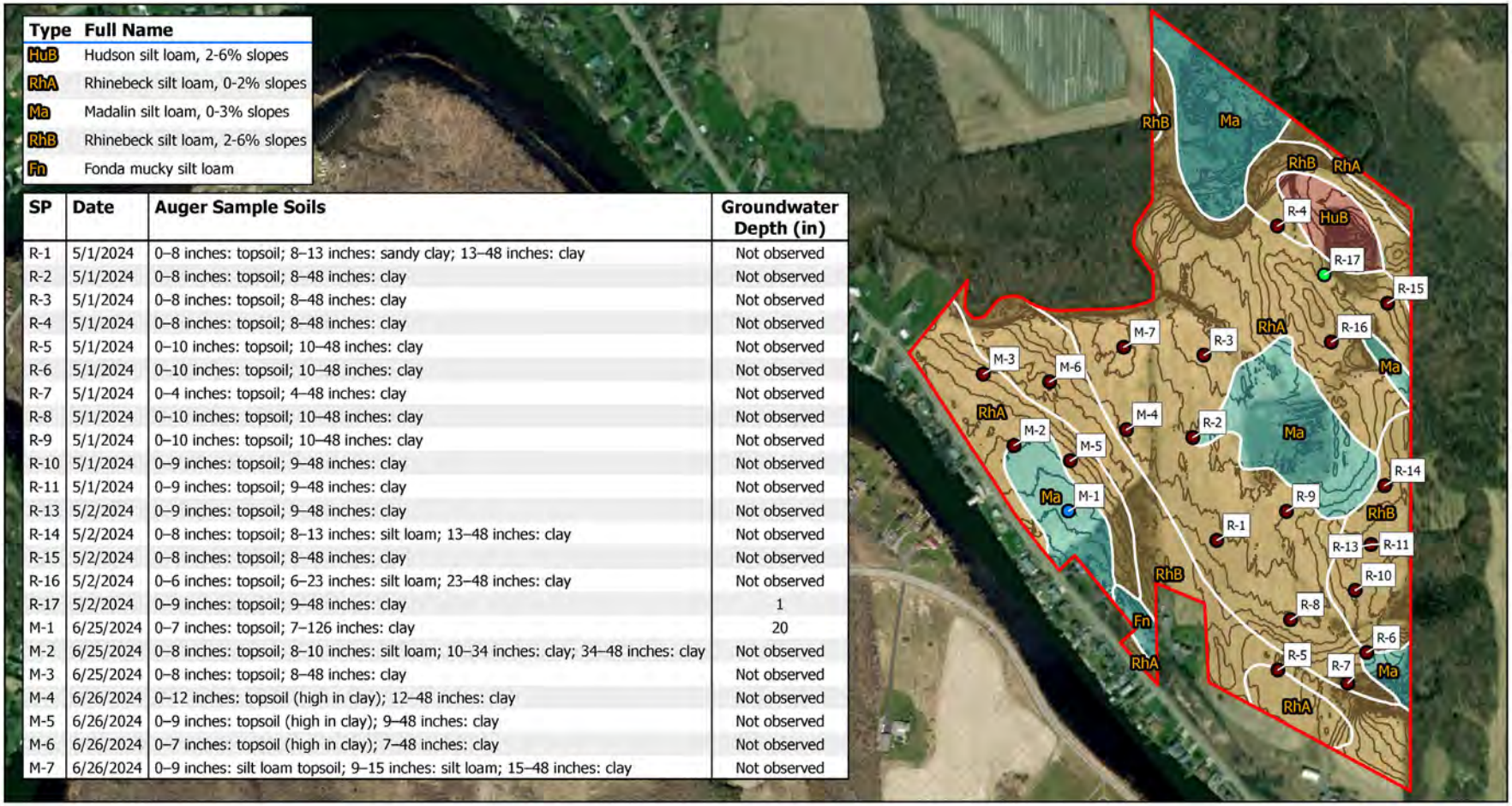
Hydrological characteristics at Lower Caughdenoy Creek were determined by TWT through wetland and aquatic resource delineations, aerial imagery interpretation, review of regulatory maps, wetland design field assessments which included a series of soil test pits, and interviews with previous and adjacent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

Federally mapped wetlands are located on site. 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 **Appendix C** for the full delineation report including mapped wetlands and drainage features, 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 (**Appendix C**), 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



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

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.

Staff Gauges

A staff gauge will be installed at Lower Caughdenoy Creek for the purpose of measuring water levels in the proposed deep emergent marsh, providing critical data to monitor surface water dynamics and its relationship to groundwater monitoring well data. 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 3-2**.

Table 3-2. Staff Gauge Location

Gauge Number	Elevation (ft)	Latitude	Longitude	Description
1	43.264749	-76.186	375.2264	Located at the center of Deep Emergent Wetland R-09

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 3-2** for details.

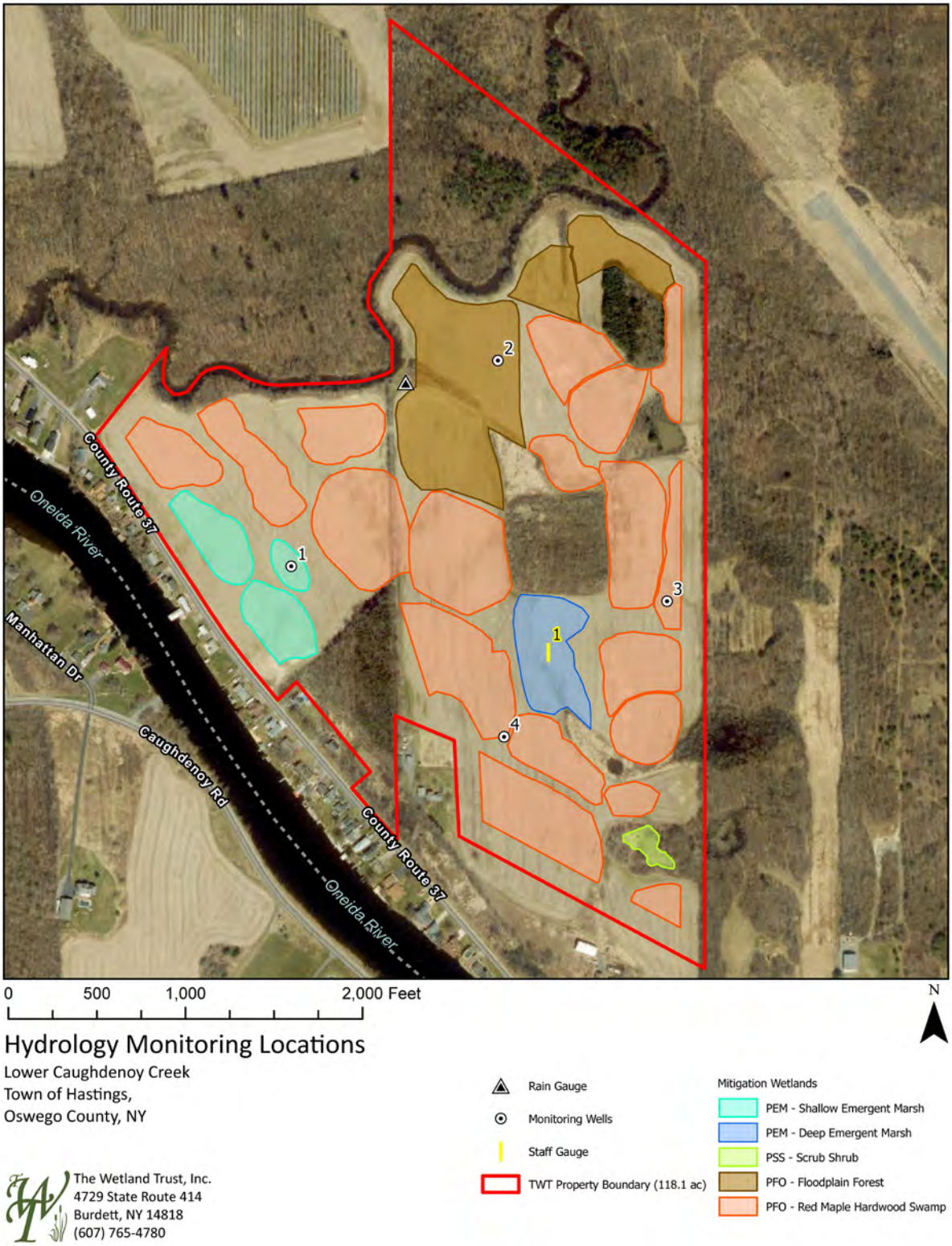
Table 3-3. Monitoring Well Location

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

Figure 3-2. Lower Caughdenoy Creek Hydrology Monitoring Locations



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

(*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	**Credit/ Mitigation Ratio**	**Credits/ Adjusted Acres**
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**

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 (restored) with an additional 6.5 acres of rehabilitation (enhancement) of these cover types **(Figure 5-1)**. The following characteristics guide the locations of each type of wetland to be re-established.

Shallow Emergent Marsh

Considerations/Characteristics

- 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)
- Composition of approximately 75% herbaceous vegetation, 10% emergent aquatics, 5% shrubs under 2 m, 2% shrubs between 2-5 m, 2% trees, and 5% floating aquatics.

Targeted Hydroperiod

- Water depth will range from 1 to 24 inches (during flooding)
- Permanently saturated soils and seasonally flooded
- Periods of dry substrate in mid-late summer.

Deep Emergent Marsh

Considerations/Characteristics

- 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
- Composition of approximately 85% emergent herbaceous vegetation and 25% floating aquatic vegetation in areas.

Targeted Hydroperiod

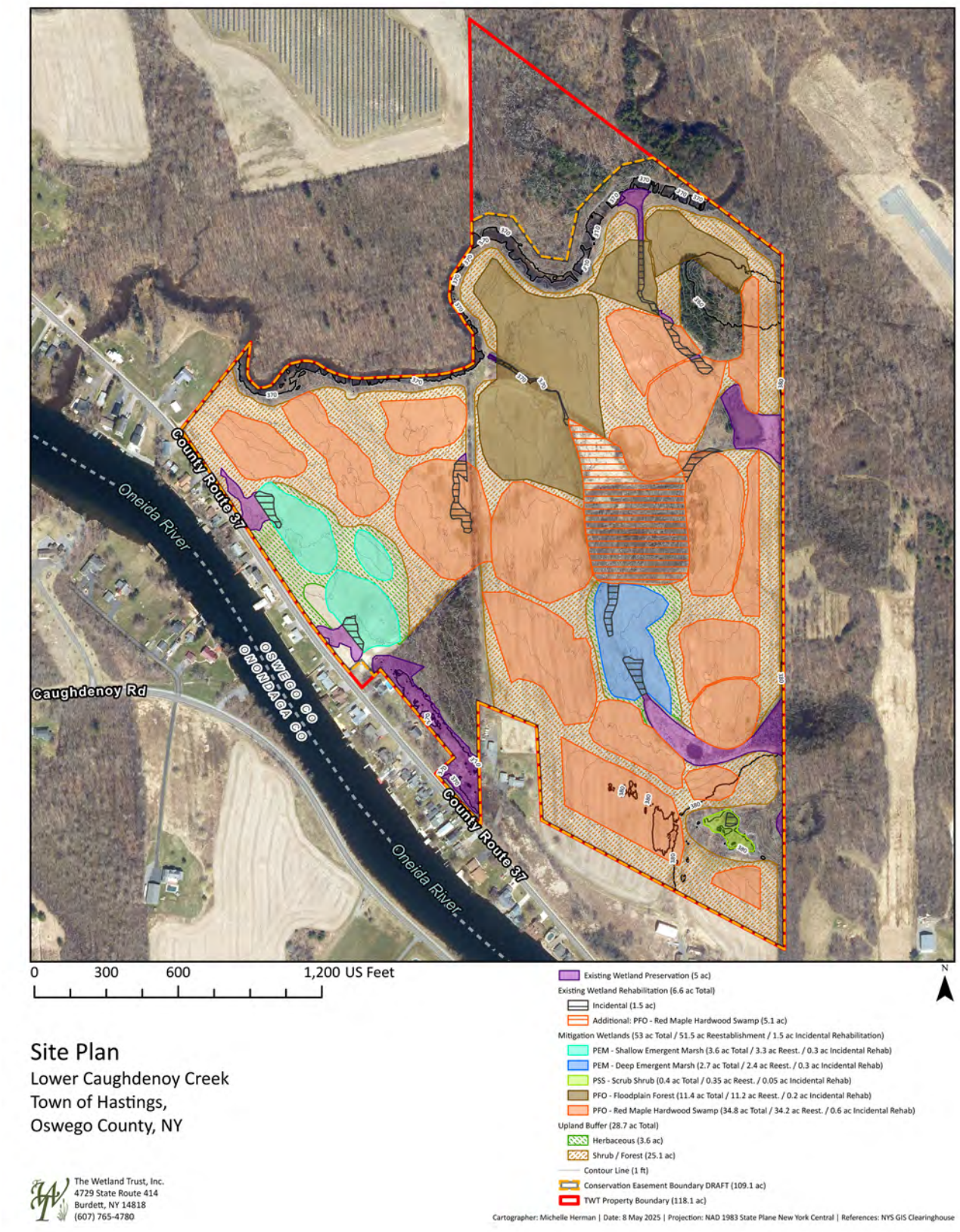
- Water depth will range from 6 to 36 inches
- Water level will fluctuate seasonally with water remaining year-round. There will be standing water remaining in the fall.

Shrub Swamp

Considerations/Characteristics

- Often occurs along the shore a lake, river, or stream

Figure 5-1. Lower Caughdenoy Creek Site Plan



- 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
- Composition of approximately 80% shrubs, 12% trees, 40% herbaceous plants, 10% non-vascular plants, aquatics, and vines.

Targeted Hydroperiod

- Water table within 12 inches of the surface for 28 or more consecutive days in the summer
- 1 to 6 inches of inundation for 14 or less consecutive days in in the spring

Floodplain Forest

Considerations/Characteristics

- Low terraces of river floodplains, and the floodplains of stream restoration areas
- Mineral soils
- Composition of approximately 85% trees, 60% herbaceous vegetation, 40% shrubs, 25% vines and nonvascular plants.

Targeted Hydroperiod

- Hollows and low areas inundated in early spring
- High areas irregularly inundated
- Periods of inundation lasting approximately 14-28 days

Red Maple-Hardwood Swamp

Considerations/Characteristics

- 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
- Composition of approximately 80% trees, 80% shrubs, 50% herbaceous vegetation, and 20% non-vascular plants.

Targeted Hydroperiod

- Seasonal flooding with saturated soils

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 **Appendix H** 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 (**Appendix H**).

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.

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 C-E** in **Appendix H**.

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%					

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 Impact 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.

TWT plans on erecting a deer-proof fence around the Buxton Creek Site construction areas to increase the survival rate of planted trees and shrubs. The lower portion of the fence will be modified for the passage of frogs, toads, salamanders, snakes, turtles, and small mammals.

Both PSS and PFO wetland Re-Establishment/Restoration areas will use a mix of herbaceous species derived from **Table 5-2a**, PEM- Shallow Emergent Plant List, as the foundational understory mix. The PSS and PFO areas will be at an early successional state and these herbaceous species are important early succession companion species that support success. While each community type listed includes a few representative herbaceous plantings tailored to sites specific goals, the broader PEM list will be used to add plant species diversity for each creation site.

Table 5-2a. PEM - Shallow Emergent Marsh

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Swamp Milkweed	*Asclepias incarnata*	OBL	4	S5	15-20 pounds per acre
Symphyotrichum puniceum	*Aster puniceus*	OBL	4	S5	
False nettle	*Boehmeria cylindrica*	OBL	7	S5	
Canada bluejoint grass	*Calamagrostis canadensis*	OBL	7	S5	
wild calla	*Calla palustris*	OBL	7	S5	
Longhair Sedge	*Carex comosa*	OBL	4	S5	
Fringed Sedge	*Carex crinita*	OBL	3	S5	
Bottlebrush Sedge	*Carex hystericina*	OBL	5	S5	
Shallow Sedge	*Carex lurida*	OBL	4	S5	
Pointed Broom Sedge	*Carex scoparia*	FACW	1	S5	
Upright Sedge	*Carex stricta*	OBL	4	S5	

Hairy-fruited sedge	*Carex trichocarpa*	OBL	5	S5	
fox sedge	*Carex vulpinoidea*	OBL	2	S5	
White Turtlehead	*Chelone glabra*	OBL	6	S5	
Swamp Loosestrife	*Decodon verticillatus*	OBL	7	S5	
deer-tongue rosette grass	*Dichanthelium clandestinum*	FACW	4	S5	
Crested wood fern	*Dryopteris cristata*	OBl	8	S5	
Three-way Sedge	*Dulichium arundinaceum*	OBL	8	S5	
Common Spikerush	*Eleocharis palustris*	OBL	5	S5	
Eastern riverbank wild rye	*Elymus riparius*	FACW	6	S5	
Virginia Wildrye	*Elymus virginicus*	FACW	6	S5	
Virginia wild rye	*Elymus virginicus*	FACW	6	S5	
Boneset	*Eupatorium perfoliatum*	FACW	3	S5	
common flat-topped goldenrod	*Euthamia graminifolia*	FAC	1	S5	
Spotted Joe-Pye Weed	*Eutrochium maculatum*	OBL	4	S5	
fowl manna grass	*Glyceria striata*	OBL	6	S5	
Common sneezeweed	*Helenium autumnale*	FACW	4	S5	
Swamp sunflower	*Helianthus angustifolius*	FACW	10	S2	
Spotted Touch-me-not	*Impatiens capensis*	FACW	3	S5	
Pale Touch-me-not	*Impatiens pallida*	FACW	3	S4	
Northern Blue Flag	*Iris versicolor*	OBL	4	S5	
Canada Rush	*Juncus canadensis*	OBL	8	S5	
Soft Rush	*Juncus effusus*	OBL	2	S5	
Cardinal Flower	*Lobelia cardinalis*	FACW	7	S4S5	
Great Blue Lobelia	*Lobelia siphilitica*	FACW	5	S5	
American bugleweed	*Lycopus americanus*	OBL	4	S5	
Square-stemmed Monkey Flower	*Mimulus ringens*	OBL	6	S5	
common wild bergamot	*Monarda fistulosa*	FACU	2	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
Cinnamon Fern	*Osmunda cinnamomea*	FACW	6	S5	
Royal fern	*Osmunda regalis*	OBL	6	S5	
Lizard's Tail	*Saururus cernuus*	OBL	6	S5	
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	OBL	4	S5	
dark-green bulrush	*Scirpus atrovirens*	OBL	2	S5	
common wool grass	*Scirpus cyperinus*	OBL	4	S5	
rough-leaved goldenrod	*Solidago patula*	OBL	7	S5	
rough goldenrod	*Solidago rugosa*	FAC	1	S5	
Indian grass	*Sorghastrum nutans*	FACU	6	S5	
American bur-reed	*Sparganium americanum*	OBL	4	S5	
lance-leaved aster	*Symphyotrichum lanceolatum*	FACW	1	S5	
New England aster	*Symphyotrichum novae-angliae*	FACW	1	S5	
Purple-Stemmed Aster	*Symphyotrichum puniceum*	OBL	4	S5	
Marsh Fern	*Thelypteris palustris*	FACW	4	S5	
Blue Vervain	*Verbena hastata*	FACW	3	S5	
white vervain	*Verbena urticifolia*	FAC	2	S5	
New York ironweed	*Vernonia noveboracensis*	FACW	3	S4	
Culver's root	*Veronicastrum virginicum*	FACW	5	S2	
common golden Alexanders	*Zizia aurea*	FAC	4	S5	

Table 5-2b. PEM - Deep Emergent Marsh

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Sweet flag	*Acorus americanua*	OBL	5	S5	
river bulrush	*Bolboschoenus fluviatilis*	OBL	4	S5	

bristly sedge	*Carex comosa*	OBL	4	S5	Herbaceous plugs 3-ft spacing 15-20 pounds per acre in applicable areas
long sedge	*Carex folliculata*	OBL	7	S5	
Gray's Sedge	*Carex grayi*	FACW	7	S5	
Cartex lacustris	*Carex lacustris*	OBL	5	S5	
cyperus-like sedge	*Carex pseudocyperus*	OBL	6	S5	
three-fruited sedge	*Carex trisperma*	OBL	8	S5	
Swamp Loosestrife	*Decodon verticillatus*	OBL	7	S5	
blue flag	*Iris versicolor*	OBL	4	S5	
Canada rush	*Juncus canadensis*	OBL	8	S5	
bayonet rush	*Juncus militaris*	OBL	9	S4	
rice cut grass	*Leersia oryzoides*	OBL	4	S5	
Royal Fern	*Osmunda regalis*	OBL	6	S5	
green arrow arum	*Peltandra virginica*	OBL	6	S5	
pickerel weed	*Pontederia cordata*	OBL	4	S5	
common arrowhead	*Sagittaria latifolia*	OBL	3	S5	
Lizards tail	*Saururus cernuus*	OBL	3	S5	
three-square bulrush	*Schoenoplectus pungens*	OBL	6	S5	
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	OBL	4	S5	
Green Bulrush	*Scirpus atrovirens*	FACW	2	S5	
Woolgrass	*Scirpus cyperinus*	FACW	4	S5	
Water Parsnip	*Sium suave*	OBL	6	S5	
Bur-reed	*Sparganium americanum*	OBL	4	S5	
giant bur-reed	*Sparganium eurycarpum*	OBL	4	S5	
Wild rice	*Zizania palustris*	OBL	8	SNR	
Sweet flag	*Acorus americanua*	OBL	5	S5	
river bulrush	*Bolboschoenus fluviatilis*	OBL	4	S5	
bristly sedge	*Carex comosa*	OBL	4	S5	
long sedge	*Carex folliculata*	OBL	7	S5	
Gray's Sedge	*Carex grayi*	FACW	7	S5	

Table 5-2c. PSS – Scrub Shrub

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
speckled alder	*Alnus incana*	FACW	5	S5	450/acre Shrub clusters
Smooth alder	*Alnus serrulata*	OBL	6	S5	
black chokeberry	*Aronia melanocarpa*	FACW	7	S5	
Purple chokeberry	*Aronia prunifolia*	FACW	7	S4	
Buttonbush	*Cephalanthus occidentalis*	OBL	7	S5	
Silky dogwood	*Cornus amomum*	FACW	6	S5	
Gray dogwood	*Cornus racemosa*	FAC	2	S5	
Red osier dogwood	*Cornus sericea*	FACW	6	S5	
Common winterberry	*Ilex verticillata*	FACW	7	S5	
Northern spicebush	*Lindera benzoin*	FACW	6	S5	
Ninebark	*Physocarpus opulifolius*	FACW	7	S5	
Swamp rose	*Rosa palustris*	FACW	9	S5	
Bebbs willow	*Salix bebbiana*	FACW	3	S5	
Pussy willow	*Salix discolor*	FACW	3	S5	
shining willow	*Salix lucida*	FACW	5	S5	
meadow willow	*Salix petiolaris*	FACW	5	S5	
Silky willow	*Salix sericea*	OBL	5	S5	
Common elderberry	*Sambucus canadensis*	FACW	4	S5	
Meadow-sweet	*Spiraea alba*	FACW	3	S4	
steeplebush	*Spiraea tomentosa*	FACW	4	S5	
High bush blueberry	*Vaccinium corymbosum*	FACW	6	S5	

Northern wild raisin	*Viburnum cassinoides*	FACW	7	S5	
Arrow-wood	*Viburnum dentatum*	FAC	3	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	

Table 5-2d. PFO – Floodplain Forest

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Tree Speceis					15-20 pounds per acre seed 450/acre Shrub clusters Trees 10-25 feet apart
Red maple	*Acer rubrum*	FAC	4	S5	
Silver maple	*Acer saccharinum*	FACW	6	S5	
speckled alder	*Alnus incana*	FACW	5	S5	
Grey birch	*Betula populifolia*	FAC	4	S5	
ironwood	*Carpinus caroliniana*	FAC	6	S5	
Hackberry	*Celtis occidentalis*	FAC	7	S4	
Black gum	*Nyssa sylvatica*	FAC	7	S5	
Ninebark	*Physocarpus opulifolius*	FACW	7	S5	
American sycamore	*Platanus occidentalis*	FACW	3	S5	
Eastern cottonwood	*Populus deltoides*	FAC	2	S5	
swamp white oak	*Quercus bicolor*	FACW	7	S5	
Bur oak	*Quercus macrocarpa*	FAC	6	S4	
Pin oak	*Quercus palustris*	FACW	7	S4	
Black willow	*Salix nigra*	OBL	5	S5	
American elm	*Ulmus americana*	FACW	4	S5	
slippery elm	*Ulmus rubra*	FAC	8	S5	
Shrub Species*					
Buttonbush	*Cephalanthus occidentalis*	OBL	8	S5	
Spicebush	*Lindera benzoin*	FACW	6	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	
Silky dogwood	*Cornus amomum*	FACW	6	S5	
Gray dogwood	*Cornus racemosa*	FAC	2	S5	
Red osier dogwood	*Cornus sericea*	FACW	6	S5	
* These species listed are not an exhaustive list, additional species may be used from the PSS List					
Herbaceous**					
Jack-in-the-Pulpit	*Arisaema triphyllum*	FAC	5	S5	
False Nettle	*Boehmeria cylindrica*	OBL	7	S5	
Gray's sedge	*Carex grayi*	FACW	7	S5	
Marsh Marigold	*Caltha palustris*	OBL	4	S5	
tussock sedge	*Carex stricta*	OBL	4	S5	
Fox Sedge	*Carex vulpinoidea*	FACW	2	S5	
Blue Flag	*Iris versicolor*	OBL	4	S5	
Wood Nettle	*Laportea canadensis*	FAC	8	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
Skunk Cabbage	*Symplocarpus foetidus*	OBL	5	S5	
swamp goldenrod	*Solidago gigantea*	FACW	3	S5	
**Not an exhaustive list, additional species may be added from the PEM lists.					

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

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Tree Speceis					
Red maple	*Acer rubrum*	FAC	4	S5	

Silver maple	*Acer saccharinum*	FACW	6	S5	15-20 pounds per acre seed 450/acre Shrub clusters Trees 10-25 feet apart
yellow birch	*Betula alleghaniensis*	FAC	7	S5	
Ironwood	*Carpinus caroliniana*	FAC	6	S5	
Bitternut hickory	*Carya cordiformis*	FAC	7	S5	
Blackgum	*Nyssa sylvatica*	FAC	7	S5	
American sycamore	*Platanus occidentalis*	FACW	3	S5	
Eastern cottonwood	*Populus deltoides*	FAC	2	S5	
Swamp white oak	*Quercus bicolor*	FACW	7	S5	
American elm	*Ulmus americana*	FACW	4	S5	
Slippery elm	*Ulmus rubra*	FAC	8	S5	
Shrub Species*					
speckled alder	*Alnus incana*	FACW	5	S5	
common winterberry	*Ilex verticillata*	FACW	7	S5	
spicebush	*Lindera benzoin*	FACW	6	S5	
Arrow-wood	*Viburnum dentatum*	FAC	3	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	
* These species listed are not an exhaustive list, additional species may be used from the PSS List					
Herbaceous**					
False Nettle	*Boehmeria cylindrica*	OBL	7	S5	
tussock sedge	*Carex stricta*	OBL	4	S5	
Spotted Touch-me-not	*Impatiens capensis*	FACW	3	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
royal fern	*Osmunda regalis*	OBL	6	S5	
cinnamon fern	*Osmundastrum cinnamomeum*	FACW	6	S5	
tall meadow rue	*Thalictrum pubescens*	FACW	4	S5	
**Not an exhaustive list, additional species may be added from the PEM lists.					

Table 5-2f. PFO – Rehabilitation/Enhancement

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Tree Speceis					15-20 pounds per acre seed 450/acre Shrub clusters Trees 10-25 feet apart
Red Maple	*Acer rubrum*	FAC	2	S5	
Black gum	*Nyssa sylvatica*	FAC	5	S5	
Swamp white oak	*Quercus bicolor*	FACW	7	S5	
Bur oak	*Quercus macrocarpa*	FAC	6	S5	
Pin oak	*Quercus palustris*	FACW	7	S4	
Black willow	*Salix nigra*	OBL	2	S5	
Shrub Species*					
Chokeberry	*Aronia melanocarpa*	FACW	6	S5	
Silky dogwood	*Cornus amomum*	FACW	4	S5	
Red osier dogwood	*Cornus sericea*	FACW	5	S5	
Buttonbush	*Cephalanthus occidentalis*	OBL	7	S5	
Spicebush	*Lindera benzoin*	FAC	5	S5	
Elderberry	*Sambucus canadensis*	FACW	3	S5	
* These species listed are not an exhaustive list, additional species may be used from the PSS List					
Herbaceous**					
Grey sedge	*Carex grayi*	FACW	7	S5	
Franks sedge	*Carex frankii*	OBL	1	S2	
Pointed Broom Sedge	Carex scoparia	FACW	1	S5	
Upright Sedge	Carex stricta	OBL	4	S5	
**Not an exhaustive list, additional species may be added from the PEM lists.					

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 15-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 I**) 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 site is based on several factors. First, mitigation acreage must meet the three wetland criteria 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:

- 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. Hydrology must be met more than 50% of the monitoring period at a minimum frequency of 6 years in 10 or 8 years in 15. Any combination of inundation or shallow water table is acceptable in meeting the 14-day minimum requirement.
- 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.

Second, mitigation success will depend on the establishment of wetland community types (as described in Section 5) that replace in form and function the impacted wetlands. At Buxton Creek, the targeted cover types are shallow and deep emergent marsh, floodplain forest, red maple and hemlock hardwood forest.

Third, 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. The final performance standard of 90% shall be 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 will be native shrub species. Stem density standards will include native volunteer species. Up to 800 woody stems will be planted, as needed, based on survival. Stem density monitoring will be conducted at a frequency of 10 times in 15 years, 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 will be native tree species. Stem density standards will include native volunteer species. Up to 600 woody stems will be planted, as needed, based on survival. Stem density monitoring will be conducted at a frequency of 10 times in 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 12^{th} year, and 9 ft by the 15^{th} 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.

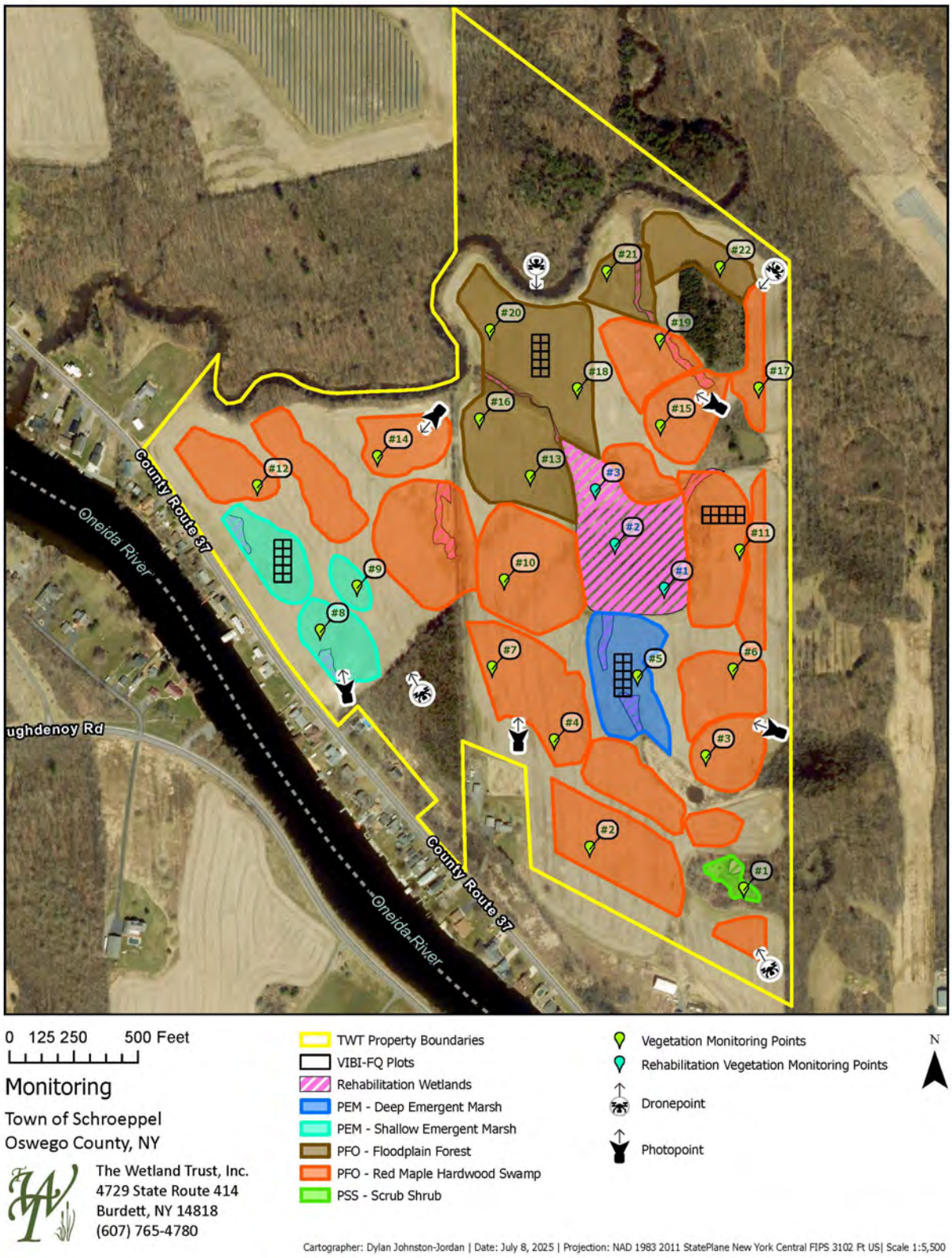
- **Stratified Randomized Permanent Plots:** To obtain a comprehensive view of characteristics at the site, random permanent plots will be established for data collection. The plots will be stratified among the different wetland cover types and mitigation types in which plots will have an equal chance of being selected in each stratum. Vegetation data such as relative cover, stem counts, tree height, and invasive coverage will be observed and documented within these plots for baseline data and post-mitigation monitoring for the 15-year period. See **Figure 6-1** for proposed permanent data collection locations.

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, maximum of 160 shall be tree species)	400[4]	400	400	400	400	400	400
Stem density in PFO areas (per acre, maximum of 200 shall be shrub species)	400[4]	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
4. Based on a beginning planting rate of 450 stems per acre with additional stems to be planted within the first three monitoring years, if needed, depending on survival. Approximately 25% of the final stem goals are expected to be native volunteer species.

Figure 6-1. Vegetation Monitoring and Photo Point Locations



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 will consist of ten (10) monitoring reports over fifteen (15) 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.

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		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			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		X
Photo sequence		X	X	X	X	X		X			X			X		X
Detailed site mapping		X	X	X	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

*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 NYSDEC approval.

8.1 Hydrology Maintenance

Immediately following construction and throughout the 15-year monitoring period, Micron, facilitated by 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 (requires USACE and NYSDEC approval),
- Adjusting height/depth of ditch fill or groundwater dams (requires USACE and NYSDEC approval),
- 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, Micron (via TWT) will closely monitor vegetative establishment following initial planting/seeding and throughout the 15-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 (requires NYSDEC approval).

8.3 General Site Maintenance

General site maintenance is anticipated to occur regularly throughout the 15-year monitoring period and beyond. Micron bears responsibility for site maintenance, as facilitated by TWT, the fee-simple owner of the site. Non-ecological maintenance tasks include but are 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 J**. 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 and NYSDEC. 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.

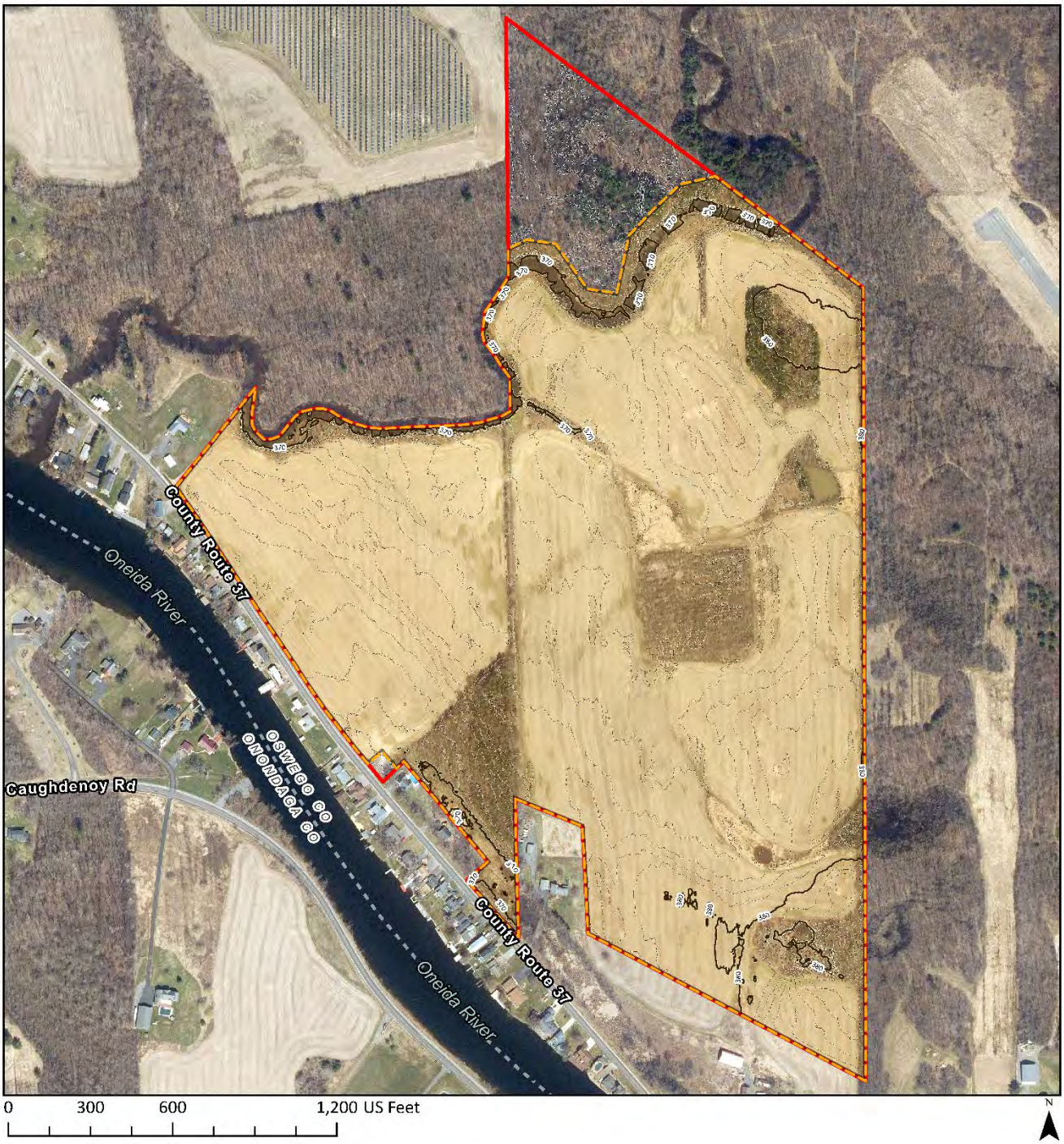
Lower Caughdenoy Creek, 195 County Road 37

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]



Conservation Easement

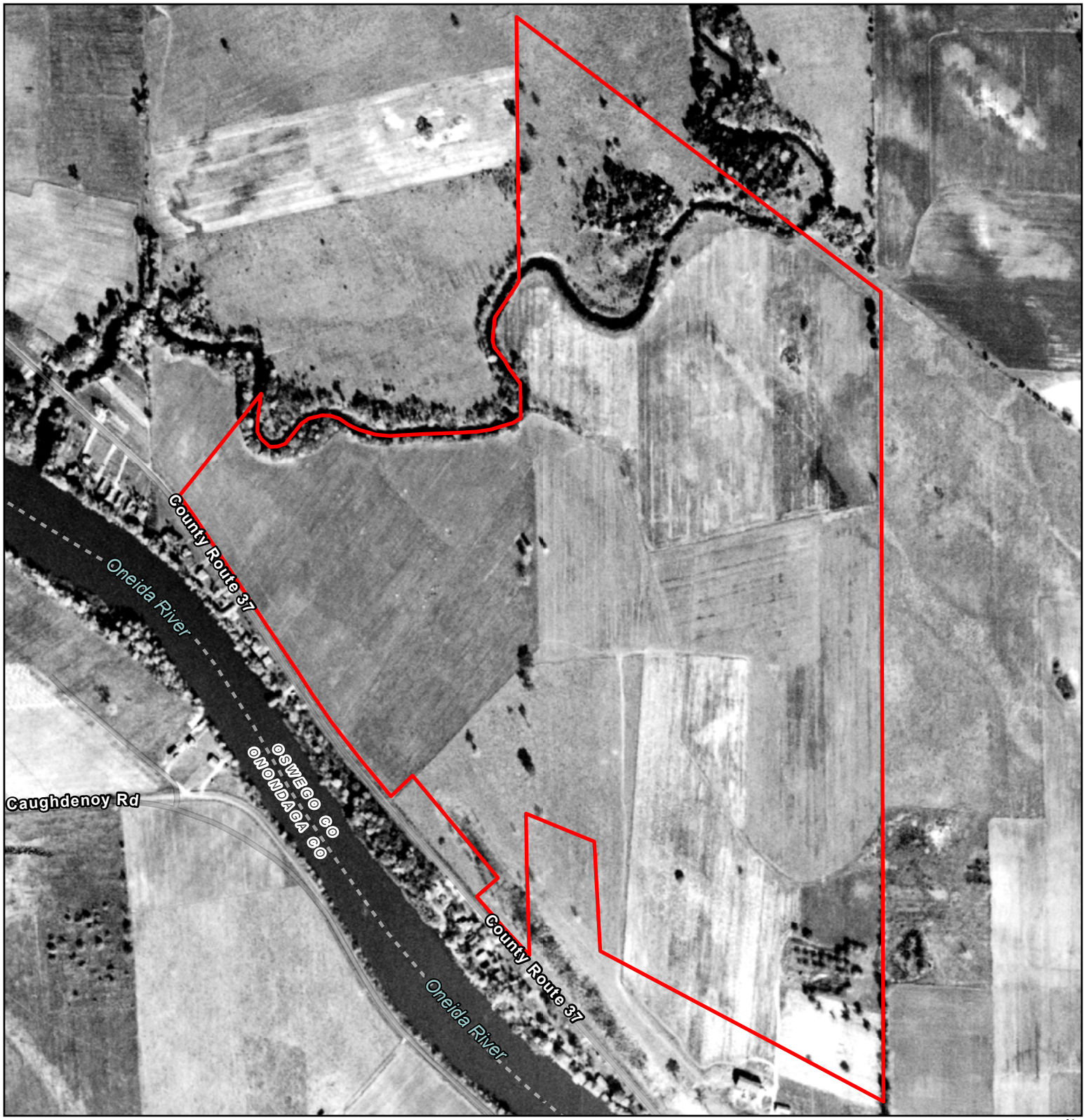
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

Contour Line (1 ft)
Conservation Easement Boundary DRAFT (109.1 ac)
TWT Property Boundary (118.1 ac)

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

TWT Property Boundary (118.1 ac)

Imagery (1955)

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

0 300 600 1,200 US Feet

N

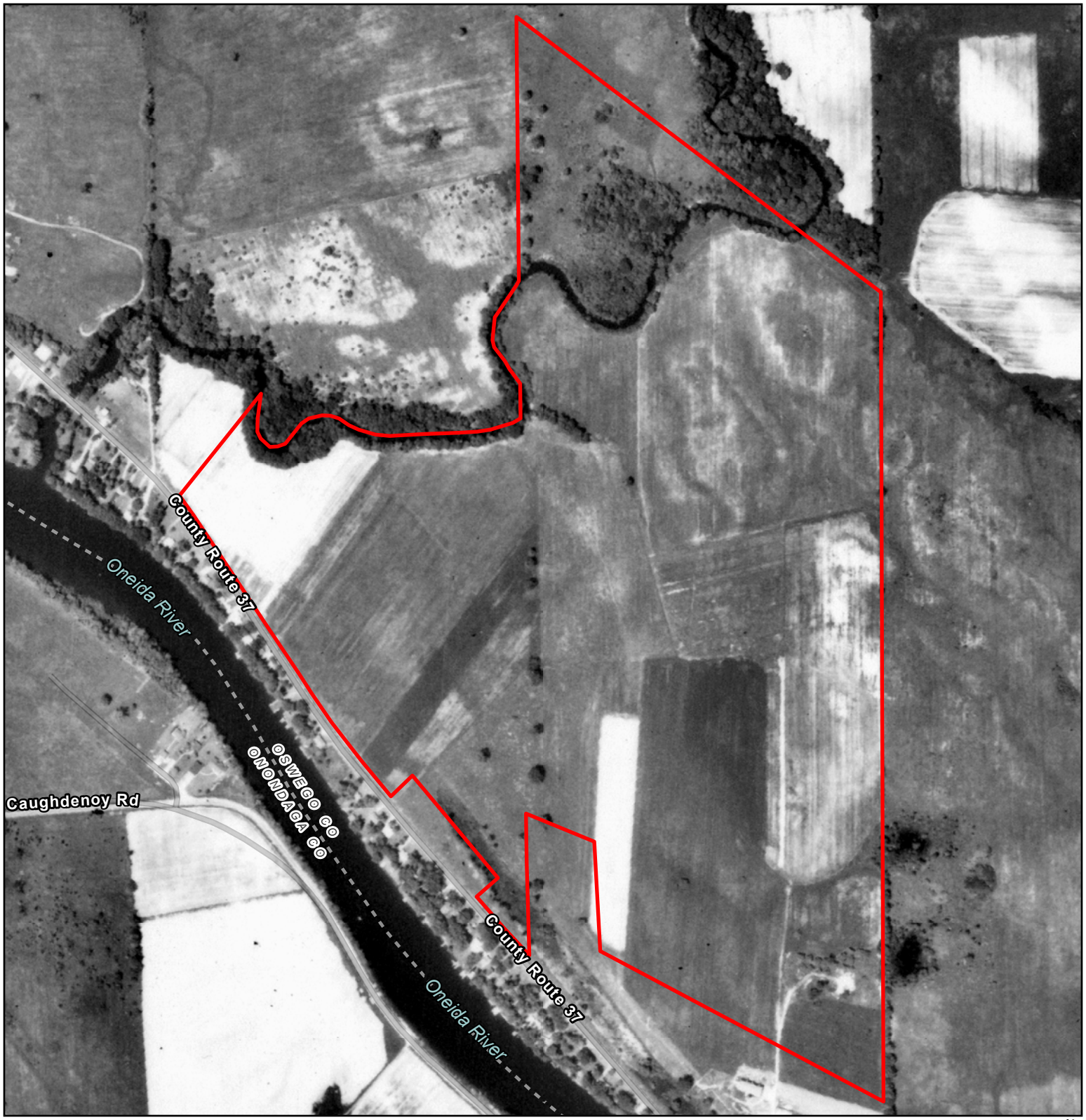
TWT Property Boundary (118.1 ac)

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



0 300 600 1,200 US Feet

N

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

0 300 600 1,200 US Feet

N

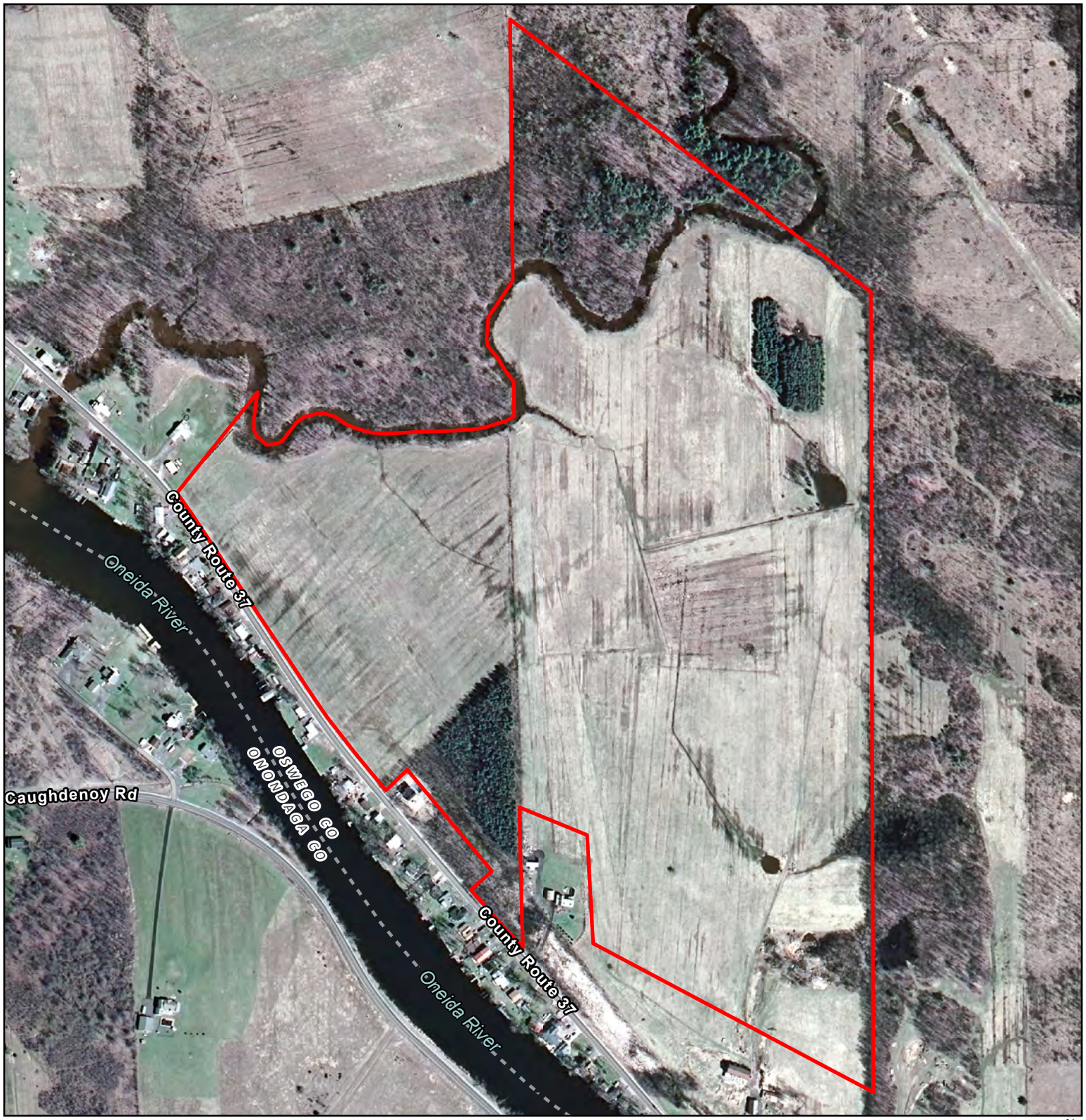
TWT Property Boundary (118.1 ac)

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



0 300 600 1,200 US Feet

N

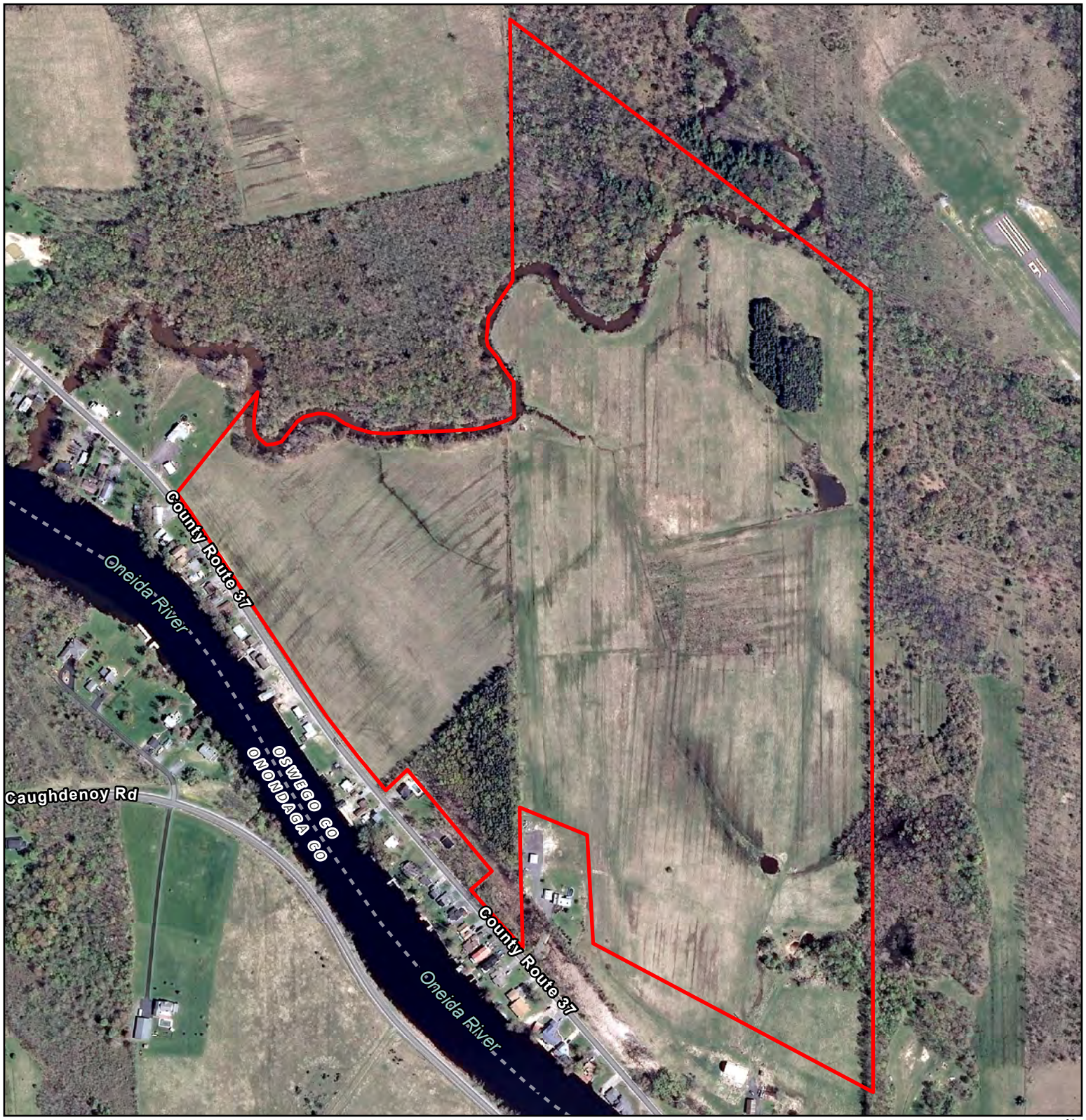
TWT Property Boundary (118.1 ac)

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

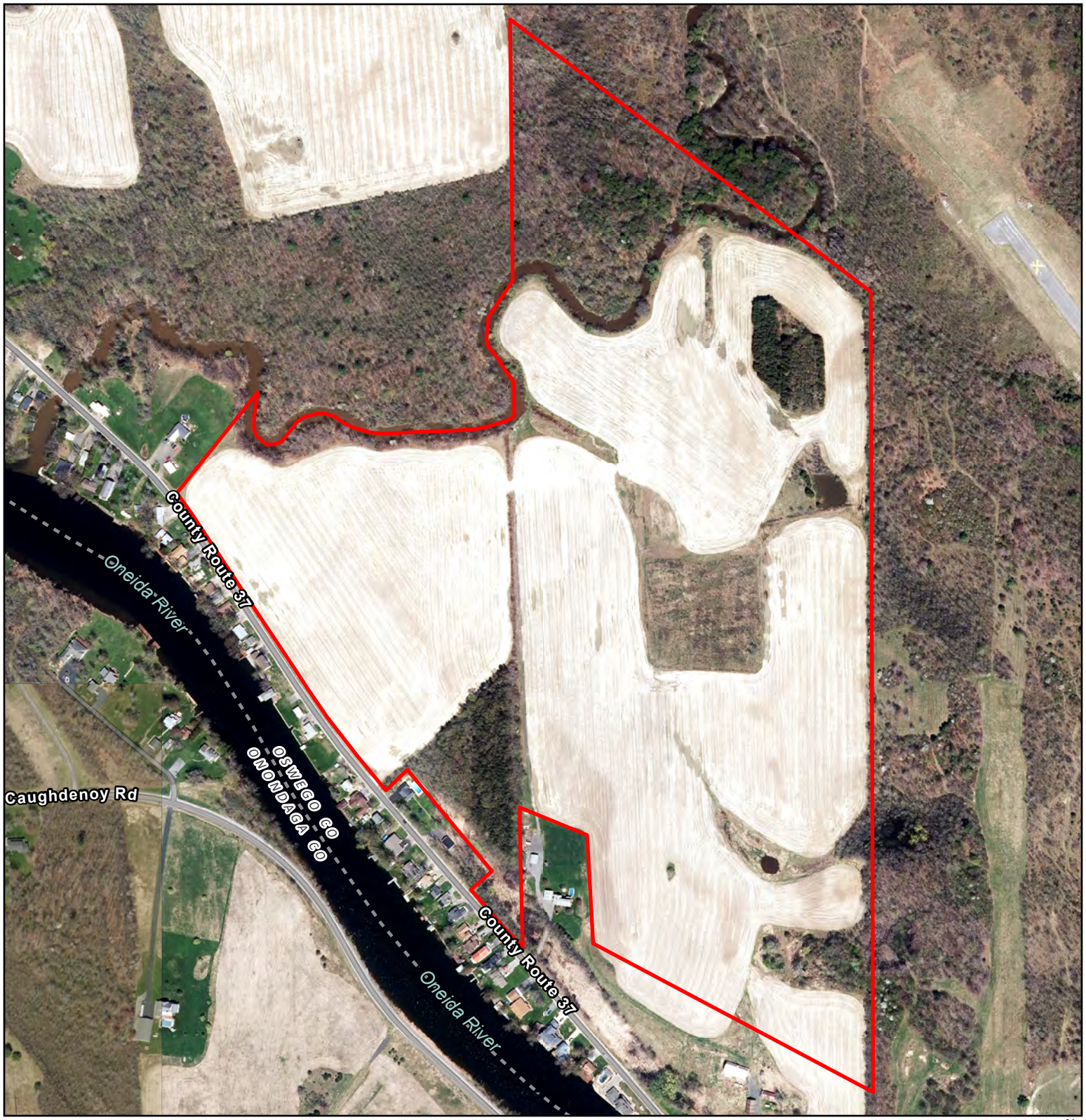


TWT Property Boundary (118.1 ac)

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



TWT Property Boundary (118.1 ac)

Figure : Imagery (2015)
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 (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.

Micron- Lower Caughdenoy Creek Mitigation Site

Wetland Delineation Report

May 2025

The Wetland Trust, Inc. (TWT) conducted delineations of wetlands, drainages, and streams at the Micron-Lower Caughdenoy Creek Wetland compensatory mitigation site located in Hastings, Oswego County, New York. The Lower Caughdenoy Creek site is located along County Route 37 and is approximately 118 acres in size. The purpose of the delineation is to determine the location and extent of wetlands and other water features on the LCC site to aid in the planning and design of the wetland mitigation plan and obtaining the required regulatory permits.

Methods

A desktop review was conducted prior to field work which included background data such as aerial photography (current and historical), soil maps, and NY State and Federal wetland maps (see Mitigation Plan). Wetland delineations were conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (Regional Supplement USACE 2012). All delineations were completed consistently with the 1995 NYSDEC Freshwater Wetlands Delineation Manual (NYSDEC 1995). All field data points were recorded with a centimeter-level accuracy GNSS receiver and mapped in ArcGIS Pro. Field visits for delineation concurrence by USACE and NYSDEC were conducted in August 2024.

Results

A total of 13.9 acres of wetland and open water features were delineated on the Lower Caughdenoy Creek mitigation site. The wetland areas are discussed as two general complexes for purposes of this summary. The entire site has primarily been active agriculture for more than 75 years. Invasive species are a consideration at each of the mitigation sites, but it is noteworthy that this site is the only one documented as having a strong presence of Glossy Buckthorn (*Frangula anlus*). This species is found in almost every wetland delineated on this site and plans are being developed to manage it prior to construction.

Wetlands Adjacent to the Oneida River and County Route 37, PEM-08, 09, 10, PFO-05 and 06

These wetlands are generally within 120 meters of the Oneida River. There are no known direct drainage connections from these wetlands to the Oneida River. They have been heavily influenced by agricultural activities and development along the Oneida River. Influences have included drainage modifications and direct filling of areas for development. All these delineated wetlands at one time were likely connected to the Oneida River. The construction of homes adjacent to the Oneida River, the construction of County Route

37, and residences on the opposite side of County Route 37 have all elevated any direct connection of these wetlands to the Oneida River. Some connections may be present during extreme flooding events.

PEM-09 and PEM-10 have been under active agriculture for more than 75 years, currently active today, and have an aquitard-like layer starting at 7 inches in some areas. Soil cracking, algal growth, and stressed plantings were all observed in these areas. These wetlands are characterized by a gently sloping to concave land feature where water periodically accumulates and stands for long periods. Soil cracking, stressed agricultural plantings (soybean in 2024), and algal growth were observed. Soil cracking is often evidence of seasonal saturation followed by drying, a common condition in temporary or seasonally inundated wetlands. Algal growth typically indicates standing or slow-moving water, which is prevalent in wetlands. It may also indicate nutrient enrichment, particularly nitrogen and phosphorus, resulting from agricultural activities. Although not a definitive indicator on its own, algal growth can support evidence of wetland hydrology when observed alongside other indicators such as cracking soils and stressed plants. These areas delineated as wetlands were verified in the field with the Agencies. These areas are shown as PEM though the only plants growing were stressed soybeans, and under the NYS Natural Heritage program these wetlands would be labeled as shallow emergent (Edinger).

PEM-08, PFO-05 and PFO-06 are all relatively intact with no obvious direct agricultural or residential impacts or connection to the Oneida River. In general, these wetlands have high clay soil content with distinct hydric soil indicators, seasonal saturation to prolonged saturation providing strong wetland hydrological indicators, and dominance of wetland vegetation. All three areas are likely linked to groundwater associated with the Oneida River with the most evidence of this in PEM-08. Additional runoff and sub-surface runoff contribute to these areas from a general east to west direction consistent with topography. Vegetation diversity is low with many invasive species.

PEM-08 is dominated by Cattail (*Typha spp.)* with a strong component of Common Reed (*Phragmites australis*). Both **PFO-05 and 06** have been impacted by Emeral Ash Borer (*Agrilus planipemmis*) with most of the Green Ash (*Fraxinus pennsylvanica*) dead or declining.

Remaining Wetlands Internal to Site (PFO-01 - 03, PSS-01 - 05, PEM-01 - 07, POW-01,02)

All of these water and wetland features eventually flow to Caughdenoy Creek except for **PSS-05**. **PSS-05** is a mined area likely used for sand on the farm. It has a small agricultural dump associated with it which is a likely sign the mining was part of the farm more than 20 years ago. It is now a depression with the established PSS cover type associated with groundwater in this area with no direct drainage leaving the area.

PEM-02, PEM-05a, PEM-05b, and PEM-07 are still actively managed for agriculture and were planted in soybeans in 2024. **PEM-07** is an outlier that is a depression area that eventually drains towards **PEM-04** and **PFO-02.** These wetlands are characterized by a gently sloping to concave land feature where water periodically accumulates and stands for long periods. Soil cracking, stressed agricultural plantings (soybean

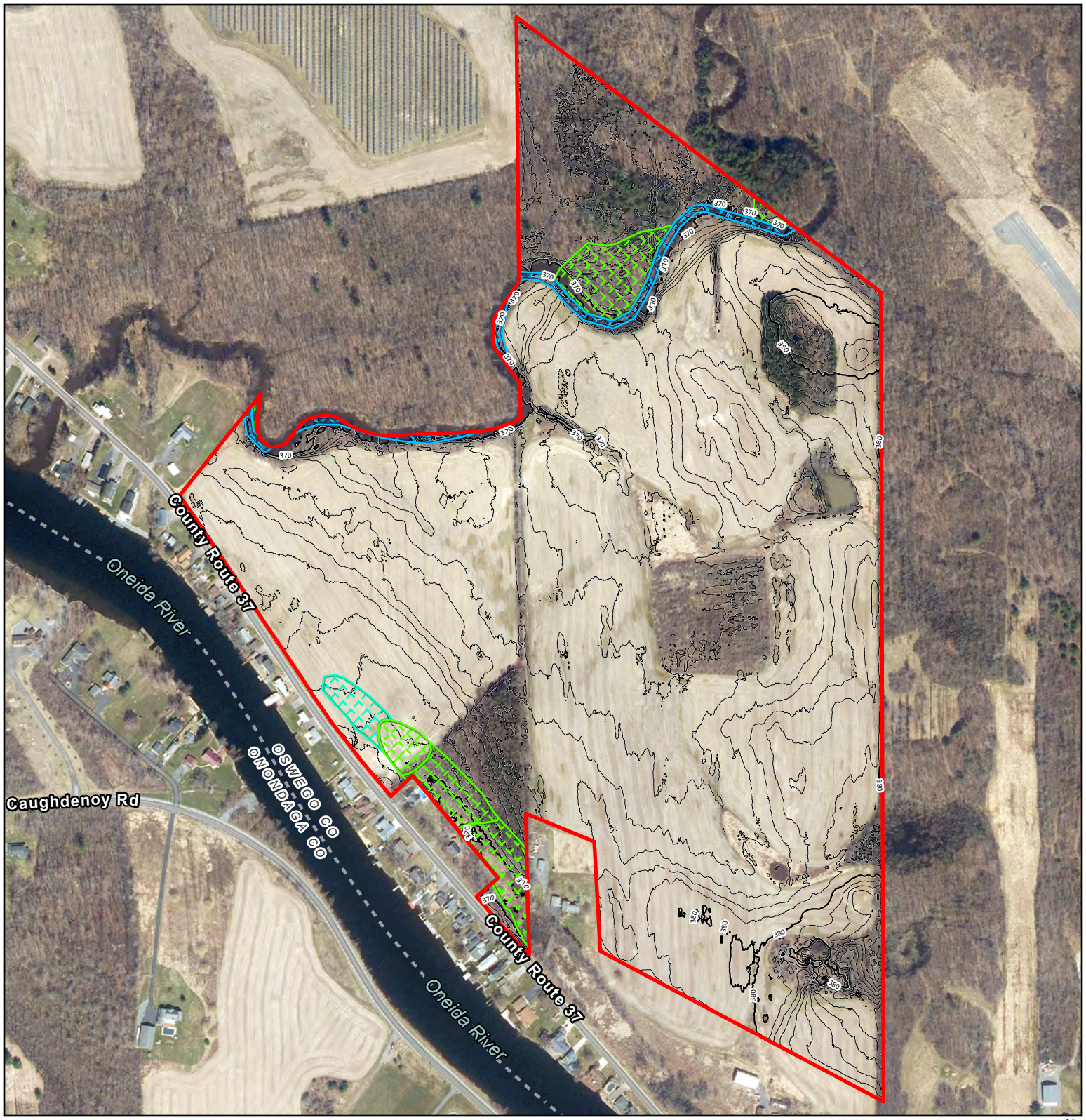
in 2024), and algal growth were observed. Soil cracking is often evidence of seasonal saturation followed by drying, a common condition in temporary or seasonally inundated wetlands. Algal growth typically indicates standing or slow-moving water, which is prevalent in wetlands. It may also indicate nutrient enrichment, particularly nitrogen and phosphorus, resulting from agricultural activities. Although not a definitive indicator on its own, algal growth can support evidence of wetland hydrology when observed alongside other indicators such as cracking soils and stressed plants. These areas delineated as wetlands were verified in the field with the Agencies.

PEM-01, PEM-02, and PSS-01 and D-14 are all connected and are separated from the rest of the wetland, water features (POW), and drainages. **PEM-02** can be best described as noted above with the addition of wetland vegetation growing, primarily sparce sedges (*Carex Spp.*). This area flows out through constructed drainage **D-14** which is dominated by wetland shrub species. **D-14** discharges along the slope of what is **PEM-01** and eventually into Caughdenoy Creek.

PFO-04, PFO-03, PSS-04, POW-02, PEM-06, PEM-05B and D-13 are the upper portion of the wetland complex that eventually drains to Caughdenoy Creek by **D-03**. **PFO-04** and **PFO-03** are primarily part of a larger wetland east of this property though they both flow to **D-03**. **PFO-03** has a younger forest component than portions to the east likely due to the history of agriculture on this property. All the wetlands mentioned were once used for farming but were likely abandoned due to concentrated runoff and persistently high-water tables. They all have a heavy presence of invasive species, **PEM-06** being dominated by Reed Canary Grass (*Phalaris arundinacea*), for example.

PFO-01, PFO-02, PSS-02, PSS-03, POW-01, PEM-03, PEM-04, PEM-05A and D-13 make up the lower portion of the wetland complex. All these wetland areas were farmed at one time and hydrology manipulated by drainage. Farming ceased in **PFO-02** the earliest with pole-sized trees dominating the area. The area likely was too difficult to drain and received a large area of runoff from surrounding agriculture and the upper wetland portions. Drainage swales are located throughout **PFO-02** as an attempt to drain this area. **PFO-01** is at another end of the that flows towards **PEM-04. PEM-03** and **PEM-04** both have been abandoned and have a strong presence of Reed Canary Grass.

Attachments: 1. State and Federal Mapped Wetlands
2. Lower Caughdenoy Creek Delineation Map
2. Delineation Summary Table
3. Data Sheets



State* and Federal Mapped Wetlands

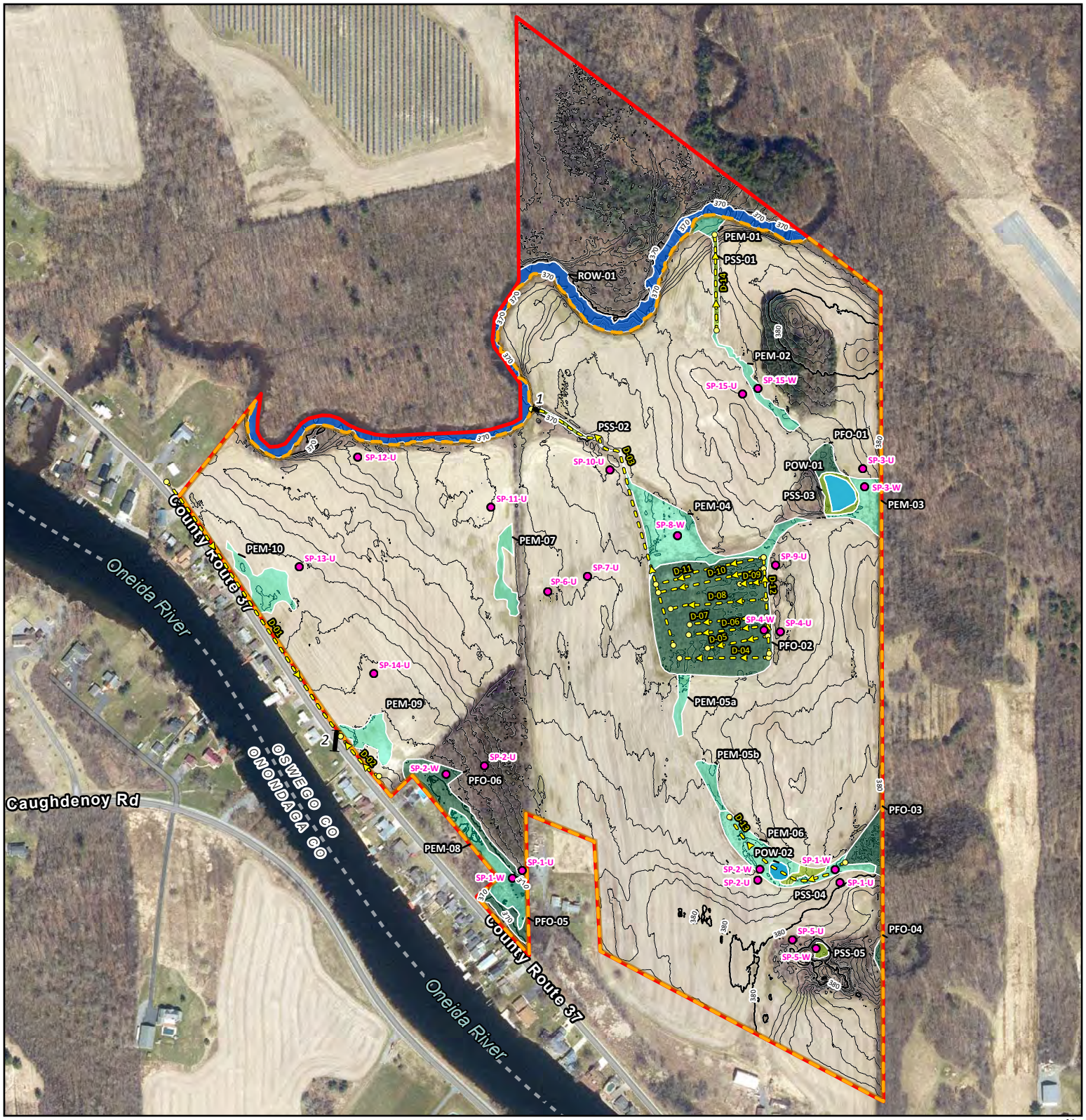
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

NWI Wetlands (6.6 ac total)
- Freshwater Emergent Wetland (0.6 ac)
- Freshwater Forested/Shrub Wetland (4.7 ac)
- Riverine (1.3 ac)
- Contour Line (1 ft)
- TWT Property Boundary (118.1 ac)

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

*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



0 300 600 1,200 US Feet

N

- 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	**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.)
- 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 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.)
- 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	**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.)
- 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? (includes capillary fringe)	Yes X	No	Depth (inches):	0

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	**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.)
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 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.)
- 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	**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.)
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 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.)
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	**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.)

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 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, 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	**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.)
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? (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: 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 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 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.)
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	**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.)
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 species	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)
- 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: 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	**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.)
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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
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:)			
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 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 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	**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.)
•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? 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 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 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 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 ____	**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.)
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? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

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 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.)
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	**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.)
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? (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 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 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: 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	**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.)
- 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 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.)
- 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	**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.)
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

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 species	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 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	**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.)
•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)	___ Water-Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Drainage Patterns (B10)
___ Saturation (A3)	___ Marl Deposits (B15)	___ Moss Trim Lines (B16)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Dry-Season Water Table (C2)
___ Sediment Deposits (B2)	X 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)		X FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required

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)			
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)			
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:)			
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 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.)
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	**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.)
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 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 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	**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.)
•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? (includes capillary fringe)	Yes	No x	Depth (inches):

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 species	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	**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.)
•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? (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, 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 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.)
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	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	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	**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.)
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 species	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 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.)
- 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	**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.)
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 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
0-12	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	**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.)
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 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	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	**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.)
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 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.)
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	**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.)
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 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.)
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	**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.)
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? (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:
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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
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:)			
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	**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.)
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	**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.)
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)

- 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)
- ____ 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? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0-4	**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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
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:)			
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.

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

American goldfinch	*Spinus tristis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
European starling	*Sturnus vulgaris*	SNA G5: not applicable in NYS and secure globally	-	No				✓		
solitary sandpiper	*Tringa solitaria*	Least concern	-	Yes			✓			
American robin	*Turdus migratorius*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
eastern kingbird	*Tyrannus tyrannus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
warbling vireo	*Vireo gilvus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
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		✓		✓		
North American beaver	*Castor canadensis*	Least concern	-	Yes		✓				
North American porcupine	*Erethizon dorsatum*	Least concern	-	Yes						✓
white-tailed deer	*Odocoileus virginianus*	Least concern	-	Yes	✓	✓	✓	✓	✓	✓
raccoon	*Procyon lotor*	Least concern	-	Yes		✓		✓	✓	
eastern cottontail	*Sylvilagus floridanus*	Least concern	-	Yes			✓	✓		
Plant											
box elder	*Acer negundo*	S5, G5, Native, CoC: 1	FAC	Yes						✓
red maple	*Acer rubrum*	Least Concern, S5, G5, Native, CoC: 4	FAC	Yes		✓	✓	✓	✓	✓
silver maple	*Acer saccharinum*	Least Concern, S5, G5, Native, CoC: 6	FACW	Yes		✓	✓			
sugar maple	*Acer saccharum*	Least Concern, S5, G5, Native, CoC: 7	FACU	Yes				✓		
common yarrow	*Achillea millefolium*	Least Concern, SNR, G5, Native, CoC: 0	FACU	Yes		✓				
sweet flag	*Acorus calamus*	Least Concern, SNR, G4	OBL	No		✓	✓			
common agrimony	*Agrimonia gryposepala*	S5, Native, CoC: 4	FACU	Yes			✓		✓	
Rhode Island bentgrass	*Agrostis capillaris*	SNA, GNR, Not native, Naturalized	FAC	No					✓	
redtop	*Agrostis gigantea*	SNA, G4G5, Not native, Naturalized	FACW	No	✓	✓			✓	✓
creeping bent	*Agrostis stolonifera*	SNA, Not native, Naturalized	FACW	No	✓				✓	
American water plantain	*Alisma subcordatum*	S5, G5, Native, CoC: 4	OBL	Yes		✓				
speckled alder	*Alnus incana*	S5, G5, Native, CoC: 5	FACW	Yes			✓			
New York fern	*Amauropelta noveboracensis*	S5, G5, Native, CoC: 4	FAC	Yes			✓			
common ragweed	*Ambrosia artemisiifolia*	S5, G5, Native, CoC: 0	FACU	Yes			✓		✓	
downy serviceberry	*Amelanchier arborea*	S5, G5, Native, CoC: 4	FACU	Yes		✓				
hog peanut	*Amphicarpaea bracteata*	S5, Native, CoC: 5	FAC	Yes		✓				
Canada anemone	*Anemone canadensis*	S5, G5, Native, CoC: 5	FACW	Yes		✓				
sweet vernal grass	*Anthoxanthum odoratum*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓	✓		✓	
Indian hemp	*Apocynum cannabinum*	S5, G5, Native, CoC: 2	FAC	Yes			✓		✓	
swamp milkweed	*Asclepias incarnata*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
common milkweed	*Asclepias syriaca*	S5, G5, Native, CoC: 0	UPL	Yes		✓	✓			✓
yellow birch	*Betula alleghaniensis*	S5, G5, Native, CoC: 7	FAC	Yes				✓		
gray birch	*Betula populifolia*	S5, G5, Native, CoC: 4	FAC	Yes					✓	
nodding beggar ticks	*Bidens cernua*	S5, G5, Native, CoC: 4	OBL	Yes					✓	
devil's beggar ticks	*Bidens frondosa*	S5, Native, CoC: 2	FACW	Yes			✓		✓	
hairy brome	*Bromus commutatus*	SNA, GNR, Not native, Naturalized	-	No			✓			
smooth brome	*Bromus inermis*	SNA, G5, Not native, Naturalized	-	No		✓	✓			
common woodland sedge	*Carex blanda*	S5, G5, Native, CoC: 4	FAC	Yes		✓				
bristly sedge	*Carex comosa*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
fringed sedge	*Carex crinita*	S5, G5, Native, CoC: 3	OBL	Yes		✓	✓			
large yellow sedge	*Carex flava*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
graceful sedge	*Carex gracillima*	S5, G5, Native, CoC: 3	FACU	Yes			✓			
lake sedge	*Carex lacustris*	S5, G5, Native, CoC: 5	OBL	Yes						✓
bladder sedge	*Carex intumescens*	S5, G5, Native, CoC: 7	FACW	Yes		✓	✓		✓	
hop sedge	*Carex lupulina*	S5, G5, Native, CoC: 7	OBL	Yes		✓	✓			
sallow sedge	*Carex lurida*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
troublesome sedge	*Carex molesta*	S4, G4, Threatened, Native, CoC: 3	FAC	Yes			✓			
cyperus-like sedge	*Carex pseudocyperus*	S5, G5, Native, CoC: 6	OBL	Yes					✓	
broom sedge	*Carex scoparia*	S5, Native, CoC: 1	FACW	Yes		✓	✓			✓
awl-fruited sedge	*Carex stipata*	S5, G5, Native, CoC: 5	OBL	Yes			✓		✓	
tussock sedge	*Carex stricta*	S5, G5, Native, CoC: 4	OBL	Yes				✓	✓	✓
fox sedge	*Carex vulpinoidea*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓		✓	✓
ironwood	*Carpinus caroliniana*	S5, G5, Native, CoC: 6	FAC	Yes				✓	✓	
bitternut hickory	*Carya cordiformis*	S5, G5, Native, CoC: 7	FAC	Yes		✓			✓	
shagbark hickory	*Carya ovata*	S5, Native, CoC: 7	FACU	Yes		✓	✓	✓	✓	
buttonbush	*Cephalanthus occidentalis*	S5, G5, Native, CoC: 7	OBL	Yes		✓				
white turtle head	*Chelone glabra*	S5, G5, Native, CoC: 6	OBL	Yes			✓		✓	
lamb's quarters	*Chenopodium album*	SNA, G5, Not native, Naturalized	FACU	No					✓	
enchanter's nightshade	*Circaea canadensis*	S5, G5, Native,CoC: 5	FACU	Yes		✓	✓			
bull thistle	*Cirsium vulgare*	SNA, GNR, Not native, Naturalized	FACU	No		✓				

silky dogwood	*Cornus amomum*	S5, G5, Native, CoC: 6	FACW	Yes	✓	✓	✓	✓	✓	✓
gray dogwood	*Cornus racemosa*	S5, G5, Native, CoC: 2	FAC	Yes		✓	✓	✓		✓
red-osier dogwood	*Cornus sericea*	S5, G5, Native, CoC: 6	FACW	Yes						✓
hawthorn	*Crataegus sp.*	-	-	-		✓				✓
common yellow nut sedge	*Cyperus esculentus*	SNR, Native, CoC: 1	FACW	Yes			✓		✓	
false yellow nut sedge	*Cyperus strigosus*	S5, G5, Native, CoC: 3	FACW	Yes			✓		✓	
orchard grass	*Dactylis glomerata*	SNA, GNR, Not native, Naturalized	FACU	No	✓				✓	
wild carrot	*Daucus carota*	SNA, GNR, Not native, Naturalized	UPL	No		✓				
water willow	*Decodon verticillatus*	S5, G5, Native, CoC: 7	OBL	Yes			✓			✓
tufted hair grass	*Deschampsia cespitosa*	SNR, Native	-	Yes					✓	
digit grass	*Digitaria eriantha*	SNA, GNR, Not native, Naturalized	-	No		✓				
smooth crab grass	*Digitaria ischaemum*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
tall flat-topped white aster	*Doellingeria umbellata*	S5, G5, Native, CoC: 4	FACW	Yes					✓	
common wood fern	*Dryopteris intermedia*	S5, G5, Native, CoC: 5	FAC	Yes		✓				✓
autumn olive	*Elaeagnus umbellata*	SNA, GNR, Not native, Naturalized	-	No		✓				
blunt spike rush	*Eleocharis obtusa*	S5, Native, CoC: 2	OBL	Yes		✓			✓	✓
fringed wilowherb	*Epilobium ciliatum*	S5, G5, Native, CoC: 3	FACW	Yes					✓	
purpleleaf willowherb	*Epilobium coloratum*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓		✓	
field horsestail	*Equisetum arvense*	S5, Native, CoC: 2	FAC	Yes				✓	✓	✓
scouringrush horsetail	*Equisetum hyemale*	S5, G5, Native, CoC: 2	FAC	Yes	✓			✓		
annual daisy fleabane	*Erigeron annuus*	S5, G5, Native, CoC: 0	FACU	Yes			✓			
small daisy fleabane	*Erigeron strigosus*	S5, Native, CoC: 0	FACU	Yes			✓			
yellow trout lily	*Erythronium americanum*	S5, G5, Native, CoC: 5	-	Yes		✓		✓		
boneset	*Eupatorium perfoliatum*	S5, G5, Native, CoC: 3	FACW	Yes			✓		✓	✓
common flat-topped goldenrod	*Euthamia graminifolia*	S5, G5, Native, CoC: 1	FAC	Yes					✓	
spotted Joe Pye weed	*Eutrochium maculatum*	S5, Native, CoC: 4	OBL	Yes	✓					
American beech	*Fagus grandifolia*	S5, G5, Native, CoC: 8	FACU	Yes				✓	✓	
common wild strawberry	*Fragaria virginiana*	S5, G5, Native, CoC: 0	FACU	Yes		✓			✓	✓
glossy buckthorn	*Frangula alnus*	SNA, GNR, Not native, Naturalized	FAC	No		✓				
white ash	*Fraxinus americana*	S5, G5, Native, CoC: 3	FACU	Yes		✓				✓
green ash	*Fraxinus pennsylvanica*	S5, G5, Native, CoC: 4	FACW	Yes	✓	✓	✓	✓	✓	✓
hedge bedstraw	*Galium album*	SNA, GNR, Not native, Naturalized	FACU	Yes	✓		✓		✓	
common marsh bedstraw	*Galium palustre*	S5, G5, Native, CoC: 3	OBL	Yes		✓			✓	
yellow avens	*Geum aleppicum*	S5, G5, Native, CoC: 3	FAC	Yes		✓	✓			
white avens	*Geum canadense*	S5, G5, Native, CoC: 5	FAC	Yes			✓			✓
town avens	*Geum urbanum*	SNA, G5, Not native, Naturalized	-	No		✓	✓			
American manna grass	*Glyceria maxima*	S5, G5, Native, CoC: 4	OBL	No			✓		✓	
fowl manna grass	*Glyceria striata*	S5, G5, Native, CoC: 6	OBL	Yes		✓	✓		✓	
soybean	*Glycine max*	SNA, GNR, Not native, Naturalized	-	-	✓	✓	✓	✓	✓	✓
marsh cubweed	*Gnaphalium uliginosum*	SNA, G5, Not native, Naturalized	FAC	No			✓			
dame's rocket	*Hesperis matronalis*	SNA, Not native, Naturalized	FACU	No	✓					
common frogbit	*Hydrocharis morsus-ranae*	SNA, GNR, Not native, Naturalized	OBL	No			✓			
Eurasian live forever	*Hylotelephium telephium*	SNA, GNR, Not native, Naturalized	-	No				✓		
St. John's wort	*Hypericum sp.*	S5, Native	-	-						✓
spotted jewelweed	*Impatiens capensis*	S5, Native, CoC: 3	FACW	Yes	✓	✓	✓		✓	
blue flag	*Iris versicolor*	S5, G5, Native, CoC: 4	OBL	Yes		✓				
soft rush	*Juncus effusus*	S5, G5, Native, CoC: 2	OBL	Yes	✓	✓	✓	✓	✓	✓
path rush	*Juncus tenuis*	S5, G5, Native, CoC: 0	FAC	Yes			✓			✓
rice cut grass	Leersia oryzoides	S5, G5, Native, CoC: 4	OBL	Yes					✓	✓
spicebush	*Lindera benzoin*	S5, Native, CoC: 6	FACW	Yes		✓	✓			
tulip poplar	*Liriodendron tulipifera*	S5, G5, Native, CoC: 6	FACU	Yes	✓				✓	
Indian tobacco	*Lobelia inflata*	S5, G5, Native, CoC: 1	FACU	Yes			✓			
great blue lobelia	*Lobelia siphilitica*	S5, G5, Native, CoC: 5	FACW	Yes						✓
tall rye grass	*Lolium arundinace*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
Japanese honeysuckle	*Lonicera japonica*	SNA, GNR, Not native, Naturalized	FACU	No		✓				
honeysuckle	*Lonicera spp.*	-	-	No	✓	✓	✓	✓	✓	✓
Tatarian honeysuckle	*Lonicera tatarica*	SNA, GNR, Not native, Naturalized	FACU	No		✓	✓			✓
water purslane	*Ludwigia palustris*	S5, G5, Native, CoC: 4	OBL	Yes	✓		✓		✓	
water horehound	*Lycopus americanus*	S5, G5, Native, CoC: 4	OBL	Yes			✓		✓	
moneywort	*Lysimachia nummularia*	SNA, GNR, Not native, Naturalized	FACW	No	✓	✓		✓	✓	
purple loosestrife	*Lythrum salicaria*	SNA, Non native, Naturalized	OBL	No	✓	✓	✓	✓	✓	
Canada mayflower	*Maianthemum canadense*	S5, G5, Native, CoC: 5	FACU	Yes				✓		
ostrich fern	*Matteuccia struthiopteris*	S4, G5, Native, CoC: 5	FAC	Yes			✓			
white sweet clover	*Melilotus albus*	SNA, G5, Not native, Naturalized	FACU	No						✓
Allegheny monkey flower	*Mimulus ringens*	S5, G5, Native, CoC: 6	OBL	Yes					✓	
blackgum	*Nyssa sylvatica*	S5, G5, Native, CoC: 7	FAC	Yes			✓			
sensitive fern	*Onoclea sensibilis*	S5, G5, Native, CoC: 2	FACW	Yes	✓	✓	✓	✓	✓	✓
royal fern	*Osmunda regalis*	S5, G5, Native, CoC: 6	OBL	Yes			✓			
cinnamon fern	*Osmundastrum cinnamomeum*	S5, G5, Native, CoC: 6	FACW	Yes			✓			
yellow wood sorrel	*Oxalis dillenii*	S5, Native, CoC: 0	FACU	Yes		✓			✓	
fall panic grass	*Panicum dichotomiflorum*	S5, G5, Native, CoC: 1	FACW	Yes						✓
Virginia creeper	*Parthenocissus quinquefolia*	S5, G5, Native, CoC: 4	FACU	Yes		✓	✓			

green arrow arum	*Peltandra virginica*	S5, G5, Native, CoC: 6	OBL	Yes		✓				
water pepper	*Persicaria hydropiper*	SNA, G5, Not native, Naturalized	OBL	No					✓	
lady's thumb	*Persicaria maculosa*	SNA, G5, Not native, Naturalized	FAC	No			✓			
arrow-leaved tearthumb	*Persicaria sagittata*	S5, Native, CoC: 4	OBL	Yes			✓			
jumpseed	*Persicaria virginiana*	S5, Native, CoC: 5	FAC	Yes		✓	✓		✓	
reed canary grass	*Phalaris arundinacea*	SNR, G5, Native, CoC: 0	FACW	No	✓	✓	✓	✓	✓	✓
common Timothy	*Phleum pratense*	SNA, GNR, Not native, Naturalized	FACU	No		✓			✓	
common reed	*Phragmites australis*	SNA, G5, Not native, Naturalized	FACW	No	✓	✓	✓			
pokeweed	*Phytolacca americana*	S5, G5, Native, CoC: 0	FACU	Yes			✓			
Norway spruce	*Picea abies*	SNA, G5, Not native, Naturalized	-	No		✓	✓	✓		
red spruce	*Picea rubens*	S5, G5, Native, CoC: 6	FACU	Yes		✓				
white pine	*Pinus strobus*	S5, G5, Native, CoC: 3	FACU	Yes		✓		✓		
English plantain	*Plantago lanceolata*	SNA, Not native, Naturalized	FACU	No	✓	✓		✓	✓	
common plantain	*Plantago major*	SNA, G5, Not native, Naturalized	FACU	No	✓			✓	✓	✓
northern tubercled orchid	*Platanthera flava*	S4, G4, Native, CoC: 3	FACW	Yes			✓			
annual blue grass	*Poa annua*	SNA, Non native, Naturalized	FACU	No				✓		
wood bluegrass	*Poa nemoralias*		FACU	No			✓			
common Kentucky blue grass	*Poa pratensis*	SNA, G5, Not native, Naturalized	FACU	No		✓			✓	✓
mayapple	*Podophyllum peltatum*	S5, Native, CoC: 5	FACU	Yes			✓	✓		
eastern cottonwood	*Populus deltoides*	S5, G5, Native, CoC: 2	FAC	Yes		✓		✓		
quaking aspen	*Populus tremuloides*	S5, G5, Native, CoC: 3	FACU	Yes	✓	✓	✓	✓	✓	✓
oldfield cinquefoil	*Potentilla simplex*	S5, G5, Native, CoC: 0	FACU	Yes		✓				
Eurasian selfheal	*Prunella vulgaris*	SNA, G5, Not native, Naturalized	FAC	No					✓	
pin cherry	*Prunus pensylvanica*	S5, Native, CoC: 4	FACU	Yes		✓				
black cherry	*Prunus serotina*	S5, G5, Native, CoC: 4	FACU	Yes		✓	✓	✓	✓	
bracken fern	*Pteridium aquilinum*	S5, G5, Native, CoC: 3	FACU	Yes			✓			
white oak	*Quercus alba*	S5, Native, CoC: 7	FACU	Yes		✓				
red oak	*Quercus rubra*	S5, Native, CoC: 7	FACU	Yes		✓	✓			
tall buttercup	*Ranunculus acris*	SNA, G5, Not native, Naturalized	FAC	No	✓	✓			✓	
creeping buttercup	*Ranunculus repens*	SNA, GNR, Not native, Naturalized	FAC	No					✓	
cursed crowfoot	*Ranunculus sceleratus*	SNR, Native, CoC: 3	OBL	Yes	✓			✓		
Japanese knotweed	*Reynoutria japonica*	SNA, Not native, Naturalized	FACU	No				✓		
alder buckthorn	*Rhamnus alnifolia*	S4, G5, Native, CoC: 9	OBL	Yes		✓				
buckthorn	*Rhamnus cathartica*	SNA, GNR, Not native, Naturalized	FAC	No		✓	✓		✓	✓
staghorn sumac	*Rhus typhina*	S5, G5, Native, CoC: 1	-	Yes		✓				
multiflora rose	*Rosa multiflora*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓	✓	✓	✓	✓
swamp rose	*Rosa palustris*	S5, G5, Native, CoC: 9	OBL	Yes				✓		✓
common blackberry	*Rubus allegheniensis*	S5, G5, Native, CoC: 3	FACU	Yes		✓	✓			
swamp dewberry	*Rubus hispidus*	S5, G5, Native, CoC: 7	FACW	Yes			✓			
red raspberry	*Rubus ideaus*	SNA, G5, Not native, Naturalized	FACU	No		✓	✓			
dwarf raspberry	*Rubus pubescens*	S5, Native, CoC: 8	FACW	Yes			✓			
sheep sorrel	*Rumex acetosella*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
curly dock	*Rumex crispus*	SNA, GNR, Not native, Naturalized	FAC	No	✓	✓	✓		✓	✓
broad-leaved dock	*Rumex obtusifolius*	SNA, Not native, Naturalized	FAC	No		✓			✓	
swamp dock	*Rumex verticillatus*	S5, G5, Native, CoC: 6	OBL	Yes			✓			
Bebb's willow	*Salix bebbiana*	S5, G5, Native, CoC: 3	FACW	Yes			✓			
pussy willow	*Salix discolor*	S5, G5, Native, CoC: 3	FACW	Yes		✓	✓	✓		
black willlow	*Salix nigra*	S5, G5, Native, CoC: 5	OBL	Yes		✓				
basket willow	*Salix purpurea*	SNA, G5, Not native, Naturalized	FACW	No			✓			
common elderberry	*Sambucus nigra*	S5, G5, Native, CoC: 4	FACW	Yes				✓		
lizard's tail	*Saururus cernuus*	S5, G5, Native, CoC: 6	OBL	Yes		✓				
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
dark-green bulrush	*Scirpus atrovirens*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓			
woolgrass	*Scirpus cyperinus*	S5, G5, Native, CoC: 4	OBL	Yes		✓		✓	✓	✓
mad dog skullcap	*Scutellaria lateriflora*	S5, G5, Native, CoC: 7	OBL	Yes			✓			
horse nettle	*Solanum carolinense*	S5, Native, CoC: 0	FACU	Yes					✓	
bitter-sweet nightshade	*Solanum dulcamara*	SNA, Not native, Naturalized	FAC	No		✓	✓			
tall goldenrod	*Solidago altissima*	S5, Native, CoC: 1	FACU	Yes		✓				✓
Canada goldenrod	*Solidago canadensis*	S5, G5, Native, CoC: 0	FACU	Yes	✓		✓		✓	
swamp goldenrod	*Solidago gigantea*	S5, G5, Native, CoC: 3	FACW	Yes		✓			✓	✓
common wrinkle-leaved goldenr	*Solidago rugosa*	S5, G5, Native, CoC: 1	FAC	Yes	✓	✓	✓		✓	✓
spiny-leaved sow thistle	*Sonchus asper*	SNA, GNR, Not native, Naturalized	FACU	No			✓	✓		
green-fruited bur-reed	*Sparganium chlorocarpum*	S5, Native, CoC: 4	OBL	Yes			✓			
grass-leaved stitchwort	*Stellaria graminea*	SNA, GNR, Not native, Naturalized	UPL	No					✓	
white panicle aster	*Symphyotrichum lanceolatum*	S5, G5, Native, CoC: 1	FACW	Yes			✓		✓	✓
calico aster	*Symphyotrichum lateriflorum*	S5, G5, Native, CoC: 0	FAC	Yes		✓			✓	
new england aster	*Symphyotrichum novae-angliae*	S5, Native, CoC: 1	FACW	Yes						✓
purple-stemmed aster	*Symphyotrichum puniceum*	S5, G5, Native, CoC: 4	OBL	Yes	✓		✓		✓	✓
skunk cabbage	*Symplocarpus foetidus*	S5, G5, Native, CoC: 5	OBL	Yes				✓		
common dandelion	*Taraxacum officinale*	SNA, G5, Not native, Naturalized	FACU	No	✓	✓	✓	✓	✓	✓
marsh fern	*Thelypteris palustris*	S5, G5, Native, CoC: 4	FACW	Yes		✓				
American basswood	*Tilia americana*	S5, G5, Native, CoC: 7	FACU	Yes			✓			

poison ivy	*Toxicodendron radicans*	S5, Native, CoC: 3	FAC	Yes	✓	✓	✓	✓	✓	✓
red clover	*Trifolium pratense*	SNA, Not native, Naturalized	FACU	No	✓			✓	✓	✓
white clover	*Trifolium repens*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓			✓	✓
red trillium	*Trillium erectum*	S5, G5, Native, CoC: 7	FACU	Yes				✓		
white trillium	*Trillium grandiflorum*	S5, G5, Native, CoC: 7	-	Yes				✓		
eastern hemlock	*Tsuga canadensis*	S5, G5, Native, CoC: 7	FACU	Yes				✓	✓	
tower mustard	*Turritis glabra*	S5, Native, CoC: 2	UPL	No			✓			
coltsfoot	*Tussilago farfara*	SNA, GNR, Not native, Naturalized	FACU	No		✓				
narrowleaf cattail	*Typha angustifolia*	S5, G5, Native, CoC: 1	OBL	No			✓			✓
hybrid cattail	*Typha glauca*	SNR, GNR, Native	OBL	No	✓	✓	✓			
wide-leaved cattail	*Typha latifolia*	S5, G5, Native, CoC: 1	OBL	Yes		✓	✓			
cattail	*Typha sp.*	-	OBL	-	✓	✓	✓	✓	✓	✓
American elm	*Ulmus americana*	S5, G5, Native, CoC: 4	FACW	Yes		✓	✓	✓		✓
false hellebore	*Veratrum viride*	S5, G5, Native, CoC: 4	FACW	Yes				✓		
moth mullein	*Verbascum blattaria*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
blue vervain	*Verbena hastata*	S5, Native, CoC: 3	FACW	Yes	✓	✓			✓	
smooth arrowwood	*Viburnum dentatum*	S5, Native, CoC: 3	FAC	Yes	✓	✓	✓		✓	✓
nannyberry	*Viburnum lentago*	S5, G5, Native, CoC: 4	FAC	Yes		✓	✓		✓	✓
tufted vetch	*Vicia cracca*	SNA, G5, Not native, Naturalized	-	No			✓			✓
common blue violet	*Viola sororia*	S5, Native, CoC: 3	FAC	Yes		✓				
riverbank grape	*Vitis riparia*	S5, G5, Native, CoC: 3	FAC	Yes		✓	✓			✓

United States Department of the Interior

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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
Zip: 14818
Email kirsten.gerhardt@gmail.com
Phone: 3028242336

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

July 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 those with a New York State Natural Heritage Invasiveness ranking of high or very high. Any others identified by NYSDEC or USACE shall be incorporated into this ISMP.

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 or leaving off-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**: To effectively prevent the introduction or spread of invasive species without disrupting construction activities, the following cleaning protocols will be implemented:
    - **Incoming Equipment:** All equipment entering the site will be visually inspected by onsite construction monitors. If soil, plant material, or debris is observed, equipment will be cleaned prior to entering sensitive work areas using appropriate methods such as manual removal or pressure washing.
    - **Active Monitoring During Construction:** Construction monitors will observe operations and identify equipment that has entered areas with known or suspected invasive species presence, particularly during wet conditions or where vegetative debris is likely to accumulate.
    - **Equipment Exit Procedures:** Any equipment identified as having operated in areas with potential for invasive seed or propagule exposure will be cleaned using onsite pressure washing

stations before leaving the site or transitioning between sensitive areas. This will help prevent the transfer of invasive material both within and beyond the project boundaries.

- **Seasonal Considerations:** Construction monitors may increase cleaning vigilance during key seed dispersal periods or when conditions increase the likelihood of soil and plant matter transport.
- **Compliance and Documentation:** Construction monitors will document cleaning efforts as part of routine field oversight.

- **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 (i.e. integrated pest management principles).

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 (**90% native cover** standard set in the mitigation plan), 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:
    - 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: (Preferred Method)
    - Hand-pull small infestations, removing all roots.
    - Cut flower heads before seed drop to prevent spread.
2. Biological Control (Unlikely to be implemented due to abundance of beetles throughout the great lakes region):
    - Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
    - Any releases would be monitored over multiple years to assess impact.
3. Chemical Control:
    - Spot treat with glyphosate-based pesticide in late summer.

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)

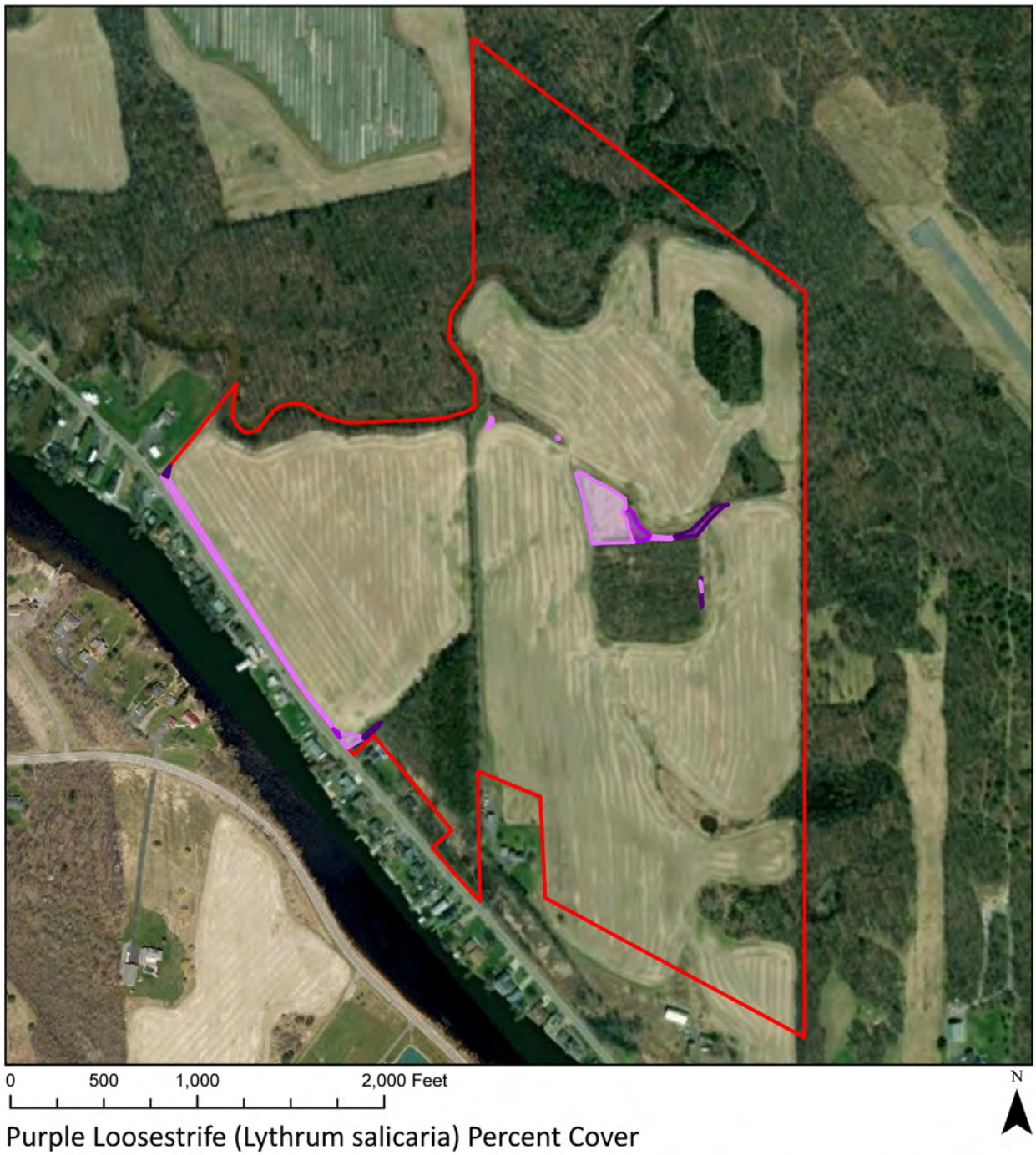

Figure 8-2. Baseline Reed Canary Grass Percent Cover (2024)

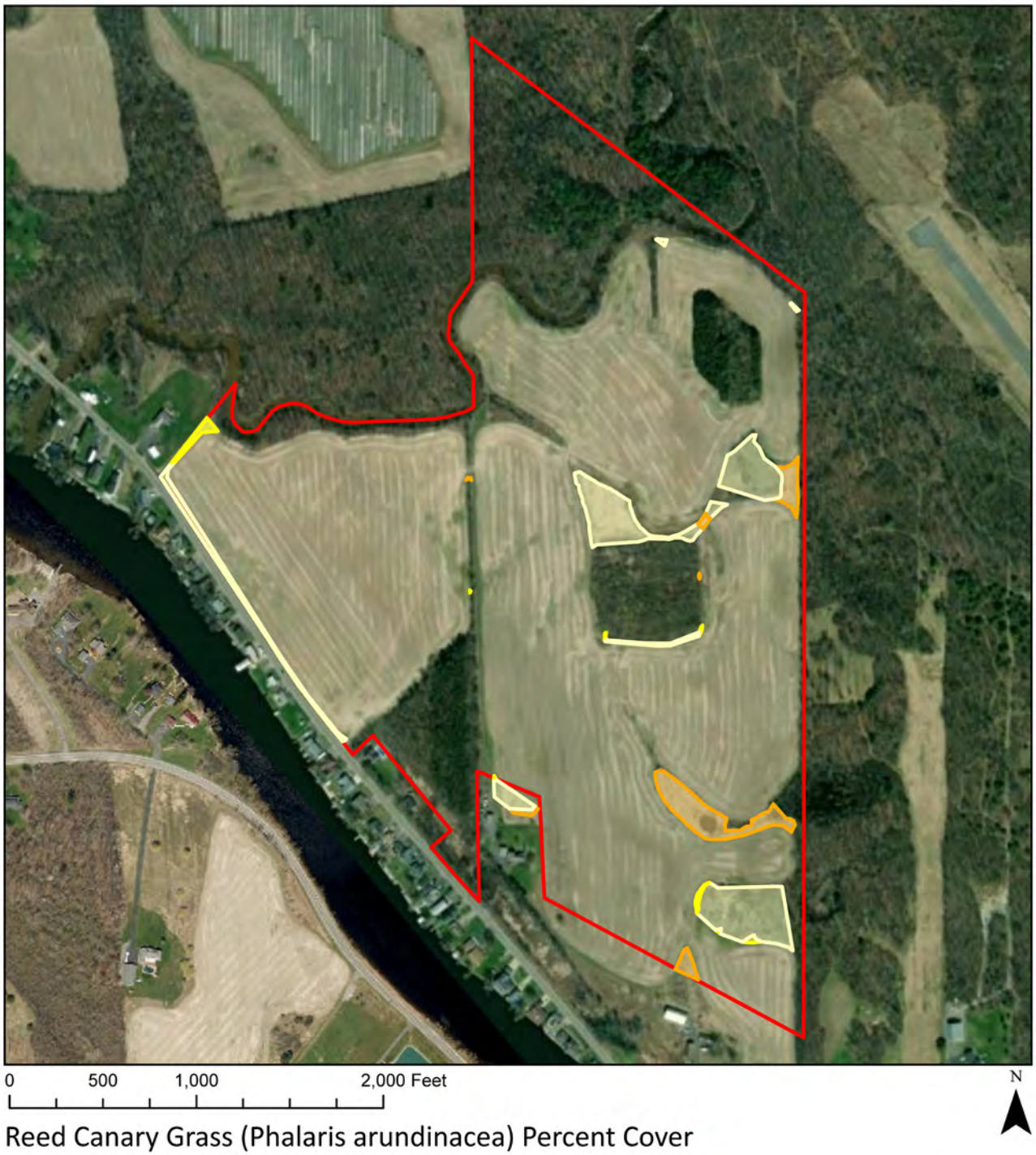

Figure 8-3. Baseline Phragmites Percent Cover (2024)

Figure 8-4. Baseline Cattail Percent Cover (2024)

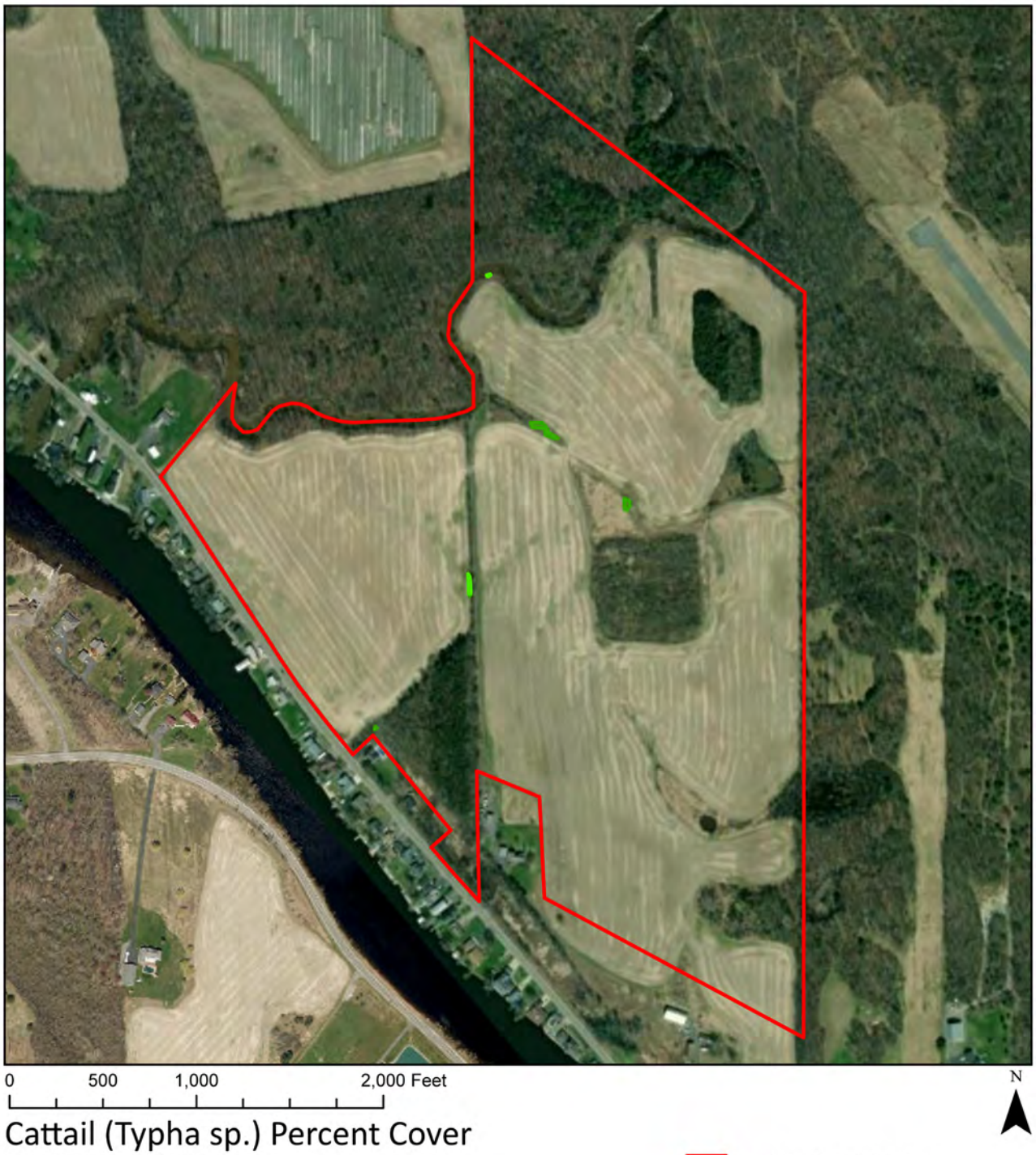

Figure 8-4 Baseline Glossy Buckthorn Percent Cover (2024)

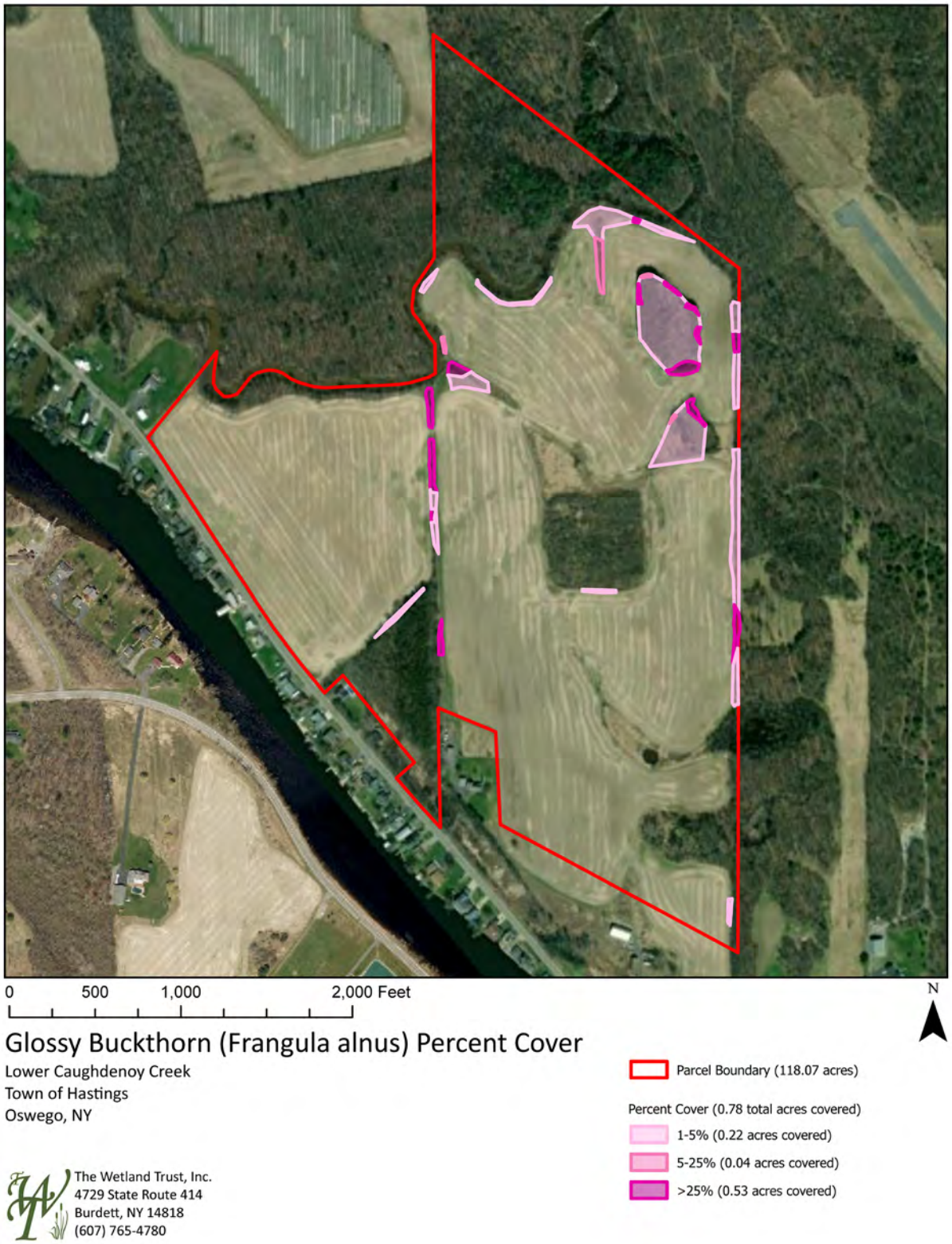

Table 8-1: Invasive Species at Lower Caughdenoy Creek				
Invasive Species	**1-5% Cover (Affected**	**5-25% Cover (Affected**	**>25% Cover (Affected**	**Total Area (Affected**
Glossy Buckthorn (*Frangula alnus*)	4.29	0.17	0.73	5.19
Common Reed (*Phragmites australis*)	0.48	0.02	0.10	0.60
Reed Canary 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

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 Trust)	
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 = 5,208feet^3/27feet^3/yard^3 = 193yards^3 x 1.5-tons/yard^3 = 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^3/27feet^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.

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Appendix I.

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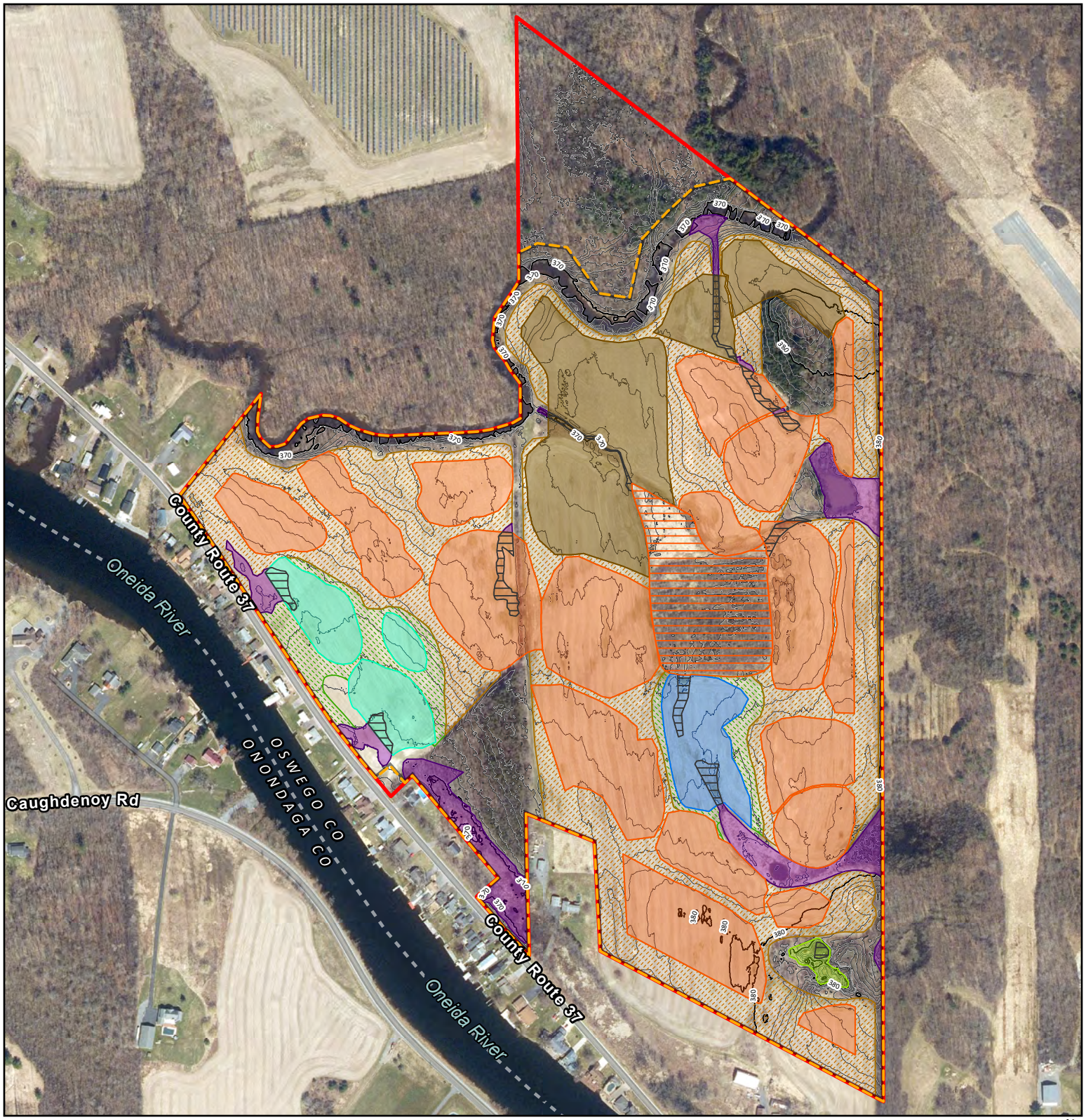


0 300 600 1,200 US Feet

N

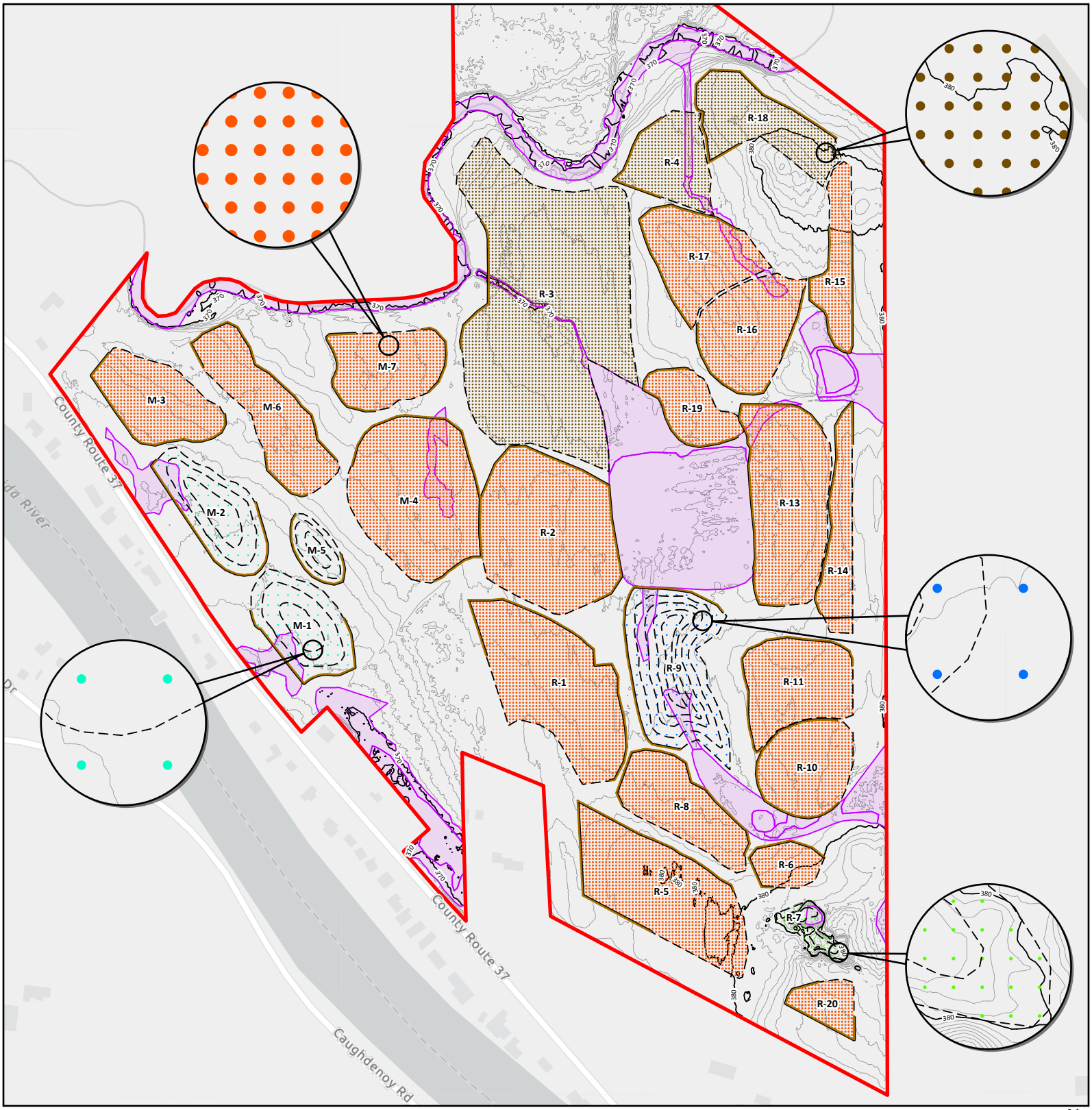
Site Plan

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

- Existing Wetland Preservation (5 ac)
- Existing Wetland Rehabilitation (6.6 ac Total)
  - Incidental (1.5 ac)
  - Additional: PFO - Red Maple Hardwood Swamp (5.1 ac)
- Mitigation Wetlands (53 ac Total / 51.5 ac Reestablishment / 1.5 ac Incidental Rehabilitation)
  - PEM - Shallow Emergent Marsh (3.6 ac Total / 3.3 ac Reest. / 0.3 ac Incidental Rehab)
  - PEM - Deep Emergent Marsh (2.7 ac Total / 2.4 ac Reest. / 0.3 ac Incidental Rehab)
  - PSS - Scrub Shrub (0.4 ac Total / 0.35 ac Reest. / 0.05 ac Incidental Rehab)
  - PFO - Floodplain Forest (11.4 ac Total / 11.2 ac Reest. / 0.2 ac Incidental Rehab)
  - PFO - Red Maple Hardwood Swamp (34.8 ac Total / 34.2 ac Reest. / 0.6 ac Incidental Rehab)
- Upland Buffer (28.7 ac Total)
  - Herbaceous (3.6 ac)
  - Shrub / Forest (25.1 ac)
- Contour Line (1 ft)
- Conservation Easement Boundary DRAFT (109.1 ac)
- TWT Property Boundary (118.1 ac)

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

Cartographer: Michelle Herman | Date: 2 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse



0 250 500 1,000 US Feet

N

Wetland Grading Plan

Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY

— Mitigation Wetland Berms / Groundwater Dams (Not to Scale; will not Exceed 3 ft H)

Mitigation Wetland Pit and Mound Specifications (Average)

- PEM Shallow Emergent Marsh: 24 in H x 36 in Dia, 30 ft Spacing
- PEM Deep Emergent Marsh: 30 in H x 36 in Dia, 30 ft Spacing
- PSS Scrub Shrub: 4 in H x 12 in Dia, 10 ft Spacing
- PFO Floodplain Forest: 12 in H x 36 in Dia, 10 ft Spacing
- PFO Red Maple Hardwood Swamp: 6 in H x 48 in Dia, 10 ft Spacing

Existing Wetlands (13.9 ac)

Mitigation Wetland Contours (0.5 ft)

Existing Contours (1 ft)

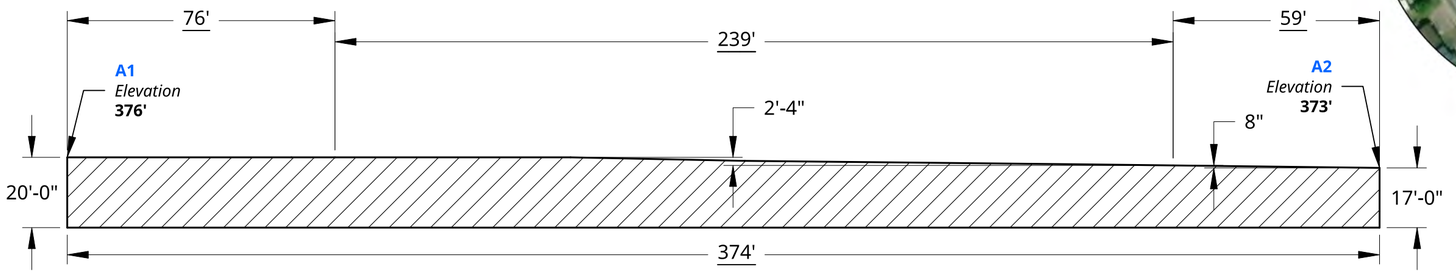
TWT Property Boundary (118.1 ac)

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

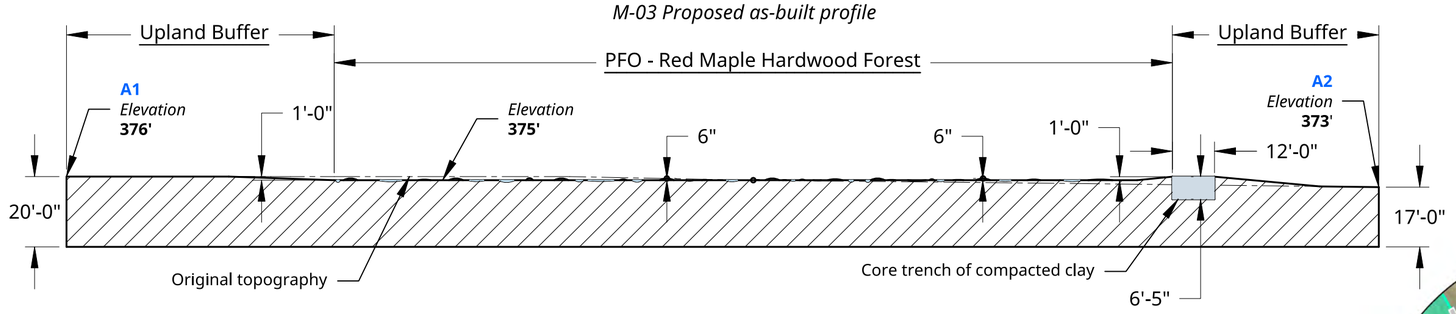
Cartographer: Michelle Herman | Date: 14 May 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse

Lower Caughdenoy Creek Wetland Cross Sections: PFO - Red Maple Hardwood Forest and PEM - Shallow Emergent Marsh

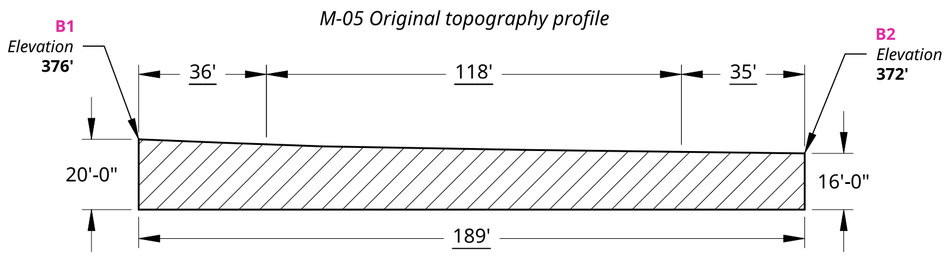
M-03 Original topography profile



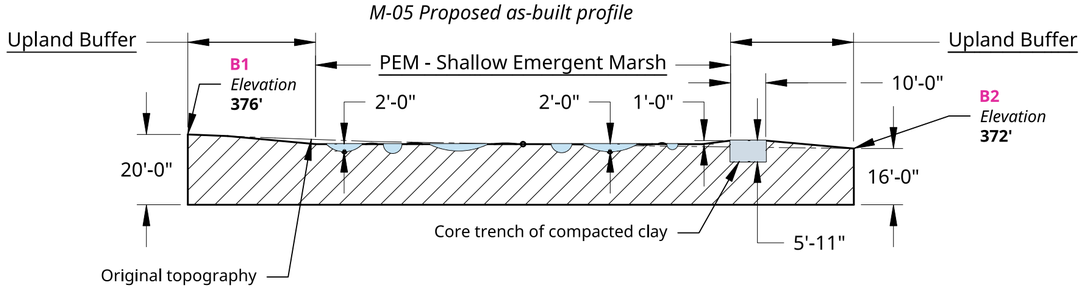
M-03 Proposed as-built profile

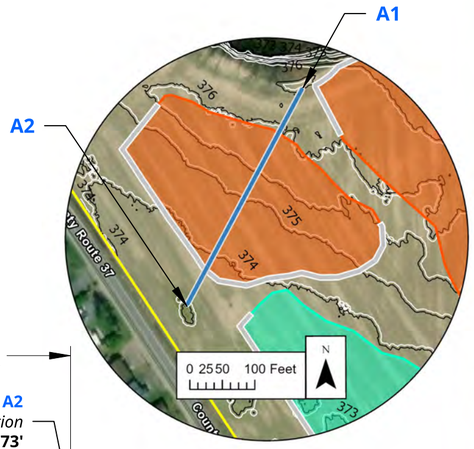


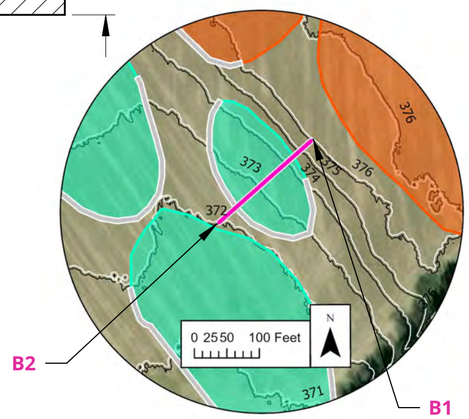
M-05 Original topography profile

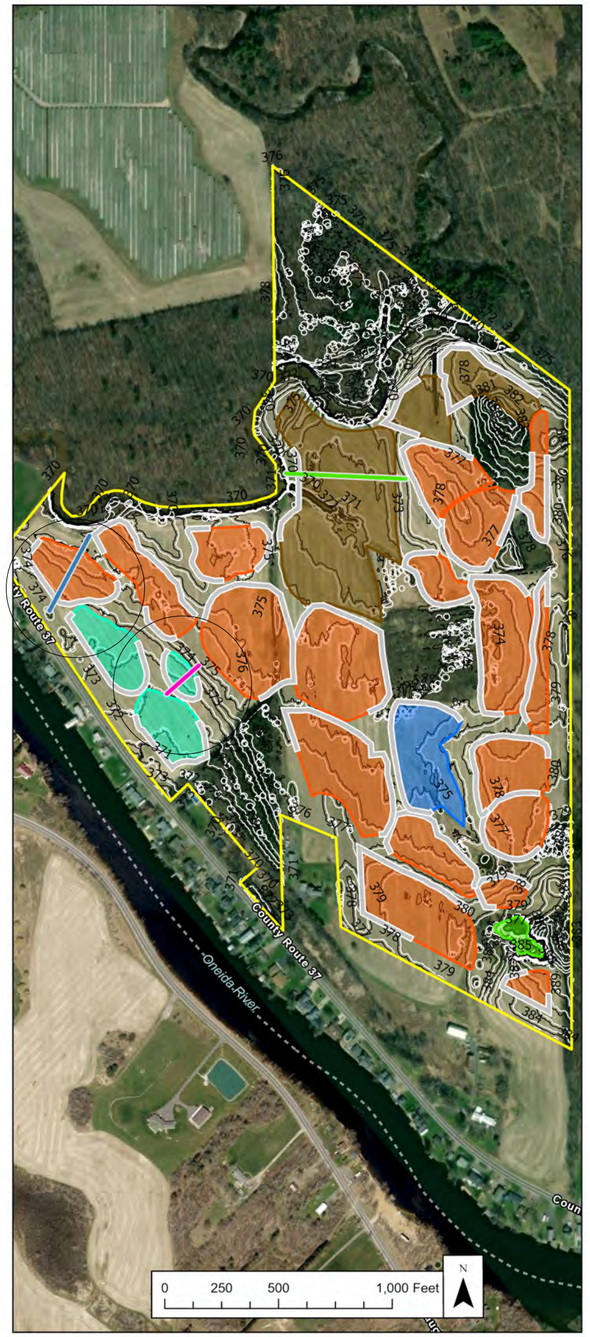


M-05 Proposed as-built profile









TWT Property Boundaries
LCC Contour Line (1 ft)
LCC Berms/Core Trenches
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest
PFO - Red Maple Hardwood Swamp

LCC Designed Wetlands Final
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest
PFO - Red Maple Hardwood Swamp
PSS - Scrub Shrub

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET.

Maps and drawings are at different scales. Berm/Core Trenches in maps are not to scale

	NAME	DATE
DRAWN	DYLAN JOHNSTON-JORDAN	06/09/2025
CHECKED		
APPROVED		

MATERIAL | FINISH

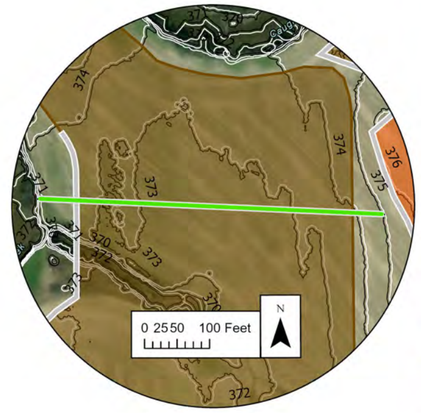
TITLE: **Lower Caughdenoy Creek Wetland Cross Sections: PFO Red Maple Hardwood Swamp and PEM - Shallow Emergent Marsh**

The Wetland Trust

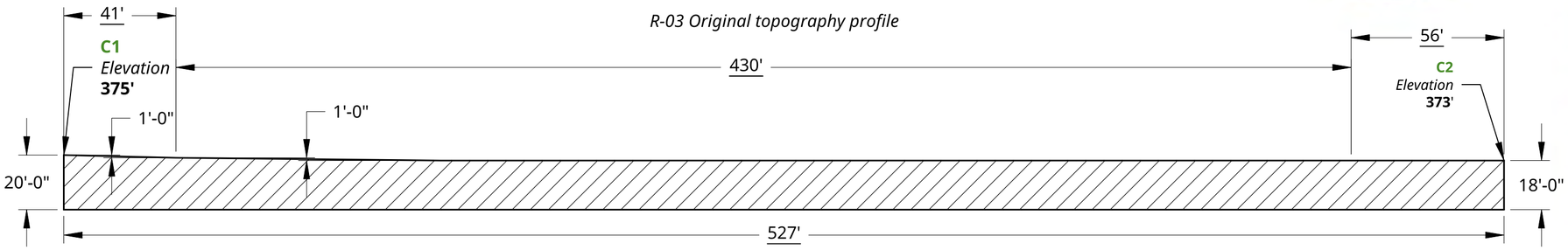
SIZE C | DWG NO. | REV.

SCALE 1:400 | WEIGHT | SHEET 1 of 1

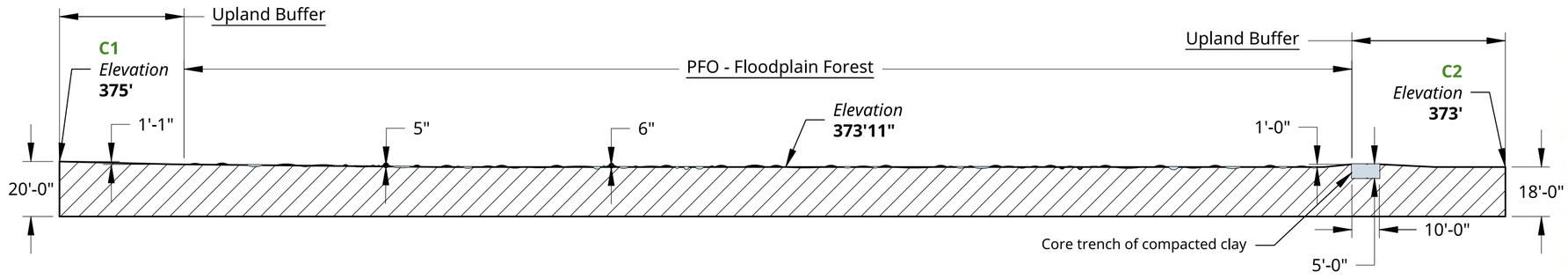
Lower Caughdenoy Creek Wetland Cross Sections: PFO - Floodplain Forest

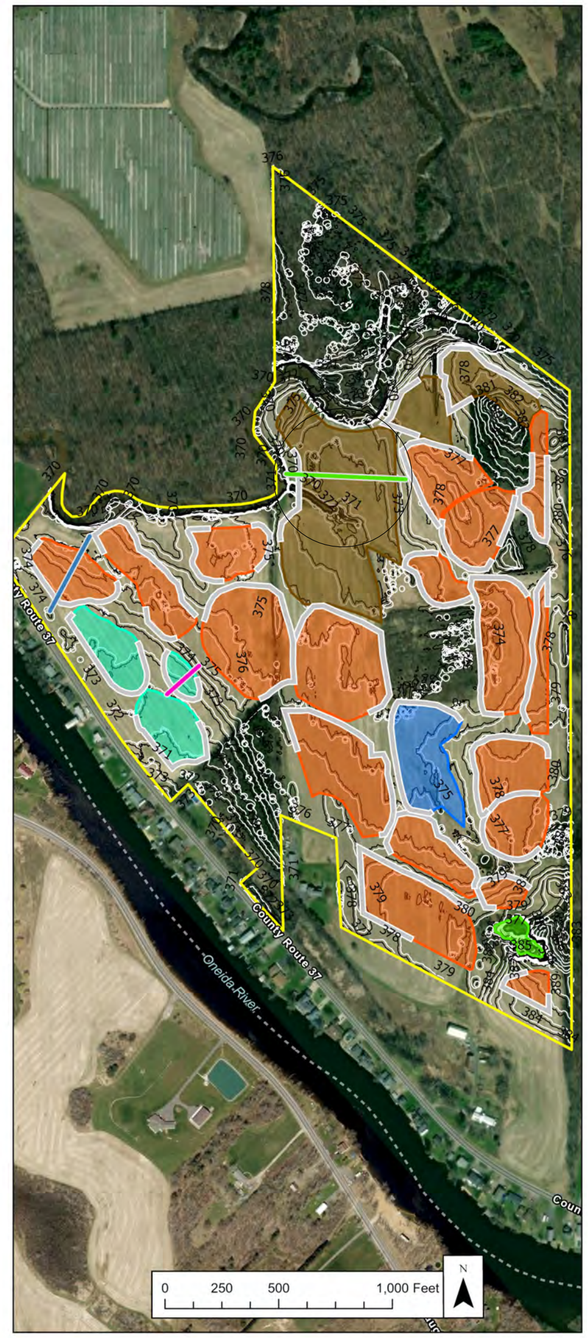


R-03 Original topography profile



R-03 Proposed as-built profile





- TWT Property Boundaries
- LCC Contour Line (1 ft)
- LCC Berms/Core Trenches
- PEM - Shallow Emergent Marsh
- PFO - Floodplain Forest
- PFO - Red Maple Hardwood Swamp
- LCC Designed Wetlands Final
- PEM - Deep Emergent Marsh
- PEM - Shallow Emergent Marsh
- PFO - Floodplain Forest
- PFO - Red Maple Hardwood Swamp
- PSS - Scrub Shrub

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET. Maps and drawings are at different scales. Berm/Core Trenches in maps are not to scale		NAME	DATE
	DRAWN	DYLAN JOHNSTON-JORDAN	06/09/2025
	CHECKED		
	APPROVED		
	MATERIAL	FINISH	

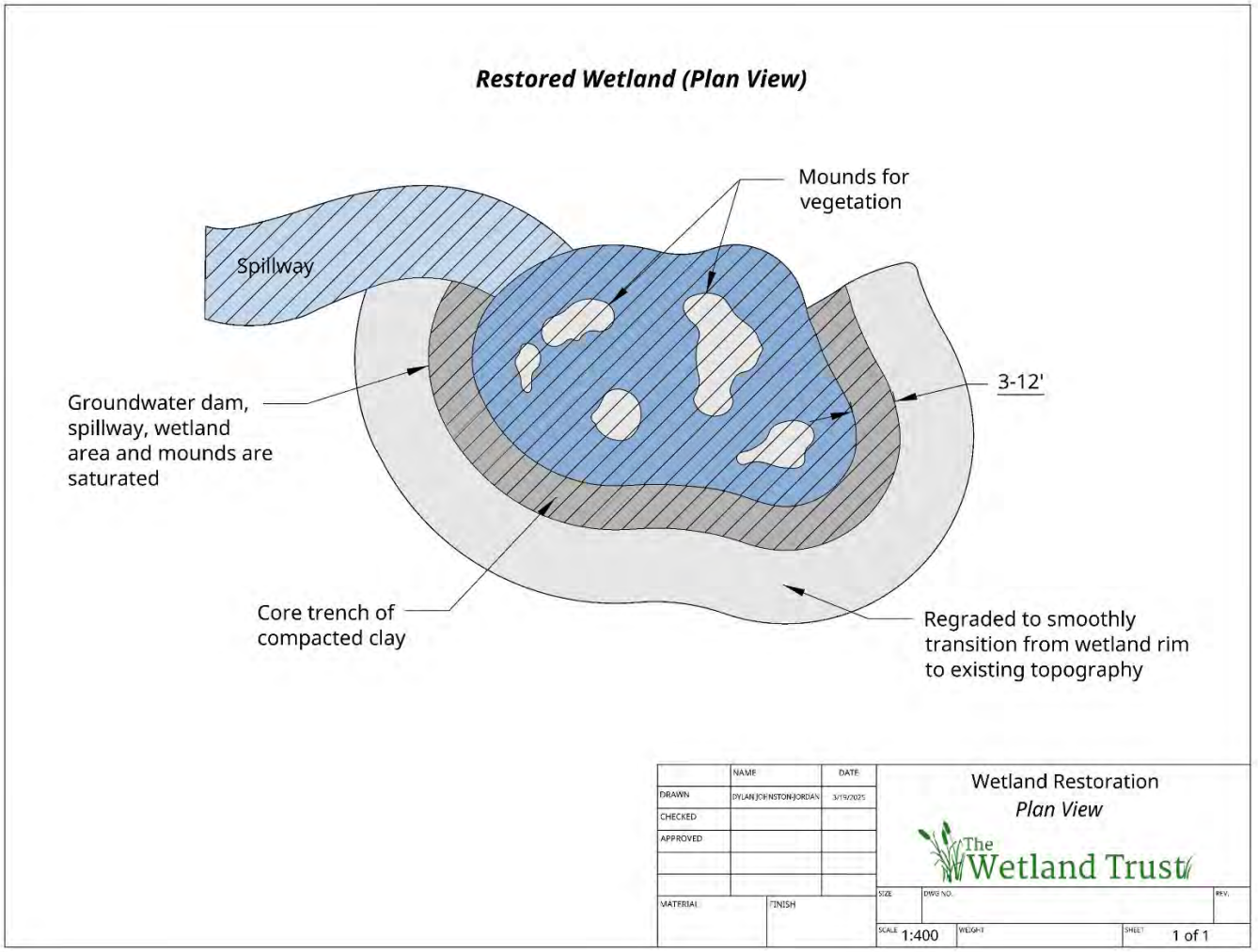
TITLE: **Lower Caughdenoy Creek Wetland Cross Sections: PFO - Floodplain Forest**

The Wetland Trust

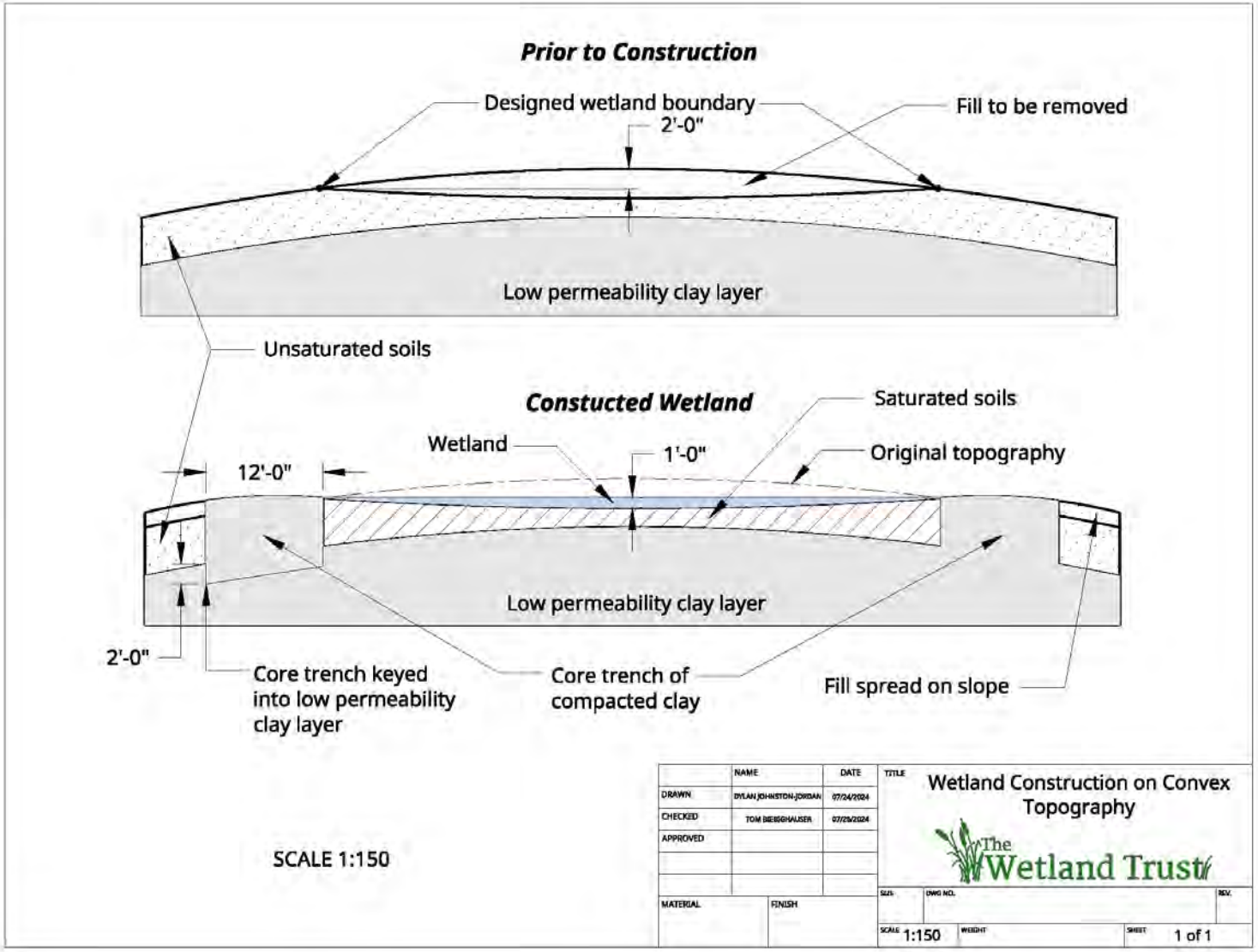
SIZE	DWG NO.	REV.
C		
SCALE 1:450	WEIGHT	SHEET 1 of 1

Construction Typical Drawings

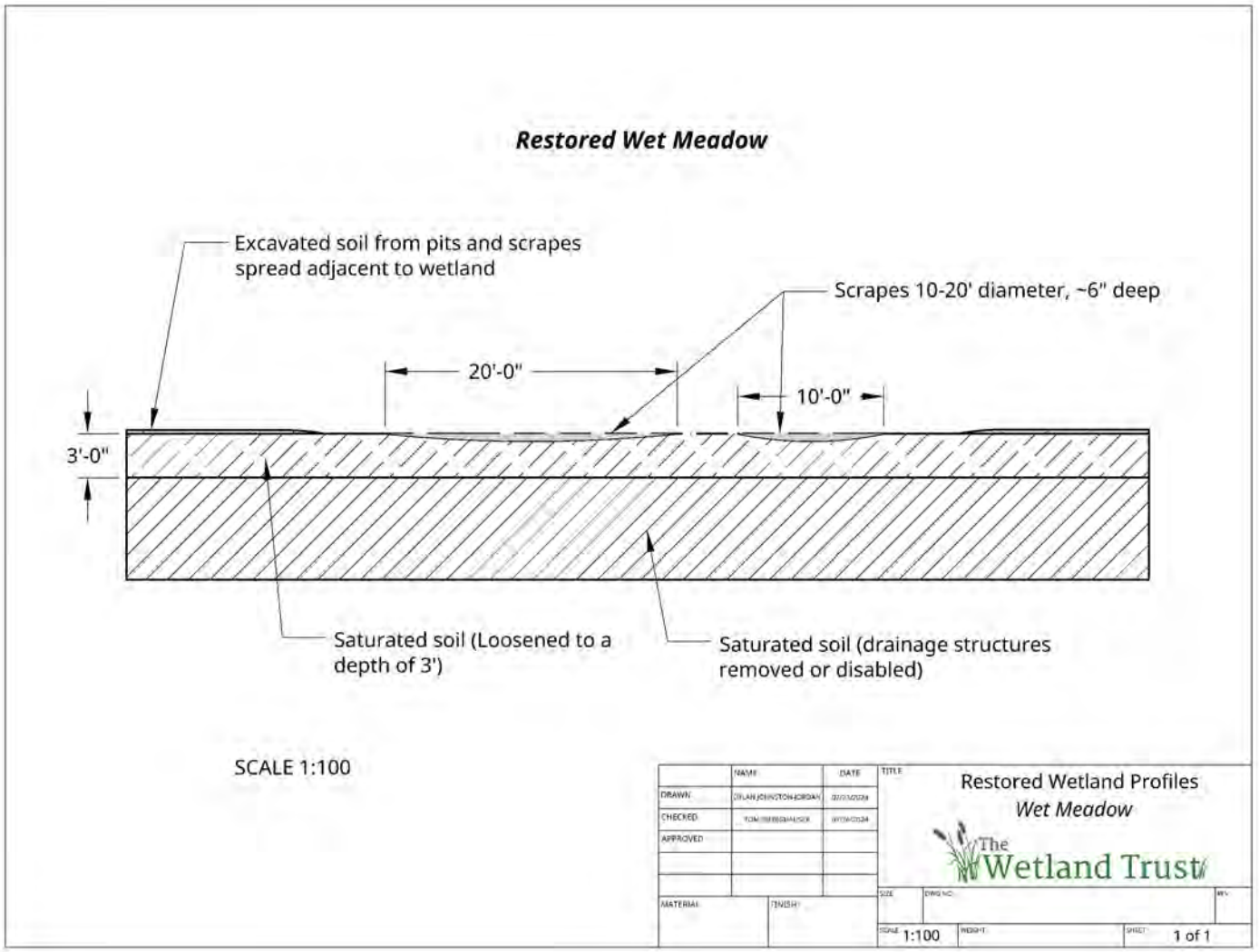
A. Typical Restored Wetland (Plan View)



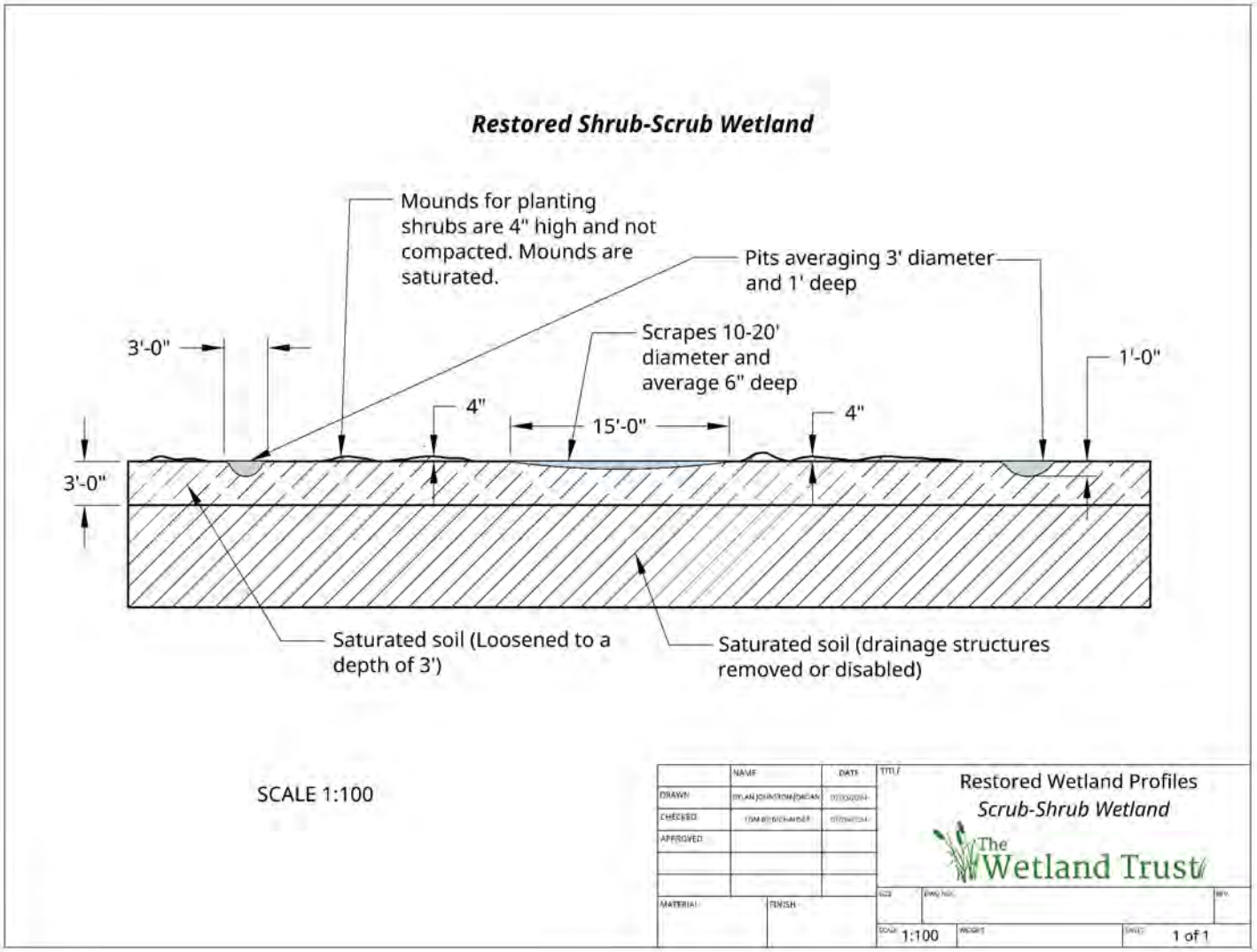
B. Wetland Construction on Convex Topography



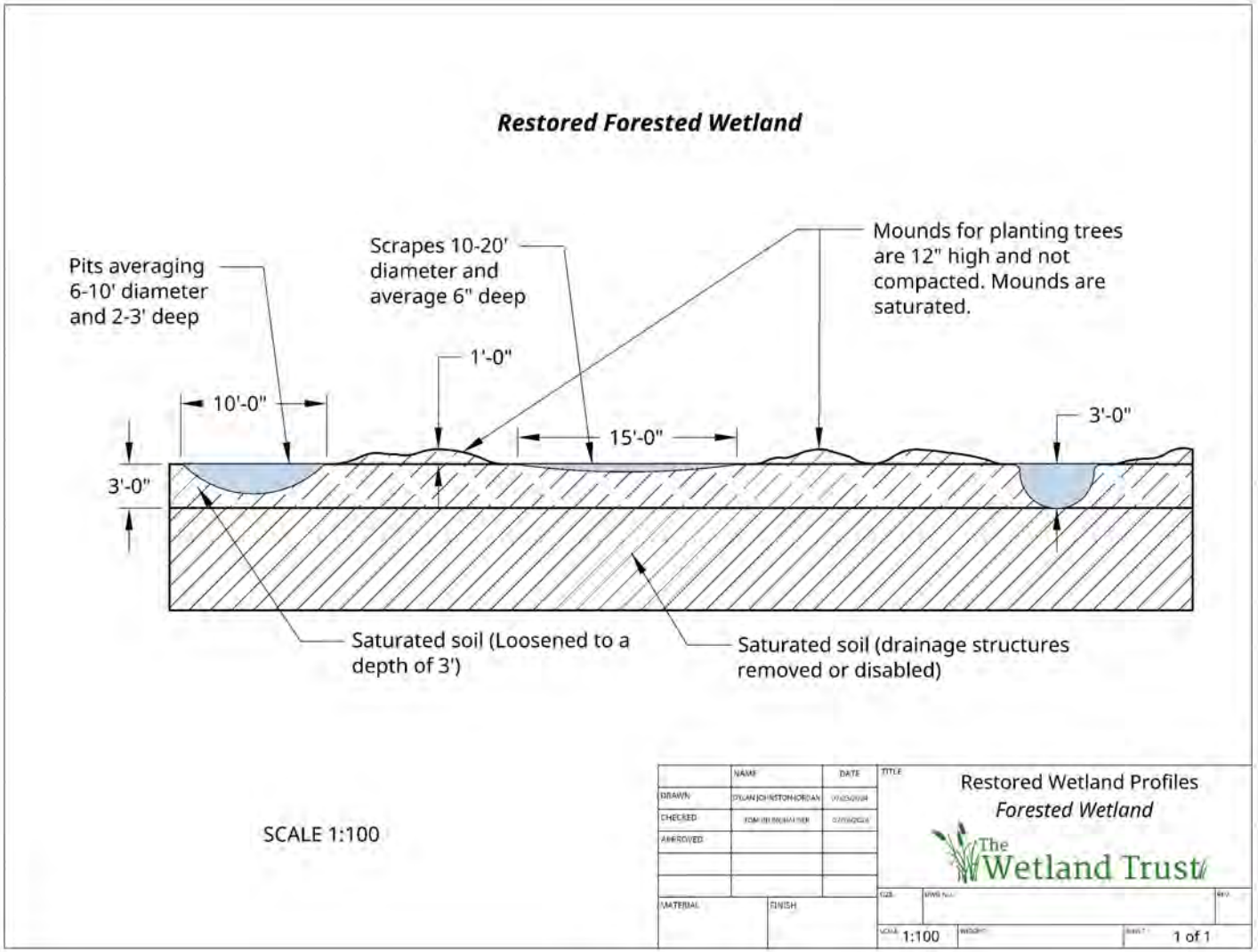
C. Restored Wet Meadow



D. Restored Scrub-Shrub Wetland

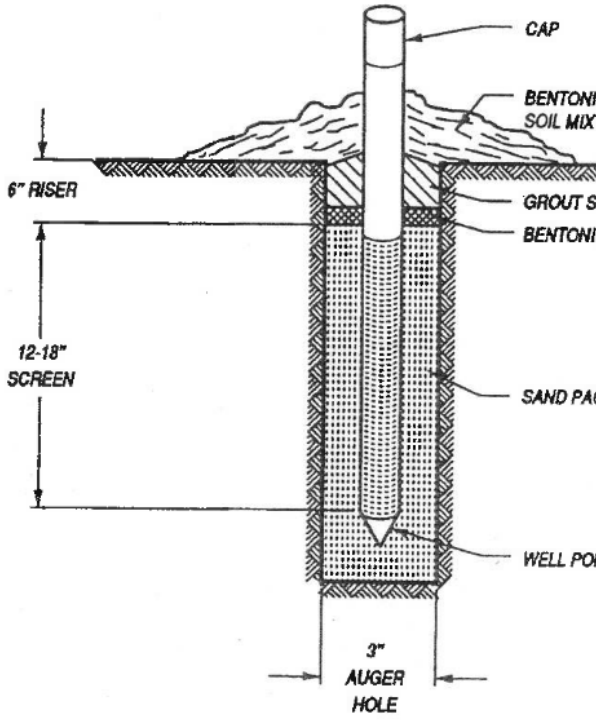


E. Restored Forested Wetland

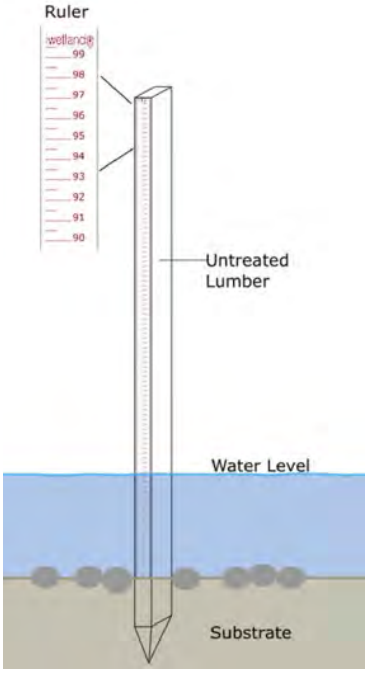


Hydrology Monitoring Structure Typicals

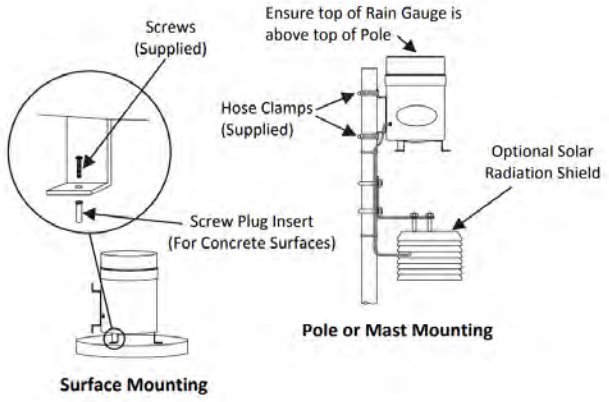
F. Groundwater Monitoring Well



G. Staff Gauge



H. HOBO Rain Gauge Typical



Appendix J.

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

July 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 1,269 acres.

Category	Task	Frequency	Estimated Cost per acre	Annualized Cost
Adaptive Management	Replanting	5		
	Reshaping terrain	5		
	Invasive species removal	2		
Maintenance	Site manipulation	10		
	Boundary posting	10		
	Other practices	3		
Long-Term Management	Other corrective adaptive management actions to ensure natural stability of site	5		
Monitoring	To determine implementation tasks	1		
Administration	For all tasks above including tax exempt status	1		
Total annual budget*				
Total Stewardship investment**				

Micron Four-Fab Central New York Semiconductor Manufacturing Complex

Fish Creek

Stream and Wetland Mitigation Plan

Oswego County, NY

PREPARED BY:

The Wetland Trust, Inc.

4729 State Route 414

Burdett, NY 14818

www.thewetlandtrust.org

July 2025

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Appendix K. Stream Construction Plan Set

Appendix L. Long Term Management Plan

List of Related Documents

Overview of Stream/Wetland Mitigation Plan
Buxton Creek- Stream and Wetland Mitigation Plan
Upper Caughdenoy Creek 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 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 on 19.9 mitigation acres toward a total compensation requirement of 405.7 credits (USACE) or 367.6 acres (NYSDEC) 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 38.3 acres of upland buffer habitat, including:
    - 7.4 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

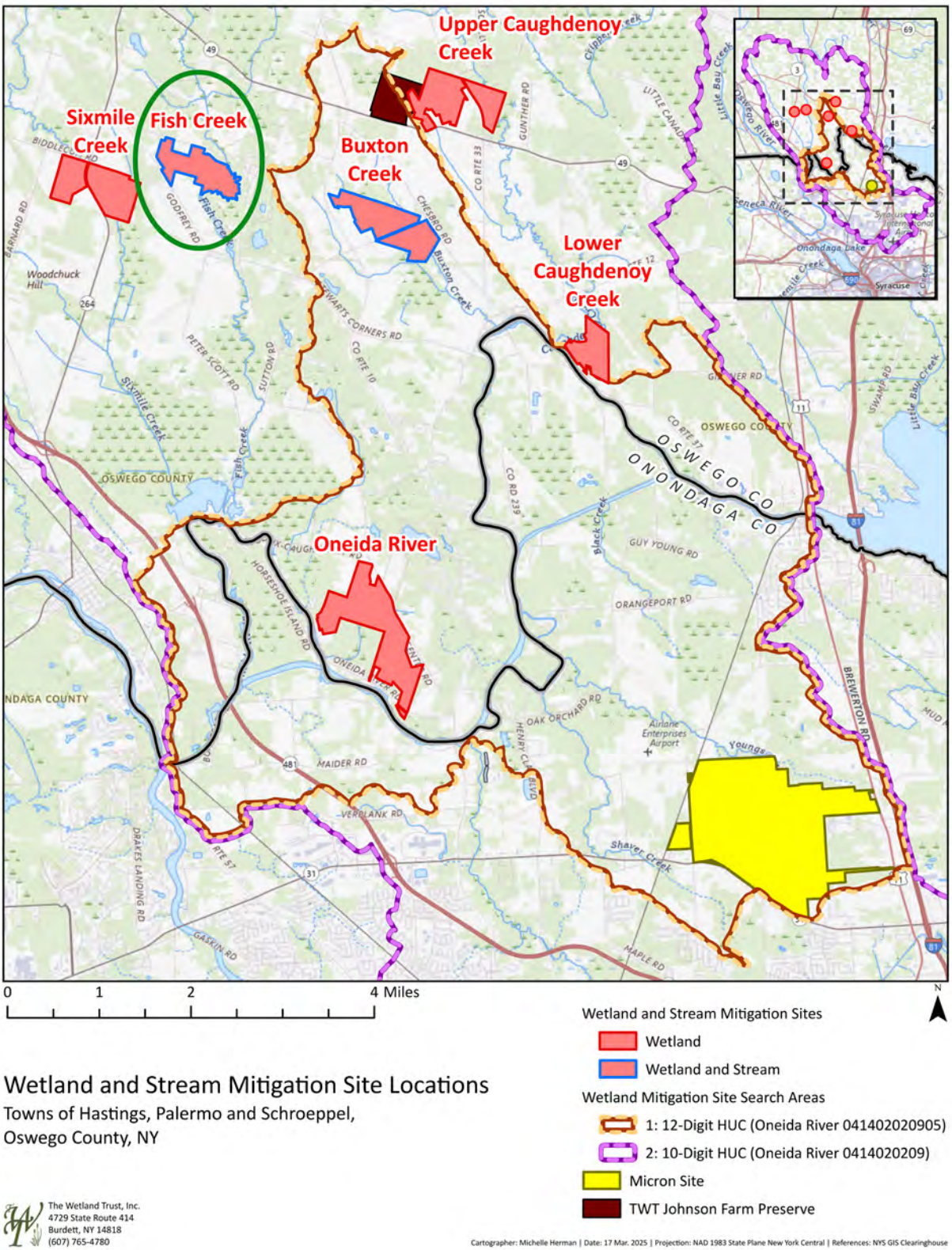
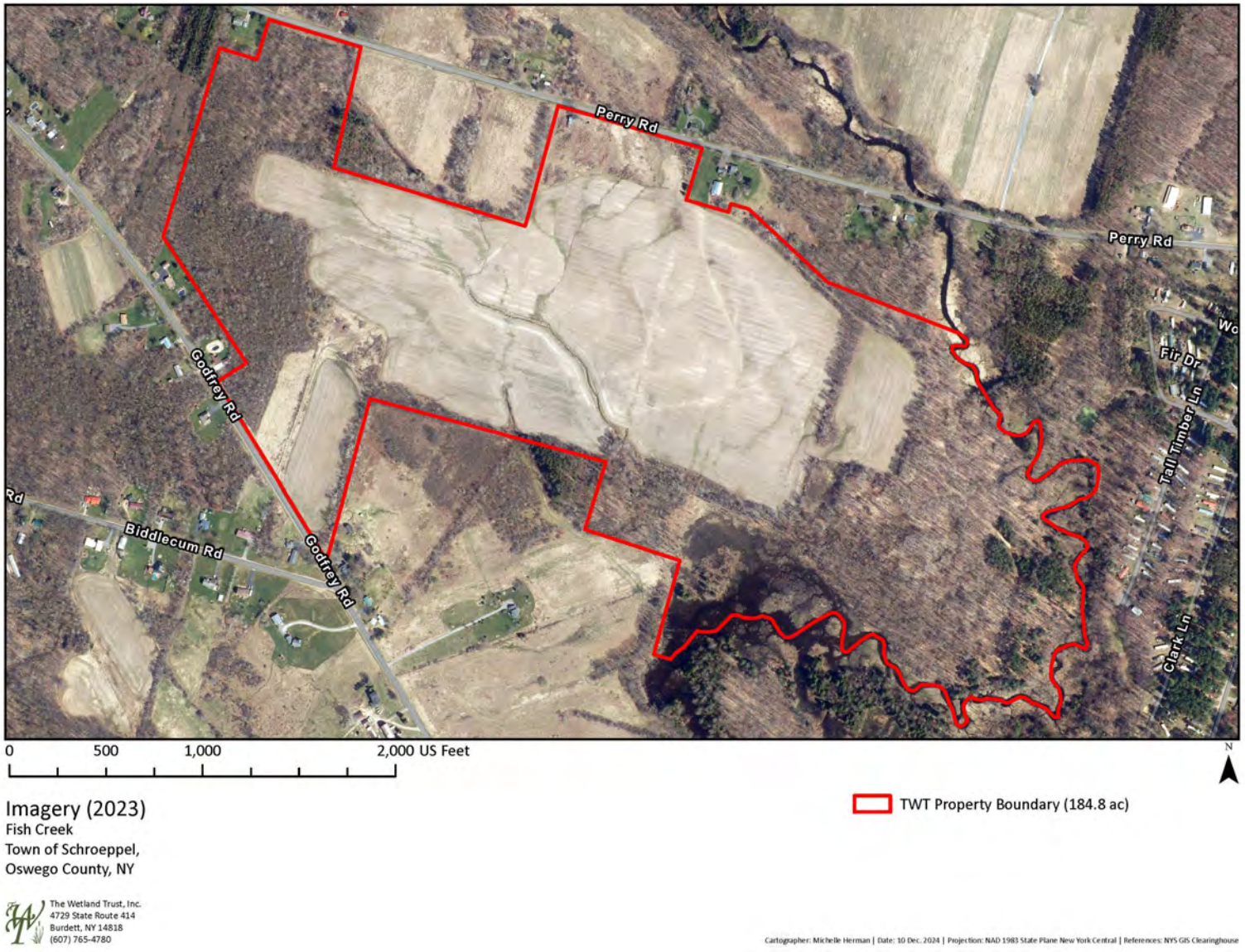


Figure 2-2. Fish Creek Property (2023)



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- and NYSDEC-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.

This site will be protected under Article 24 of the Environmental Conservation Law. 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. 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 **Appendix C** for the full delineation report including mapped wetlands and drainage features, 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.

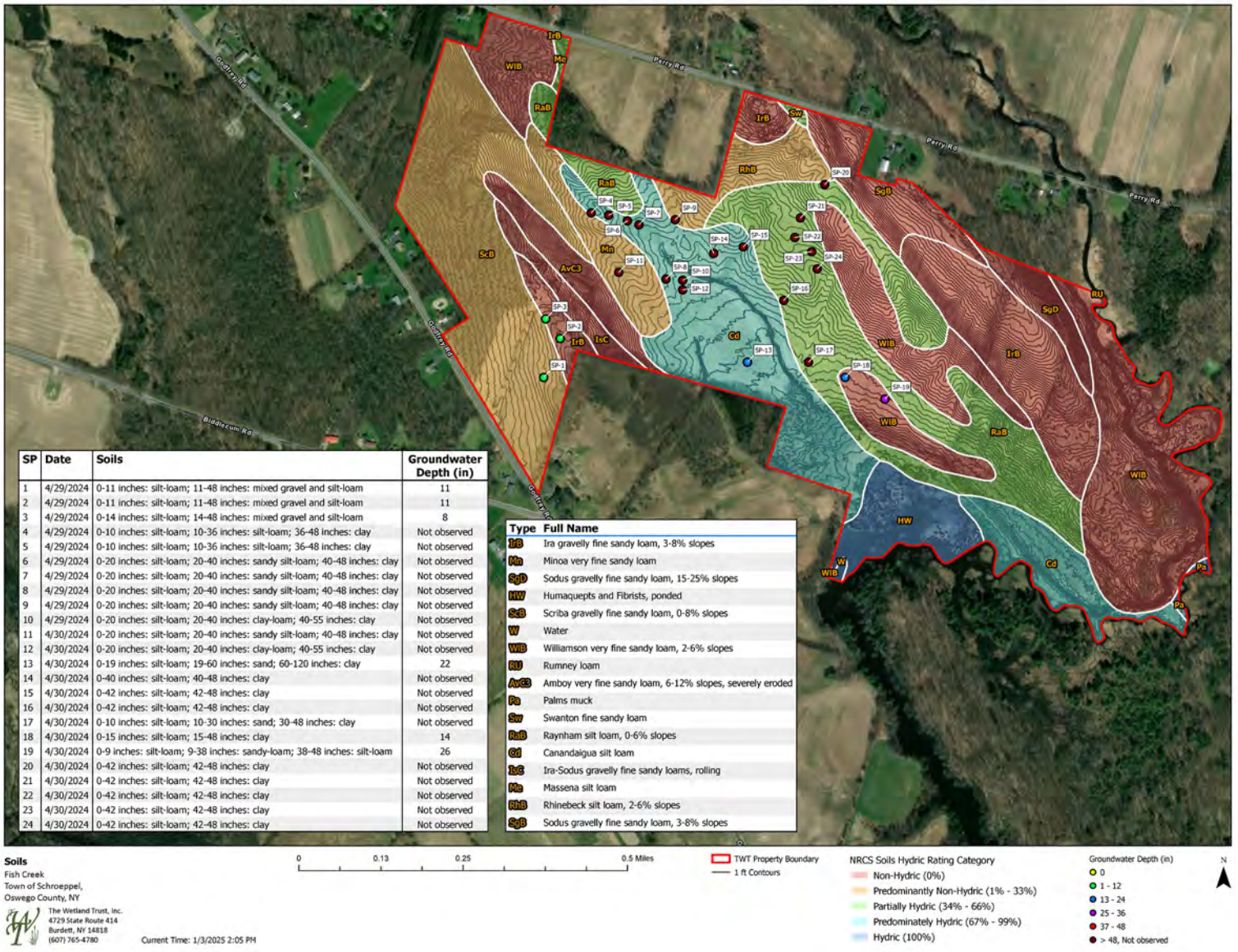
The property has been farmed for over 75 years and contains a mix of clay loam soils and areas of sand and gravel. Wetland establishment is focused on the heavier clay soils and historic tributary corridors, while sandy/gravel areas have been avoided. Surface flows generally trend northwest to southeast 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 3-2**). 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
Mo	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
Ma	Massena silt loam
RhB	Rhinebeck silt loam, 2-6% slopes
SgB	Sodus gravelly fine sandy loam, 3-8% slopes

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	43.296357	-76.275557	Located at the shallowest part of the drainage ditch
2	417.85	43.296774	-76.272791	Located in the middle Deep Emergent wetland W-22
3	412.29	43.296239	-76.272399	Located in the middle Deep Emergent wetland W-24
4	397.23	43.294588	-76.272972	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

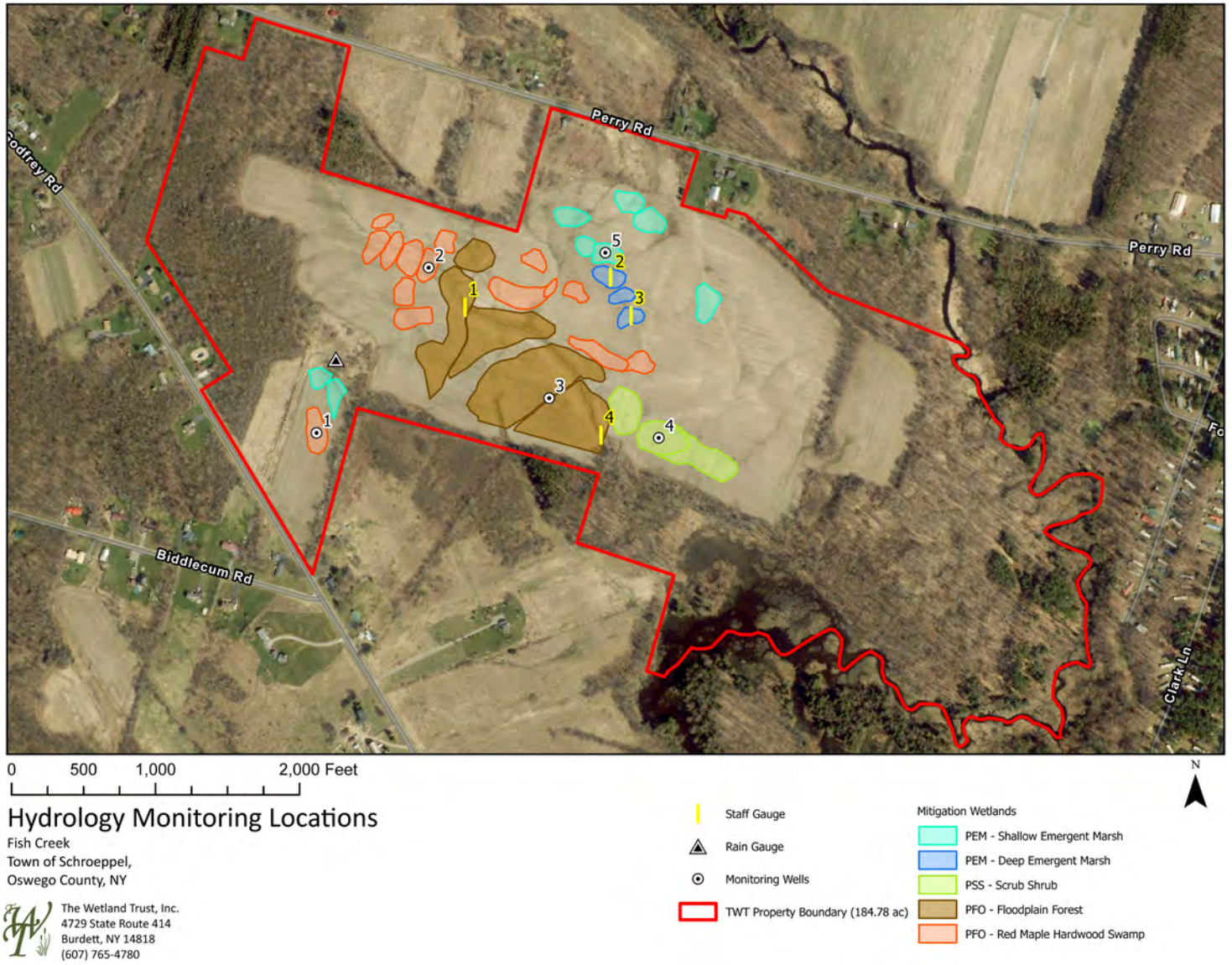
Rain Gauge

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 3-2. 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 June 12, 2025 and no further archaeological survey is recommended (**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	**Credit/ Mitigation Ratio**	**Credits/ Adjusted Acres**
PEM	**Shallow emergent marsh**	Restoration	2.2	Re-establishment	1:1	2.2
		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**

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.

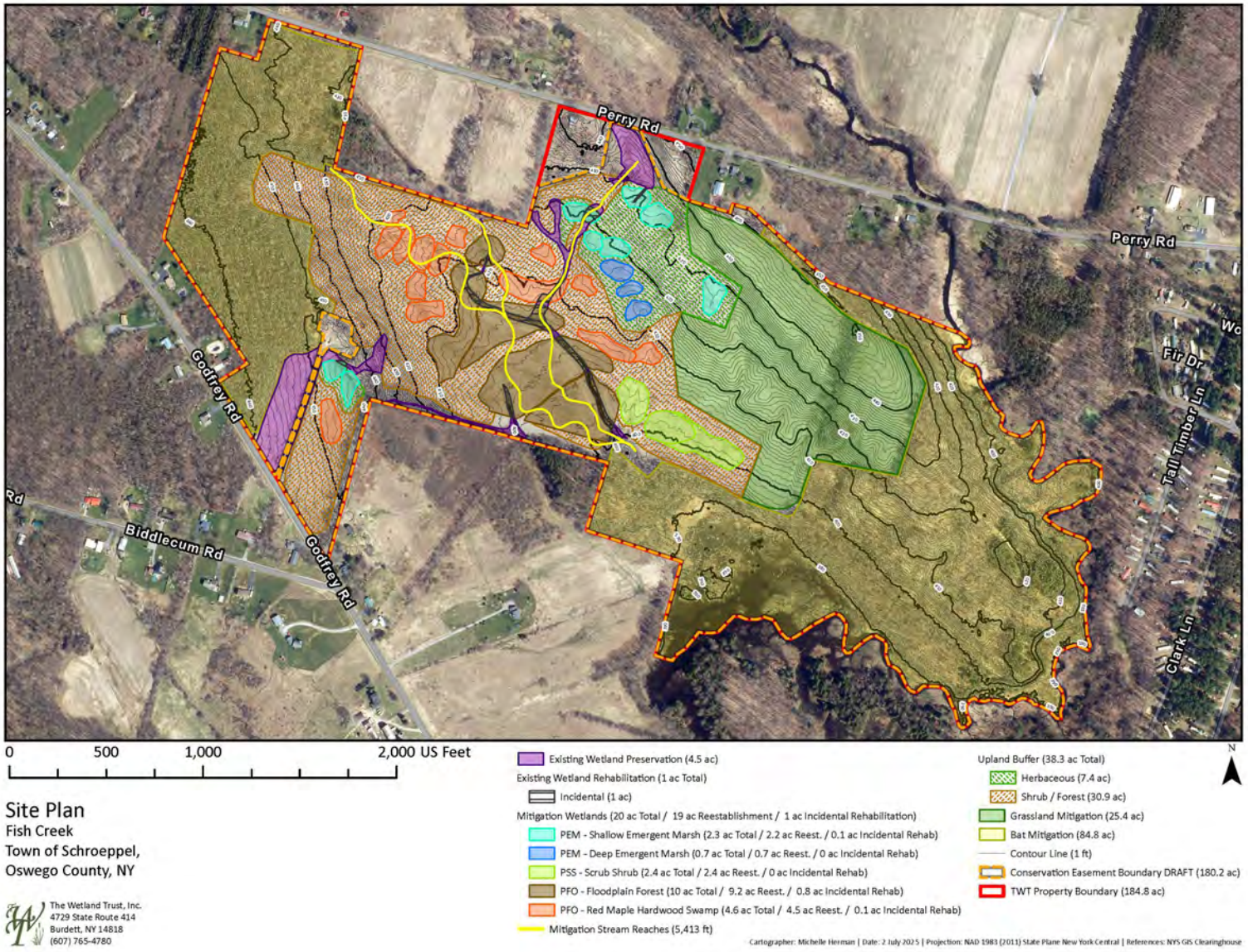
Approximately 2.1 acres of shallow emergent marsh, 0.7 acres of deep emergent marsh, 2.4 acres of scrub-shrub, 9.2 acres of floodplain forest and 4.5 acres of red maple hardwood swamp will be re-established with 1 acre of incidental rehabilitation of these cover types **(Figure 5-1)**. The following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

Shallow Emergent Marsh

Considerations/Characteristics

- 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)
- Composition of approximately 75% herbaceous vegetation, 10% emergent aquatics, 5% shrubs under 2 m, 2% shrubs between 2-5 m, 2% trees, and 5% floating aquatics.

Figure 5-1. Fish Creek Site Plan



Targeted Hydroperiod

- Water depth will range from 1 to 24 inches (during flooding)
- Permanently saturated soils and seasonally flooded
- Periods of dry substrate in mid-late summer
- Water level within 12 inches of the surface for 14-28 consecutive days during the growing season.

Deep Emergent Marsh

Considerations/Characteristics

- 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
- Composition of approximately 85% emergent herbaceous vegetation and 25% floating aquatic vegetation in areas.

Targeted Hydroperiod

- Water depth will range from 6 to 36 inches
- Water level will fluctuate seasonally with water remaining year-round. There will be standing water remaining in the fall.

Shrub Swamp

Considerations/Characteristics

- 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
- Composition of approximately 80% shrubs, 12% trees, 40% herbaceous plants, 10% non-vascular plants, aquatics, and vines.

Targeted Hydroperiod

- Water table within 12 inches of the surface for 28 or more consecutive days in the summer
- 1 to 6 inches of inundation for 14 or less consecutive days in in the spring

Floodplain Forest

Considerations/Characteristics

- Low terraces of river floodplains, and the floodplains of stream restoration areas
- Mineral soils
- Composition of approximately 85% trees, 60% herbaceous vegetation, 40% shrubs, 25% vines and nonvascular plants.

Targeted Hydroperiod

- Hollows and low areas inundated in early spring
- High areas irregularly inundated
- Periods of inundation lasting approximately 14-28 days

Red Maple-Hardwood Swamp

Considerations/Characteristics

- 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
- Composition of approximately 80% trees, 80% shrubs, 50% herbaceous vegetation, and 20% non-vascular plants.

Targeted Hydroperiod

- Seasonal flooding with saturated soils

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 **Appendix H** 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 (**Appendix H**).

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.

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 C-E** in **Appendix H.**

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%

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 Impact 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.

TWT plans on erecting a deer-proof fence around the Buxton Creek Site construction areas to increase the survival rate of planted trees and shrubs. The lower portion of the fence will be modified for the passage of frogs, toads, salamanders, snakes, turtles, and small mammals.

Both PSS and PFO wetland Re-Establishment/Restoration areas will use a mix of herbaceous species derived from **Table 5-2a**, PEM- Shallow Emergent Plant List, as the foundational understory mix. The PSS and PFO areas will be at an early successional state and these herbaceous species are important early succession companion species that support success. While each

community type listed includes a few representative herbaceous plantings tailored to sites specific goals, the broader PEM list will be used to add plant species diversity for each creation site.

Table 5-2a. PEM - Shallow Emergent Marsh					
Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Swamp Milkweed	*Asclepias incarnata*	OBL	4	S5	15-20 pounds per acre
Symphyotrichum puniceum	*Aster puniceus*	OBL	4	S5	
False nettle	*Boehmeria cylindrica*	OBL	7	S5	
Canada bluejoint grass	*Calamagrostis canadensis*	OBL	7	S5	
wild calla	*Calla palustris*	OBL	7	S5	
Longhair Sedge	*Carex comosa*	OBL	4	S5	
Fringed Sedge	*Carex crinita*	OBL	3	S5	
Bottlebrush Sedge	*Carex hystericina*	OBL	5	S5	
Shallow Sedge	*Carex lurida*	OBL	4	S5	
Pointed Broom Sedge	*Carex scoparia*	FACW	1	S5	
Upright Sedge	*Carex stricta*	OBL	4	S5	
Hairy-fruited sedge	*Carex trichocarpa*	OBL	5	S5	
fox sedge	*Carex vulpinoidea*	OBL	2	S5	
White Turtlehead	*Chelone glabra*	OBL	6	S5	
Swamp Loosestrife	*Decodon verticillatus*	OBL	7	S5	
deer-tongue rosette grass	*Dichanthelium clandestinum*	FACW	4	S5	
Crested wood fern	*Dryopteris cristata*	OBl	8	S5	
Three-way Sedge	*Dulichium arundinaceum*	OBL	8	S5	
Common Spikerush	*Eleocharis palustris*	OBL	5	S5	
Eastern riverbank wild rye	*Elymus riparius*	FACW	6	S5	
Virginia Wildrye	*Elymus virginicus*	FACW	6	S5	
Virginia wild rye	*Elymus virginicus*	FACW	6	S5	
Boneset	*Eupatorium perfoliatum*	FACW	3	S5	
common flat-topped goldenrod	*Euthamia graminifolia*	FAC	1	S5	
Spotted Joe-Pye Weed	*Eutrochium maculatum*	OBL	4	S5	
fowl manna grass	*Glyceria striata*	OBL	6	S5	
Common sneezeweed	*Helenium autumnale*	FACW	4	S5	
Swamp sunflower	*Helianthus angustifolius*	FACW	10	S2	
Spotted Touch-me-not	*Impatiens capensis*	FACW	3	S5	
Pale Touch-me-not	*Impatiens pallida*	FACW	3	S4	
Northern Blue Flag	*Iris versicolor*	OBL	4	S5	
Canada Rush	*Juncus canadensis*	OBL	8	S5	
Soft Rush	*Juncus effusus*	OBL	2	S5	
Cardinal Flower	*Lobelia cardinalis*	FACW	7	S4S5	
Great Blue Lobelia	*Lobelia siphilitica*	FACW	5	S5	
American bugleweed	*Lycopus americanus*	OBL	4	S5	
Square-stemmed Monkey Flower	*Mimulus ringens*	OBL	6	S5	
common wild bergamot	*Monarda fistulosa*	FACU	2	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
Cinnamon Fern	*Osmunda cinnamomea*	FACW	6	S5	
Royal fern	*Osmunda regalis*	OBL	6	S5	
Lizard's Tail	*Saururus cernuus*	OBL	6	S5	
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	OBL	4	S5	
dark-green bulrush	*Scirpus atrovirens*	OBL	2	S5	
common wool grass	*Scirpus cyperinus*	OBL	4	S5	
rough-leaved goldenrod	*Solidago patula*	OBL	7	S5	
rough goldenrod	*Solidago rugosa*	FAC	1	S5	

Indian grass	*Sorghastrum nutans*	FACU	6	S5	
American bur-reed	*Sparganium americanum*	OBL	4	S5	
lance-leaved aster	*Symphyotrichum lanceolatum*	FACW	1	S5	
New England aster	*Symphyotrichum novae-angliae*	FACW	1	S5	
Purple-Stemmed Aster	*Symphyotrichum puniceum*	OBL	4	S5	
Marsh Fern	*Thelypteris palustris*	FACW	4	S5	
Blue Vervain	*Verbena hastata*	FACW	3	S5	
white vervain	*Verbena urticifolia*	FAC	2	S5	
New York ironweed	*Vernonia noveboracensis*	FACW	3	S4	
Culver's root	*Veronicastrum virginicum*	FACW	5	S2	
common golden Alexanders	*Zizia aurea*	FAC	4	S5	

Table 5-2b. PEM - Deep Emergent Marsh

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Sweet flag	*Acorus americanua*	OBL	5	S5	Herbaceous plugs 3-ft spacing 15-20 pounds per acre in applicable areas
river bulrush	*Bolboschoenus fluviatilis*	OBL	4	S5	
bristly sedge	*Carex comosa*	OBL	4	S5	
long sedge	*Carex folliculata*	OBL	7	S5	
Gray's Sedge	*Carex grayi*	FACW	7	S5	
Cartex lacustris	*Carex lacustris*	OBL	5	S5	
cyperus-like sedge	*Carex pseudocyperus*	OBL	6	S5	
three-fruited sedge	*Carex trisperma*	OBL	8	S5	
Swamp Loosestrife	*Decodon verticillatus*	OBL	7	S5	
blue flag	*Iris versicolor*	OBL	4	S5	
Canada rush	*Juncus canadensis*	OBL	8	S5	
bayonet rush	*Juncus militaris*	OBL	9	S4	
rice cut grass	*Leersia oryzoides*	OBL	4	S5	
Royal Fern	*Osmunda regalis*	OBL	6	S5	
green arrow arum	*Peltandra virginica*	OBL	6	S5	
pickerel weed	*Pontederia cordata*	OBL	4	S5	
common arrowhead	*Sagittaria latifolia*	OBL	3	S5	
Lizards tail	*Saururus cernuus*	OBL	3	S5	
three-square bulrush	*Schoenoplectus pungens*	OBL	6	S5	
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	OBL	4	S5	
Green Bulrush	*Scirpus atrovirens*	FACW	2	S5	
Woolgrass	*Scirpus cyperinus*	FACW	4	S5	
Water Parsnip	*Sium suave*	OBL	6	S5	
Bur-reed	*Sparganium americanum*	OBL	4	S5	
giant bur-reed	*Sparganium eurycarpum*	OBL	4	S5	
Wild rice	*Zizania palustris*	OBL	8	SNR	
Sweet flag	*Acorus americanua*	OBL	5	S5	
river bulrush	*Bolboschoenus fluviatilis*	OBL	4	S5	
bristly sedge	*Carex comosa*	OBL	4	S5	
long sedge	*Carex folliculata*	OBL	7	S5	
Gray's Sedge	*Carex grayi*	FACW	7	S5	

Table 5-2c. PSS – Scrub Shrub					
Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
speckled alder	*Alnus incana*	FACW	5	S5	450/acre
Smooth alder	*Alnus serrulata*	OBL	6	S5	
black chokeberry	*Aronia melanocarpa*	FACW	7	S5	Shrub clusters
Purple chokeberry	*Aronia prunifolia*	FACW	7	S4	
Buttonbush	*Cephalanthus occidentalis*	OBL	7	S5	
Silky dogwood	*Cornus amomum*	FACW	6	S5	
Gray dogwood	*Cornus racemosa*	FAC	2	S5	
Red osier dogwood	*Cornus sericea*	FACW	6	S5	
Common winterberry	*Ilex verticillata*	FACW	7	S5	
Northern spicebush	*Lindera benzoin*	FACW	6	S5	
Ninebark	*Physocarpus opulifolius*	FACW	7	S5	
Swamp rose	*Rosa palustris*	FACW	9	S5	
Bebbs willow	*Salix bebbiana*	FACW	3	S5	
Pussy willow	*Salix discolor*	FACW	3	S5	
shining willow	*Salix lucida*	FACW	5	S5	
meadow willow	*Salix petiolaris*	FACW	5	S5	
Silky willow	*Salix sericea*	OBL	5	S5	
Common elderberry	*Sambucus canadensis*	FACW	4	S5	
Meadow-sweet	*Spiraea alba*	FACW	3	S4	
steeplebush	*Spiraea tomentosa*	FACW	4	S5	
High bush blueberry	*Vaccinium corymbosum*	FACW	6	S5	
Northern wild raisin	*Viburnum cassinoides*	FACW	7	S5	
Arrow-wood	*Viburnum dentatum*	FAC	3	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	

Table 5-2d. PFO – Floodplain Forest					
Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Tree Speceis					15-20 pounds per acre seed 450/acre Shrub clusters Trees 10-25 feet apart
Red maple	*Acer rubrum*	FAC	4	S5	
Silver maple	*Acer saccharinum*	FACW	6	S5	
speckled alder	*Alnus incana*	FACW	5	S5	
Grey birch	*Betula populifolia*	FAC	4	S5	
ironwood	*Carpinus caroliniana*	FAC	6	S5	
Hackberry	*Celtis occidentalis*	FAC	7	S4	
Black gum	*Nyssa sylvatica*	FAC	7	S5	
Ninebark	*Physocarpus opulifolius*	FACW	7	S5	
American sycamore	*Platanus occidentalis*	FACW	3	S5	
Eastern cottonwood	*Populus deltoides*	FAC	2	S5	
swamp white oak	*Quercus bicolor*	FACW	7	S5	
Bur oak	*Quercus macrocarpa*	FAC	6	S4	
Pin oak	*Quercus palustris*	FACW	7	S4	
Black willow	*Salix nigra*	OBL	5	S5	
American elm	*Ulmus americana*	FACW	4	S5	
slippery elm	*Ulmus rubra*	FAC	8	S5	
Shrub Species*					
Buttonbush	*Cephalanthus occidentalis*	OBL	8	S5	
Spicebush	*Lindera benzoin*	FACW	6	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	

Silky dogwood	*Cornus amomum*	FACW	6	S5	
Gray dogwood	*Cornus racemosa*	FAC	2	S5	
Red osier dogwood	*Cornus sericea*	FACW	6	S5	
* These species listed are not an exhaustive list, additional species may be used from the PSS List					
Herbaceous**					
Jack-in-the-Pulpit	*Arisaema triphyllum*	FAC	5	S5	
False Nettle	*Boehmeria cylindrica*	OBL	7	S5	
Gray's sedge	*Carex grayi*	FACW	7	S5	
Marsh Marigold	*Caltha palustris*	OBL	4	S5	
tussock sedge	*Carex stricta*	OBL	4	S5	
Fox Sedge	*Carex vulpinoidea*	FACW	2	S5	
Blue Flag	*Iris versicolor*	OBL	4	S5	
Wood Nettle	*Laportea canadensis*	FAC	8	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
Skunk Cabbage	*Symplocarpus foetidus*	OBL	5	S5	
swamp goldenrod	*Solidago gigantea*	FACW	3	S5	
**Not an exhaustive list, additional species may be added from the PEM lists.					

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

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Tree Speceis					15-20 pounds per acre seed 450/acre Shrub clusters Trees 10-25 feet apart
Red maple	*Acer rubrum*	FAC	4	S5	
Silver maple	*Acer saccharinum*	FACW	6	S5	
yellow birch	*Betula alleghaniensis*	FAC	7	S5	
Ironwood	*Carpinus caroliniana*	FAC	6	S5	
Bitternut hickory	*Carya cordiformis*	FAC	7	S5	
Blackgum	*Nyssa sylvatica*	FAC	7	S5	
American sycamore	*Platanus occidentalis*	FACW	3	S5	
Eastern cottonwood	*Populus deltoides*	FAC	2	S5	
Swamp white oak	*Quercus bicolor*	FACW	7	S5	
American elm	*Ulmus americana*	FACW	4	S5	
Slippery elm	*Ulmus rubra*	FAC	8	S5	
Shrub Species*					
speckled alder	*Alnus incana*	FACW	5	S5	
common winterberry	*Ilex verticillata*	FACW	7	S5	
spicebush	*Lindera benzoin*	FACW	6	S5	
Arrow-wood	*Viburnum dentatum*	FAC	3	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	
* These species listed are not an exhaustive list, additional species may be used from the PSS List					
Herbaceous**					
False Nettle	*Boehmeria cylindrica*	OBL	7	S5	
tussock sedge	*Carex stricta*	OBL	4	S5	
Spotted Touch-me-not	*Impatiens capensis*	FACW	3	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
royal fern	*Osmunda regalis*	OBL	6	S5	
cinnamon fern	*Osmundastrum cinnamomeum*	FACW	6	S5	
tall meadow rue	*Thalictrum pubescens*	FACW	4	S5	
**Not an exhaustive list, additional species may be added from the PEM lists.					

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 I**) 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

Success within the mitigation site is based on several factors. First, mitigation acreage must meet the three wetland criteria 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:

- 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. Hydrology must be met more than 50% of the monitoring period at a minimum frequency of 6 years in 10 or 8 years in 15. Any combination of inundation or shallow water table is acceptable in meeting the 14-day minimum requirement.
- 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.

Second, mitigation success will depend on the establishment of wetland community types (as described in Section 5) that replace in form and function the impacted wetlands. At Buxton Creek, the targeted cover types are shallow and deep emergent marsh, floodplain forest, red maple and hemlock hardwood forest.

Third, 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. The final performance standard of 90% shall be 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 will be native shrub species. Stem density standards will include native volunteer species. Up to 800 woody stems will be planted, as needed, based on survival. Stem density monitoring will be conducted at a frequency of 10 times in 15 years, 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 will be native tree species. Stem density standards will include native volunteer species. Up to 600 woody stems will be planted, as needed, based on survival. Stem density monitoring will be conducted at a frequency of 10 times in 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 12^{th} year, and 9 ft by the 15^{th} 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.

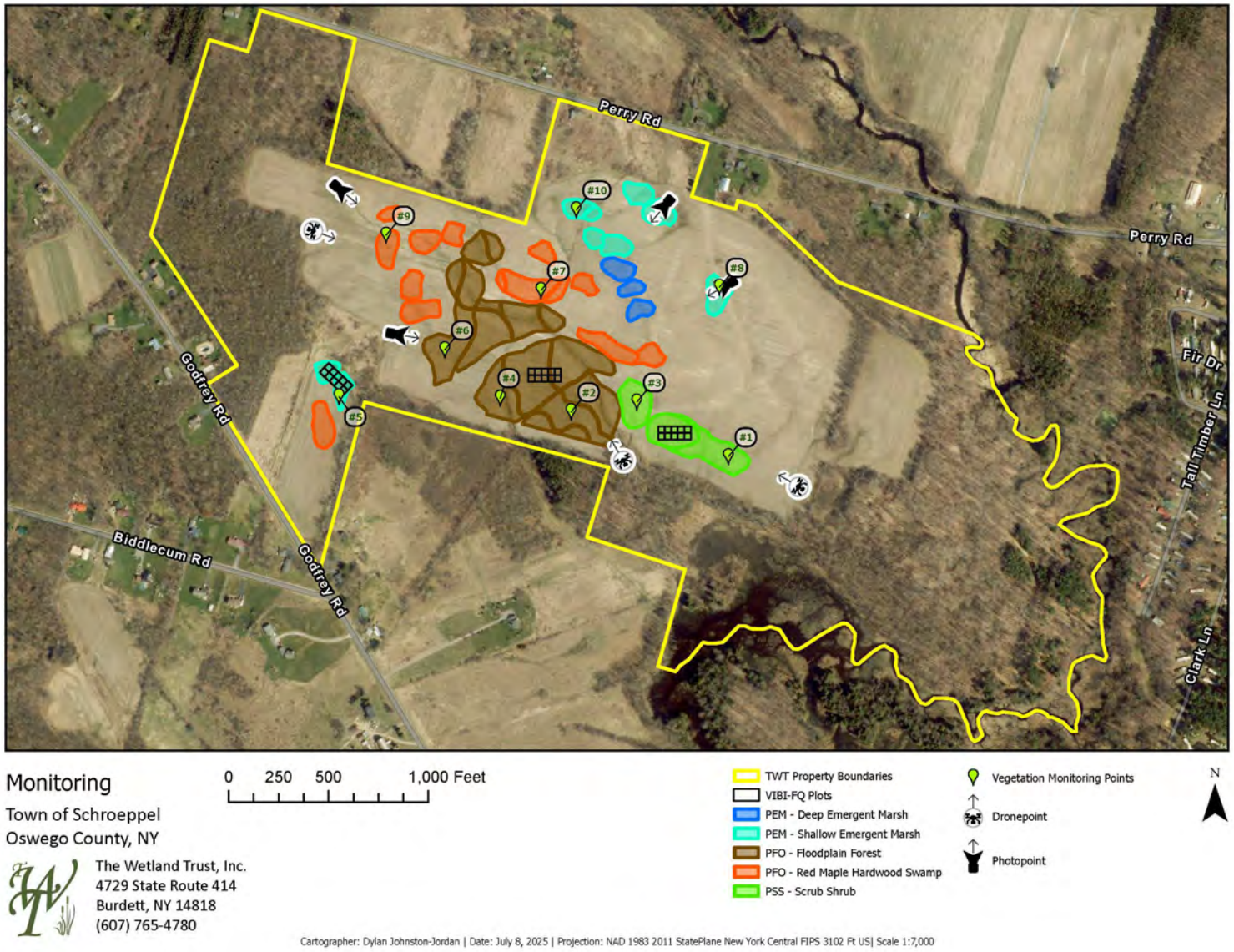
- **Stratified Randomized Permanent Plots:** To obtain a comprehensive view of characteristics at the site, random permanent plots will be established for data collection. The plots will be stratified among the different wetland cover types and mitigation types in which plots will have an equal chance of being selected in each stratum. Vegetation data such as relative cover, stem counts, tree height, and invasive coverage will be observed and documented within these plots for baseline data and post-mitigation monitoring for the 15-year period. See **Figure 6-1.** for proposed permanent data collection locations.

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, maximum of 160 shall be tree species)	400[4]	400	400	400	400	400	400
Stem density in PFO areas (per acre, maximum of 200 shall be shrub species)	400[4]	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
4. Based on a beginning planting rate of 450 stems per acre with additional stems to be planted within the first three monitoring years, if needed, depending on survival. Approximately 25% of the final stem goals are expected to be native volunteer species.

Figure 6-1. Vegetation Monitoring and Photo Point Locations



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 J**), 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 K** for specifications.

Figure 8-1a. Reference Stream Reaches

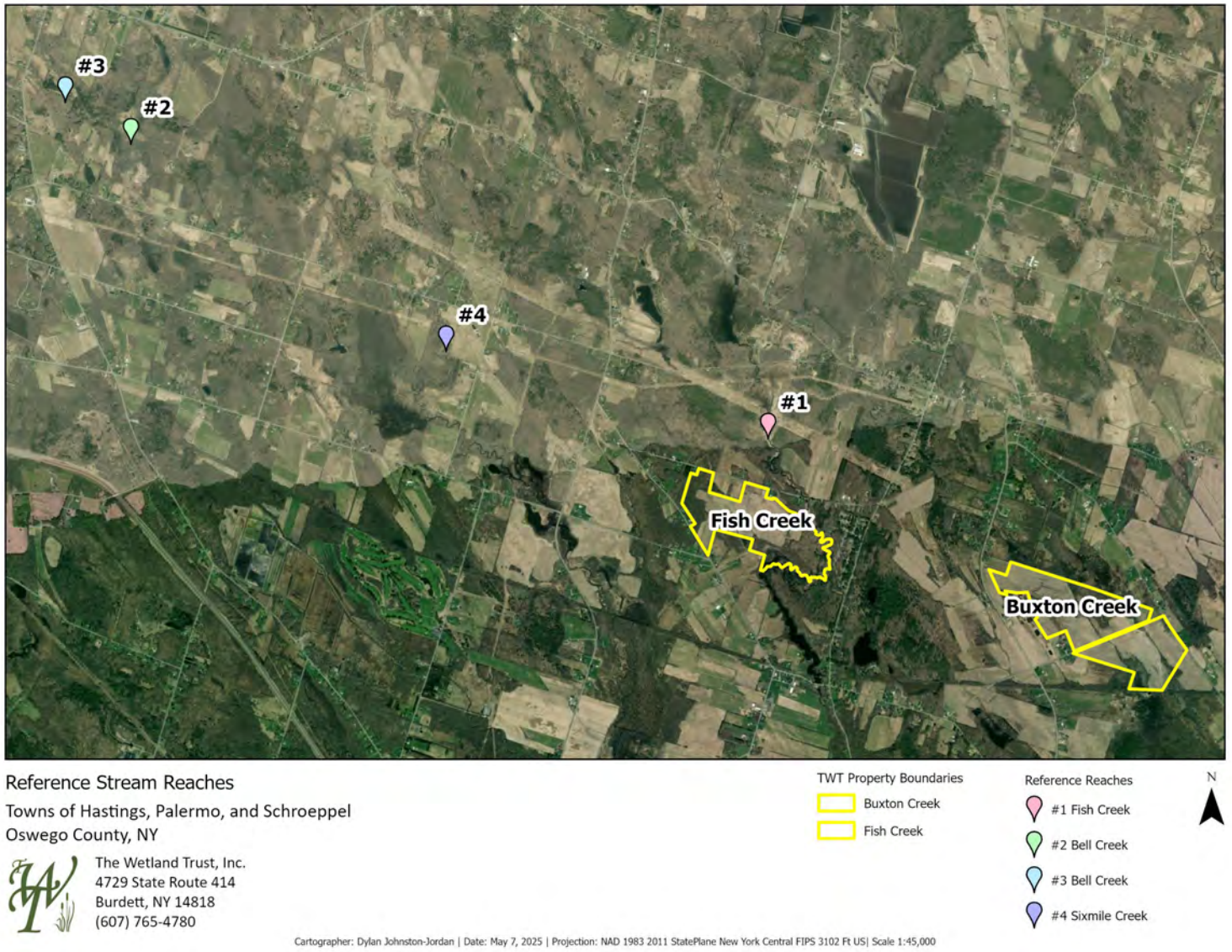
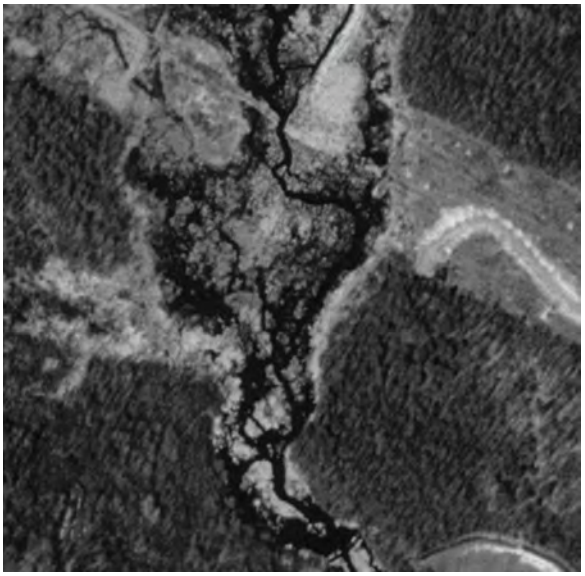


Figure 8-1b. Reference Reach #1 Fish Creek



Imagery: 1994, Location: 43.304067, -76.271105

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

Imagery: 2017, Location: 43.330381, -76.348298

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

Imagery: 2017, Location: 43.334094 -76.356244

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 K**). 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, 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.

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

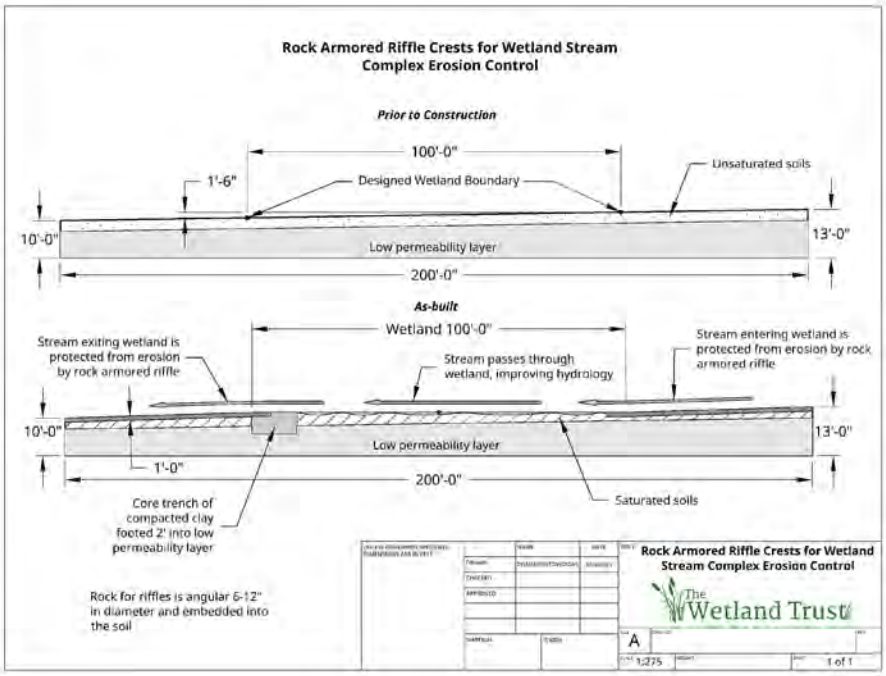
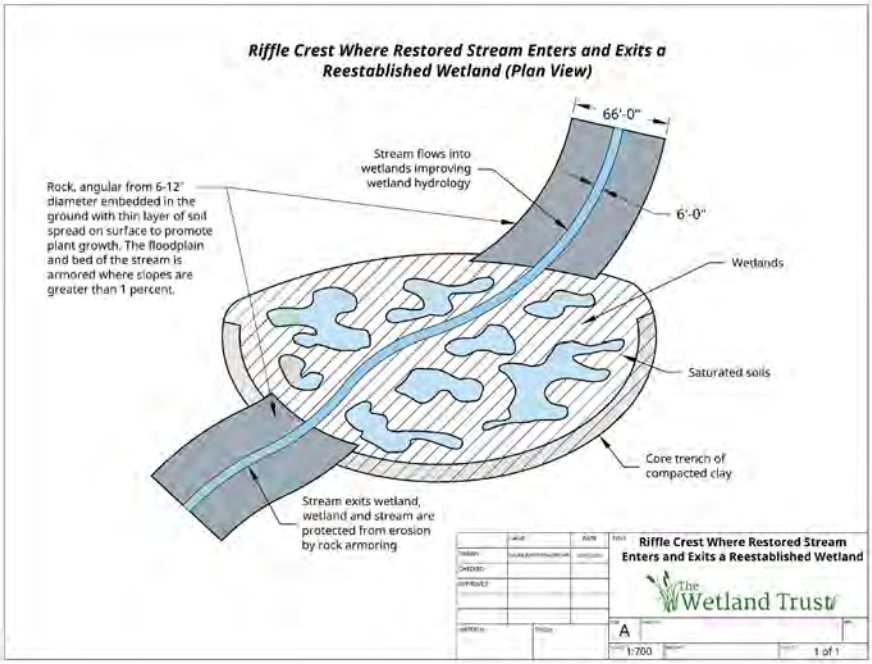


Figure 8-4. Riffle Crest Plan View



8.3 Timing and Sequence

Sections of stream and adjacent wetlands will be constructed concurrently to ensure integrated grading and hydrologic function across the stream/wetland complex. The new stream channel will be constructed first, with careful attention to alignment and grade, vertical grade control structure construction, erosion seeding. Once complete, log jams will be used to divert flow into the new channel and select portions of the existing channel will be filled to promote floodplain reconnection and wetland development. Earthwork will be conducted in dry conditions, with no temporary water management anticipated. Final seeding and planting of both the stream corridor and adjacent wetlands will occur after grading is complete to stabilize soils and initiate vegetation establishment.

Table 8-1. Stream Construction Sequence

Activity	Timing	Phase
Work area layout and preparation, SWPPP implementation.	Spring Year 1	Pre-construction
Vegetation clearing and grubbing: construction area cleared of debris, vegetation*, and any obstructions.	Summer Year 1	Construction Phase I: Earthwork
Temporary water management if needed.	Summer Year 1	Construction Phase I:
Stream channel excavation, floodplain bench and depression excavation. Grade banks to stable slopes and tie into adjacent floodplain. Erosion control seeding.	Summer Year 1	Construction Phase I:
Vertical grade control structure installation	Summer Year 1	Construction Phase II: Topography Enhancement
Log jam installation	Summer Year 1	Construction Phase II
Divert water to new channel	Summer Year 1	Construction Phase II
Filling of portions of former ditch	Summer Year 1	Construction Phase II

Seeding and planting per planting plan	Fall Year 1	Construction Phase III: Seeding & Planting
truction materials and general site clean- ment control structures (silt fencing) will be removed once site is stabilized.	Fall Year 1	Post-construction
*no trees will be removed		

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

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.

- 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 9-1, to derive an overall stream health score.
- 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.

- **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.

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 will consist of ten (10) monitoring reports over fifteen (15) 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.
- Stream Data
  - Stream reach cross sectional measurements
  - Bank dimensions
  - SVAP scores
  - Stream hydrology observations (see Section 9)
- 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		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			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		X
Photo sequence		X	X	X	X	X		X			X			X		X
Detailed site mapping		X	X	X	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 NYSDEC approval.

11.1 Hydrology Maintenance

Immediately following construction and throughout the 15-year monitoring period, Micron, facilitated by 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 (requires USACE and NYSDEC approval),
- Adjusting height/depth of ditch fill or groundwater dams (requires USACE and NYSDEC approval),
- 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, Micron (via TWT) will closely monitor vegetative establishment following initial planting/seeding and throughout the 15-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 (requires NYSDEC approval).

11.3 General Site Maintenance

General site maintenance is anticipated to occur regularly throughout the 15-year monitoring period and beyond. Micron bears responsibility for site maintenance, as facilitated by TWT, the fee-simple owner of the site. Non-ecological maintenance tasks include but are 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 L**. 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 and NYSDEC. 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 financial assurances for this compensatory mitigation plan will be in the form of a performance bond or equivalent to ensure compliance with permit requirements and project success. Experienced insurance brokers will assist Micron in preparing these financial assurances by providing guidance on structuring the performance bonds and ensuring they meet regulatory expectations. This ensures the 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.

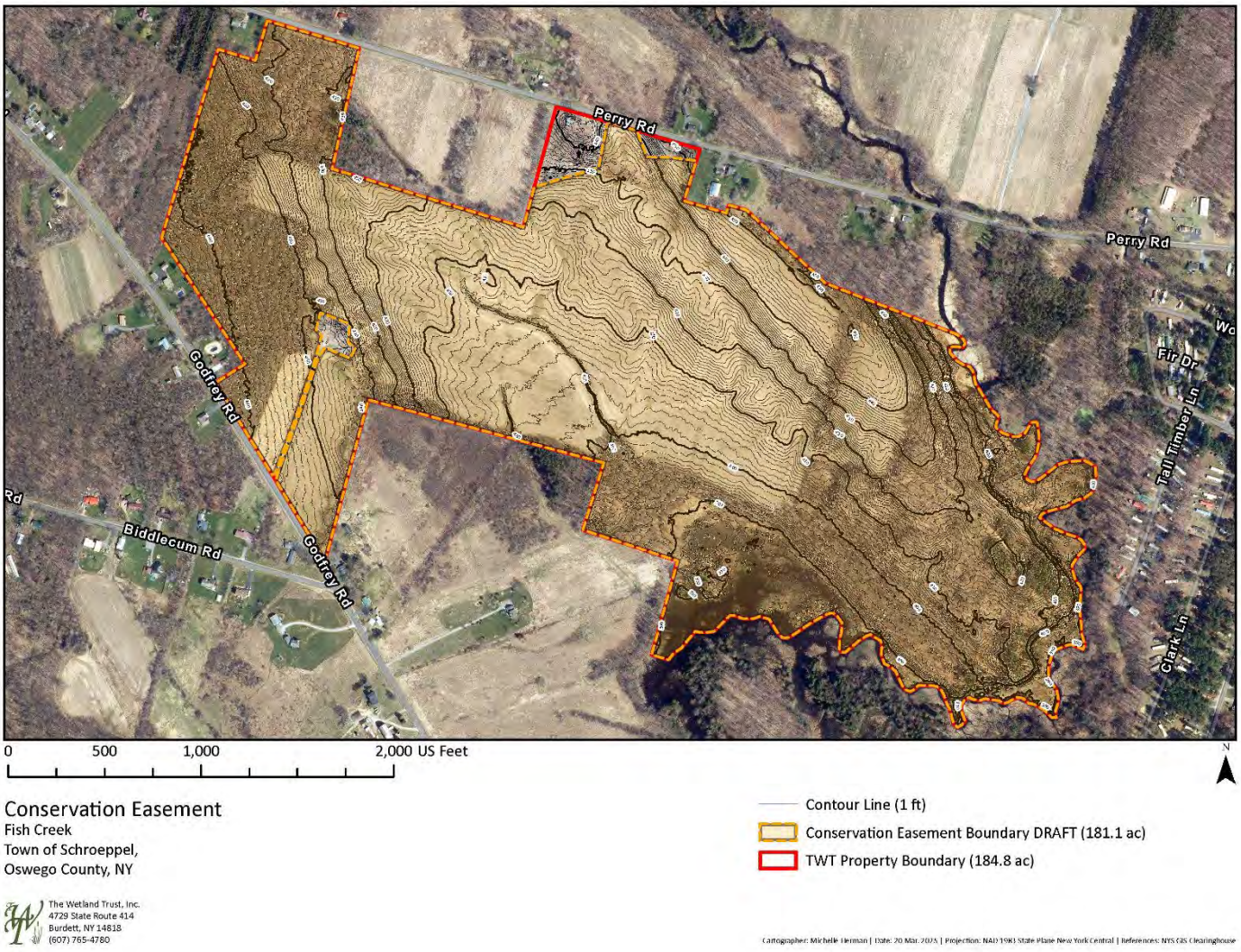
Fish Creek, 184 Godfrey Road

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]



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

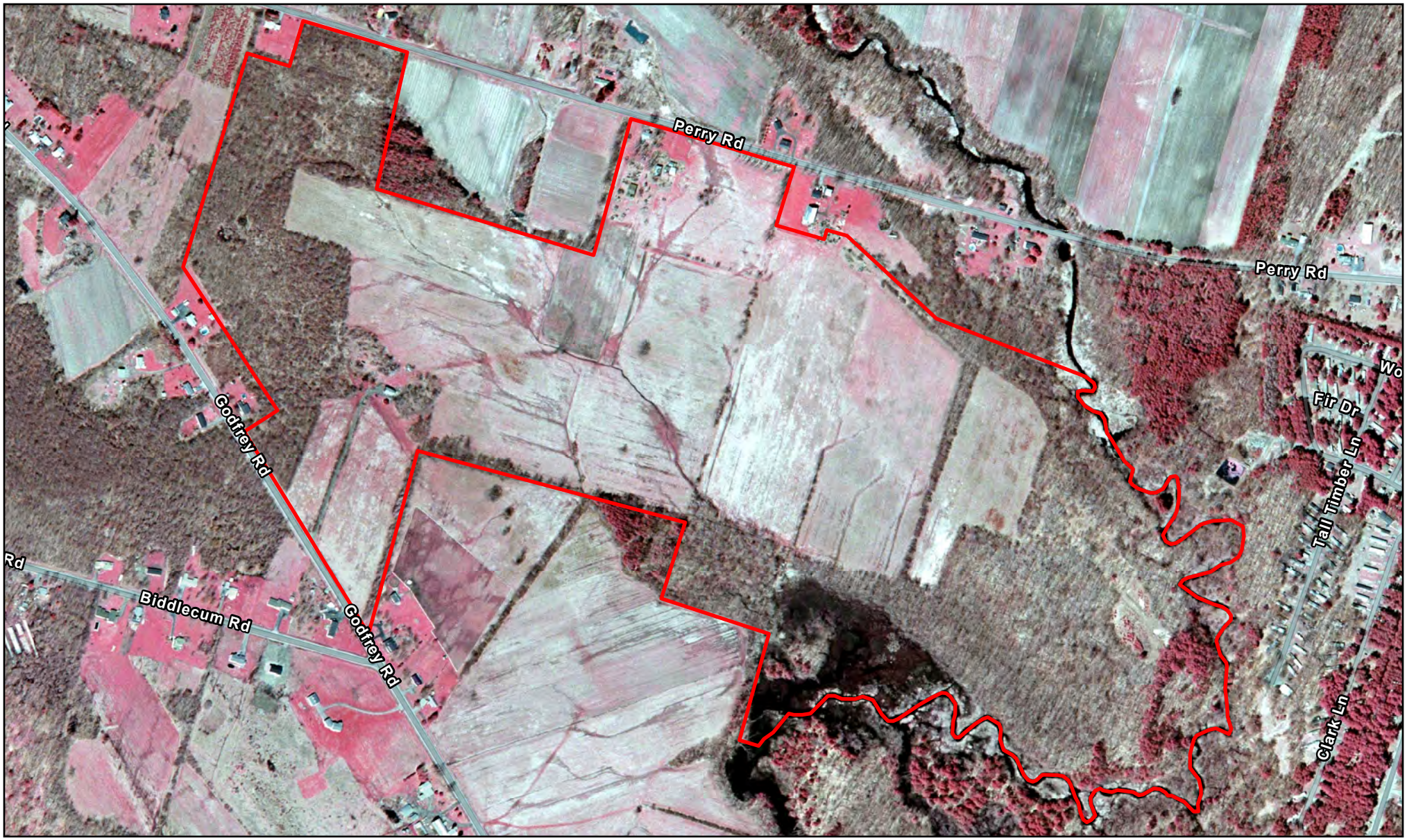
TWT Property Boundary (184.8 ac)

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



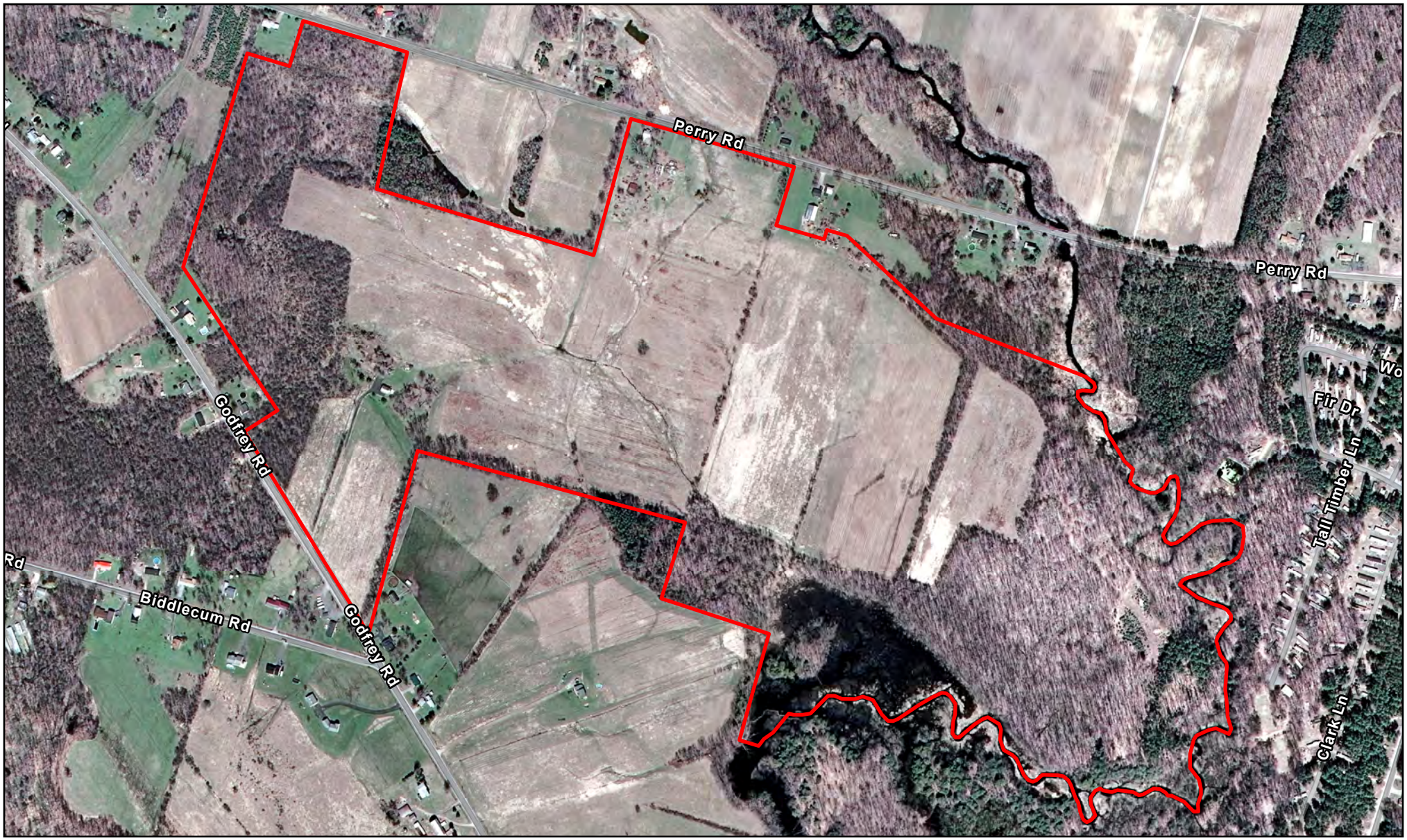
TWT Property Boundary (184.8 ac)

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



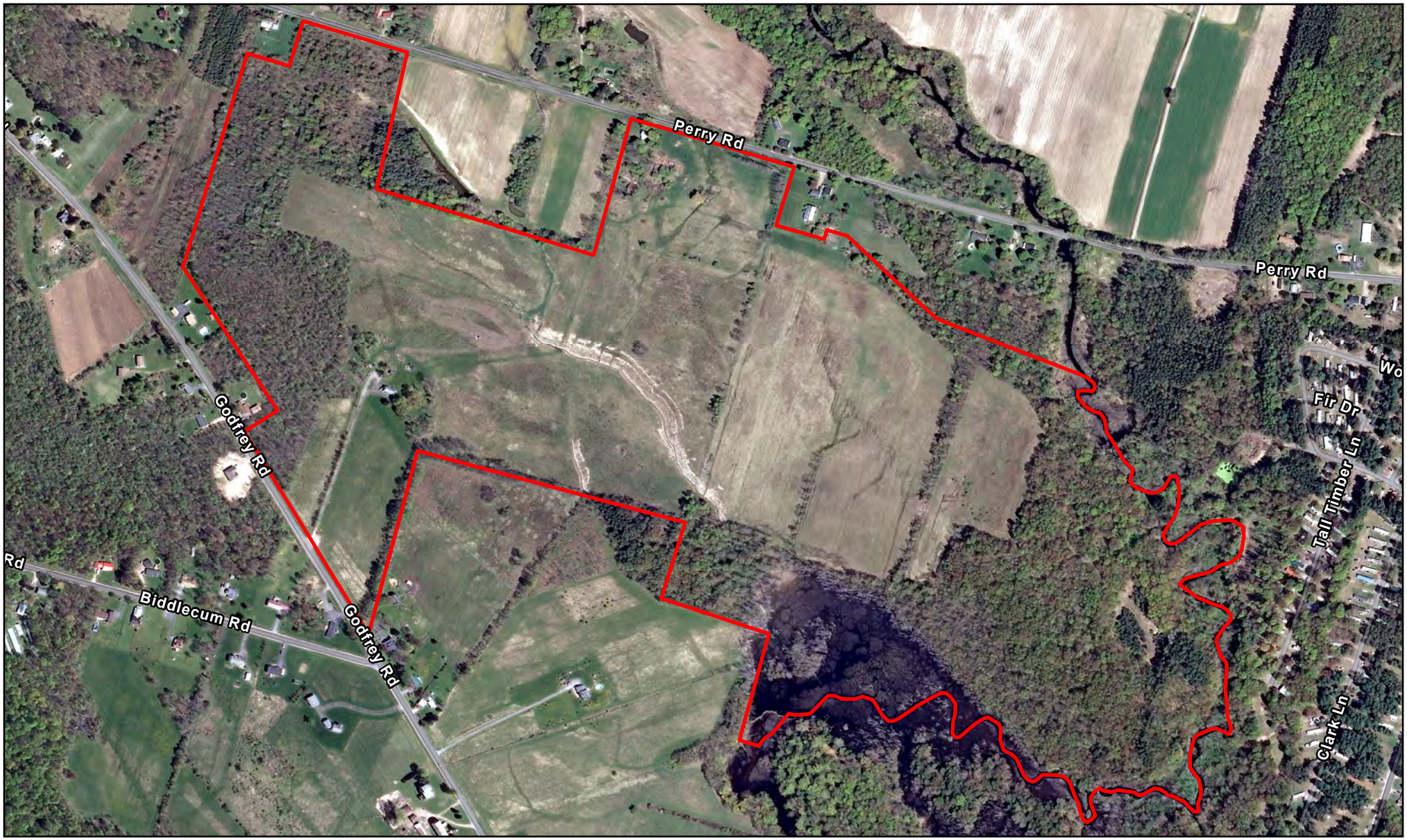
TWT Property Boundary (184.8 ac)

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.

Micron- Fish Creek Mitigation Site

Wetland Delineation Report

May 2025

The Wetland Trust, Inc. (TWT) conducted delineations of wetlands, drainages, and streams at the Micron-Fish Creek Stream and Wetland compensatory mitigation site located in Shroeppel, Oswego County, New York. The Fish Creek site is bordered by Perry Road to the north and Godfrey Road to the south and is approximately 185 acres in size. The purpose of the delineation is to determine the location and extent of wetlands and other water features on the Fish Creek site to aid in the planning and design of the wetland mitigation plan and obtaining the required regulatory permits.

Methods

A desktop review was conducted prior to field work which included background data such as aerial photography (current and historical), soil maps, and NY State and Federal wetland maps (see Mitigation Plan). Wetland delineations were conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (Regional Supplement USACE 2012). All delineations were completed consistently with the 1995 NYSDEC Freshwater Wetlands Delineation Manual (NYSDEC 1995). All field data points were recorded with a centimeter-level accuracy GNSS receiver and mapped in ArcGIS Pro. Field visits for delineation concurrence by USACE and NYSDEC were conducted in August 2024.

Results

A total of 19.2 acres of wetlands were delineated on the Fish Creek site. The wetland study focused largely on the areas within the work area/delineation concurrence request boundary (Attachment 2). For this summary the wetlands are broken down into two categories: the first being wetlands delineated within the wetland concurrence request area and the second being the wetland complex identified outside the concurrence area along the southeast side of the property. **PFO-02** is on the concurrence boundary and is included in the southeastern portion discussion. This complex consists of an area mapped as a State regulated wetland originally mapped in the 1980's (Attachment 1).

Within Wetland Concurrence Request Boundary (PEM 01, PEM 02, PEM 03, PEM 06, PEM 07, PEM 08, PSS 01, PSS 02, PSS 03, PFO 01)

Wetlands **PEM-02 and PEM-03** are currently being farmed and have little to no wetland vegetation present. These areas were delineated based on the following characteristics to varying degrees: soil cracking, algal growth, and stressed plantings were all observed in these areas. These wetlands are characterized by a gently sloping to concave (land feature) where water periodically accumulates and stands

for long periods. Soil cracking is often evidence of seasonal saturation followed by drying, a common condition in temporary or seasonally inundated wetlands. Algal growth typically indicates standing or slow-moving water, which is prevalent in wetlands. It may also indicate nutrient enrichment, particularly nitrogen and phosphorus, resulting from agricultural activities. Although not a definitive indicator on its own, algal growth can support evidence of wetland hydrology when observed alongside other indicators such as cracking soils and stressed plants. These areas delineated as wetlands were verified in the field with the Agencies.

PEM-03 also includes a very deep manipulated drainage, **D-04** (a tributary to Fish Creek), that is instrumental to draining the site for agriculture. Many plastic commercial tiles can be observed entering this drainage along its course through the active agriculture fields. The drainage is recessed over 10 feet below the original ground surface in most places.

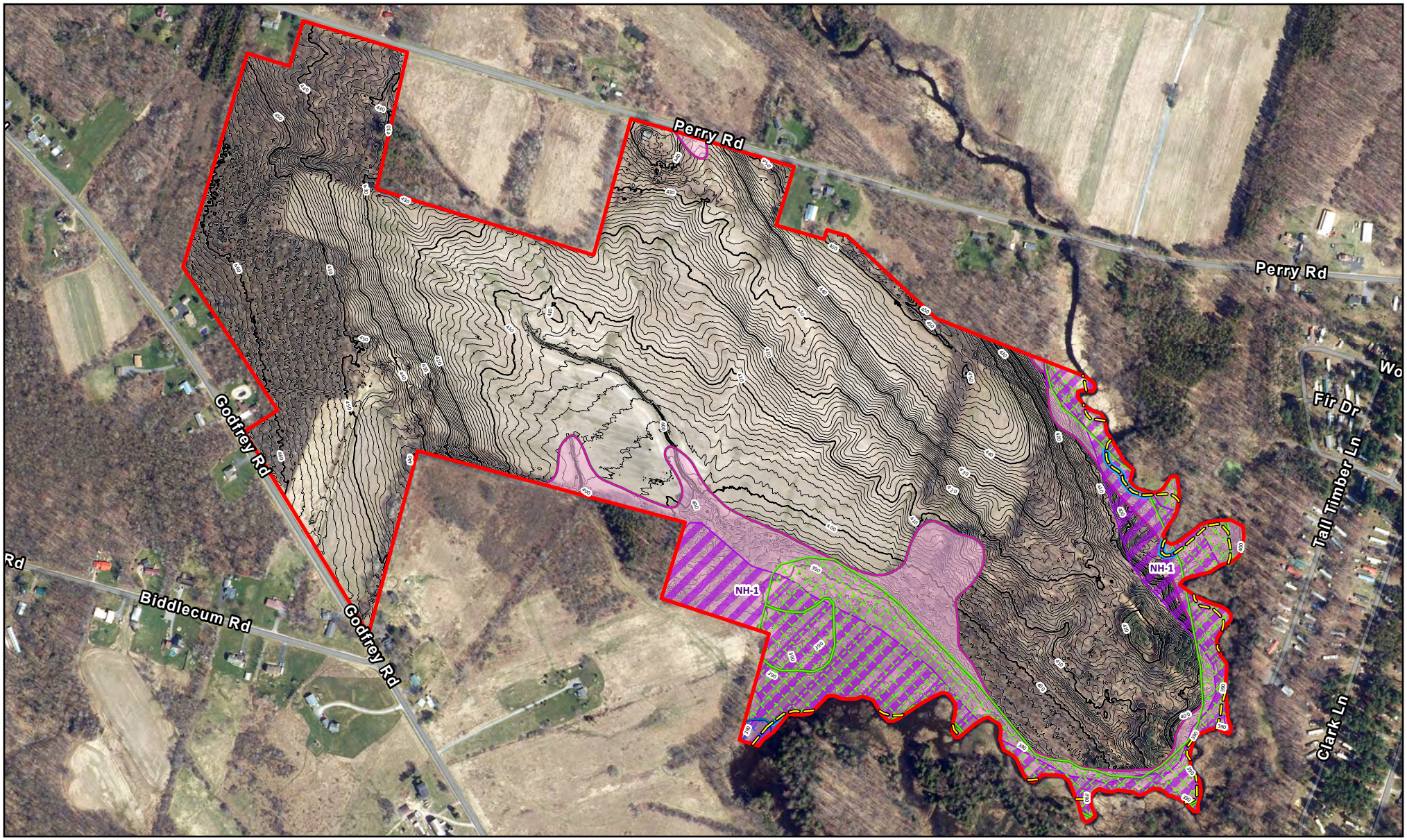
PEM-06, PEM-07, PSS-03 are part of another drainage system manipulated for agricultural purposes. The total area of these wetlands is less than an acre and less than 250 feet in length. The drainage/wetland system extends onto the adjacent property and eventually flows to the state wetland complex.

PEM-01, PEM-07 and PEM-08 were all once farmed regularly. They are all in early succession with the dominance of herbaceous species and what is often referred to as a wet meadow. Their landscape position, location within historical agricultural fields, aerial photo evidence and vegetation successional state support they were likely farmed within the last 15 years and/or cut for hay. **PSS-02** is a hill side slope area dominated by wetland shrub species. Based on field evidence and discussions with a previous tenant of the property, this is an area where drainage from **PEM-07** and **PEM-08** was directed through a series of ditches and swales. This individual notes that, at times, flows would be very heavy and above the ground surface sheet flowing through **PSS-02**.

Southeastern Portion (PFO 02, PEM 04, PEM 05, PSS 04, PSS 05)

This area was field verified and mapped in GIS. Portions of **PFO-02** within the wetland concurrence area were delineated and located with GPS. This area was further verified with Agency staff in the field. This wetland complex is relatively intact and has had limited direct agricultural impacts. Increased runoff from surrounding drained agricultural lands and the introduction of invasive species are the greatest indirect influences. The wetland system is a relatively diverse system and a benefit to the overall mitigation site.

Attachments: 1. State and Federal Mapped Wetlands
2. Fish Creek Delineation Map
2. Fish Creek Delineation Summary Table
3. Fish Creek Data Sheets



State and Federal Mapped Wetlands and Streams

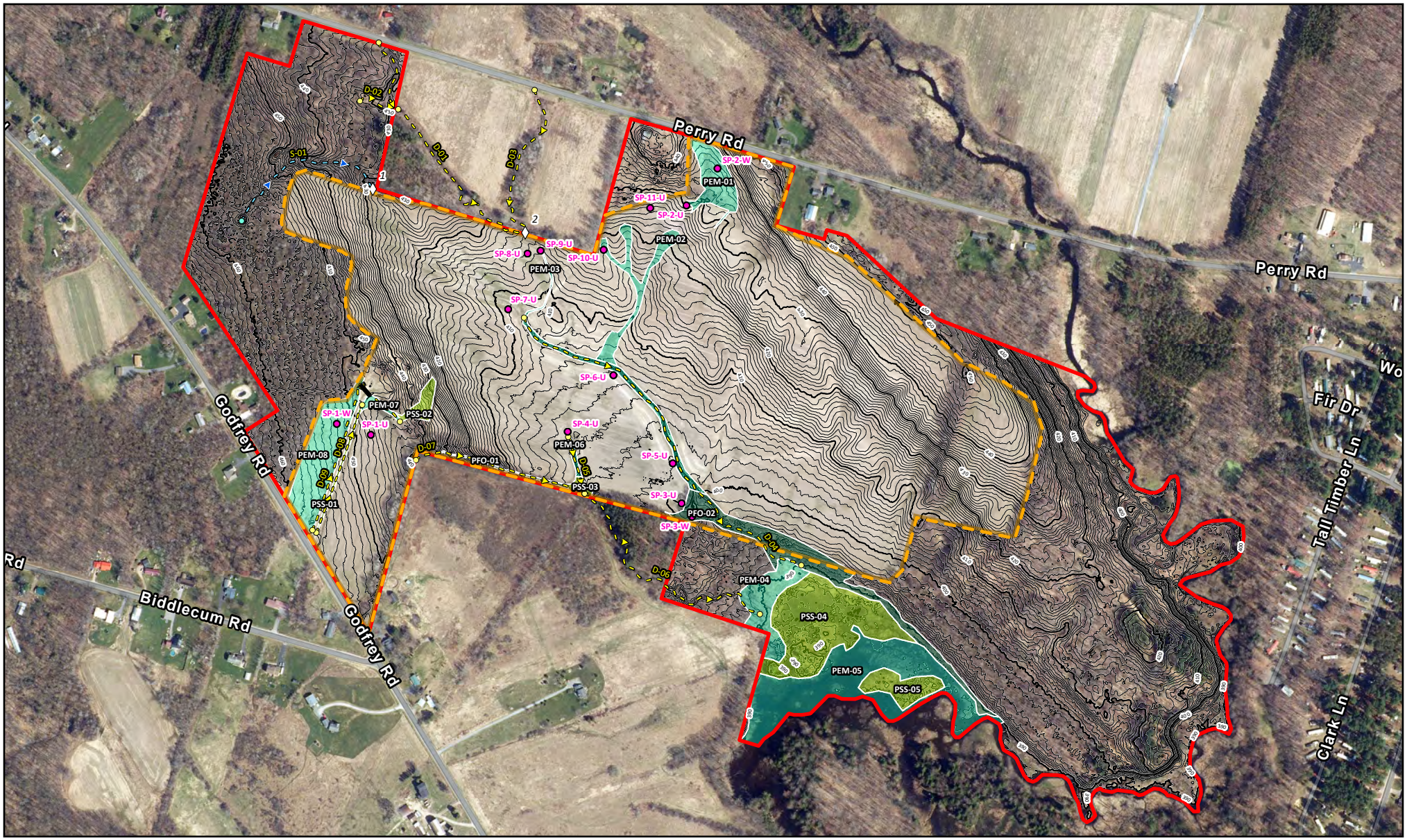
Fish Creek
Town of Schroeppel,
Oswego County, NY

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

NYSDEC Classified Rivers / Streams
- ID 899-4, Class C, Standard C(T) (2,643 ft)
- NYSDEC Previously Mapped Freshwater Wetlands (19.9 ac)
- NYSDEC Informational Freshwater Wetland Mapping (33.5 ac)

NWI Wetlands (19.7 ac total)
- Freshwater Forested/Shrub Wetland (19.1 ac)
- Lake (0.3 ac)
- Riverine (0.3 ac)
- Contour Line (1 ft)
- TWT Property Boundary (184.8 ac)

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



0 500 1,000 2,000 US Feet

N

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

- 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)

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? (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: 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	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**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.)

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

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)			
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)			
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:)			
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	**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? (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. *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	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	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)
- 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? (includes capillary fringe)	Yes X	No	Depth (inches):

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
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:)			
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	**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.)
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 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.)
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:

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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	**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.)

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)	___ Water-Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Drainage Patterns (B10)
___ Saturation (A3)	___ Marl Deposits (B15)	___ Moss Trim Lines (B16)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Dry-Season Water Table (C2)
___ Sediment Deposits (B2)	x Oxidized Rhizospheres on Living Roots (C3)	___ Crayfish Burrows (C8)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Stunted or Stressed Plants (D1)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface (B8)		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

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 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: 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	**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.)
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? 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, 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 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 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	**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.)
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 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: 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	**Is the Sampled Area**
Hydric Soil Present?	Yes	No x	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes X	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 species	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	**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.)
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 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.)

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	**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.)
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? (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: 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 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.)
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	**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.)
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? (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: 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 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	**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.)
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? (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, 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 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 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	**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.)
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? (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: 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 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:

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.

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

American goldfinch	*Spinus tristis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
European starling	*Sturnus vulgaris*	SNA G5: not applicable in NYS and secure globally	-	No				✓		
solitary sandpiper	*Tringa solitaria*	Least concern	-	Yes			✓			
American robin	*Turdus migratorius*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
eastern kingbird	*Tyrannus tyrannus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
warbling vireo	*Vireo gilvus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
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		✓		✓		
North American beaver	*Castor canadensis*	Least concern	-	Yes		✓				
North American porcupine	*Erethizon dorsatum*	Least concern	-	Yes						✓
white-tailed deer	*Odocoileus virginianus*	Least concern	-	Yes	✓	✓	✓	✓	✓	✓
raccoon	*Procyon lotor*	Least concern	-	Yes		✓		✓	✓	
eastern cottontail	*Sylvilagus floridanus*	Least concern	-	Yes			✓	✓		
Plant											
box elder	*Acer negundo*	S5, G5, Native, CoC: 1	FAC	Yes						✓
red maple	*Acer rubrum*	Least Concern, S5, G5, Native, CoC: 4	FAC	Yes		✓	✓	✓	✓	✓
silver maple	*Acer saccharinum*	Least Concern, S5, G5, Native, CoC: 6	FACW	Yes		✓	✓			
sugar maple	*Acer saccharum*	Least Concern, S5, G5, Native, CoC: 7	FACU	Yes				✓		
common yarrow	*Achillea millefolium*	Least Concern, SNR, G5, Native, CoC: 0	FACU	Yes		✓				
sweet flag	*Acorus calamus*	Least Concern, SNR, G4	OBL	No		✓	✓			
common agrimony	*Agrimonia gryposepala*	S5, Native, CoC: 4	FACU	Yes			✓		✓	
Rhode Island bentgrass	*Agrostis capillaris*	SNA, GNR, Not native, Naturalized	FAC	No					✓	
redtop	*Agrostis gigantea*	SNA, G4G5, Not native, Naturalized	FACW	No	✓	✓			✓	✓
creeping bent	*Agrostis stolonifera*	SNA, Not native, Naturalized	FACW	No	✓				✓	
American water plantain	*Alisma subcordatum*	S5, G5, Native, CoC: 4	OBL	Yes		✓				
speckled alder	*Alnus incana*	S5, G5, Native, CoC: 5	FACW	Yes			✓			
New York fern	*Amauropelta noveboracensis*	S5, G5, Native, CoC: 4	FAC	Yes			✓			
common ragweed	*Ambrosia artemisiifolia*	S5, G5, Native, CoC: 0	FACU	Yes			✓		✓	
downy serviceberry	*Amelanchier arborea*	S5, G5, Native, CoC: 4	FACU	Yes		✓				
hog peanut	*Amphicarpaea bracteata*	S5, Native, CoC: 5	FAC	Yes		✓				
Canada anemone	*Anemone canadensis*	S5, G5, Native, CoC: 5	FACW	Yes		✓				
sweet vernal grass	*Anthoxanthum odoratum*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓	✓		✓	
Indian hemp	*Apocynum cannabinum*	S5, G5, Native, CoC: 2	FAC	Yes			✓		✓	
swamp milkweed	*Asclepias incarnata*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
common milkweed	*Asclepias syriaca*	S5, G5, Native, CoC: 0	UPL	Yes		✓	✓			✓
yellow birch	*Betula alleghaniensis*	S5, G5, Native, CoC: 7	FAC	Yes				✓		
gray birch	*Betula populifolia*	S5, G5, Native, CoC: 4	FAC	Yes					✓	
nodding beggar ticks	*Bidens cernua*	S5, G5, Native, CoC: 4	OBL	Yes					✓	
devil's beggar ticks	*Bidens frondosa*	S5, Native, CoC: 2	FACW	Yes			✓		✓	
hairy brome	*Bromus commutatus*	SNA, GNR, Not native, Naturalized	-	No			✓			
smooth brome	*Bromus inermis*	SNA, G5, Not native, Naturalized	-	No		✓	✓			
common woodland sedge	*Carex blanda*	S5, G5, Native, CoC: 4	FAC	Yes		✓				
bristly sedge	*Carex comosa*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
fringed sedge	*Carex crinita*	S5, G5, Native, CoC: 3	OBL	Yes		✓	✓			
large yellow sedge	*Carex flava*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
graceful sedge	*Carex gracillima*	S5, G5, Native, CoC: 3	FACU	Yes			✓			
lake sedge	*Carex lacustris*	S5, G5, Native, CoC: 5	OBL	Yes						✓
bladder sedge	*Carex intumescens*	S5, G5, Native, CoC: 7	FACW	Yes		✓	✓		✓	
hop sedge	*Carex lupulina*	S5, G5, Native, CoC: 7	OBL	Yes		✓	✓			
sallow sedge	*Carex lurida*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
troublesome sedge	*Carex molesta*	S4, G4, Threatened, Native, CoC: 3	FAC	Yes			✓			
cyperus-like sedge	*Carex pseudocyperus*	S5, G5, Native, CoC: 6	OBL	Yes					✓	
broom sedge	*Carex scoparia*	S5, Native, CoC: 1	FACW	Yes		✓	✓			✓
awl-fruited sedge	*Carex stipata*	S5, G5, Native, CoC: 5	OBL	Yes			✓		✓	
tussock sedge	*Carex stricta*	S5, G5, Native, CoC: 4	OBL	Yes				✓	✓	✓
fox sedge	*Carex vulpinoidea*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓		✓	✓
ironwood	*Carpinus caroliniana*	S5, G5, Native, CoC: 6	FAC	Yes				✓	✓	
bitternut hickory	*Carya cordiformis*	S5, G5, Native, CoC: 7	FAC	Yes		✓			✓	
shagbark hickory	*Carya ovata*	S5, Native, CoC: 7	FACU	Yes		✓	✓	✓	✓	
buttonbush	*Cephalanthus occidentalis*	S5, G5, Native, CoC: 7	OBL	Yes		✓				
white turtle head	*Chelone glabra*	S5, G5, Native, CoC: 6	OBL	Yes			✓		✓	
lamb's quarters	*Chenopodium album*	SNA, G5, Not native, Naturalized	FACU	No					✓	
enchanter's nightshade	*Circaea canadensis*	S5, G5, Native,CoC: 5	FACU	Yes		✓	✓			
bull thistle	*Cirsium vulgare*	SNA, GNR, Not native, Naturalized	FACU	No		✓				

silky dogwood	*Cornus amomum*	S5, G5, Native, CoC: 6	FACW	Yes	✓	✓	✓	✓	✓	✓
gray dogwood	*Cornus racemosa*	S5, G5, Native, CoC: 2	FAC	Yes		✓	✓	✓		✓
red-osier dogwood	*Cornus sericea*	S5, G5, Native, CoC: 6	FACW	Yes						✓
hawthorn	*Crataegus sp.*	-	-	-		✓				✓
common yellow nut sedge	*Cyperus esculentus*	SNR, Native, CoC: 1	FACW	Yes			✓		✓	
false yellow nut sedge	*Cyperus strigosus*	S5, G5, Native, CoC: 3	FACW	Yes			✓		✓	
orchard grass	*Dactylis glomerata*	SNA, GNR, Not native, Naturalized	FACU	No	✓				✓	
wild carrot	*Daucus carota*	SNA, GNR, Not native, Naturalized	UPL	No		✓				
water willow	*Decodon verticillatus*	S5, G5, Native, CoC: 7	OBL	Yes			✓			✓
tufted hair grass	*Deschampsia cespitosa*	SNR, Native	-	Yes					✓	
digit grass	*Digitaria eriantha*	SNA, GNR, Not native, Naturalized	-	No		✓				
smooth crab grass	*Digitaria ischaemum*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
tall flat-topped white aster	*Doellingeria umbellata*	S5, G5, Native, CoC: 4	FACW	Yes					✓	
common wood fern	*Dryopteris intermedia*	S5, G5, Native, CoC: 5	FAC	Yes		✓				✓
autumn olive	*Elaeagnus umbellata*	SNA, GNR, Not native, Naturalized	-	No		✓				
blunt spike rush	*Eleocharis obtusa*	S5, Native, CoC: 2	OBL	Yes		✓			✓	✓
fringed wilowherb	*Epilobium ciliatum*	S5, G5, Native, CoC: 3	FACW	Yes					✓	
purpleleaf willowherb	*Epilobium coloratum*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓		✓	
field horsestail	*Equisetum arvense*	S5, Native, CoC: 2	FAC	Yes				✓	✓	✓
scouringrush horsetail	*Equisetum hyemale*	S5, G5, Native, CoC: 2	FAC	Yes	✓			✓		
annual daisy fleabane	*Erigeron annuus*	S5, G5, Native, CoC: 0	FACU	Yes			✓			
small daisy fleabane	*Erigeron strigosus*	S5, Native, CoC: 0	FACU	Yes			✓			
yellow trout lily	*Erythronium americanum*	S5, G5, Native, CoC: 5	-	Yes		✓		✓		
boneset	*Eupatorium perfoliatum*	S5, G5, Native, CoC: 3	FACW	Yes			✓		✓	✓
common flat-topped goldenrod	*Euthamia graminifolia*	S5, G5, Native, CoC: 1	FAC	Yes					✓	
spotted Joe Pye weed	*Eutrochium maculatum*	S5, Native, CoC: 4	OBL	Yes	✓					
American beech	*Fagus grandifolia*	S5, G5, Native, CoC: 8	FACU	Yes				✓	✓	
common wild strawberry	*Fragaria virginiana*	S5, G5, Native, CoC: 0	FACU	Yes		✓			✓	✓
glossy buckthorn	*Frangula alnus*	SNA, GNR, Not native, Naturalized	FAC	No		✓				
white ash	*Fraxinus americana*	S5, G5, Native, CoC: 3	FACU	Yes		✓				✓
green ash	*Fraxinus pennsylvanica*	S5, G5, Native, CoC: 4	FACW	Yes	✓	✓	✓	✓	✓	✓
hedge bedstraw	*Galium album*	SNA, GNR, Not native, Naturalized	FACU	Yes	✓		✓		✓	
common marsh bedstraw	*Galium palustre*	S5, G5, Native, CoC: 3	OBL	Yes		✓			✓	
yellow avens	*Geum aleppicum*	S5, G5, Native, CoC: 3	FAC	Yes		✓	✓			
white avens	*Geum canadense*	S5, G5, Native, CoC: 5	FAC	Yes			✓			✓
town avens	*Geum urbanum*	SNA, G5, Not native, Naturalized	-	No		✓	✓			
American manna grass	*Glyceria maxima*	S5, G5, Native, CoC: 4	OBL	No			✓		✓	
fowl manna grass	*Glyceria striata*	S5, G5, Native, CoC: 6	OBL	Yes		✓	✓		✓	
soybean	*Glycine max*	SNA, GNR, Not native, Naturalized	-	-	✓	✓	✓	✓	✓	✓
marsh cubweed	*Gnaphalium uliginosum*	SNA, G5, Not native, Naturalized	FAC	No			✓			
dame's rocket	*Hesperis matronalis*	SNA, Not native, Naturalized	FACU	No	✓					
common frogbit	*Hydrocharis morsus-ranae*	SNA, GNR, Not native, Naturalized	OBL	No			✓			
Eurasian live forever	*Hylotelephium telephium*	SNA, GNR, Not native, Naturalized	-	No				✓		
St. John's wort	*Hypericum sp.*	S5, Native	-	-						✓
spotted jewelweed	*Impatiens capensis*	S5, Native, CoC: 3	FACW	Yes	✓	✓	✓		✓	
blue flag	*Iris versicolor*	S5, G5, Native, CoC: 4	OBL	Yes		✓				
soft rush	*Juncus effusus*	S5, G5, Native, CoC: 2	OBL	Yes	✓	✓	✓	✓	✓	✓
path rush	*Juncus tenuis*	S5, G5, Native, CoC: 0	FAC	Yes			✓			✓
rice cut grass	Leersia oryzoides	S5, G5, Native, CoC: 4	OBL	Yes					✓	✓
spicebush	*Lindera benzoin*	S5, Native, CoC: 6	FACW	Yes		✓	✓			
tulip poplar	*Liriodendron tulipifera*	S5, G5, Native, CoC: 6	FACU	Yes	✓				✓	
Indian tobacco	*Lobelia inflata*	S5, G5, Native, CoC: 1	FACU	Yes			✓			
great blue lobelia	*Lobelia siphilitica*	S5, G5, Native, CoC: 5	FACW	Yes						✓
tall rye grass	*Lolium arundinace*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
Japanese honeysuckle	*Lonicera japonica*	SNA, GNR, Not native, Naturalized	FACU	No		✓				
honeysuckle	*Lonicera spp.*	-	-	No	✓	✓	✓	✓	✓	✓
Tatarian honeysuckle	*Lonicera tatarica*	SNA, GNR, Not native, Naturalized	FACU	No		✓	✓			✓
water purslane	*Ludwigia palustris*	S5, G5, Native, CoC: 4	OBL	Yes	✓		✓		✓	
water horehound	*Lycopus americanus*	S5, G5, Native, CoC: 4	OBL	Yes			✓		✓	
moneywort	*Lysimachia nummularia*	SNA, GNR, Not native, Naturalized	FACW	No	✓	✓		✓	✓	
purple loosestrife	*Lythrum salicaria*	SNA, Non native, Naturalized	OBL	No	✓	✓	✓	✓	✓	
Canada mayflower	*Maianthemum canadense*	S5, G5, Native, CoC: 5	FACU	Yes				✓		
ostrich fern	*Matteuccia struthiopteris*	S4, G5, Native, CoC: 5	FAC	Yes			✓			
white sweet clover	*Melilotus albus*	SNA, G5, Not native, Naturalized	FACU	No						✓
Allegheny monkey flower	*Mimulus ringens*	S5, G5, Native, CoC: 6	OBL	Yes					✓	
blackgum	*Nyssa sylvatica*	S5, G5, Native, CoC: 7	FAC	Yes			✓			
sensitive fern	*Onoclea sensibilis*	S5, G5, Native, CoC: 2	FACW	Yes	✓	✓	✓	✓	✓	✓
royal fern	*Osmunda regalis*	S5, G5, Native, CoC: 6	OBL	Yes			✓			
cinnamon fern	*Osmundastrum cinnamomeum*	S5, G5, Native, CoC: 6	FACW	Yes			✓			
yellow wood sorrel	*Oxalis dillenii*	S5, Native, CoC: 0	FACU	Yes		✓			✓	
fall panic grass	*Panicum dichotomiflorum*	S5, G5, Native, CoC: 1	FACW	Yes						✓
Virginia creeper	*Parthenocissus quinquefolia*	S5, G5, Native, CoC: 4	FACU	Yes		✓	✓			

green arrow arum	*Peltandra virginica*	S5, G5, Native, CoC: 6	OBL	Yes		✓				
water pepper	*Persicaria hydropiper*	SNA, G5, Not native, Naturalized	OBL	No					✓	
lady's thumb	*Persicaria maculosa*	SNA, G5, Not native, Naturalized	FAC	No			✓			
arrow-leaved tearthumb	*Persicaria sagittata*	S5, Native, CoC: 4	OBL	Yes			✓			
jumpseed	*Persicaria virginiana*	S5, Native, CoC: 5	FAC	Yes		✓	✓		✓	
reed canary grass	*Phalaris arundinacea*	SNR, G5, Native, CoC: 0	FACW	No	✓	✓	✓	✓	✓	✓
common Timothy	*Phleum pratense*	SNA, GNR, Not native, Naturalized	FACU	No		✓			✓	
common reed	*Phragmites australis*	SNA, G5, Not native, Naturalized	FACW	No	✓	✓	✓			
pokeweed	*Phytolacca americana*	S5, G5, Native, CoC: 0	FACU	Yes			✓			
Norway spruce	*Picea abies*	SNA, G5, Not native, Naturalized	-	No		✓	✓	✓		
red spruce	*Picea rubens*	S5, G5, Native, CoC: 6	FACU	Yes		✓				
white pine	*Pinus strobus*	S5, G5, Native, CoC: 3	FACU	Yes		✓		✓		
English plantain	*Plantago lanceolata*	SNA, Not native, Naturalized	FACU	No	✓	✓		✓	✓	
common plantain	*Plantago major*	SNA, G5, Not native, Naturalized	FACU	No	✓			✓	✓	✓
northern tubercled orchid	*Platanthera flava*	S4, G4, Native, CoC: 3	FACW	Yes			✓			
annual blue grass	*Poa annua*	SNA, Non native, Naturalized	FACU	No				✓		
wood bluegrass	*Poa nemoralias*		FACU	No			✓			
common Kentucky blue grass	*Poa pratensis*	SNA, G5, Not native, Naturalized	FACU	No		✓			✓	✓
mayapple	*Podophyllum peltatum*	S5, Native, CoC: 5	FACU	Yes			✓	✓		
eastern cottonwood	*Populus deltoides*	S5, G5, Native, CoC: 2	FAC	Yes		✓		✓		
quaking aspen	*Populus tremuloides*	S5, G5, Native, CoC: 3	FACU	Yes	✓	✓	✓	✓	✓	✓
oldfield cinquefoil	*Potentilla simplex*	S5, G5, Native, CoC: 0	FACU	Yes		✓				
Eurasian selfheal	*Prunella vulgaris*	SNA, G5, Not native, Naturalized	FAC	No					✓	
pin cherry	*Prunus pensylvanica*	S5, Native, CoC: 4	FACU	Yes		✓				
black cherry	*Prunus serotina*	S5, G5, Native, CoC: 4	FACU	Yes		✓	✓	✓	✓	
bracken fern	*Pteridium aquilinum*	S5, G5, Native, CoC: 3	FACU	Yes			✓			
white oak	*Quercus alba*	S5, Native, CoC: 7	FACU	Yes		✓				
red oak	*Quercus rubra*	S5, Native, CoC: 7	FACU	Yes		✓	✓			
tall buttercup	*Ranunculus acris*	SNA, G5, Not native, Naturalized	FAC	No	✓	✓			✓	
creeping buttercup	*Ranunculus repens*	SNA, GNR, Not native, Naturalized	FAC	No					✓	
cursed crowfoot	*Ranunculus sceleratus*	SNR, Native, CoC: 3	OBL	Yes	✓			✓		
Japanese knotweed	*Reynoutria japonica*	SNA, Not native, Naturalized	FACU	No				✓		
alder buckthorn	*Rhamnus alnifolia*	S4, G5, Native, CoC: 9	OBL	Yes		✓				
buckthorn	*Rhamnus cathartica*	SNA, GNR, Not native, Naturalized	FAC	No		✓	✓		✓	✓
staghorn sumac	*Rhus typhina*	S5, G5, Native, CoC: 1	-	Yes		✓				
multiflora rose	*Rosa multiflora*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓	✓	✓	✓	✓
swamp rose	*Rosa palustris*	S5, G5, Native, CoC: 9	OBL	Yes				✓		✓
common blackberry	*Rubus allegheniensis*	S5, G5, Native, CoC: 3	FACU	Yes		✓	✓			
swamp dewberry	*Rubus hispidus*	S5, G5, Native, CoC: 7	FACW	Yes			✓			
red raspberry	*Rubus ideaus*	SNA, G5, Not native, Naturalized	FACU	No		✓	✓			
dwarf raspberry	*Rubus pubescens*	S5, Native, CoC: 8	FACW	Yes			✓			
sheep sorrel	*Rumex acetosella*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
curly dock	*Rumex crispus*	SNA, GNR, Not native, Naturalized	FAC	No	✓	✓	✓		✓	✓
broad-leaved dock	*Rumex obtusifolius*	SNA, Not native, Naturalized	FAC	No		✓			✓	
swamp dock	*Rumex verticillatus*	S5, G5, Native, CoC: 6	OBL	Yes			✓			
Bebb's willow	*Salix bebbiana*	S5, G5, Native, CoC: 3	FACW	Yes			✓			
pussy willow	*Salix discolor*	S5, G5, Native, CoC: 3	FACW	Yes		✓	✓	✓		
black willlow	*Salix nigra*	S5, G5, Native, CoC: 5	OBL	Yes		✓				
basket willow	*Salix purpurea*	SNA, G5, Not native, Naturalized	FACW	No			✓			
common elderberry	*Sambucus nigra*	S5, G5, Native, CoC: 4	FACW	Yes				✓		
lizard's tail	*Saururus cernuus*	S5, G5, Native, CoC: 6	OBL	Yes		✓				
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
dark-green bulrush	*Scirpus atrovirens*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓			
woolgrass	*Scirpus cyperinus*	S5, G5, Native, CoC: 4	OBL	Yes		✓		✓	✓	✓
mad dog skullcap	*Scutellaria lateriflora*	S5, G5, Native, CoC: 7	OBL	Yes			✓			
horse nettle	*Solanum carolinense*	S5, Native, CoC: 0	FACU	Yes					✓	
bitter-sweet nightshade	*Solanum dulcamara*	SNA, Not native, Naturalized	FAC	No		✓	✓			
tall goldenrod	*Solidago altissima*	S5, Native, CoC: 1	FACU	Yes		✓				✓
Canada goldenrod	*Solidago canadensis*	S5, G5, Native, CoC: 0	FACU	Yes	✓		✓		✓	
swamp goldenrod	*Solidago gigantea*	S5, G5, Native, CoC: 3	FACW	Yes		✓			✓	✓
common wrinkle-leaved goldenr	*Solidago rugosa*	S5, G5, Native, CoC: 1	FAC	Yes	✓	✓	✓		✓	✓
spiny-leaved sow thistle	*Sonchus asper*	SNA, GNR, Not native, Naturalized	FACU	No			✓	✓		
green-fruited bur-reed	*Sparganium chlorocarpum*	S5, Native, CoC: 4	OBL	Yes			✓			
grass-leaved stitchwort	*Stellaria graminea*	SNA, GNR, Not native, Naturalized	UPL	No					✓	
white panicle aster	*Symphyotrichum lanceolatum*	S5, G5, Native, CoC: 1	FACW	Yes			✓		✓	✓
calico aster	*Symphyotrichum lateriflorum*	S5, G5, Native, CoC: 0	FAC	Yes		✓			✓	
new england aster	*Symphyotrichum novae-angliae*	S5, Native, CoC: 1	FACW	Yes						✓
purple-stemmed aster	*Symphyotrichum puniceum*	S5, G5, Native, CoC: 4	OBL	Yes	✓		✓		✓	✓
skunk cabbage	*Symplocarpus foetidus*	S5, G5, Native, CoC: 5	OBL	Yes				✓		
common dandelion	*Taraxacum officinale*	SNA, G5, Not native, Naturalized	FACU	No	✓	✓	✓	✓	✓	✓
marsh fern	*Thelypteris palustris*	S5, G5, Native, CoC: 4	FACW	Yes		✓				
American basswood	*Tilia americana*	S5, G5, Native, CoC: 7	FACU	Yes			✓			

poison ivy	*Toxicodendron radicans*	S5, Native, CoC: 3	FAC	Yes	✓	✓	✓	✓	✓	✓
red clover	*Trifolium pratense*	SNA, Not native, Naturalized	FACU	No	✓			✓	✓	✓
white clover	*Trifolium repens*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓			✓	✓
red trillium	*Trillium erectum*	S5, G5, Native, CoC: 7	FACU	Yes				✓		
white trillium	*Trillium grandiflorum*	S5, G5, Native, CoC: 7	-	Yes				✓		
eastern hemlock	*Tsuga canadensis*	S5, G5, Native, CoC: 7	FACU	Yes				✓	✓	
tower mustard	*Turritis glabra*	S5, Native, CoC: 2	UPL	No			✓			
coltsfoot	*Tussilago farfara*	SNA, GNR, Not native, Naturalized	FACU	No		✓				
narrowleaf cattail	*Typha angustifolia*	S5, G5, Native, CoC: 1	OBL	No			✓			✓
hybrid cattail	*Typha glauca*	SNR, GNR, Native	OBL	No	✓	✓	✓			
wide-leaved cattail	*Typha latifolia*	S5, G5, Native, CoC: 1	OBL	Yes		✓	✓			
cattail	*Typha sp.*	-	OBL	-	✓	✓	✓	✓	✓	✓
American elm	*Ulmus americana*	S5, G5, Native, CoC: 4	FACW	Yes		✓	✓	✓		✓
false hellebore	*Veratrum viride*	S5, G5, Native, CoC: 4	FACW	Yes				✓		
moth mullein	*Verbascum blattaria*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
blue vervain	*Verbena hastata*	S5, Native, CoC: 3	FACW	Yes	✓	✓			✓	
smooth arrowwood	*Viburnum dentatum*	S5, Native, CoC: 3	FAC	Yes	✓	✓	✓		✓	✓
nannyberry	*Viburnum lentago*	S5, G5, Native, CoC: 4	FAC	Yes		✓	✓		✓	✓
tufted vetch	*Vicia cracca*	SNA, G5, Not native, Naturalized	-	No			✓			✓
common blue violet	*Viola sororia*	S5, Native, CoC: 3	FAC	Yes		✓				
riverbank grape	*Vitis riparia*	S5, G5, Native, CoC: 3	FAC	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 15:07:39 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
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

July 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 those with a New York State Natural Heritage Invasiveness ranking of high or very high. Any others identified by NYSDEC or USACE shall be incorporated into this ISMP.

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 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 or leaving off-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**: To effectively prevent the introduction or spread of invasive species without disrupting construction activities, the following cleaning protocols will be implemented:
    - **Incoming Equipment:** All equipment entering the site will be visually inspected by onsite construction monitors. If soil, plant material, or debris is observed, equipment will be cleaned prior to entering sensitive work areas using appropriate methods such as manual removal or pressure washing.
    - **Active Monitoring During Construction:** Construction monitors will observe operations and identify equipment that has entered areas with known or suspected invasive species presence, particularly during wet conditions or where vegetative debris is likely to accumulate.

  - **Equipment Exit Procedures:** Any equipment identified as having operated in areas with potential for invasive seed or propagule exposure will be cleaned using onsite pressure washing stations before leaving the site or transitioning between sensitive areas. This will help prevent the transfer of invasive material both within and beyond the project boundaries.
  - **Seasonal Considerations:** Construction monitors may increase cleaning vigilance during key seed dispersal periods or when conditions increase the likelihood of soil and plant matter transport.
  - **Compliance and Documentation:** Construction monitors will document cleaning efforts as part of routine field oversight.

- **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 (i.e. integrated pest management principles).

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 (**90% native cover** standard set in the mitigation plan), 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:
    - 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: (Preferred Method)
    - Hand-pull small infestations, removing all roots.
    - Cut flower heads before seed drop to prevent spread.
2. Biological Control (Unlikely to be implemented due to abundance of beetles throughout the great lakes region):
    - Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
    - Any releases would be monitored over multiple years to assess impact.
3. Chemical Control:
    - Spot treat with glyphosate-based pesticide in late summer.

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

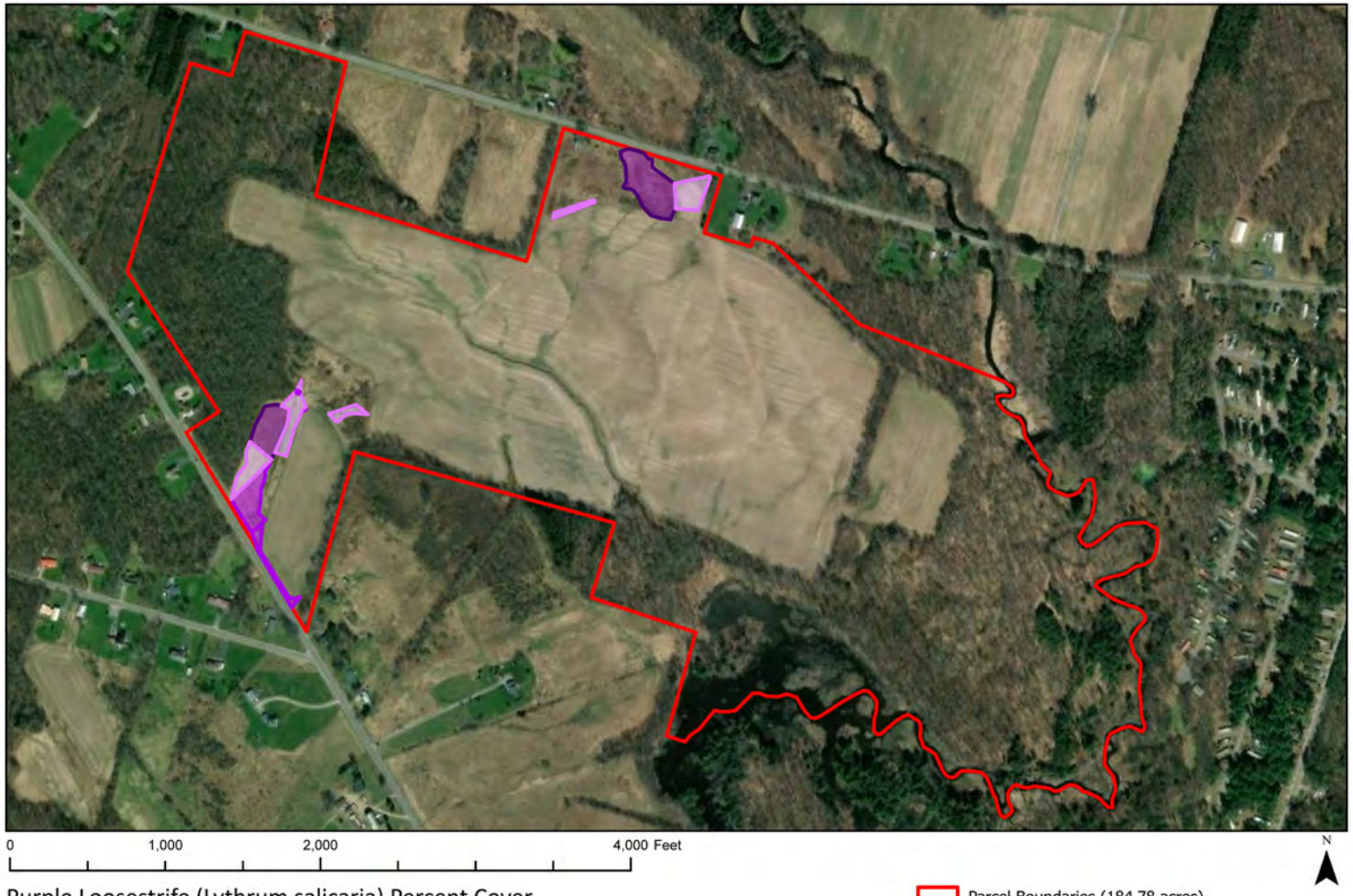

Figure 8-2. Reed Canary Grass Percent Cover

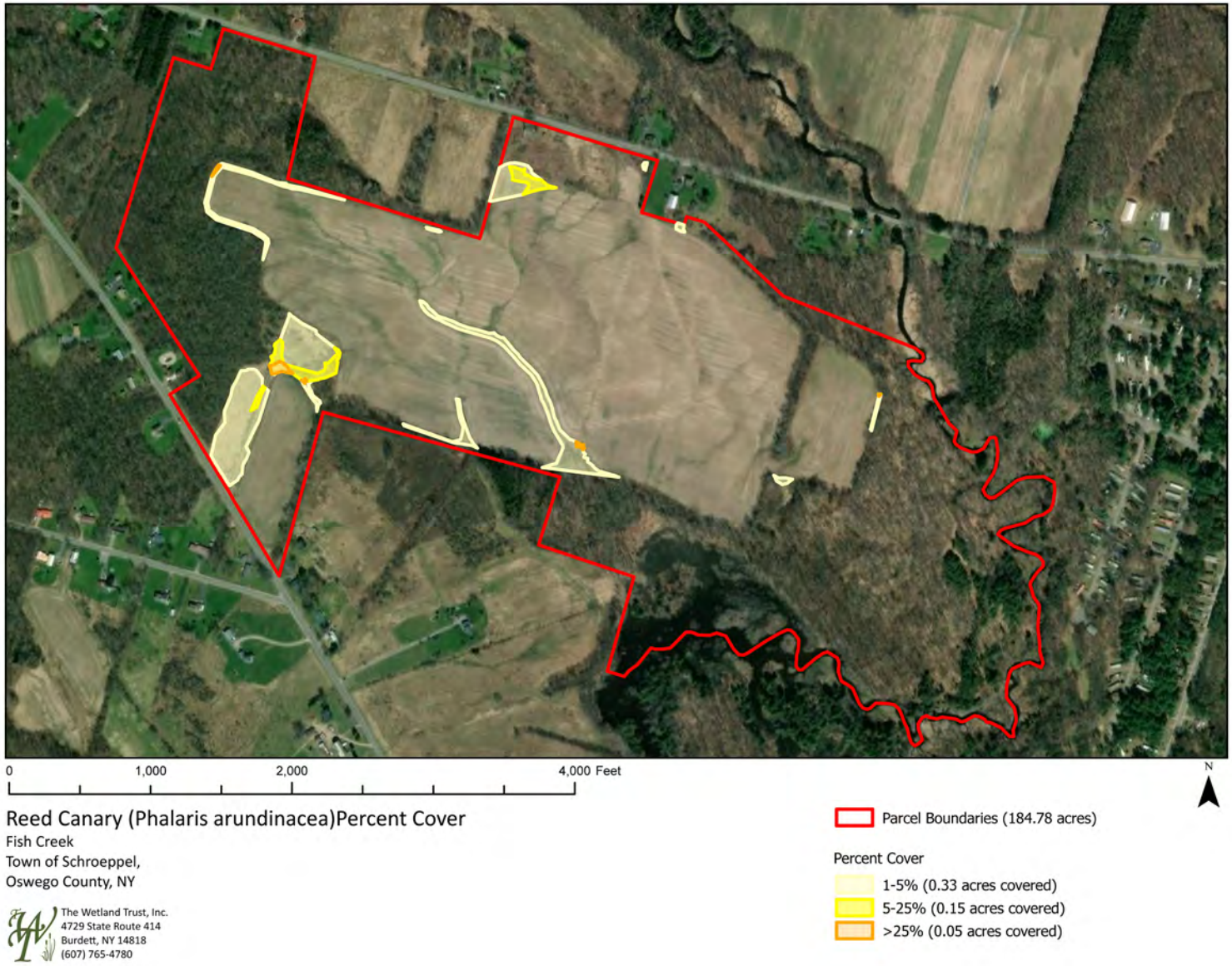

Figure 8-3. Phragmites Percent Cover

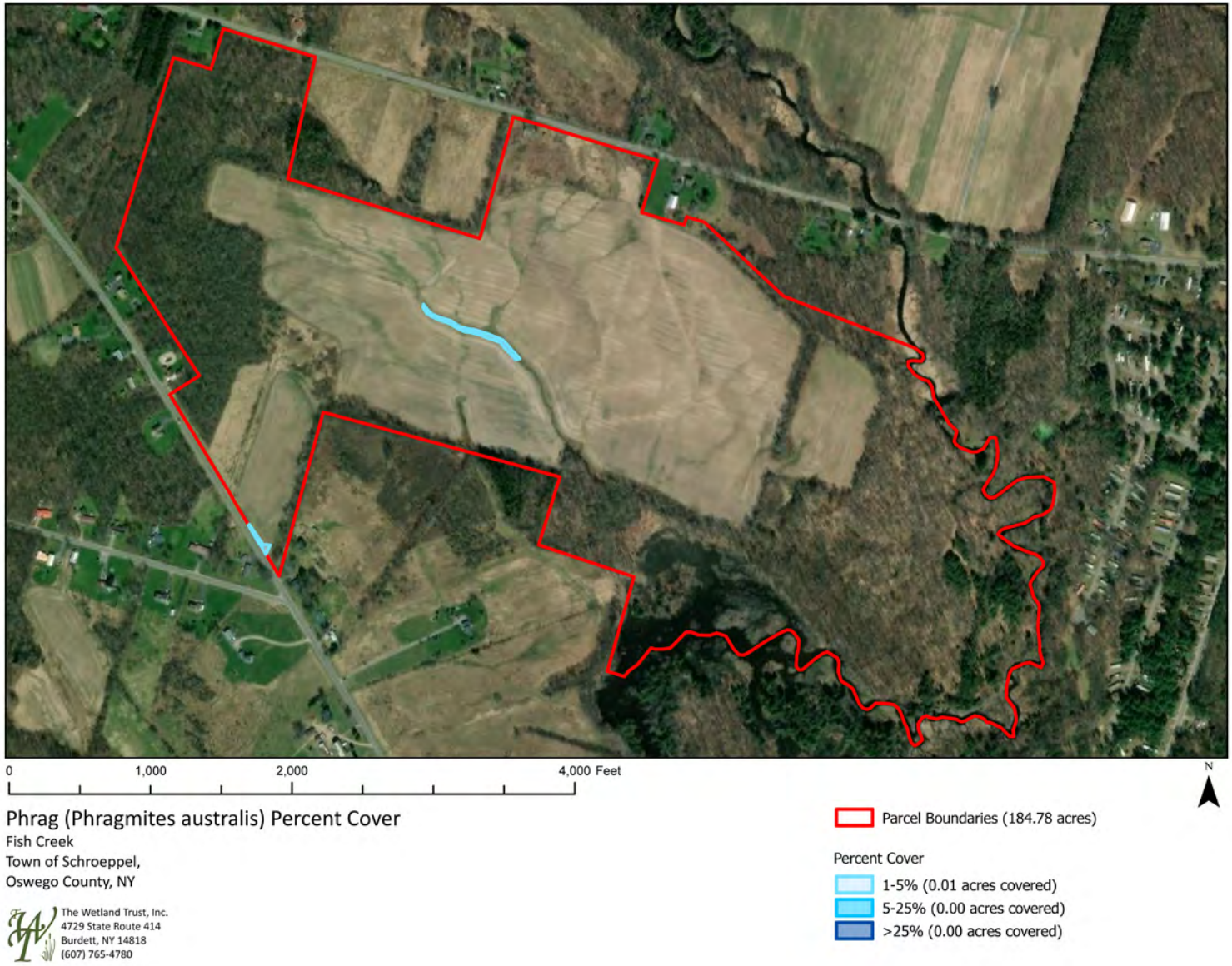

Figure 8-4. Cattail Percent Cover

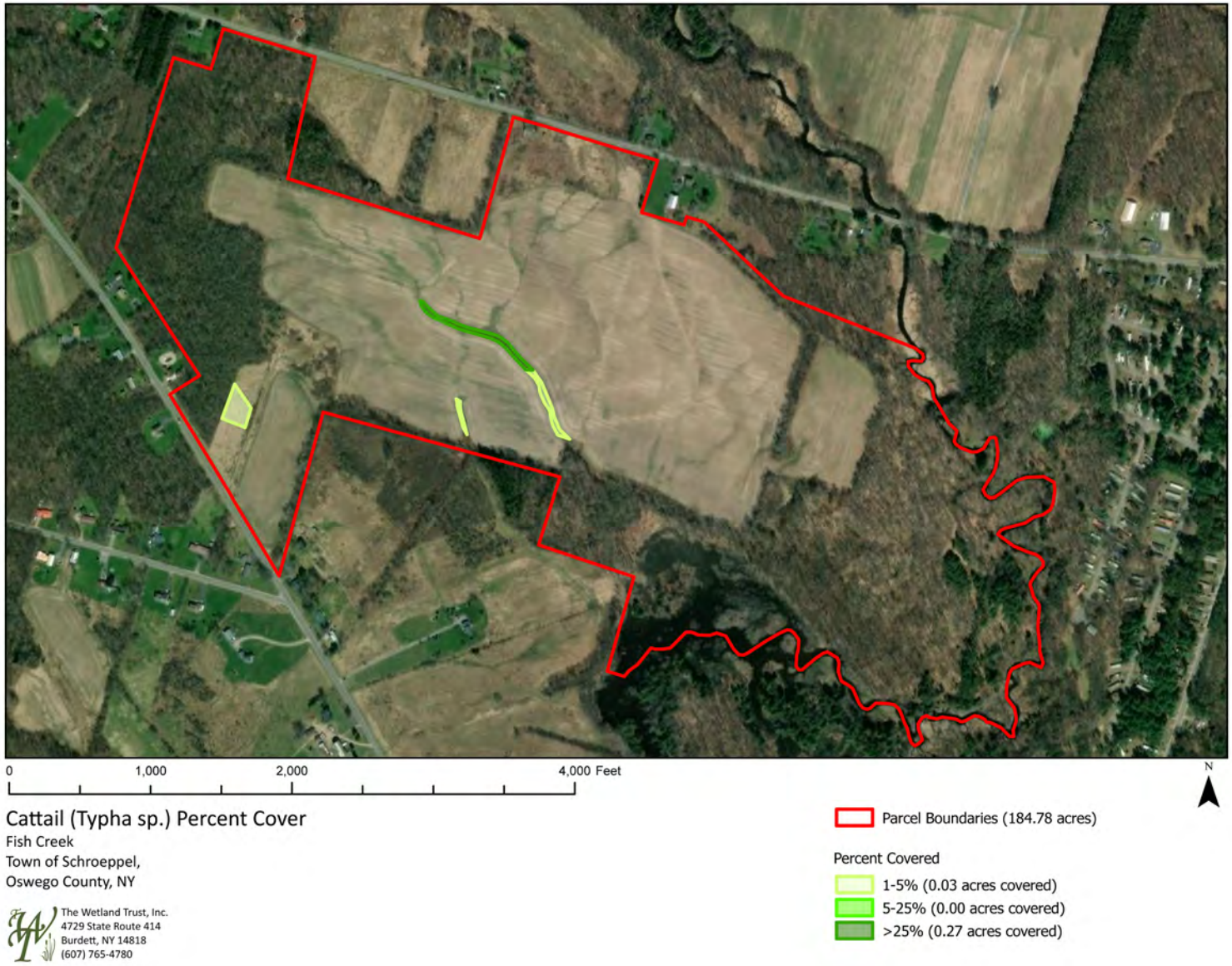

Table 8-1: Invasive Species at Fish Creek				
Invasive Species	**1-5% Cover (Affected Acres)**	**5-25% Cover (Affected Acres)**	**>25% Cover (Affected Acres)**	**Total Area (Affected Acres)**
Common Reed (*Phragmites australis*)	0.25	0.00	0.00	0.26
Reed Canary Grass (*Phalaris arundinacea*)	5.82	0.83	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.

EDR

a better environment

PHASE IA ARCHAEOLOGICAL SURVEY AND PHASE IB WORK PLAN

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Upper Caughdenoy Creek, Buxton Creek, and Fish Creek Wetland Restoration Project

Town of Hastings, Oswego County, New York

Prepared for:

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June 2025

Phase IA Archaeological Survey

Upper Caughdenoy Creek, Buxton Creek, and Fish Creek Wetland Restoration Project

Town of Hastings, Oswego County, New York

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June 2025

MANAGEMENT SUMMARY

NYSHPO Project Review Number:	25PR01429
Involved State and Federal Agencies:	U.S. Army Corps of Engineers (Section 106 of the National Historic Preservation Act); New York State Office of Parks, Recreation and Historic Preservation (Section 14.09).
Phase of Survey:	Phase IA Archaeological Survey
Location Information:	Town of Hastings, Oswego County, New York
USGS 7.5-Minute Quadrangle:	*Central Square, NY*
Survey Area:	
Project Description:	A proposed wetland restoration project.
Project Area:	The general area of land across three sites (Upper Caughdenoy Creek, Buxton Creek, and Fish Creek) within which construction will take place. The Project Area encompasses approximately 673 acres.
Limits of Disturbance	The Limits of Disturbance includes the wetland work areas that will experience ground disturbance, totaling approximately 244 acres across the Project Area: approximately 106 acres at Upper Caughdenoy Creek, approximately 114 acres at Buxton Creek, and approximately 24 acres at Fish Creek, all located within agricultural lands.
Archaeological Resources Overview:	There are no previously recorded archaeological sites within the Project Area; four previously recorded archaeological sites are located within 1 mile of the Project Area.
Report Authors:	Moira Magni; Janna Napoli, RPA, MAA; Joseph Kwiatek
Date of Report:	June 2025

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Attachment A. Agency and Nations Correspondence

ABSTRACT

Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) conducted a Phase IA Archaeological Survey for the Upper Caughdenoy Creek, Buxton Creek, and Fish Creek Wetland Restoration Project (the Project) on behalf of The Wetland Trust, Inc. (The Wetland Trust). The Project is a wetland restoration project located within the Town of Hastings, Oswego County, New York. The Project Area consists of three sites (Upper Caughdenoy Creek, Buxton Creek, and Fish Creek) totaling approximately 673 acres and is the general area of land within which construction will take place. Construction of the proposed Project will include ground disturbing activities within Limits of Disturbance defined by wetland work areas. The Limits of Disturbance totals 244 acres across the Project Area: approximately 106 acres at Upper Caughdenoy Creek, approximately 114 acres at Buxton Creek, and approximately 24 acres at Fish Creek, all located within agricultural lands. As a result of initial consultation conducted by The Wetland Trust, the New York State Office of Parks, Recreation and Historic Preservation (NYSHPO) rendered opinions that no historic properties, including archaeological and/or historic resources, would be effected by the Project. As such, no additional archaeological survey is recommended.

1.0 INTRODUCTION

On behalf of The Wetland Trust, Inc. (The Wetland Trust), Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) conducted a Phase IA Archaeological Survey for the proposed Upper Caughdenoy Creek, Buxton Creek, and Fish Creek Wetland Restoration Project (the Project), located in the Town of Hastings in Oswego County, New York (Figure 1-1). The information and recommendations included in this report are intended to assist the Onondaga Nation, the New York State Office of Parks, Recreation and Historic Preservation (NYSHPO), the U.S. Army Corps of Engineers (USACE), and other New York State and/or federal agencies in their review of the Project under Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Law, and/or Section 106 of the National Historic Preservation Act, as applicable. As a result of initial consultation conducted by The Wetland Trust, the NYSHPO rendered opinions that no historic properties, including archaeological and/or historic resources, would be effected by the Project (Section 1.3; Attachment A). The Onondaga Nation, via Section 106 consultation with the USACE, has requested a Phase IA Archaeological Survey report for the Project.

1.1 Purpose of the Investigation

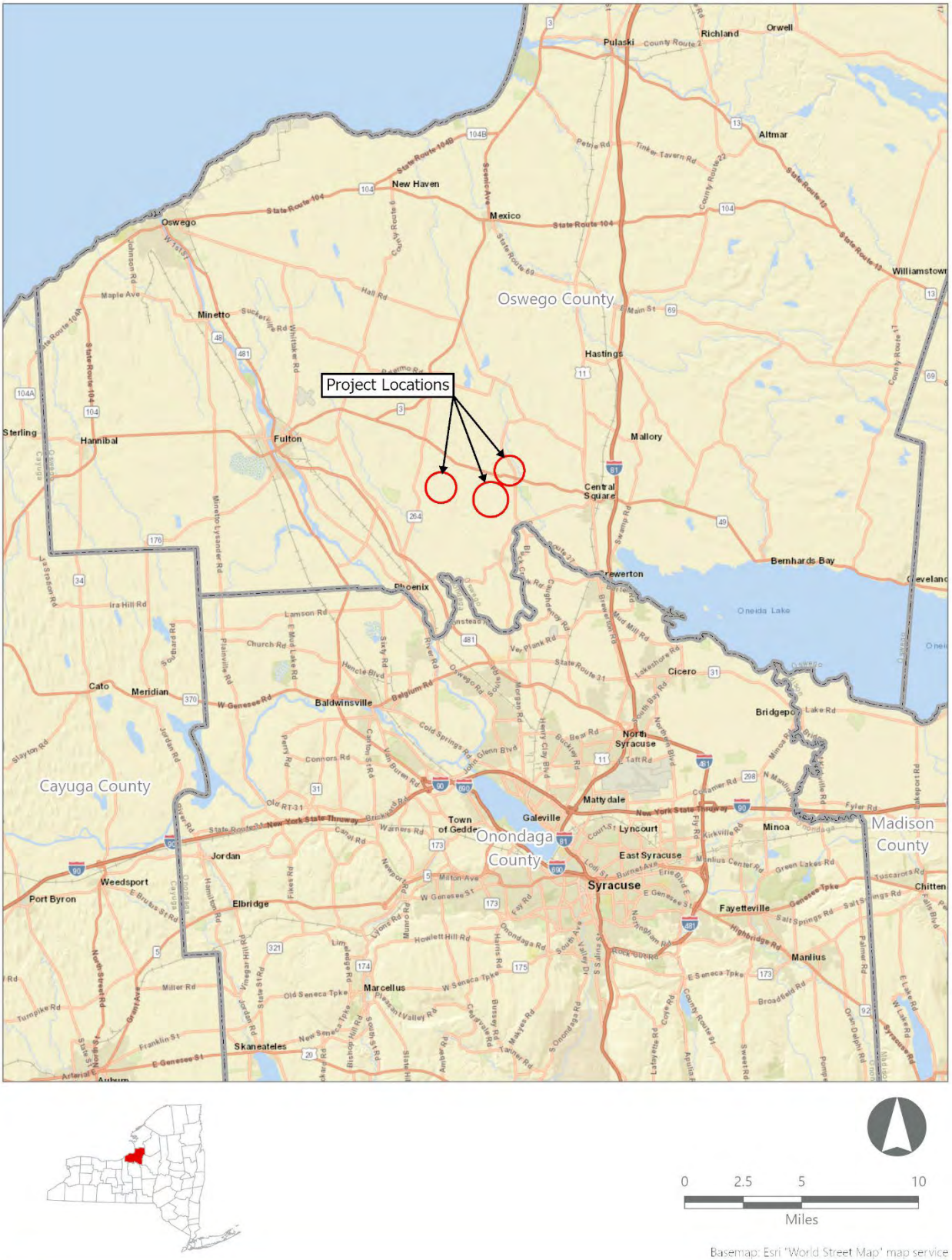
The purposes of the Phase IA Archaeological Survey are as follows:

- Describe previously identified archaeological resources and/or sites of cultural or religious significance that are located within the Project Area.

- Propose a methodology to identify archaeological resources within the Project Area, evaluate their eligibility for the State/National Register of Historic Places (S/NRHP), and assess the potential effects of the Project on those resources.

All cultural resources studies undertaken by EDR are conducted under the supervision of professionals who satisfy the qualifications criteria per the Secretary of the Interior's Standards for archaeology and historic preservation (36 Code of Federal Regulations 61), as appropriate. This Phase IA report was prepared in accordance with applicable portions of the NYSHPO's *Phase I Archaeological Report Format Requirements* (NYSHPO, 2005).

Figure 1-1. Regional Project Location



1.2 Project Location and Description

The Project is a proposed wetland restoration located within the Town of Hastings, Oswego County, New York. The Project will include compensatory wetland mitigation consisting of the restoration and rehabilitation of wetlands and streams across three sites[1] to compensate for unavoidable impacts to aquatic resources resulting from the construction of the Micron Semiconductor facility campus in the Town of Clay, New York. These mitigation efforts are designed to replace lost wetland functions and values, ensuring compliance with regulatory requirements. Construction involves disabling existing drainage structures in cultivated fields, restoring wetland basins, installing low earthen berms, and restoring hummock and hollow microtopography for vegetative biodiversity.

The following terms are used throughout this document to describe the proposed Project:

Project	Collectively refers to all components of the proposed wetland restoration.
Project Area	The general area of land across three sites (Upper Caughdenoy Creek, Buxton Creek, and Fish Creek) within which construction will take place. The Project Area totals approximately 673 acres.
Limits of Disturbance	The Limits of Disturbance includes the wetland work areas that will experience ground disturbance. The LOD totals 244 acres across the Project Area: approximately 106 acres at Upper Caughdenoy Creek, approximately 114 acres at Buxton Creek, and approximately 24 acres at Fish Creek, all located within agricultural lands.

The lands being evaluated to host the Project are typical for a rural, agricultural area in central New York and consist of cultivated crop fields, hay fields, pastures, fallow fields in various stages of secondary succession, shrubland, wetlands, and small patches of undeveloped, second-growth forest (Figure 1-2).

[1] Note that Phase IA Archaeological Survey of an additional three compensatory wetland mitigation sites (Lower Caughdenoy Creek, Oneida River, and Sixmile Creek) associated with the Micron Semiconductor facility was previously conducted by EDR under separate cover (EDR, 2025).

Figure 1-2. Project Area

1.3 Agency and Nations Consultation

The initial consultation for the Project was undertaken by The Wetland Trust and NYSHPO, while subsequent Section 106 and Nations consultation is being undertaken by the USACE. Note that throughout the consultation process the names of the three sites comprising the Project Area and their corresponding NYSHPO project review numbers have been changed and/or consolidated.[2] Consultation for the Project is now being conducted under the consolidated NYSHPO project review number 25PR01429.

Agency and Nations consultation involving The Wetland Trust for the Project is included in Appendix A and consists of the following:

- **August 9, 2024 –** The NYSHPO issued a project review letter for Upper Caughdenoy Creek (Route 33), with the opinion that no historic properties, including archaeological and/or historic resources, would be affected by the Project (NYSHPO, 2024a).

- **August 13, 2024 –** The NYSHPO issued project review letters for Buxton Creek (Bell Road) and Fish Creek (Perry Road), with the opinion that no historic properties, including archaeological and/or historic resources, would be affected by the Project (NYSHPO, 2024b and 2024c).

- **September 9, 2024 –** The NYSHPO issued a project review letter for Upper Caughdenoy Creek (Booth, LaPointe, Wisner East), with the opinion that no historic properties, including archaeological and/or historic resources, would be affected by the Project (NYSHPO, 2024d and 2024e and 2024f).

- **October 16, 2024 –** The NYSHPO issued a project review letter for Buxton Creek (Bell Road South), with the opinion that no historic properties, including archaeological and/or historic resources, would be affected by the Project (NYSHPO, 2024g).

- **January 8, 2025** – The Wetland Trust provided a letter to the USACE and the New York State Department of Environmental Control (NYSDEC) explaining the three sites comprising the Project Area (and other wetland mitigation sites being consulted on under 25PR01429) and the corresponding name changes/consolidation (TWT, 2025).

- **February 27, 2025 –** The NYSHPO informed The Wetland Trust via email that all NYSHPO review of the Project was being consolidated under 25PR01429 (NYSHPO, 2025).

- **March 5, 2025 –** The USACE informed The Wetland Trust via email that the Onondaga Nation had requested a Phase IA archaeological survey report of all proposed wetland mitigation sites (USACE, 2025).

[2] At the time of initial submittal to NYSHPO the Upper Caughdenoy Creek site was formerly Booth (24PR08086), LaPointe (24PR08085), Route 33 (24PR07284), and Wisner East (24PR08091); the Buxton Creek site was formerly Bell Road and Bell Road South (24PR07316 and 24PR09240); and the Fish Creek Site was formerly Perry Road (24PR07315).

2.0 PHASE IA BACKGROUND AND SITE HISTORY

The following subsections provide environmental and historic contexts for the Project Area, as well as information about cultural resources surveys that have been previously conducted in the vicinity.

2.1 Geology and Soils

The Project Area is located within the Erie-Ontario Lowlands physiographic province, which borders the Great Lakes and generally contains areas of low topographic relief. Topography within the Project Area varies from relatively level to gently sloping terrain, and elevations within the Project Area range approximately 378 and 454 feet above mean sea level. The Project Area is approximately 5.3 miles northwest of Oneida Lake where it feeds into the Oneida River, which flows westward from Oneida Lake to the Seneca River and joins the Oswego River before emptying into Lake Ontario.

The surficial geology of the LOD is summarized in Table 1 and depicted on Figure 2-1. As soils within the LOD predominantly consist of lacustrine soils and are therefore unlikely to contain deeply buried cultural horizons, any proposed archaeological testing in these soils should extend a minimum of 10 centimeters into sterile subsoil.

Table 1. Surficial Geology in LOD (NYSM, 1999)

Surficial Geology	Acres in LOD	Percent of LOD	Composition[1]
Lacustrine Silt and Clay (LSC)	227	93	Generally laminated silt and clay, deposited in proglacial lakes, generally calcareous, low permeability, potential land instability, thickness variable (up to 50 meters).
Till (T)	17	7	Variable texture (boulders to silt), usually poorly sorted sand-rich diamict, deposition beneath glacier ice, permeability varies with compaction, thickness variable (1-50 meters)

[1] Composition information is derived from material explanation used by New York State Museum (NYSM, 2025).

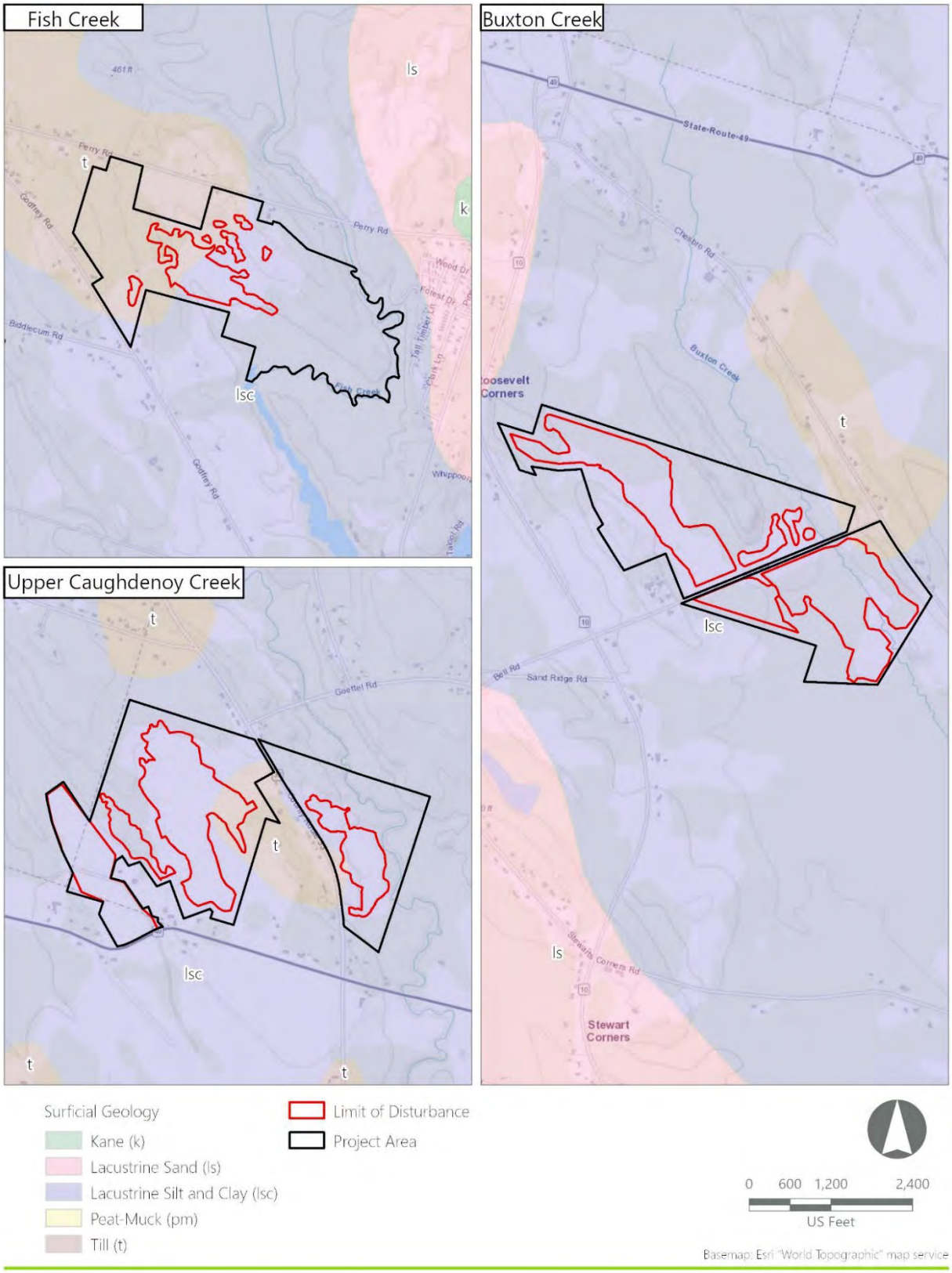
EDR reviewed online data from the Natural Resources Conservation Service (NRCS, 2025) for LOD soils data. In total, 20 individual soil units encompass the entirety of the LOD. However, ten soil units account for less than 2% of the LOD. Ten soil units constitute approximately 92% of the LOD and are summarized in Table 2.

Table 2. Common Soils Mapped within the LOD

Soil Series Name	Percent of LOD	Soil Horizon & Depth (in)	Description	Slope, Drainage, & Landform
Madalin silt loam (Ma)	24	Ap: 0 to 8 Btg1: 8 to 16 Btg2: 16 to 25 Btg3" 25-33 C: 33-79	Silt loam Silty clay loam Silty clay Silty clay Stratified silt to clay	0-3% slopes. Moderately deep, poorly drained soils on depressions. Formed in glaciolacustrine deposits derived from calcareous shale.

Soil Series Name	Percent of LOD	Soil Horizon & Depth (in)	Description	Slope, Drainage, & Landform
Rhinebeck silt loam (RhB)	17	H1: 0 to 8 H2: 8 to 16 H3: 16 to 39 H4: 39 to 53	Silt loam Silty clay loam Silty clay Silty clay	0-2% slopes. Moderately deep, poorly drained soils in lake plains. Formed in clayey and silty glaciolacustrine deposits.
Canandaigua silt loam (Cd)	16	H1: 0 to 7 H2: 7 to 33 H3: 33 to 50	Silt loam Silt loam Stratified silt to very fine sand	0-3% slopes. Moderately deep poorly drained soils on depressions. Formed in silty and clayey glaciolacustrine deposits.
Rhinebeck silt loam (RhA)	11	H1: 0 to 8 H2: 8 to 16 H3: 16 to 39 H4: 39 to 53	Silt loam Silty clay loam Silty clay Silty clay	0-2% slopes. Moderately deep, poorly drained soils in lake plains. Formed in clayey and silty glaciolacustrine deposits.
Palms Muck (Pa)	7	H1: 0 to 26 H2: 26 to 55	Muck Fine sandy loam	0-2% slopes. Very poorly drained soils in marshes or swamps. Formed in organic material over loamy glacial drift.
Lamson very fine sandy loam (Lf)	5	H1: 0 to 9 H2: 9 to 50 H3: 50 to 60	Very fine sandy loam Very fine sandy loam Stratified fine sand to very fine sand	0-3% slopes. Moderately deep, poorly drained soils on depressions. Formed in deltaic or glaciolacustrine deposits with a high content of fine and very fine sand.
Minoa very fine sandy loam (Mn)	4	H1: 0 to 8 H2: 8 to 26 H3: 26 to 31 H4: 31 to 60	Very fine sandy loam Loamy very fine sand Loamy very fine sand Very fine sandy loam	0-3% slopes. Moderately deep, somewhat poorly drained soils on deltas or lake plains. Formed in deltaic or glaciolacustrine deposits with a high content of fine and very fine sand.
Scriba gravelly fine sandy loam (ScB)	3	H1: 0 to 7 H2: 7 to 14 H3: 14 to 36 H4: 36 to 50	Gravelly fine sandy loam Gravelly fine sandy loam Gravelly fine sandy loam Gravelly fine sandy loam	0-8% slopes. Somewhat poorly drained soils on till plains or drumlins. Formed in loamy till dominated by sandstone.
Carlisle Muck (Ce)	3	H1: 0 to 56	Muck	0-1% slopes. Very poorly drained soils in marshes or swamps. Formed from deep organic material.
Raynham silt loam (RaB)	2	H1: 0 to 9 H2: 9 to 36 H3: 36 to 60	Silt loam Silt loam Stratified silt to very fine sand to fine sand	0-6% slopes. Moderately deep, poorly drained soils in lake plains. Formed in glaciolacustrine, eolian, or old alluvial deposits, comprised mainly of silt and very fine sand.

Figure 2-1. Topography and Surficial Geology within the LOD



2.2 Existing Conditions

The proposed Project is located in a rural part of Oswego County. Existing conditions within the Project Area were evaluated with aerial imagery, topographic maps, digital elevation model data, and National Land Cover Database data (MRLCC, 2021). Land use within the Project Area is typical for a rural, agricultural area in central New York and consists of cultivated crop fields, hay fields, pastures, fallow fields in various stages of secondary succession, shrubland, wetlands, and patches of undeveloped, second-growth forest. General observations of existing conditions within the Project Area include the following:

- Agricultural fields comprise a large portion of the Project. Approximately 96% of the Project Area is used for pasture, hay fields, and cultivated crops. Many of these fields have been artificially drained with ditches (MRLCC, 2021).
- Woody and emergent herbaceous wetlands account for less than 1% of the Project Area (MRLCC, 2021).
- A small portion of the Project is forested, with deciduous forests accounting for less than 1% of the Project Area (MRLCC, 2021).
- Less than 1% of the Project Area contains developed, open space.
- Disturbances in the Project Area include drainage ditches along roadways, buried utilities, and areas of cut/fill.

Previous ground disturbance within the Project Area is, for the most part, limited to previous or ongoing agricultural activities. However, farming is not considered significant in terms of its potential to affect the integrity of archaeological resources (NYAC, 1994; NYSHPO, 2005).

Some areas immediately adjacent to existing roads within the Project Area include drainage ditches, culverts, buried utilities, and areas of cut and/or fill. With the exception of limited drainage ditches, culverts, buried utilities, and areas of cut and/or fill, the Project Area in general does not appear to have been subjected to significant previous ground disturbance.

2.3 Previous Archaeological Surveys

EDR consulted the NYSHPO's online Cultural Resource Information System (CRIS) database, and county maps used by the NYSHPO prior to the implementation of the CRIS database, to determine if previous archaeological surveys have been conducted within or within 1 mile of the Project Area. According to the CRIS database, no previous archaeological surveys overlap with the Project Area. Six previously conducted archaeological surveys are located within 1 mile from the Project Area (Table 3).

Table 3. Previous Archaeological Surveys within 1 mile of the Project Area

NYSHPO Survey Number	Year	Report Name	Sites Identified	Reference
10SR60779	2010	Cultural Resources Reconnaissance Survey Report: PIN 3805.44.121 (3 of 5), New York State Route 264 @ Biddlecum Road, Town of Schroeppel (MCD 07518), Oswego County, New York	No sites identified	NYSM, 2010
05SR55830	2005	Phase I Cultural Resource Investigation for the Clay Water Project, Towns of Clay, Schroeppel, and Hastings, Onondaga and Oswego Counties, New York	1 Euro-American site identified	PAF, 2005
18SR56142	2018	Phase IA Archaeological Background and Literature Review and Phase IB Archaeological Field Reconnaissance Report of the Proposed Ainslee Drive Sanitary Sewer Study Project Area in the Town of Schroeppel, Oswego County, New York	No sites identified	Archaeological Alliance Services, 2018
N/A	1986	Stage I Cultural Resources Survey, Proposed Sewer Line Construction, Hamlet of Caughdenoy, Town of Hastings, Oswego County, New York	1 Euro-American site identified	Oberon & Johnson, 1986
04SR54584	2004	Phase IB Cultural Resource Survey Fuller Road Water District – Part 1, Town of Hastings, Oswego County, New York	1 Euro-American site identified	Pratt & Pratt, 2004
N/A	1977	Cultural Resource Survey of Baldwinsville-Seneca Knolls Sanitary District in and near the Village of Baldwinsville, Onondaga County, New York	1 Paleo-Indian Indigenous Site identified	Pratt & Pratt, 1977

2.4 Previously Identified Archaeological Sites

EDR consulted the NYSHPO's online CRIS database to determine if previously recorded archaeological sites have been identified within or surrounding 1 mile of the Project Area. According to the CRIS database there are no identified archaeological sites within the Project Area. Four previously recorded archaeological sites are located within a 1-mile buffer of the Project Area. These sites are detailed in Table 4.

Table 4. Previously Recorded Archaeological Sites within 1 mile of the Project Area

USN	Site Name	Site Description	S/NRHP Status	Distance from Project
07518.000006	Potts Site (NYSM Site #1257)	Paleo-Indian Indigenous Lithic Scatter	Undetermined	0.9 miles
07507.000020	Blacksmith Shop Site	Euro-American Foundation	Undetermined	0.9 miles

USN	Site Name	Site Description	S/NRHP Status	Distance from Project
07507.000030	Caughdenoy Historic Site	Euro-American Foundation and Architectural Artifact Scatter	Not Eligible	0.9 miles
07507.000029	M. Brockway Historic Site	Euro-American Artifact Scatter	Undetermined	0.6 miles

2.5 Cemeteries

EDR consulted the NYSHPO's online CRIS database, U.S. Geological Survey (USGS) topographic quadrangles, nineteenth century historic maps, and Find a Grave to determine if previously identified/mapped cemeteries are located within or adjacent (i.e., within 500 feet) to the Project Area. According to these sources, no cemeteries are mapped within or adjacent to the Project Area.

2.6 History of the Project Area

Archaeological evidence suggests that initial occupation in what is now Central New York began with Paleoindian groups following the retreating Laurentide Ice Sheet around 13,000 years before present (BP). During the ice sheet's retreat, much of Central New York was inundated by pro-glacial Lake Iroquois (essentially a major expansion of Lake Ontario), which quickly drained out the Mohawk and later St. Lawrence River Valleys as the ice sheet receded to the north (Lothrop et al., 2014). The first human groups to enter this post-glacial landscape specialized in hunting large game (likely caribou; and possibly mammoth and mastodon) in the recently exposed periglacial tundra and spruce forests. These groups also exploited the diverse floral resources, small game, and fish available in the post-glacial ecosystems (Ritchie and Funk, 1973). Although populations during this time were never high, Central New York was densely settled relative to other parts of the continent. Lothrop et al. (2014) note that the earliest sites in Central New York occur within the former footprint of pro-glacial Lake Iroquois. These early groups were highly mobile, but there is also evidence of moderate to large aggregations in certain places during the year (e.g., the Bull Brook sites in Massachusetts) (Curran, 1999).

Post-Glacial conditions stabilized by approximately 10,000 BP, and small groups of hunter-gatherers reduced their mobility to exploit the diverse resources available to them in the newly emerging mixed deciduous/coniferous forests. Although megafauna were now extinct, larger to medium game such as deer, elk, and moose, and perhaps woodland caribou, were still available, as were small game, fish, and wild plants (Funk, 1978). Material culture during this time is characterized by stemmed and corner-notched projectile points as well as the first appearance of notched stone net-sinkers (Funk, 1978). Groundstone plant processing technology, including nutting stones which indicate the first systematic exploitation of mast resources such as acorns, hickory nuts, and chestnuts, was first used after approximately 6,000 BP (Funk, 1978; Ritchie and Funk, 1973:7). Beginning approximately 3,500 BP, regional diversity led to a greater variety of stone tools, including broad, side-notched projectile points, as well as gouges, plummets, and ground slate artifacts (Funk, 1978; Ritchie 1980). Between approximately 4,000 and 3,000 BP, steatite (soapstone)

bowls, ceramic vessels, decorative steatite gorgets, and burial ceremonialism appears in the archaeological record (Whitthoft, 1949; Ritchie and Funk, 1973; Tuck, 1978).

The establishment of agriculture in northeastern North America began approximately 2,500 BP, possibly in response to favorable climatic conditions during the Medieval Climatic Anomaly (Fitting, 1978:44). Central and Western New York at this time were within the northeastern edge of the Hopewell cultural sphere, characterized by mound burials and other earthworks, dentate-stamped and rocker-stamped ceramic vessels, elaborate tobacco pipes, and stemmed, side-notched, and triangular unnotched Levanna projectile points (Engelbrecht, 2014; Ritchie and Funk, 1973). Groups in the northeast during this period also maintained extensive trade networks, as evidenced by the presence of exotic goods like fossil shark teeth and some ceramic motifs (Fitting, 1978; Ritchie 1980; Ritchie and Funk, 1973). Smaller settlements were more common during this period, but larger settlements are not documented in Western and Central New York until approximately 1,000 BP. In the centuries following, the appearance of maize (corn), beans, and squash agriculture led to the growth of more substantial village sites, including some protected with palisades and earthwork defenses (Ritchie and Funk, 1973; Ritchie, 1980). These villages were occupied year-round, although people still traveled far to hunt, fish, harvest plants, and trade (Cowan, 1999).

Archaeological evidence for the development of Iroquoian[3] culture points to a gradual *in situ* development in Central and Western New York, as opposed to the immigration of Iroquoian groups from outside the region (MacNeish, 1952; Tuck, 1971; Snow, 1994; Hart and Brumbach 2003; 2005; 2009; Brumbach, 2011; Hart, 2011). Haudenosaunee oral history also supports a deep history of occupation within Central and Western New York (Wonderley, 2004).

While sources differ on the specific date of the emergence of the Haudenosaunee, many researchers agree that a formalized Confederacy of five nations (also, the Great League of Peace; the Five Nations; or, the Six Nations) took shape during the late fifteenth or early sixteenth century. The initial five nations of the Haudenosaunee included, loosely from west to east, the Seneca, Cayuga, Onondaga, Oneida, and Mohawk. The Tuscarora later became a member nation in 1722. Initially, the Confederacy functioned indirectly as a religious council, calming internal conflicts through ceremonies associated with the Great Law as prescribed by the Peacemaker (Deganawidah) and Hiawatha. As conflicts arose with neighboring nations and European settlers, the Confederacy's role became more political; however, the member nations largely retained their autonomy (Richter, 2005).

European missionaries, explorers, and traders began visiting Central New York by the mid-seventeenth century. While Jesuit missionaries established missions in Central New York, Dutch and English land companies and settlers claimed land farther west into the Mohawk River Valley, thus fueling pre-existing tensions with the Haudenosaunee regarding the competitive fur trade, international wars, and diseases.

[3] The terms Iroquois and Iroquoian are used here to describe indigenous groups with a suite of cultural traits (e.g., ceramic styles and settlement patterns) and linguistic traits. The term Haudenosaunee is used specifically to denote the five (and later) six nation confederacy present from approximately the sixteenth century onward.

Conflicts between the Haudenosaunee and the French continued into the eighteenth century as French forts were established throughout New York (Anderson, 2005; Dixon, 2005).

Following the French and Indian War, the 1768 Treaty of Fort Stanwix established a boundary line to demarcate the Haudenosaunee, Delaware, and Shawnee territories and regulate westward colonial expansion. This boundary, sometimes referred to as the "Line of Property," extended southwest from the Susquehanna River in New York to the mouth of the Tennessee River. In exchange, the Haudenosaunee forfeited their claims to the Ohio River Valley. Although the treaty bound colonists to remain east of the line, many continued to migrate and settle on Native land (Anderson, 2005; Dixon, 2005; Preston, 2005).

During the American Revolutionary War, both the British and the Americans embraced the aid of various Haudenosaunee member nations, despite the Confederacy's official policy of neutrality. The war divided the Haudenosaunee, with the Cayuga, Onondaga, Mohawk, and Seneca aiding the British and the Oneida and Tuscarora providing support to the American colonists. In retaliation, Washington ordered the Sullivan-Clinton campaign of 1779, where Haudenosaunee homes and crops were burned throughout Central and Western New York. The Sullivan-Clinton expedition destroyed many settlements with refugees fleeing to the reservations in Western New York (mainly, the Buffalo Creek Reservation), Sandusky Bay, Ohio, and Ontario, Canada (now the Six Nations of the Grand River Reservation). The Haudenosaunee were forced to cede all land west of New York State and Pennsylvania in the second Treaty of Fort Stanwix in 1784.

Today, the Onondaga Nation is recognized as an independent nation, living on a portion of its ancestral territory and maintaining its own distinct laws, language, customs, and culture. Their territory consists of 7,300 acres south of Syracuse. The Onondaga Nation's territory consists of 7,300 acres just south of Syracuse, in Onondaga County (Onondaga Nation, 2025).

Prior to the formal organization of Oswego County in the nineteenth century, New York State set aside a 1.5-million-acre tract for soldiers of the Revolutionary War, but it was not fully opened to settlers for nearly a decade due to conflicts with the Haudenosaunee. The New Military Tract encouraged migration and settlement by war veterans as well as Euro-American settlers; it encompasses what is now Cayuga, Cortland, Onondaga, Seneca, and Tompkins counties, as well as parts of Oswego, Schuyler, and Wayne counties. The land was divided into 28 townships, each containing 100 lots of 600 acres arranged in a uniform grid pattern. Although the land was set aside for veterans, many of them either neglected to claim their land or sold their land to speculators. As a result, the area was settled primarily by migrants from New England, New Jersey, Pennsylvania, and the Hudson Valley (Anderson, 2005; Schein, 1993, 2005).

Oswego County, located within the Lake Ontario watershed, was formed in 1816 from parts of Oneida and Onondaga counties. The Oswego River system created a strategic trade route between the Mohawk River and Lake Ontario, which British and French forces both utilized during the seventeenth and eighteenth centuries. The British established Fort Oswego at the mouth of the river in 1727 and their presence remained until 1796. By this time, settlement in the areas around the present-day villages of Mexico, Pulaski, and Redfield grew as the plentiful streams and water systems provided ample waterpower for milling. Capitalizing on the abundance of the Oswego River system, commercial development in the county developed around the shipment of local goods such as cordwood and barrels for salt working. Thousands

of barrels of salt were shipped to Oswego port to be transported to the Old Northwest and parts of Upper Canada. Salt tax revenue in turn prompted the construction of three "salt roads" by 1820, underlining the significance of the salt working industry on the wealth of the county and its broader impact on New York State's economy. A little over a decade later, in 1833, the Welland Canal opened and linked Lake Erie and Lake Ontario, allowing the port of Oswego to act as a terminal for Midwestern agricultural products. Along the north shore of Oneida Lake, a robust glassmaking industry sprung up with the ample supply of sand, and transportation of locally produced goods made more efficient by the canal and its waterways. In 1848, the Syracuse and Oswego Railroad was completed, further developing the connection networks across the state (Wellman and Dix, 2005). Within the Project Area, structures appear along established roadways during this time, with the area remaining rural and agricultural (Geil, 1854; Figure 2-3).

Farmers benefited from the improved transportation networks that allowed for responses to competition in the market by shifting to dairy, fruit, and tobacco farming. A period of economic growth driven by these agricultural trends along with textiles, mills, and the availability of natural resources between the early nineteenth century and the early twentieth century saw settlers from Ireland, Canada, and the Alsace-Lorraine region, differing from the earliest settlers to the area who came from New England and eastern New York. This trend brought a rich diversity of immigrants to Oswego County, and with them a labor force that worked on local farms, likely similar to the former J. McKinley farmstead in Caughdenoy Creek and the former C. Plumber farmstead in Center Road, for example, within the Project Area (Figure 2-3). Additionally, Oswego County was a favorable location for abolitionists due to its geography and proximity to Canada. Many towns supported the Underground Railroad, and the county was home to abolitionists and formerly enslaved people who fled north (Johnson, 1877; Wellman and Dix, 2005).

The twentieth century saw the greatest economic changes in the county, as technology and federal aid improved communication and transportation infrastructure throughout Oswego; however, the Project Area remained relatively unchanged from 1854 (USGS, 1898, 1900a, 1900b, 1956a, 1956b, 1957a and 1957b; Figure 2-4 and Figure 2-5). With this came an increase in population and a general trend in the direction of growth and prosperity. World War II created an influx of manufacturing jobs and local Oswego County industries put hundreds of residents to work. By the 1970s, however, the economic benefits from industry and manufacturing began to trend downwards, and other sectors such as energy, education, and tourism were growing. Notably, SUNY Oswego expanded its campus and curriculum in the 1980s and 1990s, and fishing became a popular touristic sport in the county after salmon was reintroduced into local waters (Wellman and Dix, 2005).

The Town of Hastings, formerly Constantia, was established in 1825. The town is approximately 20 miles northwest of Oneida Lake and directly north of the city of Syracuse. The southern branch of the Little Salmon River drains into the northern part of Hastings. Oneida Lake played an important role in the county for eel harvesting, an indigenous practice that continued into the late nineteenth century and was an economic resource for the town (Dix, 2005). In the nineteenth century, lumbering and the manufacturing of barrels for the Syracuse salt market were important economically for Hastings, a trend reflected in the development of villages like Caughdenoy and Central Square that grew considerably between the 1820s and 1890s (Churchill, 1895; Burr, 1829; Figure 2-4). Rural areas such as those surrounding the Project Area were generally populated with farmsteads spread out on open land until the mid-twentieth century when

Interstate 81, built between 1960 and 1962, assisted in promoting land development in the region and made travel to the town of Hastings much easier. Connecting Hastings and other parts of Oswego County with the commuter region of Syracuse, Interstate 81 influenced residential growth in once-rural areas such as Pleasant Lake, just northeast of the Project Area (USGS, 1973; Wellman and Dix, 2005).

Figure 2-2. Project Area in 1854

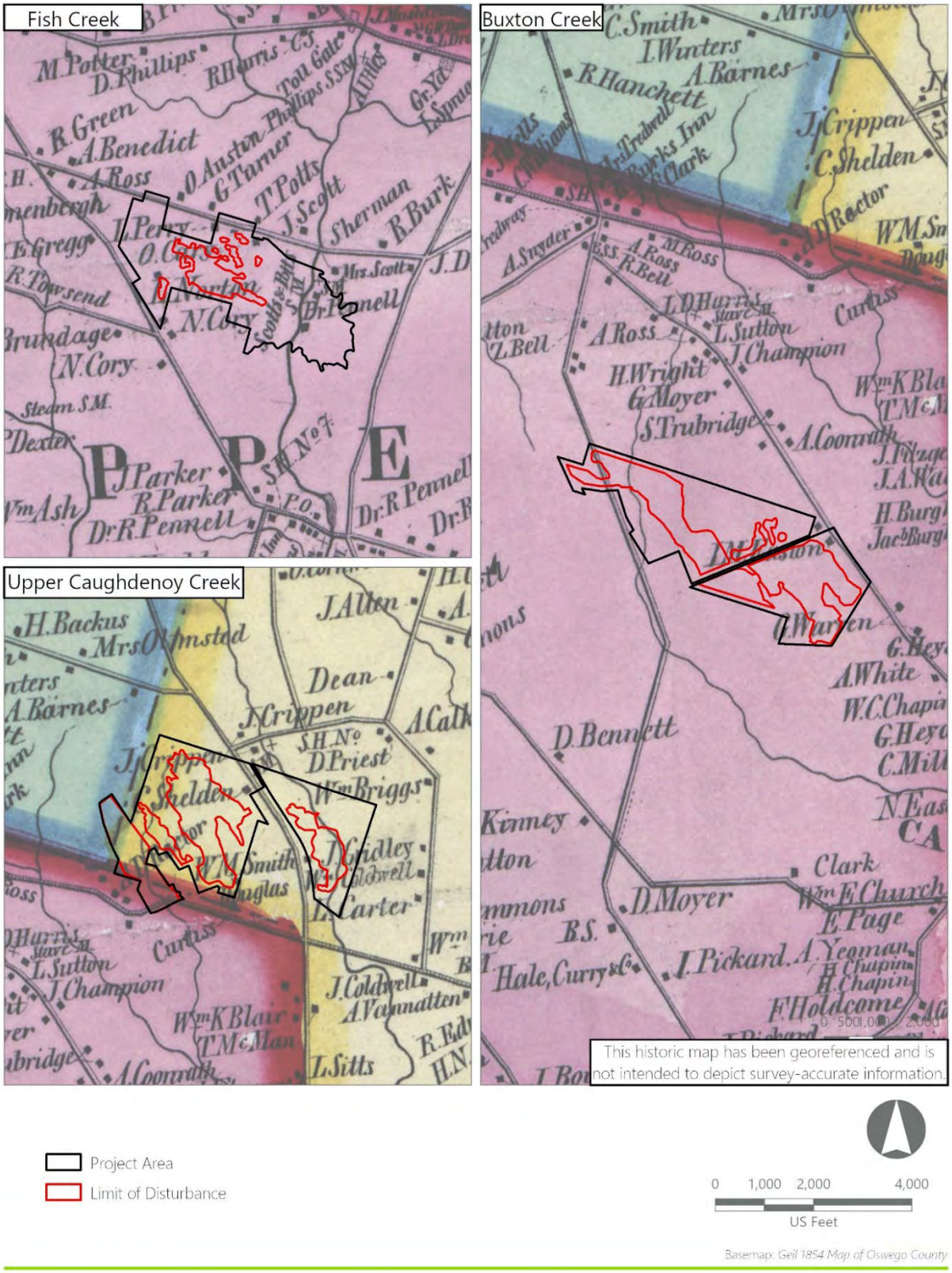


Figure 2-3. Project Area in 1900 and 1905

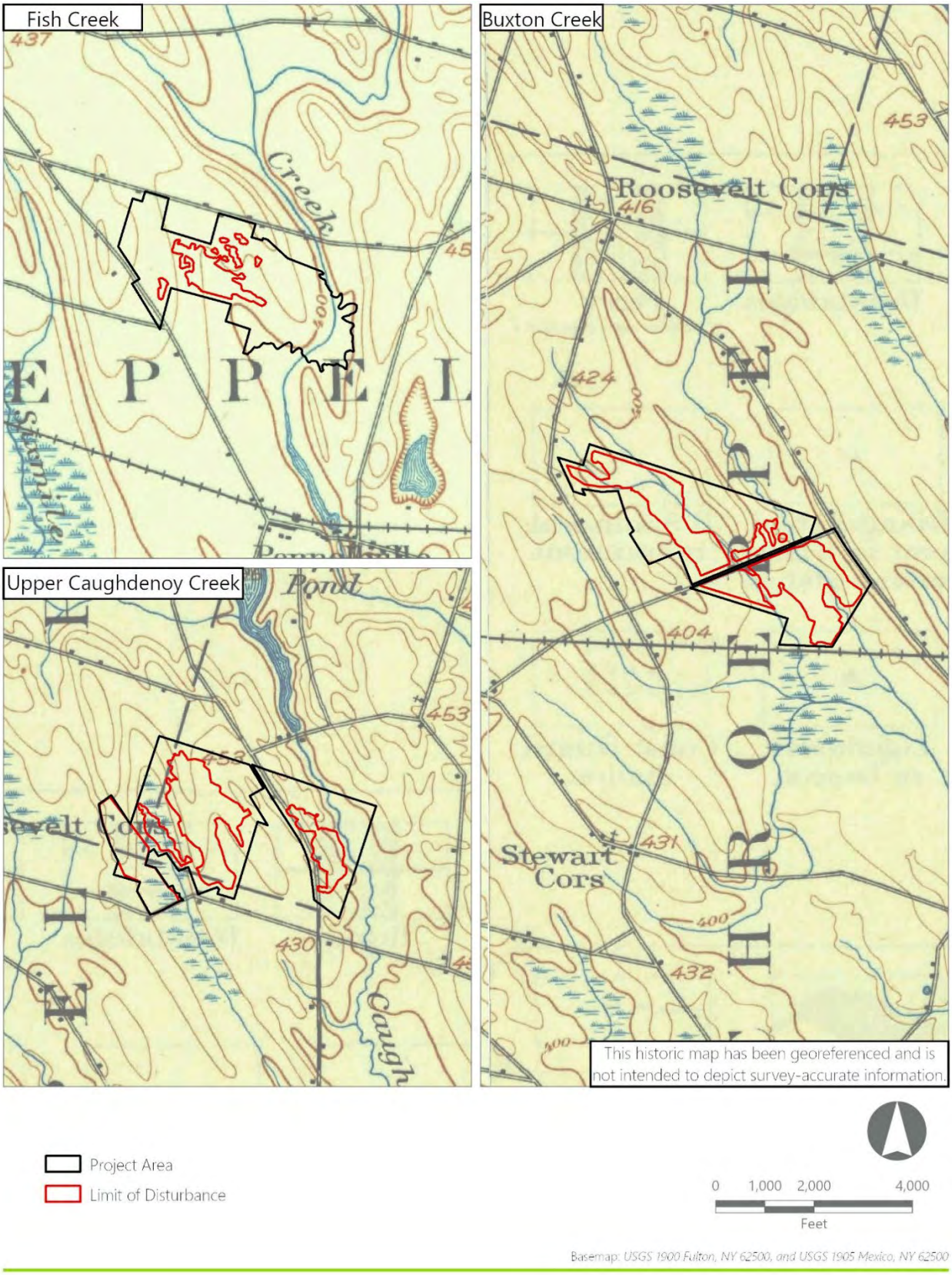
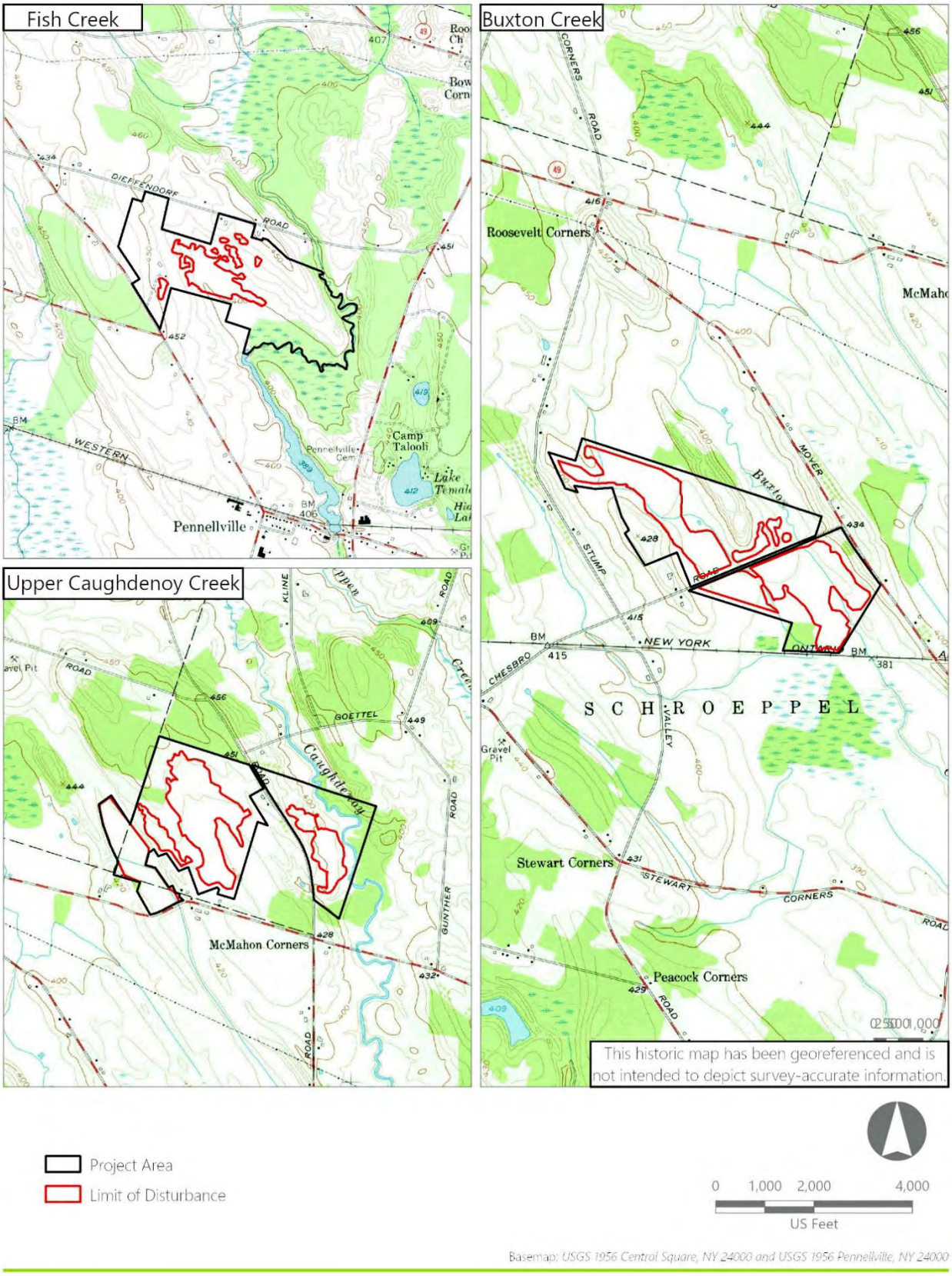


Figure 2-4. Project Area in 1956



3.0 SUMMARY AND CONCLUSION

The results of the Phase IA archaeological survey for the Project can be summarized as follows:

- No previously recorded archaeological sites are located within the Project Area.
- No previous archaeological surveys overlap with the Project Area.
- Four previously recorded archaeological sites are located within a 1-mile buffer of the Project Area.
- No recorded cemeteries are located within the Project Area.
- Historic maps depict structures located along current and abandoned roadways within the Project Area. Areas located in the immediate vicinity—within approximately 200 feet—of MDS locations are considered to have high potential for the presence of archaeological resources.
- The remaining (non-MDS) portions of the Project Area exhibit minimal likelihood for significant historic-period archaeological sites to be present.

3.1 Conclusion and Recommendation

Construction of the proposed Project will include ground disturbing activities within 244 acres of the Project Area. NYSHPO has previously rendered opinions that no historic properties, including archaeological and/or historic resources, would be effected by the Project at all three sites within the Project Area (see Section 1.3 and Attachment A). Based on the results of the Phase IA research, EDR concurs with those opinions and, therefore, no further archaeological investigation of the Project Area is recommended.

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NYSHPO. 2024c. Phase IA/IB Archaeological Survey Recommendation, Project: Perry Road Wetland Restoration, PR# 25PR01429. Review correspondence from Daniel Mackay. New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), Waterford, NY. Via CRIS, August 13, 2024.

NYSHPO. 2024d. Project Review Letter, Project: Booth Wetland Restoration, PR# 25PR01429. Review correspondence from Daniel Mackay. New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), Waterford, NY. Via CRIS, September 9, 2024.

NYSHPO. 2024e. Project Review Letter, Project: LaPointe Wetland Restoration, PR# 25PR01429. Review correspondence from Daniel Mackay. New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), Waterford, NY. Via CRIS, September 9, 2024.

NYSHPO. 2024f. Project Review Letter, Project: Wisner East Wetland Restoration, PR# 25PR01429. Review correspondence from Daniel Mackay. New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), Waterford, NY. Via CRIS, September 9, 2024.

NYSHPO. 2024g. Project Review Letter, Project: Bell Road South Restoration, PR# 25PR01429. Review correspondence from Daniel Mackay. New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), Waterford, NY. Via CRIS, October 16, 2024.

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Attachment A

Agency and Nations Correspondence

The Wetland Trust, Inc.
PO Box 4206
Ithaca, NY 14852
www.thewetlandtrust.org
607-765-4780

8 January 2025

Margaret Crawford
U.S. Army Corps of Engineers, Buffalo District, Auburn Field Office

Jean Foley
New York State Department of Environmental Control, Region 7

Re: Section 106 Review- TWT Micron Mitigation Work Area Maps and SHPO Letters

Dear Ms. Crawford and Ms. Foley,

The Wetland Trust, Inc. (TWT) is providing as per your requests a package containing maps of the TWT Micron Mitigation Work Areas and their SHPO correspondence letters. Please note that many sites were submitted to SHPO in partial uploads as TWT obtained them (prior to tax parcel combinations and name changes). To avoid confusion, each Final Site is listed below with the individual sites/corresponding SHPO submission letters that make up each:

- Buxton Creek (formerly Bell Road and Bell Road South)
- Fish Creek (formerly Perry Road)
- Lower Caughdenoy Creek (formerly Caughdenoy Creek)
- Sixmile Creek
- Upper Caughdenoy Creek (formerly Booth, LaPointe, Route 33, and Wisner East)
- Oneida River (formerly Center Road)

An archaeologist has been retained to begin Phase 1A/B investigations at Lower Caughdenoy Creek, Sixmile Creek, and Oneida River beginning the week of January 13, 2025 (weather permitting). Phase 1A/B reports will be forthcoming. Please let us know if you require any further information.

Sincerely,

Kirsten Gerhardt

Kirsten Gerhardt
Restoration Ecologist
kirsten@thewetlandtrust.org

Attachments: TWT Micron Mitigation Work Area Maps and corresponding SHPO Letters

0 0.1 0.2 0.4 Miles

N

Work Areas - Buxton Creek (Bell Road, Bell Road South)

Buxton Creek (Bell Road, Bell Road South)
Town of Schroeppel,
Oswego County, NY

Tax Parcel Boundary (248.9 ac)
Buxton Creek Wetland Work Areas (114.3 ac)

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

Cartographer: Kirsten Gerhardt| Date: 7 Jan. 2025| Projection: NAD 1983 State Plane New York East | References: NYS GIS Clearinghouse, NYS DEC

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: USACE
Bell Road Wetland Restoration
24PR07316

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,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

October 16, 2024

Kirsten Gerhardt
Restoration Ecologist
The Wetland Trust
4729 NY 414
Burdett, NY 14818

Re: USACE
Bell Road South Wetland Restoration
24PR09240

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.

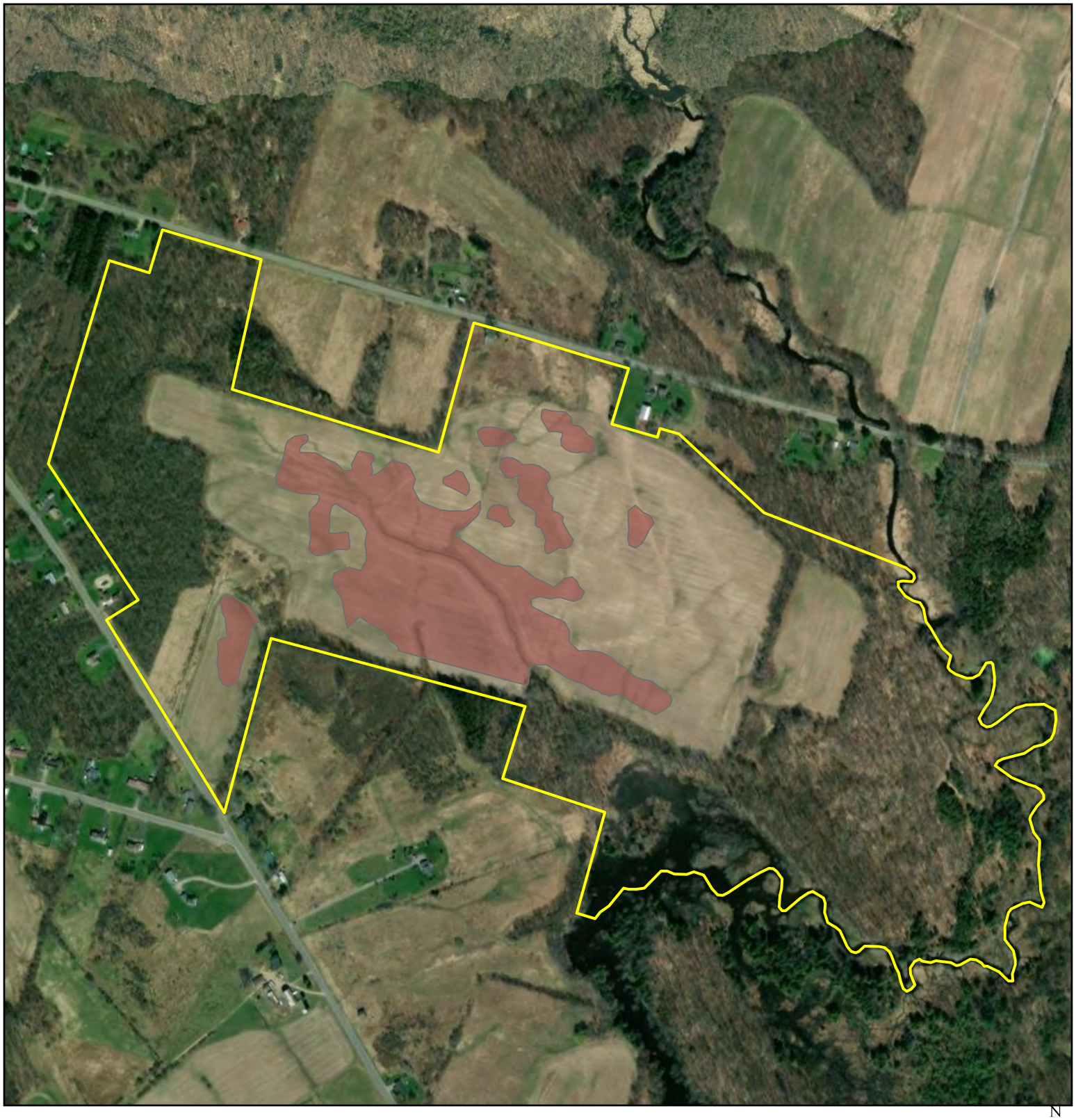
If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Bradley Russell at the following email address:

Bradley.Russell@parks.ny.gov

Sincerely,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation



0 0.07 0.15 0.3 Miles

N

Work Areas - Fish Creek (Perry Road)

Fish Creek (Perry Road)
Town of Schroeppel,
Oswego County, NY

Tax Parcel Boundary (184.8 ac)
Perry Rd Wetland Work Areas (24.1 ac)

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

Cartographer: Kirsten Gerhardt| Date: 7 Jan. 2025| Projection: NAD 1983 State Plane New York East | References: NYS GIS Clearinghouse, NYS DEC

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.

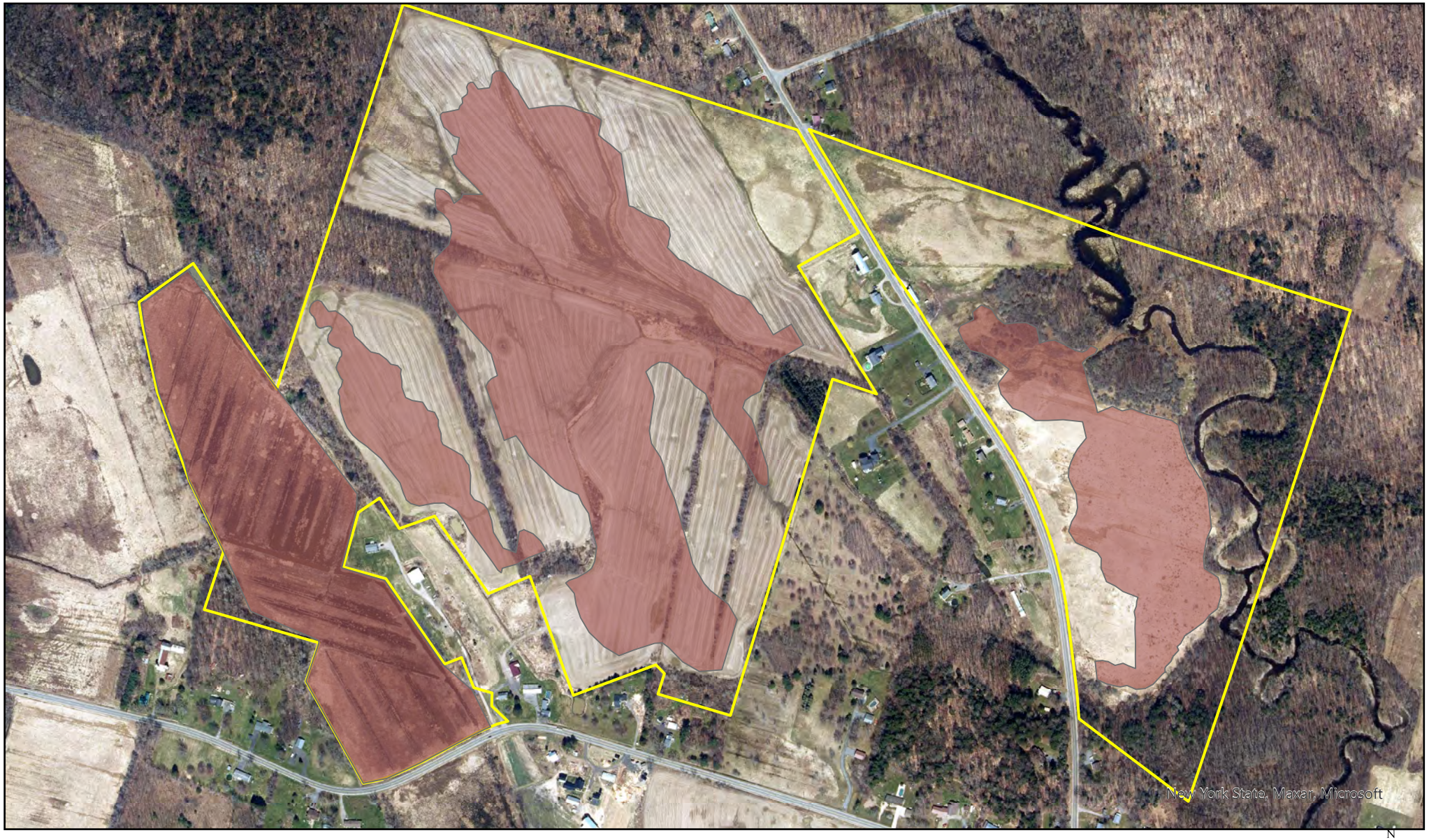
If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Bradley Russell at the following email address:

Bradley.Russell@parks.ny.gov

Sincerely,

R. Daniel Mackay

Deputy Commissioner for Historic Preservation
Division for Historic Preservation



0 465 930 1,860 US Feet

N

Tax Parcel Boundary (239 ac)

Upper Caughdenoy Creek Work Area (106.3 ac)

Work Areas- Upper Caughdenoy Creek (LaPointe, Booth, Route 33, Wisner East)

Upper Caughdenoy Creek
Town of Hastings, Palermo, and Schroeppel,
Oswego County, NY

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

Cartographer: Kirsten Gerhardt | Date: Jan 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

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,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

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,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

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,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

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
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,

R. Daniel Mackay

Deputy State Historic Preservation Officer
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 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-23

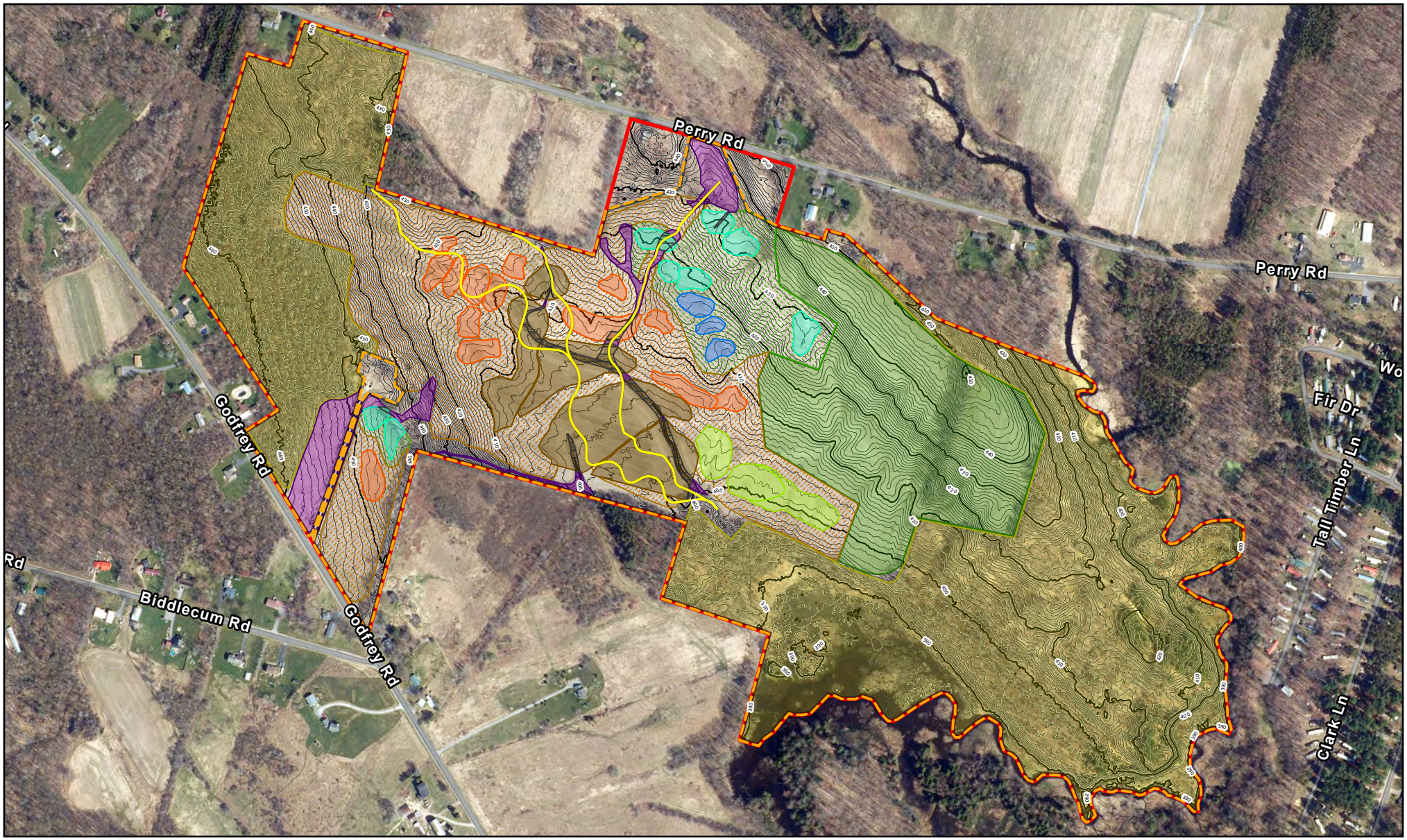
W-23

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.



0 500 1,000 2,000 US Feet

N

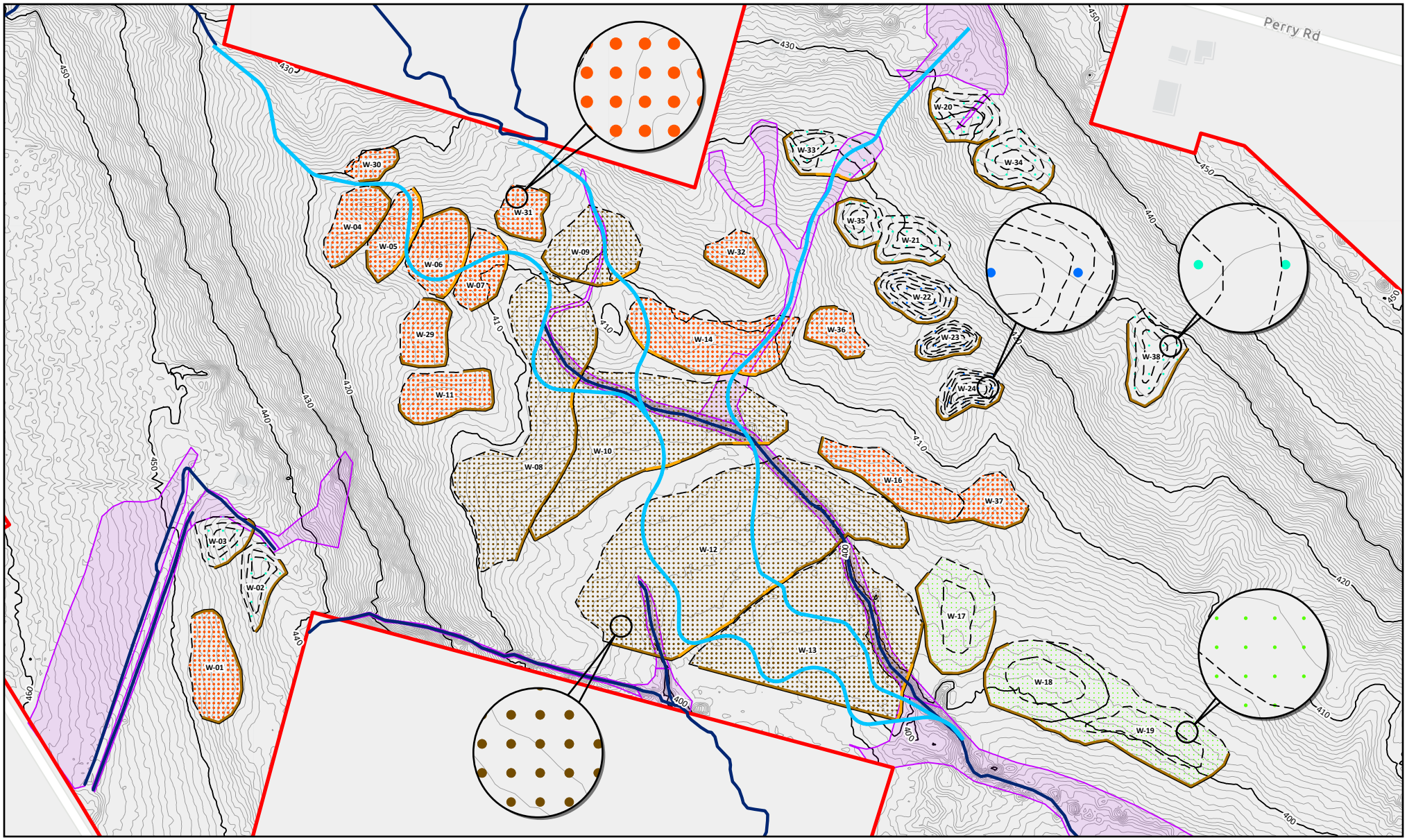
Site Plan

Fish Creek
Town of Schroeppel,
Oswego County, NY

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

- Existing Wetland Preservation (4.5 ac)
- Existing Wetland Rehabilitation (1 ac Total)
  - Incidental (1 ac)
- Mitigation Wetlands (20 ac Total / 19 ac Reestablishment / 1 ac Incidental Rehabilitation)
  - PEM - Shallow Emergent Marsh (2.3 ac Total / 2.2 ac Reest. / 0.1 ac Incidental Rehab)
  - PEM - Deep Emergent Marsh (0.7 ac Total / 0.7 ac Reest. / 0 ac Incidental Rehab)
  - PSS - Scrub Shrub (2.4 ac Total / 2.4 ac Reest. / 0 ac Incidental Rehab)
  - PFO - Floodplain Forest (10 ac Total / 9.2 ac Reest. / 0.8 ac Incidental Rehab)
  - PFO - Red Maple Hardwood Swamp (4.6 ac Total / 4.5 ac Reest. / 0.1 ac Incidental Rehab)
- Mitigation Stream Reaches (5,413 ft)
- Upland Buffer (38.3 ac Total)
  - Herbaceous (7.4 ac)
  - Shrub / Forest (30.9 ac)
- Grassland Mitigation (25.4 ac)
- Bat Mitigation (84.8 ac)
- Contour Line (1 ft)
- Conservation Easement Boundary DRAFT (180.2 ac)
- TWT Property Boundary (184.8 ac)

Cartographer: Michelle Herman | Date: 2 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse



Wetland Grading Plan

Fish Creek
Town of Schroeppel,
Oswego County, NY

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

- Mitigation Wetland Core Trenches (Not to Scale; will not Exceed 3 ft H)
- Mitigation Wetland Riffle Crests (Not to Scale)

Mitigation Wetland Pit and Mound Specifications (Average)

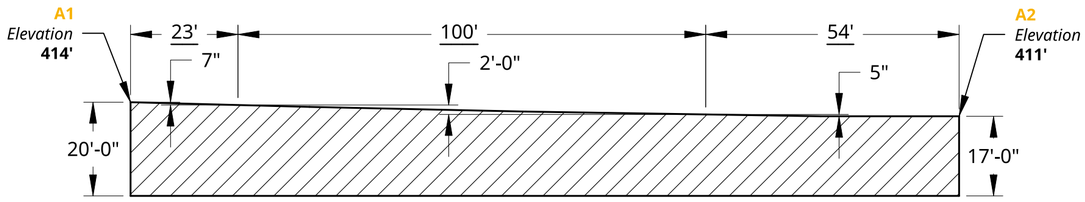
- PEM Shallow Emergent Marsh: 24 in H x 36 in Dia, 30 ft Spacing
- PEM Deep Emergent Marsh: 30 in H x 36 in Dia, 30 ft Spacing
- PSS Scrub Shrub: 4 in H x 12 in Dia, 10 ft Spacing
- PFO Floodplain Forest: 12 in H x 36 in Dia, 10 ft Spacing
- PFO Red Maple Hardwood Swamp: 6 in H x 48 in Dia, 10 ft Spacing

- Existing Wetlands (19.2 ac)
- Mitigation Stream Reaches (5,413 ft)
- Existing Reaches
- Mitigation Wetland Contours (0.5 ft)
- Existing Contours (0.5 ft)
- TWT Property Boundary (184.8 ac)

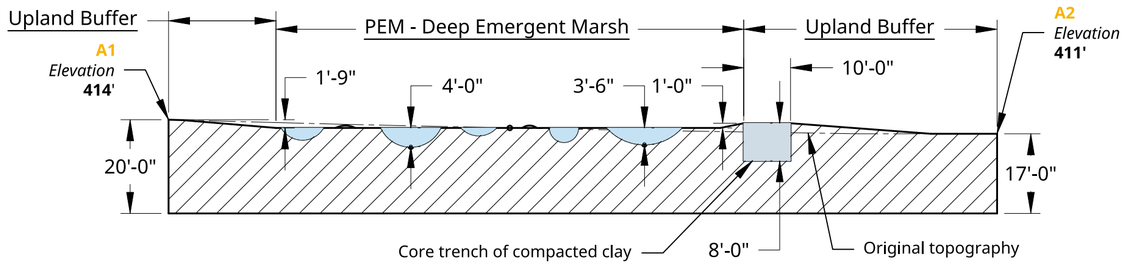
Cartographer: Michelle Herman | Date: 7 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse

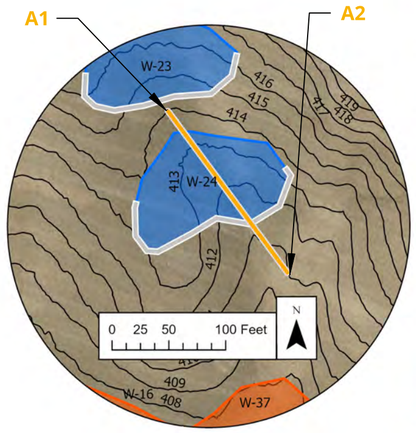
Fish Creek Wetland Cross Sections: PEM - Deep Emergent Marsh and PSS - Scrub Shrub

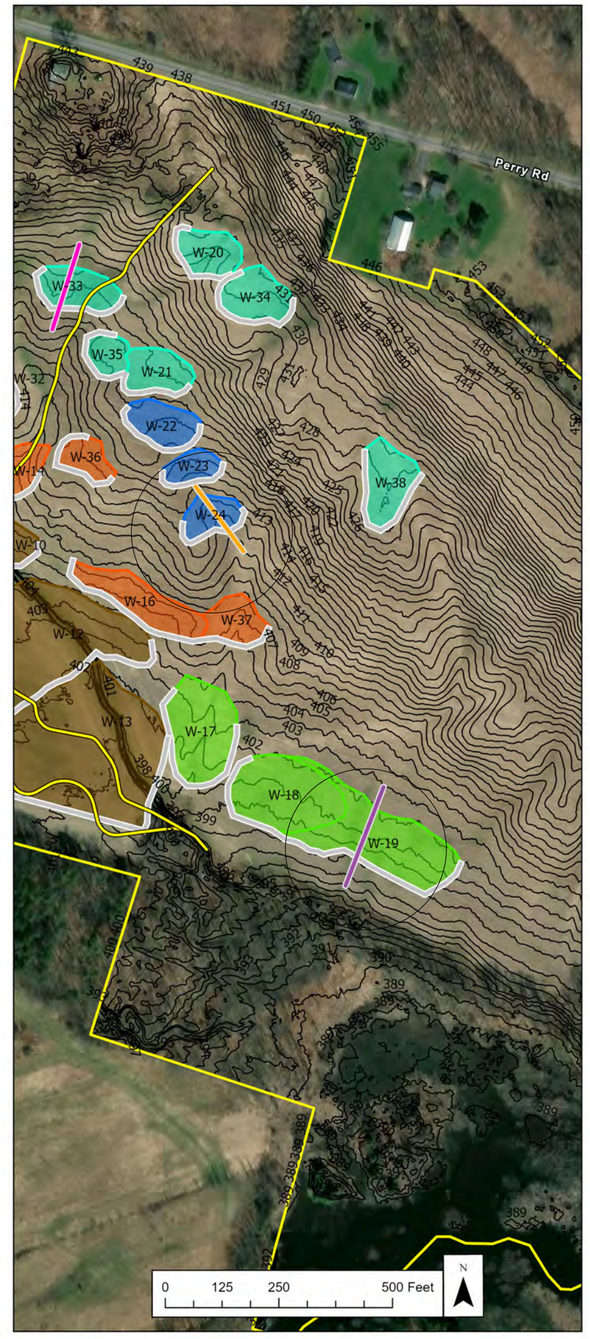
W-24 Original topography profile



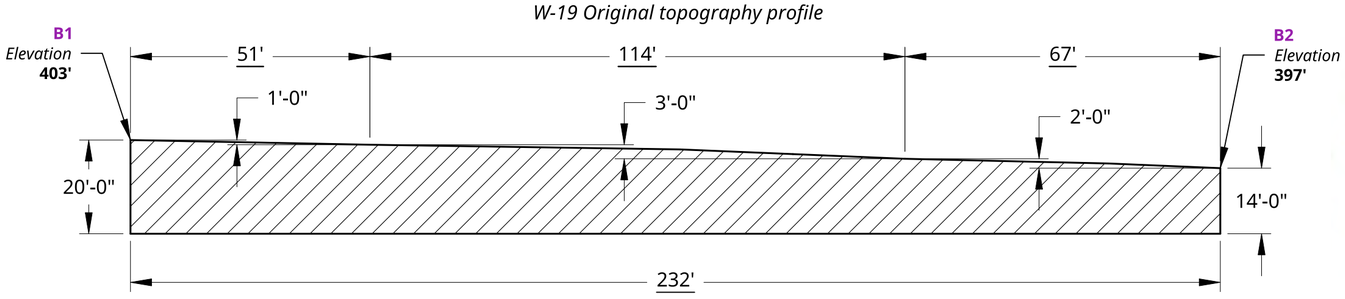
W-24 Proposed as-built profile



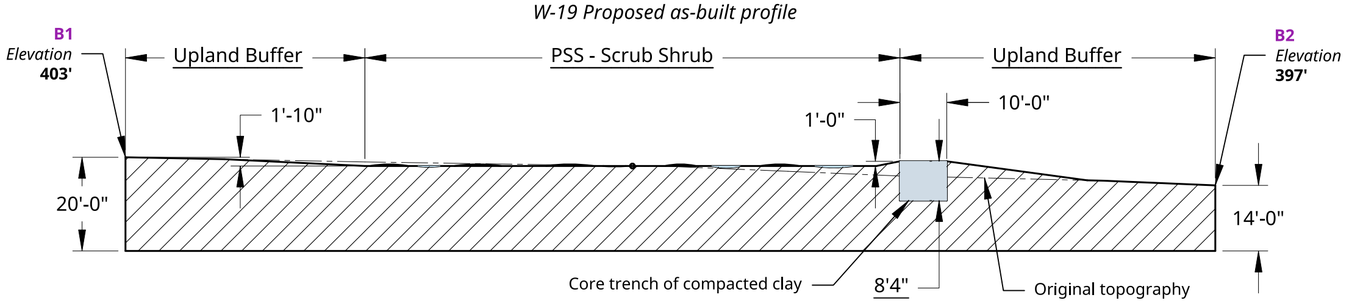


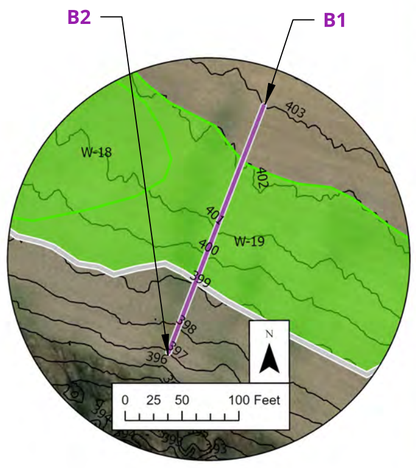


W-19 Original topography profile



W-19 Proposed as-built profile





TWT Property Boundaries
FISH_CREEK_PROP_STREAMS
Contour Line (1 ft)
Fish Creek Berms/Core Trenches
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest
PFO - Red Maple Hardwood Swamp
PSS - Scrub Shrub

Fish Creek Designed Wetlands
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest
PFO - Red Maple Hardwood Swamp
PSS - Scrub Shrub

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET.

Maps and drawings are at different scales. Berm/Core Trenches in maps are not to scale

	NAME	DATE
DRAWN	DYLAN JOHNSTON-JORDAN	06/11/2025
CHECKED		
APPROVED		

MATERIAL | FINISH

TITLE: **Fish Creek Wetland Cross Sections: Deep Emergent Marsh and Scrub Shrub**

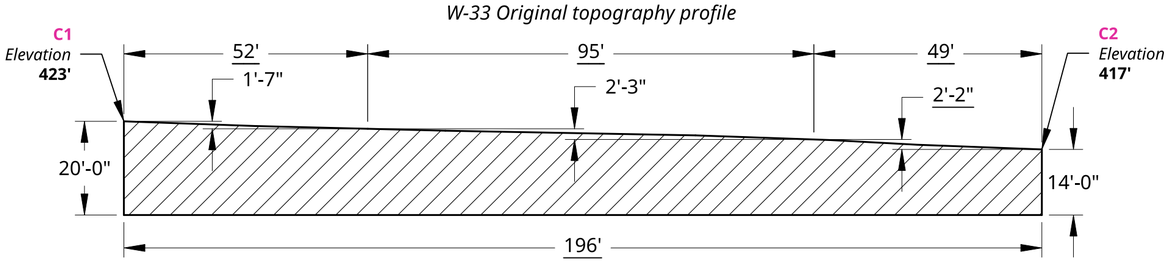
The Wetland Trust

SIZE C | DWG NO. | REV.

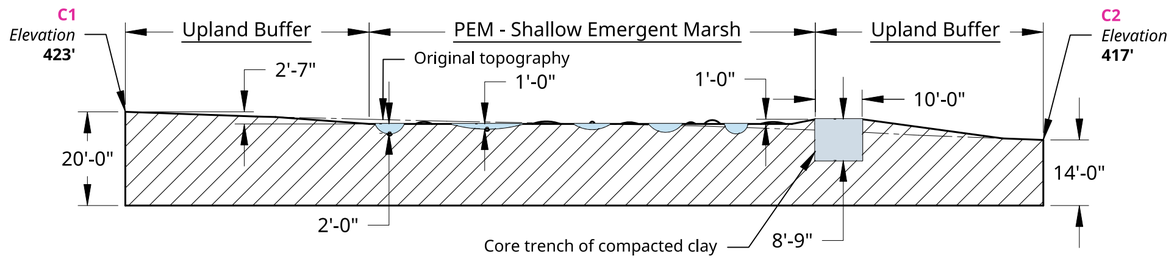
SCALE 1:300 | WEIGHT | SHEET 1 of 1

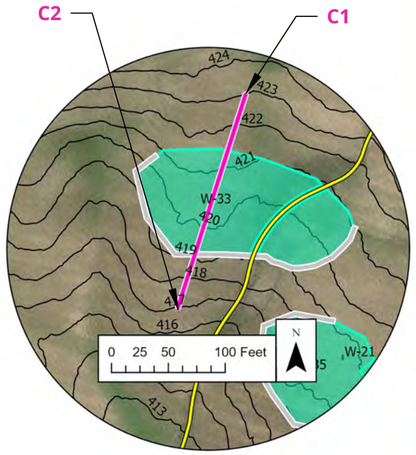
Fish Creek Wetland Cross Sections: PEM - Shallow Emergent Marsh and PFO - Floodplain Forest

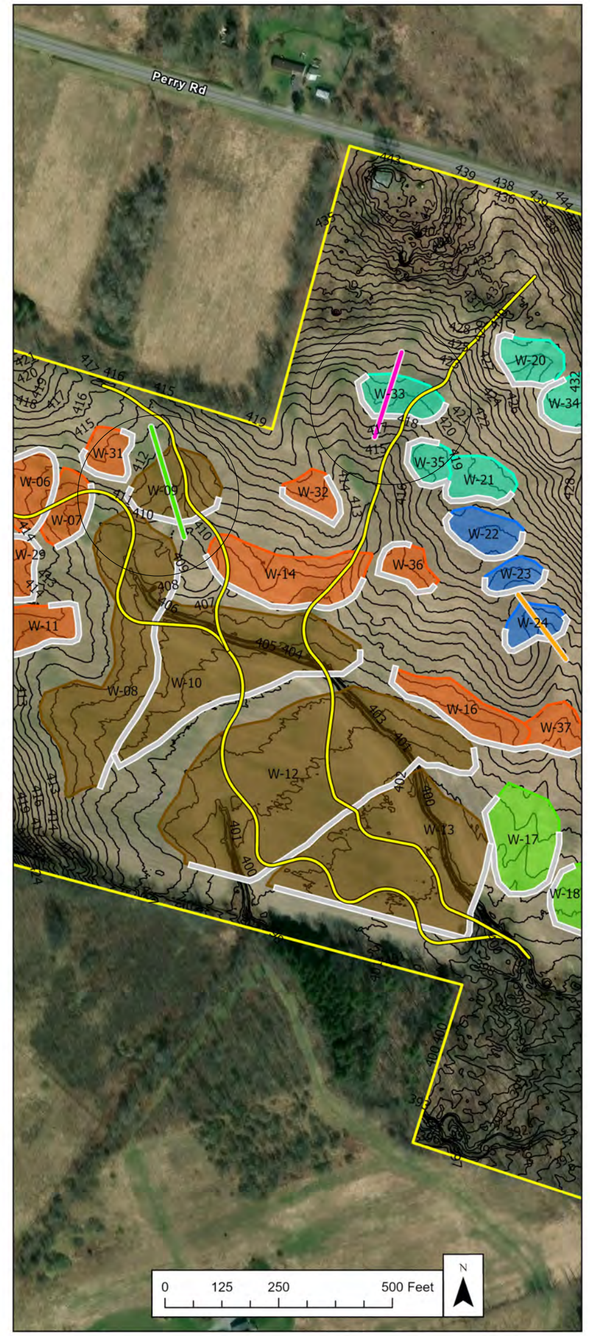
W-33 Original topography profile



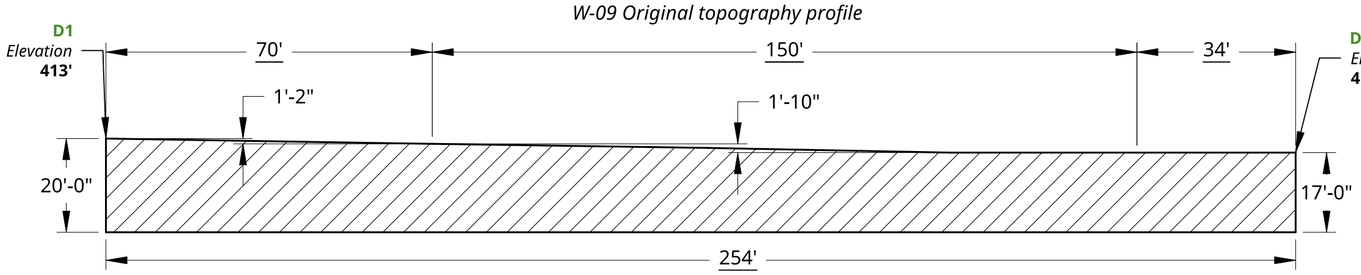
W-33 Proposed as-built profile



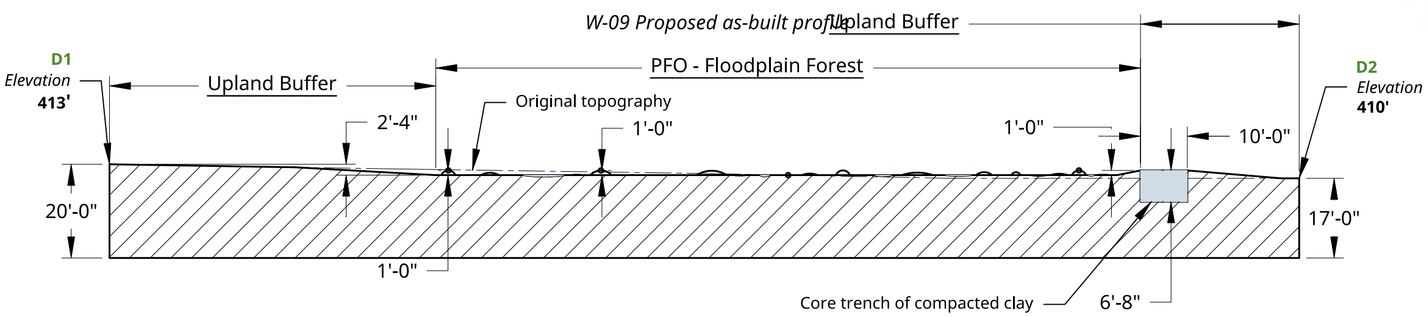


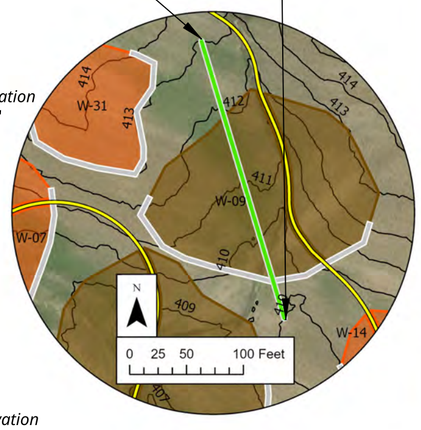


W-09 Original topography profile



W-09 Proposed as-built profile





TWT Property Boundaries
FISH_CREEK_PROP_STREAMS
Contour Line (1 ft)
Fish Creek Berms/Core Trenches
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest
PFO - Red Maple Hardwood Swamp
PSS - Scrub Shrub

Fish Creek Designed Wetlands
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest
PFO - Red Maple Hardwood Swamp
PSS - Scrub Shrub

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET.

Maps and drawings are at different scales. Berm/Core Trenches in maps are not to scale

	NAME	DATE
DRAWN	DYLAN JOHNSTON-JORDAN	06/11/2025
CHECKED		
APPROVED		

MATERIAL | FINISH

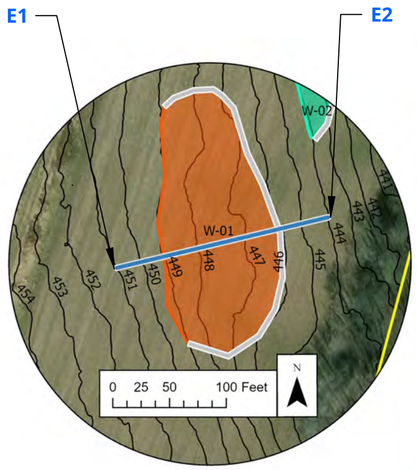
TITLE: **Fish Creek Wetland Cross Sections: Shallow Emergent Marsh and Floodplain Forest**

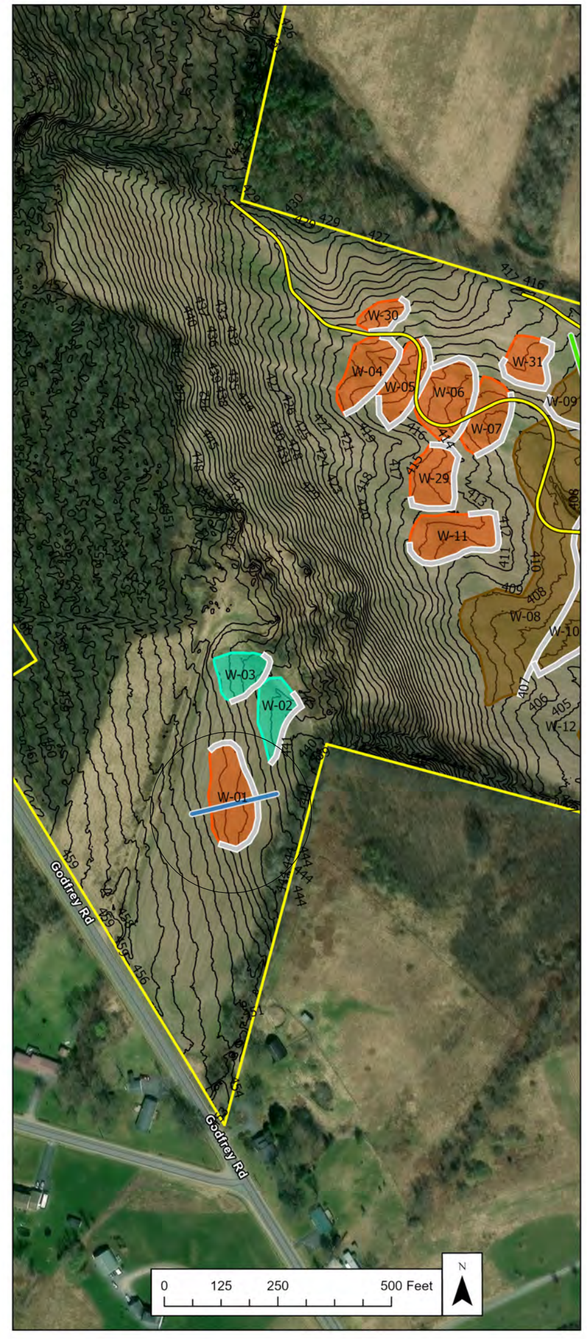
The Wetland Trust

SIZE C | DWG NO. | REV.

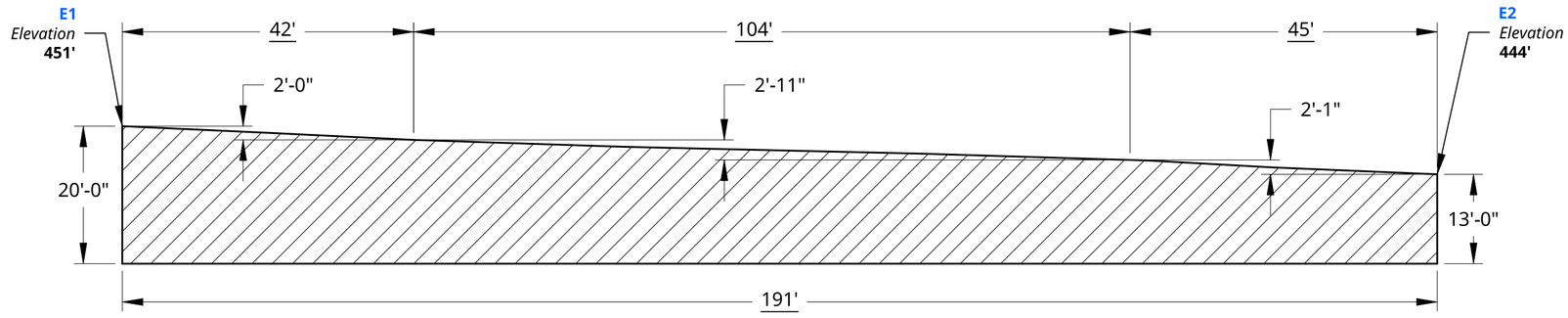
SCALE 1:300 | WEIGHT | SHEET 1 of 1

Fish Creek Wetland Cross Sections: PFO - Red Maple Hardwood Swamp

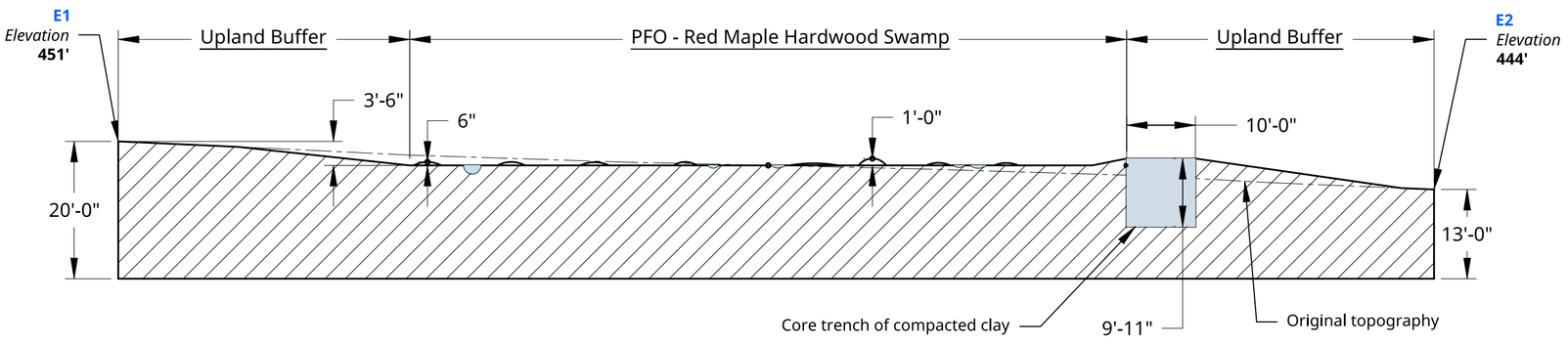




W-01 Original topography profile



W-01 Proposed as-built profile



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET. Maps and drawings are at different scales. Berm/Core Trenches in maps are not to scale		NAME	DATE
	DRAWN	DYLAN JOHNSTON-JORDAN	06/11/2025
	CHECKED		
	APPROVED		
	MATERIAL	FINISH	

TITLE: **Fish Creek Wetland Cross Sections: Red Maple Hardwood Swamp**

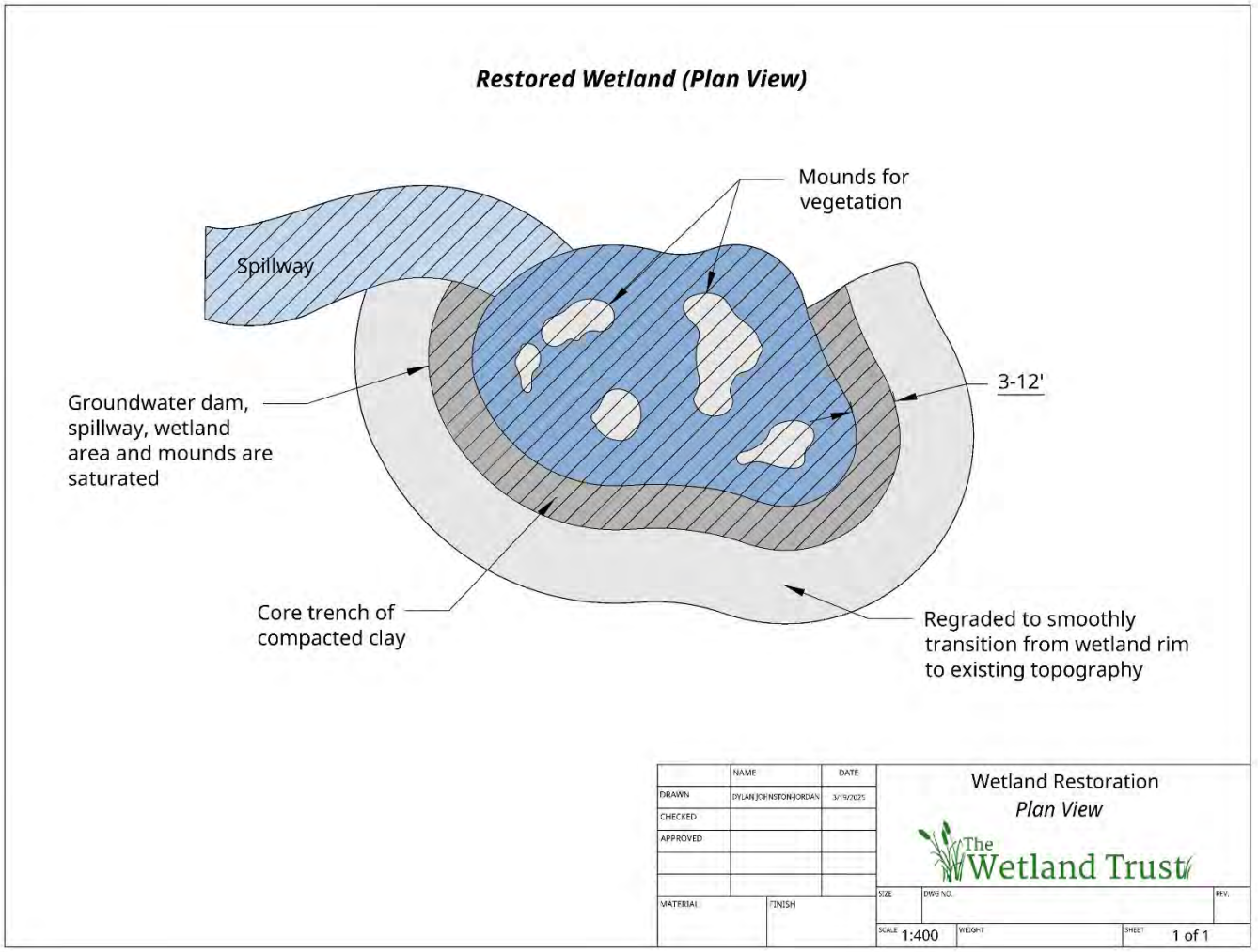
The Wetland Trust

SIZE	DWG NO.	REV.
C		

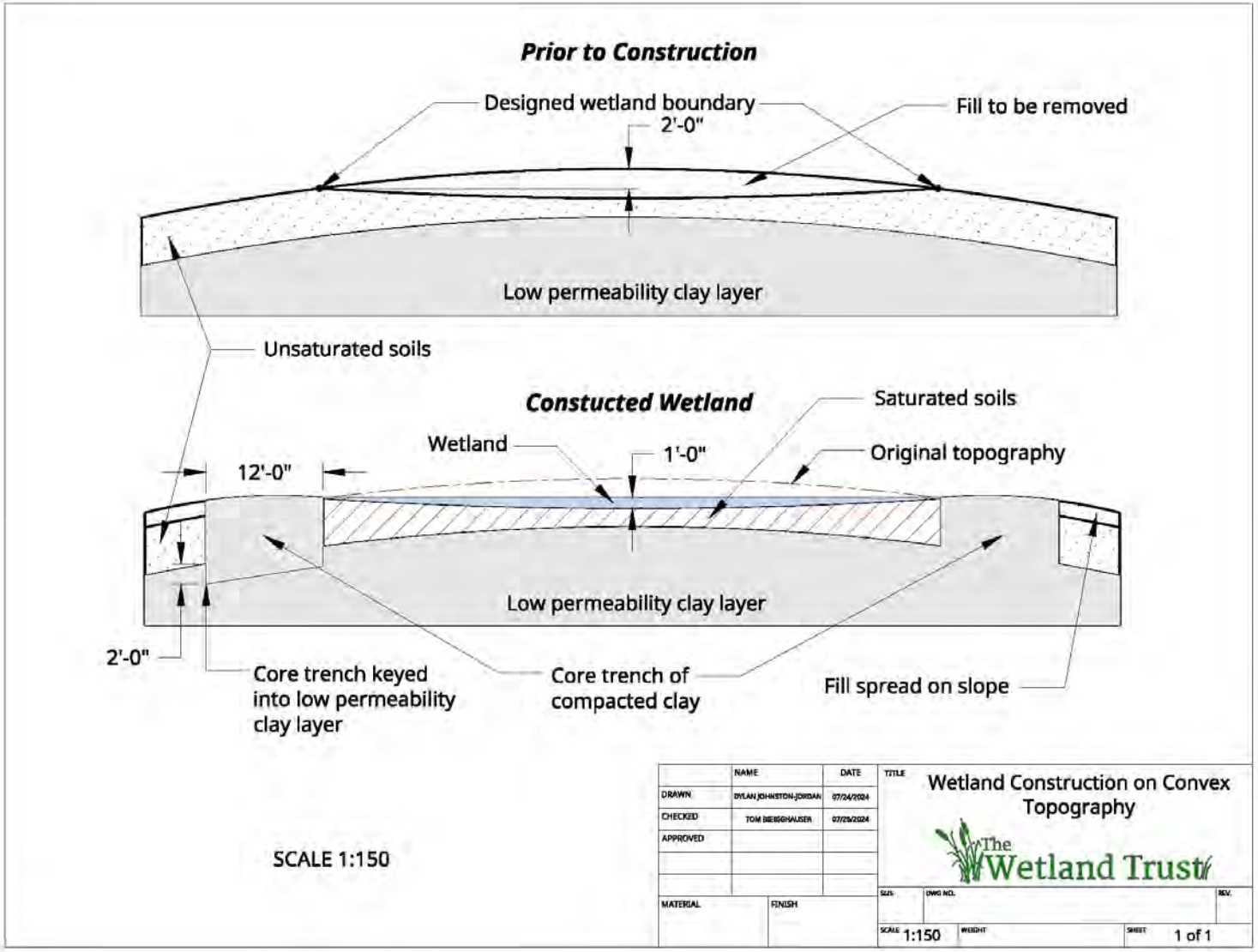
SCALE	WEIGHT	SHEET
1:200		1 of 1

Construction Typical Drawings

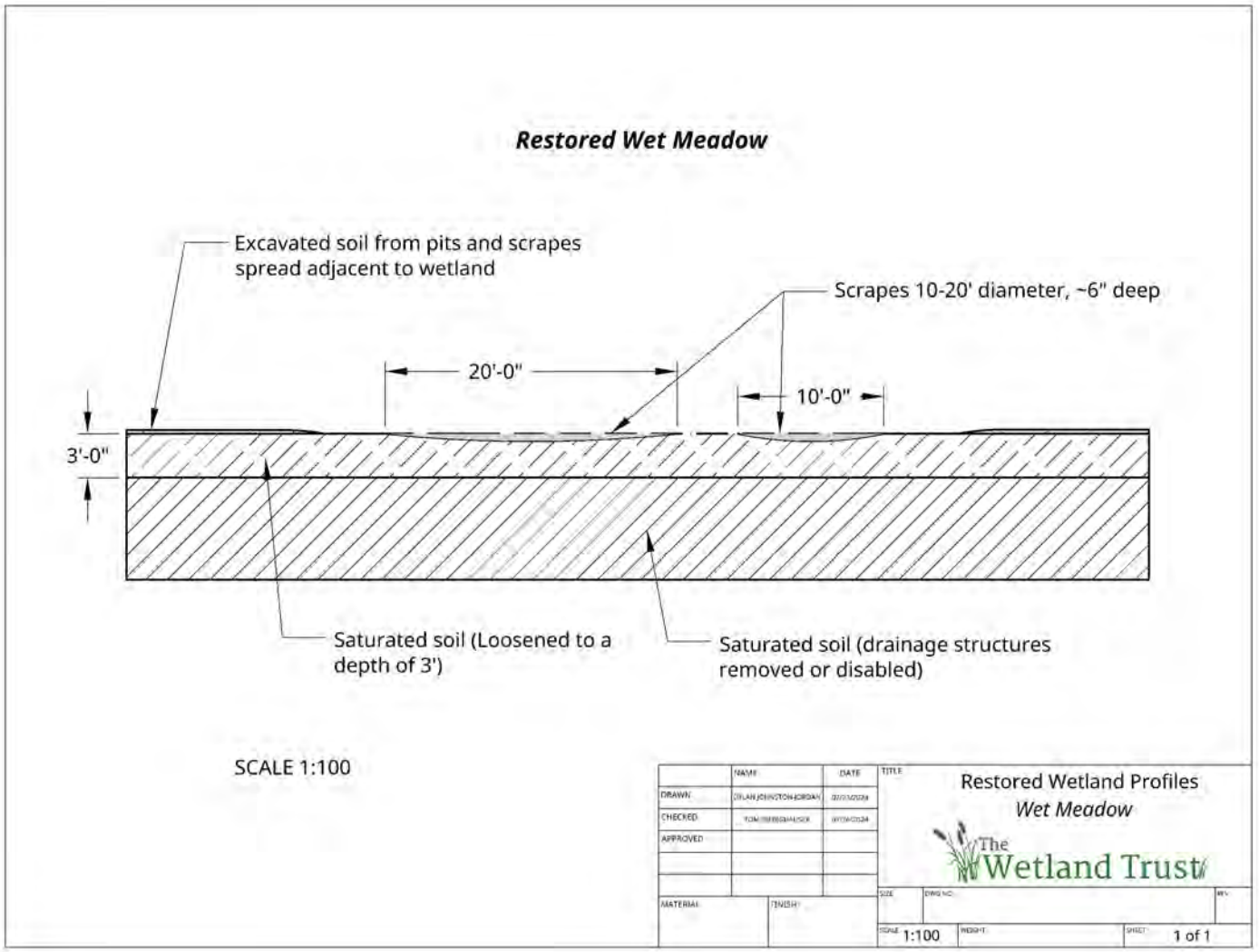
A. Typical Restored Wetland (Plan View)



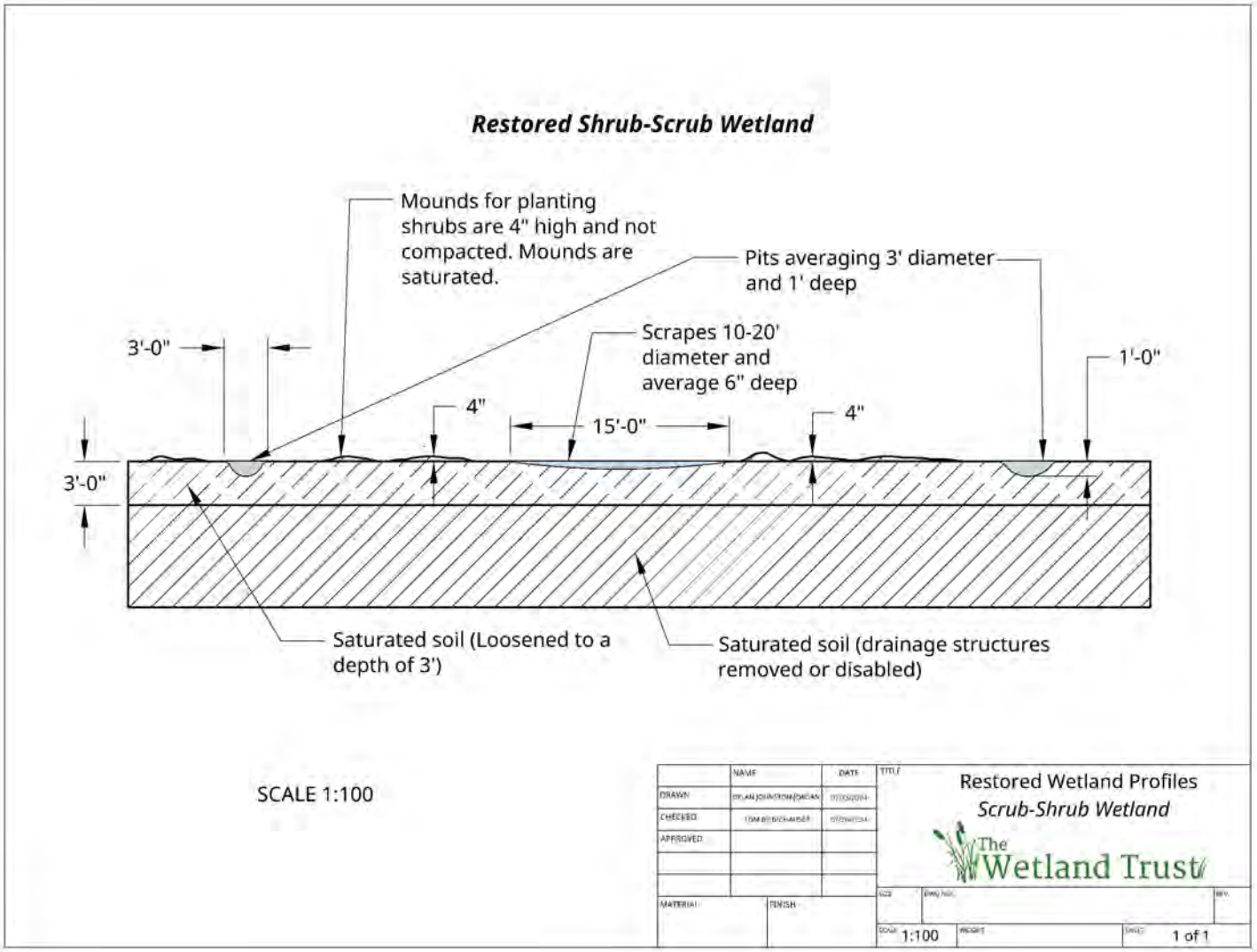
B. Wetland Construction on Convex Topography



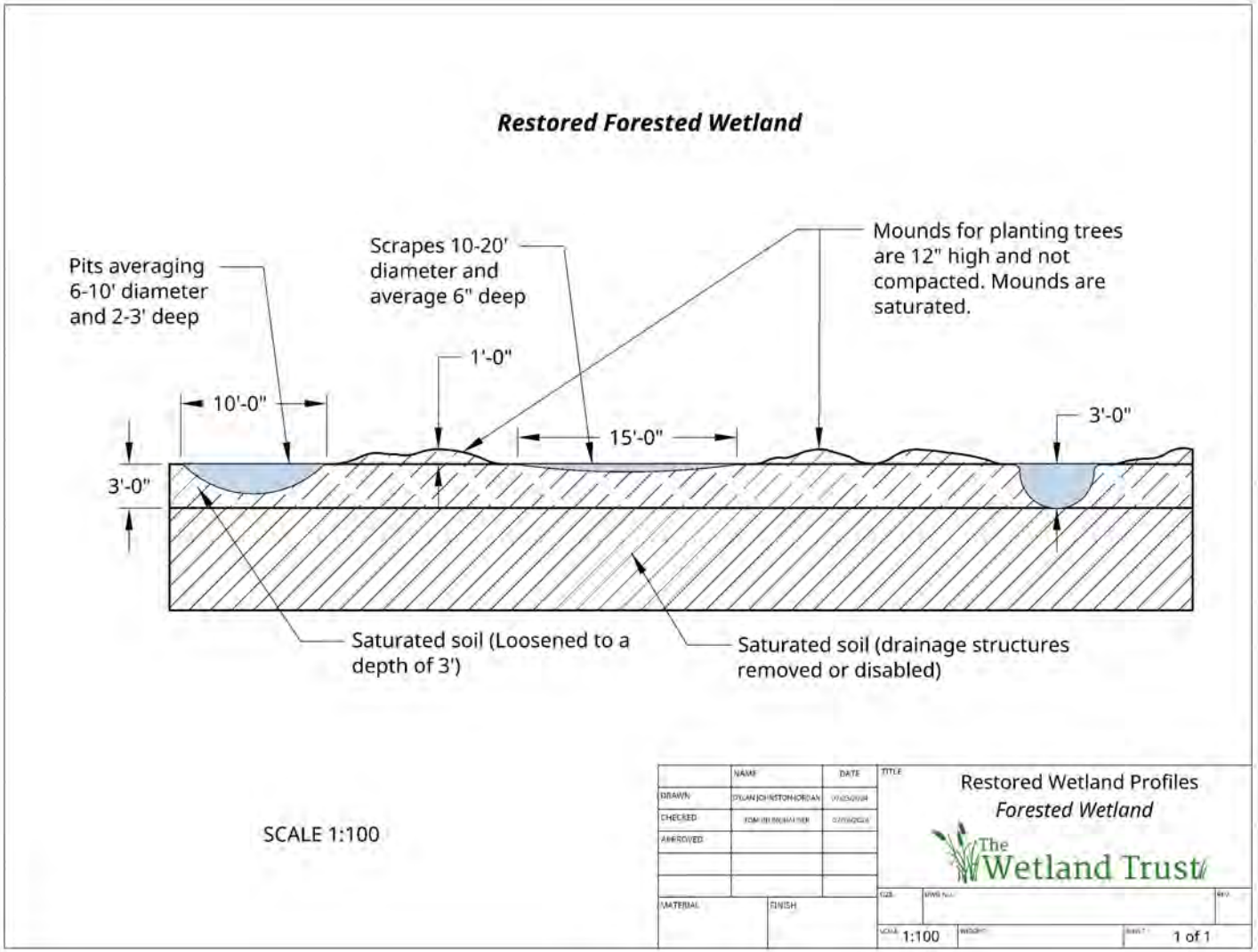
C. Restored Wet Meadow



D. Restored Scrub-Shrub Wetland

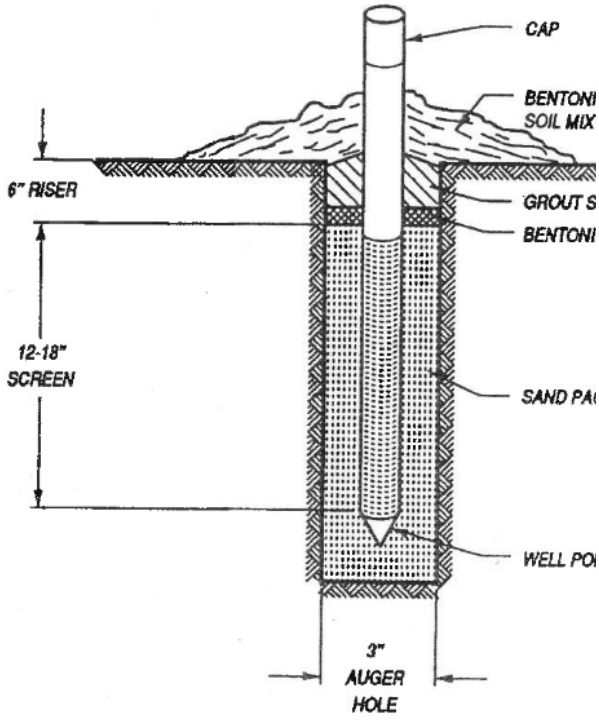


E. Restored Forested Wetland

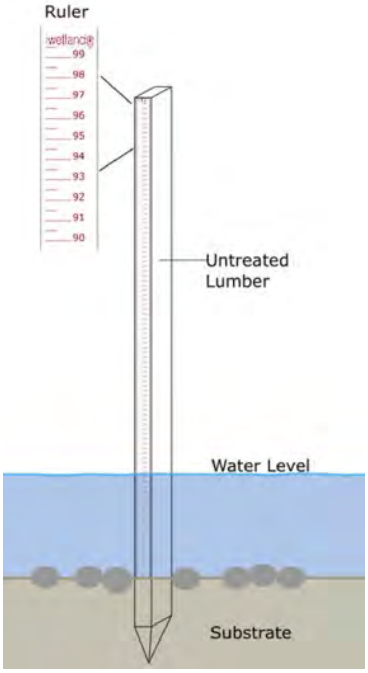


Hydrology Monitoring Structure Typicals

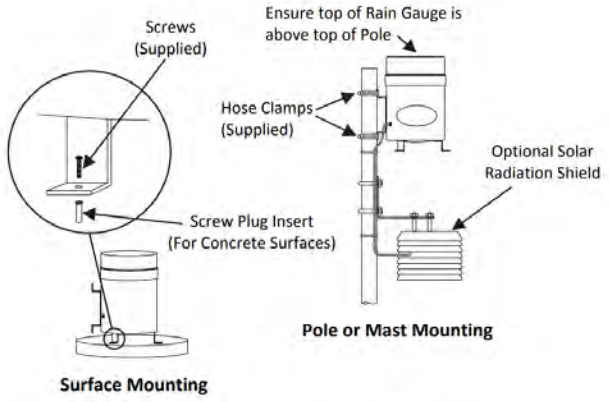
F. Groundwater Monitoring Well



G. Staff Gauge



H. HOBO Rain Gauge Typical



Appendix I.

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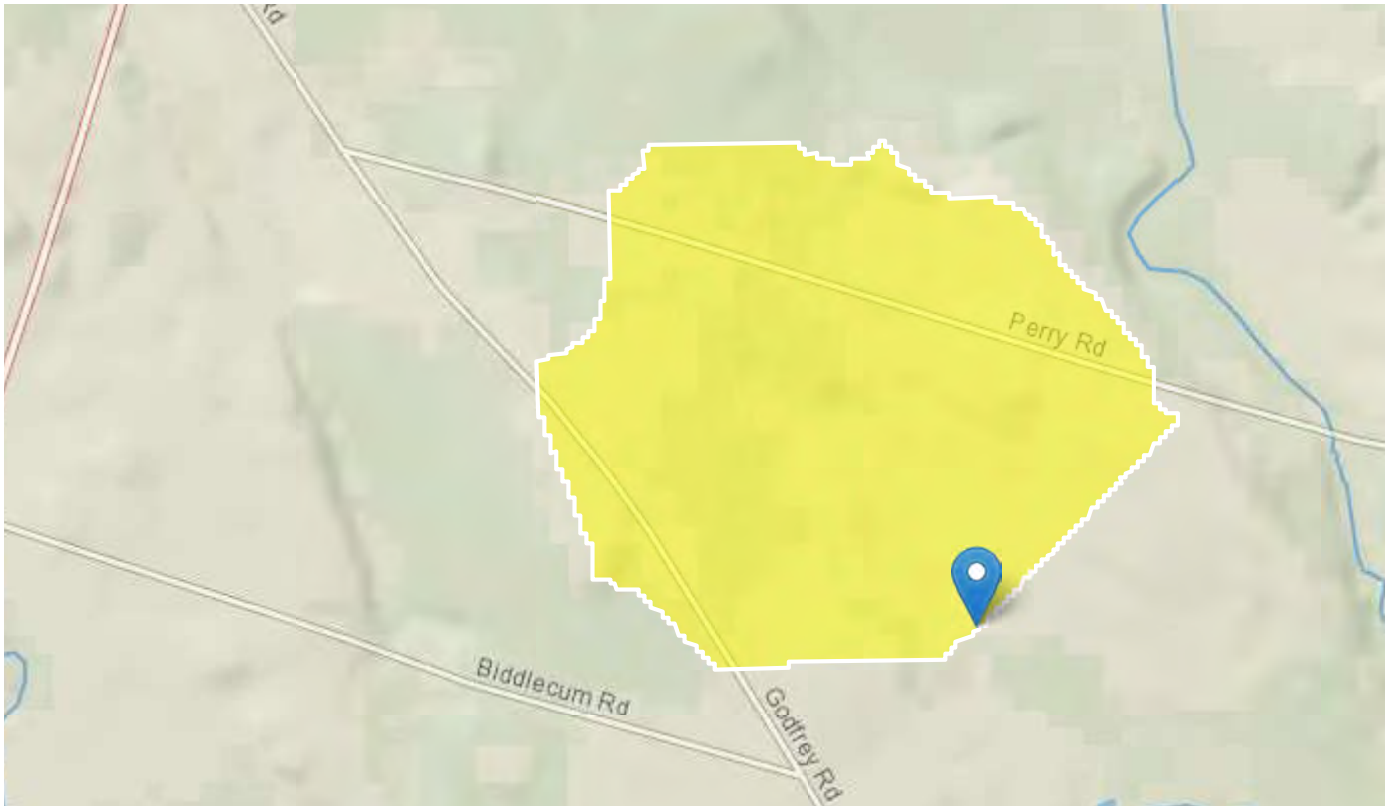
Appendix J.

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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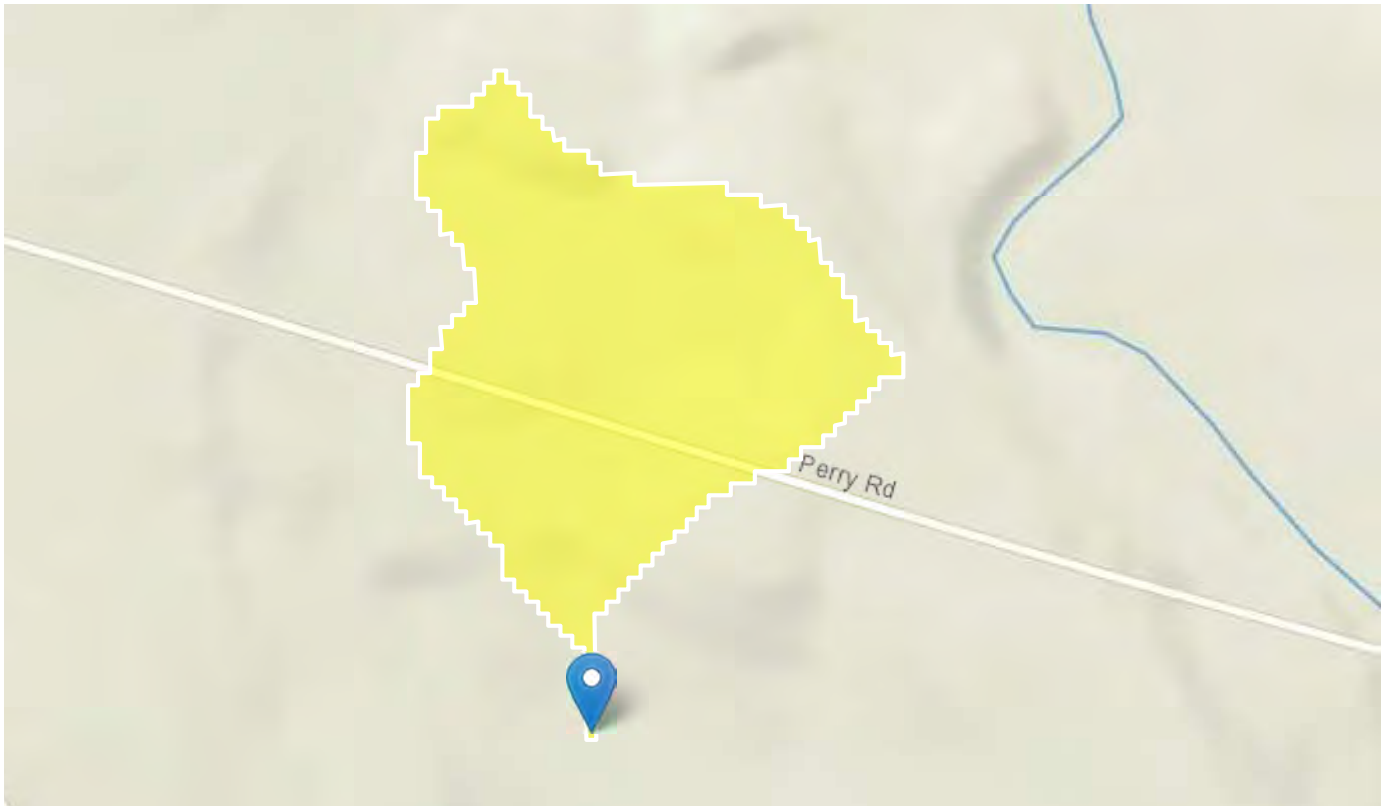
Application Version: 4.24.0

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)

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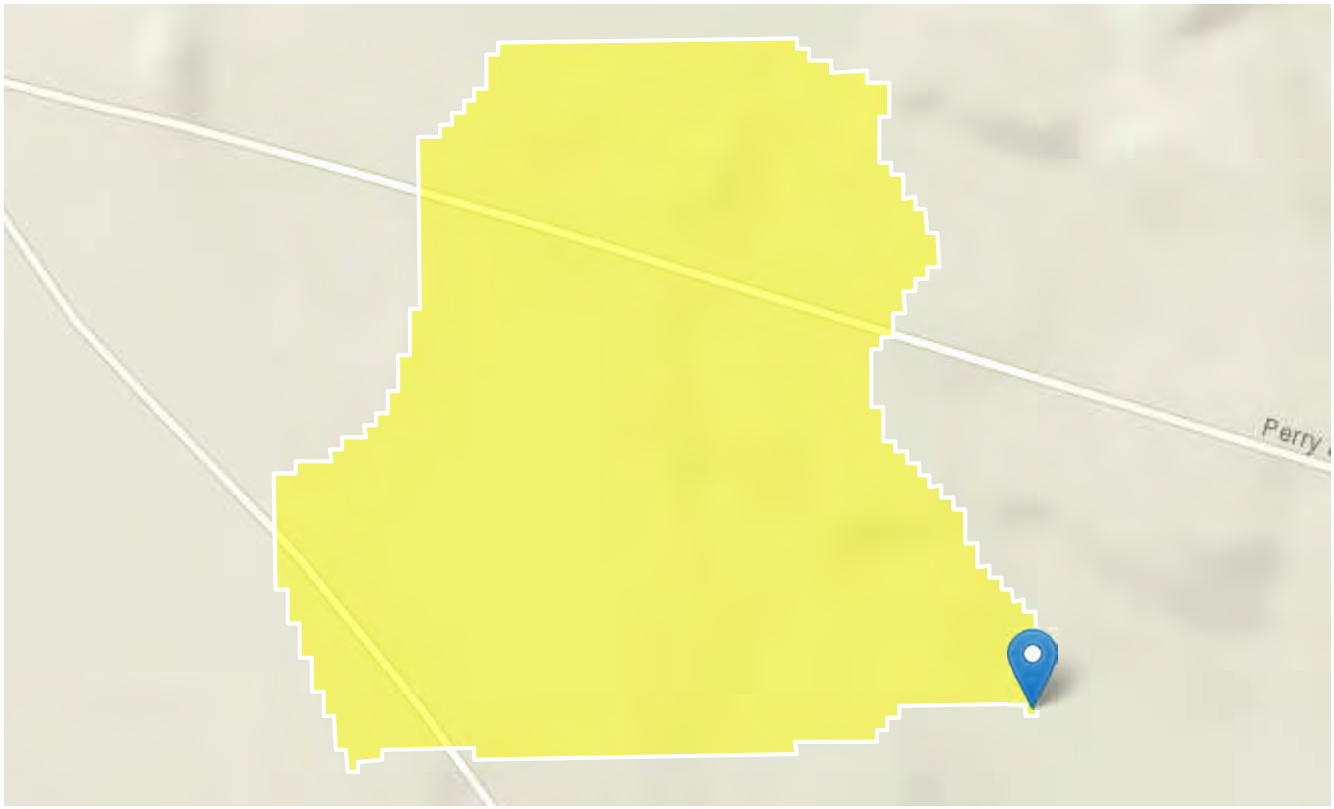
Application Version: 4.24.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats Report - Perry Road 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)

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Application Version: 4.24.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Appendix K.

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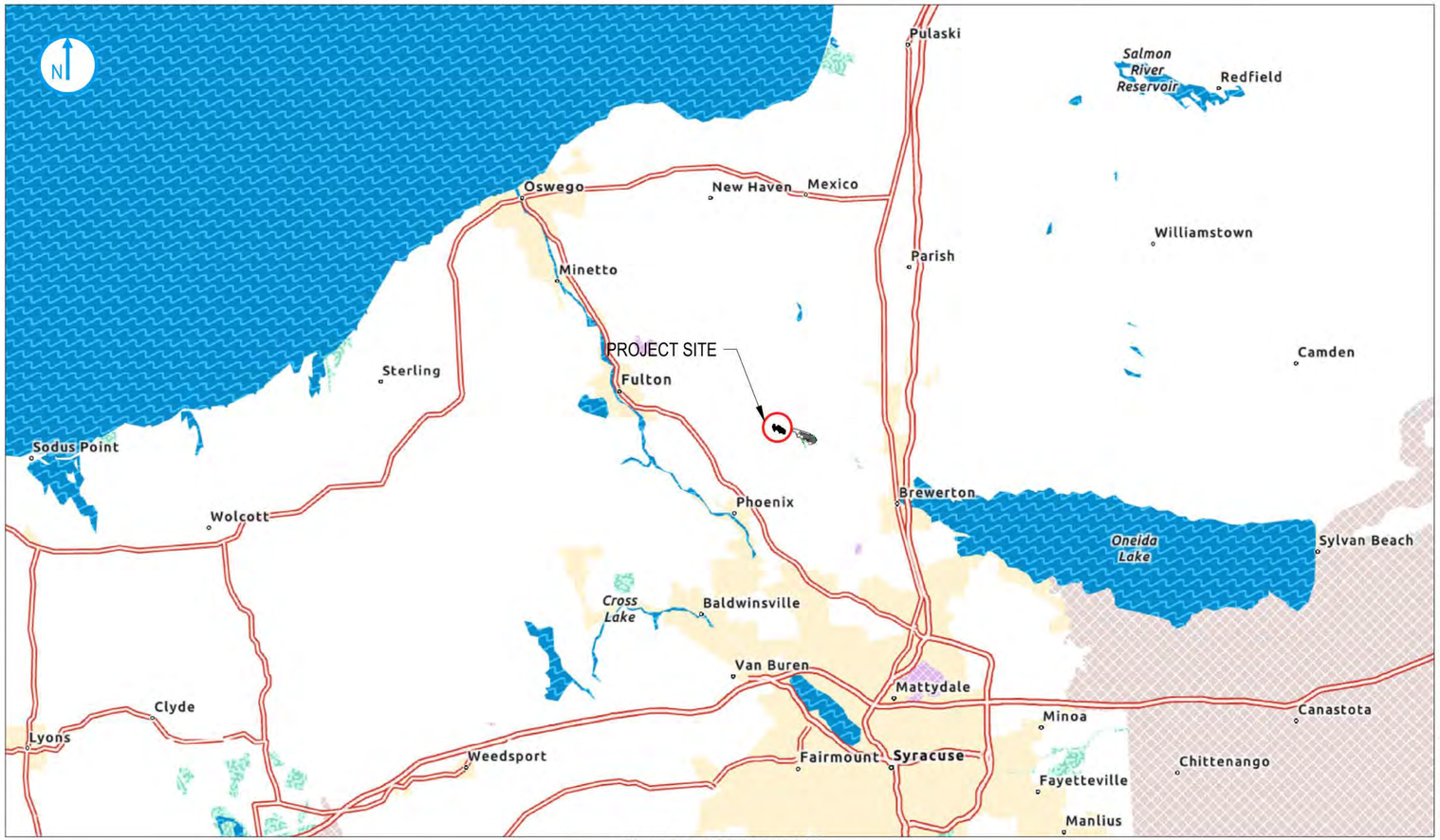

SITE LOCATION MAP

26400 0 26400

SCALE: 1"= 5 MILES

INDEX TO DRAWINGS	
SHEET NO.	SHEET NAME
C-001	COVER AND TITLE SHEET
C-002	EXISTING CONDITIONS SITE PLAN
C-003	KEY PLAN FOR EXISTING CONDITIONS
C-104	PROPOSED CONDITINS SITE PLAN
C-101	EXISTING PLAN & PROFILE PR - ED - 1
C-102	EXISTING PLAN & PROFILE PR - ED - 1
C-103	EXISTING PLAN & PROFILE PR - ED - 2
C-104	EXISTING PLAN & PROFILE PR - ED - 3
C-121	PROPOSED PLAN & PROFILE FC - DS - 1
C-122	PROPOSED PLAN & PROFILE FC - DS - 1
C-123	PROPOSED PLAN & PROFILE FC - DS - 1
C-124	PROPOSED PLAN & PROFILE FC - DS - 2
C-125	PROPOSED PLAN & PROFILE FC - DS - 3
C-126	PROPOSED PLAN & PROFILE FC - DS - 3
C-301	PROPOSED SECTION VIEWS FC - DS - 1
C-302	PROPOSED SECTION VIEWS FC - DS - 2
C-303	PROPOSED SECTION VIEWS FC - DS - 3
C-501	MISCELLANEOUS DETAILS
C-502	MISCELLANEOUS DETAILS
C-503	MISCELLANEOUS DETAILS

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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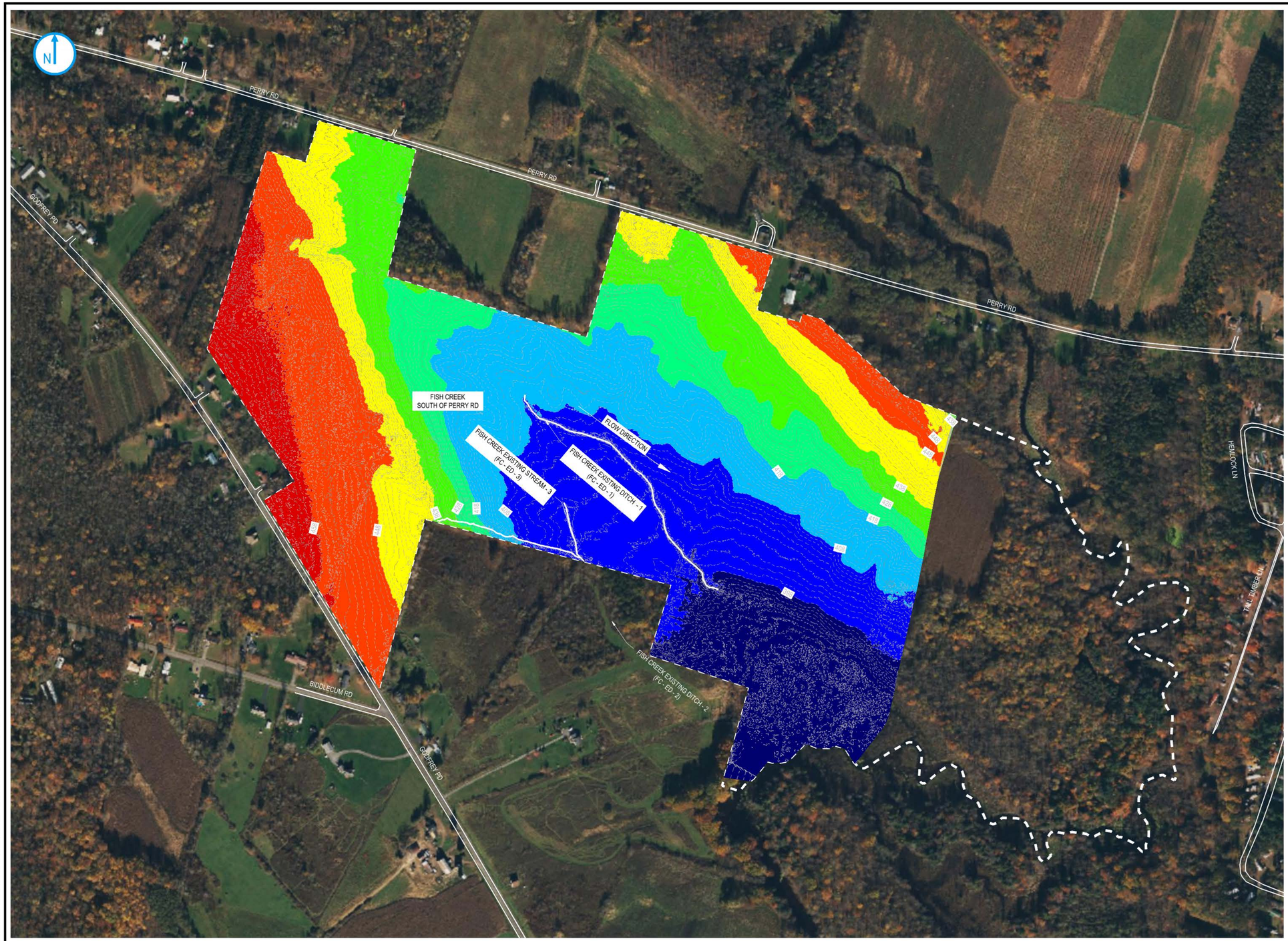
Project Details: **THE WETLAND TRUST** FISH CREEK SITE STREAM MITIGATION PERRY RD, PENNELLVILLE, NY 13132	Drawing Title: **COVER AND TITLE SHEET**				###
Location: NEW YORK	Designer / Professional Engineer Responsible: ###				###
Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buelow	Approved by P. Domaszczynski	Date ###
Project Status ###	Drawing Number **C-001**			Scale NTS	Sc x / Rev. x

C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_COVER AND TITLE.DWG

SAVED: 5/13/25 4:49 PM



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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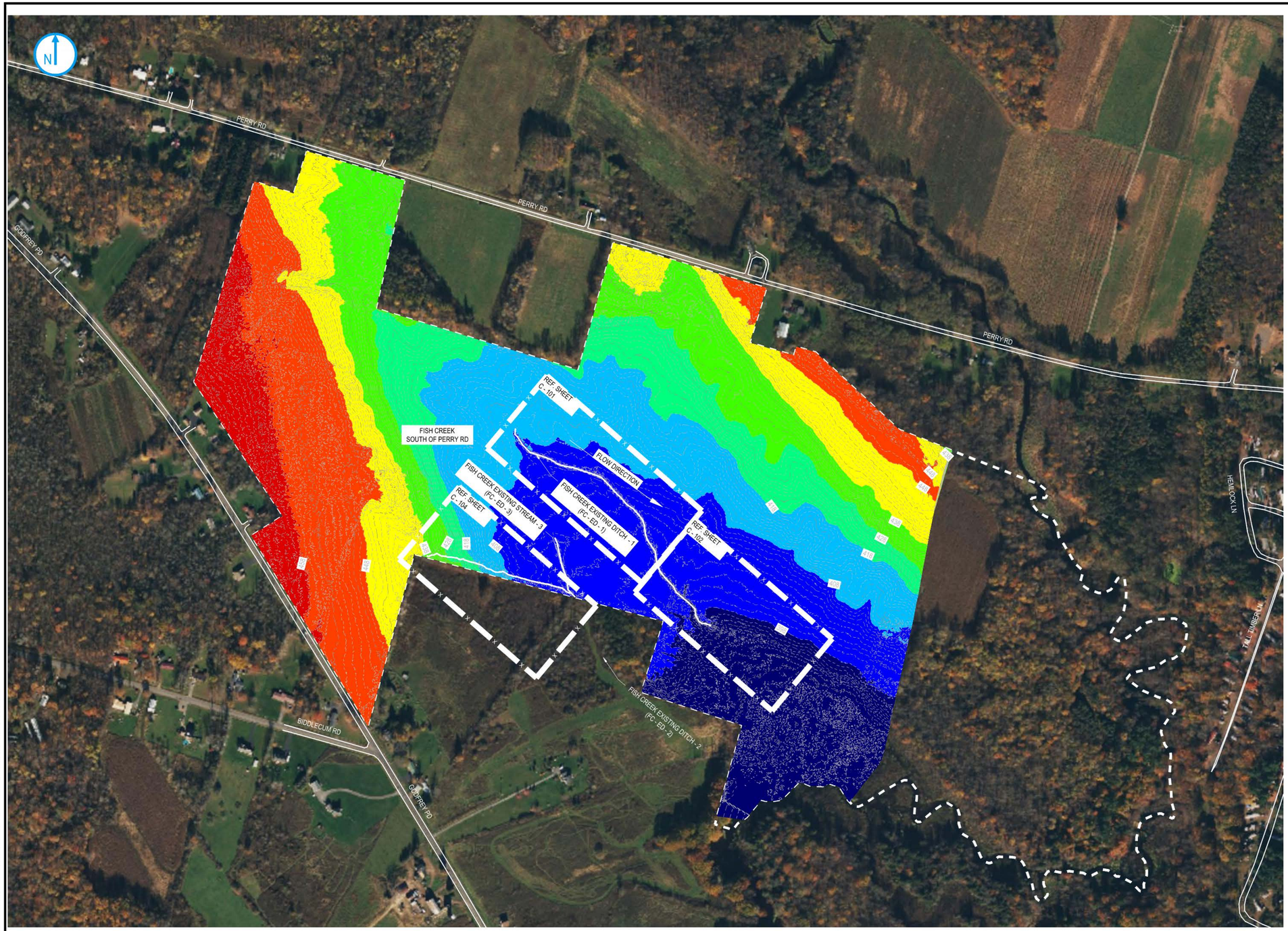

KEY PLAN FOR EXISTING CONDITIONS

250 0 250

SCALE: 1"=250'

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

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

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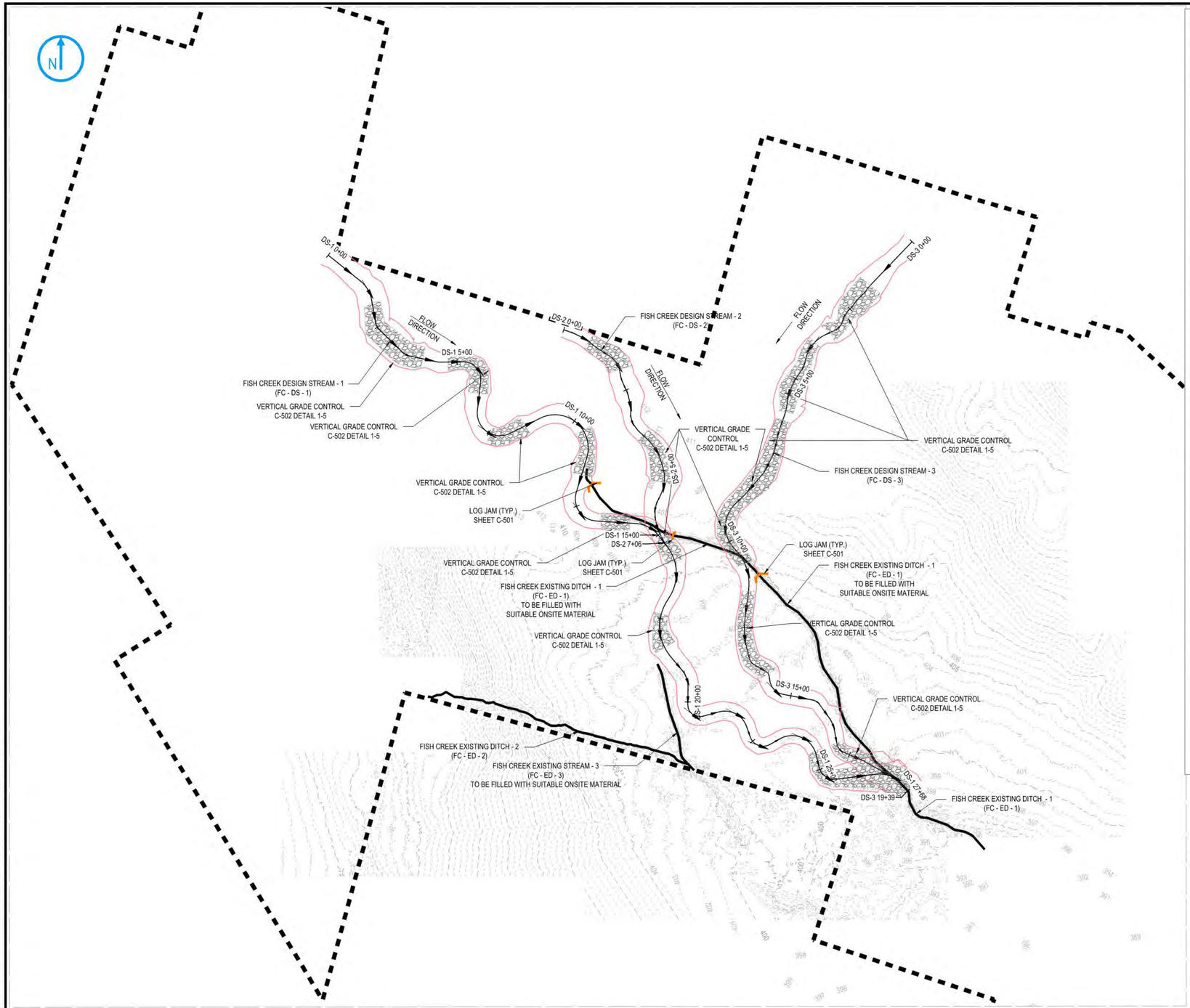

NOTES:

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

PROPOSED CONDITION SITE PLAN

150 0 150

SCALE: 1"=150'

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 CONDITION 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-004**			Scale AS NOTED	Sc x	Rev. x

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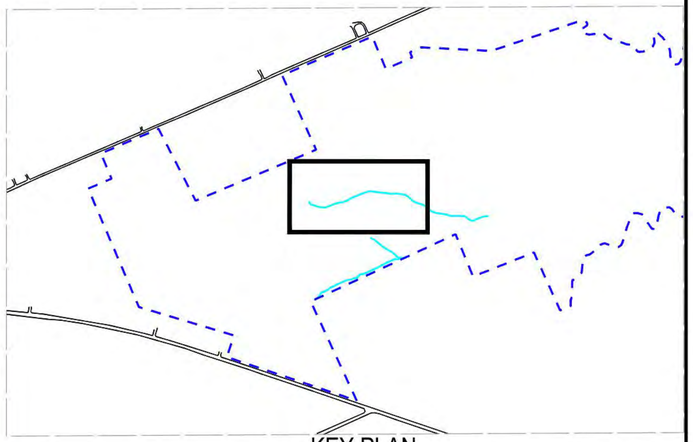

EXISTING PLAN & PROFILE PR - ED - 1

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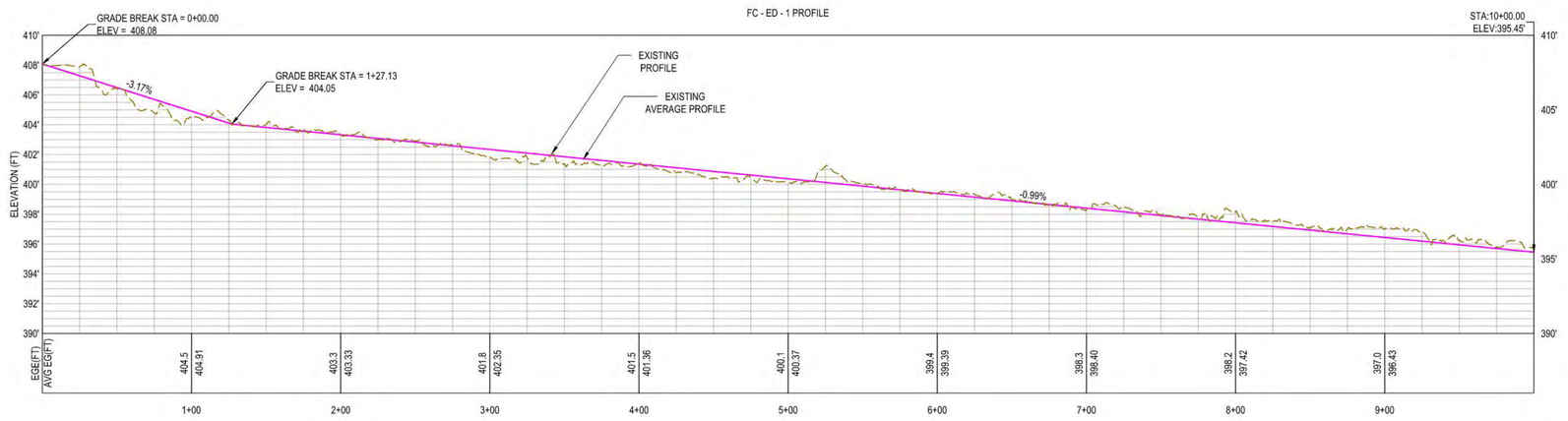
SCALE: 1"=50'



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	Drawing Title		
THE WETLAND TRUST FISH CREEK SITE STREAM MITIGATION PEERY RD, PENNELLVILLE, NY 13132 ####	**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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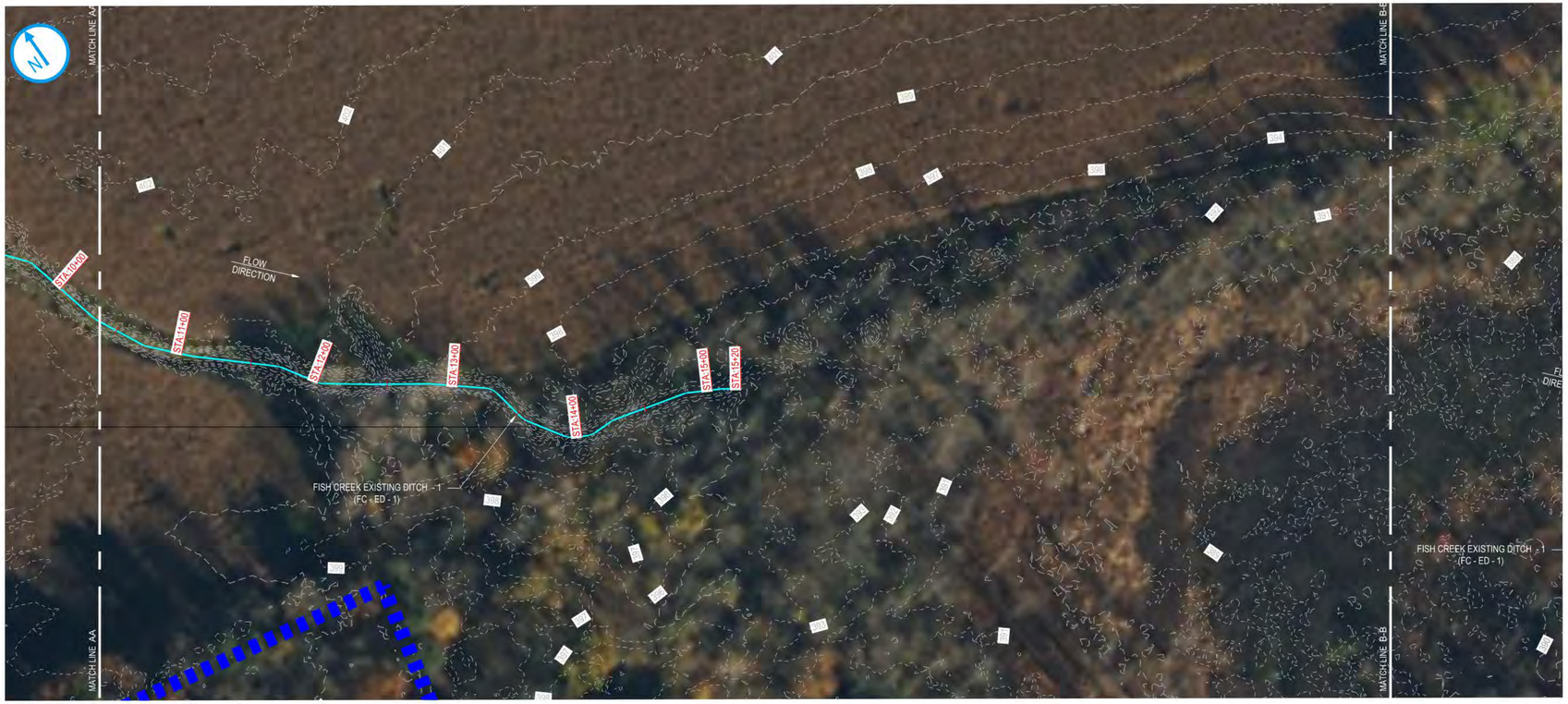

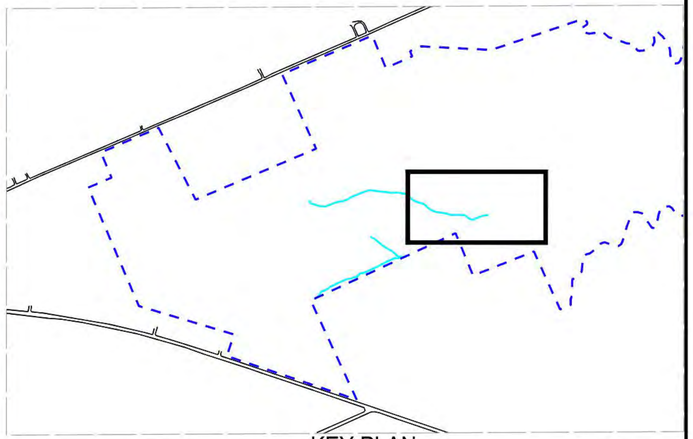

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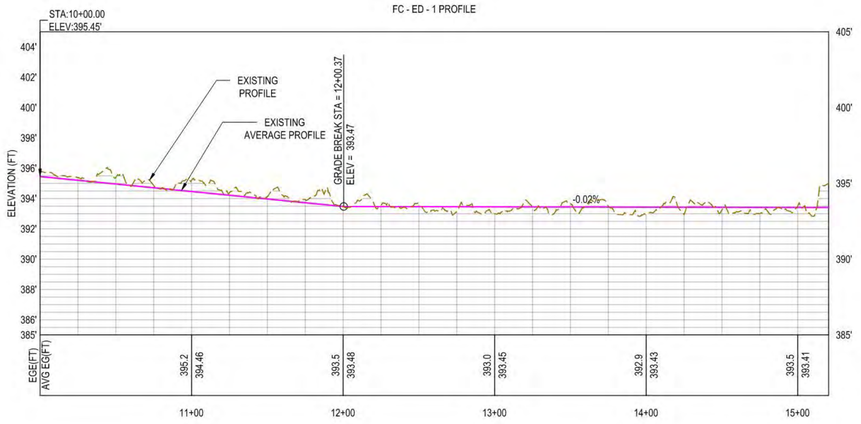
SCALE: 1"=50'



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.

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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-102**			Scale AS NOTED	Sc X Rev X

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EXISTING PLAN & PROFILE PR - ED - 2

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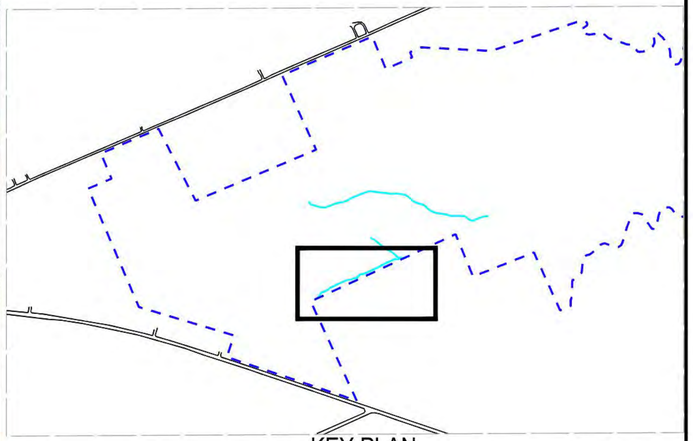
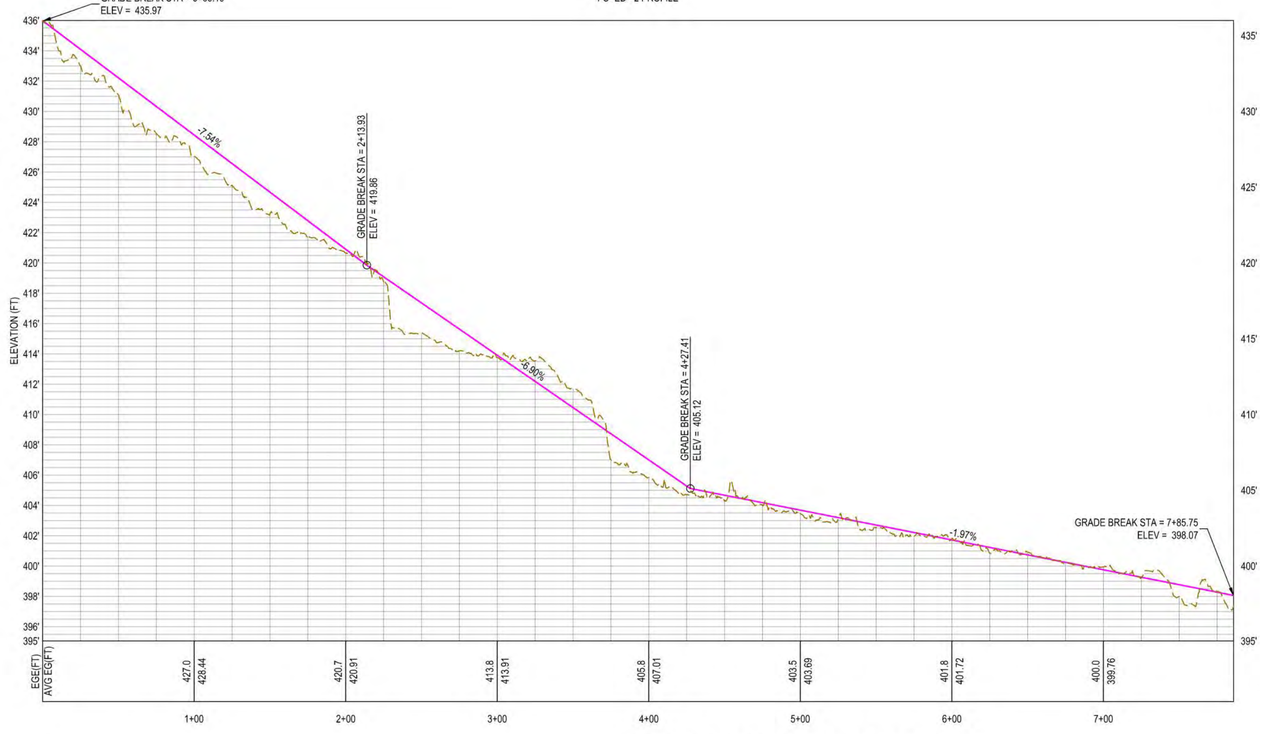
SCALE: 1"=50'



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.

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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 - 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

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EXISTING PLAN & PROFILE PR - ED - 3

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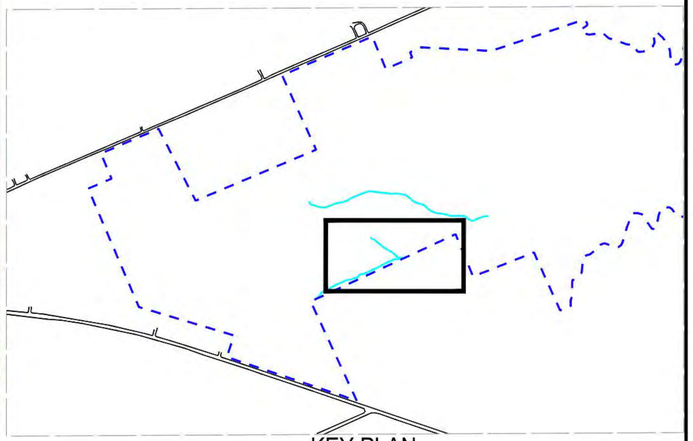
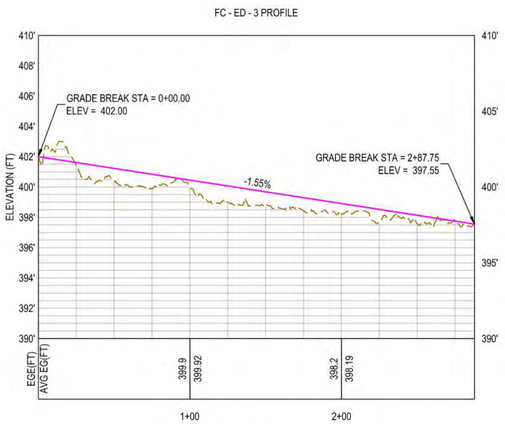
SCALE: 1"=50'





PROFILE STATION 0+00 TO 10+00

50 0 50
SCALE HORZ. 1" = 50'
5' 0 5'
SCALE: VERT. 1"= 5'

NO.	REV DATE	REVISION	INT.

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PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: 05/13/2025

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 AS NOTED	Sc x Rev. x

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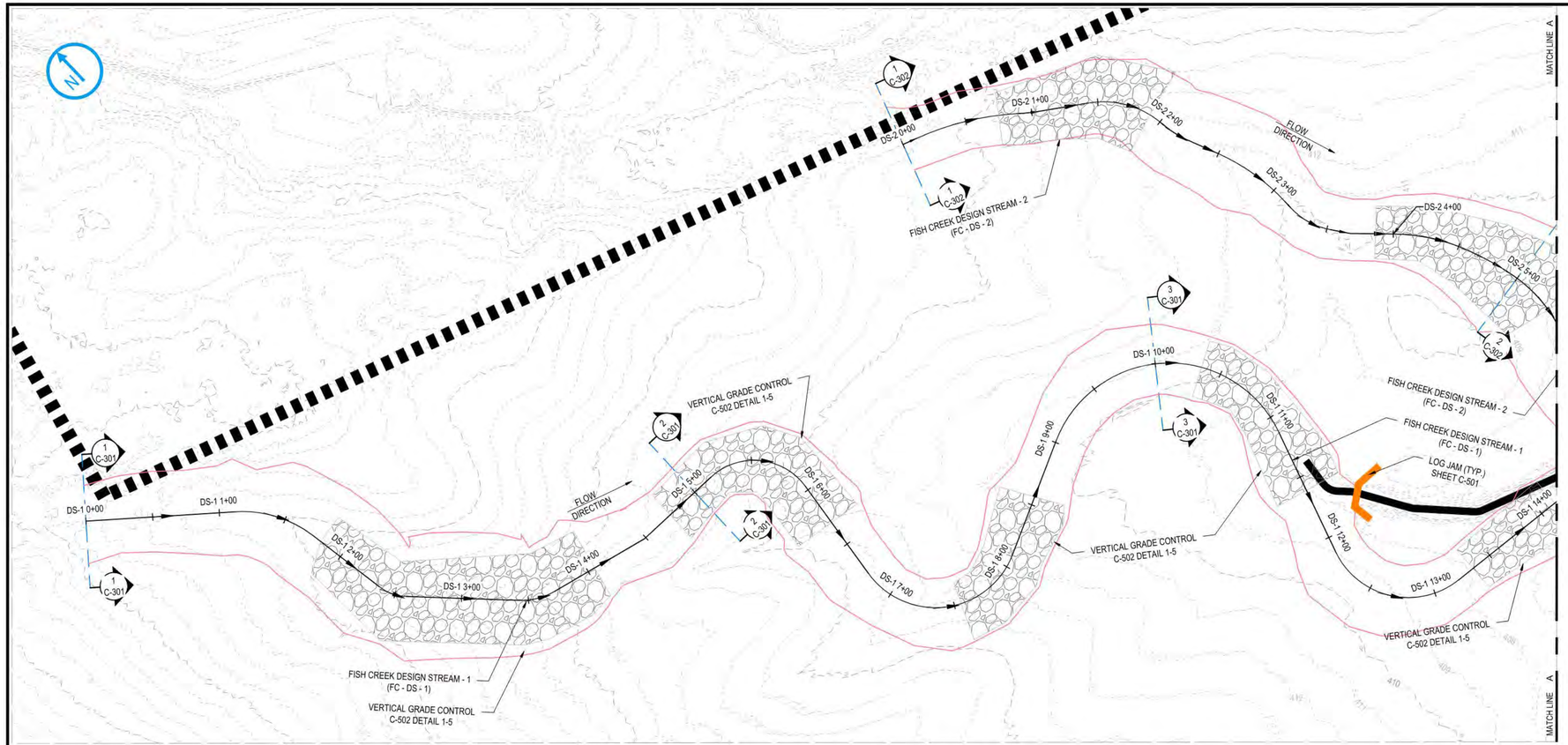
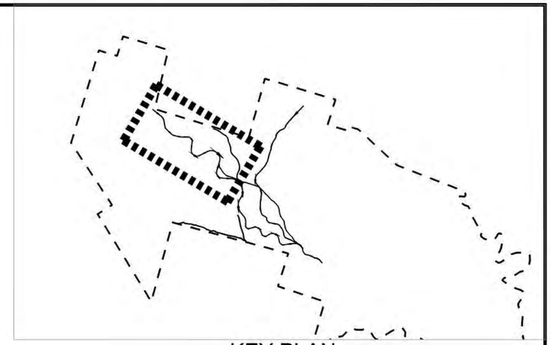




KEY PLAN

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

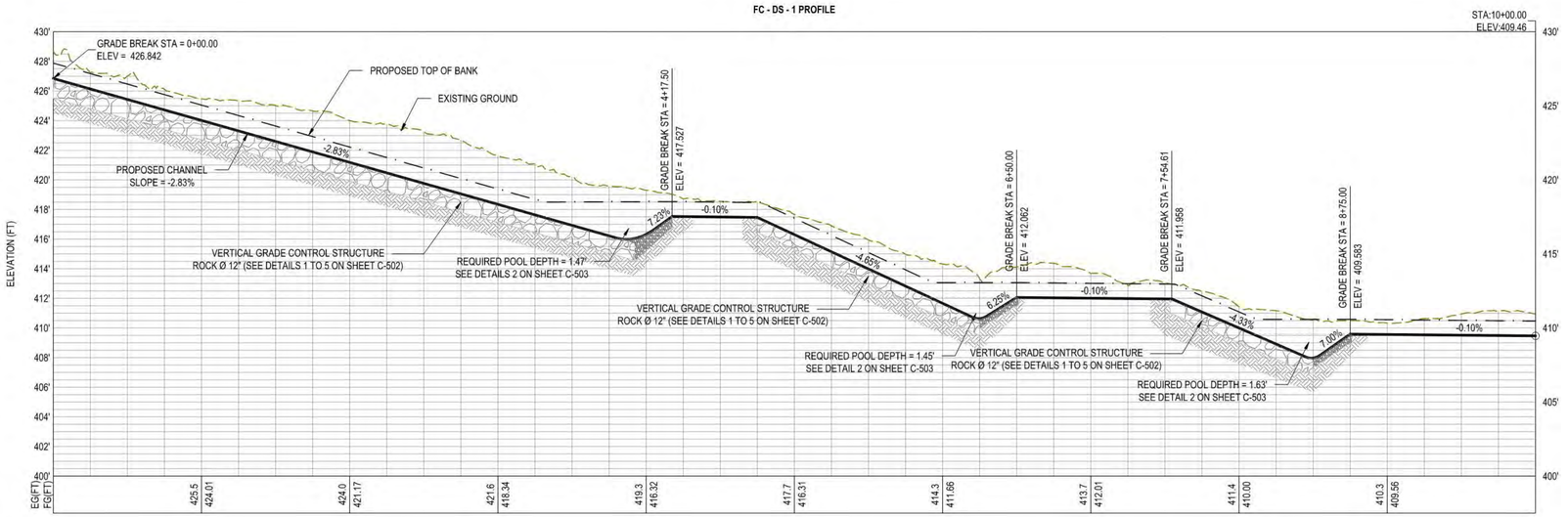
NOTES:

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.

PROPOSED PLAN & PROFILE FC - DS - 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

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 - 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

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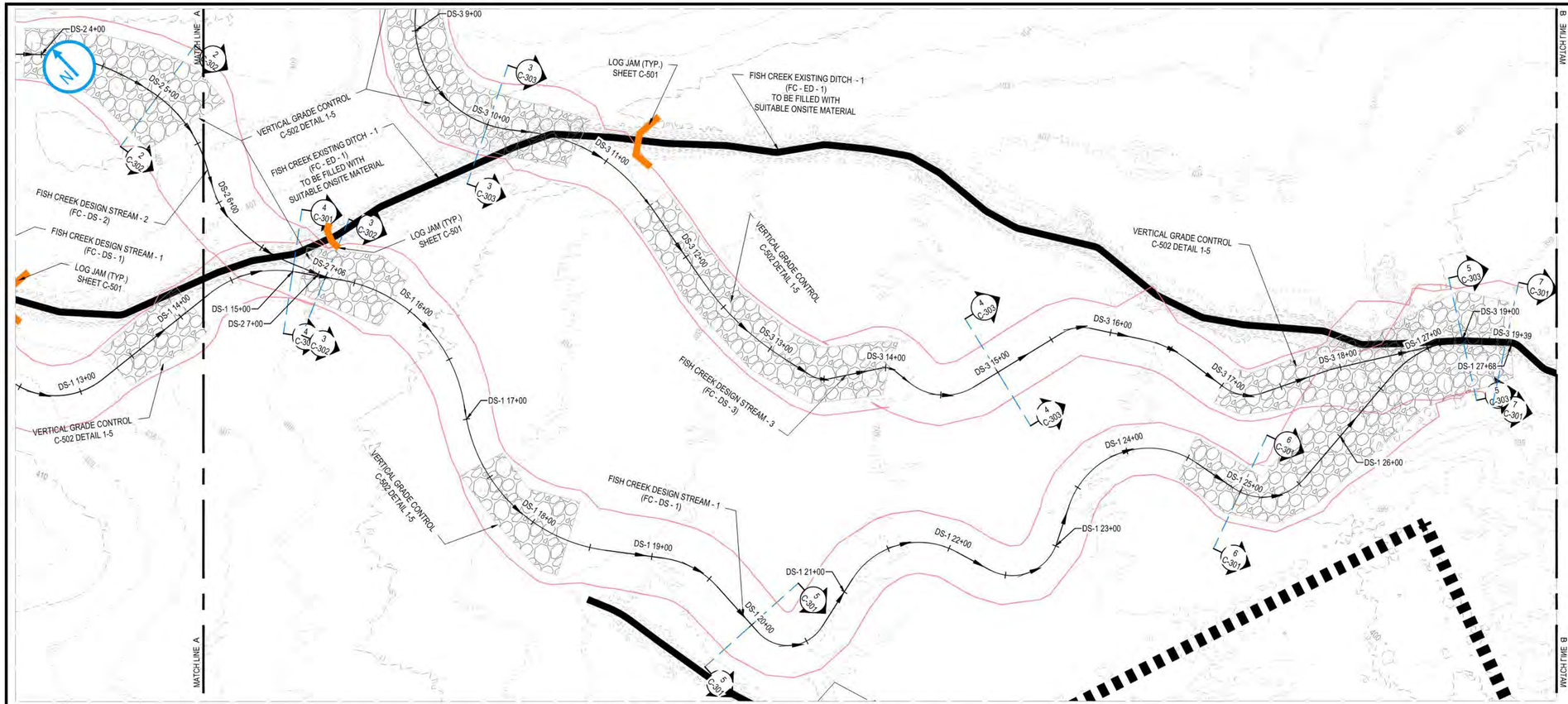

PROPOSED PLAN & PROFILE FC - DS - 1

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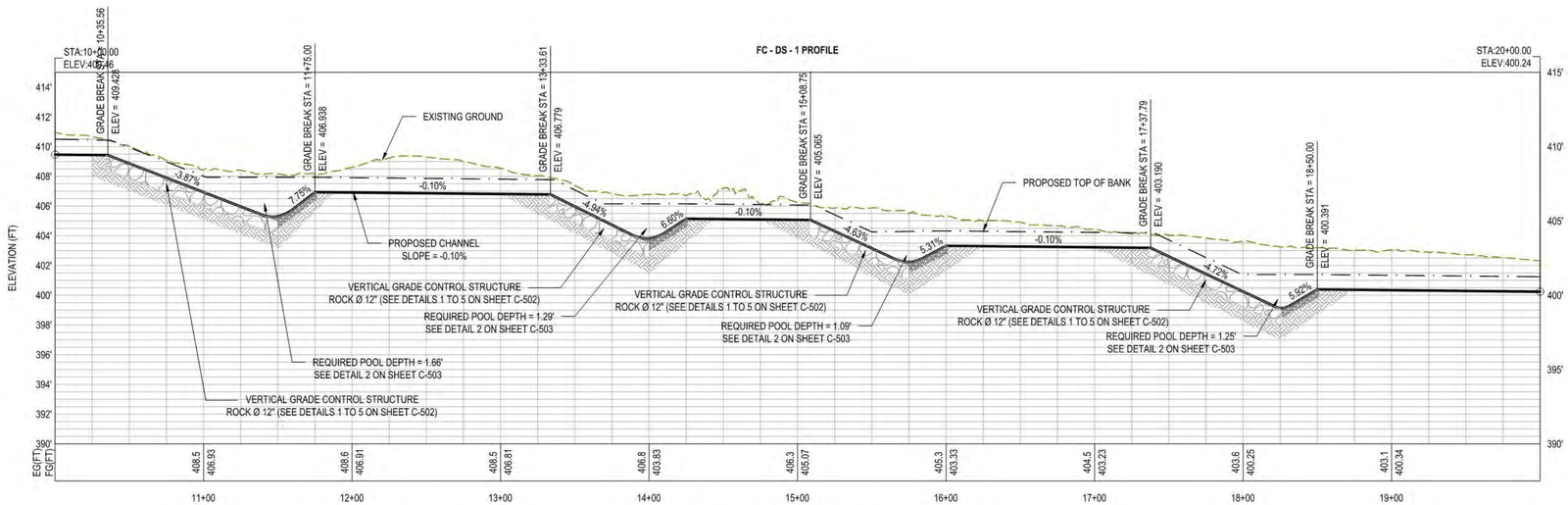
SCALE: 1"=50'



PROFILE STATION 10+00 TO 20+00

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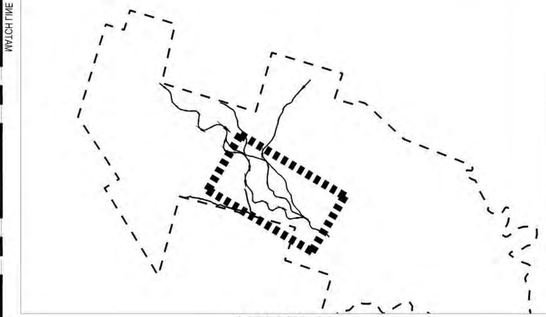
SCALE HORZ. 1" = 50'
5' 0 5'
SCALE: VERT. 1"= 5'



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.

NO.	REV DATE	REVISION	INT.

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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 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

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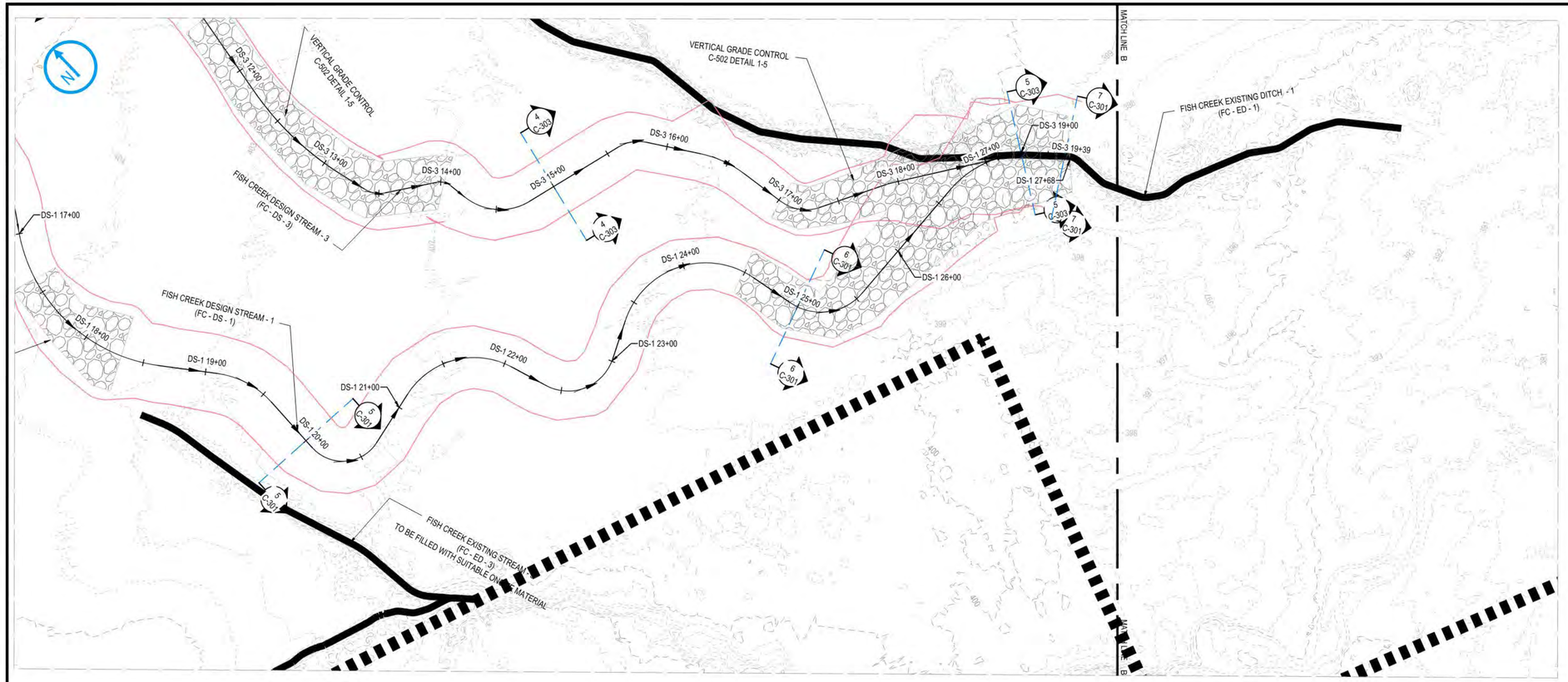
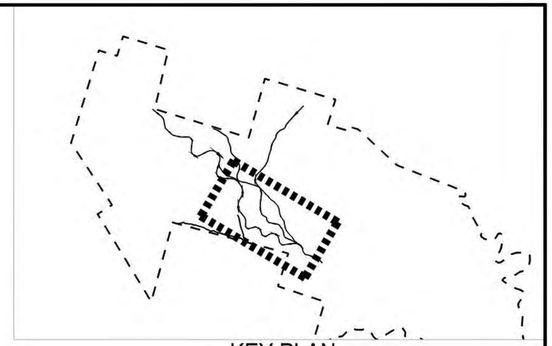




KEY PLAN

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

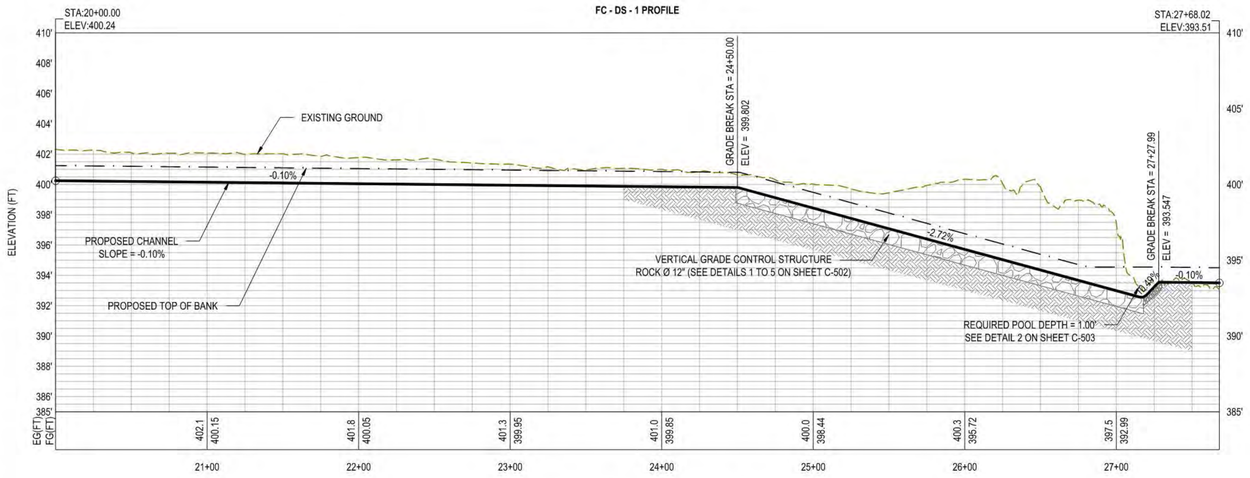
NOTES:

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.

PROPOSED PLAN & PROFILE FC - DS - 1

50 0 50

SCALE: 1"=50'



PROFILE STATION 20+00 TO 24+00

50 0 50 — SCALE HORZ. 1" = 50'

5' 0 5' — SCALE: VERT. 1"= 5'

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.

PRELIMINARY
NOT FOR
CONSTRUCTION

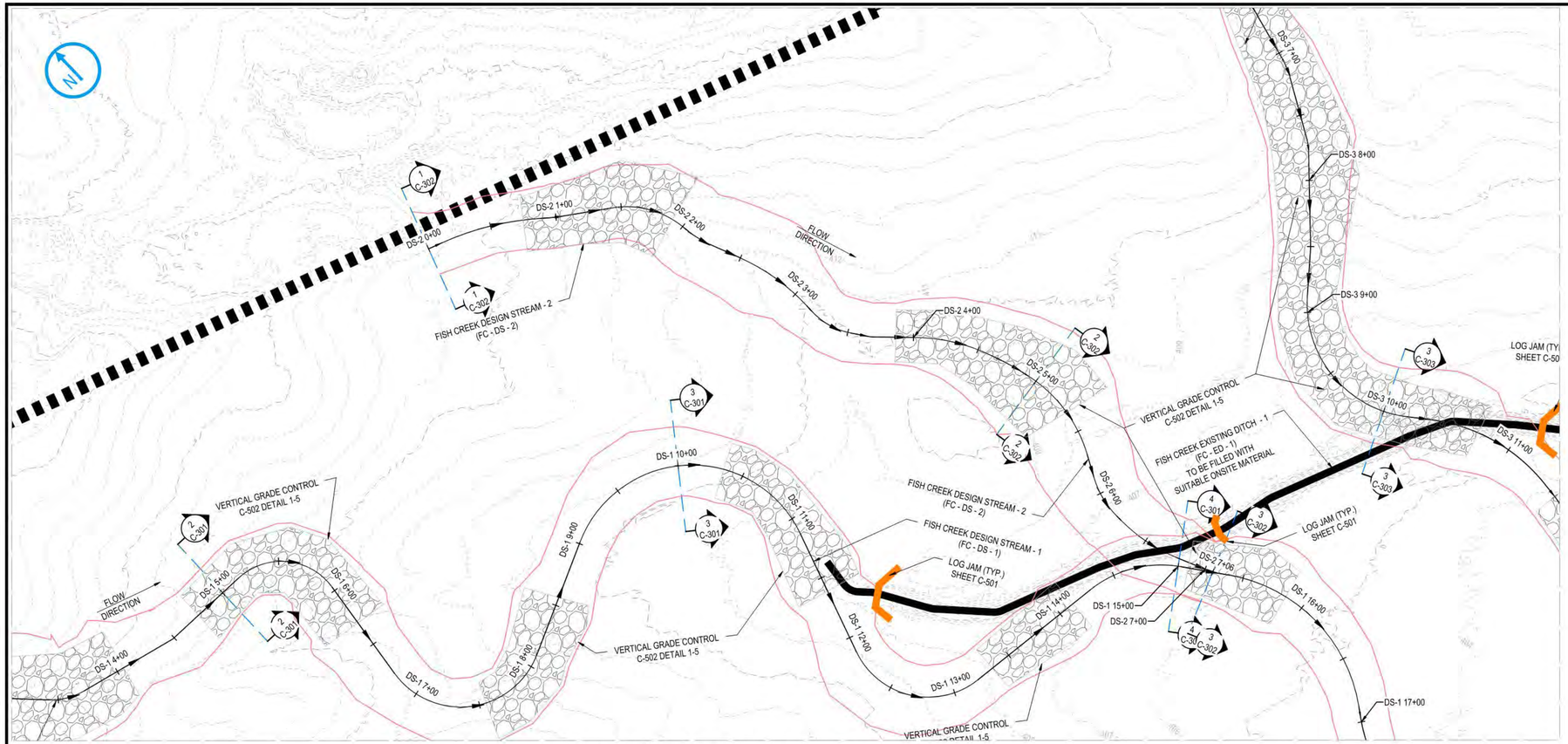
DATE: 05/13/2025

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

Project Details: THE WETLAND TRUST STREAM MITIGATION PERRY RD, PENNELLVILLE, NY 13132 ####	Drawing Title: PROPOSED 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

C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES-R08.DWG

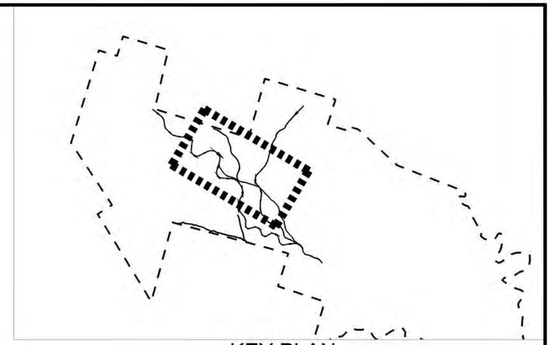
SAVED: 5/13/25 5:00 PM



PROPOSED PLAN & PROFILE FC - DS - 2

50 0 50

SCALE: 1"=50'



KEY PLAN

800 0 800

SCALE: 1"=800'

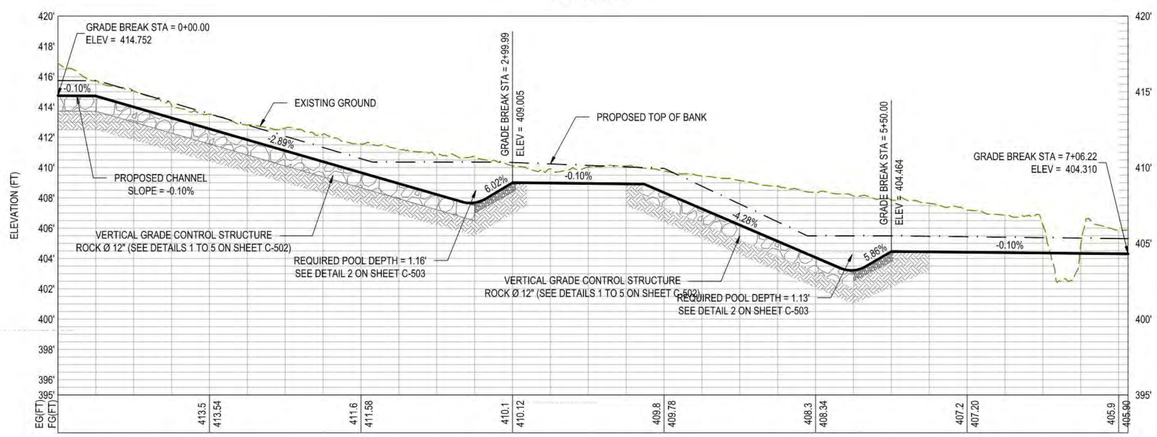
LEGEND:

- 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 - 2 PROFILE



PROFILE STATION 0+00 TO 7+20

50 0 50

SCALE HORZ. 1" = 50'

5' 0 5'

SCALE: VERT. 1"= 5'

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

PRELIMINARY NOT FOR CONSTRUCTION

DATE: 05/13/2025

NO.	REV DATE	REVISION	INT.

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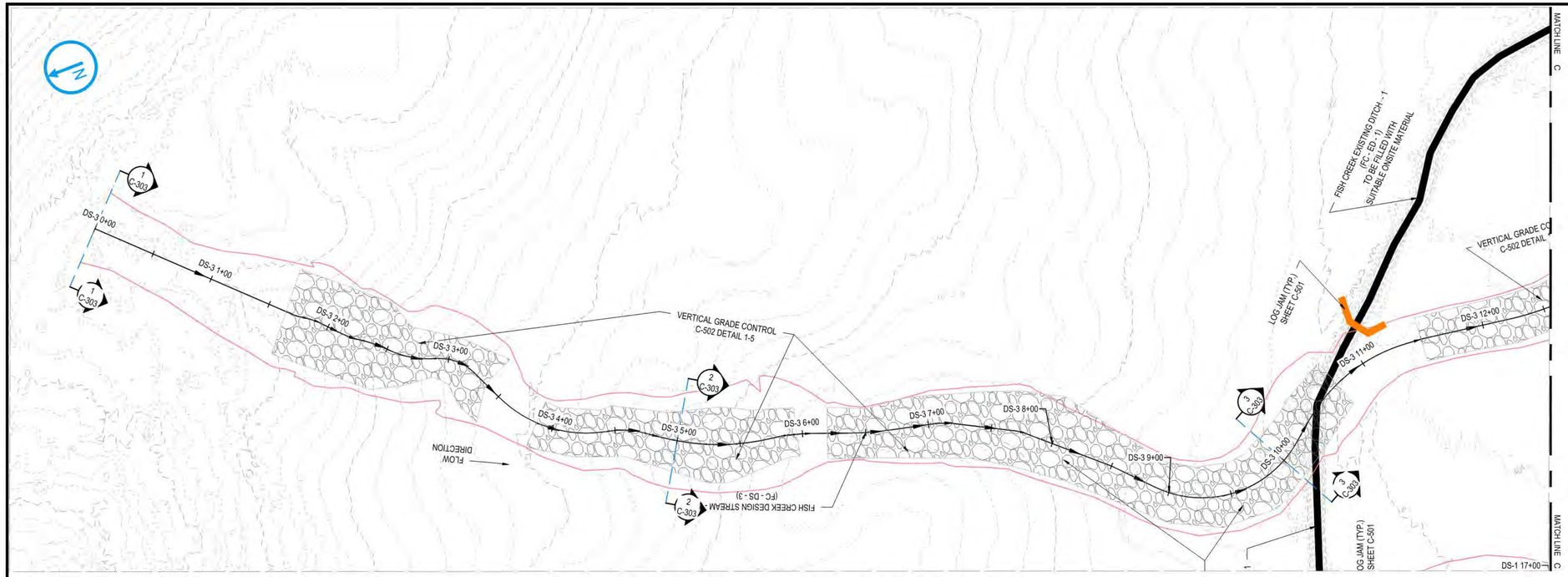
Project Details: **THE WETLAND TRUST** STREAM MITIGATION PERRY RD, PENNELLVILLE, NY 13132 ####	Drawing Title: **PROPOSED PLAN & PROFILE FC - DS - 2**			### ###	
Location: ####	Designer / Professional Engineer Responsible: ####			####	
Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buelow	Approved by P. Domaszczynski	Date ####
Project Status ####	Drawing Number **C-124**			Scale AS NOTED	Sc x / Rev. x

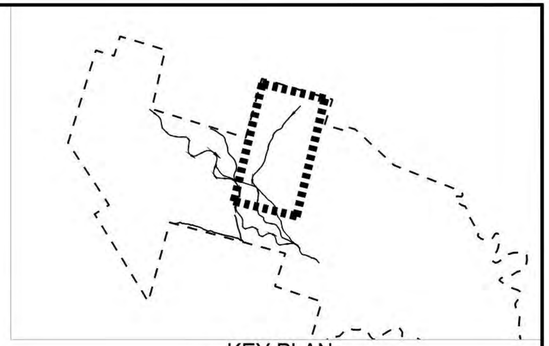
C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES.R08.DWG

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:

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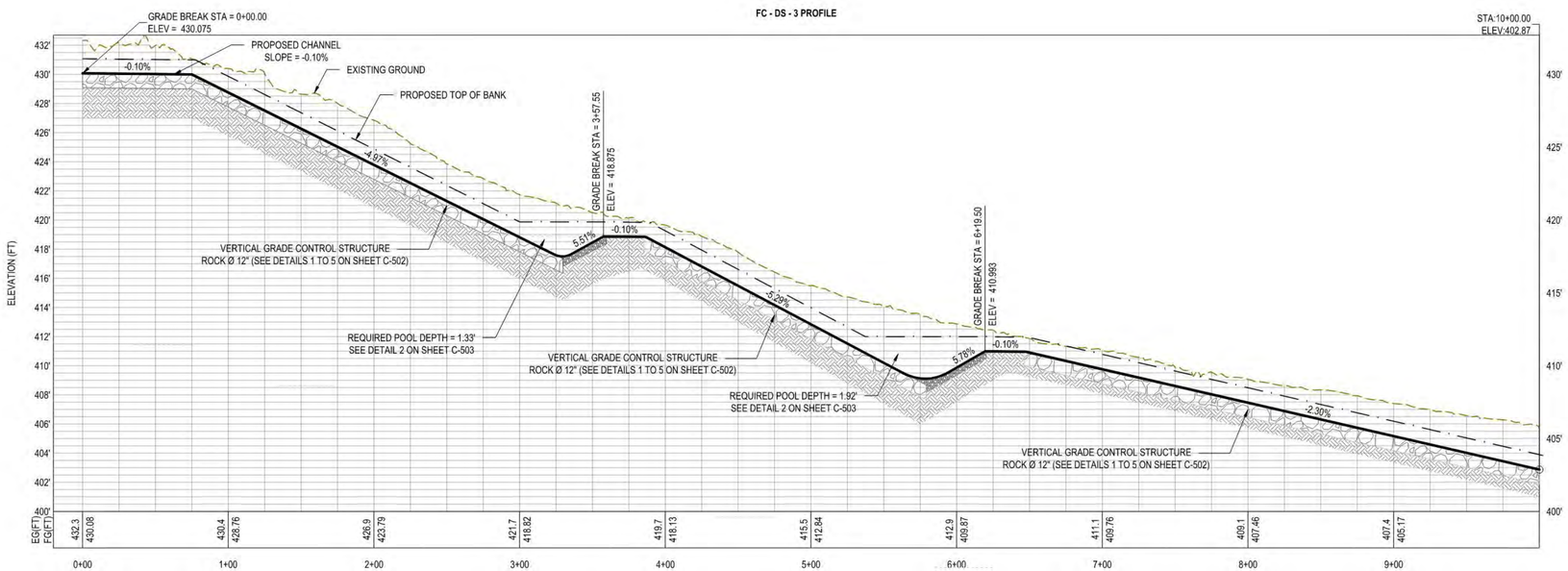
2. EXISTING DITCH IS TO BE FILLED AS SHOWN ON THE PLANS USING ONSITE SUITABLE MATERIAL.



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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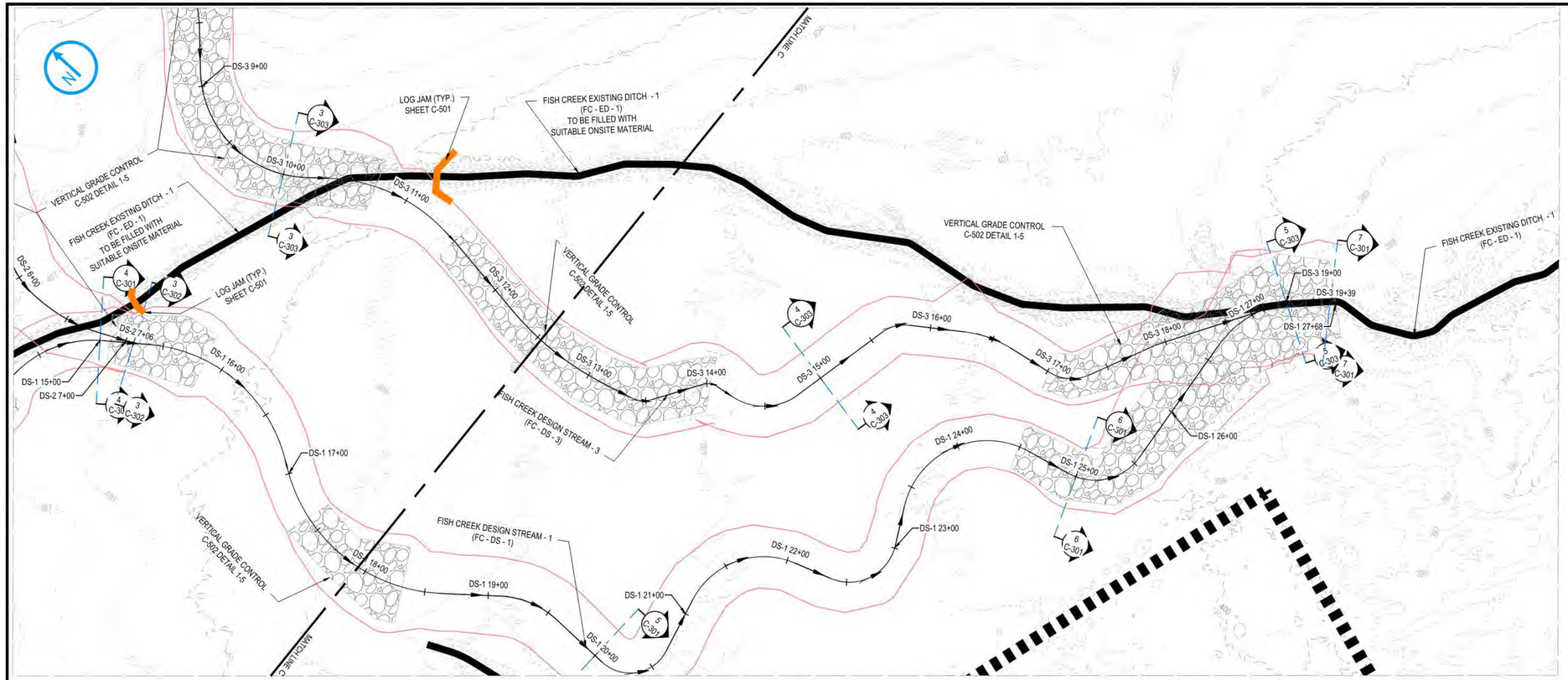
Project Details: **THE WETLAND TRUST** STREAM MITIGATION PERRY RD, PENNELLVILLE, NY 13132 ####	Drawing Title: **PROPOSED PLAN & PROFILE FC - DS - 3**			####	
Location: ####	Designer / Professional Engineer Responsible: ####			####	
Project Number **1940111895**	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	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 - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES.R08.DWG

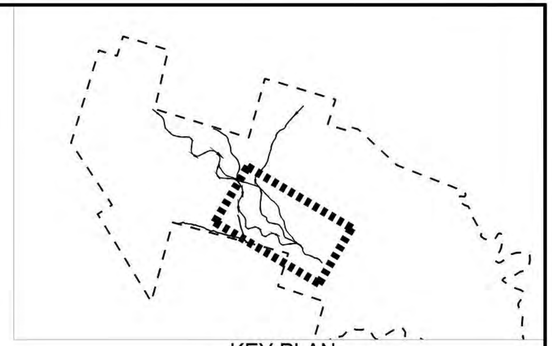
SAVED: 5/13/25 5:00 PM



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

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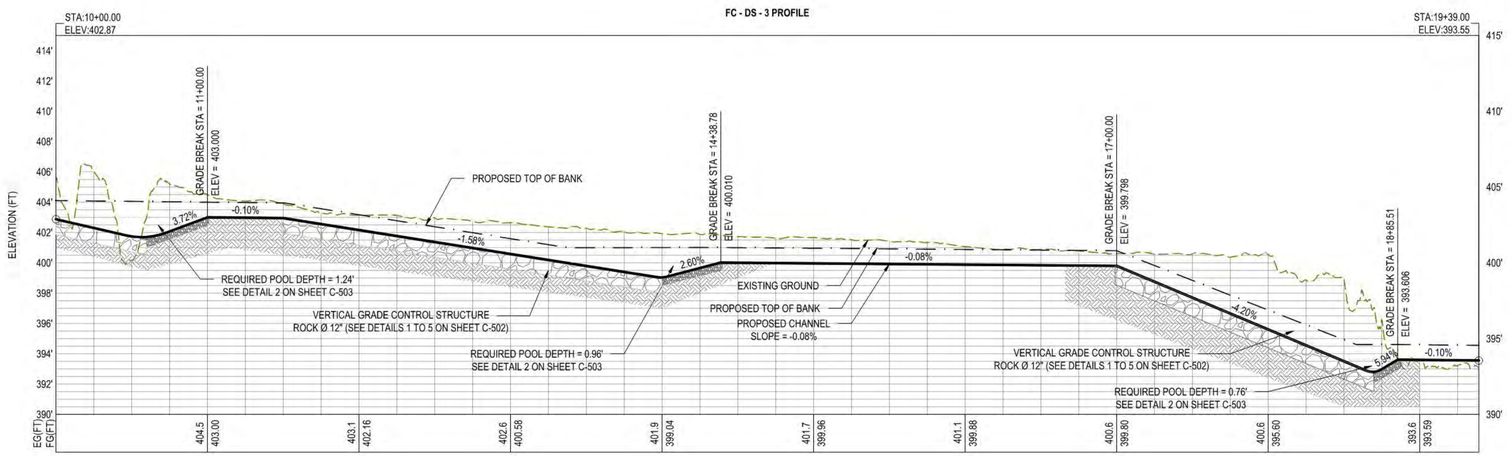
2. EXISTING DITCH IS TO BE FILLED AS SHOWN ON THE PLANS USING ONSITE SUITABLE MATERIAL.



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.

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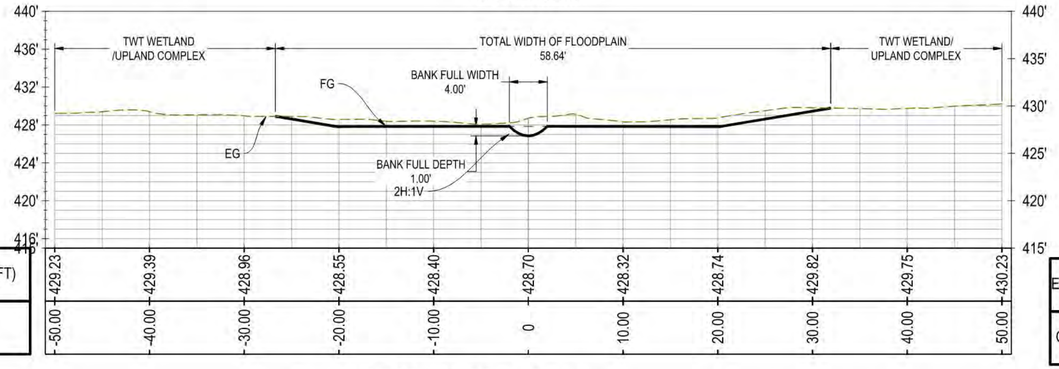
Project Details: THE WETLAND TRUST STREAM MITIGATION PERRY RD, PENNELLVILLE, NY 13132 ####	Drawing Title: PROPOSED PLAN & PROFILE FC - DS - 3				#### ####	
Location: ####	Designer / Professional Engineer Responsible: ####				####	
Project Number 1940111895	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Checked by K. Buslow	Approved by P. Domaszczynski	Date ####	
Project Status: ####	Drawing Number C-126			Scale AS NOTED	Sc: X	Rev. X

C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES-R08.DWG

SAVED: 5/13/25 5:00 PM

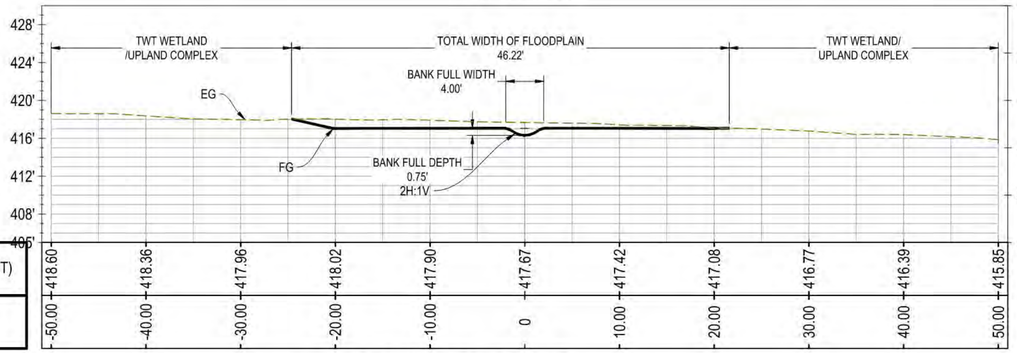
SECTION 1 - 1
ST 0+00.00



EXISTING ELEVATIONS (FT)	429.23	429.39	428.96	428.55	428.40	428.70	428.32	428.74	429.82	429.75	430.23
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 - 1
1" = 8'

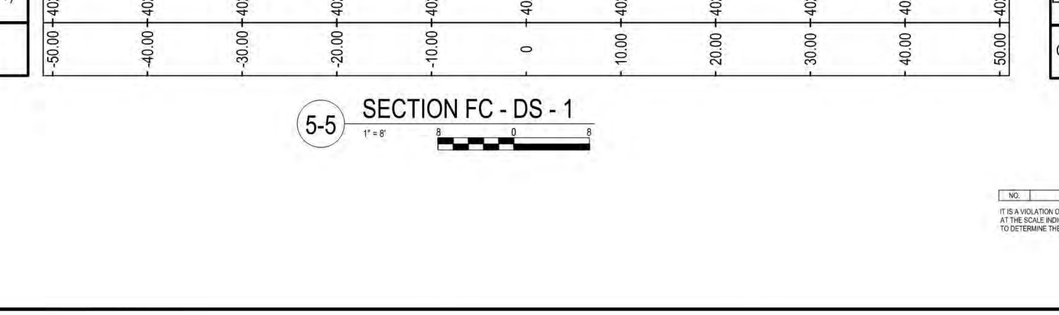
SECTION 2 - 2
ST 5+00.00



EXISTING ELEVATIONS (FT)	418.60	418.36	417.96	418.02	417.90	417.67	417.42	417.08	416.77	416.39	415.85
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 - 1
1" = 8'

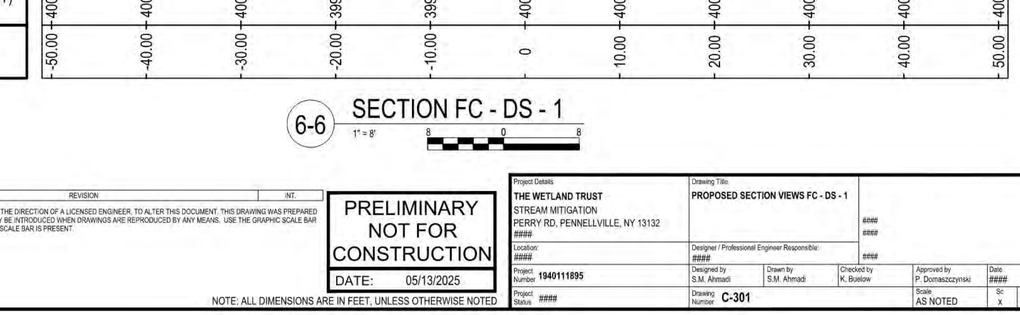
SECTION 3 - 3
ST 10+00.00



EXISTING ELEVATIONS (FT)	412.70	412.51	412.05	411.85	411.34	410.95	410.56	410.08	409.78	409.42	409.28
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 - 1
1" = 8'

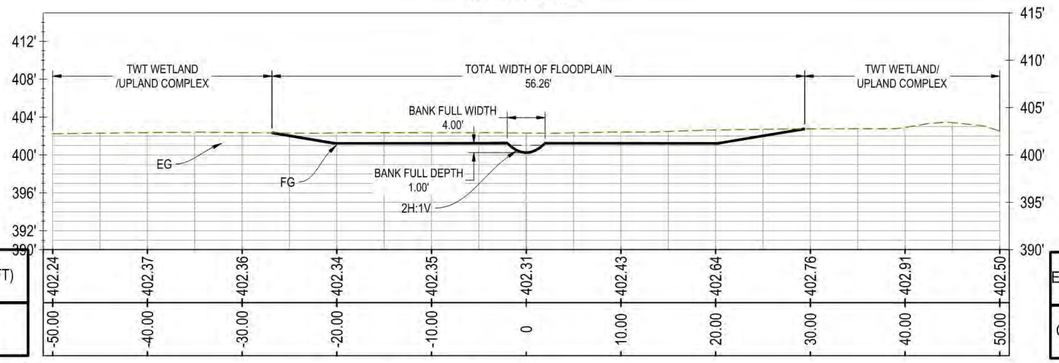
SECTION 4 - 4
ST 15+00.00



EXISTING ELEVATIONS (FT)	406.68	406.68	407.15	404.21	403.26	406.26	405.95	405.90	406.18	406.17	406.26
OFFSET (FT)	-50.00	-40.00	-30.00	-20.00	-10.00	0	10.00	20.00	30.00	40.00	50.00

4-4 SECTION FC - DS - 1
1" = 8'

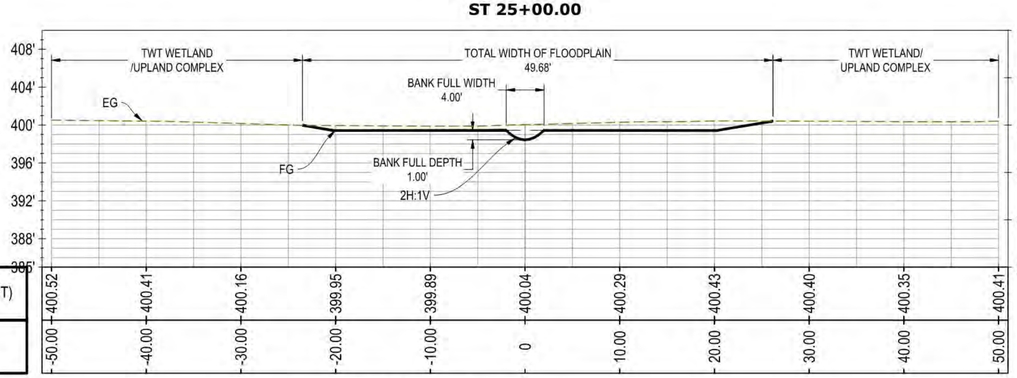
SECTION 5 - 5
ST 20+00.00



EXISTING ELEVATIONS (FT)	402.24	402.37	402.36	402.34	402.35	402.31	402.43	402.64	402.76	402.91	402.50
OFFSET (FT)	-50.00	-40.00	-30.00	-20.00	-10.00	0	10.00	20.00	30.00	40.00	50.00

5-5 SECTION FC - DS - 1
1" = 8'

SECTION 6 - 6
ST 25+00.00



EXISTING ELEVATIONS (FT)	400.52	400.41	400.16	399.95	399.89	400.04	400.29	400.43	400.40	400.35	400.41
OFFSET (FT)	-50.00	-40.00	-30.00	-20.00	-10.00	0	10.00	20.00	30.00	40.00	50.00

6-6 SECTION FC - DS - 1
1" = 8'

NO.	REV DATE	REVISION	INT.

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PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: 05/13/2025

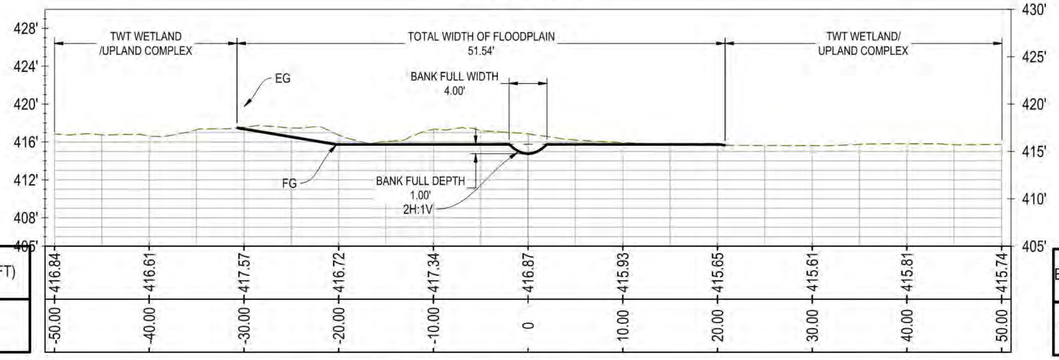
NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

Project Details	Drawing Title:		
THE WETLAND TRUST STREAM MITIGATION PERRY RD, PENNELLVILLE, NY 13132 ####	**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

C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRON\DWG\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES-R08.DWG

SAVED: 5/13/25 5:00 PM

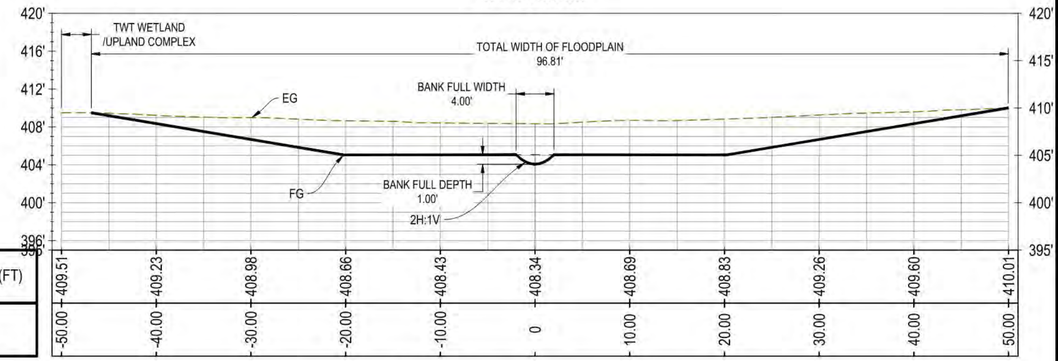
SECTION 1 - 1
ST 0+00.00



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'

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'

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'

NO.	REV DATE	REVISION	INT.

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PRELIMINARY NOT FOR CONSTRUCTION

DATE: 05/13/2025

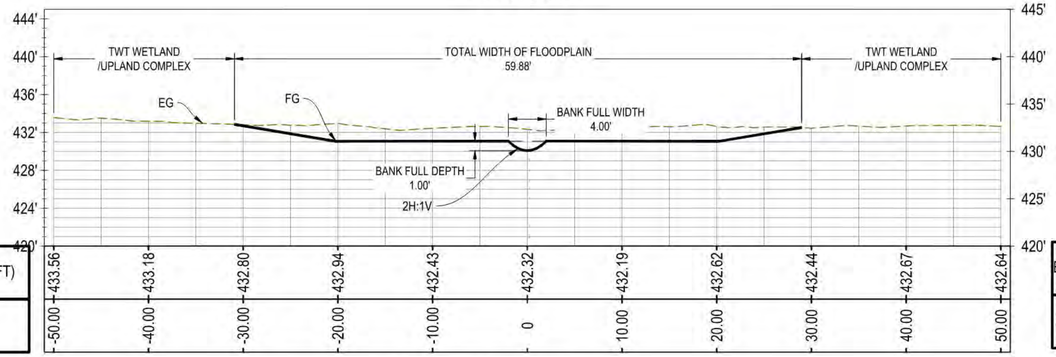
NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

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

C:\USERS\SMAHMADI\DOWNLOADS\STREAM RESTOTRATION - MICRON\WS\FINAL DESIGN DWGS - PERRY RD\PR_PROPOSED PLAN AND PROFILES-R08.DWG

SAVED: 5/13/25 5:00 PM

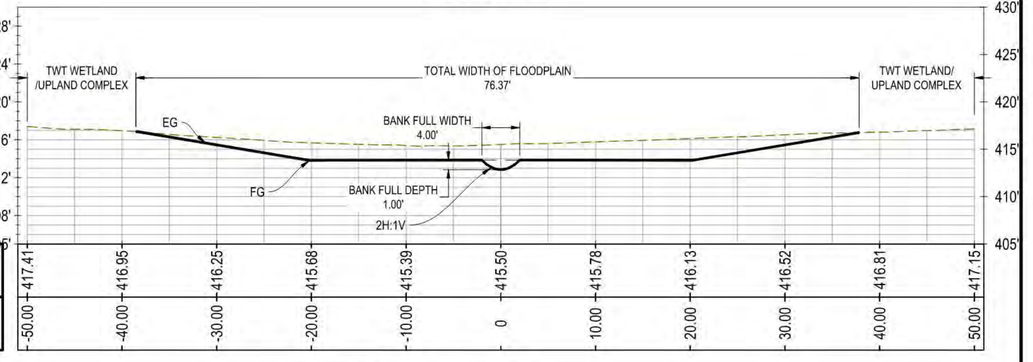
SECTION 1 - 1
ST 0+00.00



EXISTING ELEVATIONS (FT)	433.56	433.18	432.80	432.94	432.43	432.32	432.19	432.62	432.44	432.67	432.64
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 - 3
1" = 8'

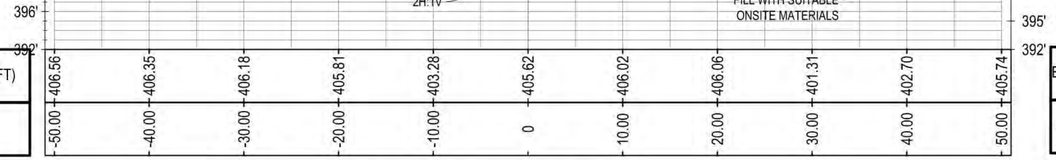
SECTION 2 - 2
ST 5+00.00



EXISTING ELEVATIONS (FT)	417.41	416.95	416.25	415.68	415.39	415.50	415.78	416.13	416.52	416.81	417.15
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 - 3
1" = 8'

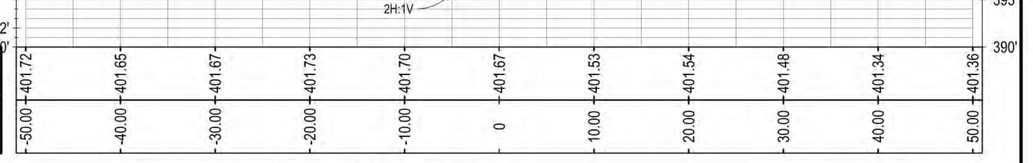
SECTION 3 - 3
ST 10+00.00



EXISTING ELEVATIONS (FT)	406.56	406.35	406.18	405.81	403.28	405.62	406.02	406.06	401.31	402.70	405.74
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 - 3
1" = 8'

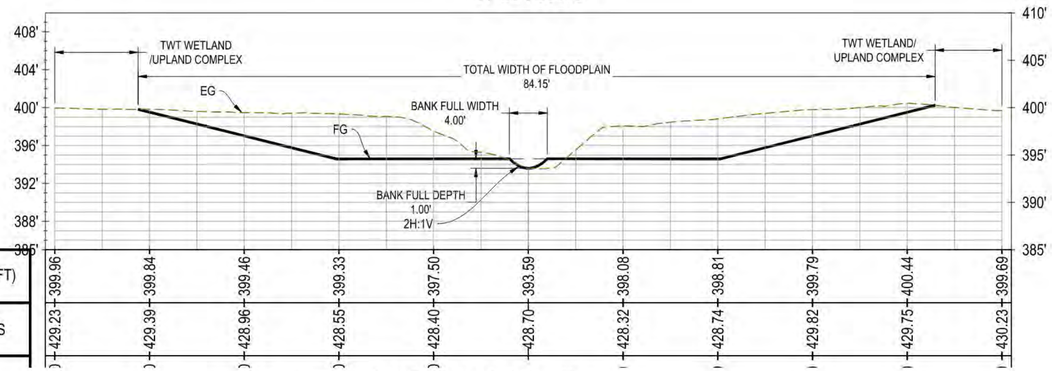
SECTION 4 - 4
ST 15+00.00



EXISTING ELEVATIONS (FT)	401.72	401.65	401.67	401.73	401.70	401.67	401.53	401.54	401.48	401.34	401.36
OFFSET (FT)	-50.00	-40.00	-30.00	-20.00	-10.00	0	10.00	20.00	30.00	40.00	50.00

4-4 SECTION FC - DS - 3
1" = 8'

SECTION 5 - 5
ST 19+00.00



EXISTING ELEVATIONS (FT)	399.96	399.84	399.46	399.33	397.50	393.59	398.08	398.81	399.79	400.44	399.69
PROPOSED ELEVATIONS	429.23	429.39	428.96	428.55	428.40	428.70	428.32	428.74	429.82	429.75	430.23

5-5 SECTION FC - DS - 3
1" = 8'

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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-303			Scale: AS NOTED	Sc: x / Rev.: x

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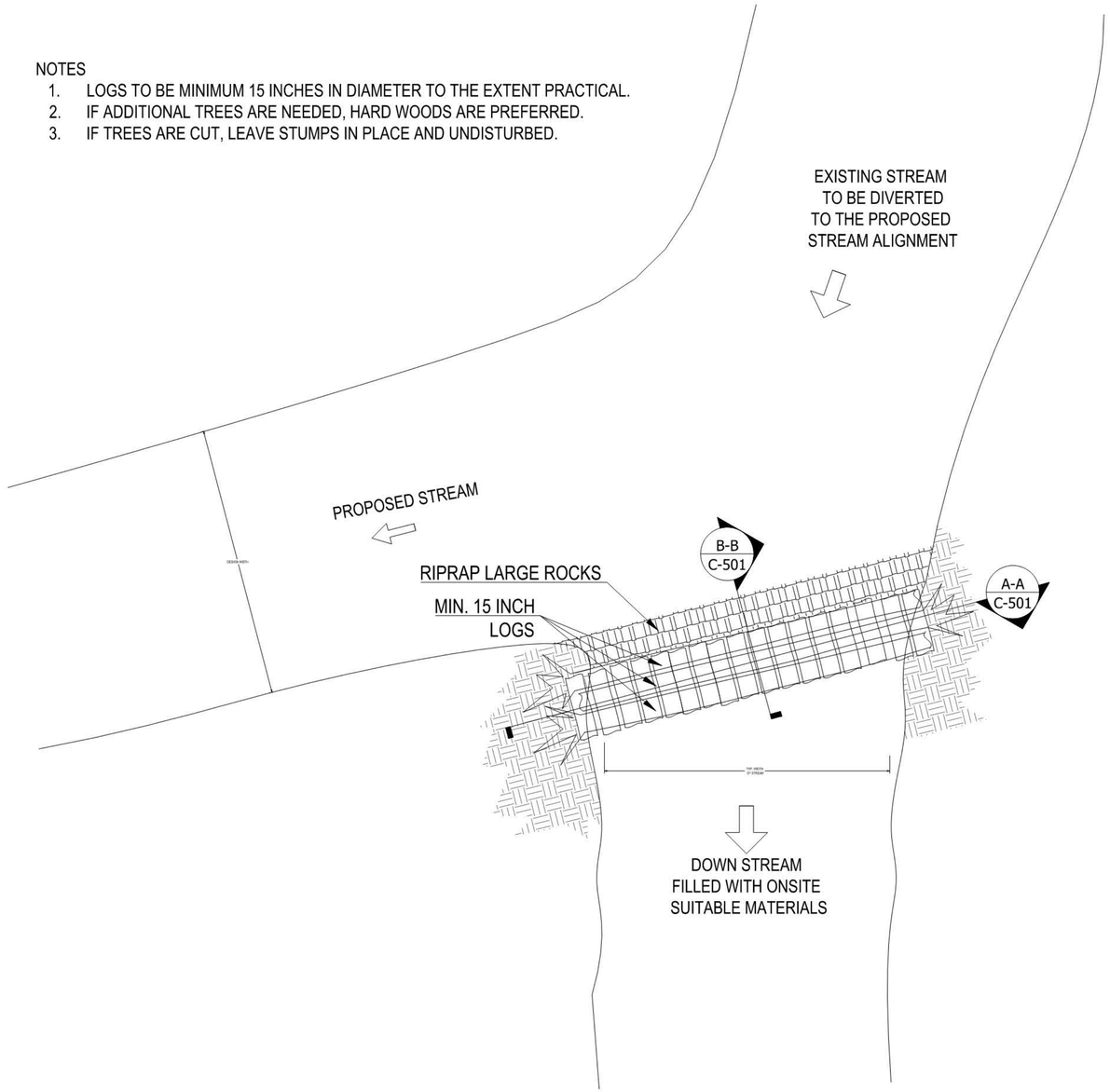
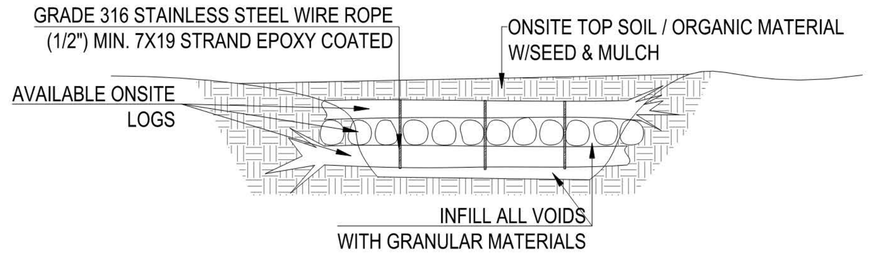
NOTES
1. LOGS TO BE MINIMUM 15 INCHES IN DIAMETER TO THE EXTENT PRACTICAL.
2. IF ADDITIONAL TREES ARE NEEDED, HARD WOODS ARE PREFERRED.
3. IF TREES ARE CUT, LEAVE STUMPS IN PLACE AND UNDISTURBED.

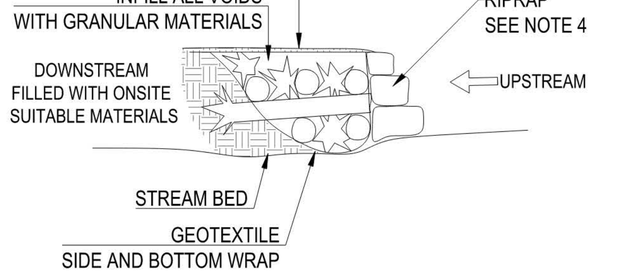


PLAN VIEW - LOG JAM (TYP.)
NOT TO SCALE



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

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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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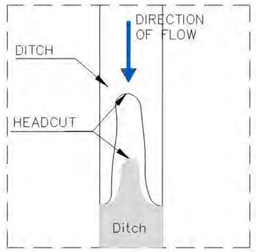
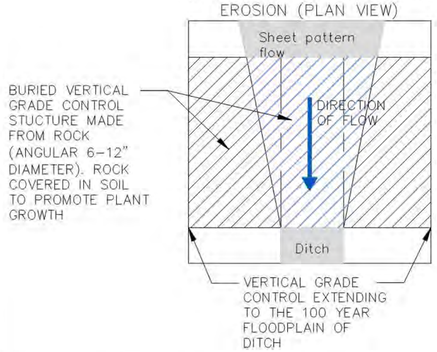


EROSION PRIOR TO CONSTRUCTION (PLAN VIEW)

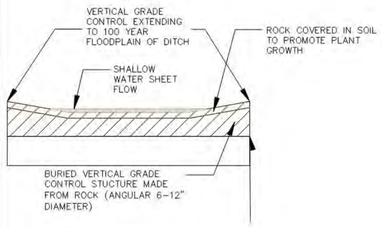
VERTICAL GRADE CONTROL STRUCTURE FOR CONTROLLING EROSION (CROSS SECTION VIEW)

1 VERTICAL GRADE CONTROL
NOT TO SCALE



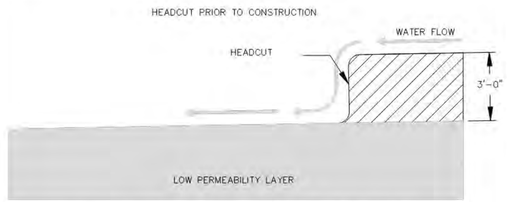
VERTICAL GRADE CONTROL STRUCTURE FOR CONTROLLING EROSION (PLAN VIEW)

2 VERTICAL GRADE CONTROL
NOT TO SCALE

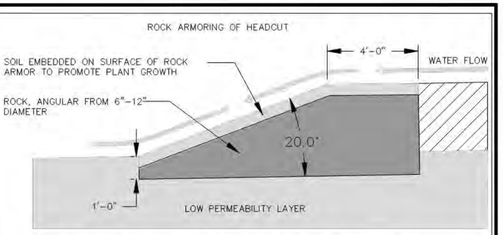


VERTICAL GRADE CONTROL MUST EXTEND TO DEPTH OF PERMANENT VERTICAL GRADE CONTROL ELEVATION DOWNSTREAM

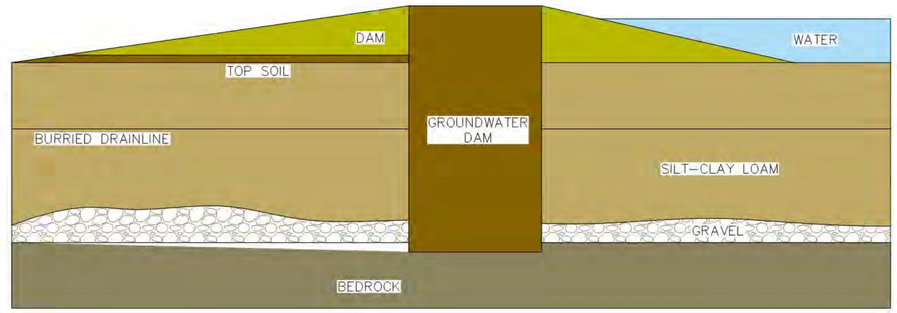
3 VERTICAL GRADE CONTROL
NOT TO SCALE



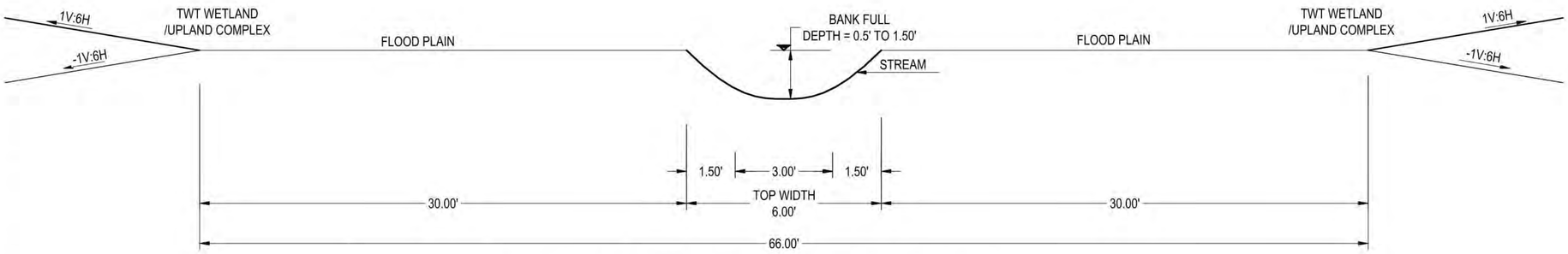
4 VERTICAL GRADE CONTROL
NOT TO SCALE



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.

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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	Sc: x / Rev.: x

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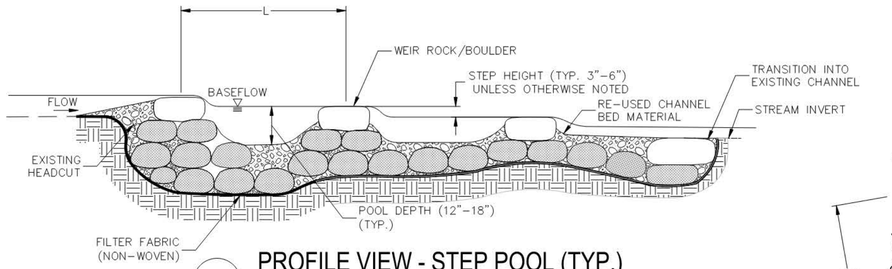

2 PROFILE VIEW - STEP POOL (TYP.)

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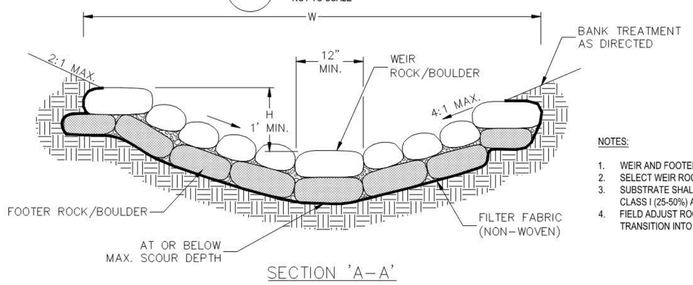


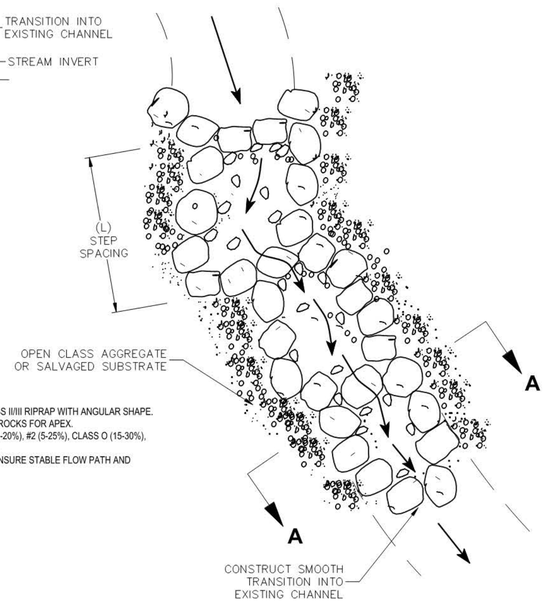
SECTION 'A–A'

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.)

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THE WETLAND TRUST STREAM MITIGATION Bell Rd, Pennelliville, NY 13132 ####	**MISCELLANEOUS DETAILS**		#### ####
Location: ####	Designer / Professional Engineer Responsible: ####		####

Project Number	Designed by	Drawn by	Checked by	Approved by	Date
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Project Status: ####	Drawing Number: **C-503**			Scale: AS NOTED	Sc: x / Rev.: x

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Appendix L.

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 Four-Fab 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

July 2025

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Appendix B. Historical Aerial Imagery
Appendix C. Wetland Determination Map, Summary Table, and Data Forms
Appendix D. Species Lists
Appendix E. Invasive Species Management Plan
Appendix F. SHPO Correspondence
Appendix G. Wetland Design Forms
Appendix H. Wetland Construction Plan Set
Appendix I. SWPPP (to be added in future submittals)
Appendix J. Long Term Management Plan Draft

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 43.1 wetland mitigation credits on 60.6 mitigation acres toward a total compensation requirement of 405.7 credits (USACE) or 367.6 acres (NYSDEC) for the entire project. This includes:

- Re-establish wetlands to generate 26.3 USACE wetland credits equivalent to the creation of 26.3 NYSDEC wetland mitigation acres, including:
    - 4.3 acres of PEM - Shallow Emergent Marsh
    - 7.9 acres of PEM - Deep Emergent Marsh
    - 4.2 acres of PSS – Scrub-Shrub
    - 9.9 acres of PFO - Red Maple Hardwood Swamp
- Rehabilitate wetlands of the above cover types to generate 16.8 USACE wetland credits equivalent to the enhancement of 34.3 NYSDEC wetland mitigation acres.
- Establish 42.9 acres of upland buffer habitat, including:
    - 32.8 acres of herbaceous buffer habitat
    - 10.1 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 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**). UCC is bordered by State Route 49 to the south and is bisected by County Route 33 to the east.

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- and NYSDEC-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.

This site will be protected under Article 24 of the Environmental Conservation Law. 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

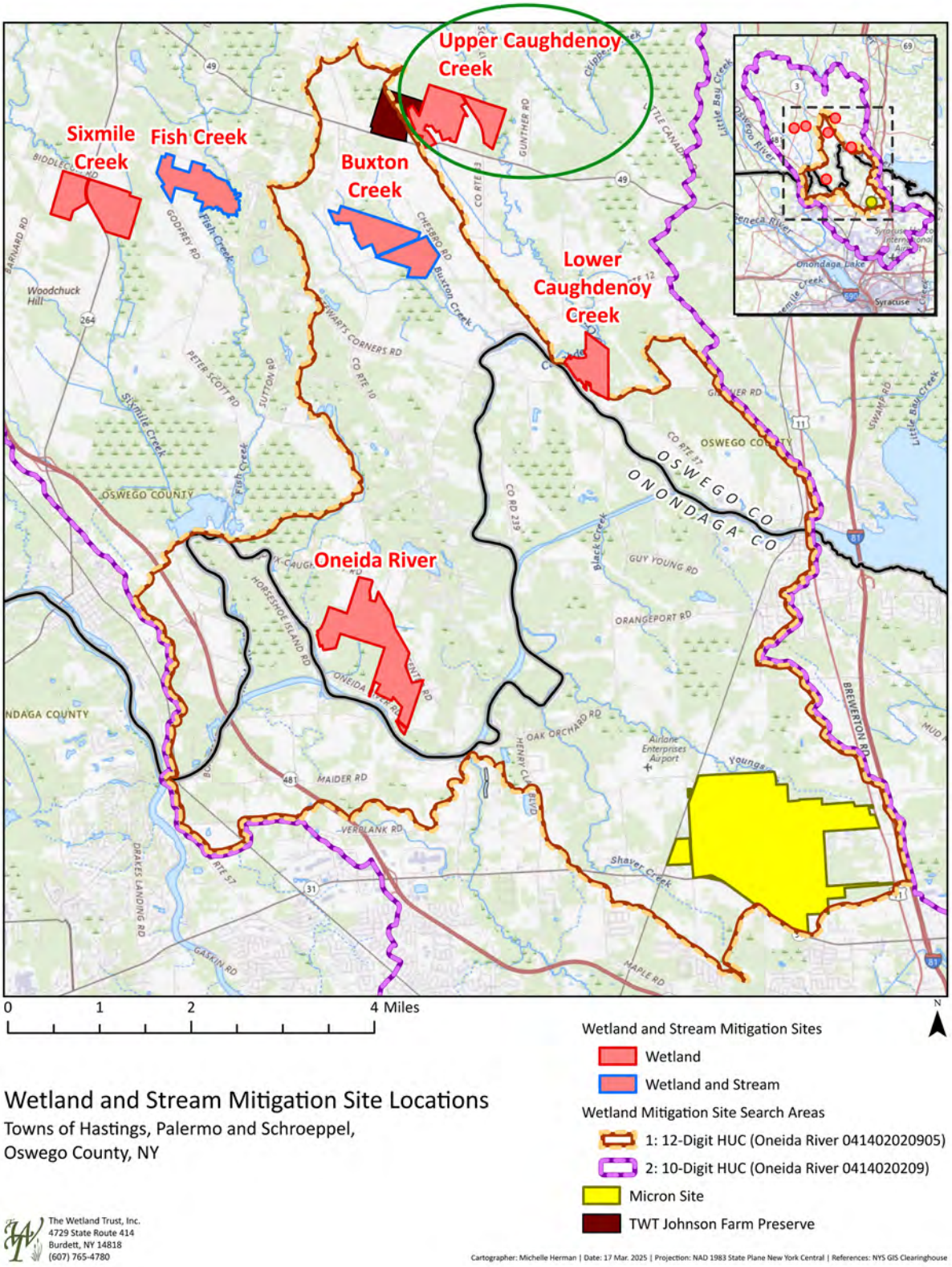
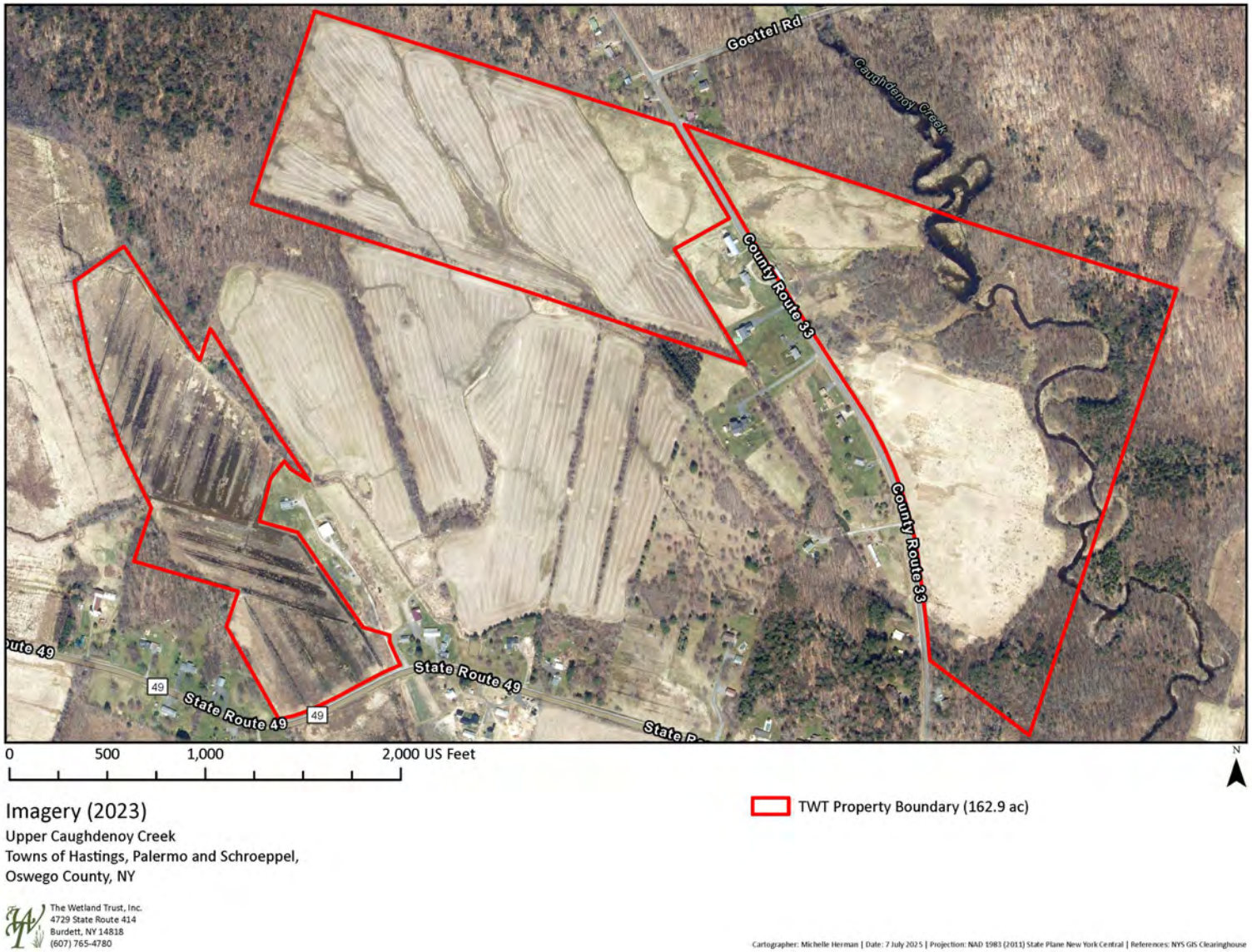


Figure 2-2. Upper Caughdenoy Creek Property (2023)



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.

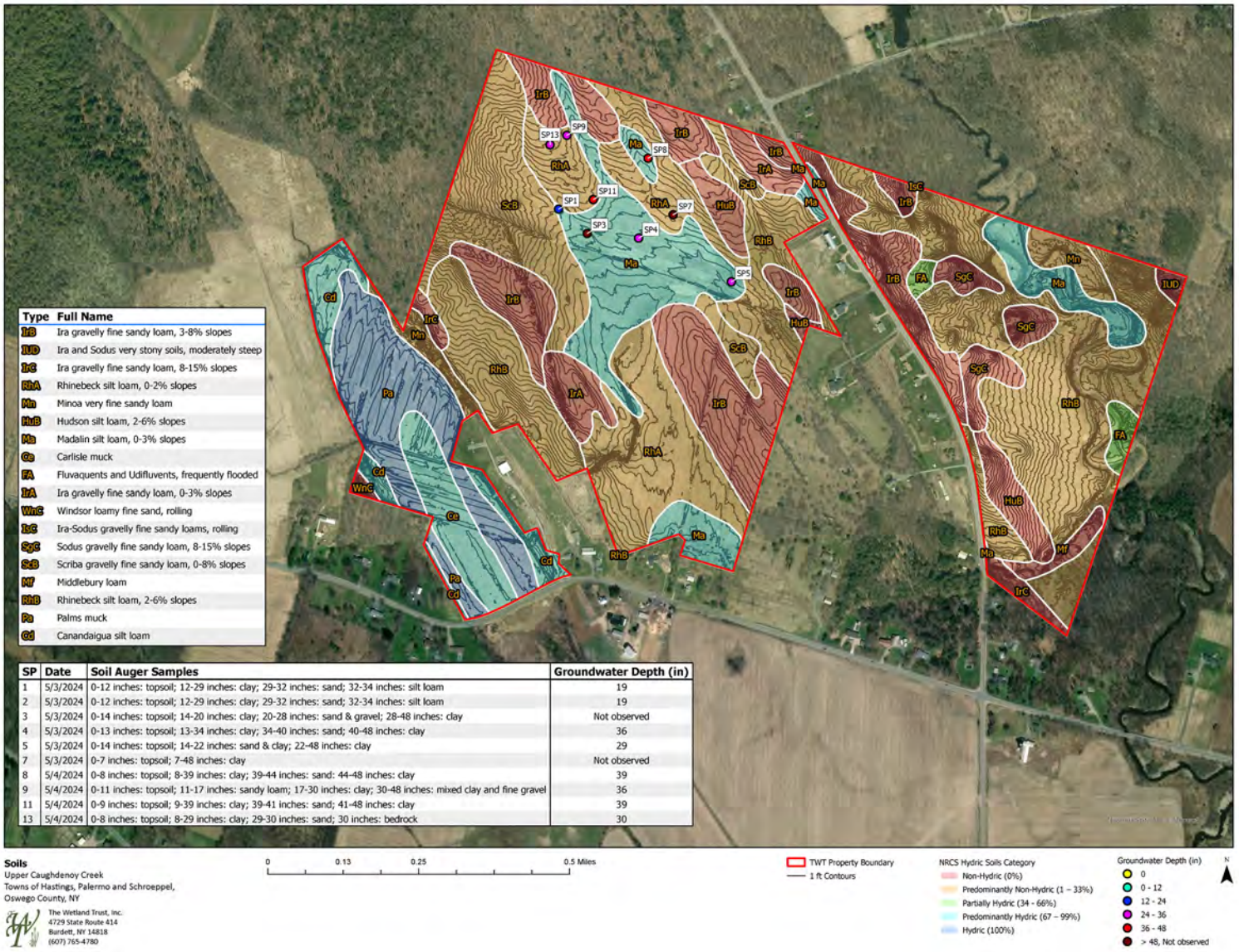
3.3 Wetlands and Hydrology

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. 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 **Appendix C** for the full delineation report including mapped wetlands and drainage features, 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 **Appendix C** map). Hydrological characteristics at the site are described in three general areas:

Figure 3-1. Upper Caughdenoy Creek Soils



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 3-2**.

Table 3-2. Staff Gauge Locations

Gauge Number	Elevation (ft)	Latitude	Longitude	Description
1	401.99	43.304244	-76.225566	Culvert expelling water from the West field
2	402.79	43.303845	-76.223717	Culvert in West field
3	403.10	43.303251	-76.222517	Culvert in West field
4	403.69	43.301815	-76.221221	Culvert supplying water to the West field
5	431.51	43.308332	-76.21968	In the center of Deep Emergent Wetland #W-07
6	416.43	43.307035	-76.212549	In the center of Deep Emergent Wetland #E-01

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.

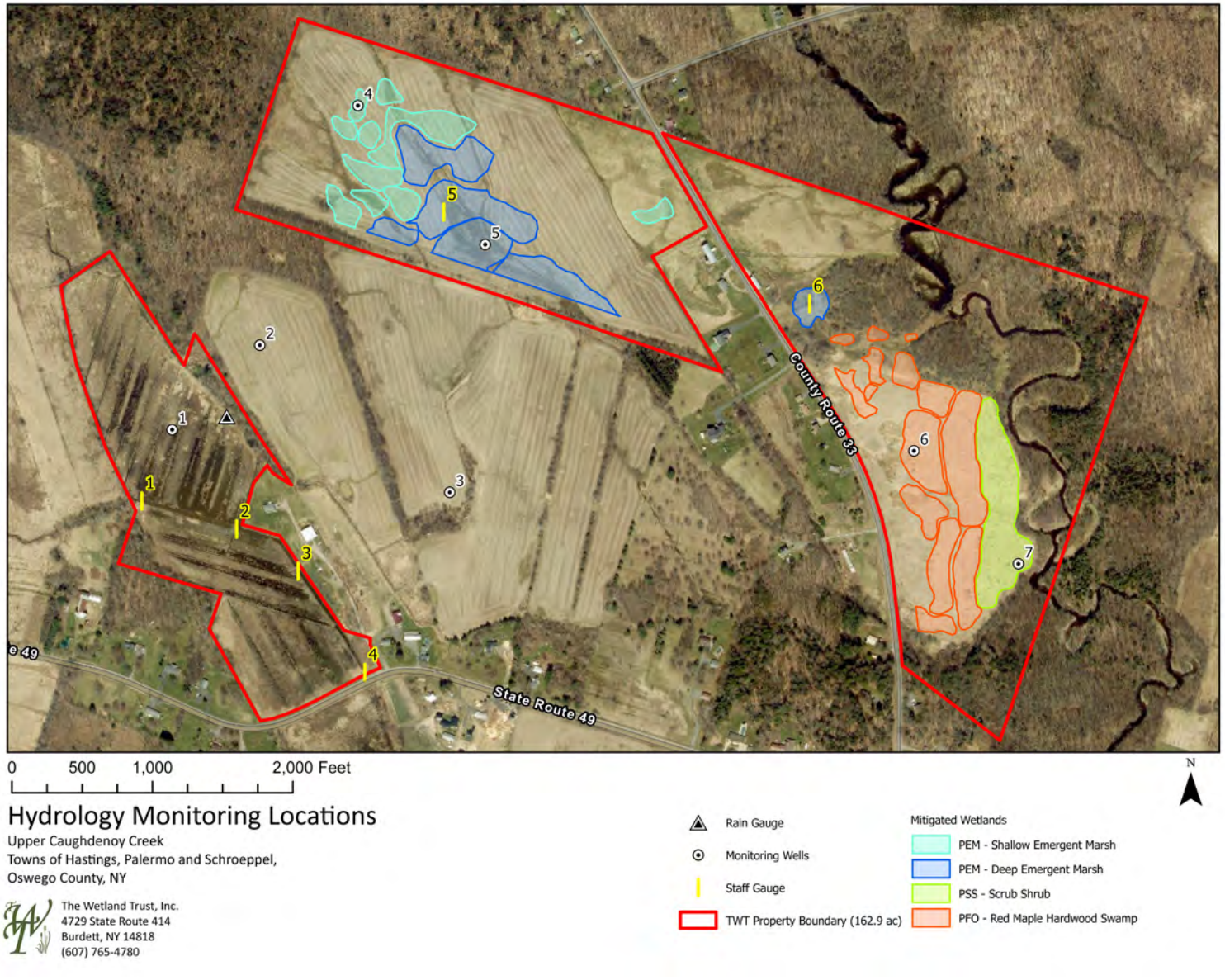
3.4 Existing Wildlife

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 3-2. 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 June 12, 2025 and no further archaeological survey is recommended (**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	**Credit/ Mitigation Ratio**	**Credits/ Adjusted Acres**
PEM	**Shallow emergent marsh**	Restoration	4.3	Re-establishment	1:1	4.3
		Enhancement	0.5	Rehabilitation	3.5:1	0.14
	Deep emergent marsh	Restoration	7.9	Re-establishment	1:1	7.9
		Enhancement	1.1	Rehabilitation	3.5:1	0.31
PFO	**Red maple- hardwood swamp**	Restoration	9.9	Re-establishment	1:1	9.9
		Enhancement	0	Rehabilitation	3.5:1	0
PSS	**Scrub shrub**	Restoration	4.2	Re-establishment	1:1	4.2
		Enhancement (ag fields)	0	Rehabilitation (ag fields)	3.5:1	0
		Enhancement	32.7	Rehabilitation	2:1	16.35
		Total	**60.6**			**43.1**

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.

Shallow Emergent Marsh

Considerations/Characteristics

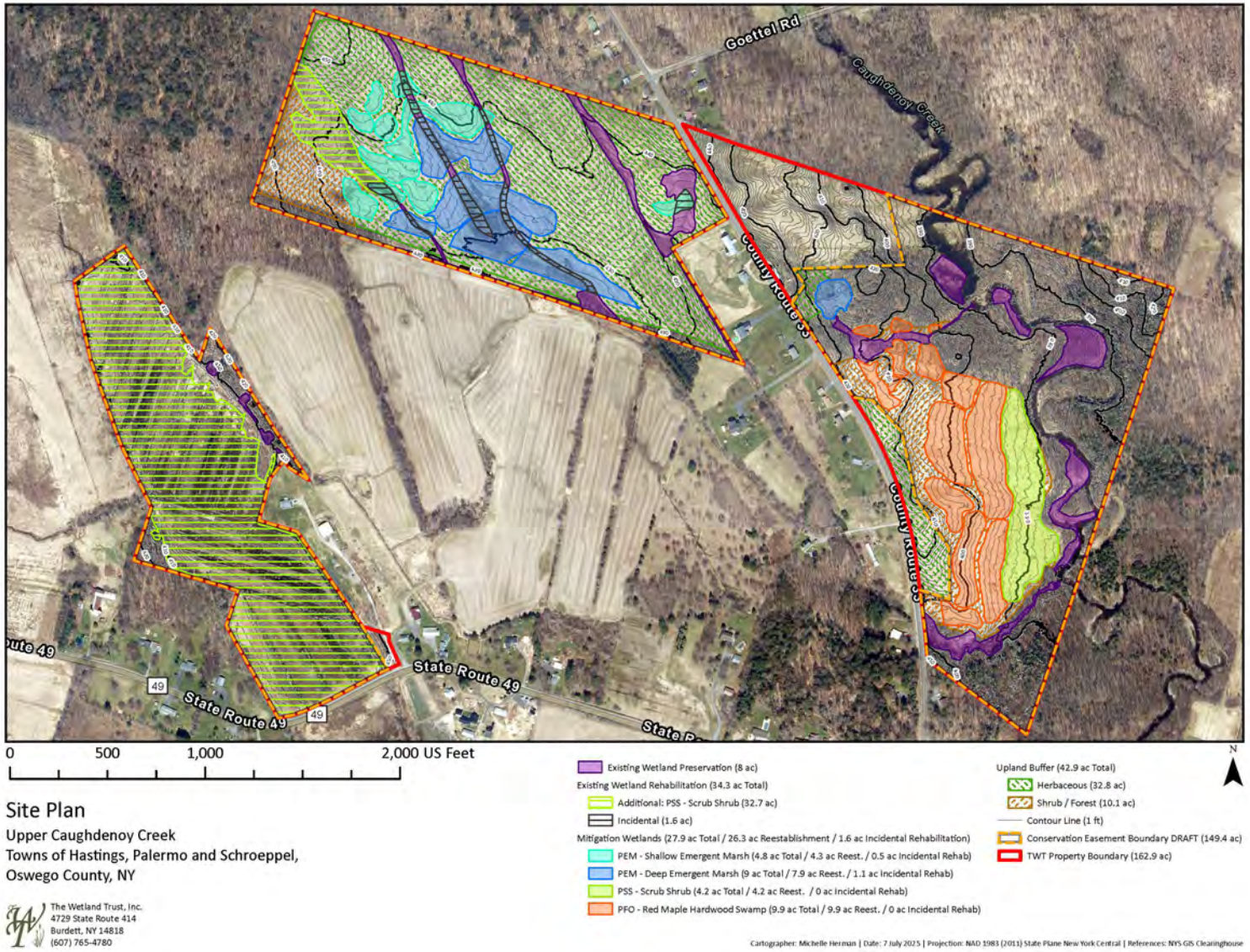
- Often placed so they are visible to the public
- Prioritized for building within grasslands
- Occurs on mineral soil or deep muck soils (rather than true peat)
- Composition of approximately 75% herbaceous vegetation, 10% emergent aquatics, 5% shrubs under 2 m, 2% shrubs between 2-5 m, 2% trees, and 5% floating aquatics.

Targeted Hydroperiod

- Water depth will range from 1 to 24 inches (during flooding)
- Permanently saturated soils and seasonally flooded
- Periods of dry substrate in mid-late summer
- Water level within 12 inches of the surface for 14-28 consecutive days during the growing season.

Deep Emergent Marsh

Figure 5-1. Upper Caughdenoy Creek Site Plan



Considerations/Characteristics

- 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
- Composition of approximately 85% emergent herbaceous vegetation and 25% floating aquatic vegetation in areas.

Targeted Hydroperiod

- Water depth will range from 6 to 36 inches
- Water level will fluctuate seasonally with water remaining year-round. There will be standing water remaining in the fall.

Shrub Swamp

Considerations/Characteristics

- 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
- Composition of approximately 80% shrubs, 12% trees, 40% herbaceous plants, 10% non-vascular plants, aquatics, and vines.

Targeted Hydroperiod

- Water table within 12 inches of the surface for 28 or more consecutive days in the summer
- 1 to 6 inches of inundation for 14 or less consecutive days in in the spring

Red Maple-Hardwood Swamp

Considerations/Characteristics

- 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
- Composition of approximately 80% trees, 80% shrubs, 50% herbaceous vegetation, and 20% non-vascular plants.

Targeted Hydroperiod

- Seasonal flooding with saturated soils

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 **Appendix H** 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 (**Appendix H**).

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.

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-

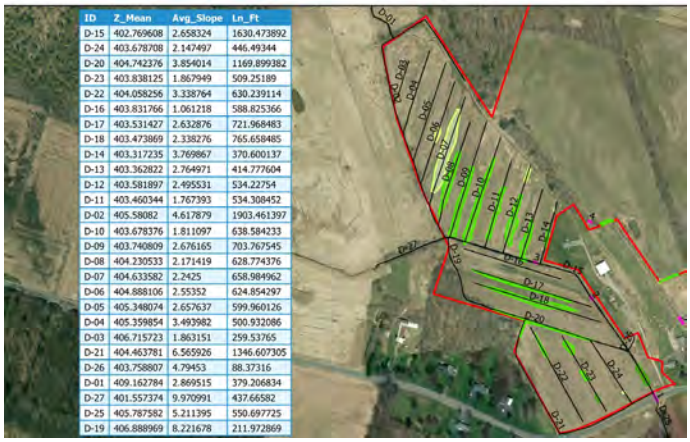
percent. Typical cross sections for emergent, scrub-shrub, and forested cover types are depicted in **Figures C-E** in **Appendix H**.

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%					

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 Impact 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.

TWT plans on erecting a deer-proof fence around the Buxton Creek Site construction areas to increase the survival rate of planted trees and shrubs. The lower portion of the fence will be modified for the passage of frogs, toads, salamanders, snakes, turtles, and small mammals.

Both PSS and PFO wetland Re-Establishment/Restoration areas will use a mix of herbaceous species derived from **Table 5-2a**, PEM- Shallow Emergent Plant List, as the foundational understory mix. The PSS and PFO areas will be at an early successional state and these herbaceous species are important early succession companion species that support success. While each community type listed includes a few representative herbaceous plantings tailored to sites specific goals, the broader PEM list will be used to add plant species diversity for each creation site.

Table 5-2a. PEM - Shallow Emergent Marsh					
Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Swamp Milkweed	*Asclepias incarnata*	OBL	4	S5	15-20 pounds per acre
Symphyotrichum puniceum	*Aster puniceus*	OBL	4	S5	
False nettle	*Boehmeria cylindrica*	OBL	7	S5	
Canada bluejoint grass	*Calamagrostis canadensis*	OBL	7	S5	
wild calla	*Calla palustris*	OBL	7	S5	
Longhair Sedge	*Carex comosa*	OBL	4	S5	
Fringed Sedge	*Carex crinita*	OBL	3	S5	
Bottlebrush Sedge	*Carex hystericina*	OBL	5	S5	
Shallow Sedge	*Carex lurida*	OBL	4	S5	
Pointed Broom Sedge	*Carex scoparia*	FACW	1	S5	
Upright Sedge	*Carex stricta*	OBL	4	S5	
Hairy-fruited sedge	*Carex trichocarpa*	OBL	5	S5	
fox sedge	*Carex vulpinoidea*	OBL	2	S5	
White Turtlehead	*Chelone glabra*	OBL	6	S5	
Swamp Loosestrife	*Decodon verticillatus*	OBL	7	S5	
deer-tongue rosette grass	*Dichanthelium clandestinum*	FACW	4	S5	
Crested wood fern	*Dryopteris cristata*	OBl	8	S5	
Three-way Sedge	*Dulichium arundinaceum*	OBL	8	S5	
Common Spikerush	*Eleocharis palustris*	OBL	5	S5	
Eastern riverbank wild rye	*Elymus riparius*	FACW	6	S5	
Virginia Wildrye	*Elymus virginicus*	FACW	6	S5	
Virginia wild rye	*Elymus virginicus*	FACW	6	S5	
Boneset	*Eupatorium perfoliatum*	FACW	3	S5	
common flat-topped goldenrod	*Euthamia graminifolia*	FAC	1	S5	
Spotted Joe-Pye Weed	*Eutrochium maculatum*	OBL	4	S5	
fowl manna grass	*Glyceria striata*	OBL	6	S5	
Common sneezeweed	*Helenium autumnale*	FACW	4	S5	
Swamp sunflower	*Helianthus angustifolius*	FACW	10	S2	
Spotted Touch-me-not	*Impatiens capensis*	FACW	3	S5	
Pale Touch-me-not	*Impatiens pallida*	FACW	3	S4	
Northern Blue Flag	*Iris versicolor*	OBL	4	S5	
Canada Rush	*Juncus canadensis*	OBL	8	S5	
Soft Rush	*Juncus effusus*	OBL	2	S5	
Cardinal Flower	*Lobelia cardinalis*	FACW	7	S4S5	
Great Blue Lobelia	*Lobelia siphilitica*	FACW	5	S5	
American bugleweed	*Lycopus americanus*	OBL	4	S5	
Square-stemmed Monkey Flower	*Mimulus ringens*	OBL	6	S5	
common wild bergamot	*Monarda fistulosa*	FACU	2	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
Cinnamon Fern	*Osmunda cinnamomea*	FACW	6	S5	
Royal fern	*Osmunda regalis*	OBL	6	S5	
Lizard's Tail	*Saururus cernuus*	OBL	6	S5	
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	OBL	4	S5	
dark-green bulrush	*Scirpus atrovirens*	OBL	2	S5	
common wool grass	*Scirpus cyperinus*	OBL	4	S5	
rough-leaved goldenrod	*Solidago patula*	OBL	7	S5	
rough goldenrod	*Solidago rugosa*	FAC	1	S5	
Indian grass	*Sorghastrum nutans*	FACU	6	S5	
American bur-reed	*Sparganium americanum*	OBL	4	S5	
lance-leaved aster	*Symphyotrichum lanceolatum*	FACW	1	S5	
New England aster	*Symphyotrichum novae-angliae*	FACW	1	S5	

Purple-Stemmed Aster	*Symphyotrichum puniceum*	OBL	4	S5	
Marsh Fern	*Thelypteris palustris*	FACW	4	S5	
Blue Vervain	*Verbena hastata*	FACW	3	S5	
white vervain	*Verbena urticifolia*	FAC	2	S5	
New York ironweed	*Vernonia noveboracensis*	FACW	3	S4	
Culver's root	*Veronicastrum virginicum*	FACW	5	S2	
common golden Alexanders	*Zizia aurea*	FAC	4	S5	

Table 5-2b. PEM - Deep Emergent Marsh

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Sweet flag	*Acorus americanua*	OBL	5	S5	Herbaceous plugs 3-ft spacing 15-20 pounds per acre in applicable areas
river bulrush	*Bolboschoenus fluviatilis*	OBL	4	S5	
bristly sedge	*Carex comosa*	OBL	4	S5	
long sedge	*Carex folliculata*	OBL	7	S5	
Gray's Sedge	*Carex grayi*	FACW	7	S5	
Cartex lacustris	*Carex lacustris*	OBL	5	S5	
cyperus-like sedge	*Carex pseudocyperus*	OBL	6	S5	
three-fruited sedge	*Carex trisperma*	OBL	8	S5	
Swamp Loosestrife	*Decodon verticillatus*	OBL	7	S5	
blue flag	*Iris versicolor*	OBL	4	S5	
Canada rush	*Juncus canadensis*	OBL	8	S5	
bayonet rush	*Juncus militaris*	OBL	9	S4	
rice cut grass	*Leersia oryzoides*	OBL	4	S5	
Royal Fern	*Osmunda regalis*	OBL	6	S5	
green arrow arum	*Peltandra virginica*	OBL	6	S5	
pickerel weed	*Pontederia cordata*	OBL	4	S5	
common arrowhead	*Sagittaria latifolia*	OBL	3	S5	
Lizards tail	*Saururus cernuus*	OBL	3	S5	
three-square bulrush	*Schoenoplectus pungens*	OBL	6	S5	
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	OBL	4	S5	
Green Bulrush	*Scirpus atrovirens*	FACW	2	S5	
Woolgrass	*Scirpus cyperinus*	FACW	4	S5	
Water Parsnip	*Sium suave*	OBL	6	S5	
Bur-reed	*Sparganium americanum*	OBL	4	S5	
giant bur-reed	*Sparganium eurycarpum*	OBL	4	S5	
Wild rice	*Zizania palustris*	OBL	8	SNR	
Sweet flag	*Acorus americanua*	OBL	5	S5	
river bulrush	*Bolboschoenus fluviatilis*	OBL	4	S5	
bristly sedge	*Carex comosa*	OBL	4	S5	
long sedge	*Carex folliculata*	OBL	7	S5	
Gray's Sedge	*Carex grayi*	FACW	7	S5	

Table 5-2c. PSS – Scrub Shrub

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
speckled alder	*Alnus incana*	FACW	5	S5	450/acre
Smooth alder	*Alnus serrulata*	OBL	6	S5	
black chokeberry	*Aronia melanocarpa*	FACW	7	S5	

Purple chokeberry	*Aronia prunifolia*	FACW	7	S4	Shrub clusters
Buttonbush	*Cephalanthus occidentalis*	OBL	7	S5	
Silky dogwood	*Cornus amomum*	FACW	6	S5	
Gray dogwood	*Cornus racemosa*	FAC	2	S5	
Red osier dogwood	*Cornus sericea*	FACW	6	S5	
Common winterberry	*Ilex verticillata*	FACW	7	S5	
Northern spicebush	*Lindera benzoin*	FACW	6	S5	
Ninebark	*Physocarpus opulifolius*	FACW	7	S5	
Swamp rose	*Rosa palustris*	FACW	9	S5	
Bebbs willow	*Salix bebbiana*	FACW	3	S5	
Pussy willow	*Salix discolor*	FACW	3	S5	
shining willow	*Salix lucida*	FACW	5	S5	
meadow willow	*Salix petiolaris*	FACW	5	S5	
Silky willow	*Salix sericea*	OBL	5	S5	
Common elderberry	*Sambucus canadensis*	FACW	4	S5	
Meadow-sweet	*Spiraea alba*	FACW	3	S4	
steeplebush	*Spiraea tomentosa*	FACW	4	S5	
High bush blueberry	*Vaccinium corymbosum*	FACW	6	S5	
Northern wild raisin	*Viburnum cassinoides*	FACW	7	S5	
Arrow-wood	*Viburnum dentatum*	FAC	3	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	

Table 5-2d. PFO – Red Maple Hardwood Swamp

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Tree Speceis					15-20 pounds per acre seed 450/acre Shrub clusters Trees 10-25 feet apart
Red maple	*Acer rubrum*	FAC	4	S5	
Silver maple	*Acer saccharinum*	FACW	6	S5	
yellow birch	*Betula alleghaniensis*	FAC	7	S5	
Ironwood	*Carpinus caroliniana*	FAC	6	S5	
Bitternut hickory	*Carya cordiformis*	FAC	7	S5	
Blackgum	*Nyssa sylvatica*	FAC	7	S5	
American sycamore	*Platanus occidentalis*	FACW	3	S5	
Eastern cottonwood	*Populus deltoides*	FAC	2	S5	
Swamp white oak	*Quercus bicolor*	FACW	7	S5	
American elm	*Ulmus americana*	FACW	4	S5	
Slippery elm	*Ulmus rubra*	FAC	8	S5	
Shrub Species*					
speckled alder	*Alnus incana*	FACW	5	S5	
common winterberry	*Ilex verticillata*	FACW	7	S5	
spicebush	*Lindera benzoin*	FACW	6	S5	
Arrow-wood	*Viburnum dentatum*	FAC	3	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	
* These species listed are not an exhaustive list, additional species may be used from the PSS List					
Herbaceous**					
False Nettle	*Boehmeria cylindrica*	OBL	7	S5	
tussock sedge	*Carex stricta*	OBL	4	S5	
Spotted Touch-me-not	*Impatiens capensis*	FACW	3	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
royal fern	*Osmunda regalis*	OBL	6	S5	
cinnamon fern	*Osmundastrum cinnamomeum*	FACW	6	S5	
tall meadow rue	*Thalictrum pubescens*	FACW	4	S5	
**Not an exhaustive list, additional species may be added from the PEM lists.					

Table 5-2e. PFO – Rehabilitation/Enhancement					
Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Tree Speceis					15-20 pounds per acre seed 450/acre Shrub clusters Trees 10-25 feet apart
Red Maple	*Acer rubrum*	FAC	2	S5	
Black gum	*Nyssa sylvatica*	FAC	5	S5	
Swamp white oak	*Quercus bicolor*	FACW	7	S5	
Bur oak	*Quercus macrocarpa*	FAC	6	S5	
Pin oak	*Quercus palustris*	FACW	7	S4	
Black willow	*Salix nigra*	OBL	2	S5	
Shrub Species*					
Chokeberry	*Aronia melanocarpa*	FACW	6	S5	
Silky dogwood	*Cornus amomum*	FACW	4	S5	
Red osier dogwood	*Cornus sericea*	FACW	5	S5	
Buttonbush	*Cephalanthus occidentalis*	OBL	7	S5	
Spicebush	*Lindera benzoin*	FAC	5	S5	
Elderberry	*Sambucus canadensis*	FACW	3	S5	
* These species listed are not an exhaustive list, additional species may be used from the PSS List					
Herbaceous**					
Grey sedge	*Carex grayi*	FACW	7	S5	
Franks sedge	*Carex frankii*	OBL	1	S2	
Pointed Broom Sedge	Carex scoparia	FACW	1	S5	
Upright Sedge	Carex stricta	OBL	4	S5	
**Not an exhaustive list, additional species may be added from the PEM lists.					

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 I**) 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 site is based on several factors. First, mitigation acreage must meet the three wetland criteria 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:

- 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. Hydrology must be met more than 50% of the monitoring period at a minimum frequency of 6 years in 10 or 8 years in 15. Any combination of inundation or shallow water table is acceptable in meeting the 14-day minimum requirement.
- 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.

Second, mitigation success will depend on the establishment of wetland community types (as described in Section 5) that replace in form and function the impacted wetlands. At Buxton Creek, the targeted cover types are shallow and deep emergent marsh, floodplain forest, red maple and hemlock hardwood forest.

Third, 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. The final performance standard of 90% shall be 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 will be native shrub species. Stem density standards will include native volunteer species. Up to 800 woody stems will be planted, as needed, based on survival. Stem density monitoring will be conducted at a frequency of 10

times in 15 years, 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 will be native tree species. Stem density standards will include native volunteer species. Up to 600 woody stems will be planted, as needed, based on survival. Stem density monitoring will be conducted at a frequency of 10 times in 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 12^{th} year, and 9 ft by the 15^{th} 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.
- **Stratified Randomized Permanent Plots:** To obtain a comprehensive view of characteristics at the site, random permanent plots will be established for data collection. The plots will be stratified among the different wetland cover types and mitigation types in which plots will have an equal chance of being selected in each stratum. Vegetation data such as relative cover, stem counts, tree height, and invasive coverage will be observed and

documented within these plots for baseline data and post-mitigation monitoring for the 15-year period. See **Figure 6-1** for proposed permanent data collection locations.

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, maximum of 160 shall be tree species)	400[4]	400	400	400	400	400	400
Stem density in PFO areas (per acre, maximum of 200 shall be shrub species)	400[4]	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
4. Based on a beginning planting rate of 450 stems per acre with additional stems to be planted within the first three monitoring years, if needed, depending on survival. Approximately 25% of the final stem goals are expected to be native volunteer species.

7. Monitoring Requirements

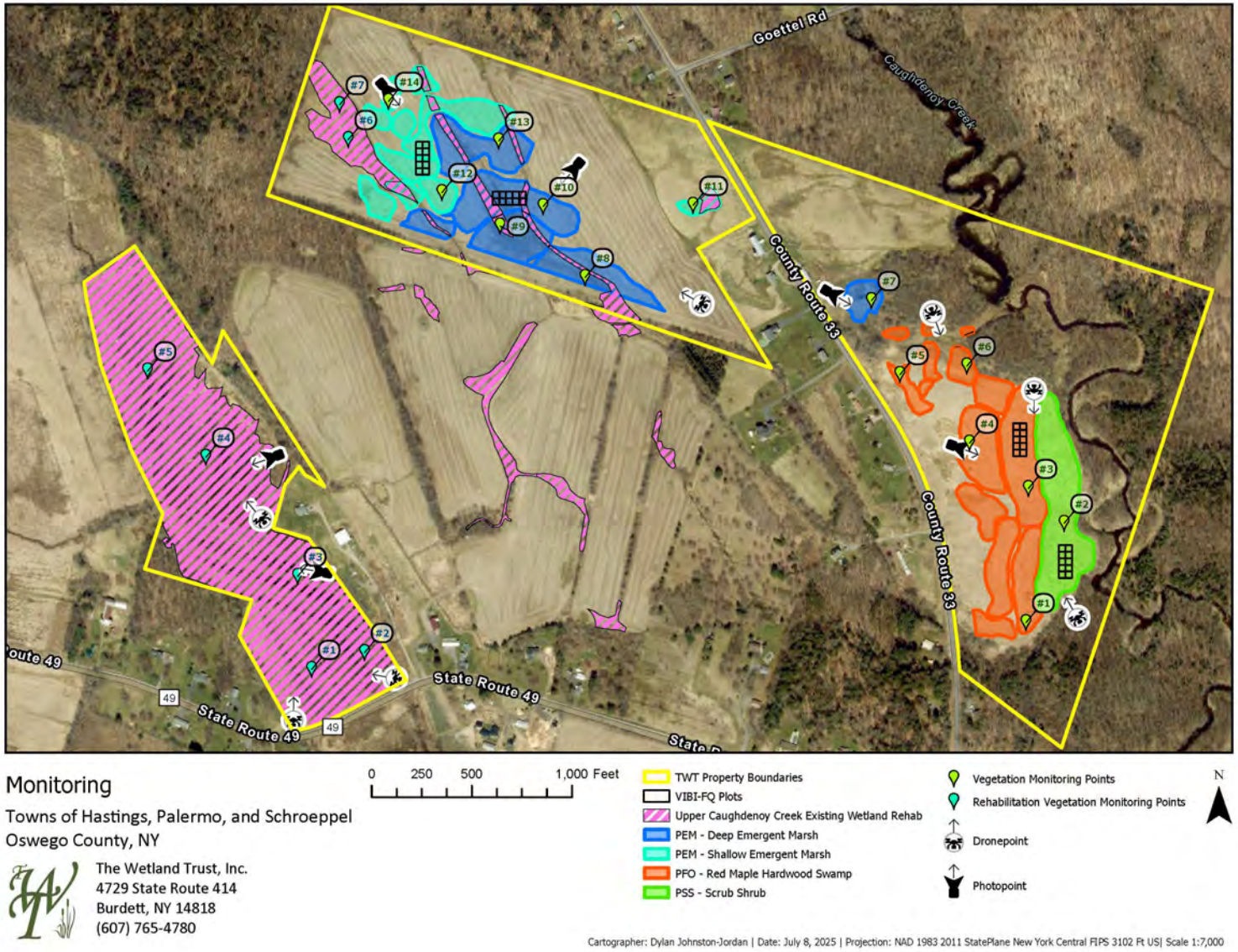
There will be an initial post-construction "as-built" plan sheet of constructed features with 1' contours, map/descriptions of planted materials, wetland delineation by wetland cover type (PEM, PSS, PFO) and other habitat types e.g. tributaries, ditches, vegetated shallows, deepwater, estimates of invasive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

Site monitoring begins after construction is completed and will consist of ten (10) monitoring reports over fifteen (15) 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. 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.

Figure 6-1. Vegetation Monitoring and Photo Point Locations



- 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.

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		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			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		X
Photo sequence		X	X	X	X	X		X			X			X		X
Detailed site mapping		X	X	X	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 NYSDEC approval.

8.1 Hydrology Maintenance

Immediately following construction and throughout the 15-year monitoring period, Micron, facilitated by 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 (requires USACE and NYSDEC approval),
- Adjusting height/depth of ditch fill or groundwater dams (requires USACE and NYSDEC approval),
- 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, Micron (via TWT) will closely monitor vegetative establishment following initial planting/seeding and throughout the 15-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 (requires NYSDEC approval).

8.3 General Site Maintenance

General site maintenance is anticipated to occur regularly throughout the 15-year monitoring period and beyond. Micron bears responsibility for site maintenance, as facilitated by TWT, the fee-simple owner of the site. Non-ecological maintenance tasks include but are 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 J**. 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 and NYDEC. 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

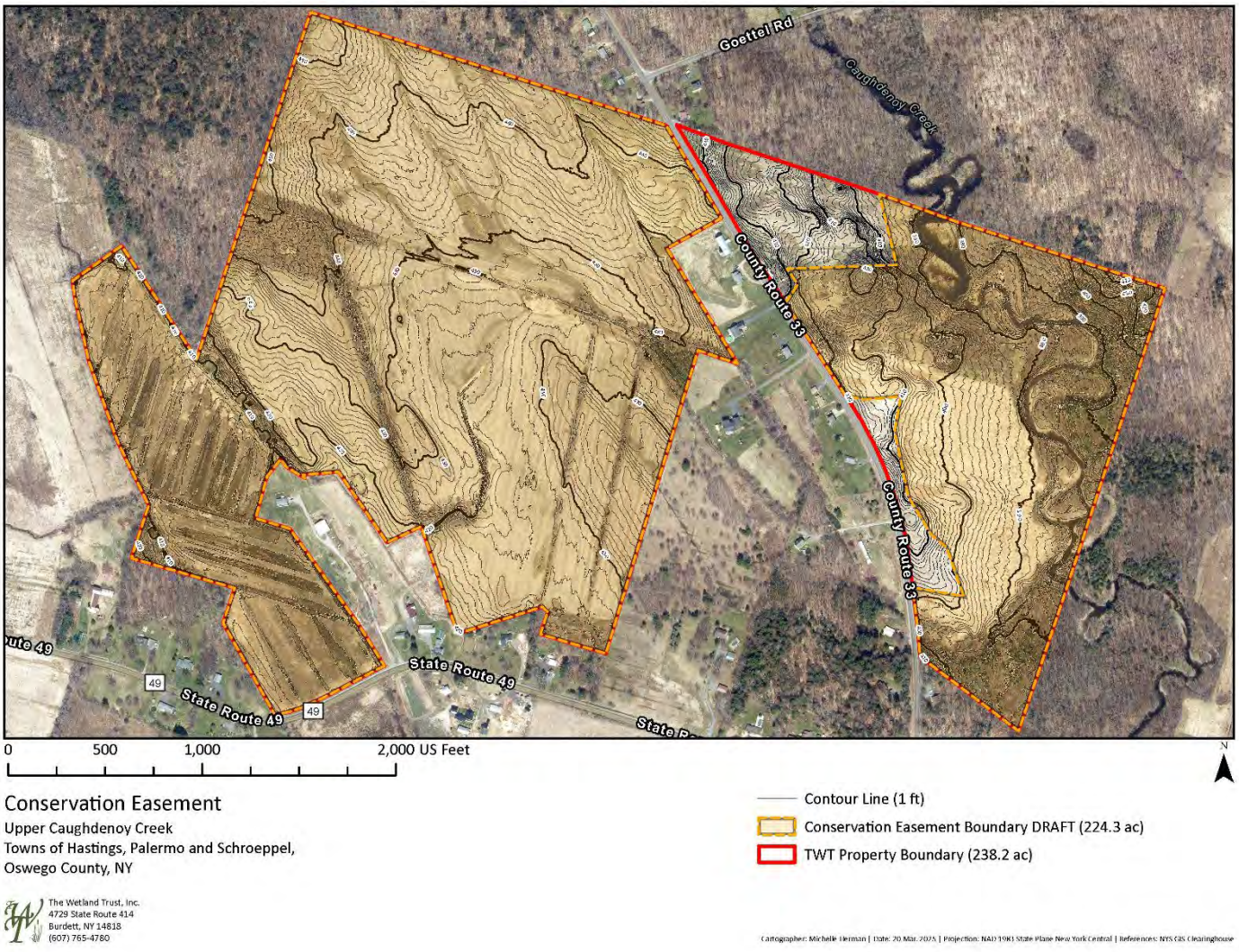
Town of Hastings, Palermo, and Schroeppel, Oswego County, NY

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]



Appendix B.

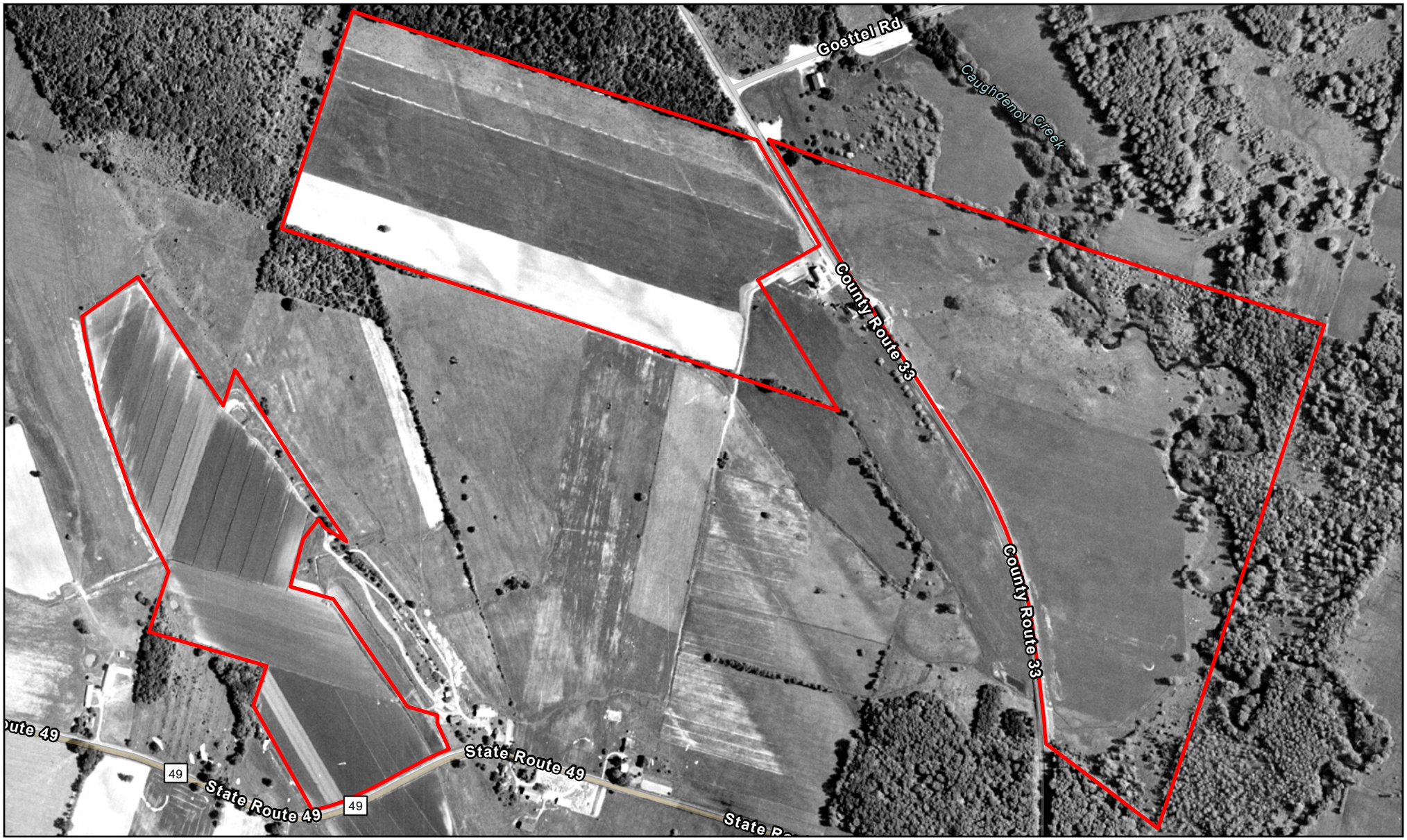
TWT Property Boundary (162.9 ac)

Imagery (1955)

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: 7 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse



TWT Property Boundary (162.9 ac)

Imagery (1959)

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: 7 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse

TWT Property Boundary (162.9 ac)

Imagery (1994)

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: 7 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse

TWT Property Boundary (162.9 ac)

Imagery (2006)

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: 7 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse

TWT Property Boundary (162.9 ac)

Imagery (2011)

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: 7 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse

TWT Property Boundary (162.9 ac)

Imagery (2015)

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: 7 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse

Appendix C.

Micron- Upper Caughdenoy Creek Mitigation Site

Wetland Delineation Report

May 2025

The Wetland Trust, Inc. (TWT) conducted delineations of wetlands, drainages, and streams at the Micron-Upper Caughdenoy Creek Wetland compensatory mitigation site located in Shroeppel, Oswego County, New York. The Upper Caughdenoy Creek site is bordered by State Route 49 to the south and is bisected by County Route 33 to the east and is approximately 238 acres in size. The purpose of the delineation is to determine the location and extent of wetlands and other water features on the UCC site to aid in the planning and design of the wetland mitigation plan and obtaining the required regulatory permits.

Methods

A desktop review was conducted prior to field work which included background data such as aerial photography (current and historical), soil maps, and NY State and Federal wetland maps (see Mitigation Plan). Wetland delineations were conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (Regional Supplement USACE 2012). All delineations were completed consistently with the 1995 NYSDEC Freshwater Wetlands Delineation Manual (NYSDEC 1995). All field data points were recorded with a centimeter-level accuracy GNSS receiver and mapped in ArcGIS Pro. Field visits for delineation concurrence by USACE and NYSDEC were conducted in August 2024.

Results

A total of 52.9 acres of wetland and open water features were delineated on the Upper Caughdenoy Creek Mitigation site.

Agriculture Portions (PEM-01, PEM-03, PEM-21, PEM-20, PEM-17, PEM-18, PEM-13, PEM-12, PEM-05, PSS-02)

These wetlands are either within the active agricultural footprint or currently idle. The idle areas are usually in some state of early succession depending on when they were last farmed. **PEM-08, PEM-10, PEM-11, and PEM-12** are all in such a state with wet meadow-like plant communities. **PEM-01, PEM-03,** and **PEM-08** are frequently pastured and/or cut for hay. The remaining areas are all in active row crops planted to soybeans (*Glycine max*) in 2024. These areas were delineated as wetlands where a combination of at least two of the following wetland factors were present: soil redox, oxidized root channels, drainage patterns**, s**oil cracking, algal growth, stressed agricultural plantings, and/or some degree of wetland plant species observed. These wetlands are generally characterized by a gently sloping to concave land feature where water periodically accumulates and stands for long periods. Soil cracking stressed agricultural plantings

(soybean in 2024), and algal growth were observed to varying degrees. Soil cracking is often evidence of seasonal saturation followed by drying, a common condition in temporary or seasonally inundated wetlands. Algal growth typically indicates standing or slow-moving water, which is prevalent in wetlands. It may also indicate nutrient enrichment, particularly nitrogen and phosphorus, resulting from agricultural activities. Although not a definitive indicator on its own, algal growth can support evidence of wetland hydrology when observed alongside other indicators such as cracking soils and stressed plants. These areas delineated as wetlands were verified in the field with the Agencies.

Western Portion (PEM-18, POW-02, PEM-03, PEM-04)

This area was actively farmed approximately 10 years ago (and was farmed for over 75 years) as what is commonly referred to as a muck farm. A muck farm is an agricultural area developed on muck soil, which is a rich, dark, highly organic soil formed from decomposed plant material in former wetlands. These areas are established by extensive drainage effort. PEM-18 has several thousand feet ditches used to manipulate and lower groundwater for farming. The extent of drainage and the current influence is still influencing the wetland system. The dominance of many weedy invasive species (upland and wetland species), both native and non-native species, along with obvious flow patterns in the ditches indicates the wetland system would benefit from mitigation measures.

Beaver (*Castor canadensis*) activity is common in this wetland system and was observed on drainages **D-01** and **D-02** in 2024. **POW-02-04** are all created ponds separated by an access road from **PEM-18**. It is likely they were created for possible agricultural irrigation.

Eastern Portion (PEM-01, PEM-02, PEM-03, PEM-04, PEM-05, PEM-06 PEM-07, PFO-01, PFO-02, PFO-03, PSS-01)

PEM 01 is currently located in a pastured area where drainage run-off concentrates. The presence of Soft Rush (*Juncus effusus*) is an obvious indicator of these wetland areas since it is avoided by livestock. **PEM-03** is an area frequently hayed, and areas of Common Reed (*Phragmites australis*) is avoided along the western portion. Both **PEM-01** and **PEM-03** have low species diversity, likely due to agricultural disturbance.

D-48 is a tributary to Caughdenoy Creek and has **PEM-07, PSS-01,** and **PFO-03** associated with it. This drainage and associated wetlands are separated from the agricultural activity by enough slope change to create this separation. This drainage system meanders through the different wetland systems creating lots of interfaces of stream bank and wetlands.

The remaining wetlands on this portion of this property are all associated with Caughdenoy Creek. Many of the areas are in old stream bed locations creating wetland habitat along the current open water areas of the creek. Areas on the west side of Caughdenoy Creek were not fully delineated at this time as they are outside of the wetland concurrence and work area.

Central Portion (PEM 08 to PEM 23, PSS 02 to PSS 11, PFO 4)

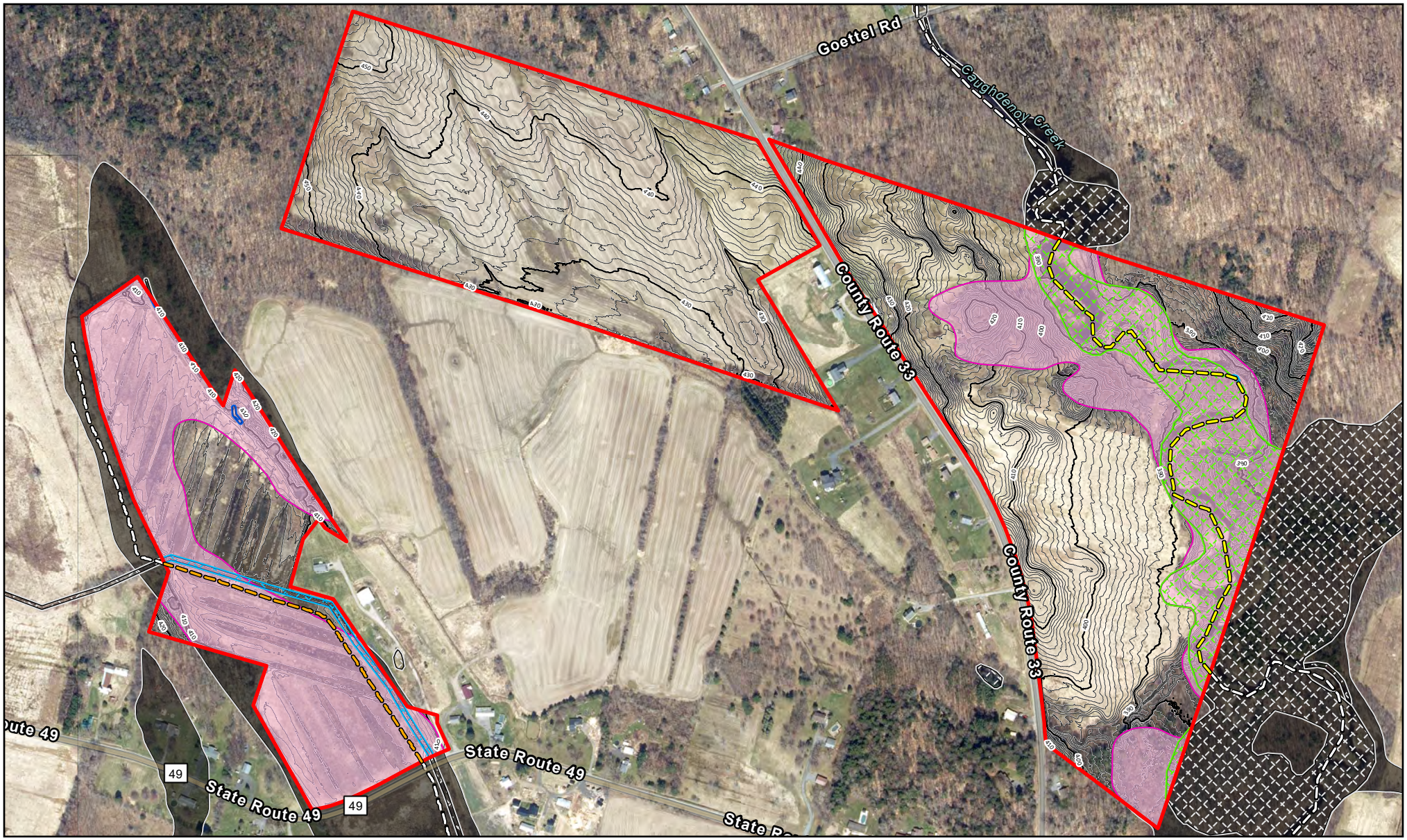
Every drainage and wetland in this portion of the property has been directly or indirectly influenced by over 75 years of agricultural activity. **PEM 08-PEM-17** are all associated with drainages that were channelized to maximize field area and crop hydrology benefits. **PEM-12** is more extensive than most drainages on this farm and was likely due to a greater extent of hydrology in this area that led to leaving more area undisturbed. **PEM-08** and the field it is associated with is fenced as pasture. This is a common practice for grazing where row crops were less successful in a field due to highwater tables. Based on conversations with the landowner, this was the case for the fields where **PEM-08** and **PEM-01** are located.

Portions of **PEM-15** and **PEM-16** are examples where the drainages themselves are smaller, but the wetland is wider, consistent with the previous discussion where these areas were delineated as wetlands where a combination of at least two wetland factors were present. In the fall of 2024, the harvest of soybeans (weight of tractors and other equipment) left extensive ruts in these delineated wetland areas.

PEM-19 to **PEM-23** are all areas in the field where active agriculture occurs. They were delineated because soybeans were heavily stressed and at least one other wetland factor was present. **PSS-11** shows the extent of the wetland associated with **PEM-23** on this parcel. **PSS-11** was likely farmed about 20 years ago.

PFO-01 is a dug pond associated with drainage **D-28**.

Attachments: 1. State and Federal Mapped Wetlands
2. Upper Caughdenoy Creek Delineation Map
2. Delineation Summary Table
3. Data Sheets



State and Federal Mapped Wetlands and Streams

Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

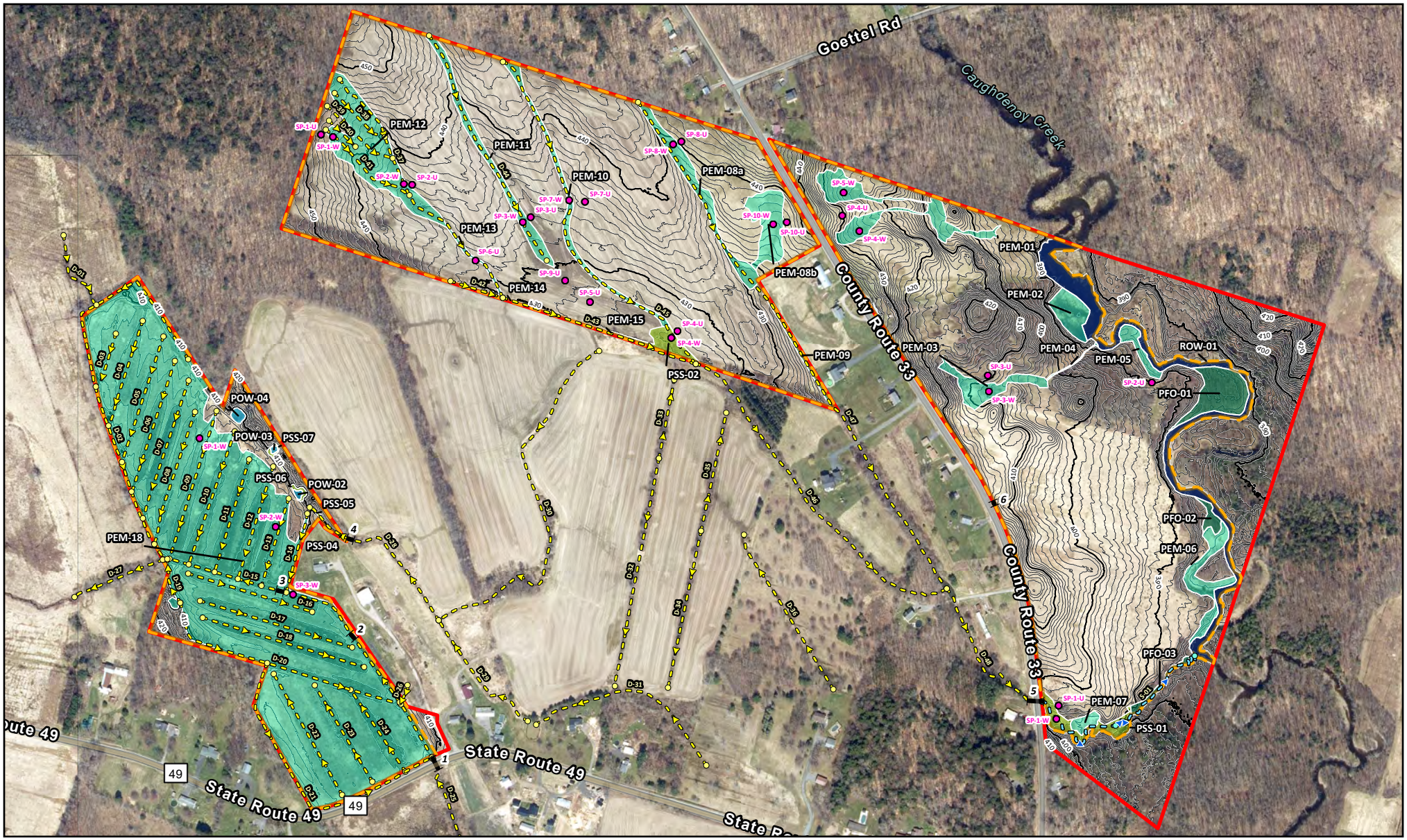
NYSDEC Informational Freshwater Wetland Mapping (53.2 ac)
NYSDEC Classified Rivers / Streams
- ID 899-14, Class C, Standard C (3,071 ft)
- ID 899-16, Class C, Standard C (1,578 ft)

NWI Wetlands (16.5 ac Total)
- Freshwater Forested/Shrub Wetland (15.4 ac)
- Freshwater Pond (0.1 ac)
- Riverine (1 ac)

Adjacent NYSDEC Informational Freshwater Wetland Mapping
Adjacent NYSDEC Classified Rivers / Streams
Adjacent NWI Wetlands
Contour Line (1 ft)
TWT Property Boundary (162.9 ac)

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

Cartographer: Michelle Herman | Date: 7 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse



0 500 1,000 2,000 US Feet

N

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

- Wetland Delineation Sample Points (n = 28)
- Culverts (n = 6)
- Drainage Features
  - Ditch
  - Stream
- Delineated Wetlands (46.6 ac)
  - Open Water - Pond (0.1 ac)
  - Open Water - Caughdenoy Creek (2.8 ac)
  - PEM (41.1 ac)
  - PSS (1.2 ac)
  - PFO (1.4 ac)
- Contour Line (1 ft)
- Delineation Concurrence Request Boundary (143.4 ac)
- TWT Property Boundary (162.9 ac)

Cartographer: Michelle Herman | Date: 8 July 2025 | Projection: NAD 1983 (2011) 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 ____	**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.)
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? (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 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 ____	**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 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? (includes capillary fringe)	Yes X No ____	Depth (inches): 0	**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:)			
1. *Cornus amomum*	15	Yes	FACW
2. *Viburnum lentago*	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Herb Stratum (Plot size:)			
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:)			
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	**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.)
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? (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 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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
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:)			
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	**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.)
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? (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 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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
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:)			
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 ____	**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.)
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? (includes capillary fringe)	Yes X	No ____	Depth (inches): ____

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 ____	**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.)
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? (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 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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
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:)			
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	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	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)	____ Water-Stained Leaves (B9)	____ Aquatic Fauna (B13)
X High Water Table (A2)	____ Marl Deposits (B15)	____ Hydrogen Sulfide Odor (C1)
X Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Presence of Reduced Iron (C4)
____ Water Marks (B1)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Thin Muck Surface (C7)
____ Sediment Deposits (B2)	____ Other (Explain in Remarks)	
____ Drift Deposits (B3)		
____ Algal Mat or Crust (B4)		
____ Iron Deposits (B5)		
____ Inundation Visible on Aerial Imagery (B7)		
____ Sparsely Vegetated Concave Surface (B8)		

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? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0

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 ____	**Is the Sampled Area**		
Hydric Soil Present?	Yes X	No ____	**within a Wetland?**	**Yes** ____	**No** X
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 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? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0	**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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 15)			
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:)			
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	**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.)
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)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
X Saturation (A3)	Marl Deposits (B15)	Moss Trim Lines (B16)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	X Oxidized Rhizospheres on Living Roots (C3)	Crayfish Burrows (C8)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Thin Muck Surface (C7)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Shallow Aquitard (D3)
Sparsely Vegetated Concave Surface (B8)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):	
Water Table Present?	Yes X	No	Depth (inches):	16
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches):	12

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
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:)			
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	**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.)
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? (includes capillary fringe)	Yes X	No	Depth (inches): 12

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	**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.)
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)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
Saturation (A3)	Marl Deposits (B15)	Moss Trim Lines (B16)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Crayfish Burrows (C8)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Thin Muck Surface (C7)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Shallow Aquitard (D3)
Sparsely Vegetated Concave Surface (B8)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

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

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	**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 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? (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:
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	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No	**within a Wetland?** **Yes** **No X**
Wetland Hydrology Present?	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. 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? (includes capillary fringe)	Yes	No X	Depth (inches):

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	**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.)
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? (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 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	**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.)
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? (includes capillary fringe)	Yes	No X	Depth (inches):	

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:)			
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:)			
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:)			
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	**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 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? (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-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	**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 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? (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-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	**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.)
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	**Is the Sampled Area**		
Hydric Soil Present?	Yes X	No	**within a Wetland?**	**Yes**	**No** X
Wetland Hydrology Present?	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 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? (includes capillary fringe)	Yes X	No	Depth (inches):	10	**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)
- 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 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	**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 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? (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. 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:)			
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-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	**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 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:)			
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-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)
- 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:
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	**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 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? (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:
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	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes X	No	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? (includes capillary fringe)	Yes	No X	Depth (inches):

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft)			
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:)			
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	**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.)
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? (includes capillary fringe)	Yes X	No ___	Depth (inches): ___

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5 ft)			
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:)			
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)
- 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: 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**		
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): 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	**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.)

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

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5 ft)			
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:)			
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	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	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	**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.)
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	**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.)

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

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	**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.)
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? (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: 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	**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.)

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

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
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:)			
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	**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.)
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? (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: 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	**Is the Sampled Area**	
Hydric Soil Present?	Yes x	No	**within a Wetland?**	**Yes** **No** X
Wetland Hydrology Present?	Yes	No	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? (includes capillary fringe)	Yes	No x	Depth (inches):

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	**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.)
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? (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, 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	**Is the Sampled Area**
Hydric Soil Present?	Yes	No x	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes X	No	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 species	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 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: 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	**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.)

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)	___ Water-Stained Leaves (B9)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Aquatic Fauna (B13)	___ Drainage Patterns (B10)
___ Saturation (A3)	___ Marl Deposits (B15)	___ Moss Trim Lines (B16)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Dry-Season Water Table (C2)
___ Sediment Deposits (B2)	x Oxidized Rhizospheres on Living Roots (C3)	___ Crayfish Burrows (C8)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Stunted or Stressed Plants (D1)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface (B8)		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

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 Stratum (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 species	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	**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.)
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 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:

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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.

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

American goldfinch	*Spinus tristis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
European starling	*Sturnus vulgaris*	SNA G5: not applicable in NYS and secure globally	-	No				✓		
solitary sandpiper	*Tringa solitaria*	Least concern	-	Yes			✓			
American robin	*Turdus migratorius*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
eastern kingbird	*Tyrannus tyrannus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
warbling vireo	*Vireo gilvus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
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		✓		✓		
North American beaver	*Castor canadensis*	Least concern	-	Yes		✓				
North American porcupine	*Erethizon dorsatum*	Least concern	-	Yes						✓
white-tailed deer	*Odocoileus virginianus*	Least concern	-	Yes	✓	✓	✓	✓	✓	✓
raccoon	*Procyon lotor*	Least concern	-	Yes		✓		✓	✓	
eastern cottontail	*Sylvilagus floridanus*	Least concern	-	Yes			✓	✓		
Plant											
box elder	*Acer negundo*	S5, G5, Native, CoC: 1	FAC	Yes						✓
red maple	*Acer rubrum*	Least Concern, S5, G5, Native, CoC: 4	FAC	Yes		✓	✓	✓	✓	✓
silver maple	*Acer saccharinum*	Least Concern, S5, G5, Native, CoC: 6	FACW	Yes		✓	✓			
sugar maple	*Acer saccharum*	Least Concern, S5, G5, Native, CoC: 7	FACU	Yes				✓		
common yarrow	*Achillea millefolium*	Least Concern, SNR, G5, Native, CoC: 0	FACU	Yes		✓				
sweet flag	*Acorus calamus*	Least Concern, SNR, G4	OBL	No		✓	✓			
common agrimony	*Agrimonia gryposepala*	S5, Native, CoC: 4	FACU	Yes			✓		✓	
Rhode Island bentgrass	*Agrostis capillaris*	SNA, GNR, Not native, Naturalized	FAC	No					✓	
redtop	*Agrostis gigantea*	SNA, G4G5, Not native, Naturalized	FACW	No	✓	✓			✓	✓
creeping bent	*Agrostis stolonifera*	SNA, Not native, Naturalized	FACW	No	✓				✓	
American water plantain	*Alisma subcordatum*	S5, G5, Native, CoC: 4	OBL	Yes		✓				
speckled alder	*Alnus incana*	S5, G5, Native, CoC: 5	FACW	Yes			✓			
New York fern	*Amauropelta noveboracensis*	S5, G5, Native, CoC: 4	FAC	Yes			✓			
common ragweed	*Ambrosia artemisiifolia*	S5, G5, Native, CoC: 0	FACU	Yes			✓		✓	
downy serviceberry	*Amelanchier arborea*	S5, G5, Native, CoC: 4	FACU	Yes		✓				
hog peanut	*Amphicarpaea bracteata*	S5, Native, CoC: 5	FAC	Yes		✓				
Canada anemone	*Anemone canadensis*	S5, G5, Native, CoC: 5	FACW	Yes		✓				
sweet vernal grass	*Anthoxanthum odoratum*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓	✓		✓	
Indian hemp	*Apocynum cannabinum*	S5, G5, Native, CoC: 2	FAC	Yes			✓		✓	
swamp milkweed	*Asclepias incarnata*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
common milkweed	*Asclepias syriaca*	S5, G5, Native, CoC: 0	UPL	Yes		✓	✓			✓
yellow birch	*Betula alleghaniensis*	S5, G5, Native, CoC: 7	FAC	Yes				✓		
gray birch	*Betula populifolia*	S5, G5, Native, CoC: 4	FAC	Yes					✓	
nodding beggar ticks	*Bidens cernua*	S5, G5, Native, CoC: 4	OBL	Yes					✓	
devil's beggar ticks	*Bidens frondosa*	S5, Native, CoC: 2	FACW	Yes			✓		✓	
hairy brome	*Bromus commutatus*	SNA, GNR, Not native, Naturalized	-	No			✓			
smooth brome	*Bromus inermis*	SNA, G5, Not native, Naturalized	-	No		✓	✓			
common woodland sedge	*Carex blanda*	S5, G5, Native, CoC: 4	FAC	Yes		✓				
bristly sedge	*Carex comosa*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
fringed sedge	*Carex crinita*	S5, G5, Native, CoC: 3	OBL	Yes		✓	✓			
large yellow sedge	*Carex flava*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
graceful sedge	*Carex gracillima*	S5, G5, Native, CoC: 3	FACU	Yes			✓			
lake sedge	*Carex lacustris*	S5, G5, Native, CoC: 5	OBL	Yes						✓
bladder sedge	*Carex intumescens*	S5, G5, Native, CoC: 7	FACW	Yes		✓	✓		✓	
hop sedge	*Carex lupulina*	S5, G5, Native, CoC: 7	OBL	Yes		✓	✓			
sallow sedge	*Carex lurida*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
troublesome sedge	*Carex molesta*	S4, G4, Threatened, Native, CoC: 3	FAC	Yes			✓			
cyperus-like sedge	*Carex pseudocyperus*	S5, G5, Native, CoC: 6	OBL	Yes					✓	
broom sedge	*Carex scoparia*	S5, Native, CoC: 1	FACW	Yes		✓	✓			✓
awl-fruited sedge	*Carex stipata*	S5, G5, Native, CoC: 5	OBL	Yes			✓		✓	
tussock sedge	*Carex stricta*	S5, G5, Native, CoC: 4	OBL	Yes				✓	✓	✓
fox sedge	*Carex vulpinoidea*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓		✓	✓
ironwood	*Carpinus caroliniana*	S5, G5, Native, CoC: 6	FAC	Yes				✓	✓	
bitternut hickory	*Carya cordiformis*	S5, G5, Native, CoC: 7	FAC	Yes		✓			✓	
shagbark hickory	*Carya ovata*	S5, Native, CoC: 7	FACU	Yes		✓	✓	✓	✓	
buttonbush	*Cephalanthus occidentalis*	S5, G5, Native, CoC: 7	OBL	Yes		✓				
white turtle head	*Chelone glabra*	S5, G5, Native, CoC: 6	OBL	Yes			✓		✓	
lamb's quarters	*Chenopodium album*	SNA, G5, Not native, Naturalized	FACU	No					✓	
enchanter's nightshade	*Circaea canadensis*	S5, G5, Native,CoC: 5	FACU	Yes		✓	✓			
bull thistle	*Cirsium vulgare*	SNA, GNR, Not native, Naturalized	FACU	No		✓				

silky dogwood	*Cornus amomum*	S5, G5, Native, CoC: 6	FACW	Yes	✓	✓	✓	✓	✓	✓
gray dogwood	*Cornus racemosa*	S5, G5, Native, CoC: 2	FAC	Yes		✓	✓	✓		✓
red-osier dogwood	*Cornus sericea*	S5, G5, Native, CoC: 6	FACW	Yes						✓
hawthorn	*Crataegus sp.*	-	-	-		✓				✓
common yellow nut sedge	*Cyperus esculentus*	SNR, Native, CoC: 1	FACW	Yes			✓		✓	
false yellow nut sedge	*Cyperus strigosus*	S5, G5, Native, CoC: 3	FACW	Yes			✓		✓	
orchard grass	*Dactylis glomerata*	SNA, GNR, Not native, Naturalized	FACU	No	✓				✓	
wild carrot	*Daucus carota*	SNA, GNR, Not native, Naturalized	UPL	No		✓				
water willow	*Decodon verticillatus*	S5, G5, Native, CoC: 7	OBL	Yes			✓			✓
tufted hair grass	*Deschampsia cespitosa*	SNR, Native	-	Yes					✓	
digit grass	*Digitaria eriantha*	SNA, GNR, Not native, Naturalized	-	No		✓				
smooth crab grass	*Digitaria ischaemum*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
tall flat-topped white aster	*Doellingeria umbellata*	S5, G5, Native, CoC: 4	FACW	Yes					✓	
common wood fern	*Dryopteris intermedia*	S5, G5, Native, CoC: 5	FAC	Yes		✓				✓
autumn olive	*Elaeagnus umbellata*	SNA, GNR, Not native, Naturalized	-	No		✓				
blunt spike rush	*Eleocharis obtusa*	S5, Native, CoC: 2	OBL	Yes		✓			✓	✓
fringed wilowherb	*Epilobium ciliatum*	S5, G5, Native, CoC: 3	FACW	Yes					✓	
purpleleaf willowherb	*Epilobium coloratum*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓		✓	
field horsestail	*Equisetum arvense*	S5, Native, CoC: 2	FAC	Yes				✓	✓	✓
scouringrush horsetail	*Equisetum hyemale*	S5, G5, Native, CoC: 2	FAC	Yes	✓			✓		
annual daisy fleabane	*Erigeron annuus*	S5, G5, Native, CoC: 0	FACU	Yes			✓			
small daisy fleabane	*Erigeron strigosus*	S5, Native, CoC: 0	FACU	Yes			✓			
yellow trout lily	*Erythronium americanum*	S5, G5, Native, CoC: 5	-	Yes		✓		✓		
boneset	*Eupatorium perfoliatum*	S5, G5, Native, CoC: 3	FACW	Yes			✓		✓	✓
common flat-topped goldenrod	*Euthamia graminifolia*	S5, G5, Native, CoC: 1	FAC	Yes					✓	
spotted Joe Pye weed	*Eutrochium maculatum*	S5, Native, CoC: 4	OBL	Yes	✓					
American beech	*Fagus grandifolia*	S5, G5, Native, CoC: 8	FACU	Yes				✓	✓	
common wild strawberry	*Fragaria virginiana*	S5, G5, Native, CoC: 0	FACU	Yes		✓			✓	✓
glossy buckthorn	*Frangula alnus*	SNA, GNR, Not native, Naturalized	FAC	No		✓				
white ash	*Fraxinus americana*	S5, G5, Native, CoC: 3	FACU	Yes		✓				✓
green ash	*Fraxinus pennsylvanica*	S5, G5, Native, CoC: 4	FACW	Yes	✓	✓	✓	✓	✓	✓
hedge bedstraw	*Galium album*	SNA, GNR, Not native, Naturalized	FACU	Yes	✓		✓		✓	
common marsh bedstraw	*Galium palustre*	S5, G5, Native, CoC: 3	OBL	Yes		✓			✓	
yellow avens	*Geum aleppicum*	S5, G5, Native, CoC: 3	FAC	Yes		✓	✓			
white avens	*Geum canadense*	S5, G5, Native, CoC: 5	FAC	Yes			✓			✓
town avens	*Geum urbanum*	SNA, G5, Not native, Naturalized	-	No		✓	✓			
American manna grass	*Glyceria maxima*	S5, G5, Native, CoC: 4	OBL	No			✓		✓	
fowl manna grass	*Glyceria striata*	S5, G5, Native, CoC: 6	OBL	Yes		✓	✓		✓	
soybean	*Glycine max*	SNA, GNR, Not native, Naturalized	-	-	✓	✓	✓	✓	✓	✓
marsh cubweed	*Gnaphalium uliginosum*	SNA, G5, Not native, Naturalized	FAC	No			✓			
dame's rocket	*Hesperis matronalis*	SNA, Not native, Naturalized	FACU	No	✓					
common frogbit	*Hydrocharis morsus-ranae*	SNA, GNR, Not native, Naturalized	OBL	No			✓			
Eurasian live forever	*Hylotelephium telephium*	SNA, GNR, Not native, Naturalized	-	No				✓		
St. John's wort	*Hypericum sp.*	S5, Native	-	-						✓
spotted jewelweed	*Impatiens capensis*	S5, Native, CoC: 3	FACW	Yes	✓	✓	✓		✓	
blue flag	*Iris versicolor*	S5, G5, Native, CoC: 4	OBL	Yes		✓				
soft rush	*Juncus effusus*	S5, G5, Native, CoC: 2	OBL	Yes	✓	✓	✓	✓	✓	✓
path rush	*Juncus tenuis*	S5, G5, Native, CoC: 0	FAC	Yes			✓			✓
rice cut grass	Leersia oryzoides	S5, G5, Native, CoC: 4	OBL	Yes					✓	✓
spicebush	*Lindera benzoin*	S5, Native, CoC: 6	FACW	Yes		✓	✓			
tulip poplar	*Liriodendron tulipifera*	S5, G5, Native, CoC: 6	FACU	Yes	✓				✓	
Indian tobacco	*Lobelia inflata*	S5, G5, Native, CoC: 1	FACU	Yes			✓			
great blue lobelia	*Lobelia siphilitica*	S5, G5, Native, CoC: 5	FACW	Yes						✓
tall rye grass	*Lolium arundinace*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
Japanese honeysuckle	*Lonicera japonica*	SNA, GNR, Not native, Naturalized	FACU	No		✓				
honeysuckle	*Lonicera spp.*	-	-	No	✓	✓	✓	✓	✓	✓
Tatarian honeysuckle	*Lonicera tatarica*	SNA, GNR, Not native, Naturalized	FACU	No		✓	✓			✓
water purslane	*Ludwigia palustris*	S5, G5, Native, CoC: 4	OBL	Yes	✓		✓		✓	
water horehound	*Lycopus americanus*	S5, G5, Native, CoC: 4	OBL	Yes			✓		✓	
moneywort	*Lysimachia nummularia*	SNA, GNR, Not native, Naturalized	FACW	No	✓	✓		✓	✓	
purple loosestrife	*Lythrum salicaria*	SNA, Non native, Naturalized	OBL	No	✓	✓	✓	✓	✓	
Canada mayflower	*Maianthemum canadense*	S5, G5, Native, CoC: 5	FACU	Yes				✓		
ostrich fern	*Matteuccia struthiopteris*	S4, G5, Native, CoC: 5	FAC	Yes			✓			
white sweet clover	*Melilotus albus*	SNA, G5, Not native, Naturalized	FACU	No						✓
Allegheny monkey flower	*Mimulus ringens*	S5, G5, Native, CoC: 6	OBL	Yes					✓	
blackgum	*Nyssa sylvatica*	S5, G5, Native, CoC: 7	FAC	Yes			✓			
sensitive fern	*Onoclea sensibilis*	S5, G5, Native, CoC: 2	FACW	Yes	✓	✓	✓	✓	✓	✓
royal fern	*Osmunda regalis*	S5, G5, Native, CoC: 6	OBL	Yes			✓			
cinnamon fern	*Osmundastrum cinnamomeum*	S5, G5, Native, CoC: 6	FACW	Yes			✓			
yellow wood sorrel	*Oxalis dillenii*	S5, Native, CoC: 0	FACU	Yes		✓			✓	
fall panic grass	*Panicum dichotomiflorum*	S5, G5, Native, CoC: 1	FACW	Yes						✓
Virginia creeper	*Parthenocissus quinquefolia*	S5, G5, Native, CoC: 4	FACU	Yes		✓	✓			

green arrow arum	*Peltandra virginica*	S5, G5, Native, CoC: 6	OBL	Yes		✓				
water pepper	*Persicaria hydropiper*	SNA, G5, Not native, Naturalized	OBL	No					✓	
lady's thumb	*Persicaria maculosa*	SNA, G5, Not native, Naturalized	FAC	No			✓			
arrow-leaved tearthumb	*Persicaria sagittata*	S5, Native, CoC: 4	OBL	Yes			✓			
jumpseed	*Persicaria virginiana*	S5, Native, CoC: 5	FAC	Yes		✓	✓		✓	
reed canary grass	*Phalaris arundinacea*	SNR, G5, Native, CoC: 0	FACW	No	✓	✓	✓	✓	✓	✓
common Timothy	*Phleum pratense*	SNA, GNR, Not native, Naturalized	FACU	No		✓			✓	
common reed	*Phragmites australis*	SNA, G5, Not native, Naturalized	FACW	No	✓	✓	✓			
pokeweed	*Phytolacca americana*	S5, G5, Native, CoC: 0	FACU	Yes			✓			
Norway spruce	*Picea abies*	SNA, G5, Not native, Naturalized	-	No		✓	✓	✓		
red spruce	*Picea rubens*	S5, G5, Native, CoC: 6	FACU	Yes		✓				
white pine	*Pinus strobus*	S5, G5, Native, CoC: 3	FACU	Yes		✓		✓		
English plantain	*Plantago lanceolata*	SNA, Not native, Naturalized	FACU	No	✓	✓		✓	✓	
common plantain	*Plantago major*	SNA, G5, Not native, Naturalized	FACU	No	✓			✓	✓	✓
northern tubercled orchid	*Platanthera flava*	S4, G4, Native, CoC: 3	FACW	Yes			✓			
annual blue grass	*Poa annua*	SNA, Non native, Naturalized	FACU	No				✓		
wood bluegrass	*Poa nemoralias*		FACU	No			✓			
common Kentucky blue grass	*Poa pratensis*	SNA, G5, Not native, Naturalized	FACU	No		✓			✓	✓
mayapple	*Podophyllum peltatum*	S5, Native, CoC: 5	FACU	Yes			✓	✓		
eastern cottonwood	*Populus deltoides*	S5, G5, Native, CoC: 2	FAC	Yes		✓		✓		
quaking aspen	*Populus tremuloides*	S5, G5, Native, CoC: 3	FACU	Yes	✓	✓	✓	✓	✓	✓
oldfield cinquefoil	*Potentilla simplex*	S5, G5, Native, CoC: 0	FACU	Yes		✓				
Eurasian selfheal	*Prunella vulgaris*	SNA, G5, Not native, Naturalized	FAC	No					✓	
pin cherry	*Prunus pensylvanica*	S5, Native, CoC: 4	FACU	Yes		✓				
black cherry	*Prunus serotina*	S5, G5, Native, CoC: 4	FACU	Yes		✓	✓	✓	✓	
bracken fern	*Pteridium aquilinum*	S5, G5, Native, CoC: 3	FACU	Yes			✓			
white oak	*Quercus alba*	S5, Native, CoC: 7	FACU	Yes		✓				
red oak	*Quercus rubra*	S5, Native, CoC: 7	FACU	Yes		✓	✓			
tall buttercup	*Ranunculus acris*	SNA, G5, Not native, Naturalized	FAC	No	✓	✓			✓	
creeping buttercup	*Ranunculus repens*	SNA, GNR, Not native, Naturalized	FAC	No					✓	
cursed crowfoot	*Ranunculus sceleratus*	SNR, Native, CoC: 3	OBL	Yes	✓			✓		
Japanese knotweed	*Reynoutria japonica*	SNA, Not native, Naturalized	FACU	No				✓		
alder buckthorn	*Rhamnus alnifolia*	S4, G5, Native, CoC: 9	OBL	Yes		✓				
buckthorn	*Rhamnus cathartica*	SNA, GNR, Not native, Naturalized	FAC	No		✓	✓		✓	✓
staghorn sumac	*Rhus typhina*	S5, G5, Native, CoC: 1	-	Yes		✓				
multiflora rose	*Rosa multiflora*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓	✓	✓	✓	✓
swamp rose	*Rosa palustris*	S5, G5, Native, CoC: 9	OBL	Yes				✓		✓
common blackberry	*Rubus allegheniensis*	S5, G5, Native, CoC: 3	FACU	Yes		✓	✓			
swamp dewberry	*Rubus hispidus*	S5, G5, Native, CoC: 7	FACW	Yes			✓			
red raspberry	*Rubus ideaus*	SNA, G5, Not native, Naturalized	FACU	No		✓	✓			
dwarf raspberry	*Rubus pubescens*	S5, Native, CoC: 8	FACW	Yes			✓			
sheep sorrel	*Rumex acetosella*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
curly dock	*Rumex crispus*	SNA, GNR, Not native, Naturalized	FAC	No	✓	✓	✓		✓	✓
broad-leaved dock	*Rumex obtusifolius*	SNA, Not native, Naturalized	FAC	No		✓			✓	
swamp dock	*Rumex verticillatus*	S5, G5, Native, CoC: 6	OBL	Yes			✓			
Bebb's willow	*Salix bebbiana*	S5, G5, Native, CoC: 3	FACW	Yes			✓			
pussy willow	*Salix discolor*	S5, G5, Native, CoC: 3	FACW	Yes		✓	✓	✓		
black willlow	*Salix nigra*	S5, G5, Native, CoC: 5	OBL	Yes		✓				
basket willow	*Salix purpurea*	SNA, G5, Not native, Naturalized	FACW	No			✓			
common elderberry	*Sambucus nigra*	S5, G5, Native, CoC: 4	FACW	Yes				✓		
lizard's tail	*Saururus cernuus*	S5, G5, Native, CoC: 6	OBL	Yes		✓				
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
dark-green bulrush	*Scirpus atrovirens*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓			
woolgrass	*Scirpus cyperinus*	S5, G5, Native, CoC: 4	OBL	Yes		✓		✓	✓	✓
mad dog skullcap	*Scutellaria lateriflora*	S5, G5, Native, CoC: 7	OBL	Yes			✓			
horse nettle	*Solanum carolinense*	S5, Native, CoC: 0	FACU	Yes					✓	
bitter-sweet nightshade	*Solanum dulcamara*	SNA, Not native, Naturalized	FAC	No		✓	✓			
tall goldenrod	*Solidago altissima*	S5, Native, CoC: 1	FACU	Yes		✓				✓
Canada goldenrod	*Solidago canadensis*	S5, G5, Native, CoC: 0	FACU	Yes	✓		✓		✓	
swamp goldenrod	*Solidago gigantea*	S5, G5, Native, CoC: 3	FACW	Yes		✓			✓	✓
common wrinkle-leaved goldenr	*Solidago rugosa*	S5, G5, Native, CoC: 1	FAC	Yes	✓	✓	✓		✓	✓
spiny-leaved sow thistle	*Sonchus asper*	SNA, GNR, Not native, Naturalized	FACU	No			✓	✓		
green-fruited bur-reed	*Sparganium chlorocarpum*	S5, Native, CoC: 4	OBL	Yes			✓			
grass-leaved stitchwort	*Stellaria graminea*	SNA, GNR, Not native, Naturalized	UPL	No					✓	
white panicle aster	*Symphyotrichum lanceolatum*	S5, G5, Native, CoC: 1	FACW	Yes			✓		✓	✓
calico aster	*Symphyotrichum lateriflorum*	S5, G5, Native, CoC: 0	FAC	Yes		✓			✓	
new england aster	*Symphyotrichum novae-angliae*	S5, Native, CoC: 1	FACW	Yes						✓
purple-stemmed aster	*Symphyotrichum puniceum*	S5, G5, Native, CoC: 4	OBL	Yes	✓		✓		✓	✓
skunk cabbage	*Symplocarpus foetidus*	S5, G5, Native, CoC: 5	OBL	Yes				✓		
common dandelion	*Taraxacum officinale*	SNA, G5, Not native, Naturalized	FACU	No	✓	✓	✓	✓	✓	✓
marsh fern	*Thelypteris palustris*	S5, G5, Native, CoC: 4	FACW	Yes		✓				
American basswood	*Tilia americana*	S5, G5, Native, CoC: 7	FACU	Yes			✓			

poison ivy	*Toxicodendron radicans*	S5, Native, CoC: 3	FAC	Yes	✓	✓	✓	✓	✓	✓
red clover	*Trifolium pratense*	SNA, Not native, Naturalized	FACU	No	✓			✓	✓	✓
white clover	*Trifolium repens*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓			✓	✓
red trillium	*Trillium erectum*	S5, G5, Native, CoC: 7	FACU	Yes				✓		
white trillium	*Trillium grandiflorum*	S5, G5, Native, CoC: 7	-	Yes				✓		
eastern hemlock	*Tsuga canadensis*	S5, G5, Native, CoC: 7	FACU	Yes				✓	✓	
tower mustard	*Turritis glabra*	S5, Native, CoC: 2	UPL	No			✓			
coltsfoot	*Tussilago farfara*	SNA, GNR, Not native, Naturalized	FACU	No		✓				
narrowleaf cattail	*Typha angustifolia*	S5, G5, Native, CoC: 1	OBL	No			✓			✓
hybrid cattail	*Typha glauca*	SNR, GNR, Native	OBL	No	✓	✓	✓			
wide-leaved cattail	*Typha latifolia*	S5, G5, Native, CoC: 1	OBL	Yes		✓	✓			
cattail	*Typha sp.*	-	OBL	-	✓	✓	✓	✓	✓	✓
American elm	*Ulmus americana*	S5, G5, Native, CoC: 4	FACW	Yes		✓	✓	✓		✓
false hellebore	*Veratrum viride*	S5, G5, Native, CoC: 4	FACW	Yes				✓		
moth mullein	*Verbascum blattaria*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
blue vervain	*Verbena hastata*	S5, Native, CoC: 3	FACW	Yes	✓	✓			✓	
smooth arrowwood	*Viburnum dentatum*	S5, Native, CoC: 3	FAC	Yes	✓	✓	✓		✓	✓
nannyberry	*Viburnum lentago*	S5, G5, Native, CoC: 4	FAC	Yes		✓	✓		✓	✓
tufted vetch	*Vicia cracca*	SNA, G5, Not native, Naturalized	-	No			✓			✓
common blue violet	*Viola sororia*	S5, Native, CoC: 3	FAC	Yes		✓				
riverbank grape	*Vitis riparia*	S5, G5, Native, CoC: 3	FAC	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 15:07:39 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
Zip: 14818
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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

July 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 those with a New York State Natural Heritage Invasiveness ranking of high or very high. Any others identified by NYSDEC or USACE shall be incorporated into this ISMP.

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 or leaving off-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**: To effectively prevent the introduction or spread of invasive species without disrupting construction activities, the following cleaning protocols will be implemented:
    - **Incoming Equipment:** All equipment entering the site will be visually inspected by onsite construction monitors. If soil, plant material, or debris is observed, equipment will be cleaned prior to entering sensitive work areas using appropriate methods such as manual removal or pressure washing.
    - **Active Monitoring During Construction:** Construction monitors will observe operations and identify equipment that has entered areas with known or suspected invasive species presence, particularly during wet conditions or where vegetative debris is likely to accumulate.

- **Equipment Exit Procedures:** Any equipment identified as having operated in areas with potential for invasive seed or propagule exposure will be cleaned using onsite pressure washing stations before leaving the site or transitioning between sensitive areas. This will help prevent the transfer of invasive material both within and beyond the project boundaries.
- **Seasonal Considerations:** Construction monitors may increase cleaning vigilance during key seed dispersal periods or when conditions increase the likelihood of soil and plant matter transport.
- **Compliance and Documentation:** Construction monitors will document cleaning efforts as part of routine field oversight.

- **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 (i.e. integrated pest management principles).

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 (**90% native cover** standard set in the mitigation plan), 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:
    - 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 (Preferred Method):
    - Hand-pull small infestations, removing all roots.
    - Cut flower heads before seed drop to prevent spread.
2. Biological Control Control(Unlikely to be implemented due to abundance of beetles throughout the great lakes region):
    - Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
    - Any releases would be monitored over multiple years to assess impact.
3. Chemical Control:
    - Spot treat with glyphosate-based pesticide in late summer.

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

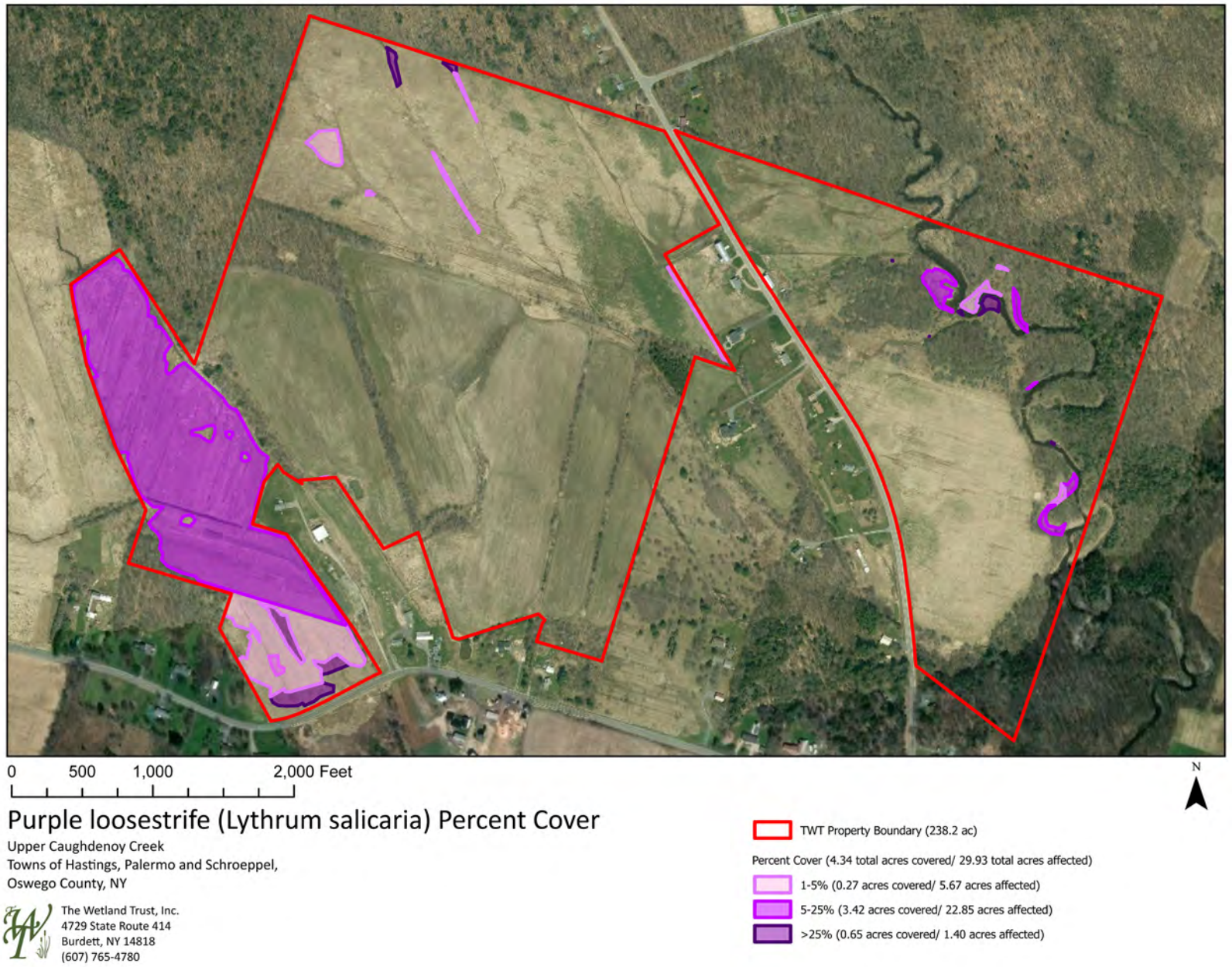

Figure 8-2. Reed Canary Grass Percent Cover

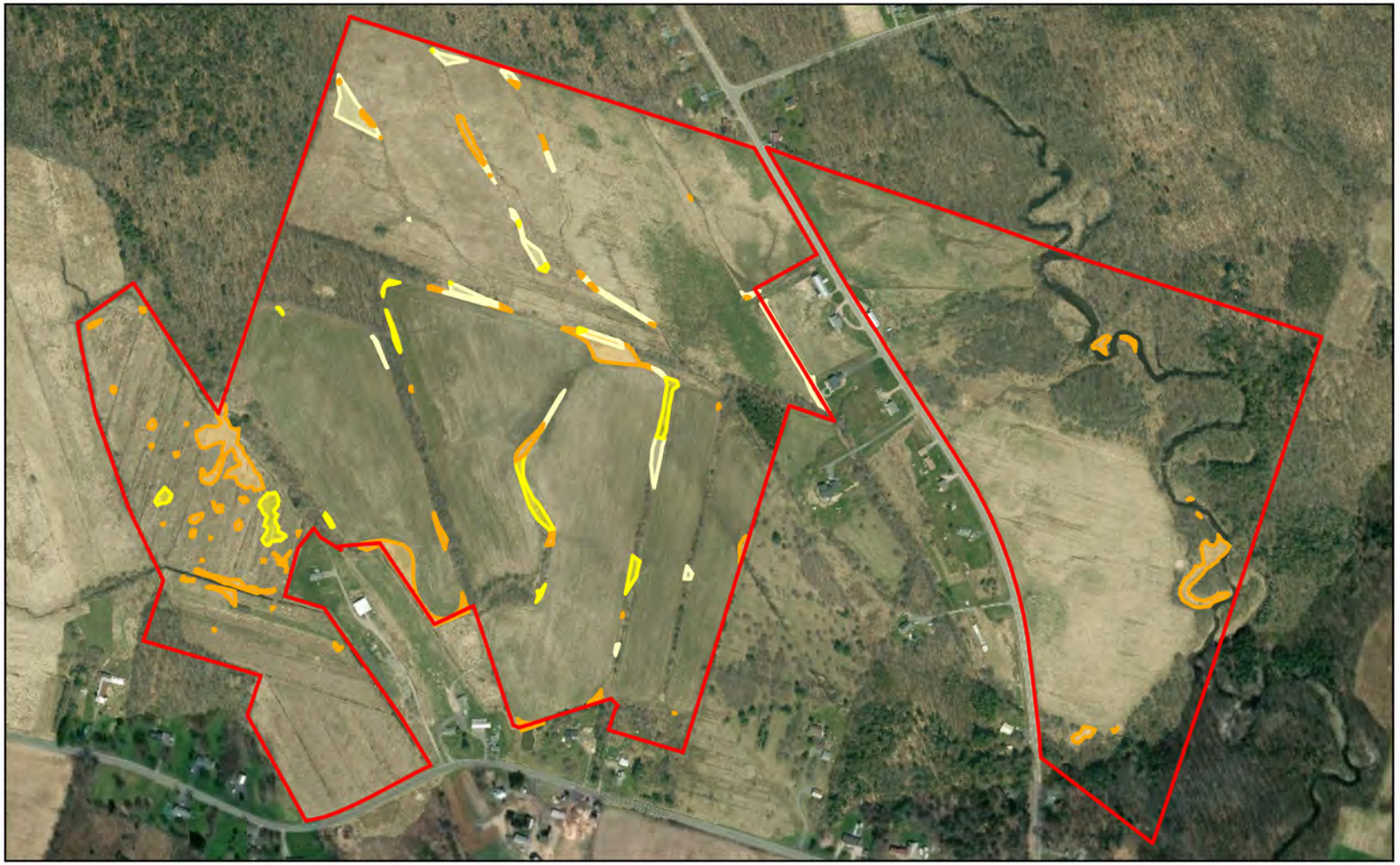

Figure 8-3. Phragmites Percent Cover

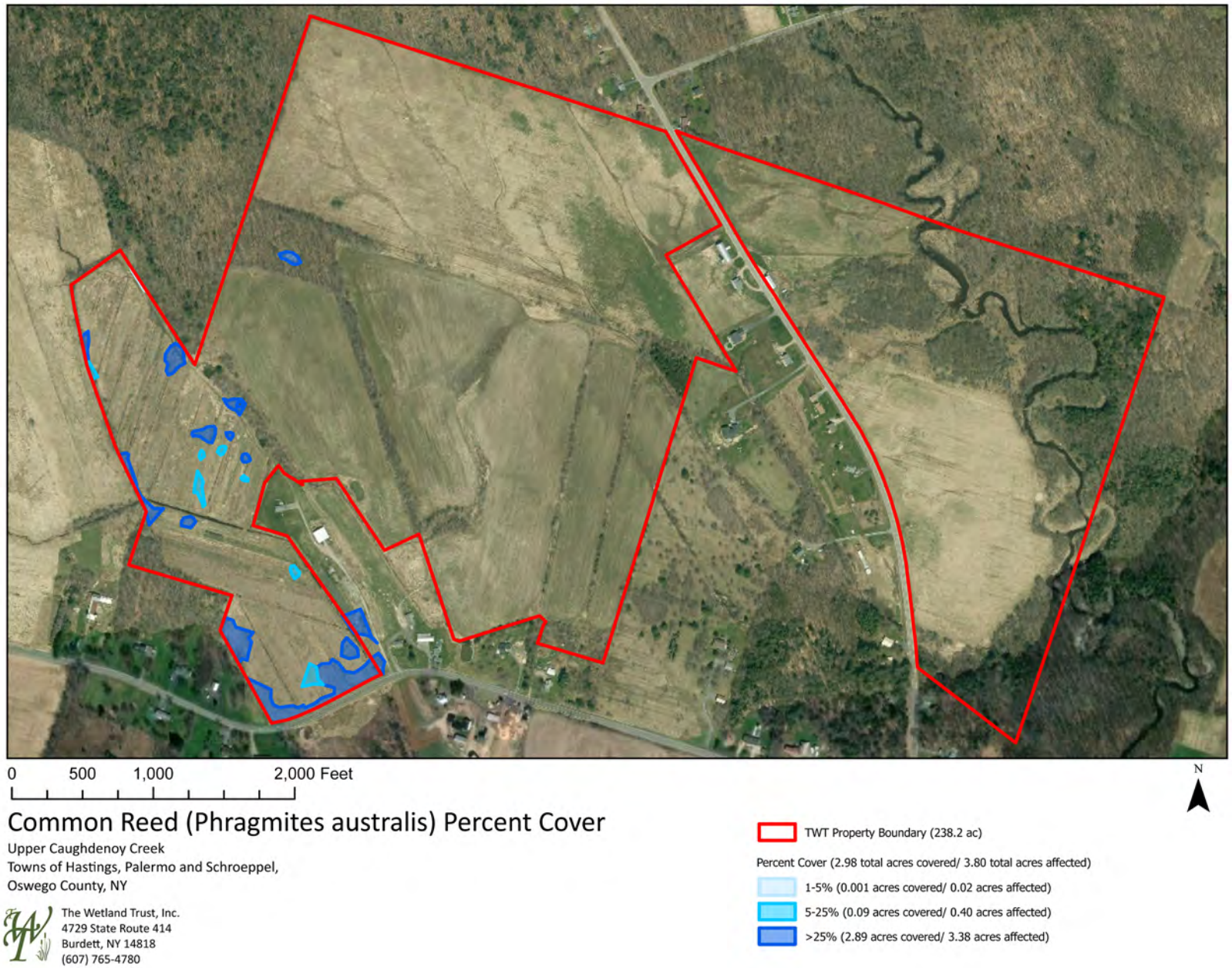

Figure 8-4. Cattail Percent Cover

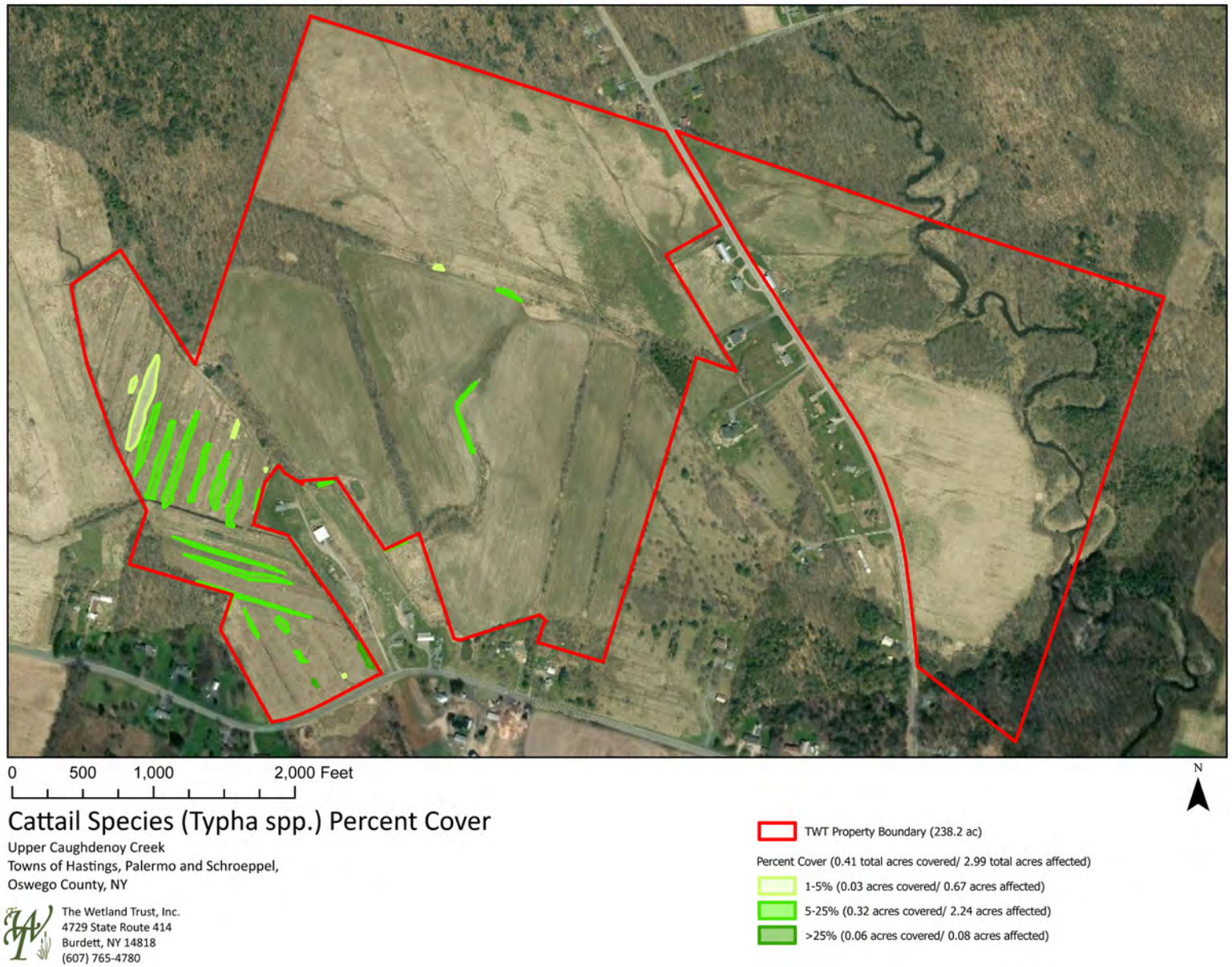

Table 8-1: Invasive Species Coverage at Upper Caughdenoy Creek				
Invasive Species	**1-5% Cover (Affected**	**5-25% Cover (Affected**	**>25% Cover (Affected**	**Total Area (Affected Acres)**
Reed Canary Grass (*Phalaris arundinacea*)	1.63	1.09	3.87	6.59
Purple Loosestrife (*Lythrum salicaria*)	5.67	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.

EDR

a better environment

PHASE IA ARCHAEOLOGICAL SURVEY AND PHASE IB WORK PLAN

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Upper Caughdenoy Creek, Buxton Creek, and Fish Creek Wetland Restoration Project

Town of Hastings, Oswego County, New York

Prepared for:

The Wetland Trust, Inc.
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June 2025

Phase IA Archaeological Survey

Upper Caughdenoy Creek, Buxton Creek, and Fish Creek Wetland Restoration Project

Town of Hastings, Oswego County, New York

Prepared for:

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June 2025

MANAGEMENT SUMMARY

NYSHPO Project Review Number:	25PR01429
Involved State and Federal Agencies:	U.S. Army Corps of Engineers (Section 106 of the National Historic Preservation Act); New York State Office of Parks, Recreation and Historic Preservation (Section 14.09).
Phase of Survey:	Phase IA Archaeological Survey
Location Information:	Town of Hastings, Oswego County, New York
USGS 7.5-Minute Quadrangle:	*Central Square, NY*
Survey Area:	
Project Description:	A proposed wetland restoration project.
Project Area:	The general area of land across three sites (Upper Caughdenoy Creek, Buxton Creek, and Fish Creek) within which construction will take place. The Project Area encompasses approximately 673 acres.
Limits of Disturbance	The Limits of Disturbance includes the wetland work areas that will experience ground disturbance, totaling approximately 244 acres across the Project Area: approximately 106 acres at Upper Caughdenoy Creek, approximately 114 acres at Buxton Creek, and approximately 24 acres at Fish Creek, all located within agricultural lands.
Archaeological Resources Overview:	There are no previously recorded archaeological sites within the Project Area; four previously recorded archaeological sites are located within 1 mile of the Project Area.
Report Authors:	Moira Magni; Janna Napoli, RPA, MAA; Joseph Kwiatek
Date of Report:	June 2025

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Attachment A. Agency and Nations Correspondence

ABSTRACT

Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) conducted a Phase IA Archaeological Survey for the Upper Caughdenoy Creek, Buxton Creek, and Fish Creek Wetland Restoration Project (the Project) on behalf of The Wetland Trust, Inc. (The Wetland Trust). The Project is a wetland restoration project located within the Town of Hastings, Oswego County, New York. The Project Area consists of three sites (Upper Caughdenoy Creek, Buxton Creek, and Fish Creek) totaling approximately 673 acres and is the general area of land within which construction will take place. Construction of the proposed Project will include ground disturbing activities within Limits of Disturbance defined by wetland work areas. The Limits of Disturbance totals 244 acres across the Project Area: approximately 106 acres at Upper Caughdenoy Creek, approximately 114 acres at Buxton Creek, and approximately 24 acres at Fish Creek, all located within agricultural lands. As a result of initial consultation conducted by The Wetland Trust, the New York State Office of Parks, Recreation and Historic Preservation (NYSHPO) rendered opinions that no historic properties, including archaeological and/or historic resources, would be effected by the Project. As such, no additional archaeological survey is recommended.

1.0 INTRODUCTION

On behalf of The Wetland Trust, Inc. (The Wetland Trust), Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) conducted a Phase IA Archaeological Survey for the proposed Upper Caughdenoy Creek, Buxton Creek, and Fish Creek Wetland Restoration Project (the Project), located in the Town of Hastings in Oswego County, New York (Figure 1-1). The information and recommendations included in this report are intended to assist the Onondaga Nation, the New York State Office of Parks, Recreation and Historic Preservation (NYSHPO), the U.S. Army Corps of Engineers (USACE), and other New York State and/or federal agencies in their review of the Project under Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Law, and/or Section 106 of the National Historic Preservation Act, as applicable. As a result of initial consultation conducted by The Wetland Trust, the NYSHPO rendered opinions that no historic properties, including archaeological and/or historic resources, would be effected by the Project (Section 1.3; Attachment A). The Onondaga Nation, via Section 106 consultation with the USACE, has requested a Phase IA Archaeological Survey report for the Project.

1.1 Purpose of the Investigation

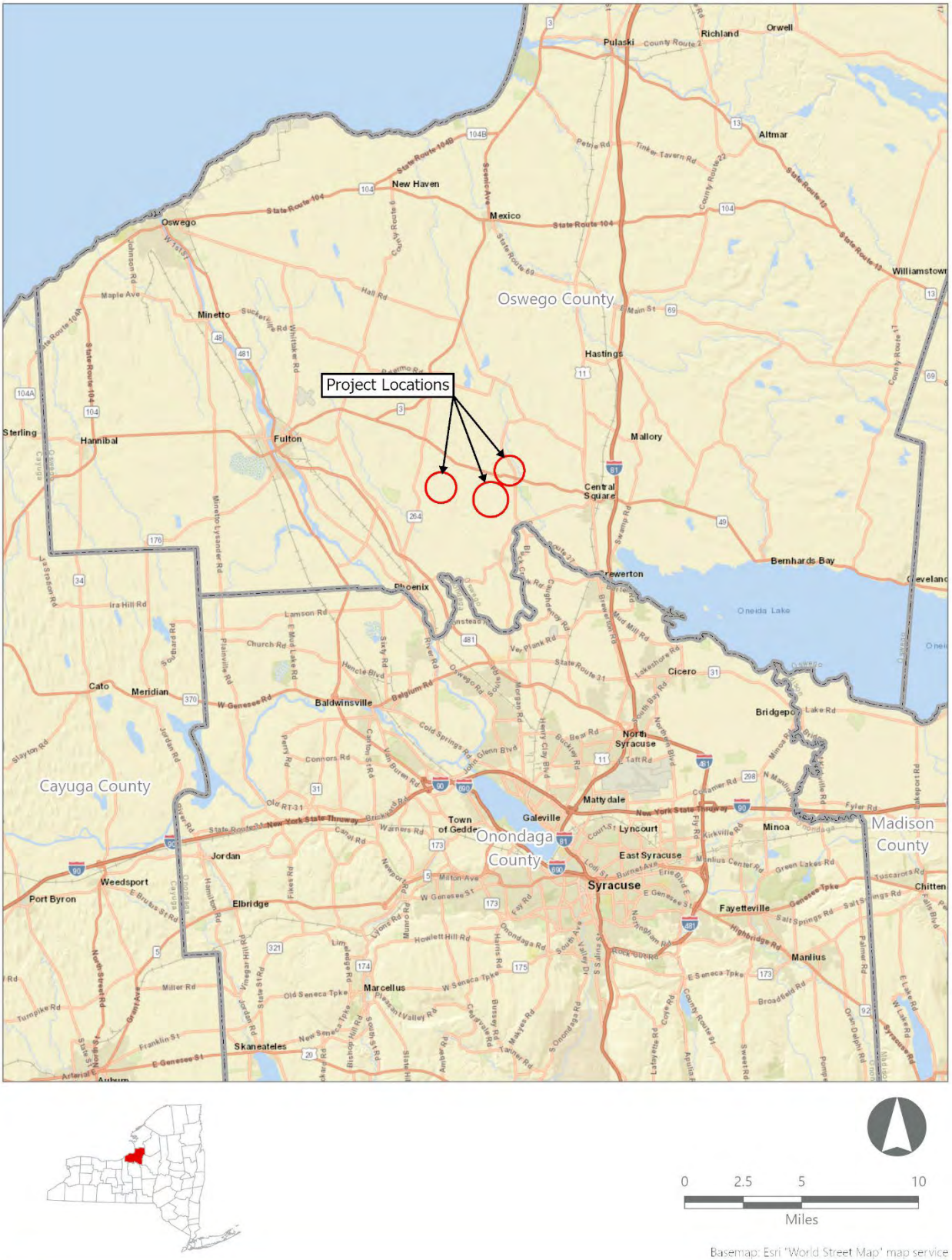
The purposes of the Phase IA Archaeological Survey are as follows:

- Describe previously identified archaeological resources and/or sites of cultural or religious significance that are located within the Project Area.

- Propose a methodology to identify archaeological resources within the Project Area, evaluate their eligibility for the State/National Register of Historic Places (S/NRHP), and assess the potential effects of the Project on those resources.

All cultural resources studies undertaken by EDR are conducted under the supervision of professionals who satisfy the qualifications criteria per the Secretary of the Interior's Standards for archaeology and historic preservation (36 Code of Federal Regulations 61), as appropriate. This Phase IA report was prepared in accordance with applicable portions of the NYSHPO's *Phase I Archaeological Report Format Requirements* (NYSHPO, 2005).

Figure 1-1. Regional Project Location



1.2 Project Location and Description

The Project is a proposed wetland restoration located within the Town of Hastings, Oswego County, New York. The Project will include compensatory wetland mitigation consisting of the restoration and rehabilitation of wetlands and streams across three sites[1] to compensate for unavoidable impacts to aquatic resources resulting from the construction of the Micron Semiconductor facility campus in the Town of Clay, New York. These mitigation efforts are designed to replace lost wetland functions and values, ensuring compliance with regulatory requirements. Construction involves disabling existing drainage structures in cultivated fields, restoring wetland basins, installing low earthen berms, and restoring hummock and hollow microtopography for vegetative biodiversity.

The following terms are used throughout this document to describe the proposed Project:

Project	Collectively refers to all components of the proposed wetland restoration.
Project Area	The general area of land across three sites (Upper Caughdenoy Creek, Buxton Creek, and Fish Creek) within which construction will take place. The Project Area totals approximately 673 acres.
Limits of Disturbance	The Limits of Disturbance includes the wetland work areas that will experience ground disturbance. The LOD totals 244 acres across the Project Area: approximately 106 acres at Upper Caughdenoy Creek, approximately 114 acres at Buxton Creek, and approximately 24 acres at Fish Creek, all located within agricultural lands.

The lands being evaluated to host the Project are typical for a rural, agricultural area in central New York and consist of cultivated crop fields, hay fields, pastures, fallow fields in various stages of secondary succession, shrubland, wetlands, and small patches of undeveloped, second-growth forest (Figure 1-2).

[1] Note that Phase IA Archaeological Survey of an additional three compensatory wetland mitigation sites (Lower Caughdenoy Creek, Oneida River, and Sixmile Creek) associated with the Micron Semiconductor facility was previously conducted by EDR under separate cover (EDR, 2025).

Figure 1-2. Project Area

1.3 Agency and Nations Consultation

The initial consultation for the Project was undertaken by The Wetland Trust and NYSHPO, while subsequent Section 106 and Nations consultation is being undertaken by the USACE. Note that throughout the consultation process the names of the three sites comprising the Project Area and their corresponding NYSHPO project review numbers have been changed and/or consolidated.[2] Consultation for the Project is now being conducted under the consolidated NYSHPO project review number 25PR01429.

Agency and Nations consultation involving The Wetland Trust for the Project is included in Appendix A and consists of the following:

- **August 9, 2024 –** The NYSHPO issued a project review letter for Upper Caughdenoy Creek (Route 33), with the opinion that no historic properties, including archaeological and/or historic resources, would be affected by the Project (NYSHPO, 2024a).

- **August 13, 2024 –** The NYSHPO issued project review letters for Buxton Creek (Bell Road) and Fish Creek (Perry Road), with the opinion that no historic properties, including archaeological and/or historic resources, would be affected by the Project (NYSHPO, 2024b and 2024c).

- **September 9, 2024 –** The NYSHPO issued a project review letter for Upper Caughdenoy Creek (Booth, LaPointe, Wisner East), with the opinion that no historic properties, including archaeological and/or historic resources, would be affected by the Project (NYSHPO, 2024d and 2024e and 2024f).

- **October 16, 2024 –** The NYSHPO issued a project review letter for Buxton Creek (Bell Road South), with the opinion that no historic properties, including archaeological and/or historic resources, would be affected by the Project (NYSHPO, 2024g).

- **January 8, 2025** – The Wetland Trust provided a letter to the USACE and the New York State Department of Environmental Control (NYSDEC) explaining the three sites comprising the Project Area (and other wetland mitigation sites being consulted on under 25PR01429) and the corresponding name changes/consolidation (TWT, 2025).

- **February 27, 2025 –** The NYSHPO informed The Wetland Trust via email that all NYSHPO review of the Project was being consolidated under 25PR01429 (NYSHPO, 2025).

- **March 5, 2025 –** The USACE informed The Wetland Trust via email that the Onondaga Nation had requested a Phase IA archaeological survey report of all proposed wetland mitigation sites (USACE, 2025).

[2] At the time of initial submittal to NYSHPO the Upper Caughdenoy Creek site was formerly Booth (24PR08086), LaPointe (24PR08085), Route 33 (24PR07284), and Wisner East (24PR08091); the Buxton Creek site was formerly Bell Road and Bell Road South (24PR07316 and 24PR09240); and the Fish Creek Site was formerly Perry Road (24PR07315).

2.0 PHASE IA BACKGROUND AND SITE HISTORY

The following subsections provide environmental and historic contexts for the Project Area, as well as information about cultural resources surveys that have been previously conducted in the vicinity.

2.1 Geology and Soils

The Project Area is located within the Erie-Ontario Lowlands physiographic province, which borders the Great Lakes and generally contains areas of low topographic relief. Topography within the Project Area varies from relatively level to gently sloping terrain, and elevations within the Project Area range approximately 378 and 454 feet above mean sea level. The Project Area is approximately 5.3 miles northwest of Oneida Lake where it feeds into the Oneida River, which flows westward from Oneida Lake to the Seneca River and joins the Oswego River before emptying into Lake Ontario.

The surficial geology of the LOD is summarized in Table 1 and depicted on Figure 2-1. As soils within the LOD predominantly consist of lacustrine soils and are therefore unlikely to contain deeply buried cultural horizons, any proposed archaeological testing in these soils should extend a minimum of 10 centimeters into sterile subsoil.

Table 1. Surficial Geology in LOD (NYSM, 1999)

Surficial Geology	Acres in LOD	Percent of LOD	Composition[1]
Lacustrine Silt and Clay (LSC)	227	93	Generally laminated silt and clay, deposited in proglacial lakes, generally calcareous, low permeability, potential land instability, thickness variable (up to 50 meters).
Till (T)	17	7	Variable texture (boulders to silt), usually poorly sorted sand-rich diamict, deposition beneath glacier ice, permeability varies with compaction, thickness variable (1-50 meters)

[1] Composition information is derived from material explanation used by New York State Museum (NYSM, 2025).

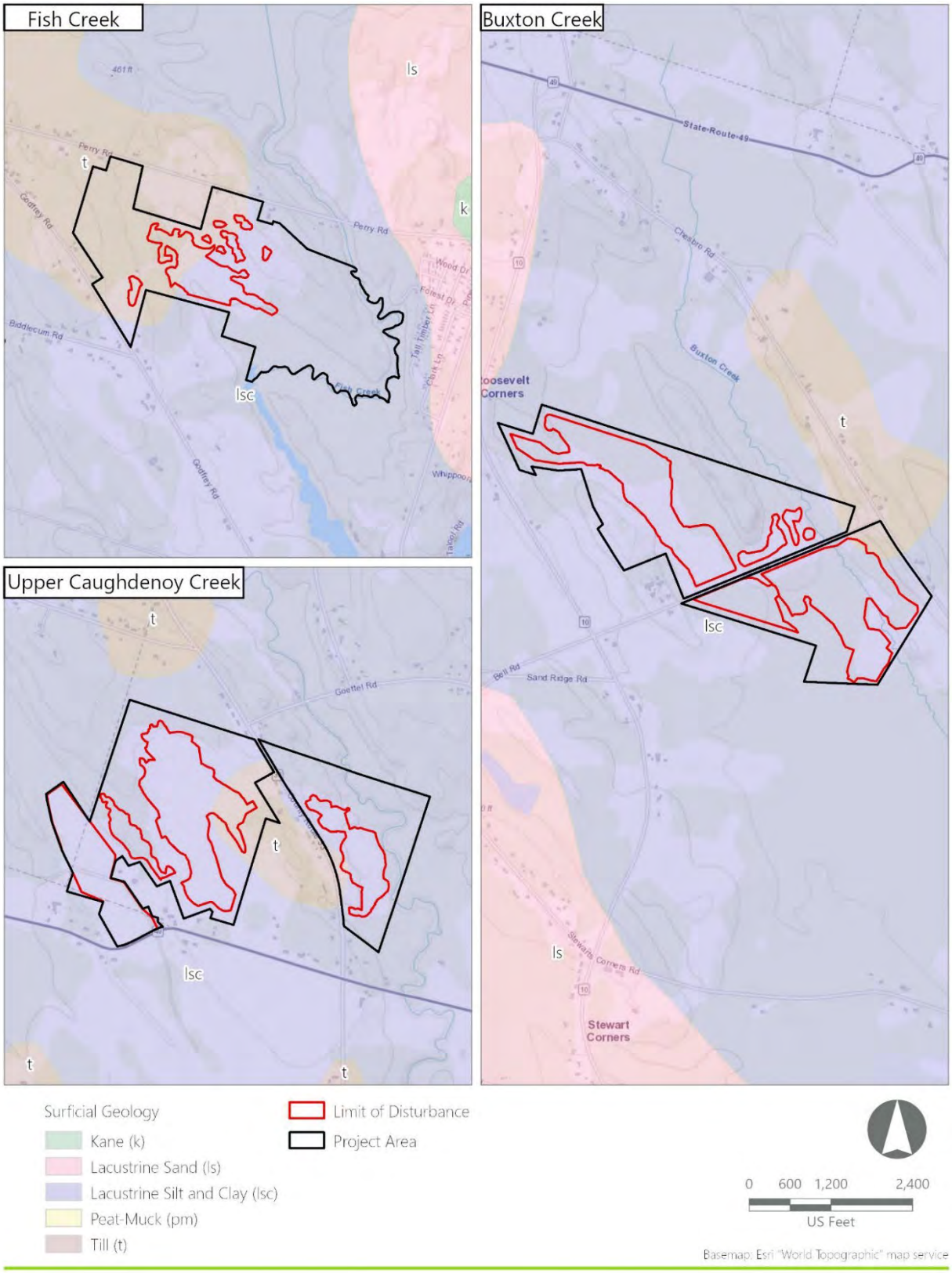
EDR reviewed online data from the Natural Resources Conservation Service (NRCS, 2025) for LOD soils data. In total, 20 individual soil units encompass the entirety of the LOD. However, ten soil units account for less than 2% of the LOD. Ten soil units constitute approximately 92% of the LOD and are summarized in Table 2.

Table 2. Common Soils Mapped within the LOD

Soil Series Name	Percent of LOD	Soil Horizon & Depth (in)	Description	Slope, Drainage, & Landform
Madalin silt loam (Ma)	24	Ap: 0 to 8 Btg1: 8 to 16 Btg2: 16 to 25 Btg3" 25-33 C: 33-79	Silt loam Silty clay loam Silty clay Silty clay Stratified silt to clay	0-3% slopes. Moderately deep, poorly drained soils on depressions. Formed in glaciolacustrine deposits derived from calcareous shale.

Soil Series Name	Percent of LOD	Soil Horizon & Depth (in)	Description	Slope, Drainage, & Landform
Rhinebeck silt loam (RhB)	17	H1: 0 to 8 H2: 8 to 16 H3: 16 to 39 H4: 39 to 53	Silt loam Silty clay loam Silty clay Silty clay	0-2% slopes. Moderately deep, poorly drained soils in lake plains. Formed in clayey and silty glaciolacustrine deposits.
Canandaigua silt loam (Cd)	16	H1: 0 to 7 H2: 7 to 33 H3: 33 to 50	Silt loam Silt loam Stratified silt to very fine sand	0-3% slopes. Moderately deep poorly drained soils on depressions. Formed in silty and clayey glaciolacustrine deposits.
Rhinebeck silt loam (RhA)	11	H1: 0 to 8 H2: 8 to 16 H3: 16 to 39 H4: 39 to 53	Silt loam Silty clay loam Silty clay Silty clay	0-2% slopes. Moderately deep, poorly drained soils in lake plains. Formed in clayey and silty glaciolacustrine deposits.
Palms Muck (Pa)	7	H1: 0 to 26 H2: 26 to 55	Muck Fine sandy loam	0-2% slopes. Very poorly drained soils in marshes or swamps. Formed in organic material over loamy glacial drift.
Lamson very fine sandy loam (Lf)	5	H1: 0 to 9 H2: 9 to 50 H3: 50 to 60	Very fine sandy loam Very fine sandy loam Stratified fine sand to very fine sand	0-3% slopes. Moderately deep, poorly drained soils on depressions. Formed in deltaic or glaciolacustrine deposits with a high content of fine and very fine sand.
Minoa very fine sandy loam (Mn)	4	H1: 0 to 8 H2: 8 to 26 H3: 26 to 31 H4: 31 to 60	Very fine sandy loam Loamy very fine sand Loamy very fine sand Very fine sandy loam	0-3% slopes. Moderately deep, somewhat poorly drained soils on deltas or lake plains. Formed in deltaic or glaciolacustrine deposits with a high content of fine and very fine sand.
Scriba gravelly fine sandy loam (ScB)	3	H1: 0 to 7 H2: 7 to 14 H3: 14 to 36 H4: 36 to 50	Gravelly fine sandy loam Gravelly fine sandy loam Gravelly fine sandy loam Gravelly fine sandy loam	0-8% slopes. Somewhat poorly drained soils on till plains or drumlins. Formed in loamy till dominated by sandstone.
Carlisle Muck (Ce)	3	H1: 0 to 56	Muck	0-1% slopes. Very poorly drained soils in marshes or swamps. Formed from deep organic material.
Raynham silt loam (RaB)	2	H1: 0 to 9 H2: 9 to 36 H3: 36 to 60	Silt loam Silt loam Stratified silt to very fine sand to fine sand	0-6% slopes. Moderately deep, poorly drained soils in lake plains. Formed in glaciolacustrine, eolian, or old alluvial deposits, comprised mainly of silt and very fine sand.

Figure 2-1. Topography and Surficial Geology within the LOD



2.2 Existing Conditions

The proposed Project is located in a rural part of Oswego County. Existing conditions within the Project Area were evaluated with aerial imagery, topographic maps, digital elevation model data, and National Land Cover Database data (MRLCC, 2021). Land use within the Project Area is typical for a rural, agricultural area in central New York and consists of cultivated crop fields, hay fields, pastures, fallow fields in various stages of secondary succession, shrubland, wetlands, and patches of undeveloped, second-growth forest. General observations of existing conditions within the Project Area include the following:

- Agricultural fields comprise a large portion of the Project. Approximately 96% of the Project Area is used for pasture, hay fields, and cultivated crops. Many of these fields have been artificially drained with ditches (MRLCC, 2021).
- Woody and emergent herbaceous wetlands account for less than 1% of the Project Area (MRLCC, 2021).
- A small portion of the Project is forested, with deciduous forests accounting for less than 1% of the Project Area (MRLCC, 2021).
- Less than 1% of the Project Area contains developed, open space.
- Disturbances in the Project Area include drainage ditches along roadways, buried utilities, and areas of cut/fill.

Previous ground disturbance within the Project Area is, for the most part, limited to previous or ongoing agricultural activities. However, farming is not considered significant in terms of its potential to affect the integrity of archaeological resources (NYAC, 1994; NYSHPO, 2005).

Some areas immediately adjacent to existing roads within the Project Area include drainage ditches, culverts, buried utilities, and areas of cut and/or fill. With the exception of limited drainage ditches, culverts, buried utilities, and areas of cut and/or fill, the Project Area in general does not appear to have been subjected to significant previous ground disturbance.

2.3 Previous Archaeological Surveys

EDR consulted the NYSHPO's online Cultural Resource Information System (CRIS) database, and county maps used by the NYSHPO prior to the implementation of the CRIS database, to determine if previous archaeological surveys have been conducted within or within 1 mile of the Project Area. According to the CRIS database, no previous archaeological surveys overlap with the Project Area. Six previously conducted archaeological surveys are located within 1 mile from the Project Area (Table 3).

Table 3. Previous Archaeological Surveys within 1 mile of the Project Area

NYSHPO Survey Number	Year	Report Name	Sites Identified	Reference
10SR60779	2010	Cultural Resources Reconnaissance Survey Report: PIN 3805.44.121 (3 of 5), New York State Route 264 @ Biddlecum Road, Town of Schroeppel (MCD 07518), Oswego County, New York	No sites identified	NYSM, 2010
05SR55830	2005	Phase I Cultural Resource Investigation for the Clay Water Project, Towns of Clay, Schroeppel, and Hastings, Onondaga and Oswego Counties, New York	1 Euro-American site identified	PAF, 2005
18SR56142	2018	Phase IA Archaeological Background and Literature Review and Phase IB Archaeological Field Reconnaissance Report of the Proposed Ainslee Drive Sanitary Sewer Study Project Area in the Town of Schroeppel, Oswego County, New York	No sites identified	Archaeological Alliance Services, 2018
N/A	1986	Stage I Cultural Resources Survey, Proposed Sewer Line Construction, Hamlet of Caughdenoy, Town of Hastings, Oswego County, New York	1 Euro-American site identified	Oberon & Johnson, 1986
04SR54584	2004	Phase IB Cultural Resource Survey Fuller Road Water District – Part 1, Town of Hastings, Oswego County, New York	1 Euro-American site identified	Pratt & Pratt, 2004
N/A	1977	Cultural Resource Survey of Baldwinsville-Seneca Knolls Sanitary District in and near the Village of Baldwinsville, Onondaga County, New York	1 Paleo-Indian Indigenous Site identified	Pratt & Pratt, 1977

2.4 Previously Identified Archaeological Sites

EDR consulted the NYSHPO's online CRIS database to determine if previously recorded archaeological sites have been identified within or surrounding 1 mile of the Project Area. According to the CRIS database there are no identified archaeological sites within the Project Area. Four previously recorded archaeological sites are located within a 1-mile buffer of the Project Area. These sites are detailed in Table 4.

Table 4. Previously Recorded Archaeological Sites within 1 mile of the Project Area

USN	Site Name	Site Description	S/NRHP Status	Distance from Project
07518.000006	Potts Site (NYSM Site #1257)	Paleo-Indian Indigenous Lithic Scatter	Undetermined	0.9 miles
07507.000020	Blacksmith Shop Site	Euro-American Foundation	Undetermined	0.9 miles

USN	Site Name	Site Description	S/NRHP Status	Distance from Project
07507.000030	Caughdenoy Historic Site	Euro-American Foundation and Architectural Artifact Scatter	Not Eligible	0.9 miles
07507.000029	M. Brockway Historic Site	Euro-American Artifact Scatter	Undetermined	0.6 miles

2.5 Cemeteries

EDR consulted the NYSHPO's online CRIS database, U.S. Geological Survey (USGS) topographic quadrangles, nineteenth century historic maps, and Find a Grave to determine if previously identified/mapped cemeteries are located within or adjacent (i.e., within 500 feet) to the Project Area. According to these sources, no cemeteries are mapped within or adjacent to the Project Area.

2.6 History of the Project Area

Archaeological evidence suggests that initial occupation in what is now Central New York began with Paleoindian groups following the retreating Laurentide Ice Sheet around 13,000 years before present (BP). During the ice sheet's retreat, much of Central New York was inundated by pro-glacial Lake Iroquois (essentially a major expansion of Lake Ontario), which quickly drained out the Mohawk and later St. Lawrence River Valleys as the ice sheet receded to the north (Lothrop et al., 2014). The first human groups to enter this post-glacial landscape specialized in hunting large game (likely caribou; and possibly mammoth and mastodon) in the recently exposed periglacial tundra and spruce forests. These groups also exploited the diverse floral resources, small game, and fish available in the post-glacial ecosystems (Ritchie and Funk, 1973). Although populations during this time were never high, Central New York was densely settled relative to other parts of the continent. Lothrop et al. (2014) note that the earliest sites in Central New York occur within the former footprint of pro-glacial Lake Iroquois. These early groups were highly mobile, but there is also evidence of moderate to large aggregations in certain places during the year (e.g., the Bull Brook sites in Massachusetts) (Curran, 1999).

Post-Glacial conditions stabilized by approximately 10,000 BP, and small groups of hunter-gatherers reduced their mobility to exploit the diverse resources available to them in the newly emerging mixed deciduous/coniferous forests. Although megafauna were now extinct, larger to medium game such as deer, elk, and moose, and perhaps woodland caribou, were still available, as were small game, fish, and wild plants (Funk, 1978). Material culture during this time is characterized by stemmed and corner-notched projectile points as well as the first appearance of notched stone net-sinkers (Funk, 1978). Groundstone plant processing technology, including nutting stones which indicate the first systematic exploitation of mast resources such as acorns, hickory nuts, and chestnuts, was first used after approximately 6,000 BP (Funk, 1978; Ritchie and Funk, 1973:7). Beginning approximately 3,500 BP, regional diversity led to a greater variety of stone tools, including broad, side-notched projectile points, as well as gouges, plummets, and ground slate artifacts (Funk, 1978; Ritchie 1980). Between approximately 4,000 and 3,000 BP, steatite (soapstone)

bowls, ceramic vessels, decorative steatite gorgets, and burial ceremonialism appears in the archaeological record (Whitthoft, 1949; Ritchie and Funk, 1973; Tuck, 1978).

The establishment of agriculture in northeastern North America began approximately 2,500 BP, possibly in response to favorable climatic conditions during the Medieval Climatic Anomaly (Fitting, 1978:44). Central and Western New York at this time were within the northeastern edge of the Hopewell cultural sphere, characterized by mound burials and other earthworks, dentate-stamped and rocker-stamped ceramic vessels, elaborate tobacco pipes, and stemmed, side-notched, and triangular unnotched Levanna projectile points (Engelbrecht, 2014; Ritchie and Funk, 1973). Groups in the northeast during this period also maintained extensive trade networks, as evidenced by the presence of exotic goods like fossil shark teeth and some ceramic motifs (Fitting, 1978; Ritchie 1980; Ritchie and Funk, 1973). Smaller settlements were more common during this period, but larger settlements are not documented in Western and Central New York until approximately 1,000 BP. In the centuries following, the appearance of maize (corn), beans, and squash agriculture led to the growth of more substantial village sites, including some protected with palisades and earthwork defenses (Ritchie and Funk, 1973; Ritchie, 1980). These villages were occupied year-round, although people still traveled far to hunt, fish, harvest plants, and trade (Cowan, 1999).

Archaeological evidence for the development of Iroquoian[3] culture points to a gradual *in situ* development in Central and Western New York, as opposed to the immigration of Iroquoian groups from outside the region (MacNeish, 1952; Tuck, 1971; Snow, 1994; Hart and Brumbach 2003; 2005; 2009; Brumbach, 2011; Hart, 2011). Haudenosaunee oral history also supports a deep history of occupation within Central and Western New York (Wonderley, 2004).

While sources differ on the specific date of the emergence of the Haudenosaunee, many researchers agree that a formalized Confederacy of five nations (also, the Great League of Peace; the Five Nations; or, the Six Nations) took shape during the late fifteenth or early sixteenth century. The initial five nations of the Haudenosaunee included, loosely from west to east, the Seneca, Cayuga, Onondaga, Oneida, and Mohawk. The Tuscarora later became a member nation in 1722. Initially, the Confederacy functioned indirectly as a religious council, calming internal conflicts through ceremonies associated with the Great Law as prescribed by the Peacemaker (Deganawidah) and Hiawatha. As conflicts arose with neighboring nations and European settlers, the Confederacy's role became more political; however, the member nations largely retained their autonomy (Richter, 2005).

European missionaries, explorers, and traders began visiting Central New York by the mid-seventeenth century. While Jesuit missionaries established missions in Central New York, Dutch and English land companies and settlers claimed land farther west into the Mohawk River Valley, thus fueling pre-existing tensions with the Haudenosaunee regarding the competitive fur trade, international wars, and diseases.

[3] The terms Iroquois and Iroquoian are used here to describe indigenous groups with a suite of cultural traits (e.g., ceramic styles and settlement patterns) and linguistic traits. The term Haudenosaunee is used specifically to denote the five (and later) six nation confederacy present from approximately the sixteenth century onward.

Conflicts between the Haudenosaunee and the French continued into the eighteenth century as French forts were established throughout New York (Anderson, 2005; Dixon, 2005).

Following the French and Indian War, the 1768 Treaty of Fort Stanwix established a boundary line to demarcate the Haudenosaunee, Delaware, and Shawnee territories and regulate westward colonial expansion. This boundary, sometimes referred to as the "Line of Property," extended southwest from the Susquehanna River in New York to the mouth of the Tennessee River. In exchange, the Haudenosaunee forfeited their claims to the Ohio River Valley. Although the treaty bound colonists to remain east of the line, many continued to migrate and settle on Native land (Anderson, 2005; Dixon, 2005; Preston, 2005).

During the American Revolutionary War, both the British and the Americans embraced the aid of various Haudenosaunee member nations, despite the Confederacy's official policy of neutrality. The war divided the Haudenosaunee, with the Cayuga, Onondaga, Mohawk, and Seneca aiding the British and the Oneida and Tuscarora providing support to the American colonists. In retaliation, Washington ordered the Sullivan-Clinton campaign of 1779, where Haudenosaunee homes and crops were burned throughout Central and Western New York. The Sullivan-Clinton expedition destroyed many settlements with refugees fleeing to the reservations in Western New York (mainly, the Buffalo Creek Reservation), Sandusky Bay, Ohio, and Ontario, Canada (now the Six Nations of the Grand River Reservation). The Haudenosaunee were forced to cede all land west of New York State and Pennsylvania in the second Treaty of Fort Stanwix in 1784.

Today, the Onondaga Nation is recognized as an independent nation, living on a portion of its ancestral territory and maintaining its own distinct laws, language, customs, and culture. Their territory consists of 7,300 acres south of Syracuse. The Onondaga Nation's territory consists of 7,300 acres just south of Syracuse, in Onondaga County (Onondaga Nation, 2025).

Prior to the formal organization of Oswego County in the nineteenth century, New York State set aside a 1.5-million-acre tract for soldiers of the Revolutionary War, but it was not fully opened to settlers for nearly a decade due to conflicts with the Haudenosaunee. The New Military Tract encouraged migration and settlement by war veterans as well as Euro-American settlers; it encompasses what is now Cayuga, Cortland, Onondaga, Seneca, and Tompkins counties, as well as parts of Oswego, Schuyler, and Wayne counties. The land was divided into 28 townships, each containing 100 lots of 600 acres arranged in a uniform grid pattern. Although the land was set aside for veterans, many of them either neglected to claim their land or sold their land to speculators. As a result, the area was settled primarily by migrants from New England, New Jersey, Pennsylvania, and the Hudson Valley (Anderson, 2005; Schein, 1993, 2005).

Oswego County, located within the Lake Ontario watershed, was formed in 1816 from parts of Oneida and Onondaga counties. The Oswego River system created a strategic trade route between the Mohawk River and Lake Ontario, which British and French forces both utilized during the seventeenth and eighteenth centuries. The British established Fort Oswego at the mouth of the river in 1727 and their presence remained until 1796. By this time, settlement in the areas around the present-day villages of Mexico, Pulaski, and Redfield grew as the plentiful streams and water systems provided ample waterpower for milling. Capitalizing on the abundance of the Oswego River system, commercial development in the county developed around the shipment of local goods such as cordwood and barrels for salt working. Thousands

of barrels of salt were shipped to Oswego port to be transported to the Old Northwest and parts of Upper Canada. Salt tax revenue in turn prompted the construction of three "salt roads" by 1820, underlining the significance of the salt working industry on the wealth of the county and its broader impact on New York State's economy. A little over a decade later, in 1833, the Welland Canal opened and linked Lake Erie and Lake Ontario, allowing the port of Oswego to act as a terminal for Midwestern agricultural products. Along the north shore of Oneida Lake, a robust glassmaking industry sprung up with the ample supply of sand, and transportation of locally produced goods made more efficient by the canal and its waterways. In 1848, the Syracuse and Oswego Railroad was completed, further developing the connection networks across the state (Wellman and Dix, 2005). Within the Project Area, structures appear along established roadways during this time, with the area remaining rural and agricultural (Geil, 1854; Figure 2-3).

Farmers benefited from the improved transportation networks that allowed for responses to competition in the market by shifting to dairy, fruit, and tobacco farming. A period of economic growth driven by these agricultural trends along with textiles, mills, and the availability of natural resources between the early nineteenth century and the early twentieth century saw settlers from Ireland, Canada, and the Alsace-Lorraine region, differing from the earliest settlers to the area who came from New England and eastern New York. This trend brought a rich diversity of immigrants to Oswego County, and with them a labor force that worked on local farms, likely similar to the former J. McKinley farmstead in Caughdenoy Creek and the former C. Plumber farmstead in Center Road, for example, within the Project Area (Figure 2-3). Additionally, Oswego County was a favorable location for abolitionists due to its geography and proximity to Canada. Many towns supported the Underground Railroad, and the county was home to abolitionists and formerly enslaved people who fled north (Johnson, 1877; Wellman and Dix, 2005).

The twentieth century saw the greatest economic changes in the county, as technology and federal aid improved communication and transportation infrastructure throughout Oswego; however, the Project Area remained relatively unchanged from 1854 (USGS, 1898, 1900a, 1900b, 1956a, 1956b, 1957a and 1957b; Figure 2-4 and Figure 2-5). With this came an increase in population and a general trend in the direction of growth and prosperity. World War II created an influx of manufacturing jobs and local Oswego County industries put hundreds of residents to work. By the 1970s, however, the economic benefits from industry and manufacturing began to trend downwards, and other sectors such as energy, education, and tourism were growing. Notably, SUNY Oswego expanded its campus and curriculum in the 1980s and 1990s, and fishing became a popular touristic sport in the county after salmon was reintroduced into local waters (Wellman and Dix, 2005).

The Town of Hastings, formerly Constantia, was established in 1825. The town is approximately 20 miles northwest of Oneida Lake and directly north of the city of Syracuse. The southern branch of the Little Salmon River drains into the northern part of Hastings. Oneida Lake played an important role in the county for eel harvesting, an indigenous practice that continued into the late nineteenth century and was an economic resource for the town (Dix, 2005). In the nineteenth century, lumbering and the manufacturing of barrels for the Syracuse salt market were important economically for Hastings, a trend reflected in the development of villages like Caughdenoy and Central Square that grew considerably between the 1820s and 1890s (Churchill, 1895; Burr, 1829; Figure 2-4). Rural areas such as those surrounding the Project Area were generally populated with farmsteads spread out on open land until the mid-twentieth century when

Interstate 81, built between 1960 and 1962, assisted in promoting land development in the region and made travel to the town of Hastings much easier. Connecting Hastings and other parts of Oswego County with the commuter region of Syracuse, Interstate 81 influenced residential growth in once-rural areas such as Pleasant Lake, just northeast of the Project Area (USGS, 1973; Wellman and Dix, 2005).

Figure 2-2. Project Area in 1854

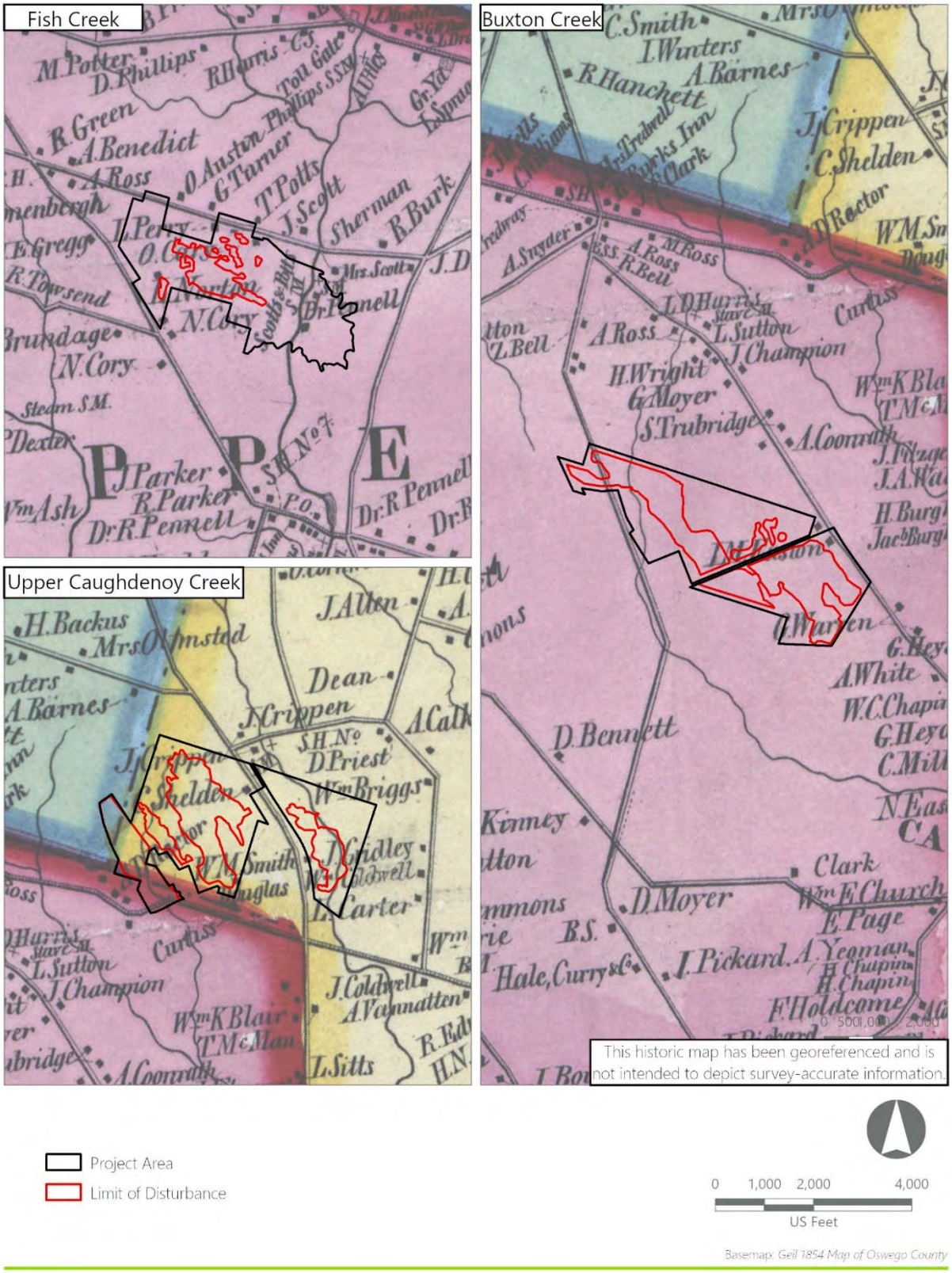


Figure 2-3. Project Area in 1900 and 1905

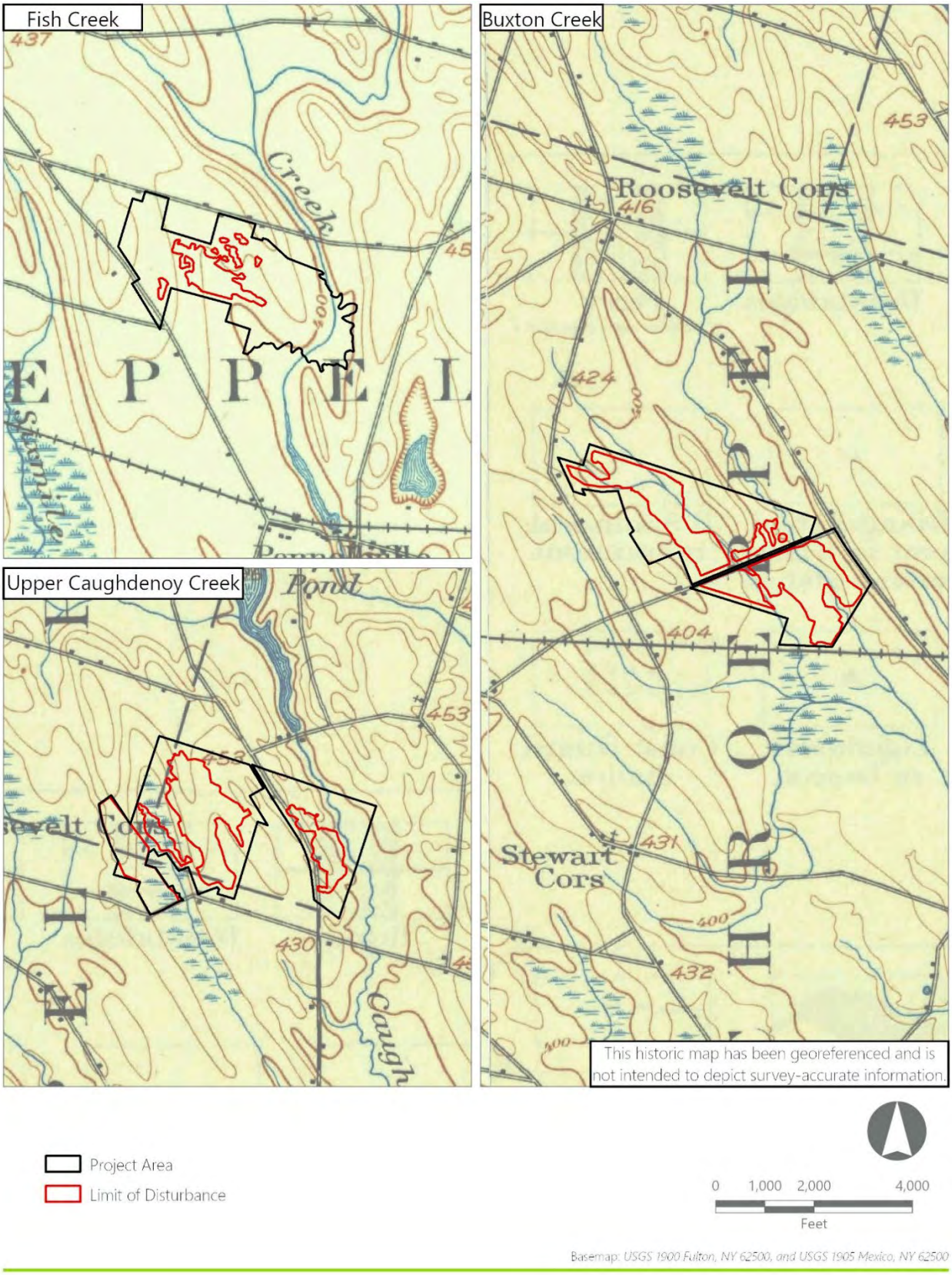
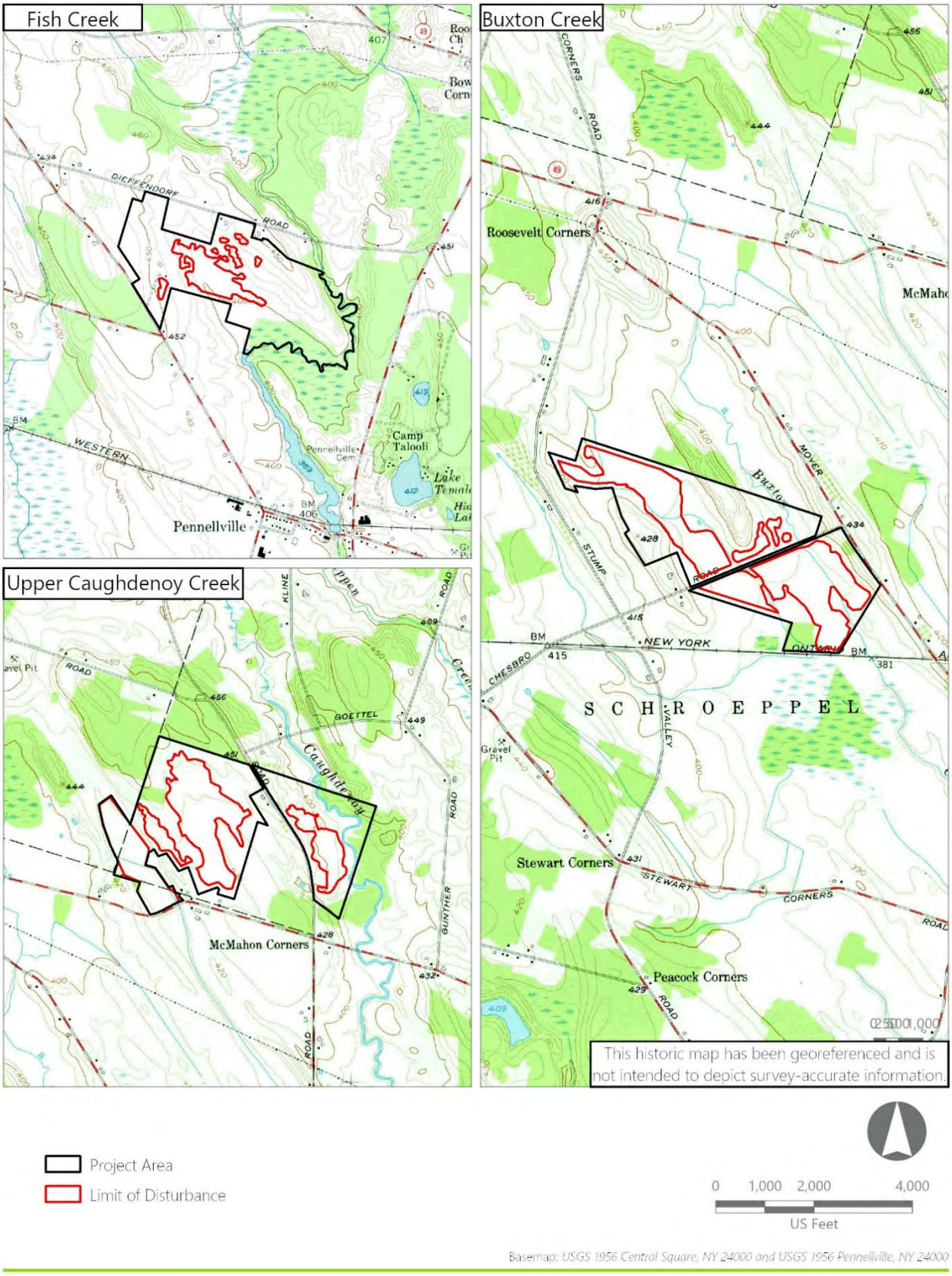


Figure 2-4. Project Area in 1956



3.0 SUMMARY AND CONCLUSION

The results of the Phase IA archaeological survey for the Project can be summarized as follows:

- No previously recorded archaeological sites are located within the Project Area.
- No previous archaeological surveys overlap with the Project Area.
- Four previously recorded archaeological sites are located within a 1-mile buffer of the Project Area.
- No recorded cemeteries are located within the Project Area.
- Historic maps depict structures located along current and abandoned roadways within the Project Area. Areas located in the immediate vicinity—within approximately 200 feet—of MDS locations are considered to have high potential for the presence of archaeological resources.
- The remaining (non-MDS) portions of the Project Area exhibit minimal likelihood for significant historic-period archaeological sites to be present.

3.1 Conclusion and Recommendation

Construction of the proposed Project will include ground disturbing activities within 244 acres of the Project Area. NYSHPO has previously rendered opinions that no historic properties, including archaeological and/or historic resources, would be effected by the Project at all three sites within the Project Area (see Section 1.3 and Attachment A). Based on the results of the Phase IA research, EDR concurs with those opinions and, therefore, no further archaeological investigation of the Project Area is recommended.

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Attachment A

Agency and Nations Correspondence

The Wetland Trust, Inc.
PO Box 4206
Ithaca, NY 14852
www.thewetlandtrust.org
607-765-4780

8 January 2025

Margaret Crawford
U.S. Army Corps of Engineers, Buffalo District, Auburn Field Office

Jean Foley
New York State Department of Environmental Control, Region 7

Re: Section 106 Review- TWT Micron Mitigation Work Area Maps and SHPO Letters

Dear Ms. Crawford and Ms. Foley,

The Wetland Trust, Inc. (TWT) is providing as per your requests a package containing maps of the TWT Micron Mitigation Work Areas and their SHPO correspondence letters. Please note that many sites were submitted to SHPO in partial uploads as TWT obtained them (prior to tax parcel combinations and name changes). To avoid confusion, each Final Site is listed below with the individual sites/corresponding SHPO submission letters that make up each:

- Buxton Creek (formerly Bell Road and Bell Road South)
- Fish Creek (formerly Perry Road)
- Lower Caughdenoy Creek (formerly Caughdenoy Creek)
- Sixmile Creek
- Upper Caughdenoy Creek (formerly Booth, LaPointe, Route 33, and Wisner East)
- Oneida River (formerly Center Road)

An archaeologist has been retained to begin Phase 1A/B investigations at Lower Caughdenoy Creek, Sixmile Creek, and Oneida River beginning the week of January 13, 2025 (weather permitting). Phase 1A/B reports will be forthcoming. Please let us know if you require any further information.

Sincerely,

Kirsten Gerhardt

Kirsten Gerhardt
Restoration Ecologist
kirsten@thewetlandtrust.org

Attachments: TWT Micron Mitigation Work Area Maps and corresponding SHPO Letters

0 0.1 0.2 0.4 Miles

N

Work Areas - Buxton Creek (Bell Road, Bell Road South)

Buxton Creek (Bell Road, Bell Road South)
Town of Schroeppel,
Oswego County, NY

Tax Parcel Boundary (248.9 ac)
Buxton Creek Wetland Work Areas (114.3 ac)

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

Cartographer: Kirsten Gerhardt| Date: 7 Jan. 2025| Projection: NAD 1983 State Plane New York East | References: NYS GIS Clearinghouse, NYS DEC

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: USACE
Bell Road Wetland Restoration
24PR07316

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,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

October 16, 2024

Kirsten Gerhardt
Restoration Ecologist
The Wetland Trust
4729 NY 414
Burdett, NY 14818

Re: USACE
Bell Road South Wetland Restoration
24PR09240

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.

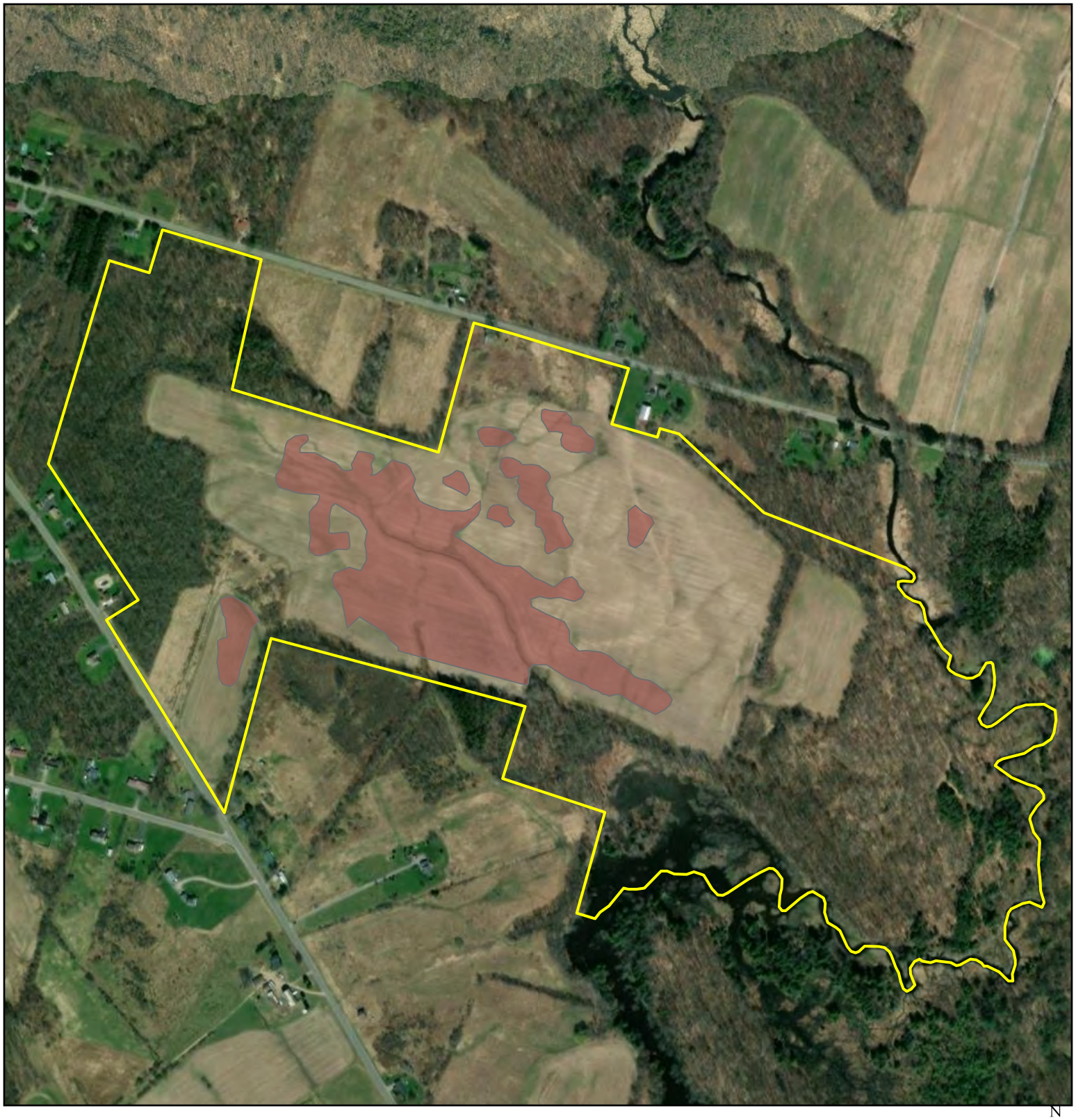
If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Bradley Russell at the following email address:

Bradley.Russell@parks.ny.gov

Sincerely,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation



0 0.07 0.15 0.3 Miles

N

Work Areas - Fish Creek (Perry Road)

Fish Creek (Perry Road)
Town of Schroeppel,
Oswego County, NY

Tax Parcel Boundary (184.8 ac)
Perry Rd Wetland Work Areas (24.1 ac)

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

Cartographer: Kirsten Gerhardt| Date: 7 Jan. 2025| Projection: NAD 1983 State Plane New York East | References: NYS GIS Clearinghouse, NYS DEC

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.

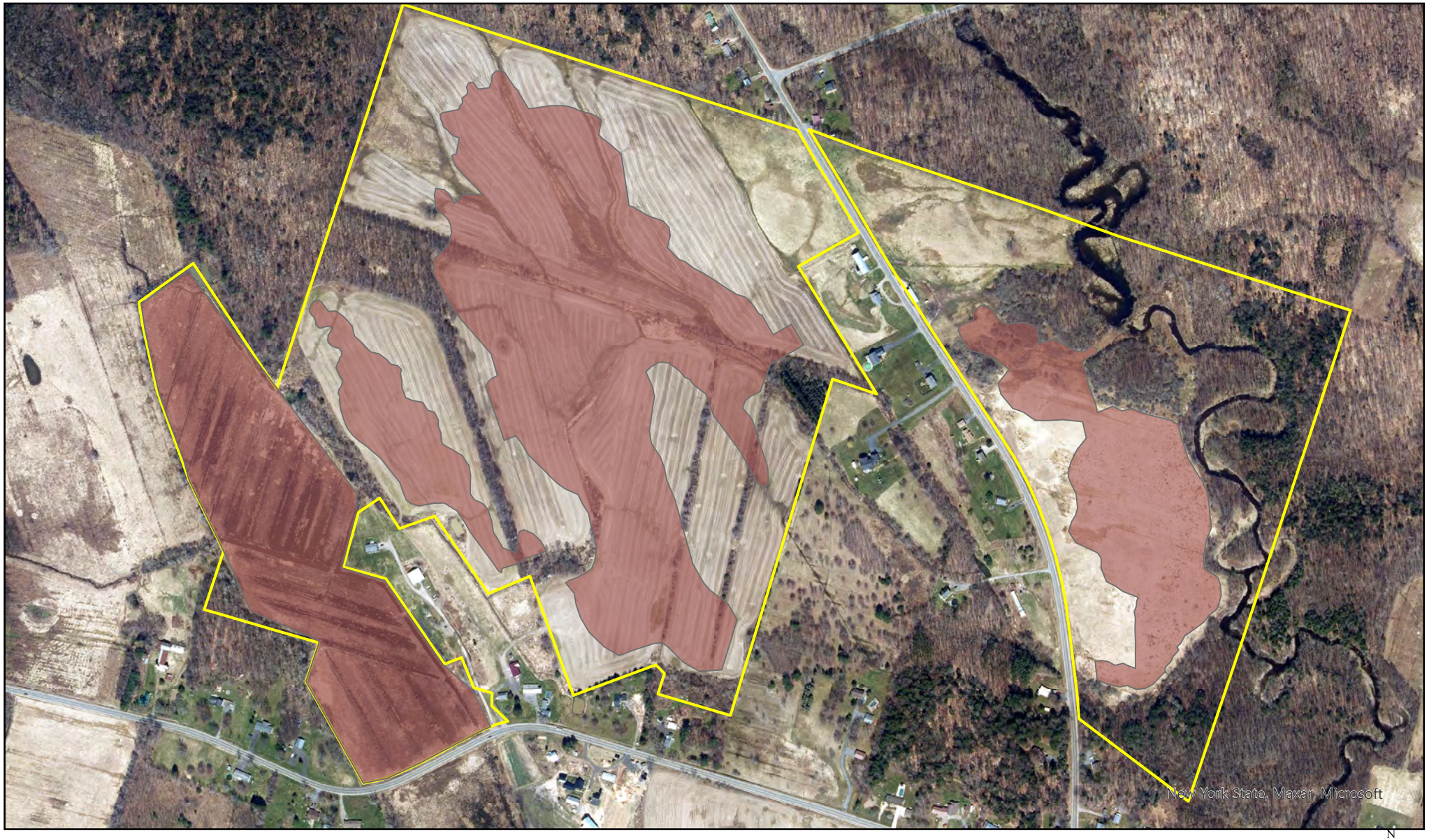
If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Bradley Russell at the following email address:

Bradley.Russell@parks.ny.gov

Sincerely,

R. Daniel Mackay

Deputy Commissioner for Historic Preservation
Division for Historic Preservation



0 465 930 1,860 US Feet

N

Tax Parcel Boundary (239 ac)

Upper Caughdenoy Creek Work Area (106.3 ac)

Work Areas- Upper Caughdenoy Creek (LaPointe, Booth, Route 33, Wisner East)

Upper Caughdenoy Creek
Town of Hastings, Palermo, and Schroeppel,
Oswego County, NY

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

Cartographer: Kirsten Gerhardt | Date: Jan 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

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,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

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,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

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,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

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
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,

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 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 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

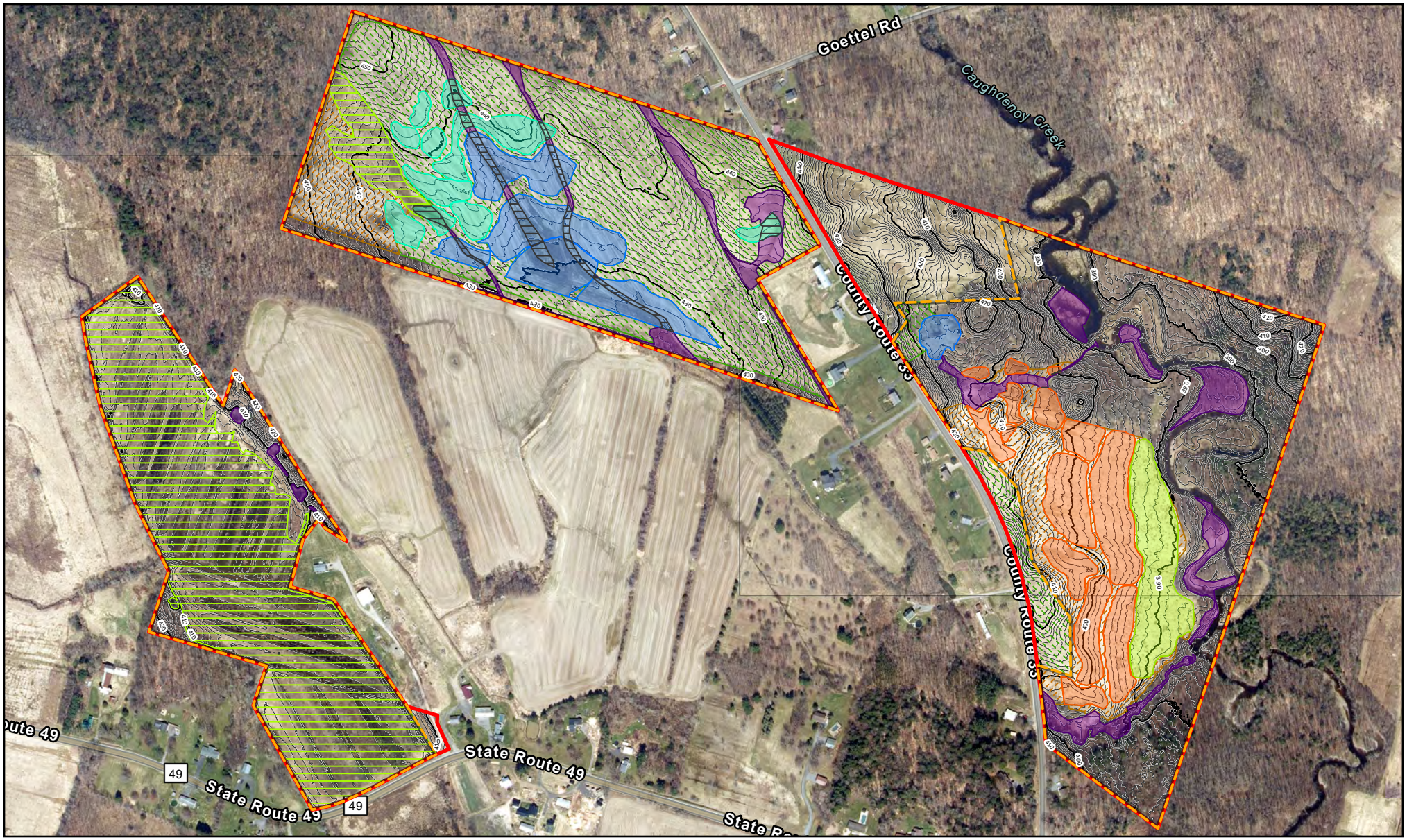
Wetland Design Form

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.



Site Plan

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

Existing Wetland Preservation (8 ac)

Existing Wetland Rehabilitation (34.3 ac Total)
- Additional: PSS - Scrub Shrub (32.7 ac)
- Incidental (1.6 ac)

Mitigation Wetlands (27.9 ac Total / 26.3 ac Reestablishment / 1.6 ac Incidental Rehabilitation)
- PEM - Shallow Emergent Marsh (4.8 ac Total / 4.3 ac Reest. / 0.5 ac Incidental Rehab)
- PEM - Deep Emergent Marsh (9 ac Total / 7.9 ac Reest. / 1.1 ac Incidental Rehab)
- PSS - Scrub Shrub (4.2 ac Total / 4.2 ac Reest. / 0 ac Incidental Rehab)
- PFO - Red Maple Hardwood Swamp (9.9 ac Total / 9.9 ac Reest. / 0 ac Incidental Rehab)

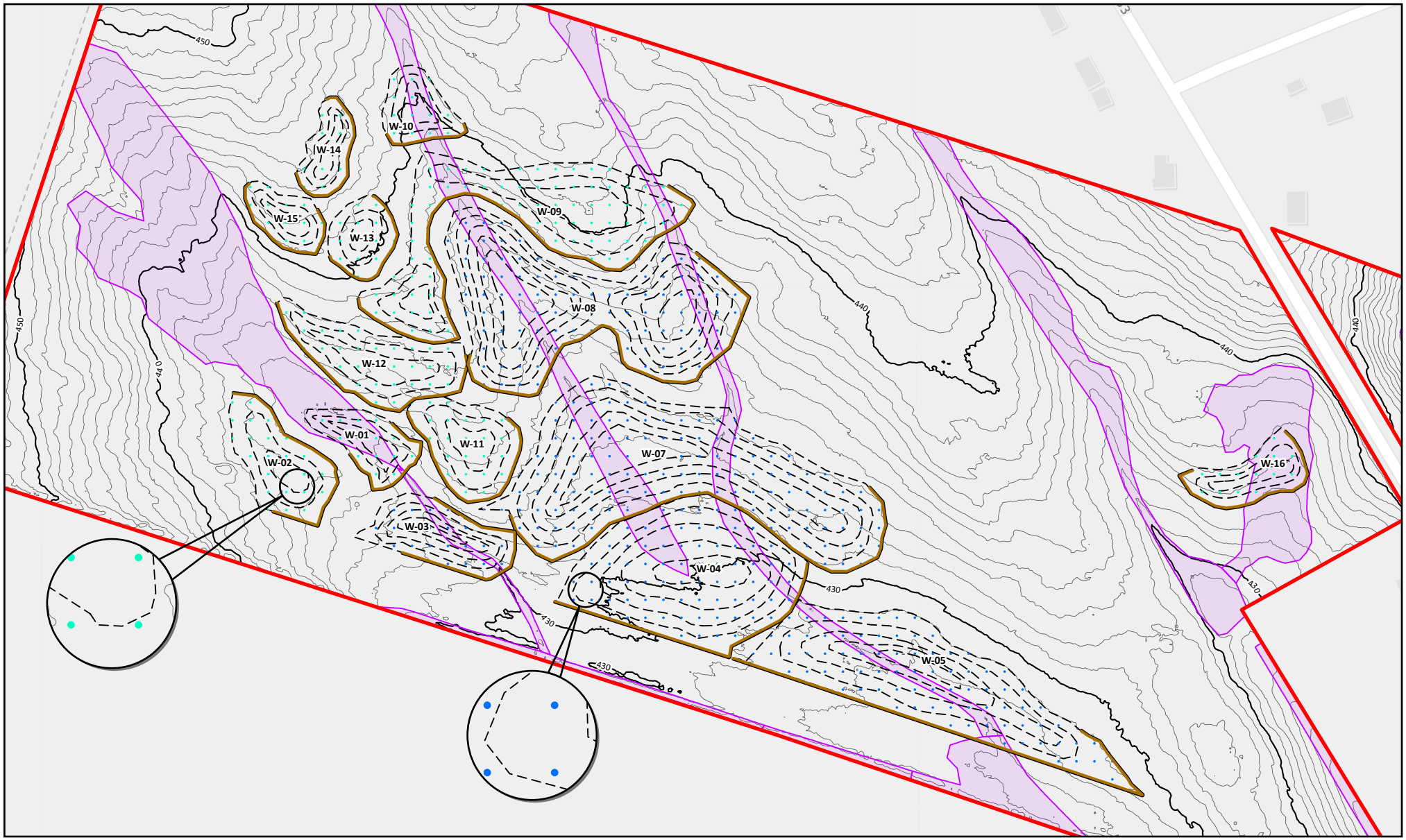
Upland Buffer (42.9 ac Total)
- Herbaceous (32.8 ac)
- Shrub / Forest (10.1 ac)

Contour Line (1 ft)

Conservation Easement Boundary DRAFT (149.4 ac)

TWT Property Boundary (162.9 ac)

Cartographer: Michelle Herman | Date: 7 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse



Wetland Grading Plan - West

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

Mitigation Wetland Core Trenchess (Not to Scale; will not Exceed 3 ft H)

Mitigation Wetland Pit and Mound Specifications (Average)

- PEM Shallow Emergent Marsh: 24 in H x 36 in Dia, 30 ft Spacing
- PEM Deep Emergent Marsh: 30 in H x 36 in Dia, 30 ft Spacing

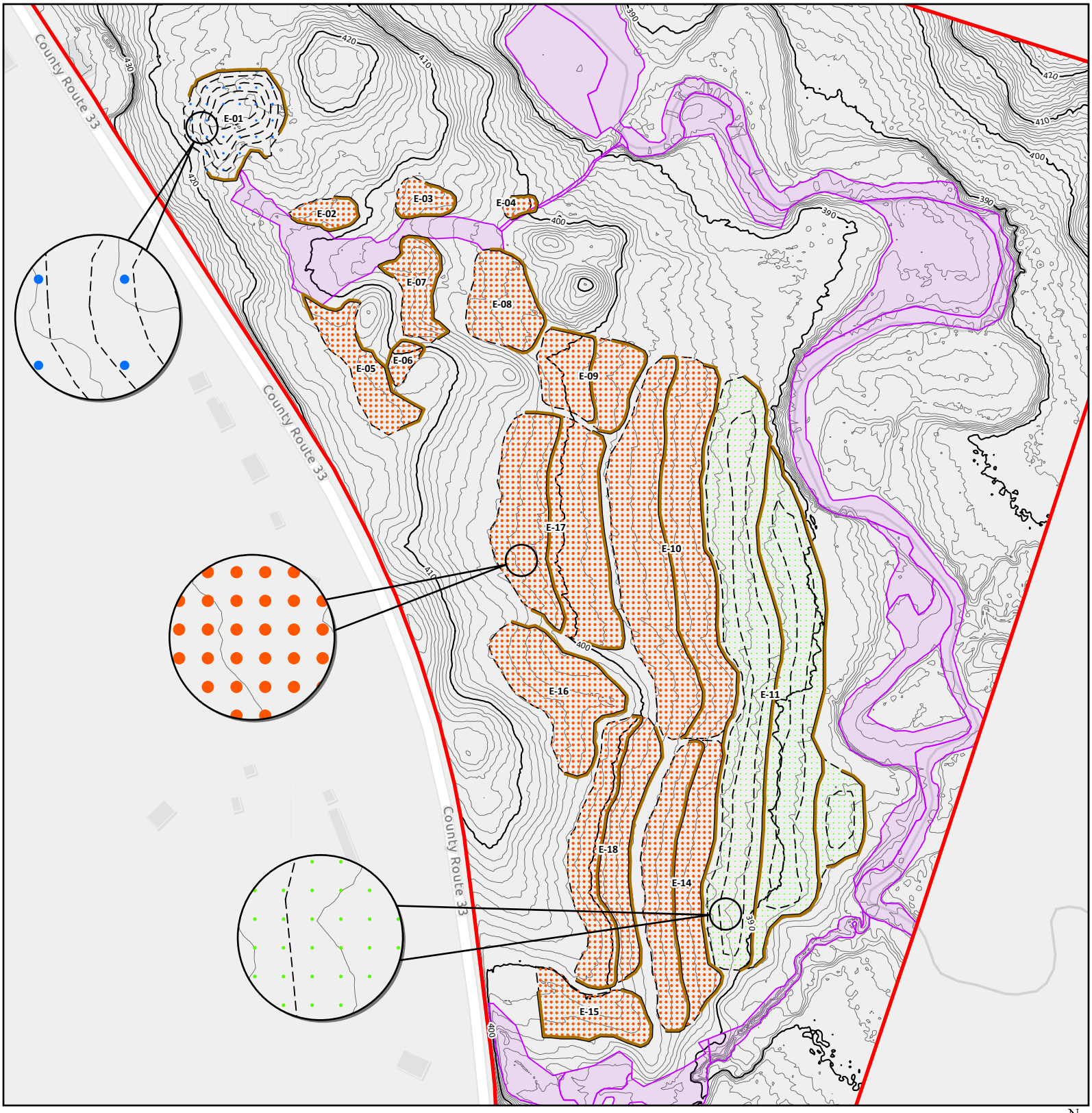
Existing Wetlands (46.6 ac)

Existing Contours (1 ft)

Mitigation Wetland Contours (0.5 ft)

TWT Property Boundary (162.9 ac)

Cartographer: Michelle Herman | Date: 8 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse



0 150 300 600 US Feet

N

Wetland Grading Plan - East

Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

- Mitigation Wetland Core Trenchess (Not to Scale; will not Exceed 3 ft H)

Mitigation Wetland Pit and Mound Specifications (Average)

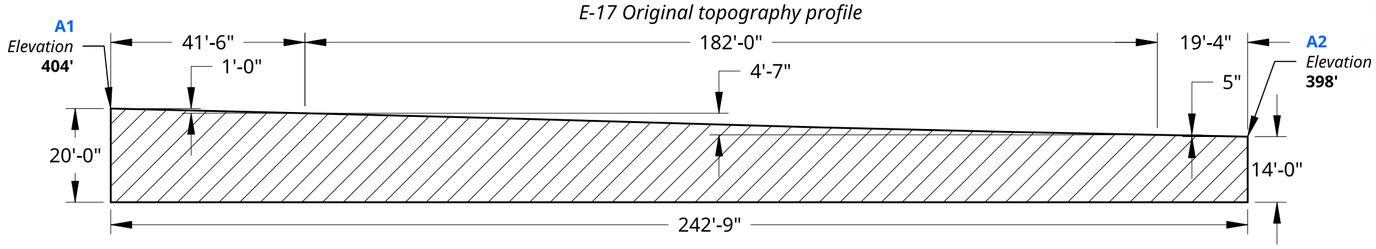
- PEM Deep Emergent Marsh: 30 in H x 36 in Dia, 30 ft Spacing
- PSS Scrub Shrub: 4 in H x 12 in Dia, 10 ft Spacing
- PFO Red Maple Hardwood Swamp: 6 in H x 48 in Dia, 10 ft Spacing
- Existing Wetlands (46.6 ac)
- Existing Contours (1 ft)
- Mitigation Wetland Contours (0.5 ft)
- TWT Property Boundary (162.9 ac)

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

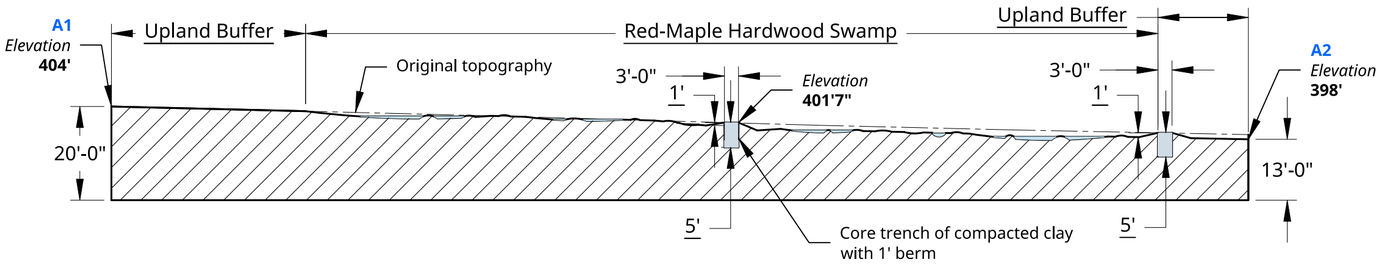
Cartographer: Michelle Herman | Date: 8 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse

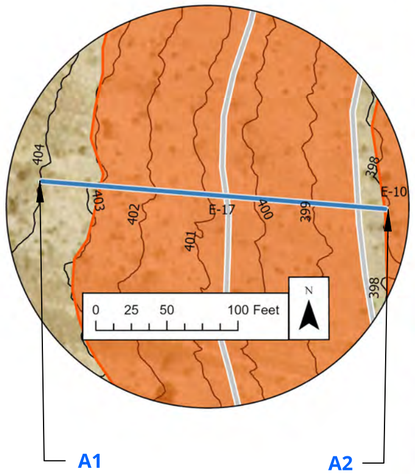
Upper Caughdenoy Creek Wetland Cross Sections: PFO - Red Maple Hardwood Swamp and PSS - Scrub Shrub

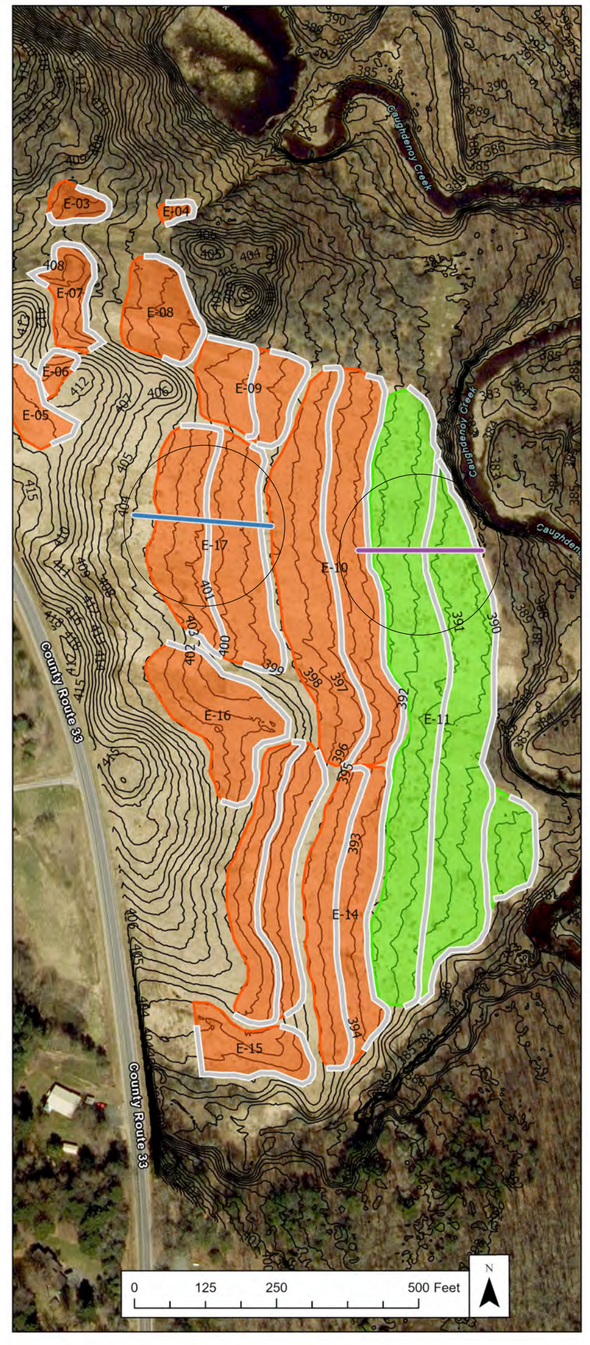
E-17 Original topography profile

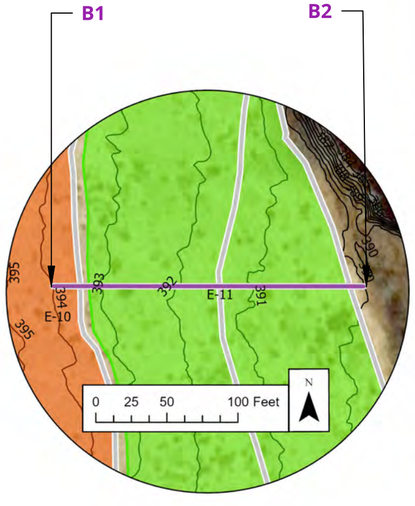


E-17 Proposed as-built profile

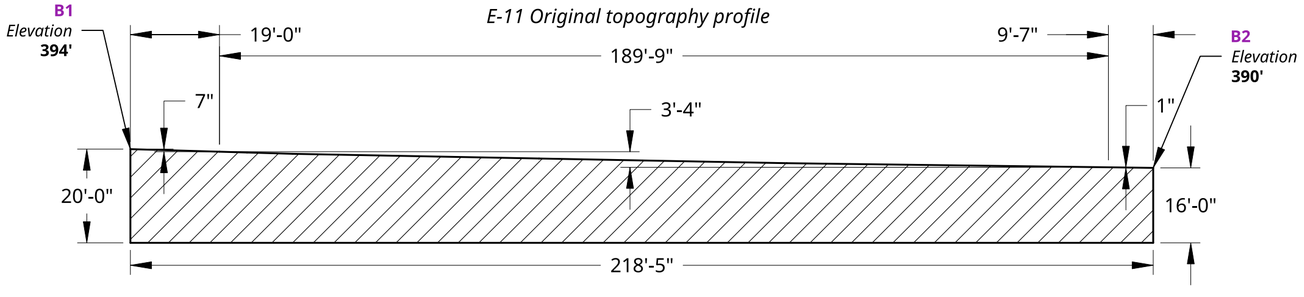




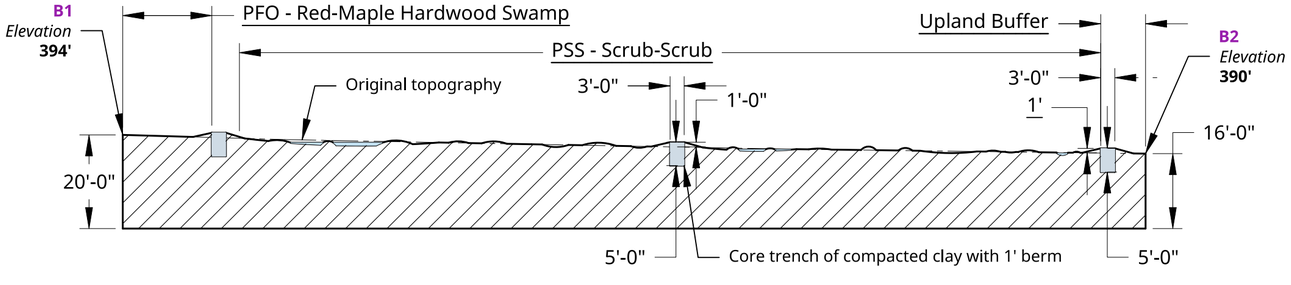




E-11 Original topography profile



E-11 Proposed as-built profile



Contour Line (1 ft)
UCC Berms/Core Trenches
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Red Maple Hardwood Swamp
PSS - Scrub Shrub

Type
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Red Maple Hardwood Swamp
PSS - Scrub Shrub

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET. Maps and drawings are at different scales. Berm/Core Trenches in maps are not to scale		NAME	DATE
	DRAWN	DYLAN JOHNSTON-JORDAN	07/03/2025
	CHECKED		
	APPROVED		
	MATERIAL	FINISH	

TITLE: **Upper Caughdenoy Creek Wetland Cross Sections: Red Maple Hardwood Swamp and Scrub Shrub**

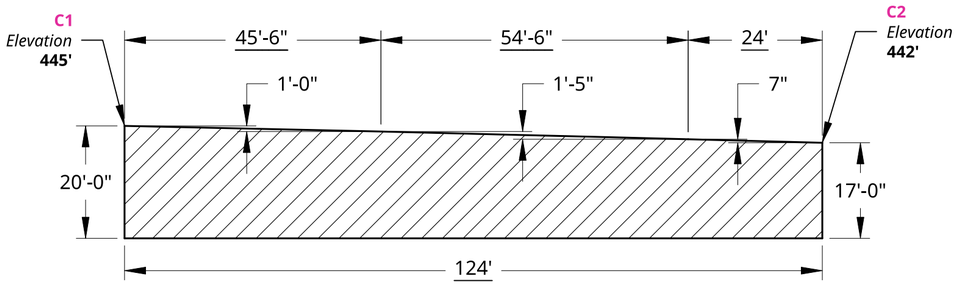
The Wetland Trust

SIZE	DWG NO.	REV.
C		

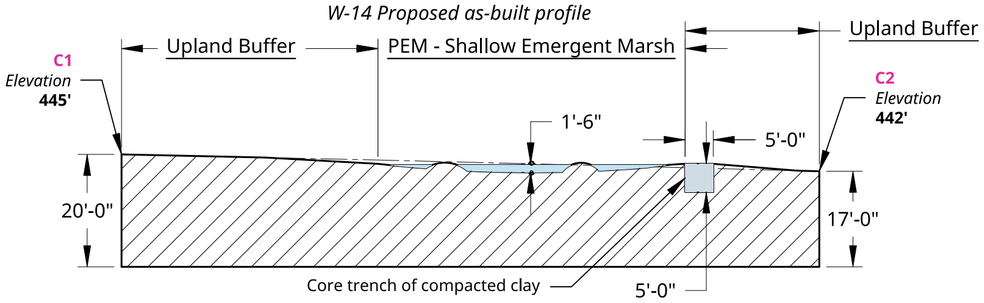
SCALE	WEIGHT	SHEET
1:300		1 of 1

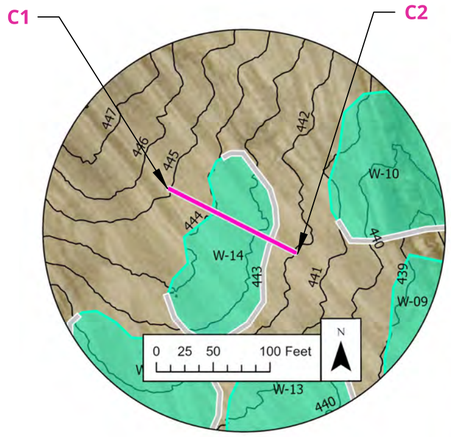
Upper Caughdenoy Creek Wetland Cross Sections: PEM - Deep Emergent Marsh and Shallow Emergent Marsh

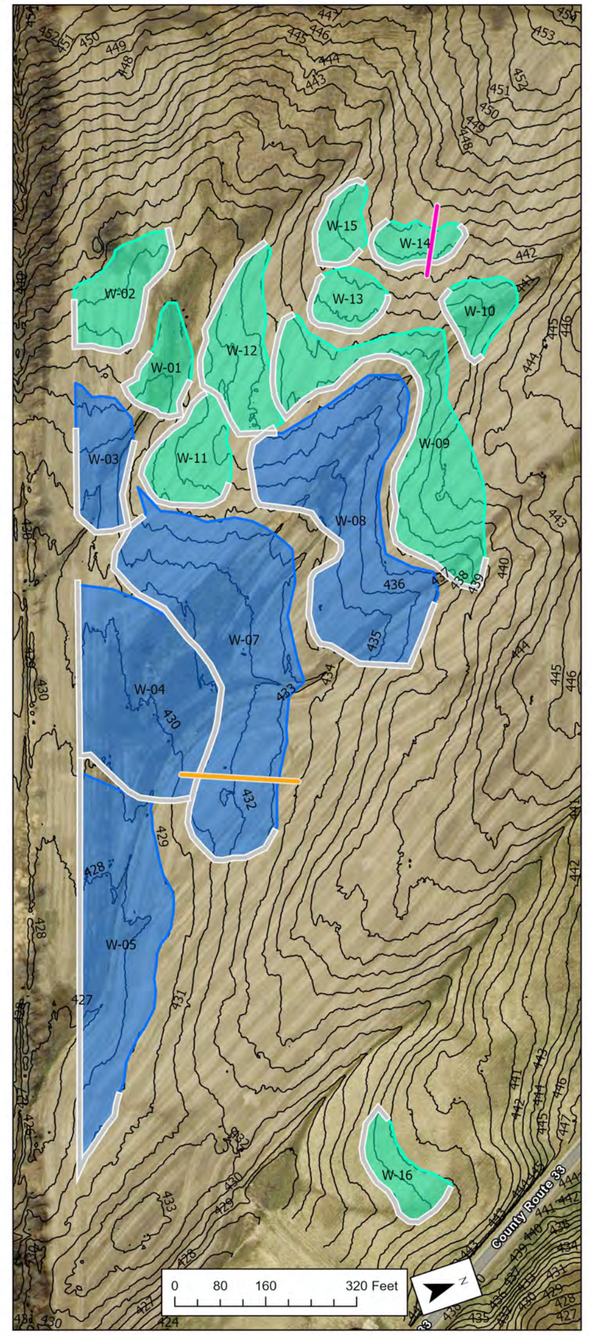
W-14 Original topography profile



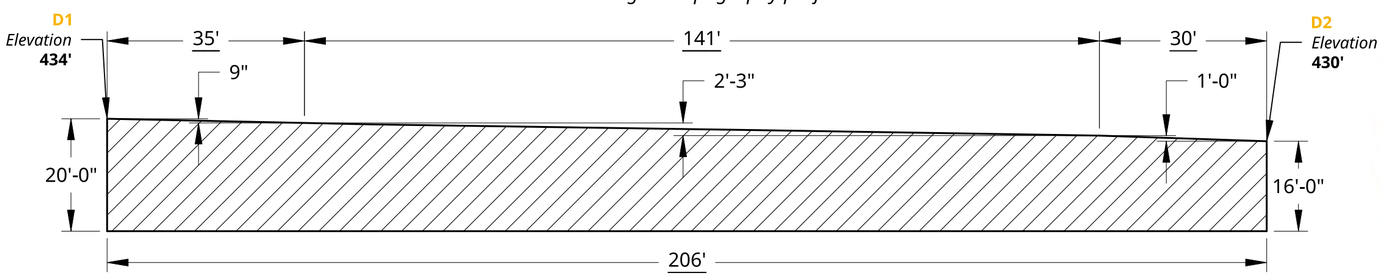
W-14 Proposed as-built profile



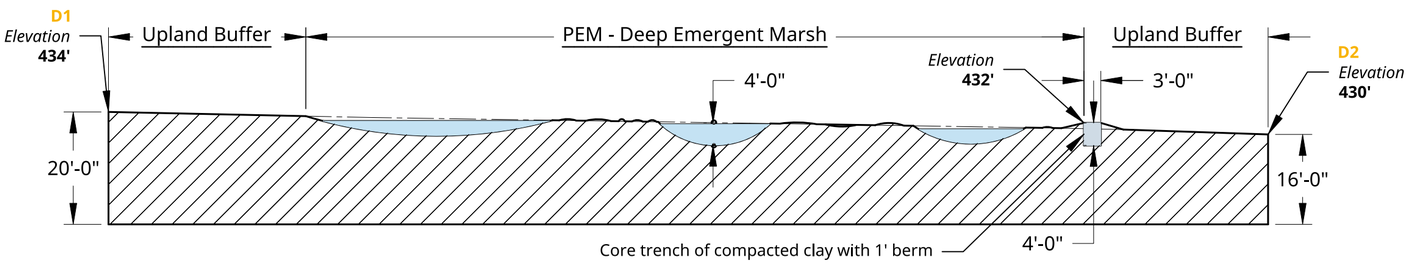


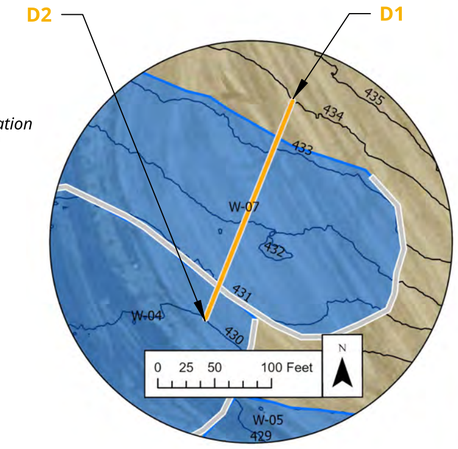


W-07 Original topography profile



W-07 Proposed as-built profile





Contour Line (1 ft)
UCC Berms/Core Trenches
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Red Maple Hardwood Swamp
PSS - Scrub Shrub

Type
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Red Maple Hardwood Swamp
PSS - Scrub Shrub

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET. Maps and drawings are at different scales. Berm/Core Trenches in maps are not to scale		NAME	DATE
	DRAWN	DYLAN JOHNSTON-JORDAN	07/07/2025
	CHECKED		
	APPROVED		
	MATERIAL	FINISH	

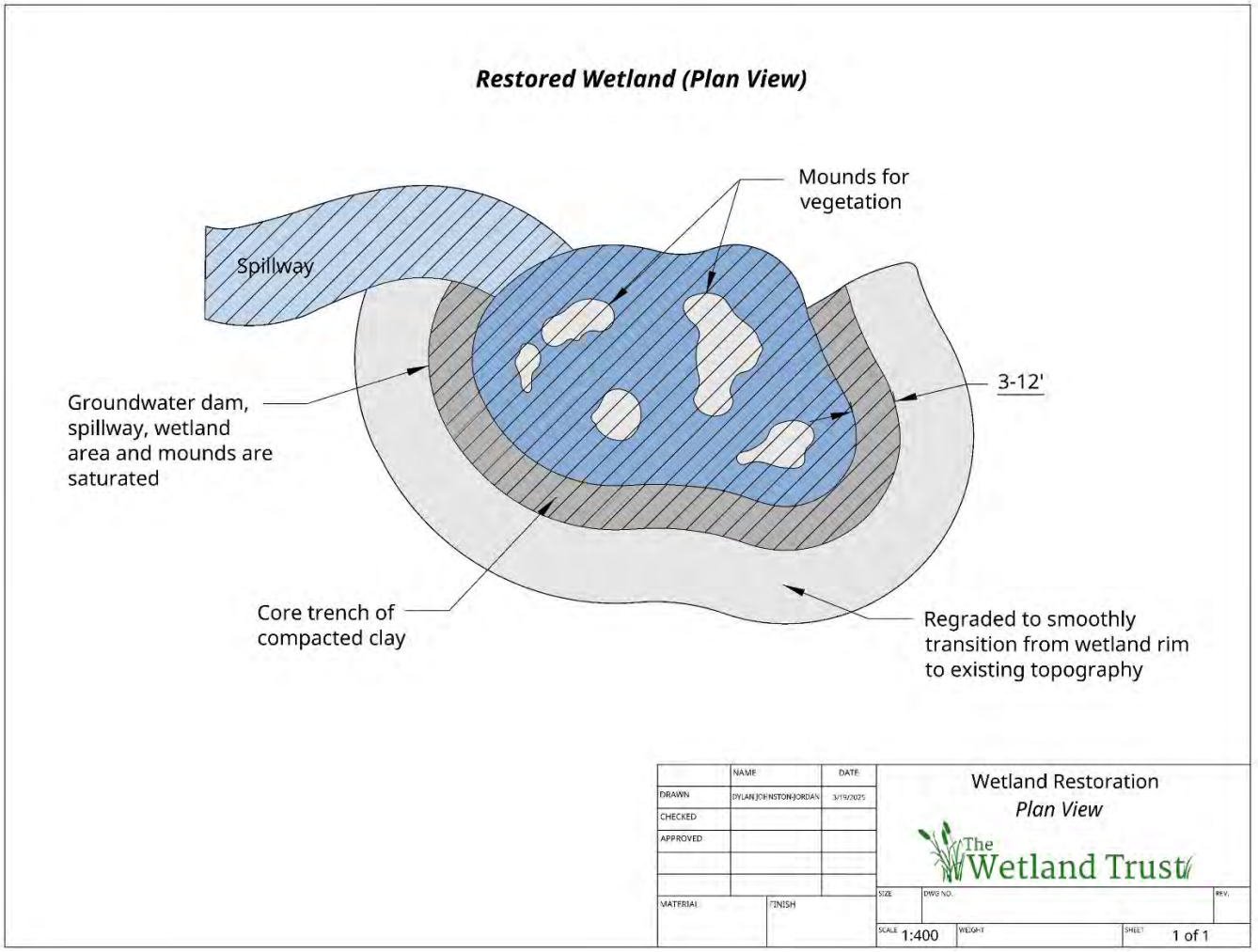
TITLE: **Upper Caughdenoy Creek Wetland Cross Sections: Deep and Shallow Emergent Marsh**

The Wetland Trust

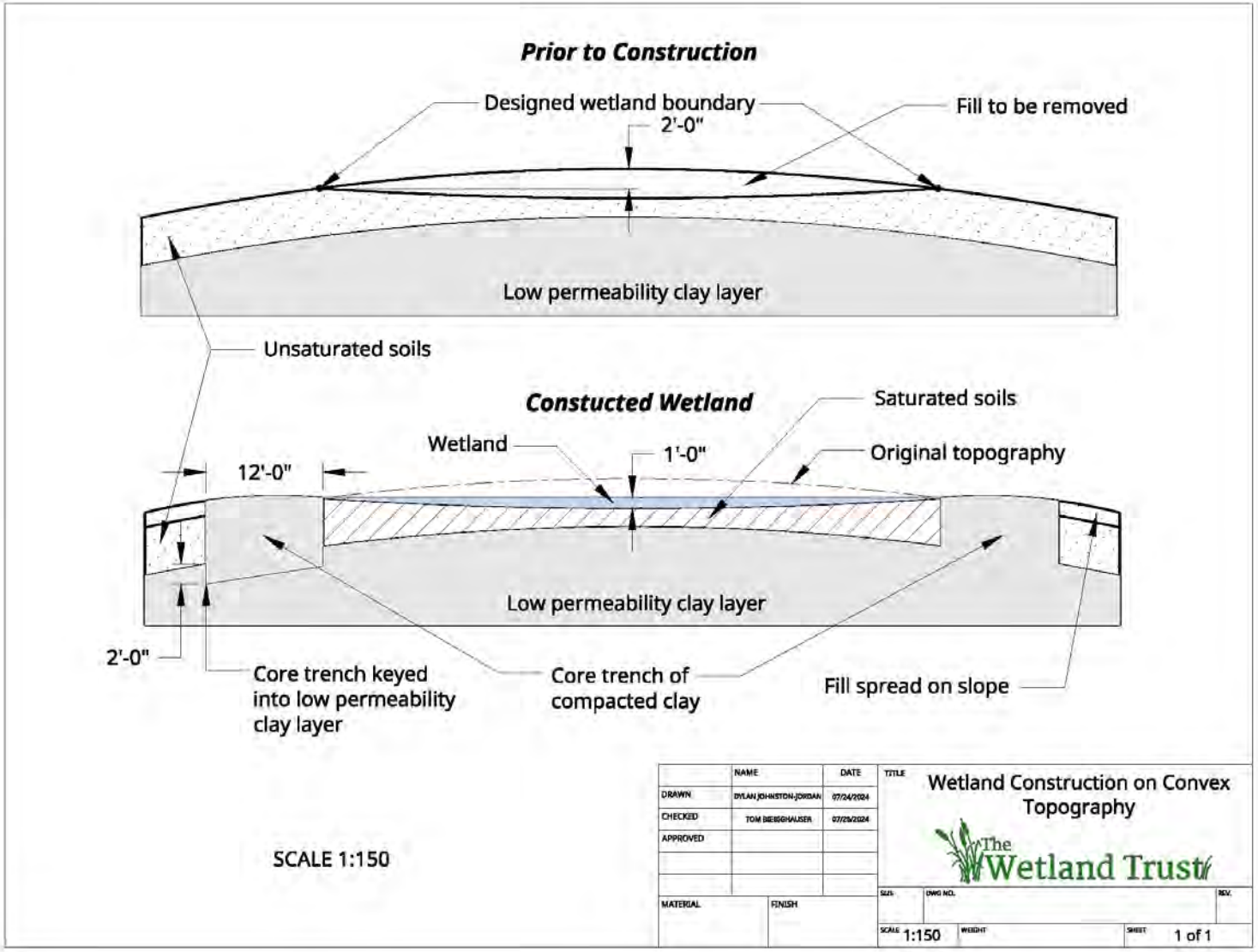
SIZE	DWG NO.	REV.
C		
SCALE 1:250	WEIGHT	SHEET 1 of 1

Construction Typical Drawings

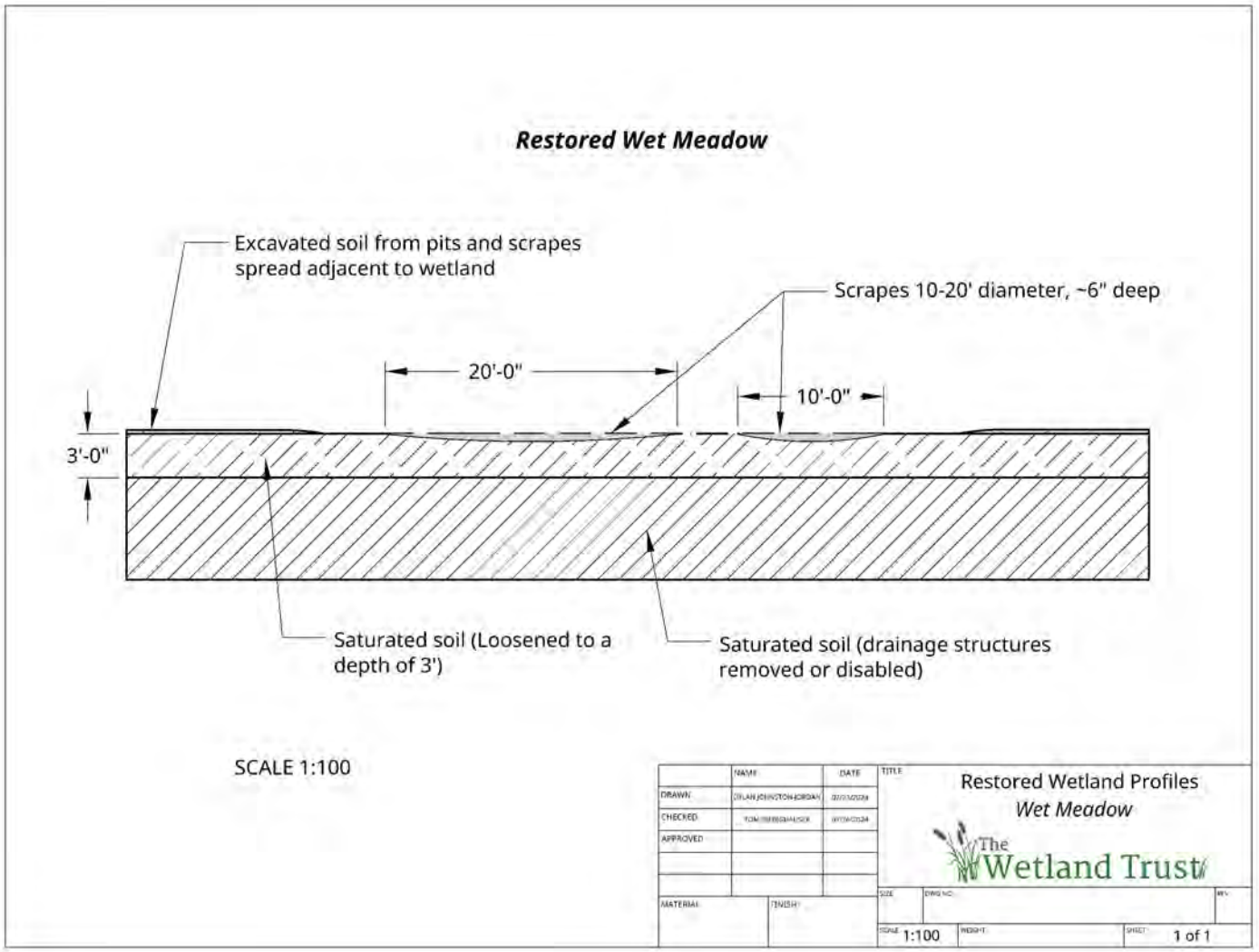
A. Typical Restored Wetland (Plan View)



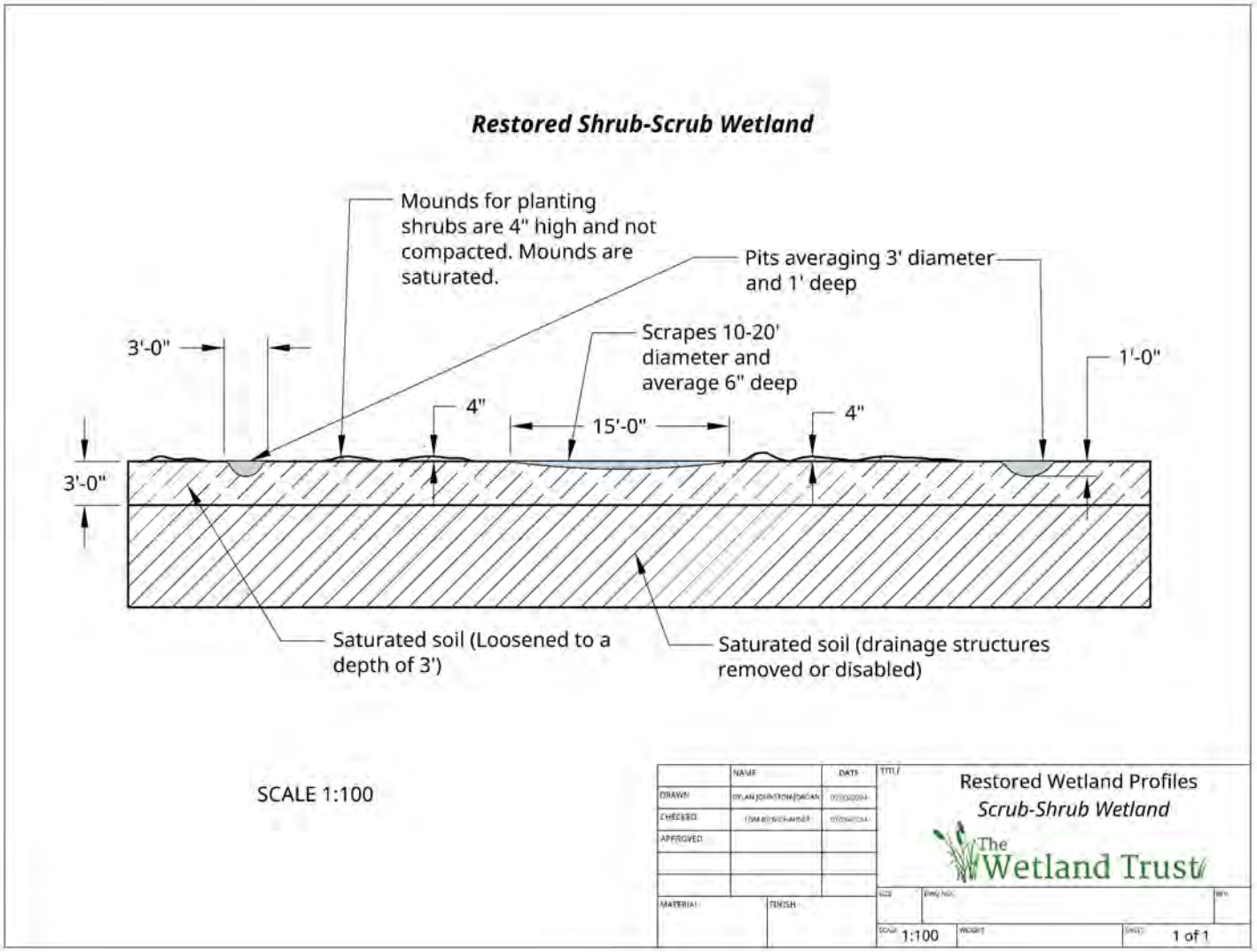
B. Wetland Construction on Convex Topography



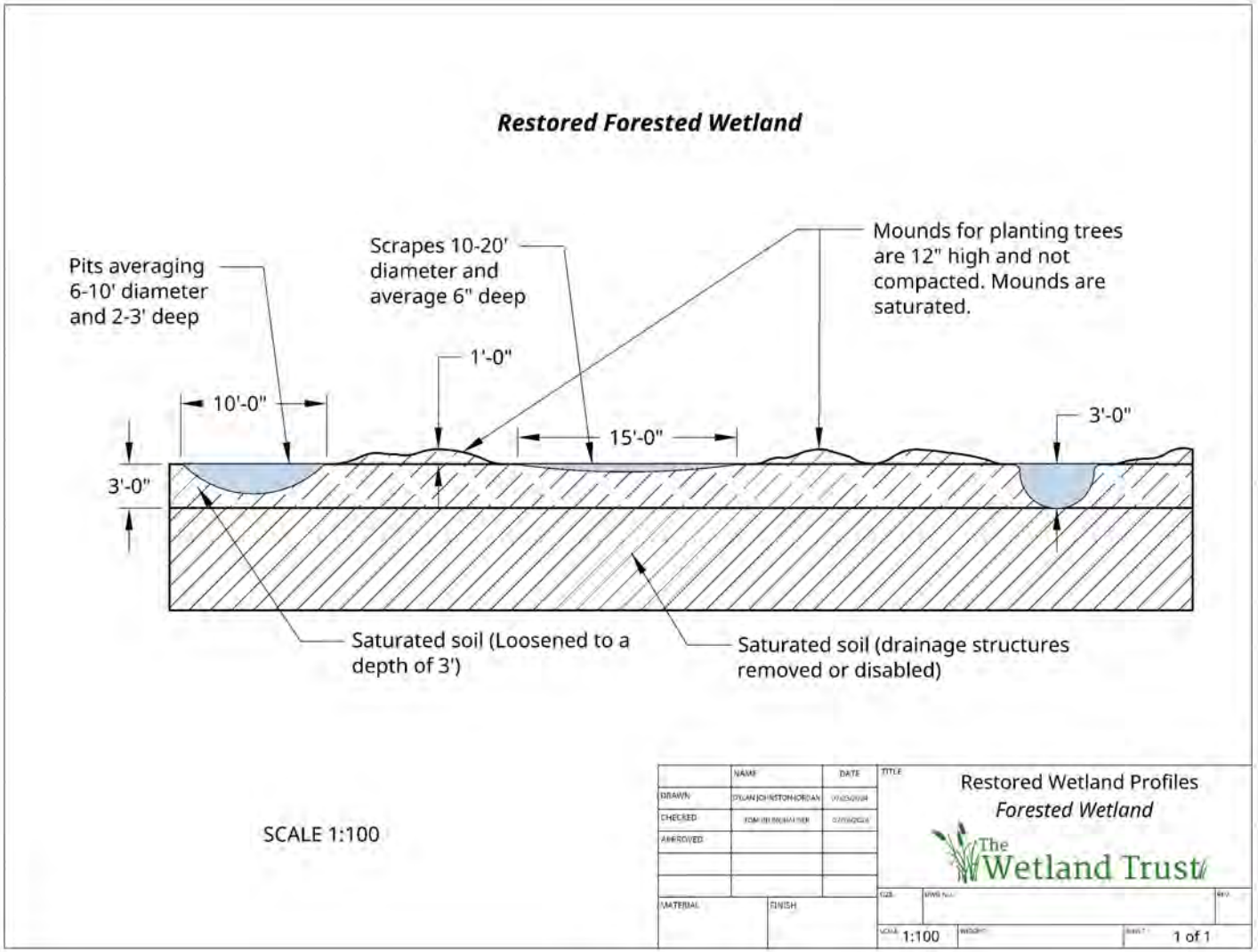
C. Restored Wet Meadow



D. Restored Scrub-Shrub Wetland

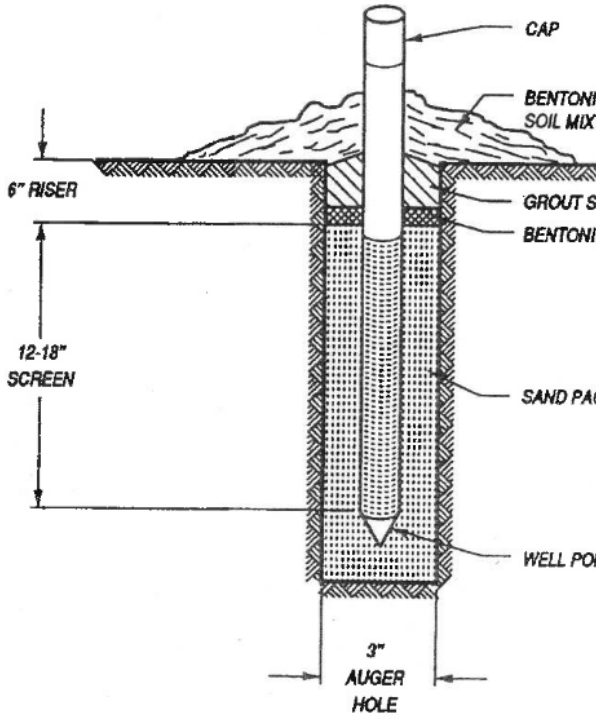


E. Restored Forested Wetland

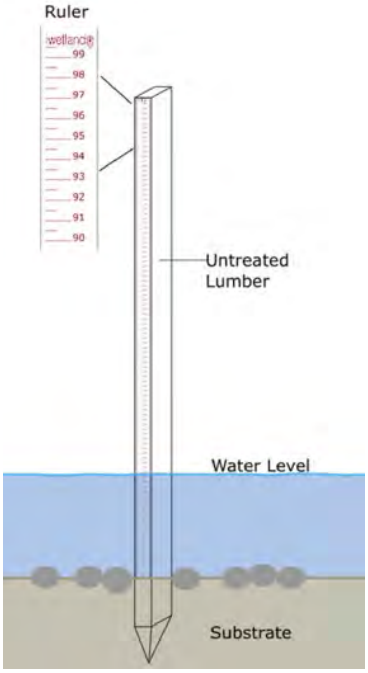


Hydrology Monitoring Structure Typicals

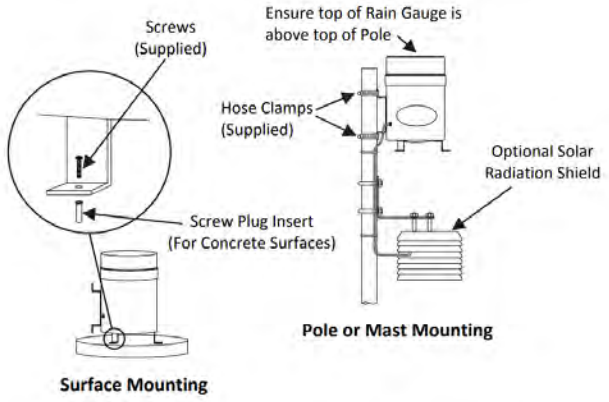
F. Groundwater Monitoring Well



G. Staff Gauge



H. HOBO Rain Gauge Typical



Appendix I.

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Appendix J.

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 Four-Fab Central New York Semiconductor Manufacturing Complex

Sixmile Creek

Wetland Mitigation Plan

Oswego County, NY

PREPARED BY:

The Wetland Trust, Inc.

4729 State Route 414

Burdett, NY 14818

www.thewetlandtrust.org

July 2025

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Appendix I. Long Term Management Plan Draft

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
Oneida River Wetland Mitigation Plan
Upper Caughdenoy Creek Wetland Mitigation Plan
Lower Caughdenoy Creek 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 Sixmile Creek Wetland Mitigation Plan (Plan) location is along State Route 264 and Biddlecum Road in the Town of Schroeppel, 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 Sixmile 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 Sixmile Creek Plan focuses on wetland mitigation components. The objectives are to develop approximately 44.2 wetland mitigation credits on 44.5 mitigation acres toward a total compensation requirement of 405.7 credits (USACE) or 367.6 acres (NYSDEC) for the entire project. This includes:

- Re-establish wetlands to generate 44.1 USACE wetland credits equivalent to the creation of 44.1 NYSDEC wetland mitigation acres, including:
    - 20 acres of PEM - Shallow Emergent Marsh
    - 17.4 acres of PEM - Deep Emergent Marsh
    - 5.5 acres of PFO - Floodplain Forest
    - 1.2 acres of PFO - Red Maple Hardwood Swamp
- Rehabilitate wetlands of the above cover types to generate 0.1 USACE wetland credits equivalent to the enhancement of 0.4 NYSDEC wetland mitigation acres.
- Establish 31.6 acres of upland buffer habitat, including:
    - 23.8 acres of herbaceous buffer habitat
    - 7.8 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 Sixmile Creek Site is approximately 239.4 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: [43.29254124, -76.29453783]. The Site is at the intersection of State Route 264 and Biddlecum Road (**Figure 2-2**).

2.1 Site Selection

The Sixmile 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 acreage of existing wetlands providing the opportunity for significant expansion and connectivity.

2.2 Site Protection

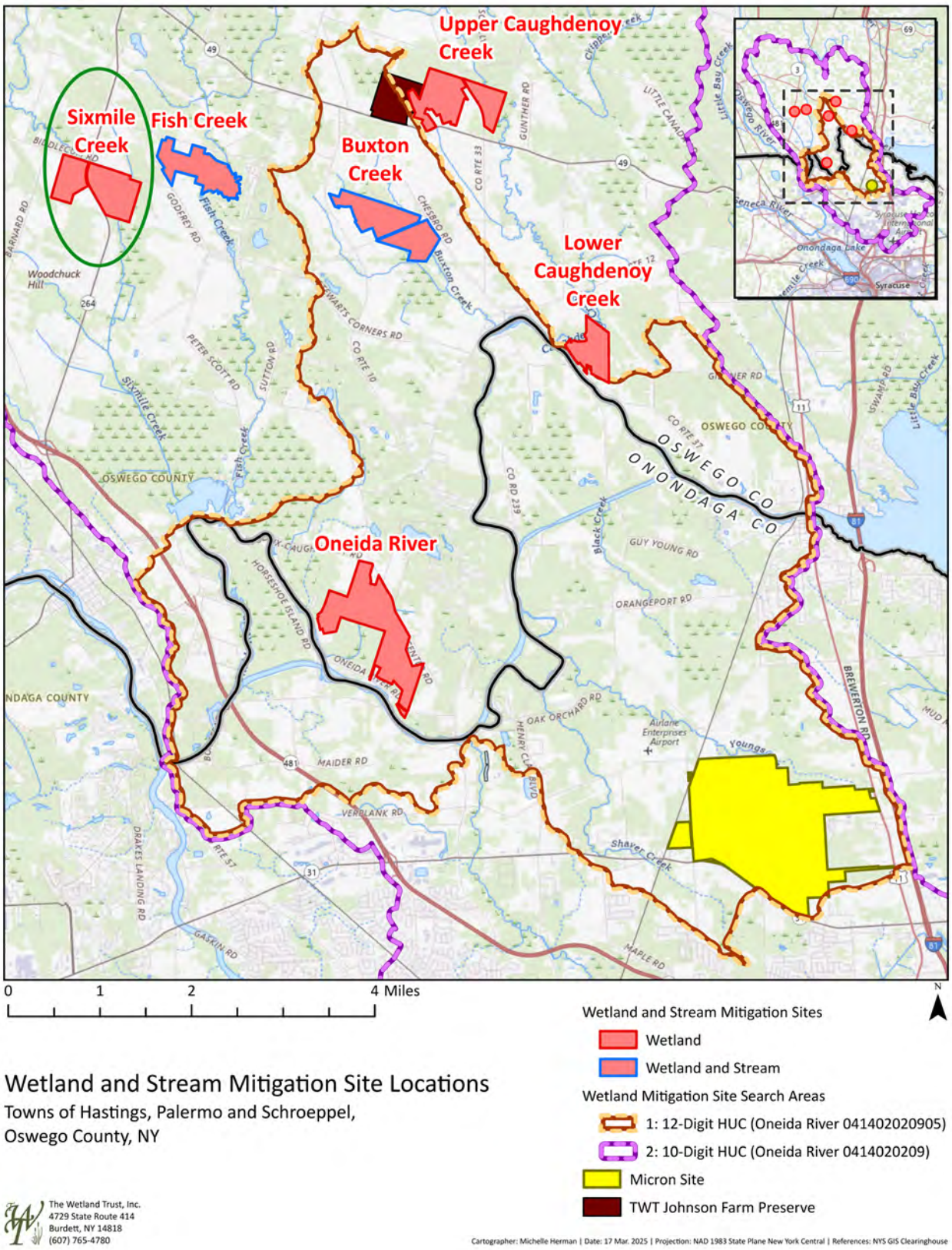
The Wetland Trust, Inc. (TWT) is a 501(c)(3) nonprofit corporation and qualifying conservation organization (NYS ECL) whose mission is the protection, conservation, and restoration of wetlands and other critical habitat. TWT owns the Sixmile Creek site fee simple and in perpetuity, with provisions to 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 Sixmile 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- and NYSDEC-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.

This site will be protected under Article 24 of the Environmental Conservation Law. 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



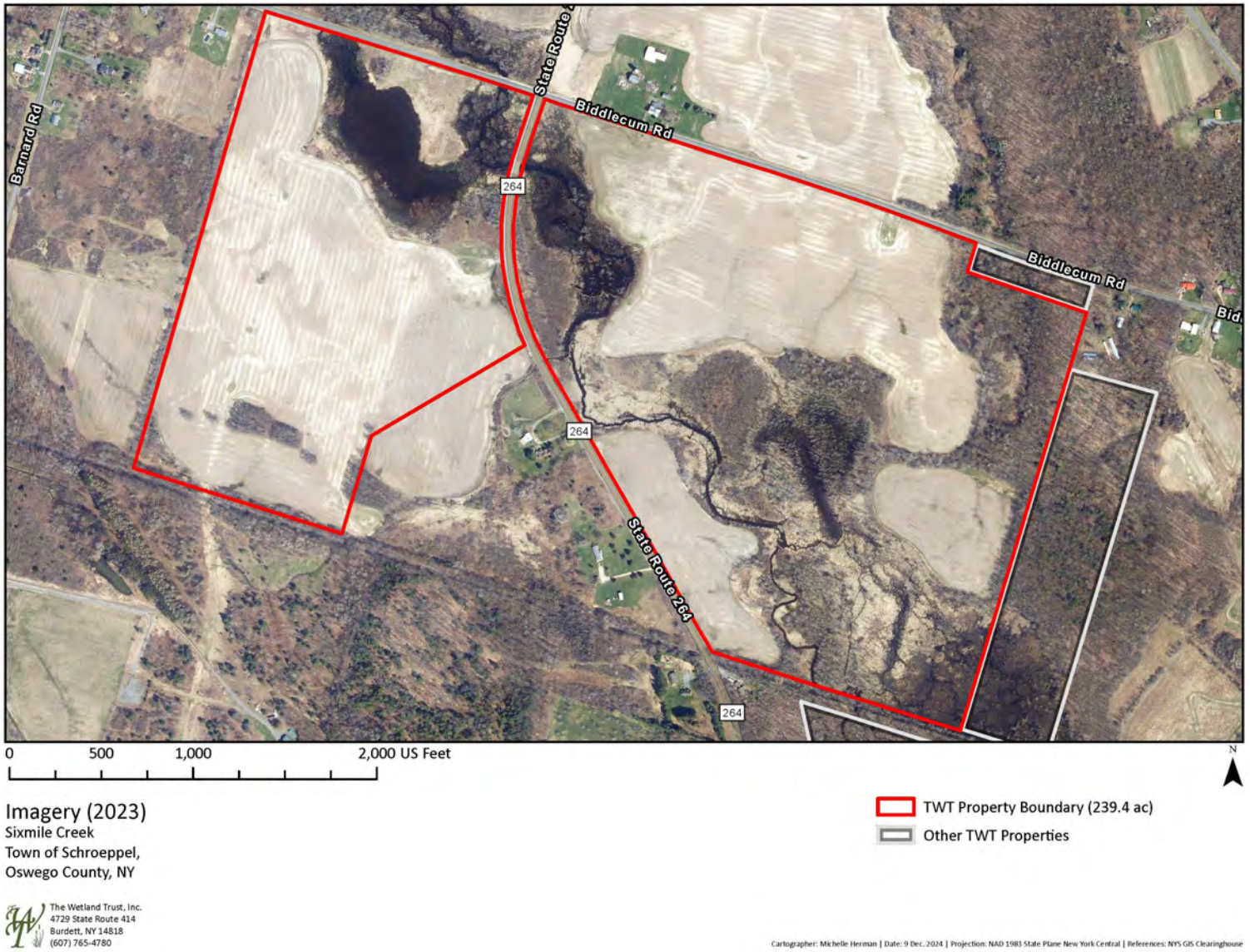
Wetland and Stream Mitigation Site Locations

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: 17 Mar. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Figure 2-2. Sixmile 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 first aerial imagery available in 1955 shows almost the entire parcel denuded of vegetation and likely in agricultural use. By 1981 the wetland area in the southeastern section of the property appears to have been abandoned for agricultural use and vegetation has begun to expand along the small stream which runs into Sixmile Creek from the northeastern side of the property. Between 2006 and 2011, significant vegetation growth occurs adjacent to Sixmile Creek. Successional growth occurs in the vegetated areas following 2011 but the composition of the property remains relatively unchanged to the present day.

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. The forested and wettest portions of the property, mainly along Sixmile Creek, remain vegetated, with significant invasive hydrophytes.

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 features a diverse mosaic of upland and wetland soils shaped by local topography and hydrology. Upland soils include Ira and Sodus gravelly fine sandy loams found on moderate to steep slopes, along with Hudson silt loam on rolling terrain. These soils are generally well-drained and support typical upland vegetation. In contrast, lower-lying areas are characterized by wetland-associated soils such as Rumney loam, Carlisle muck, and Canandaigua silt loam, all of which are poorly drained and reflect persistently saturated conditions. Additional soils common across the site include Raynham and Rhinebeck silt loams, which occupy flatter areas closer to Sixmile Creek.

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, 2-6% slopes	AvB	0.2026	0.08%	Well drained	C/D
Canandaigua silt loam	Cd	132.777357	55.46%	Poorly drained	C/D
Carlisle muck	Ce	2.572702	1.07%	Very poorly drained	A/D
Fonda mucky silt loam	Fn	1.15459	0.48%	Very poorly drained	C/D
Hudson silt loam, 6-12% slopes	HuC	14.476051	6.05%	Moderately well drained	C/D
Hudson silt loam, rolling	HuCK	0.086122	0.04%	Moderately well drained	C/D
Ira gravelly fine sandy loam, 3-8% slopes	IrB	2.926275	1.22%	Moderately well drained	D

Ira gravelly fine sandy loam, 8-15% slopes	IrC	0.549098	0.23%	Moderately well drained	D
Raynham silt loam, 0-6% slopes	RaB	14.321678	5.98%	Poorly drained	C/D
Rhinebeck silt loam, 0-2% slopes	RhA	5.190907	2.17%	Somewhat poorly drained	C/D
Rhinebeck silt loam, 2-6% slopes	RhB	30.712689	12.83%	Somewhat poorly drained	C/D
Rumney loam	RU	16.145298	6.74%	Poorly drained	B/D
Sodus gravelly fine sandy loam, 8-15% slopes	SgC	1.89261	0.79%	Well drained	C
Sodus gravelly fine sandy loam, 15-25% slopes	SgD	2.013395	0.84%	Well drained	C
Williamson very fine sandy loam, 2-6% slopes	WlB	14.402649	6.02%	Moderately well drained	D

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 Sixmile 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.

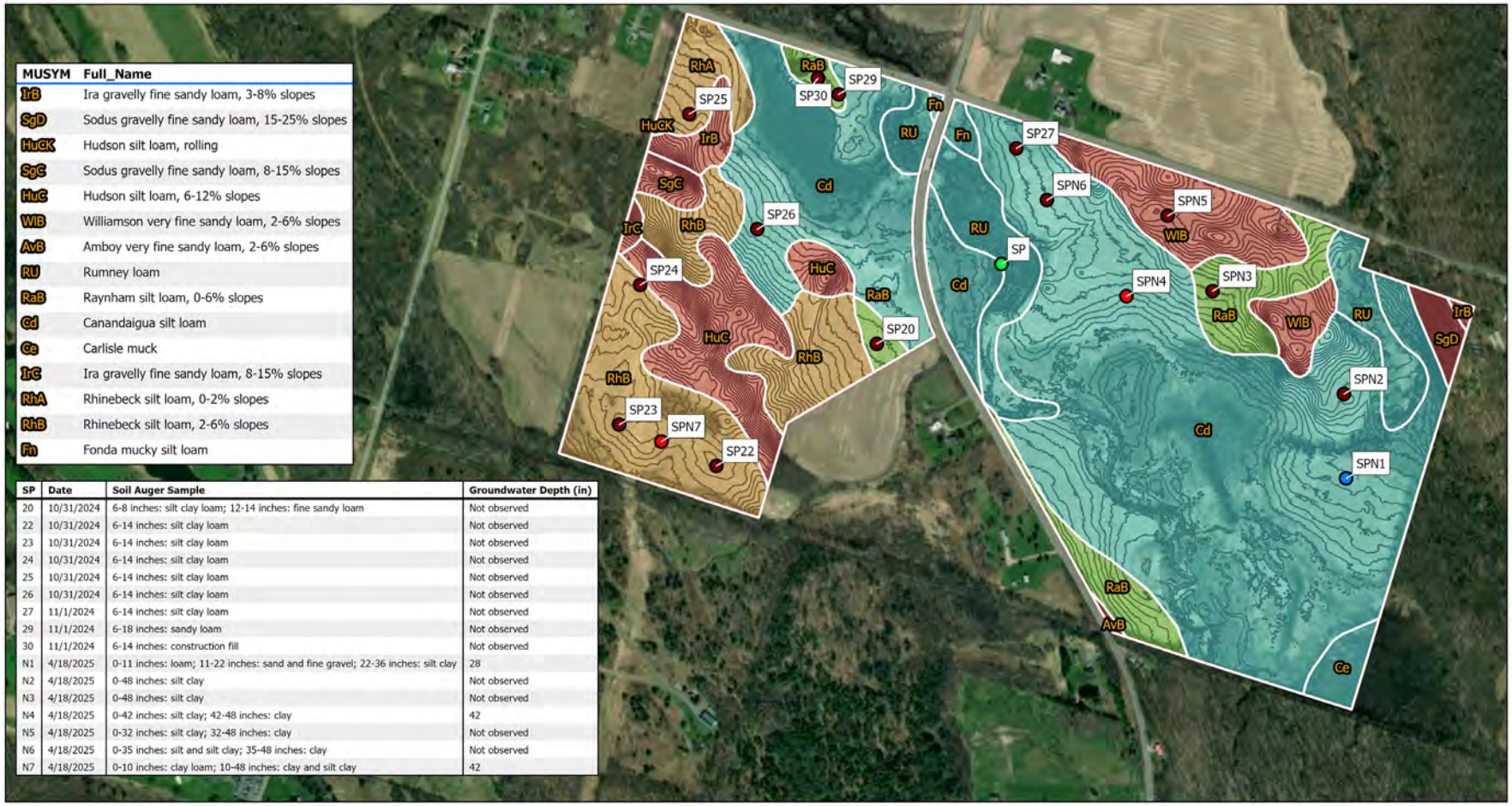
Both state and federal wetlands are mapped onsite. Existing wetlands, streams, and drainage features were delineated in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and Regional Supplement. Field visits for delineation concurrence by USACE and NYSDEC were conducted in August 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 **Appendix C** for the full delineation report including mapped wetlands and drainage features, delineated features summary table and data sheets.

Six Mile Creek flows through the site, with most delineated wetlands located along its stream-wetland complex. Historical meanders and oxbows are visible in aerial imagery, indicating past channel movement. A small tributary enters from the northeast, contributing to the wetland system. Many of these wetlands are influenced by shallow groundwater, especially near a constructed pond in the northeast portion of the site, which intersects the water table.

Fringe wetland areas and those in active agricultural fields are also affected by surface runoff and dense clay soils near the surface. In some locations, an aquitard-like layer further restricts infiltration, leading to prolonged saturation.

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.

Figure 3-1. Sixmile Creek Soil



Staff Gauges

Staff gauges will be installed at Sixmile 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 5 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 3-2**.

Table 3-2. Staff Gauge Locations

Gauge Number	Elevation (ft)	Latitude	Longitude	Description
1	375.52	43.29573322	-76.2994016	Middle of made pond on the West side
2	376.23	43.29649288	-76.29700399	Inlet of water on West side
3	375.66	43.29534547	-76.29641605	Connection point where steam enters East side
4	385.435951	43.292375	-76.298813	In the center of Deep Emergent Wetland #10
5	413.993339	43.290693	-76.301175	In the center of Deep Emergent Wetland #01
6	374.959991	43.291504	-76.294804	Middle of East creek, influenced by surrounding drainage
7	379.127698	43.292966	-76.291177	In the center of Deep Emergent Wetland #22
8	378.382194	43.290949	-76.288286	Culvert at small creek to the East
9	378.848151	43.290277	-76.287415	In the center of Deep Emergent Wetland #34

Monitoring Wells

Approximately 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 3-2** for details.

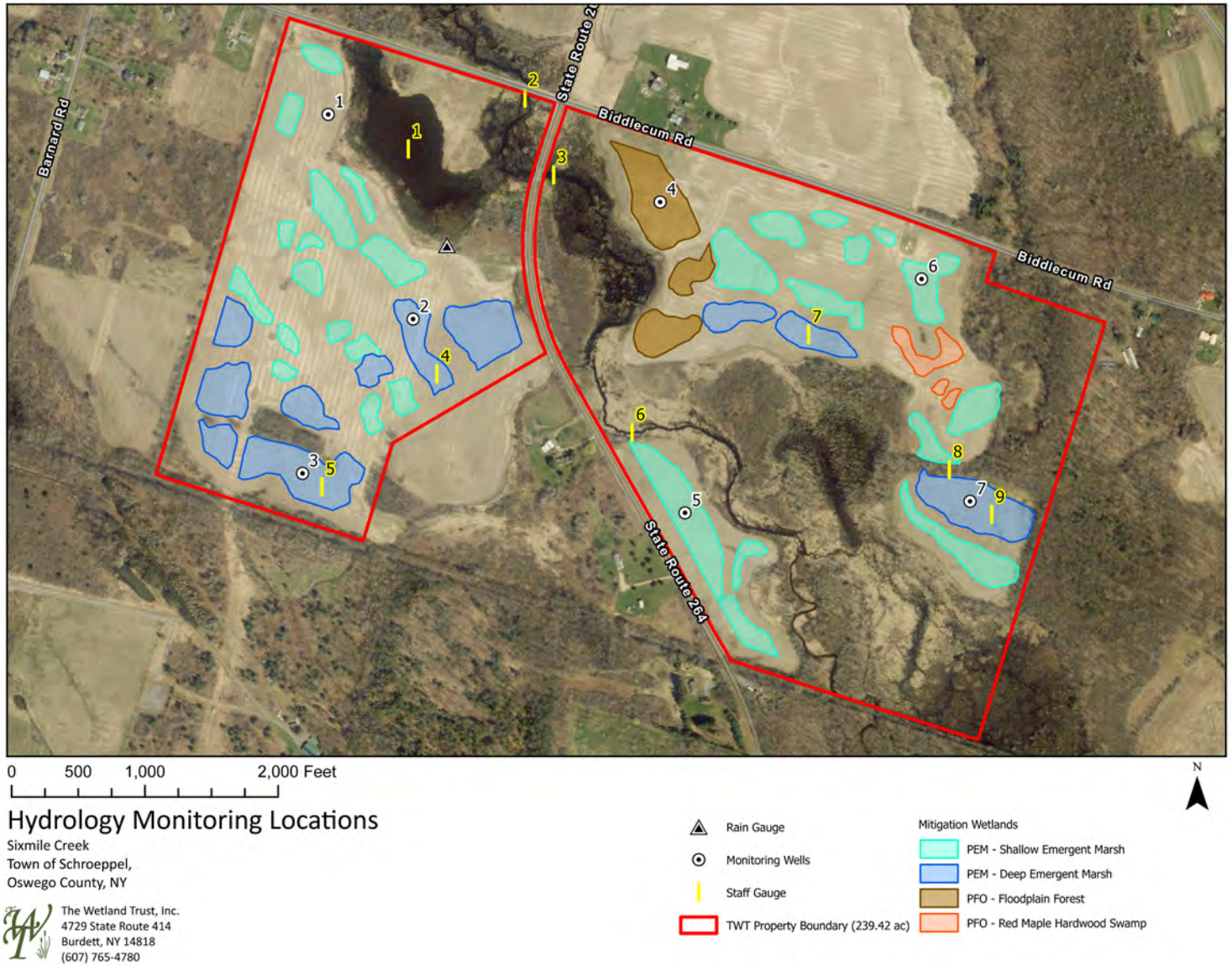
Table 3-3. Monitoring Well Location

Well #	Elevation (ft)	Latitude	Longitude	Location	Description
1	379.26	43.29624768	-76.3010472	West field	Near wetland 17; assessing groundwater and pond relationship
2	385.75	43.29319435	-76.29930337	West field	Near wetland 10
3	413.72	43.29089258	-76.30157373	West field	Near wetland 01; Highest elevation point
4	380.01	43.29494179	-76.29422706	East field	Near wetland 18; Lowest elevation point
5	379.44	43.29030283	-76.29371759	East field	Near wetland 38; monitoring hydrology in lower East field
6	393.23	43.29379306	-76.28885682	East field	Near wetland 29; surrounded by no hydrology influences
7	379.76	43.29047492	-76.2878603	East field	Near wetland 7; dry field surrounded by multiply hydrology factors

Rain Gauge

One HOBO Rain Gauge Data Logger (RG3) is installed at the site to measure precipitation on-site (coordinates: 43.294313, -76.298608, Elevation: 376.8) and has been recording data since April 28, 2025. This data will support the interpretation of hydrologic responses observed in monitoring

Figure 3-2. Sixmile Creek Hydrology Monitoring Locations



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 in and around the Sixmile 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. Although not directly observed at the Sixmile Creek site, several amphibian species were documented in the surrounding area and are likely present at this site as well, including the American toad (*Anaxyrus americanus*), gray treefrog (*Dryophytes versicolor*), northern green frog (*Lithobates clamitans melanota*), northern leopard frog (*Lithobates pipiens*), and wood frog (*Lithobates sylvaticus*). All these species are secure both statewide and globally.

Numerous bird species were observed at the Sixmile Creek mitigation site using both visual and auditory identification. Several species of note include the American pipit (*Anthus rubescens*), mallard (*Anas platyrhynchos*), Canada goose (*Branta canadensis*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*), all of which are secure or apparently secure both statewide and globally. Multiple species of greater conservation concern were also documented at the Sixmile Creek mitigation site, including the northern harrier (*Circus hudsonius*) and bald eagle (*Haliaeetus leucocephalus*), both of which are threatened species in New York State.

Various mammal species were also observed within the Sixmile Creek 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*), North American porcupine (*Erethizon dorsatum*), raccoon (*Procyon lotor*), and 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 Sixmile 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 lake sedge (*Carex lacustris*), water willow (*Decodon verticillatus*), and great blue lobelia (*Lobelia siphilitica*) contribute vital habitat and ecological functions. A complete list of species observed at the Sixmile Creek site can be found in **Appendix D.**

3.6 Invasive Species

The key invasives of Sixmile Creek include purple loosestrife (*Lythrum salicaria*) affecting 67.25 acres, reed canary grass (*Phalaris arundinacea*) affecting 30.53 acres, common reed (*Phragmites australis*) affecting 1.10 acres, and cattail (*Typha spp*) affecting 12.81 acres. In addition to these dominant species, other invasive plants present in the area include honeysuckle (*Lonicera spp*.), white sweet clover (*Melilotus albus*), common Kentucky blue grass (*Poa pratensis*), buckthorn (*Rhamnus cathartica*), multiflora rose (*Rosa multiflora*), and tufted vetch (*Vicia cracca*). 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 Sixmile Creek in 2025

Invasive Species	1-5% Cover (Acres)	5-25% Cover (Acres)	>25% Cover (Acres)	Total Affected Area (Acres)
Reed Canary Grass (Phalaris arundinacea)	0.13	0.41	29.99	30.53
Purple Loosestrife (Lythrum salicaria)	46.47	20.10	0.68	67.25
Cattail (Typha sp.)	6.93	3.28	2.60	12.81
Common Reed (Phragmites australis)	0.02	0.01	1.07	1.10

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 October 17, 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 and approved April 24th, 2025 (**Appendix F**) with Phase 1B field work completed on May 2nd, 2025. The summary report is in progress as of this writing.

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	**Credit/ Mitigation Ratio**	**Credits/ Adjusted Acres**
PEM	**Shallow emergent marsh**	Restoration	20	Re-establishment	1:1	20
		Enhancement	0.1	Rehabilitation	3.5:1	0.03
	Deep emergent marsh	Restoration	17.4	Re-establishment	1:1	17.4
		Enhancement	0.3	Rehabilitation	3.5:1	0.08
PFO	**Floodplain forest**	Restoration	5.5	Re-establishment	1:1	5.5
		Enhancement	0	Rehabilitation	3.5:1	0
	Red maple- hardwood swamp	Restoration	1.2	Re-establishment	1:1	1.2
		Enhancement	0	Rehabilitation	3.5:1	0
		Total	**44.5**			**44.2**

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 Sixmile 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 and planting will be completed after all grading is complete.

Wetlands were designed at the site in June and July 2024 by TWT staff. Determination of the types of wetlands to be re-established for each area within the Sixmile 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 20 acres of shallow emergent marsh, 17.4 acres of deep emergent marsh, 5.5 acres of floodplain forest, and 1.2 acres of red maple hardwood swamp will be re-established (restored) with an additional 0.4 acres of rehabilitation (enhancement) of these cover types **(Figure 5-1)**. The following characteristics guide the locations of each type of wetland to be re-established.

Shallow Emergent Marsh

Considerations/Characteristics

- 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)
- Composition of approximately 75% herbaceous vegetation, 10% emergent aquatics, 5% shrubs under 2 m, 2% shrubs between 2-5 m, 2% trees, and 5% floating aquatics.

Targeted Hydroperiod

- Water depth will range from 1 to 24 inches (during flooding)
- Permanently saturated soils and seasonally flooded
- Periods of dry substrate in mid-late summer.

Deep Emergent Marsh

Considerations/Characteristics

- 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
- Composition of approximately 85% emergent herbaceous vegetation and 25% floating aquatic vegetation in areas.

Targeted Hydroperiod

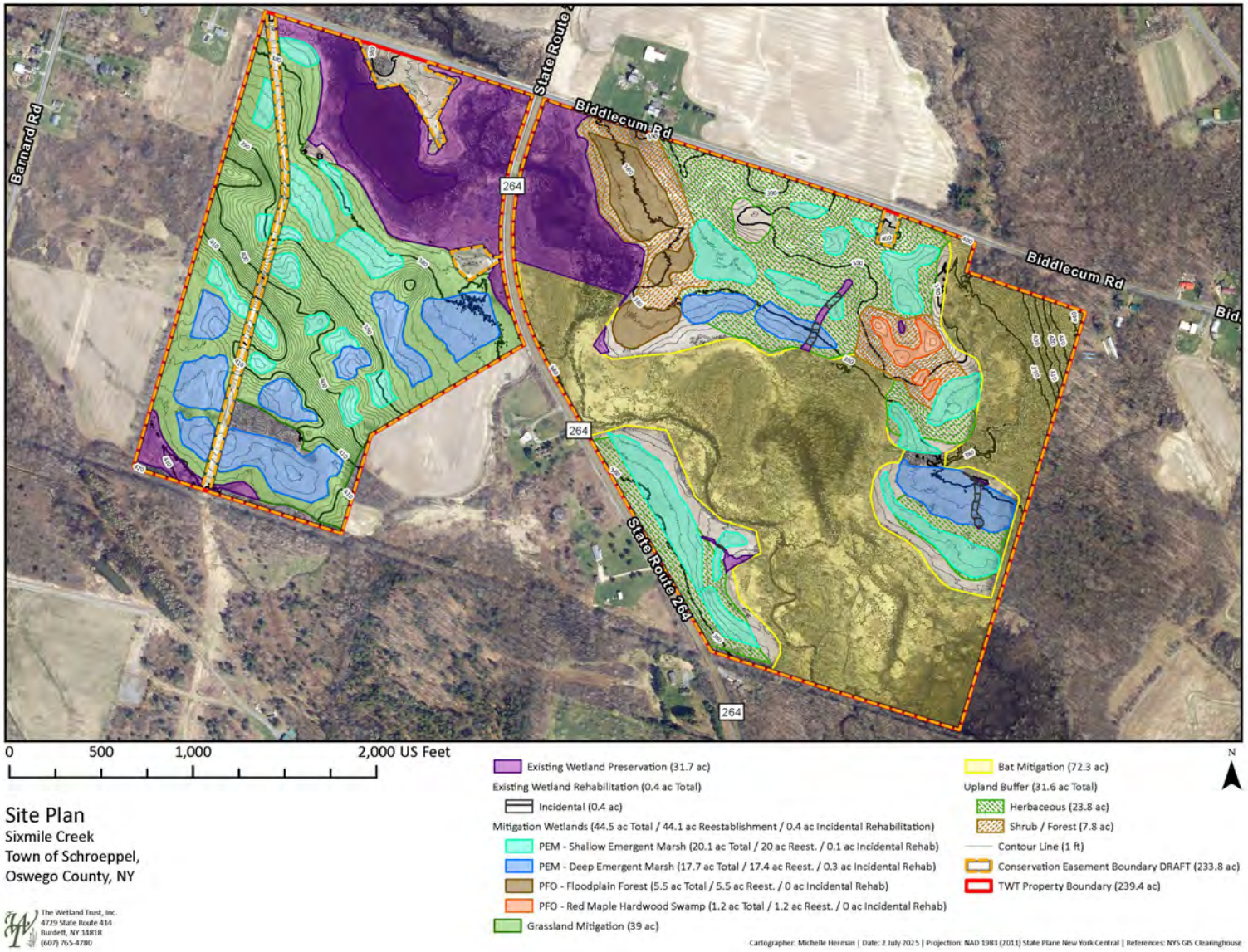
- Water depth will range from 6 to 36 inches
- Water level will fluctuate seasonally with water remaining year-round. There will be standing water remaining in the fall.

Floodplain Forest

Considerations/Characteristics

- Low terraces of river floodplains, and the floodplains of stream restoration areas
- Mineral soils

Figure 5-1. Sixmile Creek Site Plan



- Composition of approximately 85% trees, 60% herbaceous vegetation, 40% shrubs, 25% vines and nonvascular plants.

Targeted Hydroperiod

- Hollows and low areas inundated in early spring
- High areas irregularly inundated
- Periods of inundation lasting approximately 14-28 days

Red Maple-Hardwood Swamp

Considerations/Characteristics

- 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
- Composition of approximately 80% trees, 80% shrubs, 50% herbaceous vegetation, and 20% non-vascular plants.

Targeted Hydroperiod

- Seasonal flooding with saturated soils

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 Biddlecum Road or State Route 264 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 Sixmile Creek ISMP details the target species, timing, and control methods. Methods may includemechanical 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 **Appendix G** 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 **Appendix G** for a typical plan view and representative cross sections.

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.

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 C-E** in **Appendix G**.

Table 5-1. Sixmile 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 – Hemlock Hardwood Swamp	1	12	36	10	400
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%

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-d** 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 Impact 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.

TWT plans on erecting a deer-proof fence around the Buxton Creek Site construction areas to increase the survival rate of planted trees and shrubs. The lower portion of the fence will be modified for the passage of frogs, toads, salamanders, snakes, turtles, and small mammals.

Both PSS and PFO wetland Re-Establishment/Restoration areas will use a mix of herbaceous species derived from **Table 5-2a**, PEM- Shallow Emergent Plant List, as the foundational understory mix. The PSS and PFO areas will be at an early successional state and these herbaceous species are important early succession companion species that support success. While each

community type listed includes a few representative herbaceous plantings tailored to sites specific goals, the broader PEM list will be used to add plant species diversity for each creation site.

Table 5-2a. PEM - Shallow Emergent Marsh					
Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Swamp Milkweed	*Asclepias incarnata*	OBL	4	S5	15-20 pounds per acre
Symphyotrichum puniceum	*Aster puniceus*	OBL	4	S5	
False nettle	*Boehmeria cylindrica*	OBL	7	S5	
Canada bluejoint grass	*Calamagrostis canadensis*	OBL	7	S5	
wild calla	*Calla palustris*	OBL	7	S5	
Longhair Sedge	*Carex comosa*	OBL	4	S5	
Fringed Sedge	*Carex crinita*	OBL	3	S5	
Bottlebrush Sedge	*Carex hystericina*	OBL	5	S5	
Shallow Sedge	*Carex lurida*	OBL	4	S5	
Pointed Broom Sedge	*Carex scoparia*	FACW	1	S5	
Upright Sedge	*Carex stricta*	OBL	4	S5	
Hairy-fruited sedge	*Carex trichocarpa*	OBL	5	S5	
fox sedge	*Carex vulpinoidea*	OBL	2	S5	
White Turtlehead	*Chelone glabra*	OBL	6	S5	
Swamp Loosestrife	*Decodon verticillatus*	OBL	7	S5	
deer-tongue rosette grass	*Dichanthelium clandestinum*	FACW	4	S5	
Crested wood fern	*Dryopteris cristata*	OBl	8	S5	
Three-way Sedge	*Dulichium arundinaceum*	OBL	8	S5	
Common Spikerush	*Eleocharis palustris*	OBL	5	S5	
Eastern riverbank wild rye	*Elymus riparius*	FACW	6	S5	
Virginia Wildrye	*Elymus virginicus*	FACW	6	S5	
Virginia wild rye	*Elymus virginicus*	FACW	6	S5	
Boneset	*Eupatorium perfoliatum*	FACW	3	S5	
common flat-topped goldenrod	*Euthamia graminifolia*	FAC	1	S5	
Spotted Joe-Pye Weed	*Eutrochium maculatum*	OBL	4	S5	
fowl manna grass	*Glyceria striata*	OBL	6	S5	
Common sneezeweed	*Helenium autumnale*	FACW	4	S5	
Swamp sunflower	*Helianthus angustifolius*	FACW	10	S2	
Spotted Touch-me-not	*Impatiens capensis*	FACW	3	S5	
Pale Touch-me-not	*Impatiens pallida*	FACW	3	S4	
Northern Blue Flag	*Iris versicolor*	OBL	4	S5	
Canada Rush	*Juncus canadensis*	OBL	8	S5	
Soft Rush	*Juncus effusus*	OBL	2	S5	
Cardinal Flower	*Lobelia cardinalis*	FACW	7	S4S5	
Great Blue Lobelia	*Lobelia siphilitica*	FACW	5	S5	
American bugleweed	*Lycopus americanus*	OBL	4	S5	
Square-stemmed Monkey Flower	*Mimulus ringens*	OBL	6	S5	
common wild bergamot	*Monarda fistulosa*	FACU	2	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
Cinnamon Fern	*Osmunda cinnamomea*	FACW	6	S5	
Royal fern	*Osmunda regalis*	OBL	6	S5	
Lizard's Tail	*Saururus cernuus*	OBL	6	S5	
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	OBL	4	S5	
dark-green bulrush	*Scirpus atrovirens*	OBL	2	S5	
common wool grass	*Scirpus cyperinus*	OBL	4	S5	
rough-leaved goldenrod	*Solidago patula*	OBL	7	S5	
rough goldenrod	*Solidago rugosa*	FAC	1	S5	

Indian grass	*Sorghastrum nutans*	FACU	6	S5	
American bur-reed	*Sparganium americanum*	OBL	4	S5	
lance-leaved aster	*Symphyotrichum lanceolatum*	FACW	1	S5	
New England aster	*Symphyotrichum novae-angliae*	FACW	1	S5	
Purple-Stemmed Aster	*Symphyotrichum puniceum*	OBL	4	S5	
Marsh Fern	*Thelypteris palustris*	FACW	4	S5	
Blue Vervain	*Verbena hastata*	FACW	3	S5	
white vervain	*Verbena urticifolia*	FAC	2	S5	
New York ironweed	*Vernonia noveboracensis*	FACW	3	S4	
Culver's root	*Veronicastrum virginicum*	FACW	5	S2	
common golden Alexanders	*Zizia aurea*	FAC	4	S5	

Table 5-2b. PEM - Deep Emergent Marsh

Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Sweet flag	*Acorus americanua*	OBL	5	S5	Herbaceous plugs 3-ft spacing 15-20 pounds per acre in applicable areas
river bulrush	*Bolboschoenus fluviatilis*	OBL	4	S5	
bristly sedge	*Carex comosa*	OBL	4	S5	
long sedge	*Carex folliculata*	OBL	7	S5	
Gray's Sedge	*Carex grayi*	FACW	7	S5	
Cartex lacustris	*Carex lacustris*	OBL	5	S5	
cyperus-like sedge	*Carex pseudocyperus*	OBL	6	S5	
three-fruited sedge	*Carex trisperma*	OBL	8	S5	
Swamp Loosestrife	*Decodon verticillatus*	OBL	7	S5	
blue flag	*Iris versicolor*	OBL	4	S5	
Canada rush	*Juncus canadensis*	OBL	8	S5	
bayonet rush	*Juncus militaris*	OBL	9	S4	
rice cut grass	*Leersia oryzoides*	OBL	4	S5	
Royal Fern	*Osmunda regalis*	OBL	6	S5	
green arrow arum	*Peltandra virginica*	OBL	6	S5	
pickerel weed	*Pontederia cordata*	OBL	4	S5	
common arrowhead	*Sagittaria latifolia*	OBL	3	S5	
Lizards tail	*Saururus cernuus*	OBL	3	S5	
three-square bulrush	*Schoenoplectus pungens*	OBL	6	S5	
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	OBL	4	S5	
Green Bulrush	*Scirpus atrovirens*	FACW	2	S5	
Woolgrass	*Scirpus cyperinus*	FACW	4	S5	
Water Parsnip	*Sium suave*	OBL	6	S5	
Bur-reed	*Sparganium americanum*	OBL	4	S5	
giant bur-reed	*Sparganium eurycarpum*	OBL	4	S5	
Wild rice	*Zizania palustris*	OBL	8	SNR	
Sweet flag	*Acorus americanua*	OBL	5	S5	
river bulrush	*Bolboschoenus fluviatilis*	OBL	4	S5	
bristly sedge	*Carex comosa*	OBL	4	S5	
long sedge	*Carex folliculata*	OBL	7	S5	
Gray's Sedge	*Carex grayi*	FACW	7	S5	

Table 5-2c. PFO – Floodplain Forest					
Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Tree Speceis					15-20 pounds per acre seed 450/acre Shrub clusters Trees 10-25 feet apart
Red maple	*Acer rubrum*	FAC	4	S5	
Silver maple	*Acer saccharinum*	FACW	6	S5	
speckled alder	*Alnus incana*	FACW	5	S5	
Grey birch	*Betula populifolia*	FAC	4	S5	
ironwood	*Carpinus caroliniana*	FAC	6	S5	
Hackberry	*Celtis occidentalis*	FAC	7	S4	
Black gum	*Nyssa sylvatica*	FAC	7	S5	
Ninebark	*Physocarpus opulifolius*	FACW	7	S5	
American sycamore	*Platanus occidentalis*	FACW	3	S5	
Eastern cottonwood	*Populus deltoides*	FAC	2	S5	
swamp white oak	*Quercus bicolor*	FACW	7	S5	
Bur oak	*Quercus macrocarpa*	FAC	6	S4	
Pin oak	*Quercus palustris*	FACW	7	S4	
Black willow	*Salix nigra*	OBL	5	S5	
American elm	*Ulmus americana*	FACW	4	S5	
slippery elm	*Ulmus rubra*	FAC	8	S5	
Shrub Species*					
Buttonbush	*Cephalanthus occidentalis*	OBL	8	S5	
Spicebush	*Lindera benzoin*	FACW	6	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	
Silky dogwood	*Cornus amomum*	FACW	6	S5	
Gray dogwood	*Cornus racemosa*	FAC	2	S5	
Red osier dogwood	*Cornus sericea*	FACW	6	S5	
* These species listed are not an exhaustive list, additional species may be used from the PSS List					
Herbaceous**					
Jack-in-the-Pulpit	*Arisaema triphyllum*	FAC	5	S5	
False Nettle	*Boehmeria cylindrica*	OBL	7	S5	
Gray's sedge	*Carex grayi*	FACW	7	S5	
Marsh Marigold	*Caltha palustris*	OBL	4	S5	
tussock sedge	*Carex stricta*	OBL	4	S5	
Fox Sedge	*Carex vulpinoidea*	FACW	2	S5	
Blue Flag	*Iris versicolor*	OBL	4	S5	
Wood Nettle	*Laportea canadensis*	FAC	8	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
Skunk Cabbage	*Symplocarpus foetidus*	OBL	5	S5	
swamp goldenrod	*Solidago gigantea*	FACW	3	S5	
**Not an exhaustive list, additional species may be added from the PEM lists.					

Table 5-2d. PFO – Red Maple Hardwood Swamp					
Common Name	Scientific Name	Wetland Indicator	Coefficient of Conservatism (CoC)	Conservation Status	Planting Rate
Tree Speceis					15-20 pounds per acre seed 450/acre
Red maple	*Acer rubrum*	FAC	4	S5	
Silver maple	*Acer saccharinum*	FACW	6	S5	
yellow birch	*Betula alleghaniensis*	FAC	7	S5	
Ironwood	*Carpinus caroliniana*	FAC	6	S5	
Bitternut hickory	*Carya cordiformis*	FAC	7	S5	
Blackgum	*Nyssa sylvatica*	FAC	7	S5	

American sycamore	*Platanus occidentalis*	FACW	3	S5	Shrub clusters Trees 10-25 feet apart
Eastern cottonwood	*Populus deltoides*	FAC	2	S5	
Swamp white oak	*Quercus bicolor*	FACW	7	S5	
American elm	*Ulmus americana*	FACW	4	S5	
Slippery elm	*Ulmus rubra*	FAC	8	S5	
Shrub Species*					
speckled alder	*Alnus incana*	FACW	5	S5	
common winterberry	*Ilex verticillata*	FACW	7	S5	
spicebush	*Lindera benzoin*	FACW	6	S5	
Arrow-wood	*Viburnum dentatum*	FAC	3	S5	
Nannyberry	*Viburnum Lentago*	FAC	4	S5	
* These species listed are not an exhaustive list, additional species may be used from the PSS List					
Herbaceous**					
False Nettle	*Boehmeria cylindrica*	OBL	7	S5	
tussock sedge	*Carex stricta*	OBL	4	S5	
Spotted Touch-me-not	*Impatiens capensis*	FACW	3	S5	
Sensitive Fern	*Onoclea sensibilis*	FACW	2	S5	
royal fern	*Osmunda regalis*	OBL	6	S5	
cinnamon fern	*Osmundastrum cinnamomeum*	FACW	6	S5	
tall meadow rue	*Thalictrum pubescens*	FACW	4	S5	
**Not an exhaustive list, additional species may be added from the PEM lists.					

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 Sixmile Creek Site will be the sixth site developed which is proposed for the fourth 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				
Sixmile 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

The construction sequence at Sixmile 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 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 Sixmile 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 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 site is based on several factors. First, mitigation acreage must meet the three wetland criteria 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:

- 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. Hydrology must be met more than 50% of the monitoring period at a minimum frequency of 6 years in 10 or 8 years in

15. Any combination of inundation or shallow water table is acceptable in meeting the 14-day minimum requirement.

- 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.

Second, mitigation success will depend on the establishment of wetland community types (as described in Section 5) that replace in form and function the impacted wetlands. At Buxton Creek, the targeted cover types are shallow and deep emergent marsh, floodplain forest, red maple and hemlock hardwood forest.

Third, 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. The final performance standard of 90% shall be 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 will be native shrub species. Stem density standards will include native volunteer species. Up to 800 woody stems will be planted, as needed, based on survival. Stem density monitoring will be conducted at a frequency of 10 times in 15 years, 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 will be native tree species. Stem density standards will include native volunteer

species. Up to 600 woody stems will be planted, as needed, based on survival. Stem density monitoring will be conducted at a frequency of 10 times in 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.
- **Stratified Randomized Permanent Plots:** To obtain a comprehensive view of characteristics at the site, random permanent plots will be established for data collection. The plots will be stratified among the different wetland cover types and mitigation types in which plots will have an equal chance of being selected in each stratum. Vegetation data such as relative cover, stem counts, tree height, and invasive coverage will be observed and documented within these plots for baseline data and post-mitigation monitoring for the 15-year period. See **Figure 6-1** for proposed permanent data collection locations.

Figure 6-1. Vegetation Monitoring and Photo Point Locations

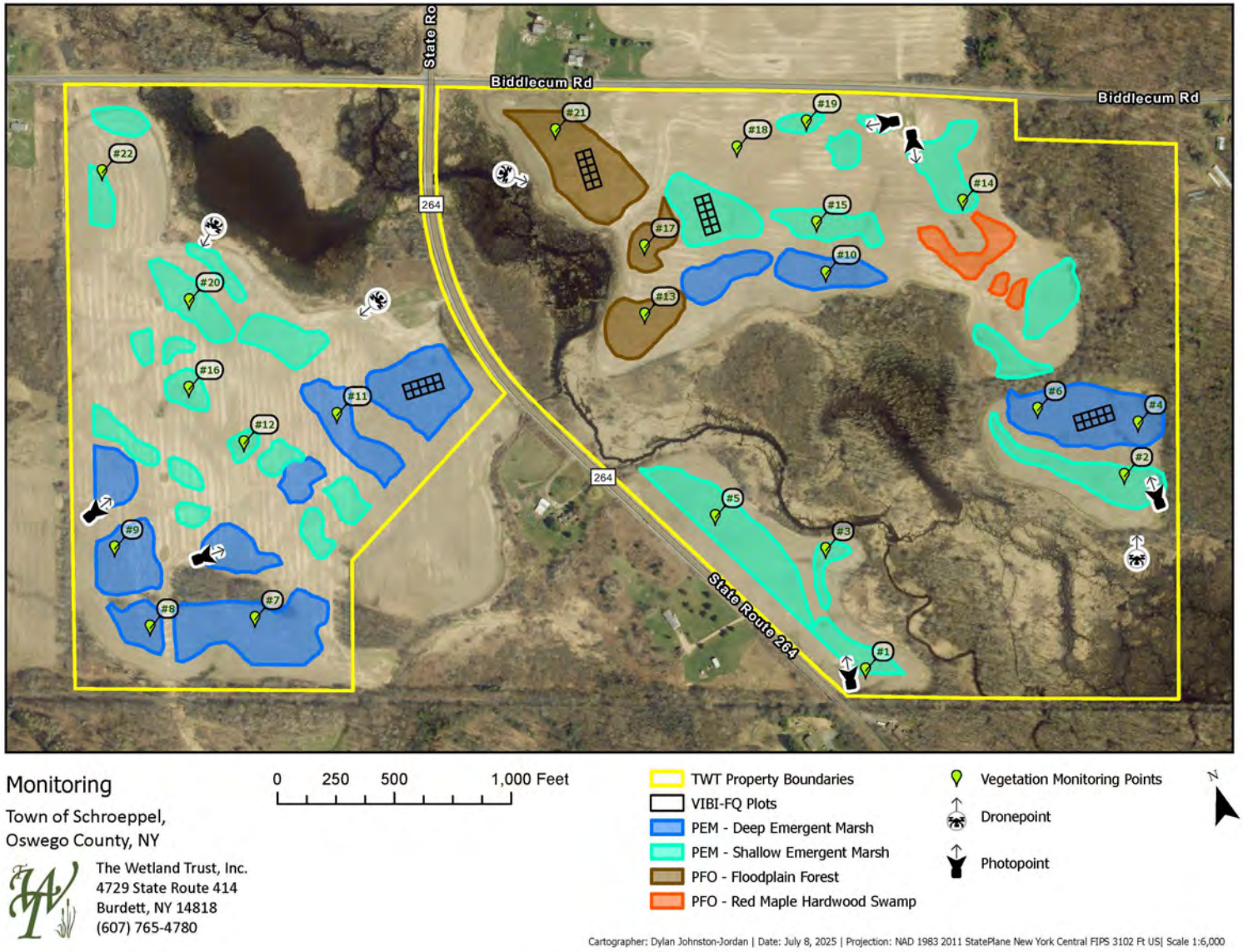


Table 6-1. Wetland Performance Standards and Interim Goals							
Performance Standard	**Interim and Final Goals**						
	Year 1[1]	Year 3	Year 5	Year 7	Year 10[2]	Year 12	Year 15[3]
Relative cover by native perennial hydrophytes (FAC or wetter)	20%	40%	60%	80%	90%		
Stem density in PSS areas (per acre, maximum of 160 shall be tree species)	400[4]	400	400	400	400	400	400
Stem density in PFO areas (per acre, maximum of 200 shall be shrub species)	400[4]	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
4. Based on a beginning planting rate of 450 stems per acre with additional stems to be planted within the first three monitoring years, if needed, depending on survival. Approximately 25% of the final stem goals are expected to be native volunteer species.

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 will consist of ten (10) monitoring reports over fifteen (15) 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.

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		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			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		X
Photo sequence		X	X	X	X	X		X			X			X		X
Detailed site mapping		X	X	X	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 NYSDEC approval.

8.1 Hydrology Maintenance

Immediately following construction and throughout the 15-year monitoring period, Micron, facilitated by 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 (requires USACE and NYSDEC approval),
- Adjusting height/depth of ditch fill or groundwater dams (requires USACE and NYSDEC approval),
- 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, Micron (via TWT) will closely monitor vegetative establishment following initial planting/seeding and throughout the 15-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 (requires NYSDEC approval).

8.3 General Site Maintenance

General site maintenance is anticipated to occur regularly throughout the 15-year monitoring period and beyond. Micron bears responsibility for site maintenance, as facilitated by TWT, the fee-simple owner of the site. Non-ecological maintenance tasks include but are 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 and NYSDEC. 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.

168 Biddlecum Road, Town of Schroeppel,

Oswego County, NY

covering a 233.8-acre portion of

Tax Parcels 256.00-04-28, 272.00-01-02, 272.00-02-01 and 273.00-01-01.03

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 Sixmile 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.

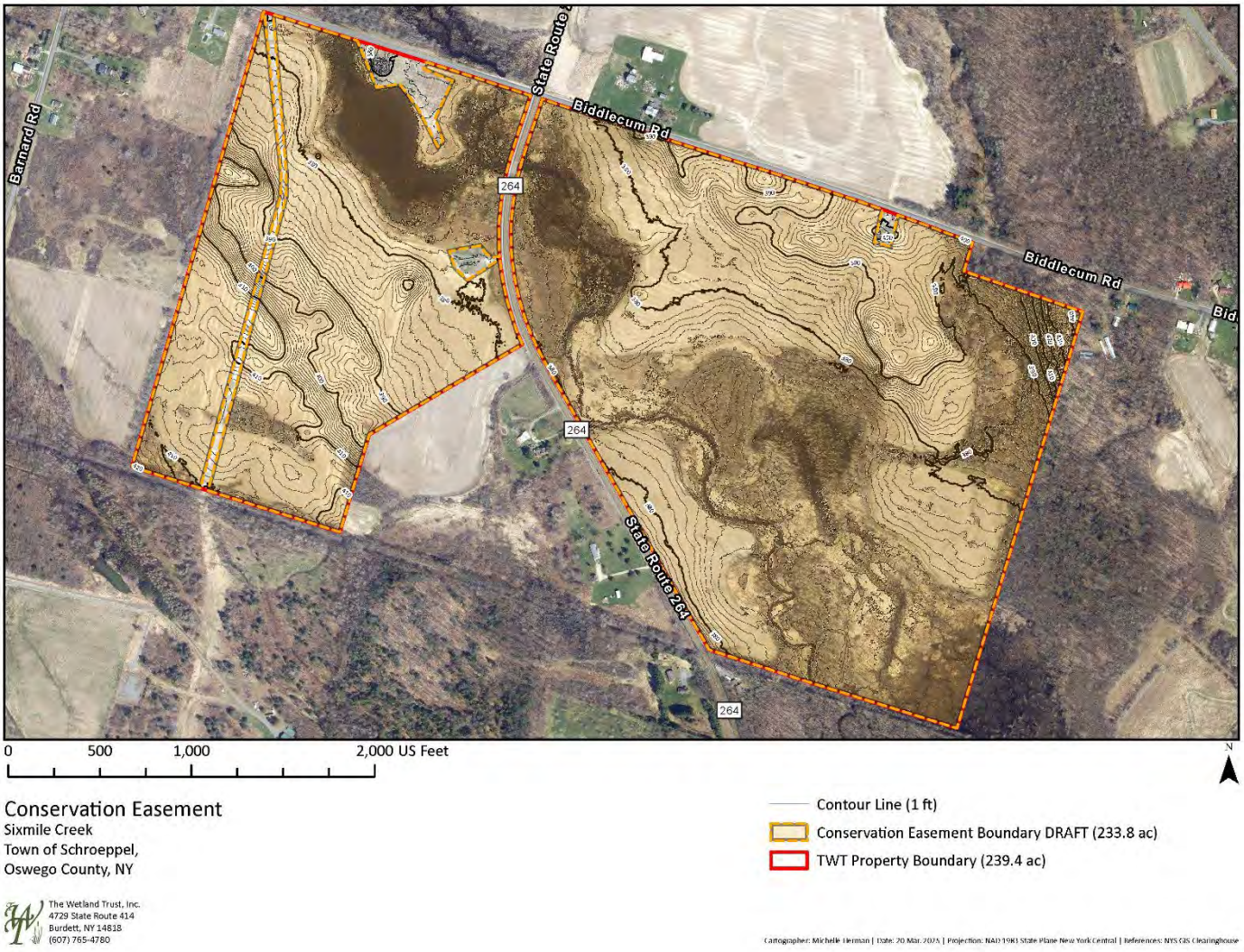
Sixmile Creek, 168 Biddlecum Road

Town of Schroeppel, Oswego County, NY, covering a *233.8*-acre portion

of Tax Parcels 256.00-04-28, 272.00-01-02, 272.00-02-01 and 273.00-01-01.03

ALL THAT TRACT OR PARCEL OF LAND,

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



Appendix B.

0 500 1,000 2,000 US Feet

N

Imagery (1955)

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

TWT Property Boundary (239.4 ac)

Other TWT Properties

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)

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

TWT Property Boundary (239.4 ac)

Other TWT Properties

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)

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

TWT Property Boundary (239.4 ac)

Other TWT Properties

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

0 500 1,000 2,000 US Feet

N

Imagery (2011)

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

TWT Property Boundary (239.4 ac)

Other TWT Properties

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

0 500 1,000 2,000 US Feet

N

Imagery (2015)

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

TWT Property Boundary (239.4 ac)

Other TWT Properties

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

0 500 1,000 2,000 US Feet

N

Imagery (2019)

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

TWT Property Boundary (239.4 ac)

Other TWT Properties

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.

Micron- Sixmile Creek Mitigation Site

Wetland Delineation Report

May 2025

The Wetland Trust, Inc. (TWT) conducted delineations of wetlands, drainages, and streams at the Micron-Sixmile Creek Wetland compensatory mitigation site located in Shroeppel, Oswego County, New York. The Sixmile Creek site is at the intersection of State Route 264 and Biddlecum Road and is approximately 239 acres in size. The purpose of the delineation is to determine the location and extent of wetlands and other water features on the Sixmile Creek site to aid in the planning and design of the wetland mitigation plan and obtaining the required regulatory permits.

Methods

A desktop review was conducted prior to field work which included background data such as aerial photography (current and historical), soil maps, and NY State and Federal wetland maps (see Mitigation Plan). Wetland delineations were conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (Regional Supplement USACE 2012). All delineations were completed consistently with the 1995 NYSDEC Freshwater Wetlands Delineation Manual (NYSDEC 1995). All field data points were recorded with a centimeter-level accuracy GNSS receiver and mapped in ArcGIS Pro. Field visits for delineation concurrence by USACE and NYSDEC were conducted in August 2024.

Results

A total of 98.9 acres of wetland and open water features were delineated on the Sixmile Creek mitigation site. This site has the largest portion of riparian wetlands associated directly with stream systems out of the six sites. It also has some of the largest areas of deep emergent wetlands.

Agricultural Portions (PEM 21, PEM 20, PEM 17, PEM 18, PEM 13, PEM 12, PEM 05, PSS-02)

Some of these areas are within the active agricultural footprint and some on the fringes currently idle. These idle areas are usually in some state of early plant succession depending on when they were last farmed. For this property, **PSS-02** is the only area in that state. Though not listed above, portions of **PEM-02, PEM-06,** and **PEM-16** all have active agricultural areas along the interface where the wetland boundaries extend into portions of active agriculture. These areas were delineated and had similar conditions like **PEM-17** or **PEM-21** where drainage patterns**, s**oil cracking, algal growth, and stressed plantings were observed in these areas. These wetlands are characterized by a gently sloping to concave land feature where water periodically accumulates and stands for long periods. Soil cracking, stressed agricultural plantings (soybeans in 2024), and algal growth were observed to varying degrees. Soil cracking

is often evidence of seasonal saturation followed by drying, a common condition in temporary or seasonally inundated wetlands. Algal growth typically indicates standing or slow-moving water, which is prevalent in wetlands. It may also indicate nutrient enrichment, particularly nitrogen and phosphorus, resulting from agricultural activities. Although not a definitive indicator on its own, algal growth can support evidence of wetland hydrology when observed alongside other indicators such as cracking soils and stressed plants. These areas delineated as wetlands were verified in the field with the Agencies.

West Portion (PEM 01, PEM 02, PEM 03, PEM 04, PEM-05, PFO 01, PFO 02, PSS 01, PSS 02, POW 01, ROW 01)

POW-01 is the standout feature in this portion of the wetland complex. It attracts people to fishing as well as a regular visitor observed on several occasions, a mature Bald Eagle (Haliaeetus leucocephalus) flying or perched on a large dead Green Ash (Fraxinus pennsylvanica). This open water area was created and likely involved placement of portions of excavated materials along the north side. The area does have portions with some aquatic species and deep emergent species along the fringes. Surrounding this area is a large wetland area of PEM. **PEM-02** immediately adjacent and on the east side of Six Mile Creek **PEM-03**. **PFO-01, PFO-02,** and **PSS-01** interface with the state highway and primary access for agricultural use. This interface of disturbance along with the highway likely introduced Common Reed in this area dominating **PEM-04** and portions of **PSS-01**. This access area between **PSS-01** and **PEM-04** will be an important staging/access area for wetland mitigation efforts and could be considered as part of future wetland education/research opportunities.

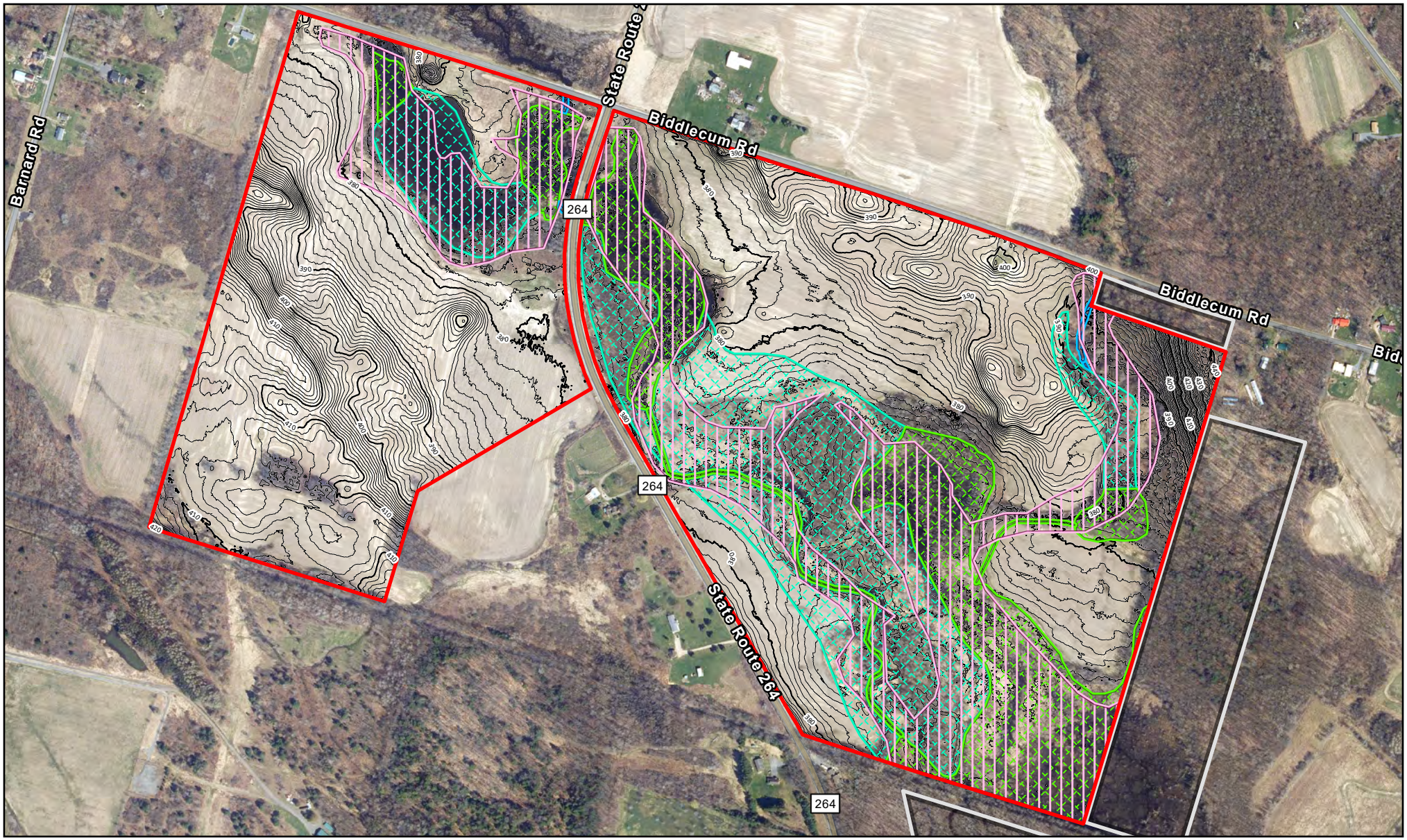
East Portion (PEM 06 to PEM 21, PFO 03 to PFO 13, PSS 03 to PSS 09, ROW 02)

This area is interconnected with Sixmile Creek and a small tributary that enters the property in the northeast corner draining eventually into the larger wetland complex near **PFO-11.** The wetland system in the northeast corner is primarily outside of the wetland concurrence area but has an important relationship with the larger wetland complex and mitigation efforts. This wetland complex includes **PFO-13** and **PEM-19** (making up the largest wetland areas). All the wetland areas delineated are associated with a tributary of Sixmile Creek. This tributary has an agricultural road crossing with an undersized culvert near **PFO-11 (Attachment 2).**

The larger portion of the wetland complex within the wetland concurrence area is a very diverse mixture of wetland species and cover types. Sixmile Creek has played an important role in the current configuration as well as human influences such as a highway and agricultural activity. Of note are old stream oxbow features in the wetland system like the candy cane-like shape in **PFO-06**. Some of the largest areas of deep emergent wetlands are found on this site with species like Buttonbush (Cephalanthus occidentalis) and Swamp loosestrife (Decodon verticillantus) complementing these systems. Swamp loosestrife is common along deep emergent system of Lake Ontario and was only documented on this site (out of the 6 sites). Emerald

Ash Borer (EAB) has had a major impact on all the forested wetland areas and presents possible opportunities to uplift these areas through mitigation efforts. This entire wetland system has on-going beaver (Castor canadensis) use/activity and should a consideration in all mitigation efforts. Agriculture has maximized use up to the boundaries of this wetland system and in many fringe locations has marginal value. Many of these areas were delineated as wetlands as previously noted.

Attachments: 1. State and Federal Mapped Wetlands
2. Sixmile Creek Delineation Map
2. Delineation Summary Table
3. Data Sheets



State and Federal Mapped Wetlands

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

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

NYSDEC Wetlands (64.5 ac)

NWI Wetlands (83.3 ac total)

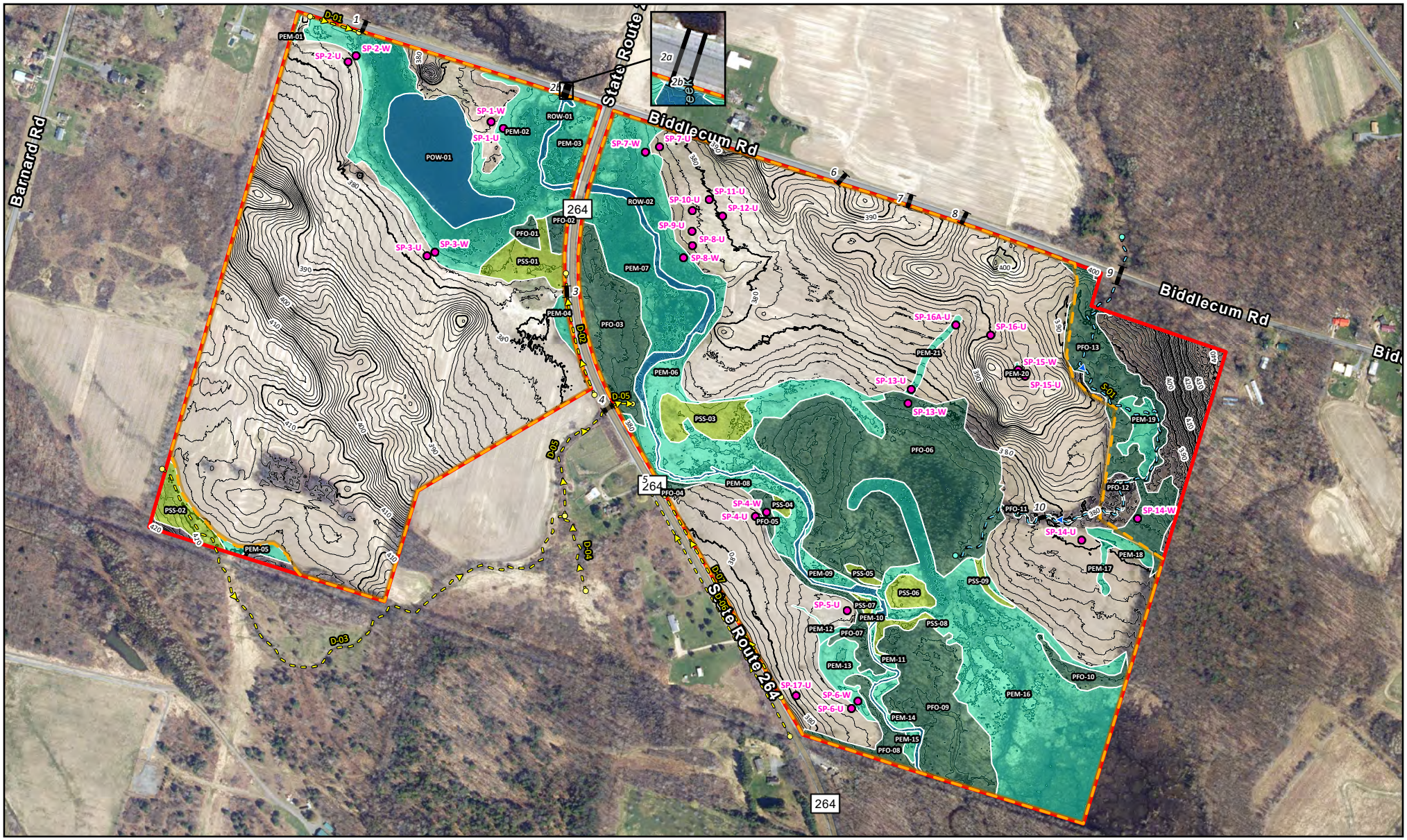
- Freshwater Emergent Wetland (49.7 ac)
- Freshwater Forested/Shrub Wetland (33.3 ac)
- Riverine (0.3 ac)

Contour Line (1 ft)

TWT Property Boundary (239.4 ac)

Other TWT Properties

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



0 500 1,000 2,000 US Feet

N

Delineated Wetlands and Drainage Features

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

- Wetland Delineation Sample Points (n = 28)
- Culverts (n = 11)

Drainage Features
- Ditch
- Stream

Delineated Wetlands (98.9 ac total)
- Open Water - Pond (P) and Riverine (R) (7.8 ac)
- PEM (48.6 ac)
- PSS (6.1 ac)
- PFO (36.4 ac)

- Contour Line (1 ft)
- Delineation Concurrence Request Boundary (225 ac)
- TWT Property Boundary (239.4 ac)

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

Sixmile Creek Wetland Delineation Summary Table

ID	Wetland Type Cowardin	Cover Type Edinger	Acres	Linear Feet	Notes	Flow Regime
1	Culvert	-	-	18.74598227	7 ft diameter metal; Biddlecum Rd crossing over offshoot channel of Sixmile Creek, flows into dug pond (POW-01).	-
2a	Culvert	-	-	49.27027926	West culvert under Biddlecum Rd. for main channel of Sixmile Creek.	-
2b	Culvert	-	-	49.42708877	East culvert under Biddlecum Rd. for main channel of Sixmile Creek.	-
3	Culvert	-	-	18.74598227	Gas well field entrance over roadside ditch.	-
4	Culvert	-	-	37.76054065	Under State Route 264 connecting hydrology from the West field to the East field.	-
5	Culvert	-	-	38.71672108	Under State Route 264 connecting hydrology from the West field to the East field.	-
6	Culvert	-	-	43.90504635	18 in diameter.	-
7	Culvert	-	-	48.99398824	24 in diameter; also a drainage well for three 4 in drain pipes.	-
8	Culvert	-	-	49.77230411	18 in diameter.	-
9	Culvert	-	-	45.24092126	Biddlecum Rd crossing over unnamed tributary of Sixmile Creek.	-
10	Culvert	-	-	75.51536412	2 ft diameter; unnamed tributary crossing. On 10/29/24 water depth was 8 in at inlet.	-
D-01	Ditch	Ditch / artificial intermittent stream	-	246.8795028	Roadside ditch along Biddlecum Rd., flows East to PEM-02.	Intermittent
D-02	Ditch	Ditch / artificial intermittent stream	-	605.721395	Roadside ditch along State Route 264, flows North.	Intermittent
D-03	Ditch	Ditch / artificial intermittent stream	-	2916.782656	Largely off-site, flows from PSS-02 to D-05 and Sixmile Creek.	Intermittent
D-04	Ditch	Ditch / artificial intermittent stream	-	415.8757746	Off-site flow into D-05.	Intermittent
D-05	Ditch	Ditch / artificial intermittent stream	-	722.6099466	Largely off-site flow to south of West field through Culvert 4 to Sixmile Creek.	Intermittent
D-06	Ditch	Ditch / artificial intermittent stream	-	1454.490655	Roadside ditch along State Route 264, flows North to Culvert 5.	Intermittent
D-07	Ditch	Ditch / artificial intermittent stream	-	1121.854377	Roadside ditch along State Route 264, flows North.	Intermittent
S-01	Stream	Stream	-	3094.10160026	Unnamed tributary of Sixmile Creek, flows South. NYSDEC classified stream, depicted on maps going back to 1854 Oswego County atlas.	Perennial
PEM-01	PEM	Shallow emergent	0.0780237387405	-	Northwest corner of West agricultural field where runoff collects beside farm equipment entry point. High invasive plant species cover.	Intermittent
PEM-02	PEM	Shallow emergent	10.3529206856	-	Wet meadow north of West active agricultural field. Surrounds POW-01 and ROW-01. Isolated upland area within due to soil	Intermittent

					deposits from building POW-01.	
PEM-03	PEM	Shallow emergent	1.61255959026	-	Between ROW-02 and State Route 264 intersection.	Intermittent
PEM-04	PEM	Shallow emergent	0.390459356288	-	Wet soil pile infested with invasive plants. Between West agricultural field and State Route 264.	Intermittent
PEM-05	PEM	Shallow emergent	0.344151448189	-	South end of West agricultural field, includes gas pipeline ROW. Farmed concave area where water pools. Invaded with Phalaris arundinacea.	Intermittent
PEM-06	PEM	Shallow emergent	9.31190258719	-	Between ROW-02 and Northeast agricultural field.	Intermittent
PEM-07	PEM	Shallow emergent	4.21705763253	-	Deeper emergent area along ROW-02. High invasive plant species cover.	Intermittent
PEM-08	PEM	Shallow emergent	1.98115889918	-	Wet meadow along ROW-02. High invasive plant species cover.	Intermittent
PEM-09	PEM	Shallow emergent	0.526257587742	-	Wet meadow along ROW-02. High invasive plant species cover.	Intermittent
PEM-10	PEM	Shallow emergent	0.117539591006	-	Wet meadow along ROW-02. High invasive plant species cover.	Intermittent
PEM-11	PEM	Shallow emergent	0.15749256166	-	Wet meadow along ROW-02. High invasive plant species cover.	Intermittent
PEM-12	PEM	Shallow emergent	0.184309574486	-	Actively farmed wet finger trailing from adjacent PEM-13 / PFO-07.	Intermittent
PEM-13	PEM	Shallow emergent	1.20085428896	-	Borders active southeast agricultural field and Sixmile Creek corridor.	Intermittent
PEM-14	PEM	Shallow emergent	0.349430292102	-	Wet meadow along ROW-02. High invasive plant species cover.	Intermittent
PEM-15	PEM	Shallow emergent	0.179763184853	-	Wet meadow along ROW-02. High invasive plant species cover.	Intermittent
PEM-16	PEM	Shallow emergent	15.5334476032	-	In southeast corner of property, connects to a larger off-site wetland. Invaded with Typha, Lythrum salicaria and Phalaris arundinacea. Borders small East field.	Intermittent
PEM-17	PEM	Shallow emergent	0.219609720565	-	Actively farmed wet finger trailing from PEM-18 to center of field.	Ephemeral
PEM-18	PEM	Shallow emergent	0.47390599616	-	Edge of agricultural field where runoff collects. High invasive plant species cover.	Intermittent
PEM-19	PEM	Shallow emergent	0.935080312502	-	Within PFO-13, receives hydrology from S-01.	Intermittent
PEM-20	PEM	Shallow emergent	0.033584726212	-	Isolated wet spot in active agricultural field. High clay content with yellowing crops and algal mats.	Ephemeral
PEM-21	PEM	Shallow emergent	0.37263357746	-	Actively farmed wet finger draining to PFO-06.	Ephemeral
PFO-01	PFO	Red maple- hardwood swamp	0.319539016449	-	Small wet forest located on soil deposits from construction of POW-01.	Intermittent
PFO-02	PFO	Red maple- hardwood swamp	0.408871115169	-	Small wet forest, borders State Route 264.	Intermittent
PFO-03	PFO	Red maple- hardwood swamp	4.24623102933	-	Borders State Route 264 to East.	Intermittent
PFO-04	PFO	Red maple- hardwood swamp	0.194291097537	-	Contains outflow from Culvert 5, north end of southeast agricultural field.	Intermittent
PFO-05	PFO	Red maple- hardwood swamp	0.330552442998	-	Edge of active agricultural field, surrounded by PEM-08.	Intermittent
PFO-06	PFO	Red maple- hardwood swamp	16.1513681084	-	Surrounded by active agriculture and wet meadow.	Intermittent
PFO-07	PFO	Red maple- hardwood swamp	0.977442899748	-	Between southeast agricultural field and ROW-02.	Intermittent
PFO-08	PFO	Red maple- hardwood	1.17273300395	-	Southeast agricultural field to West, former railroad grade to South,	Intermittent

		swamp			ROW-02 to East.	
PFO-09	PFO	Red maple- hardwood swamp	5.89684226617	-	East of ROW-02, surrounded by wet meadow connecting to larger off-site wet forest.	Intermittent
PFO-10	PFO	Red maple- hardwood swamp	0.813242189193	-	Surrounded by PEM-16, adjacent to an active agricultural field and connected to a larger off-site forest.	Intermittent
PFO-11	PFO	Red maple- hardwood swamp	0.0879694458889	-	Small wet forest surrounding S-02.	Intermittent
PFO-12	PFO	Red maple- hardwood swamp	0.180734724746	-	S-01 corridor, upland forest to either side.	Intermittent
PFO-13	PFO	Red maple- hardwood swamp	5.59436325432	-	Borders northeast agricultural field. Receives hydrology from S-01.	Intermittent
POW-01	Open Water - Pond	Stream	4.98640333563	-	Agricultural pond dug between 1955-1959 with surrounding wet meadow. Adjacent to State Route 262 and Biddlecum Rd.	Perennial
PSS-01	PSS	Scrub shrub	1.56415059955	-	Located on soil deposits from construction of POW-01. North of gas well.	Intermittent
PSS-02	PSS	Scrub shrub	1.20627916246	-	Off southwest corner of West agricultural field and North of former railroad grade. Contains D-03.	Intermittent
PSS-03	PSS	Scrub shrub	1.70725022322	-	Surrounded by PEM-06, adjacent to northeast agricultural field.	Intermittent
PSS-04	PSS	Scrub shrub	0.132445182036	-	Isolated shrub wetland between PEM-08 and PFO-05.	Intermittent
PSS-05	PSS	Scrub shrub	0.187658460187	-	Small thicket along south edge of PFO-06.	Intermittent
PSS-06	PSS	Scrub shrub	0.675412165665	-	Isolated shrub wetland surrounded by PEM-16.	Intermittent
PSS-07	PSS	Scrub shrub	0.140388693082	-	Small shrubby area between PFO-09, PEM-16 and ROW-02.	Intermittent
PSS-08	PSS	Scrub shrub	0.341974726804	-	Narrow strip that wraps around north end of PFO-09.	Intermittent
PSS-09	PSS	Scrub shrub	0.211879074318	-	Narrow strip extending into PEM-16.	Intermittent
ROW-01	Open Water - Riverine	Stream	0.336025092679	-	Sixmile Creek channel between Biddlecum Rd culverts (entry point into property) and State Route 264 bridge, flowing South-Southeast.	Perennial
ROW-02	Open Water - Riverine	Stream	2.44442825365	-	Sixmile Creek channel between State Route 264 bridge and former railroad grade bridge (exit point from property). Adjacent to East fields, supplies hydrology to main wetland complex on site. Flows South-Southeast.	Perennial

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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.): Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.296132 Long: -76.29815 Datum: WGS84

Soil Map Unit Name: Canandaigua 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	**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.)
The site appears to be a deposit from the creation of the nearby pond. Soils show consistent B and C horizon which are below 20 inches. The deposit created an upland area although soils indicate wetland. Vegetation was marginal

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)
- 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? (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

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. *Cornus alba*	10	Yes	FACW
2. *Cornus amomum*	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	20 =Total Cover		
Herb Stratum (Plot size: 6)			
1. *Solidago altissima*	75	Yes	FACU
2. *Asclepias syriaca*	5	No	UPL
3. *Symphyotrichum novae-angliae*	20	No	FACW
4. *Vicia cracca*	1	No	UPL
5. *Viburnum dentatum*	1	No	FAC
6. *Agrostis gigantea*	5	No	FACW
7. *Melilotus albus*	1	No	FACU
8.			
9.			
10.			
11.			
12.			
	108 =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	45	x 2 =	90
FAC species	1	x 3 =	3
FACU species	76	x 4 =	304
UPL species	6	x 5 =	30
Column Totals:	128 (A)		427 (B)

Prevalence Index = B/A = 3.34

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.)
Unsure on aster species, so late in the season to know 100%. Note very low density of two shrub species that are providing two more dominance and kicking over the wetland threshold. Area is 90+% with little shrub

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
0-8	10yr 5/2	100					Loamy/Clayey	
8-16	10yr 5/2	90	7.5yr 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:

Soil appears to be fill from nearby pond. Did not find an A horizon even below this material. Area may have had this top soil striped.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-1-W

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: 43.296132 Long: -76.29815 Datum: WGS84

Soil Map Unit Name: Canandaigua 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	**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.)
Possible fill sight from near open water to the South. Can not find A horizon withing 24inches. 50ft to the East has organ soil on top. Stream to the east 100ft away. Sample point is one foot higher than stream.

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

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

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

Remarks:
No signs of hydrology. We are in a wet meadow, with no drainage pattern. Possible flooding from stream. Assume site get much wetter during different times of season.

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Carex vulpinoidea*	75	Yes	OBL
2. *Juncus tenuis*	25	Yes	FAC
3. *Vicia cracca*	1	No	UPL
4. *Eutrochium purpureum*	3	No	FAC
5. *Cornus alba*	1	No	FACW
6. *Symphyotrichum puniceum*	3	No	OBL
7. *Phalaris arundinacea*	10	No	FACW
8. *Solidago gigantea*	5	No	FACW
9. *Asclepias syriaca*	1	No	UPL
10. *Carex stricta*	1	No	OBL
11.			
12.			
	125 =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	79	x 1 =	79
FACW species	16	x 2 =	32
FAC species	28	x 3 =	84
FACU species	0	x 4 =	0
UPL species	2	x 5 =	10
Column Totals:	125 (A)		205 (B)

Prevalence Index = B/A = 1.64

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% herbacious

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
0-8	7.5yr 5/1	80	7.5yr 5/6	20			Loamy/Clayey	
8-16	7.5yr 5/1	60	7.5yr 5/7	20			Loamy/Clayey	
			7.5yr 4/2	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:

Clay loam to surface could indicate deposit from pond mining

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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.): Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.297018 Long: -76.300954 Datum: WGS84

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 X	No	**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.)
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)

- ___ 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

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*	75	Yes	UPL
2. *Panicum dichotomiflorum*	25	Yes	FACW
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: 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	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	75	x 5 =	375
Column Totals:	100 (A)		425 (B)

Prevalence Index = B/A = 4.25

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.)
Panicum may have been planted as a crop cover plant

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 4/2	100						
6-14	7.5yr 4/4	50	7.5yr 4/2	40				
			7.5yr 4/1	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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-2-W

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: 43.297099 Long: -76.300811 Datum: WGS84

Soil Map Unit Name: Canadaigua 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	**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.)
Open water channel to the East. Sample point sits approximately 1ft higher in elevation than channel. Located in a over grown wet meadow

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)
- ___ 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): 10
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:
Water in hole at 10 inches below surface

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. *Lobelia siphilitica*	5	No	FACW
2. *Rosa palustris*	5	No	OBL
3. *Phalaris arundinacea*	100	Yes	FACW
4. *Carex scoparia*	10	No	FACW
5. *Scirpus cyperinus*	5	No	OBL
6. *Lythrum salicaria*	1	No	OBL
7. *Eutrochium purpureum*	5	No	FAC
8.			
9.			
10.			
11.			
12.			
	131	=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	11	x 1 =	11
FACW species	115	x 2 =	230
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	131 (A)		256 (B)

Prevalence Index = B/A = 1.95

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.)
Reed canary litters the ground

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
0-10	7.5yr 4/2	90	7.5yr 4/4	10			Loamy/Clayey	
10-16	7.5yr 5/1	80	7.5yr 4/4	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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.29445 Long: -76.299538 Datum: WGS84

Soil Map Unit Name: Canandaigua 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 X	No	**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.)
Grass area between a Soy agriculture field and an open water wetland. Elevation approximately 4ft above pond. Ruts from combines and tractor along plot.

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, and no algal mats. Field drains from West to East

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*	50	Yes	UPL
2. *Panicum dichotomiflorum*	50	Yes	FACW
3. *Plantago major*	5	No	FACU
4. *Rumex crispus*	1	No	FAC
5.			
6.			
7.			
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: 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	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	1	x 3 =	3
FACU species	5	x 4 =	20
UPL species	50	x 5 =	250
Column Totals:	106 (A)		373 (B)

Prevalence Index = B/A = 3.52

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.)
Grass dominant along wetland edge, may have been planted as a crop cover plant

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
0-10	5yr 4/2	100					Loamy/Clayey	
10-12	7.5yr 5/2	95	7.5yr 5/4	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:
No hydrology in hole

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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): None Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.294498 Long: 43.294498 Datum: WGS84

Soil Map Unit Name: Canandaigua 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	**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.)
Five yards from agriculture field edge heading towards open water pond to the East, 70 yards away. Sample point approximately 3ft elevation above pond.

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)
- ___ 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): 10
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:
Water in hole at 10inches deep

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. *Lythrum salicaria*	95	Yes	OBL
2. *Symphyotrichum novae-angliae*	15	No	FACW
3. *Phalaris arundinacea*	10	No	FACW
4. *Solidago rugosa*	15	No	FAC
5. *Rumex crispus*	1	No	FAC
6. *Equisetum arvense*	1	No	FAC
7. *Carex lacustris*	20	No	OBL
8.			
9.			
10.			
11.			
12.			
	157	=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	115	x 1 =	115
FACW species	25	x 2 =	50
FAC species	17	x 3 =	51
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	157 (A)		216 (B)

Prevalence Index = B/A = 1.38

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: 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
0-10	7.5yr 4/2	95	7.5yr 4/4	5			Loamy/Clayey	
10-16	7.5yr 5/1	90	7.5yr 4/4	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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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.): Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.29099 Long: -76.293611 Datum: WGS84

Soil Map Unit Name: Canadaigua Silt Loam NWI classification: PEM5A

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	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.)
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 ruts and compacted soils around sample point. Adjacent to forested/shrub 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	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

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 is tall and thriving. 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
0-8	7.5yr 4/2	100					Loamy/Clayey	Loam
8-14	10yr 5/3	70	5yr 5/6	25			Loamy/Clayey	
			5yr 4/1	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 oxidized roots, no modeling in top layer

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-4-W

Investigator(s): E. Frantz, K. Hastings Section, Township, Range:

Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.291045 Long: -76.293411 Datum: WGS84

Soil Map Unit Name: Canadaigua Silt Loam NWI classification: PEM5A

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	**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.)
Forested/ Shrub wetland 5 yards from agriculture field. Slight slope up to 2%, sloping towards more wet 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)
- 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? (includes capillary fringe)	Yes	No X	Depth (inches):

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

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

Remarks:
No signs of hydrology, no saturation. More than likely seasonally wet. Assume hydrology. Faint oxidized root channels in A horizon

VEGETATION – Use scientific names of plants. Sampling Point: SP-4-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	15	Yes	FACW
2. *Fraxinus pennsylvanica*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Crataegus spp.*	10	No	FAC
2. *Cornus racemosa*	40	Yes	FAC
3. *Cornus amomum*	40	Yes	FACW
4. *Viburnum lentago*	10	No	FAC
5. *Lonicera spp.*	2	No	UPL
6.			
7.			
	102	=Total Cover	
Herb Stratum (Plot size:)			
1. *Viburnum dentatum*	15	Yes	FAC
2. *Geum canadense*	5	No	FAC
3. *Fragaria vesca*	2	No	UPL
4. *Solidago rugosa*	10	Yes	FAC
5. *Carex sp.*	1	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	33	=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: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (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	60	x 2 =	120
FAC species	91	x 3 =	273
FACU species	0	x 4 =	0
UPL species	4	x 5 =	20
Column Totals:	155 (A)		413 (B)

Prevalence Index = B/A = 2.66

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.)
Few scattered trees. Understory 30-50% herbacious. Upland species on strip seperating sample point from soy field.

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
0-8	7.5yr 3/1	100					Loamy/Clayey	
8-15	7.5yr 6/1	95	7.5yr 6/6	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)
- 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)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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.): Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.28974 Long: -76.291958 Datum: WGS84

Soil Map Unit Name: Canandaigua Silt Loam NWI classification: PEM5A

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.)
Agricultural field planted with soybeans. Formed for 70+ years. Adjacent to a mixed wetland with grasses, shrubs, trees, and emergent. Stream channel approximately 100ft from sample point. The stream is 5ft lower in elevation that point. Soil barely meets hydric conditions and soy is not stressed. Heavy combines left soil compacted with ruts.

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

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 is thriving and tall. Understory consist of <5% other growth within three acre area

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
0-8	7.5yr 5/1	100					Loamy/Clayey	
8-16	7.5yr 6/1	95	7.5yr 6/6	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:

No signs of oxidized root channels or modeling in the top 10 inches. Faint modeling below 10 inches.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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.): Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.288446 Long: -76.291886 Datum: WGS84

Soil Map Unit Name: Canandaigua Silt Loam NWI classification: PEM5A

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 soy. Farmed for 70+ years. Adjacent to forested/shrub wetland. Soil compaction and shallow rutting due to farming equipment

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

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

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
0-4	7.5yr 4/1	100					Loamy/Clayey	
4-12	7.5yr 4/1	90	7.5yr 4/6	10			Loamy/Clayey	
12-17	7.5yr 6/1	50	7.5yr 4/6	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)
- 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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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.): Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.288542 Long: -76.291769 Datum: WGS84

Soil Map Unit Name: Canandaigua Silt Loam NWI classification: PEM5A

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	**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.)
Wet meadow 5 yards from agriculture field to the southwest. Shrub wetland to the East

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)
- ___ 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):	2
Water Table Present?	Yes No X	Depth (inches):	
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:
Water standing at surface

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. *Lythrum salicaria*	25	No	OBL
2. *Phalaris arundinacea*	60	Yes	FACW
3. *Typha angustifolia*	40	Yes	OBL
4. *Juncus effusus*	5	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	130	=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	70	x 1 =	70
FACW species	60	x 2 =	120
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		190 (B)

Prevalence Index = B/A = 1.46

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.)
Reed canary and cattail littered the ground

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
0-2								Organic
2-12	10yr 3/1	97	7.5yr 4/4	3			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:

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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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: 43.29588 Long: -76.295324 Datum: WGS84

Soil Map Unit Name: Canandaigua 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 X	No	**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 soy. Farmed for 70+ years. Adjacent to emergent wetland. Compacted soils due to heavy farming equipment. Directly north is a busy road and west is a emergent 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)
- 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? (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.

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. *Panicum dichotomiflorum*	100	Yes	FACW
2. *Cyperus strigosus*	5	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105	=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	105	x 2 =	210
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	105 (A)		210 (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 soy was planted in plot. Panicum may have been planted as a crop cover plant

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
0-8	7.5yr 4/3	100					Loamy/Clayey	Loam
8-14	10yr 5/2	90	10yr 5/6	10			Sandy	Loamy/ Sand

[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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-7-W

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: 43.295812 Long: -76.295581 Datum: WGS84

Soil Map Unit Name: Canandaigua 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	**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.)
30ft from energent wetland. Agriculture field 15 ft away

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)
- ___ 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): 6
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:
Saturated to surface, water in hole 6 inches down

VEGETATION – Use scientific names of plants. Sampling Point: SP-7-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. *Typha angustifolia*	40	Yes	OBL
2. *Leersia oryzoides*	100	Yes	OBL
3. *Lythrum salicaria*	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	145	=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	145	x 1 =	145
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	145 (A)		145 (B)

Prevalence Index = B/A = 1.00

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.)

SOIL

Sampling Point: SP-7-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
0-2								Organic
2-12	7.5yr 4/1	97	7.5yr 5/6	3			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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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 (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.294573 Long: -76.294735 Datum: WGS84

Soil Map Unit Name: Canandaigua 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 X	No	**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.)
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 an emergent 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)
- 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? (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

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
1. *Panicum dichotomiflorum*	100	Yes	FACW
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: 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	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (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 soy was planted in the plot. Panicum may have been planted as a crop cover plant

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
0-10	5yr 3/2	100					Loamy/Clayey	
10-16	5yr 4/3	70	5yr 5/2	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:

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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

Applicant/Owner: The Wetland Trust State: NJ Sampling Point: SP-8-W

Investigator(s): E. Frantz, K. Hastings Section, Township, Range:

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

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.294413 Long: -76.294898 Datum: WGS84

Soil Map Unit Name: Canandaigua 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	**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.)
Shallow emergent wetland with vegetation covering. Edge of agriculture field

HYDROLOGY

Wetland Hydrology Indicators:

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

X Surface Water (A1)	___ Water-Stained Leaves (B9)	___ Surface Soil Cracks (B6)
X High Water Table (A2)	___ Aquatic Fauna (B13)	___ Drainage Patterns (B10)
X Saturation (A3)	___ Marl Deposits (B15)	___ Moss Trim Lines (B16)
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Dry-Season Water Table (C2)
___ Sediment Deposits (B2)	X Oxidized Rhizospheres on Living Roots (C3)	___ Crayfish Burrows (C8)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Saturation Visible on Aerial Imagery (C9)
___ Algal Mat or Crust (B4)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Stunted or Stressed Plants (D1)
___ Iron Deposits (B5)	___ Thin Muck Surface (C7)	___ Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Other (Explain in Remarks)	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface (B8)		___ Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes X	No	Depth (inches):	1	
Water Table Present?	Yes X	No	Depth (inches):	3	
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:
Water to surface, water in hole 3 inches down

VEGETATION – Use scientific names of plants. Sampling Point: SP-8-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. *Lythrum salicaria*	20	Yes	OBL
2. *Phalaris arundinacea*	1	No	FACW
3. *Decodon verticillatus*	40	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	61	=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	60	x 1 =	60
FACW species	1	x 2 =	2
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	61 (A)		62 (B)

Prevalence Index = B/A = 1.02

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: SP-8-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								Organic
6-12	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:

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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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.): Local relief (concave, convex, none): None Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.294763 Long: -76.294741 Datum: WGS84

Soil Map Unit Name: Canandaigua 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 X	No	**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 soy. Farmed for 70+ years. Adjacent to emergent wetland. Compacted soils due to heavy farming equipment. Some small depressions around test hole where there is less vegetation 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)
- 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? (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

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
1. *Panicum dichotomiflorum*	100	Yes	FACW
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: 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	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (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 soy was planted in the plot. Panicum may have been planted as a crop cover plant

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
0-10	7.5yr 3/2	90	7.5yr 4/4	10			Loamy/Clayey	
10-14	7.5yr 5/4	90	7.5yr 6/4	10			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:
Can hear stones in augar

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

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: 43.295036 Long: -76.294734 Datum: WGS84

Soil Map Unit Name: Canandaigua 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 X	No	**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 around 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)
- 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? (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 hydology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern

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. *Panicum dichotomiflorum*	95	Yes	FACW
2. *Rumex crispus*	5	No	FAC
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: 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	95	x 2 =	190
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		205 (B)

Prevalence Index = B/A = 2.05

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 soy was planted in the plot. Panicum may have been planted as a crop cover plant

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
0-10	7.5yr 3/2	90	7.5yr 4/4	10			Loamy/Clayey	
10-14	7.5yr 5/4	60	7.5yr 6/4	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:

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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-11-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: 43.295181 Long: -76.294429 Datum: WGS84

Soil Map Unit Name: Canandaigua 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 X	No	**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 around 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)
- 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? (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

VEGETATION – Use scientific names of plants. Sampling Point: SP-11-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. *Panicum dichotomiflorum*	100	Yes	FACW
2. *Rumex crispus*	3	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	103	=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	100	x 2 =	200
FAC species	3	x 3 =	9
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	103 (A)		209 (B)

Prevalence Index = B/A = 2.03

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.)
No soy was planted in the plot. Panicum may have been planted as a crop cover plant

SOIL

Sampling Point: SP-11-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
0-10	7.5yr 3/2	90	7.5yr 4/4	10			Loamy/Clayey	
10-16	7.5yr 5/4	60	7.5yr 6/4	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:

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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-12-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: 43.294962 Long: -76.294189 Datum: WGS84

Soil Map Unit Name: Canandaigua 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 X	No	**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 soy. Farmed for 70+ years. Adjacent to emergent wetland. Compacted soils due to heavy farming equipment

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)
- 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? (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

VEGETATION – Use scientific names of plants. Sampling Point: SP-12-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. *Panicum dichotomiflorum*	100	Yes	FACW
2. *Rumex crispus*	3	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	103	=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	100	x 2 =	200
FAC species	3	x 3 =	9
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	103 (A)		209 (B)

Prevalence Index = B/A = 2.03

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.)
No soy was planted in the plot. Panicum may have been planted as a crop cover plant

SOIL

Sampling Point: SP-12-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
0-10	7.5yr 3/2	90	7.5yr 4/4	10			Loamy/Clayey	
10-16	7.5yr 5/4	60	7.5yr 6/4	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:

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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-13-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: 43.292663 Long: -76.290784 Datum: WGS84

Soil Map Unit Name: Canadaigua 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 plated with soy. Recently harvested with large combines leaving deep ruts around sample point. Adjacent to a shrub/ young, forested 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	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

VEGETATION – Use scientific names of plants. Sampling Point: SP-13-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 algal mats. Soy was thriving and tall.

SOIL

Sampling Point: SP-13-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	7.5yr 4/1	100					Loamy/Clayey	
8-14	7.5yr 5/1	95	7.5yr 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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-13-W

Investigator(s): E. Frantz, K. Hastings Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): None Slope (%): 1-2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.292478 Long: -76.290843 Datum: WGS84

Soil Map Unit Name: Canandaigua 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	**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.)
Shrub/ young forested wetland with few large trees. Mostly dead or dying ash. Adjacent to 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)
- 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? (includes capillary fringe)	Yes	No X	Depth (inches):

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

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

Remarks:
No hydrology, nearby evidence of periodic standing water. Area where sample was taken is on a slight slope transitining into a more distint wetland area. We assume hydrology is presant during portions of the year

VEGETATION – Use scientific names of plants. Sampling Point: SP-13-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	25	Yes	FACW
2. *Fraxinus pennsylvanica*	15	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Lonicera tatarica*	10	Yes	FACU
2. *Rosa multiflora*	5	No	FACU
3. *Cornus amomum*	25	Yes	FACW
4. *Acer negundo*	5	No	FAC
5. *Rhamnus cathartica*	2	No	FAC
6. *Fraxinus pennsylvanica*	10	Yes	FACW
7.			
	57	=Total Cover	
Herb Stratum (Plot size:)			
1. *Solidago gigantea*	10	No	FACW
2. *Symphyotrichum puniceum*	5	No	OBL
3. *Lysimachia nummularia*	10	No	FACW
4. *Fragaria vesca*	40	Yes	UPL
5. *Equisetum spp.*	15	Yes	FACW
6. *Vitis riparia*	1	No	FAC
7.	1	No	
8.			
9.			
10.			
11.			
12.			
	82	=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	5	x 1 =	5
FACW species	110	x 2 =	220
FAC species	8	x 3 =	24
FACU species	15	x 4 =	60
UPL species	40	x 5 =	200
Column Totals:	178 (A)		509 (B)

Prevalence Index = B/A = 2.86

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.)
80% herbacious, some bare soil showing. 60% shrub, 40% tree coverage

SOIL

Sampling Point: SP-13-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	7.5yr 5/1	100					Loamy/Clayey	
8-11	7.5yr 5/2	90	7.5yr 4/4	10			Loamy/Clayey	Sandy/ Loam
11-16	7.5yr 6/1	70	7.5yr 5/6	25			Loamy/Clayey	Sandy/ Loam
			7.5yr 3/1	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:
No redox in top layer

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-14-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: 43.290661 Long: -76.287711 Datum: WGS84

Soil Map Unit Name: Canandaigua 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 plated with soy. Recently harvested with large combines leaving deep ruts around sample point. Adjacent to a wet meadow leading into a forested 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	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 hydology indicators such as: soil cracking, oxidized root channels, no algal mats and no drainage pattern

VEGETATION – Use scientific names of plants. Sampling Point: SP-14-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 tall and thriving

SOIL

Sampling Point: SP-14-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
0-10	5yr 4/2	100					Loamy/Clayey	
10-15	5yr 5/2	90	5yr 4/3	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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 10/31/24

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-14-W

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: 43.290943 Long: -76.286696 Datum: WGS84

Soil Map Unit Name: Canadaigua Silt Loam NWI classification: PSS1E

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

Remarks: (Explain alternative procedures here or in a separate report.)
Mature forest, DBH ranging from 8in-20in. Ash dying or dead. Stream 100ft to West, approximately 2-4ft higher than stream elevation. Areas towards stream have more upland species such as beach and black cherry

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

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

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

Remarks:
No saturated soils, no oxidized roots. There is an aquiclude like layer approximently 16 inches down that likely has a seasonal hydrolic influence, assuming wet in spring.

VEGETATION – Use scientific names of plants. Sampling Point: SP-14-W

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus tremuloides*	25	Yes	FACU
2. *Acer rubrum*	45	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	70	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Ulmus americana*	10	Yes	FACW
2. *Fraxinus americana*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size:)			
1. *Symphyotrichum lanceolatum*	65	Yes	FACW
2. *Dryopteris intermedia*	2	No	FAC
3. *Solidago rugosa*	10	No	FAC
4. *Lonicera spp.*	1	No	FACU
5. *Juncus effusus*	2	No	OBL
6. *Geum canadense*	5	No	FAC
7.			
8.			
9.			
10.			
11.			
12.			
	85	=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	2	x 1 =	2
FACW species	75	x 2 =	150
FAC species	62	x 3 =	186
FACU species	31	x 4 =	124
UPL species	0	x 5 =	0
Column Totals:	170 (A)		462 (B)

Prevalence Index = B/A = 2.72

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.)
80% herbacious cover, 15% shrub, >50% tree cover. One aspin uprooted. Dead ash

SOIL

Sampling Point: SP-14-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
0-10	10yr 3/2	100					Loamy/Clayey	
10-16	10yr 6/3	60	7.5yr 5/4	40			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:

16inches below surface is dense, aquiclude like soil. Difficult to augar/ shovel through

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-15-U

Investigator(s): E. Frantz, K. Hastings Section, Township, Range:

Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.292833 Long: -76.288723 Datum: WGS84

Soil Map Unit Name: Williamson very 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	**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.)
Agriculture field plated with soy. Recently harvested with large, heavy combines. Sample point is at higher elevation, sloping towards isolated wet area.

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. No water in 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.)
Soy was tall and thriving. No understory vegetation

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
0-6	5yr 5/2	100						
6-12	5yr 5/3	90	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)
- ___ 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 upper layer. At 8inches augar hits very hard soil layer

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 11/06/2024

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.): Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.292855 Long: -76.288814 Datum: WGS84

Soil Map Unit Name: Williamson very 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 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.)
Isolated wet spot surrounded in field. 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 around sample point. Higher elevation than most of field.

HYDROLOGY

Wetland Hydrology Indicators:

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

X Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10)
X Saturation (A3)	Marl Deposits (B15)	Moss Trim Lines (B16)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Crayfish Burrows (C8)
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)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes X	No	Depth (inches):	2
Water Table Present?	Yes	No X	Depth (inches):	
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:
Standing water in wet area and in the tractor ruts.

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:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Glycine max*	30	Yes	UPL
2. *Eleocharis spp.*	90	Yes	OBL
3. *Poa pratensis*	5	No	FACU
4. *Hypericum spp.*	15	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	140 =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: 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	90	x 1 =	90
FACW species	15	x 2 =	30
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	30	x 5 =	150
Column Totals:	140 (A)		290 (B)

Prevalence Index = B/A = 2.07

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.)

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	5yr 5/2	95	5yr 4/6	5			Loamy/Clayey	
6-12	5yr 5/3	70	5yr 4/7	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: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-16A-U

Investigator(s): E. Frantz, K. Hastings Section, Township, Range:

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

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.293511 Long: 43.293511 Datum: WGS84

Soil Map Unit Name: Raynham 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 around sample point. Yes a wetland because soy does not count for proper vegetation indicator

HYDROLOGY

Wetland Hydrology Indicators:

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

X Surface Water (A1)	Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required)
High Water Table (A2)	Aquatic Fauna (B13)	Surface Soil Cracks (B6)
Saturation (A3)	Marl Deposits (B15)	Drainage Patterns (B10)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
X Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)	Thin Muck Surface (C7)	Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)	X Other (Explain in Remarks)	Geomorphic Position (D2)
Sparsely Vegetated Concave Surface (B8)		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	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:
Pooling of water in deep tractor ruts could be due to steady rainfall throughout the night and morning. Small amount of algal mats present.

VEGETATION – Use scientific names of plants. Sampling Point: SP-16A-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

SOIL

Sampling Point: SP-16A-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 3/2	100					Loamy/Clayey	Loam
8-12	10yr 3/2	90	7.5yr 4/4	10			Sandy	Sandy hard compacted layer
12-15	7.5yr 5/4	60	7.5yr 5/6	40				

[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:

Hard sandy layer 12 inches below surface. Similar to the soils at Bell Rd.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-16-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: 43.293376 Long: -76.289344 Datum: WGS84

Soil Map Unit Name: Raynham 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 small impressions of tractor tires on soil. Shows dark spot on map that slopes and draines to the west.

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)
- X 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 and no drainage pattern. No water in small tractor marks. Large amount of algal mats are presant w/ no other hydrology indicators. Steady rainfall throughout the night and morning.

VEGETATION – Use scientific names of plants. Sampling Point: SP-16-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.

SOIL

Sampling Point: SP-16-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	5yr 5/2	100					Loamy/Clayey	
8-12	5yr 5/2	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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sixmile Creek City/County: Schroeppel/ Oswego Sampling Date: 11/06/2024

Applicant/Owner: The Wetland Trust State: NY Sampling Point: SP-17-U

Investigator(s): E. Frantz, K. Hastings Section, Township, Range:

Landform (hillside, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.288618 Long: -76.292887 Datum: WGS84

Soil Map Unit Name: Raynham 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 parallel to the road. The road is directly west with heavy traffic. To the south is a disabled railroad now used as a recreational trail. Area sloping from west to east, towards 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 ____ 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. Standing water in deep tractor ruts outside of plot.

VEGETATION – Use scientific names of plants. Sampling Point: SP-17-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*	10	No	UPL
2. *Poa pratensis*	90	Yes	FACU
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	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	100 (A)		410 (B)

Prevalence Index = B/A = 4.10

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: SP-17-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	5yr 4/2	100					Loamy/Clayey	No modeling
6-10	5yr 5/2	97	5yr 4/4	3			Loamy/Clayey	Higher clay content
10-12	5yr 5/1	90	5yr 4/4	10			Loamy/Clayey	Higher clay content
12-16	7.5yr 5/3	60	7.5yr 5/6	20			Loamy/Clayey	More sand presant
			7.5yr 5/1	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.

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

American goldfinch	*Spinus tristis*	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
European starling	*Sturnus vulgaris*	SNA G5: not applicable in NYS and secure globally	-	No				✓		
solitary sandpiper	*Tringa solitaria*	Least concern	-	Yes			✓			
American robin	*Turdus migratorius*	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
eastern kingbird	*Tyrannus tyrannus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
warbling vireo	*Vireo gilvus*	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
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		✓		✓		
North American beaver	*Castor canadensis*	Least concern	-	Yes		✓				
North American porcupine	*Erethizon dorsatum*	Least concern	-	Yes						✓
white-tailed deer	*Odocoileus virginianus*	Least concern	-	Yes	✓	✓	✓	✓	✓	✓
raccoon	*Procyon lotor*	Least concern	-	Yes		✓		✓	✓	
eastern cottontail	*Sylvilagus floridanus*	Least concern	-	Yes			✓	✓		
Plant											
box elder	*Acer negundo*	S5, G5, Native, CoC: 1	FAC	Yes						✓
red maple	*Acer rubrum*	Least Concern, S5, G5, Native, CoC: 4	FAC	Yes		✓	✓	✓	✓	✓
silver maple	*Acer saccharinum*	Least Concern, S5, G5, Native, CoC: 6	FACW	Yes		✓	✓			
sugar maple	*Acer saccharum*	Least Concern, S5, G5, Native, CoC: 7	FACU	Yes				✓		
common yarrow	*Achillea millefolium*	Least Concern, SNR, G5, Native, CoC: 0	FACU	Yes		✓				
sweet flag	*Acorus calamus*	Least Concern, SNR, G4	OBL	No		✓	✓			
common agrimony	*Agrimonia gryposepala*	S5, Native, CoC: 4	FACU	Yes			✓		✓	
Rhode Island bentgrass	*Agrostis capillaris*	SNA, GNR, Not native, Naturalized	FAC	No					✓	
redtop	*Agrostis gigantea*	SNA, G4G5, Not native, Naturalized	FACW	No	✓	✓			✓	✓
creeping bent	*Agrostis stolonifera*	SNA, Not native, Naturalized	FACW	No	✓				✓	
American water plantain	*Alisma subcordatum*	S5, G5, Native, CoC: 4	OBL	Yes		✓				
speckled alder	*Alnus incana*	S5, G5, Native, CoC: 5	FACW	Yes			✓			
New York fern	*Amauropelta noveboracensis*	S5, G5, Native, CoC: 4	FAC	Yes			✓			
common ragweed	*Ambrosia artemisiifolia*	S5, G5, Native, CoC: 0	FACU	Yes			✓		✓	
downy serviceberry	*Amelanchier arborea*	S5, G5, Native, CoC: 4	FACU	Yes		✓				
hog peanut	*Amphicarpaea bracteata*	S5, Native, CoC: 5	FAC	Yes		✓				
Canada anemone	*Anemone canadensis*	S5, G5, Native, CoC: 5	FACW	Yes		✓				
sweet vernal grass	*Anthoxanthum odoratum*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓	✓		✓	
Indian hemp	*Apocynum cannabinum*	S5, G5, Native, CoC: 2	FAC	Yes			✓		✓	
swamp milkweed	*Asclepias incarnata*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
common milkweed	*Asclepias syriaca*	S5, G5, Native, CoC: 0	UPL	Yes		✓	✓			✓
yellow birch	*Betula alleghaniensis*	S5, G5, Native, CoC: 7	FAC	Yes				✓		
gray birch	*Betula populifolia*	S5, G5, Native, CoC: 4	FAC	Yes					✓	
nodding beggar ticks	*Bidens cernua*	S5, G5, Native, CoC: 4	OBL	Yes					✓	
devil's beggar ticks	*Bidens frondosa*	S5, Native, CoC: 2	FACW	Yes			✓		✓	
hairy brome	*Bromus commutatus*	SNA, GNR, Not native, Naturalized	-	No			✓			
smooth brome	*Bromus inermis*	SNA, G5, Not native, Naturalized	-	No		✓	✓			
common woodland sedge	*Carex blanda*	S5, G5, Native, CoC: 4	FAC	Yes		✓				
bristly sedge	*Carex comosa*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
fringed sedge	*Carex crinita*	S5, G5, Native, CoC: 3	OBL	Yes		✓	✓			
large yellow sedge	*Carex flava*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
graceful sedge	*Carex gracillima*	S5, G5, Native, CoC: 3	FACU	Yes			✓			
lake sedge	*Carex lacustris*	S5, G5, Native, CoC: 5	OBL	Yes						✓
bladder sedge	*Carex intumescens*	S5, G5, Native, CoC: 7	FACW	Yes		✓	✓		✓	
hop sedge	*Carex lupulina*	S5, G5, Native, CoC: 7	OBL	Yes		✓	✓			
sallow sedge	*Carex lurida*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
troublesome sedge	*Carex molesta*	S4, G4, Threatened, Native, CoC: 3	FAC	Yes			✓			
cyperus-like sedge	*Carex pseudocyperus*	S5, G5, Native, CoC: 6	OBL	Yes					✓	
broom sedge	*Carex scoparia*	S5, Native, CoC: 1	FACW	Yes		✓	✓			✓
awl-fruited sedge	*Carex stipata*	S5, G5, Native, CoC: 5	OBL	Yes			✓		✓	
tussock sedge	*Carex stricta*	S5, G5, Native, CoC: 4	OBL	Yes				✓	✓	✓
fox sedge	*Carex vulpinoidea*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓		✓	✓
ironwood	*Carpinus caroliniana*	S5, G5, Native, CoC: 6	FAC	Yes				✓	✓	
bitternut hickory	*Carya cordiformis*	S5, G5, Native, CoC: 7	FAC	Yes		✓			✓	
shagbark hickory	*Carya ovata*	S5, Native, CoC: 7	FACU	Yes		✓	✓	✓	✓	
buttonbush	*Cephalanthus occidentalis*	S5, G5, Native, CoC: 7	OBL	Yes		✓				
white turtle head	*Chelone glabra*	S5, G5, Native, CoC: 6	OBL	Yes			✓		✓	
lamb's quarters	*Chenopodium album*	SNA, G5, Not native, Naturalized	FACU	No					✓	
enchanter's nightshade	*Circaea canadensis*	S5, G5, Native,CoC: 5	FACU	Yes		✓	✓			
bull thistle	*Cirsium vulgare*	SNA, GNR, Not native, Naturalized	FACU	No		✓				

silky dogwood	*Cornus amomum*	S5, G5, Native, CoC: 6	FACW	Yes	✓	✓	✓	✓	✓	✓
gray dogwood	*Cornus racemosa*	S5, G5, Native, CoC: 2	FAC	Yes		✓	✓	✓		✓
red-osier dogwood	*Cornus sericea*	S5, G5, Native, CoC: 6	FACW	Yes						✓
hawthorn	*Crataegus sp.*	-	-	-		✓				✓
common yellow nut sedge	*Cyperus esculentus*	SNR, Native, CoC: 1	FACW	Yes			✓		✓	
false yellow nut sedge	*Cyperus strigosus*	S5, G5, Native, CoC: 3	FACW	Yes			✓		✓	
orchard grass	*Dactylis glomerata*	SNA, GNR, Not native, Naturalized	FACU	No	✓				✓	
wild carrot	*Daucus carota*	SNA, GNR, Not native, Naturalized	UPL	No		✓				
water willow	*Decodon verticillatus*	S5, G5, Native, CoC: 7	OBL	Yes			✓			✓
tufted hair grass	*Deschampsia cespitosa*	SNR, Native	-	Yes					✓	
digit grass	*Digitaria eriantha*	SNA, GNR, Not native, Naturalized	-	No		✓				
smooth crab grass	*Digitaria ischaemum*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
tall flat-topped white aster	*Doellingeria umbellata*	S5, G5, Native, CoC: 4	FACW	Yes					✓	
common wood fern	*Dryopteris intermedia*	S5, G5, Native, CoC: 5	FAC	Yes		✓				✓
autumn olive	*Elaeagnus umbellata*	SNA, GNR, Not native, Naturalized	-	No		✓				
blunt spike rush	*Eleocharis obtusa*	S5, Native, CoC: 2	OBL	Yes		✓			✓	✓
fringed wilowherb	*Epilobium ciliatum*	S5, G5, Native, CoC: 3	FACW	Yes					✓	
purpleleaf willowherb	*Epilobium coloratum*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓		✓	
field horsestail	*Equisetum arvense*	S5, Native, CoC: 2	FAC	Yes				✓	✓	✓
scouringrush horsetail	*Equisetum hyemale*	S5, G5, Native, CoC: 2	FAC	Yes	✓			✓		
annual daisy fleabane	*Erigeron annuus*	S5, G5, Native, CoC: 0	FACU	Yes			✓			
small daisy fleabane	*Erigeron strigosus*	S5, Native, CoC: 0	FACU	Yes			✓			
yellow trout lily	*Erythronium americanum*	S5, G5, Native, CoC: 5	-	Yes		✓		✓		
boneset	*Eupatorium perfoliatum*	S5, G5, Native, CoC: 3	FACW	Yes			✓		✓	✓
common flat-topped goldenrod	*Euthamia graminifolia*	S5, G5, Native, CoC: 1	FAC	Yes					✓	
spotted Joe Pye weed	*Eutrochium maculatum*	S5, Native, CoC: 4	OBL	Yes	✓					
American beech	*Fagus grandifolia*	S5, G5, Native, CoC: 8	FACU	Yes				✓	✓	
common wild strawberry	*Fragaria virginiana*	S5, G5, Native, CoC: 0	FACU	Yes		✓			✓	✓
glossy buckthorn	*Frangula alnus*	SNA, GNR, Not native, Naturalized	FAC	No		✓				
white ash	*Fraxinus americana*	S5, G5, Native, CoC: 3	FACU	Yes		✓				✓
green ash	*Fraxinus pennsylvanica*	S5, G5, Native, CoC: 4	FACW	Yes	✓	✓	✓	✓	✓	✓
hedge bedstraw	*Galium album*	SNA, GNR, Not native, Naturalized	FACU	Yes	✓		✓		✓	
common marsh bedstraw	*Galium palustre*	S5, G5, Native, CoC: 3	OBL	Yes		✓			✓	
yellow avens	*Geum aleppicum*	S5, G5, Native, CoC: 3	FAC	Yes		✓	✓			
white avens	*Geum canadense*	S5, G5, Native, CoC: 5	FAC	Yes			✓			✓
town avens	*Geum urbanum*	SNA, G5, Not native, Naturalized	-	No		✓	✓			
American manna grass	*Glyceria maxima*	S5, G5, Native, CoC: 4	OBL	No			✓		✓	
fowl manna grass	*Glyceria striata*	S5, G5, Native, CoC: 6	OBL	Yes		✓	✓		✓	
soybean	*Glycine max*	SNA, GNR, Not native, Naturalized	-	-	✓	✓	✓	✓	✓	✓
marsh cubweed	*Gnaphalium uliginosum*	SNA, G5, Not native, Naturalized	FAC	No			✓			
dame's rocket	*Hesperis matronalis*	SNA, Not native, Naturalized	FACU	No	✓					
common frogbit	*Hydrocharis morsus-ranae*	SNA, GNR, Not native, Naturalized	OBL	No			✓			
Eurasian live forever	*Hylotelephium telephium*	SNA, GNR, Not native, Naturalized	-	No				✓		
St. John's wort	*Hypericum sp.*	S5, Native	-	-						✓
spotted jewelweed	*Impatiens capensis*	S5, Native, CoC: 3	FACW	Yes	✓	✓	✓		✓	
blue flag	*Iris versicolor*	S5, G5, Native, CoC: 4	OBL	Yes		✓				
soft rush	*Juncus effusus*	S5, G5, Native, CoC: 2	OBL	Yes	✓	✓	✓	✓	✓	✓
path rush	*Juncus tenuis*	S5, G5, Native, CoC: 0	FAC	Yes			✓			✓
rice cut grass	Leersia oryzoides	S5, G5, Native, CoC: 4	OBL	Yes					✓	✓
spicebush	*Lindera benzoin*	S5, Native, CoC: 6	FACW	Yes		✓	✓			
tulip poplar	*Liriodendron tulipifera*	S5, G5, Native, CoC: 6	FACU	Yes	✓				✓	
Indian tobacco	*Lobelia inflata*	S5, G5, Native, CoC: 1	FACU	Yes			✓			
great blue lobelia	*Lobelia siphilitica*	S5, G5, Native, CoC: 5	FACW	Yes						✓
tall rye grass	*Lolium arundinace*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
Japanese honeysuckle	*Lonicera japonica*	SNA, GNR, Not native, Naturalized	FACU	No		✓				
honeysuckle	*Lonicera spp.*	-	-	No	✓	✓	✓	✓	✓	✓
Tatarian honeysuckle	*Lonicera tatarica*	SNA, GNR, Not native, Naturalized	FACU	No		✓	✓			✓
water purslane	*Ludwigia palustris*	S5, G5, Native, CoC: 4	OBL	Yes	✓		✓		✓	
water horehound	*Lycopus americanus*	S5, G5, Native, CoC: 4	OBL	Yes			✓		✓	
moneywort	*Lysimachia nummularia*	SNA, GNR, Not native, Naturalized	FACW	No	✓	✓		✓	✓	
purple loosestrife	*Lythrum salicaria*	SNA, Non native, Naturalized	OBL	No	✓	✓	✓	✓	✓	
Canada mayflower	*Maianthemum canadense*	S5, G5, Native, CoC: 5	FACU	Yes				✓		
ostrich fern	*Matteuccia struthiopteris*	S4, G5, Native, CoC: 5	FAC	Yes			✓			
white sweet clover	*Melilotus albus*	SNA, G5, Not native, Naturalized	FACU	No						✓
Allegheny monkey flower	*Mimulus ringens*	S5, G5, Native, CoC: 6	OBL	Yes					✓	
blackgum	*Nyssa sylvatica*	S5, G5, Native, CoC: 7	FAC	Yes			✓			
sensitive fern	*Onoclea sensibilis*	S5, G5, Native, CoC: 2	FACW	Yes	✓	✓	✓	✓	✓	✓
royal fern	*Osmunda regalis*	S5, G5, Native, CoC: 6	OBL	Yes			✓			
cinnamon fern	*Osmundastrum cinnamomeum*	S5, G5, Native, CoC: 6	FACW	Yes			✓			
yellow wood sorrel	*Oxalis dillenii*	S5, Native, CoC: 0	FACU	Yes		✓			✓	
fall panic grass	*Panicum dichotomiflorum*	S5, G5, Native, CoC: 1	FACW	Yes						✓
Virginia creeper	*Parthenocissus quinquefolia*	S5, G5, Native, CoC: 4	FACU	Yes		✓	✓			

green arrow arum	*Peltandra virginica*	S5, G5, Native, CoC: 6	OBL	Yes		✓				
water pepper	*Persicaria hydropiper*	SNA, G5, Not native, Naturalized	OBL	No					✓	
lady's thumb	*Persicaria maculosa*	SNA, G5, Not native, Naturalized	FAC	No			✓			
arrow-leaved tearthumb	*Persicaria sagittata*	S5, Native, CoC: 4	OBL	Yes			✓			
jumpseed	*Persicaria virginiana*	S5, Native, CoC: 5	FAC	Yes		✓	✓		✓	
reed canary grass	*Phalaris arundinacea*	SNR, G5, Native, CoC: 0	FACW	No	✓	✓	✓	✓	✓	✓
common Timothy	*Phleum pratense*	SNA, GNR, Not native, Naturalized	FACU	No		✓			✓	
common reed	*Phragmites australis*	SNA, G5, Not native, Naturalized	FACW	No	✓	✓	✓			
pokeweed	*Phytolacca americana*	S5, G5, Native, CoC: 0	FACU	Yes			✓			
Norway spruce	*Picea abies*	SNA, G5, Not native, Naturalized	-	No		✓	✓	✓		
red spruce	*Picea rubens*	S5, G5, Native, CoC: 6	FACU	Yes		✓				
white pine	*Pinus strobus*	S5, G5, Native, CoC: 3	FACU	Yes		✓		✓		
English plantain	*Plantago lanceolata*	SNA, Not native, Naturalized	FACU	No	✓	✓		✓	✓	
common plantain	*Plantago major*	SNA, G5, Not native, Naturalized	FACU	No	✓			✓	✓	✓
northern tubercled orchid	*Platanthera flava*	S4, G4, Native, CoC: 3	FACW	Yes			✓			
annual blue grass	*Poa annua*	SNA, Non native, Naturalized	FACU	No				✓		
wood bluegrass	*Poa nemoralias*		FACU	No			✓			
common Kentucky blue grass	*Poa pratensis*	SNA, G5, Not native, Naturalized	FACU	No		✓			✓	✓
mayapple	*Podophyllum peltatum*	S5, Native, CoC: 5	FACU	Yes			✓	✓		
eastern cottonwood	*Populus deltoides*	S5, G5, Native, CoC: 2	FAC	Yes		✓		✓		
quaking aspen	*Populus tremuloides*	S5, G5, Native, CoC: 3	FACU	Yes	✓	✓	✓	✓	✓	✓
oldfield cinquefoil	*Potentilla simplex*	S5, G5, Native, CoC: 0	FACU	Yes		✓				
Eurasian selfheal	*Prunella vulgaris*	SNA, G5, Not native, Naturalized	FAC	No					✓	
pin cherry	*Prunus pensylvanica*	S5, Native, CoC: 4	FACU	Yes		✓				
black cherry	*Prunus serotina*	S5, G5, Native, CoC: 4	FACU	Yes		✓	✓	✓	✓	
bracken fern	*Pteridium aquilinum*	S5, G5, Native, CoC: 3	FACU	Yes			✓			
white oak	*Quercus alba*	S5, Native, CoC: 7	FACU	Yes		✓				
red oak	*Quercus rubra*	S5, Native, CoC: 7	FACU	Yes		✓	✓			
tall buttercup	*Ranunculus acris*	SNA, G5, Not native, Naturalized	FAC	No	✓	✓			✓	
creeping buttercup	*Ranunculus repens*	SNA, GNR, Not native, Naturalized	FAC	No					✓	
cursed crowfoot	*Ranunculus sceleratus*	SNR, Native, CoC: 3	OBL	Yes	✓			✓		
Japanese knotweed	*Reynoutria japonica*	SNA, Not native, Naturalized	FACU	No				✓		
alder buckthorn	*Rhamnus alnifolia*	S4, G5, Native, CoC: 9	OBL	Yes		✓				
buckthorn	*Rhamnus cathartica*	SNA, GNR, Not native, Naturalized	FAC	No		✓	✓		✓	✓
staghorn sumac	*Rhus typhina*	S5, G5, Native, CoC: 1	-	Yes		✓				
multiflora rose	*Rosa multiflora*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓	✓	✓	✓	✓
swamp rose	*Rosa palustris*	S5, G5, Native, CoC: 9	OBL	Yes				✓		✓
common blackberry	*Rubus allegheniensis*	S5, G5, Native, CoC: 3	FACU	Yes		✓	✓			
swamp dewberry	*Rubus hispidus*	S5, G5, Native, CoC: 7	FACW	Yes			✓			
red raspberry	*Rubus ideaus*	SNA, G5, Not native, Naturalized	FACU	No		✓	✓			
dwarf raspberry	*Rubus pubescens*	S5, Native, CoC: 8	FACW	Yes			✓			
sheep sorrel	*Rumex acetosella*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
curly dock	*Rumex crispus*	SNA, GNR, Not native, Naturalized	FAC	No	✓	✓	✓		✓	✓
broad-leaved dock	*Rumex obtusifolius*	SNA, Not native, Naturalized	FAC	No		✓			✓	
swamp dock	*Rumex verticillatus*	S5, G5, Native, CoC: 6	OBL	Yes			✓			
Bebb's willow	*Salix bebbiana*	S5, G5, Native, CoC: 3	FACW	Yes			✓			
pussy willow	*Salix discolor*	S5, G5, Native, CoC: 3	FACW	Yes		✓	✓	✓		
black willlow	*Salix nigra*	S5, G5, Native, CoC: 5	OBL	Yes		✓				
basket willow	*Salix purpurea*	SNA, G5, Not native, Naturalized	FACW	No			✓			
common elderberry	*Sambucus nigra*	S5, G5, Native, CoC: 4	FACW	Yes				✓		
lizard's tail	*Saururus cernuus*	S5, G5, Native, CoC: 6	OBL	Yes		✓				
soft-stemmed bulrush	*Schoenoplectus tabernaemontani*	S5, G5, Native, CoC: 4	OBL	Yes			✓			
dark-green bulrush	*Scirpus atrovirens*	S5, G5, Native, CoC: 2	OBL	Yes		✓	✓			
woolgrass	*Scirpus cyperinus*	S5, G5, Native, CoC: 4	OBL	Yes		✓		✓	✓	✓
mad dog skullcap	*Scutellaria lateriflora*	S5, G5, Native, CoC: 7	OBL	Yes			✓			
horse nettle	*Solanum carolinense*	S5, Native, CoC: 0	FACU	Yes					✓	
bitter-sweet nightshade	*Solanum dulcamara*	SNA, Not native, Naturalized	FAC	No		✓	✓			
tall goldenrod	*Solidago altissima*	S5, Native, CoC: 1	FACU	Yes		✓				✓
Canada goldenrod	*Solidago canadensis*	S5, G5, Native, CoC: 0	FACU	Yes	✓		✓		✓	
swamp goldenrod	*Solidago gigantea*	S5, G5, Native, CoC: 3	FACW	Yes		✓			✓	✓
common wrinkle-leaved goldenr	*Solidago rugosa*	S5, G5, Native, CoC: 1	FAC	Yes	✓	✓	✓		✓	✓
spiny-leaved sow thistle	*Sonchus asper*	SNA, GNR, Not native, Naturalized	FACU	No			✓	✓		
green-fruited bur-reed	*Sparganium chlorocarpum*	S5, Native, CoC: 4	OBL	Yes			✓			
grass-leaved stitchwort	*Stellaria graminea*	SNA, GNR, Not native, Naturalized	UPL	No					✓	
white panicle aster	*Symphyotrichum lanceolatum*	S5, G5, Native, CoC: 1	FACW	Yes			✓		✓	✓
calico aster	*Symphyotrichum lateriflorum*	S5, G5, Native, CoC: 0	FAC	Yes		✓			✓	
new england aster	*Symphyotrichum novae-angliae*	S5, Native, CoC: 1	FACW	Yes						✓
purple-stemmed aster	*Symphyotrichum puniceum*	S5, G5, Native, CoC: 4	OBL	Yes	✓		✓		✓	✓
skunk cabbage	*Symplocarpus foetidus*	S5, G5, Native, CoC: 5	OBL	Yes				✓		
common dandelion	*Taraxacum officinale*	SNA, G5, Not native, Naturalized	FACU	No	✓	✓	✓	✓	✓	✓
marsh fern	*Thelypteris palustris*	S5, G5, Native, CoC: 4	FACW	Yes		✓				
American basswood	*Tilia americana*	S5, G5, Native, CoC: 7	FACU	Yes			✓			

poison ivy	*Toxicodendron radicans*	S5, Native, CoC: 3	FAC	Yes	✓	✓	✓	✓	✓	✓
red clover	*Trifolium pratense*	SNA, Not native, Naturalized	FACU	No	✓			✓	✓	✓
white clover	*Trifolium repens*	SNA, GNR, Not native, Naturalized	FACU	No	✓	✓			✓	✓
red trillium	*Trillium erectum*	S5, G5, Native, CoC: 7	FACU	Yes				✓		
white trillium	*Trillium grandiflorum*	S5, G5, Native, CoC: 7	-	Yes				✓		
eastern hemlock	*Tsuga canadensis*	S5, G5, Native, CoC: 7	FACU	Yes				✓	✓	
tower mustard	*Turritis glabra*	S5, Native, CoC: 2	UPL	No			✓			
coltsfoot	*Tussilago farfara*	SNA, GNR, Not native, Naturalized	FACU	No		✓				
narrowleaf cattail	*Typha angustifolia*	S5, G5, Native, CoC: 1	OBL	No			✓			✓
hybrid cattail	*Typha glauca*	SNR, GNR, Native	OBL	No	✓	✓	✓			
wide-leaved cattail	*Typha latifolia*	S5, G5, Native, CoC: 1	OBL	Yes		✓	✓			
cattail	*Typha sp.*	-	OBL	-	✓	✓	✓	✓	✓	✓
American elm	*Ulmus americana*	S5, G5, Native, CoC: 4	FACW	Yes		✓	✓	✓		✓
false hellebore	*Veratrum viride*	S5, G5, Native, CoC: 4	FACW	Yes				✓		
moth mullein	*Verbascum blattaria*	SNA, GNR, Not native, Naturalized	FACU	No			✓			
blue vervain	*Verbena hastata*	S5, Native, CoC: 3	FACW	Yes	✓	✓			✓	
smooth arrowwood	*Viburnum dentatum*	S5, Native, CoC: 3	FAC	Yes	✓	✓	✓		✓	✓
nannyberry	*Viburnum lentago*	S5, G5, Native, CoC: 4	FAC	Yes		✓	✓		✓	✓
tufted vetch	*Vicia cracca*	SNA, G5, Not native, Naturalized	-	No			✓			✓
common blue violet	*Viola sororia*	S5, Native, CoC: 3	FAC	Yes		✓				
riverbank grape	*Vitis riparia*	S5, G5, Native, CoC: 3	FAC	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 15:07:39 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
Zip: 14818
Email kirsten.gerhardt@gmail.com
Phone: 3028242336

Appendix E.

Sixmile 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

July 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 Sixmile Creek Site in the Town of Schroeppel, Oswego County, New York. The Mitigation Plan (Plan) at Sixmile 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 those with a New York State Natural Heritage Invasiveness ranking of high or very high. Any others identified by NYSDEC or USACE shall be incorporated into this ISMP.

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 111 acres at the Sixmile Creek Site at the time of data collection. 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*). 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 Sixmile 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 or leaving off-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**: To effectively prevent the introduction or spread of invasive species without disrupting construction activities, the following cleaning protocols will be implemented:
    - **Incoming Equipment:** All equipment entering the site will be visually inspected by onsite construction monitors. If soil, plant material, or debris is observed, equipment will be cleaned prior to entering sensitive work areas using appropriate methods such as manual removal or pressure washing.
    - **Active Monitoring During Construction:** Construction monitors will observe operations and identify equipment that has entered areas with known or suspected invasive species presence, particularly during wet conditions or where vegetative debris is likely to accumulate.

- **Equipment Exit Procedures:** Any equipment identified as having operated in areas with potential for invasive seed or propagule exposure will be cleaned using onsite pressure washing stations before leaving the site or transitioning between sensitive areas. This will help prevent the transfer of invasive material both within and beyond the project boundaries.
- **Seasonal Considerations:** Construction monitors may increase cleaning vigilance during key seed dispersal periods or when conditions increase the likelihood of soil and plant matter transport.
- **Compliance and Documentation:** Construction monitors will document cleaning efforts as part of routine field oversight.

- **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 (i.e. integrated pest management principles).

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 (**90% native cover** standard set in the mitigation plan), 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:
    - 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 (Preferred Method):
    - Hand-pull small infestations, removing all roots.
    - Cut flower heads before seed drop to prevent spread.
2. Biological Control (Unlikely to be implemented due to abundance of beetles throughout the great lakes region):
    - Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
    - Any releases would be monitored over multiple years to assess impact.
3. Chemical Control:
    - Spot treat with glyphosate-based pesticide in late summer.

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

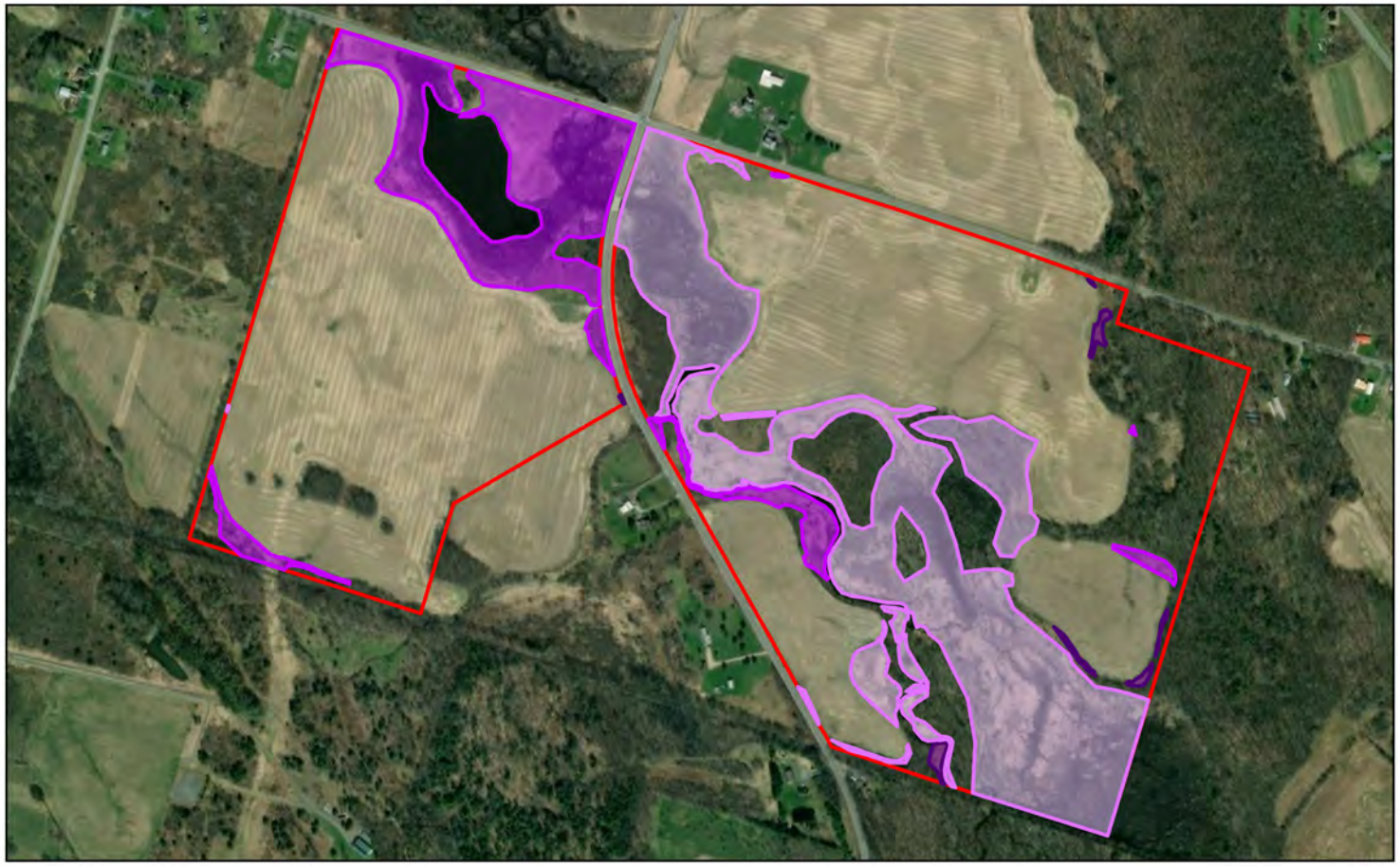


Figure 8-2. Reed Canary Grass Percent Cover

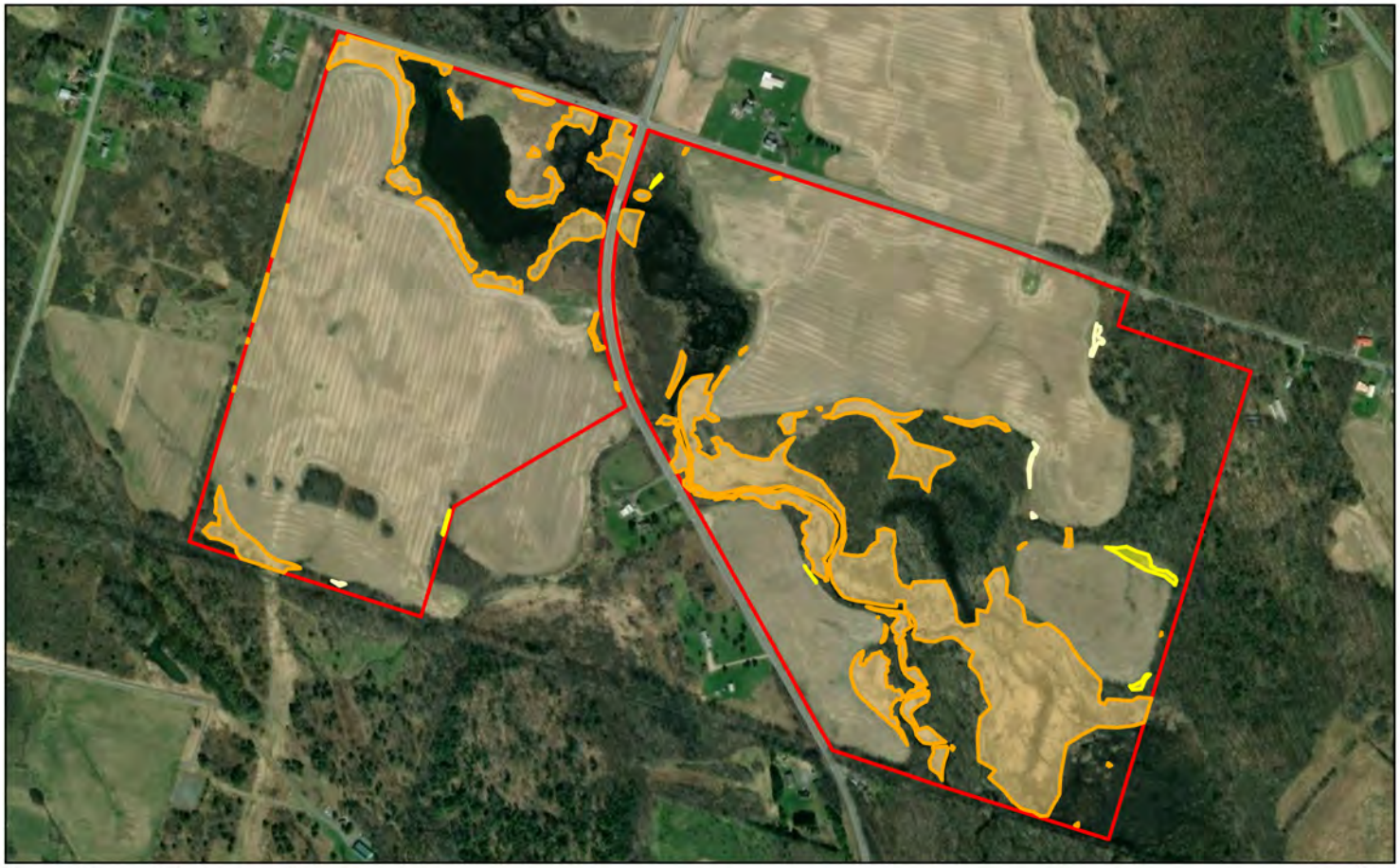


Figure 8-3. Phragmites Percent Cover

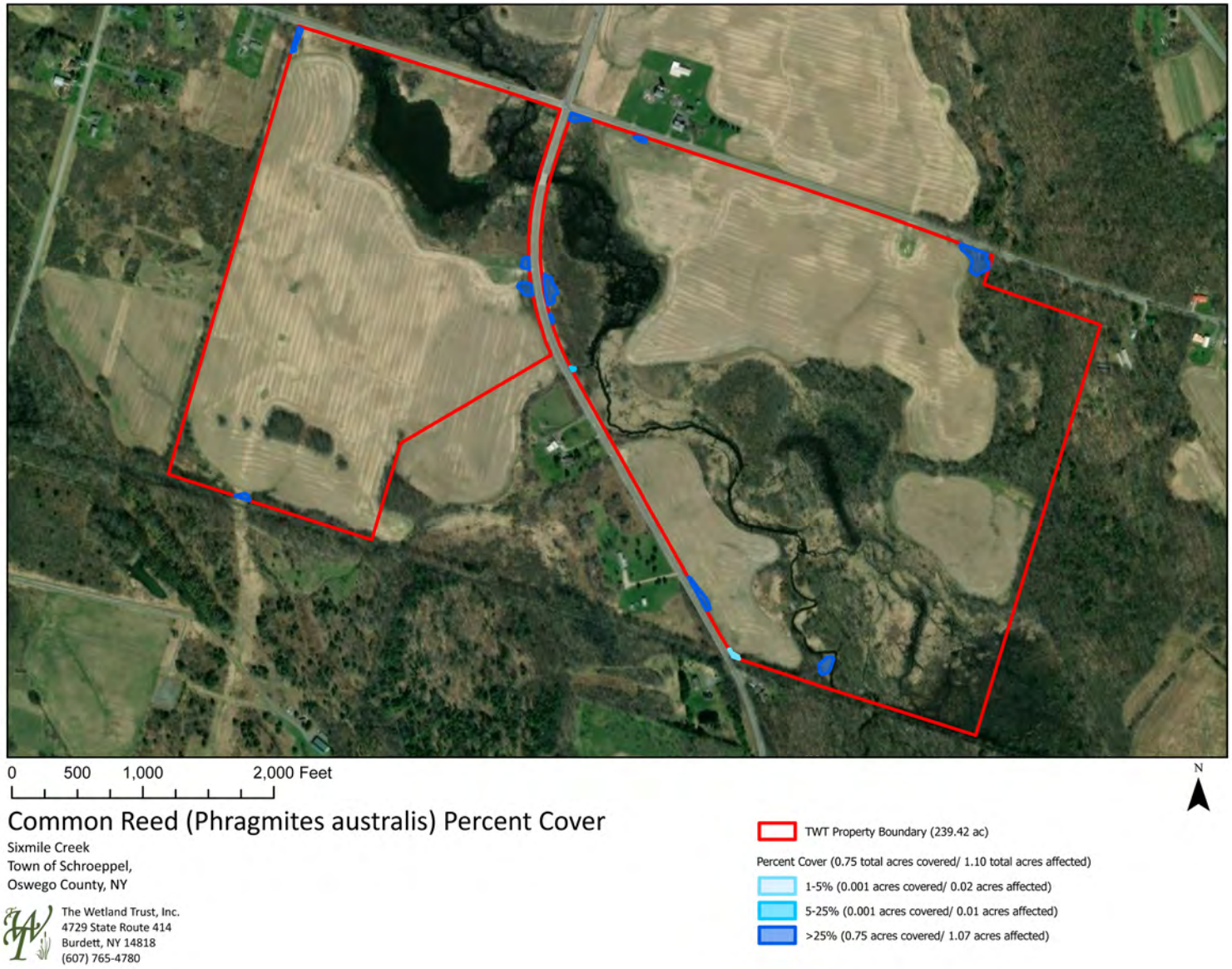


Figure 8-4. Cattail Percent Cover

Table 8-1. Invasive Species Coverage at Sixmile Creek				
Invasive Species	**1-5% Cover (Affected Acres)**	**5-25% Cover (Affected Acres)**	**>25% Cover (Affected Acres)**	**Total Area (Affected Acres)**
Reed Canary Grass (*Phalaris arundinacea*)	0.13	0.41	29.99	30.53
Purple Loosestrife (*Lythrum salicaria*)	46.47	20.10	0.68	67.25
Cattail (Typha sp.)	6.93	3.28	2.60	12.81
Common Reed (*Phragmites australis*)	0.02	0.01	1.07	1.10

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 Name: Sixmile Creek Wetland Restoration
PR#: 24PR09236
Date: 10/17/2024

The project is in an archaeologically sensitive location. 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.

If your project is 10 acres or less in extent or a linear project that is 0.5 miles or less in length, and *NO* archaeological sites are identified, the archaeologist may use our optional *Phase IA/IB Archaeological Investigation Abridged Report Form* (attached). This form is not applicable for projects conducted in New York City.

If you have any questions concerning archaeology, please contact XXX 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.

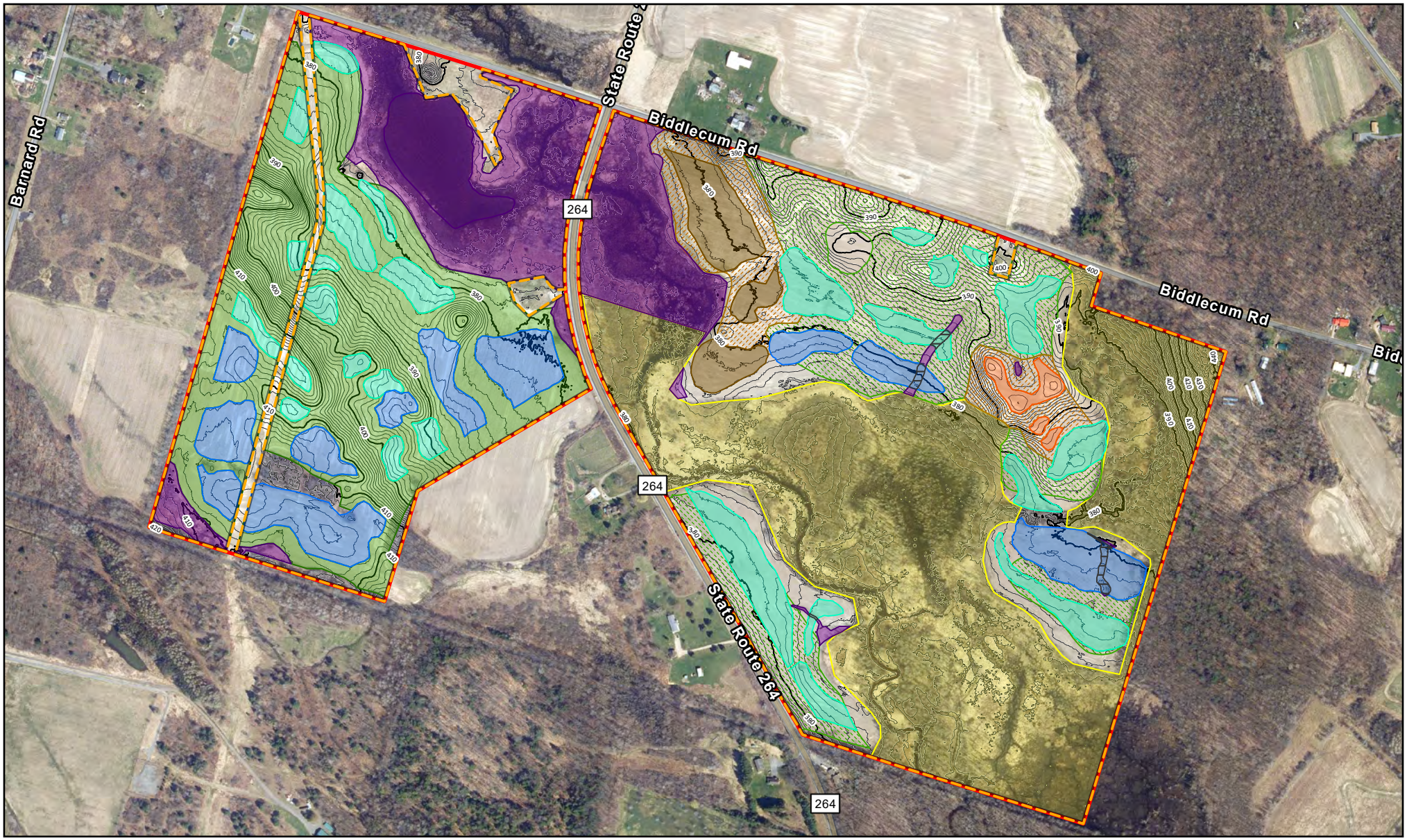
If you have any questions, I can be reached at Jessica.Schreyer@parks.ny.gov.

Sincerely,

Jessica E. Schreyer

Jessica Schreyer
Archaeology Unit Program Coordinator

Appendix G.



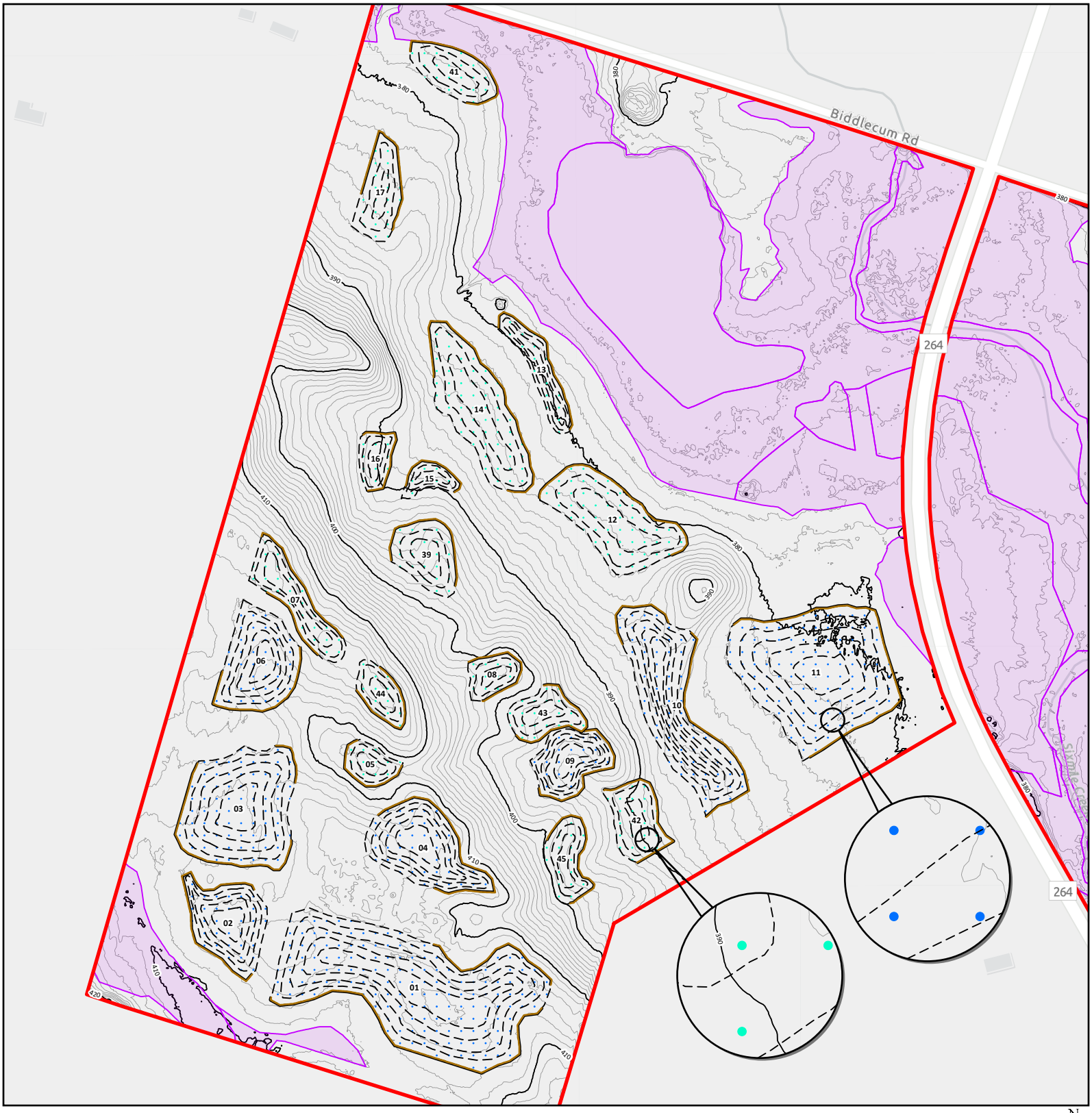
Site Plan

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

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

- Existing Wetland Preservation (31.7 ac)
- Existing Wetland Rehabilitation (0.4 ac Total)
  - Incidental (0.4 ac)
- Mitigation Wetlands (44.5 ac Total / 44.1 ac Reestablishment / 0.4 ac Incidental Rehabilitation)
  - PEM - Shallow Emergent Marsh (20.1 ac Total / 20 ac Reest. / 0.1 ac Incidental Rehab)
  - PEM - Deep Emergent Marsh (17.7 ac Total / 17.4 ac Reest. / 0.3 ac Incidental Rehab)
  - PFO - Floodplain Forest (5.5 ac Total / 5.5 ac Reest. / 0 ac Incidental Rehab)
  - PFO - Red Maple Hardwood Swamp (1.2 ac Total / 1.2 ac Reest. / 0 ac Incidental Rehab)
- Grassland Mitigation (39 ac)
- Bat Mitigation (72.3 ac)
- Upland Buffer (31.6 ac Total)
  - Herbaceous (23.8 ac)
  - Shrub / Forest (7.8 ac)
- Contour Line (1 ft)
- Conservation Easement Boundary DRAFT (233.8 ac)
- TWT Property Boundary (239.4 ac)

Cartographer: Michelle Herman | Date: 2 July 2025 | Projection: NAD 1983 (2011) State Plane New York Central | References: NYS GIS Clearinghouse



Wetland Grading Plan - West

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

Mitigation Wetland Berms / Groundwater Dams (Not to Scale; will not Exceed 3 ft H)

Mitigation Wetland Pit and Mound Specifications (Average)

- PEM Shallow Emergent Marsh: 24 in H x 36 in Dia, 30 ft Spacing
- PEM Deep Emergent Marsh: 30 in H x 36 in Dia, 30 ft Spacing

Existing Wetlands (98.9 ac)

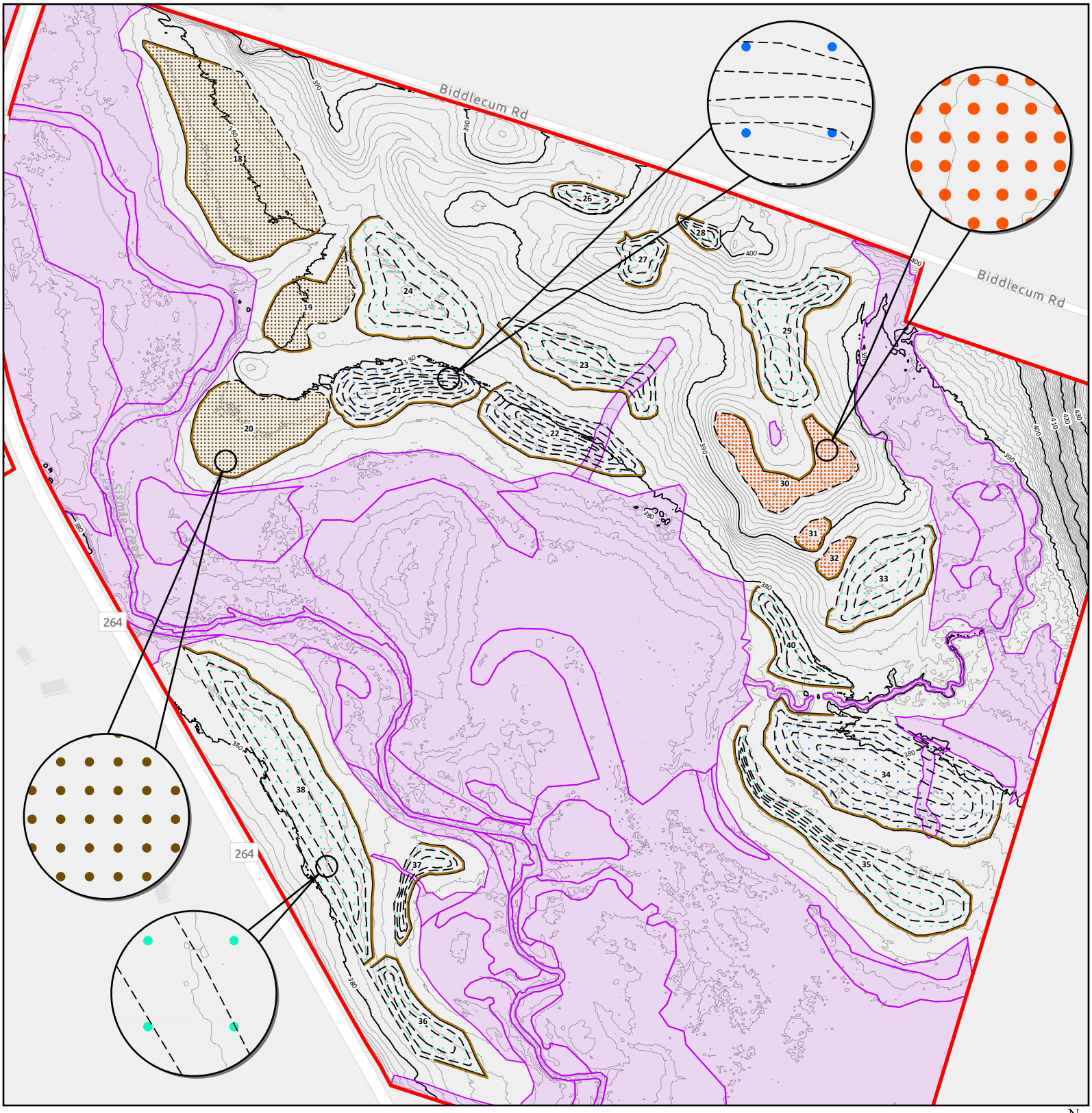
Mitigation Wetland Contours (0.5 ft)

Existing Contours (1 ft)

TWT Property Boundary (239.4 ac)

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

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



0 200 400 800 US Feet

N

Wetland Grading Plan - East

Sixmile Creek
Town of Schroeppel,
Oswego County, NY

- Mitigation Wetland Berms / Groundwater Dams (Not to Scale; will not Exceed 3 ft H)

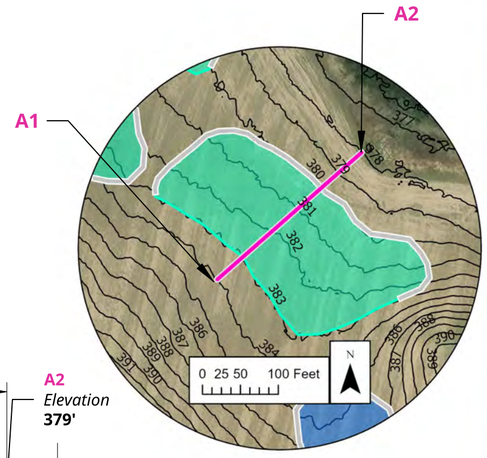
Mitigation Wetland Pit and Mound Specifications (Average)

- PEM Shallow Emergent Marsh: 24 in H x 36 in Dia, 30 ft Spacing
- PEM Deep Emergent Marsh: 30 in H x 36 in Dia, 30 ft Spacing
- PFO Floodplain Forest: 12 in H x 36 in Dia, 10 ft Spacing
- PFO Red Maple Hardwood Swamp: 6 in H x 48 in Dia, 10 ft Spacing
- Existing Wetlands (98.9 ac)
- Mitigation Wetland Contours (0.5 ft)
- Existing Contours (1 ft)
- TWT Property Boundary (239.4 ac)

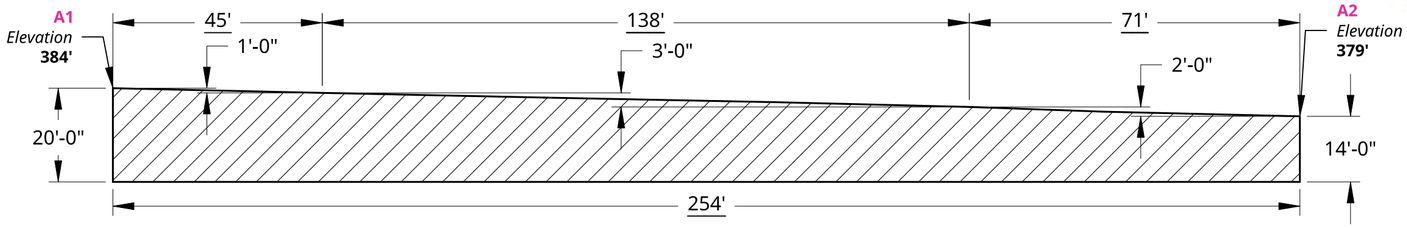
The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
(607) 765-4780

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

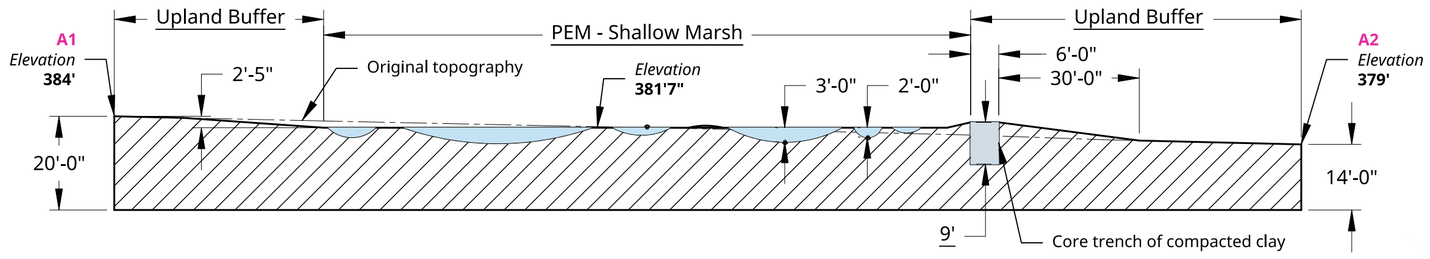
Sixmile Creek Wetland Cross Sections: Shallow and Deep PEM

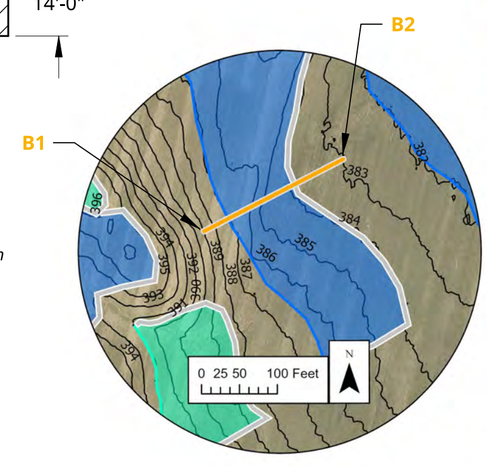


W-12 Original topography profile

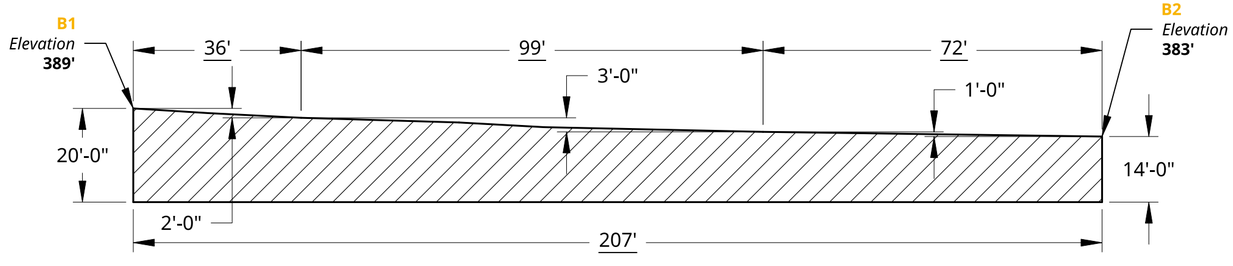


W-12 Proposed as-built profile

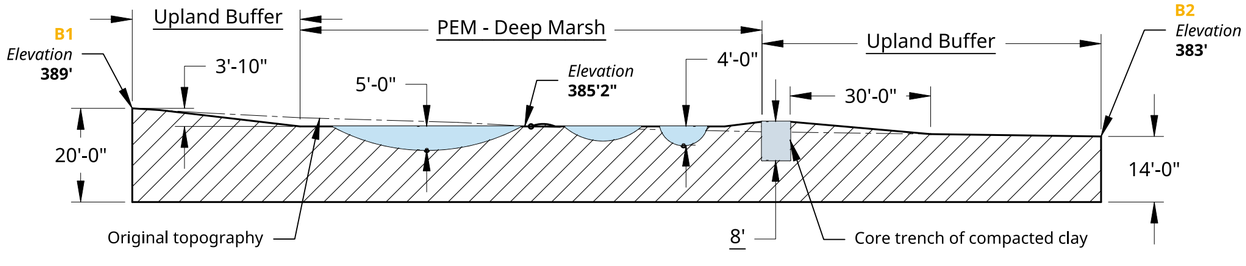


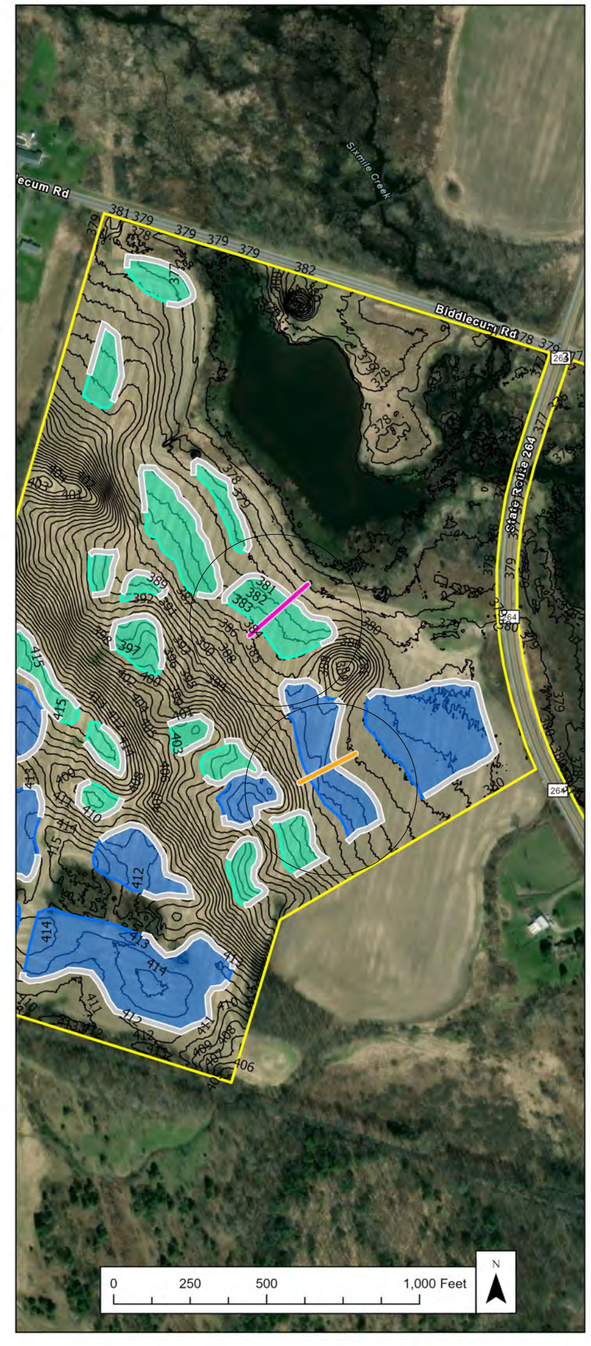


W-10 Original topography profile



W-10 Proposed as-built profile





TWT Property Boundaries
Contour Line (1 ft)

Wetland Profiles
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest

Sixmile Creek Designed Wetlands
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest
PFO - Red Maple Hardwood Swamp
Sixmile Creek Berms/Core Trench

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET. Maps and drawings are at different scales. Berm/Core Trenches in maps are not to scale		NAME	DATE
	DRAWN	DYLAN JOHNSTON-JORDAN	06/05/2025
	CHECKED		
	APPROVED		
	MATERIAL	FINISH	

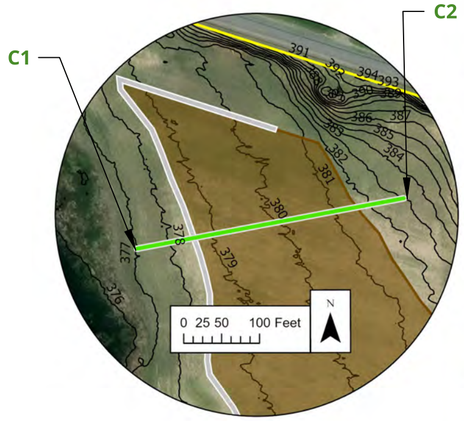
TITLE: **Sixmile Creek Wetland Cross Sections: Shallow and Deep PEM**

The Wetland Trust

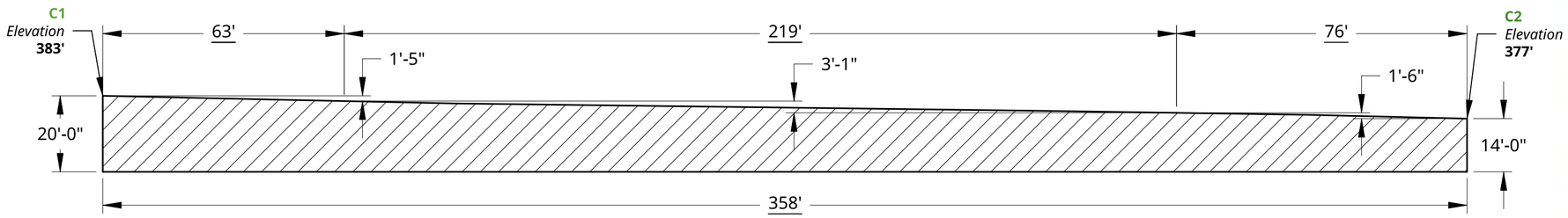
SIZE	DWG NO.	REV.
C		

SCALE	WEIGHT	SHEET
1:300		1 of 1

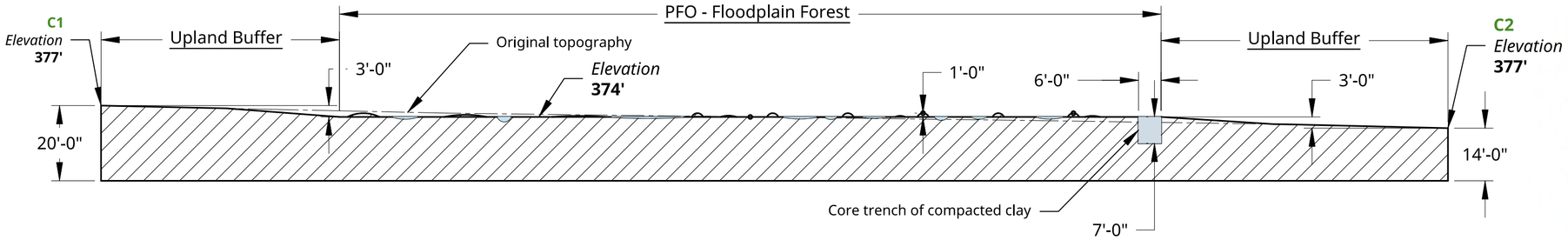
Sixmile Creek Wetland Cross Sections: Floodplain Forest PFO

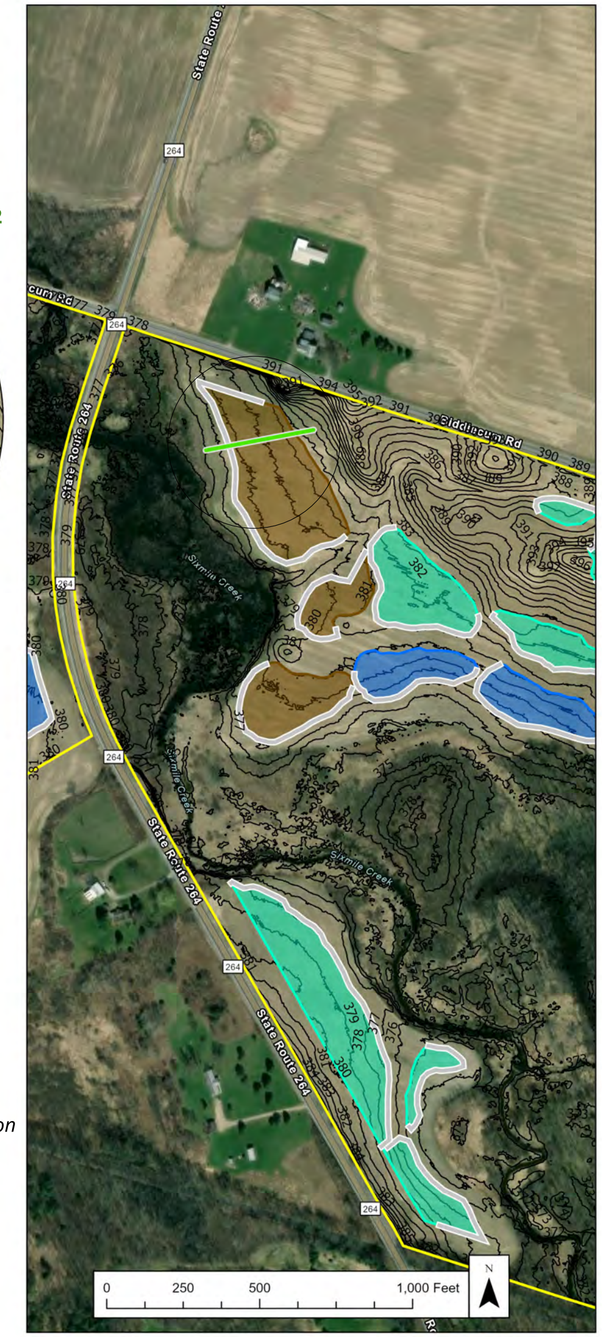


W-18 Original topography profile



W-18 Proposed as-built profile





TWT Property Boundaries
Contour Line (1 ft)
Sixmile Creek Berms/Core Trench
Wetland Profiles
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest
Sixmile Creek Designed Wetlands
PEM - Deep Emergent Marsh
PEM - Shallow Emergent Marsh
PFO - Floodplain Forest
PFO - Red Maple Hardwood Swamp

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET. Maps and drawings are at different scales. Berm/Core Trenches in maps are not to scale	NAME	DATE
DRAWN	DYLAN JOHNSTON-JORDAN	06/06/2025
CHECKED		
APPROVED		
MATERIAL	FINISH	

TITLE: **Sixmile Creek Wetland Cross Sections: Floodplain PFO**

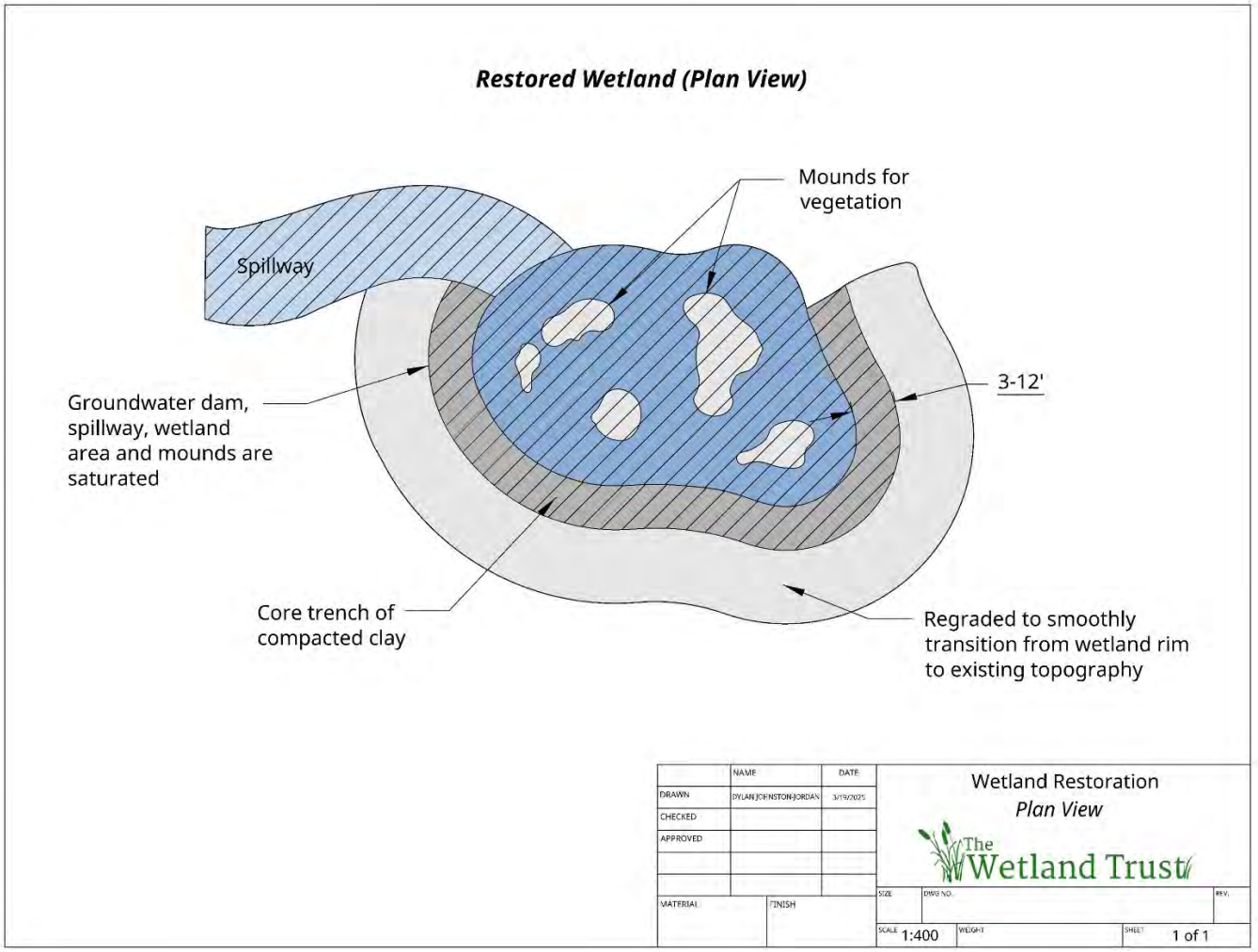
The Wetland Trust

SIZE	DWG NO.	REV.
C		

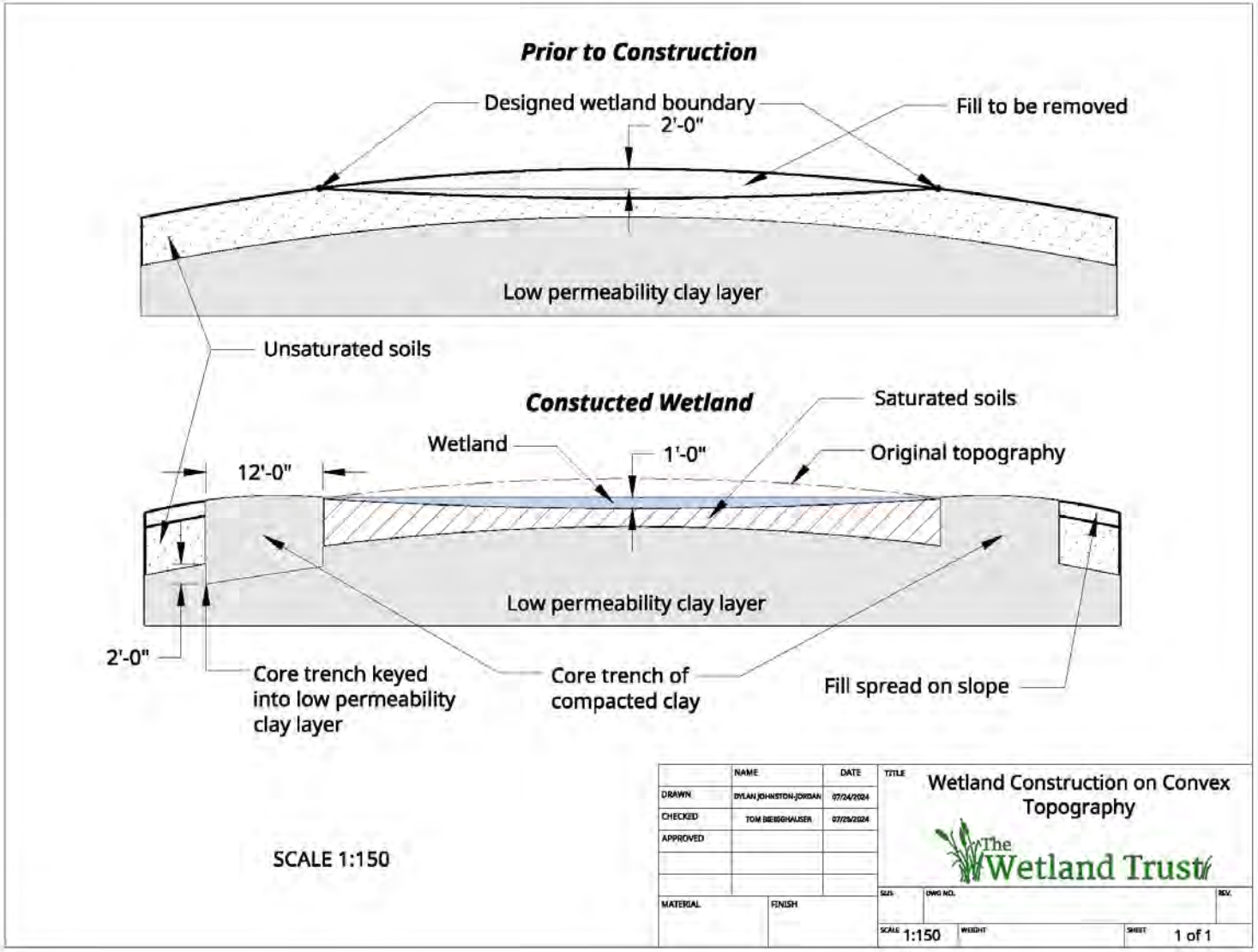
SCALE	WEIGHT	SHEET
1:325		1 of 1

Construction Typical Drawings

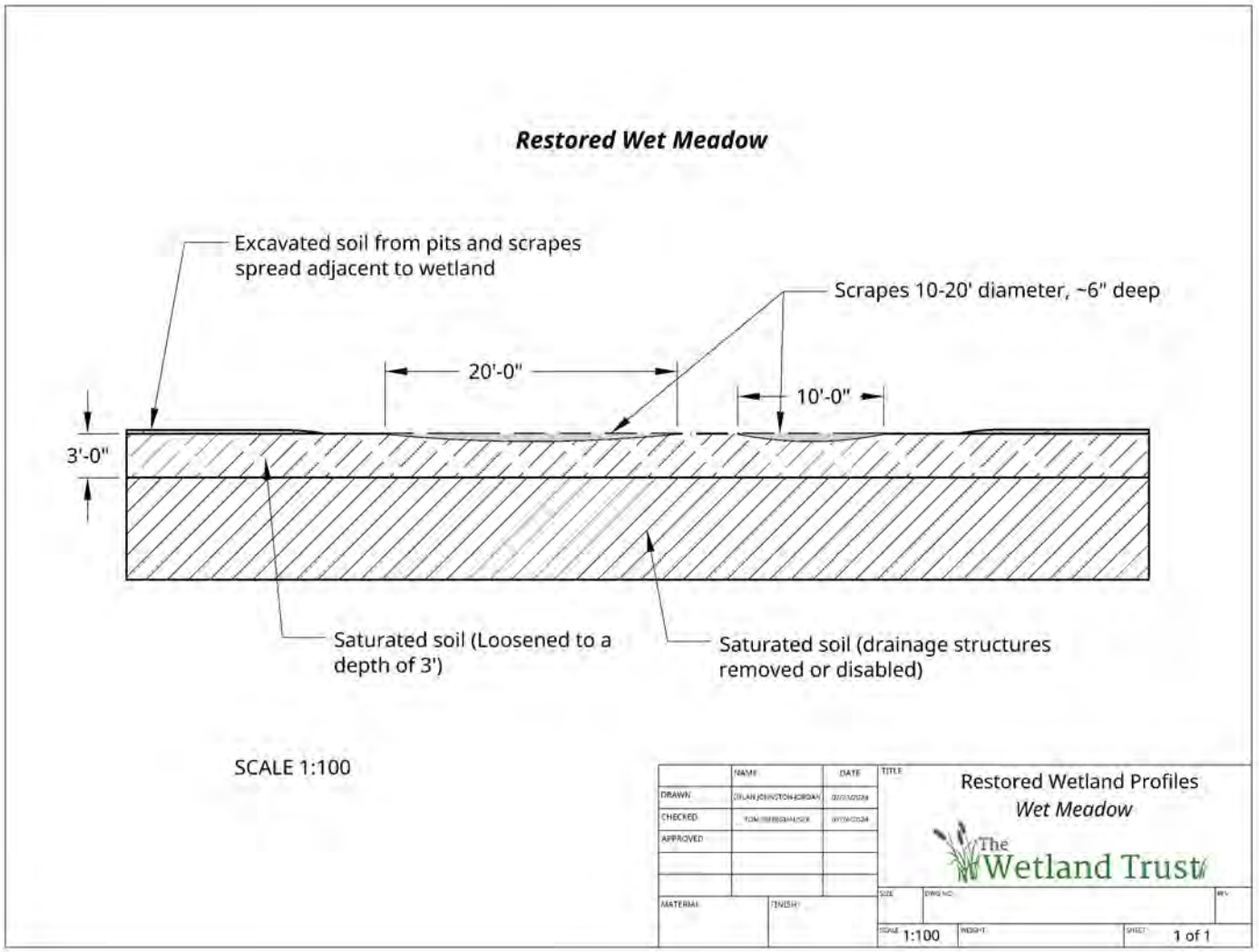
A. Typical Restored Wetland (Plan View)



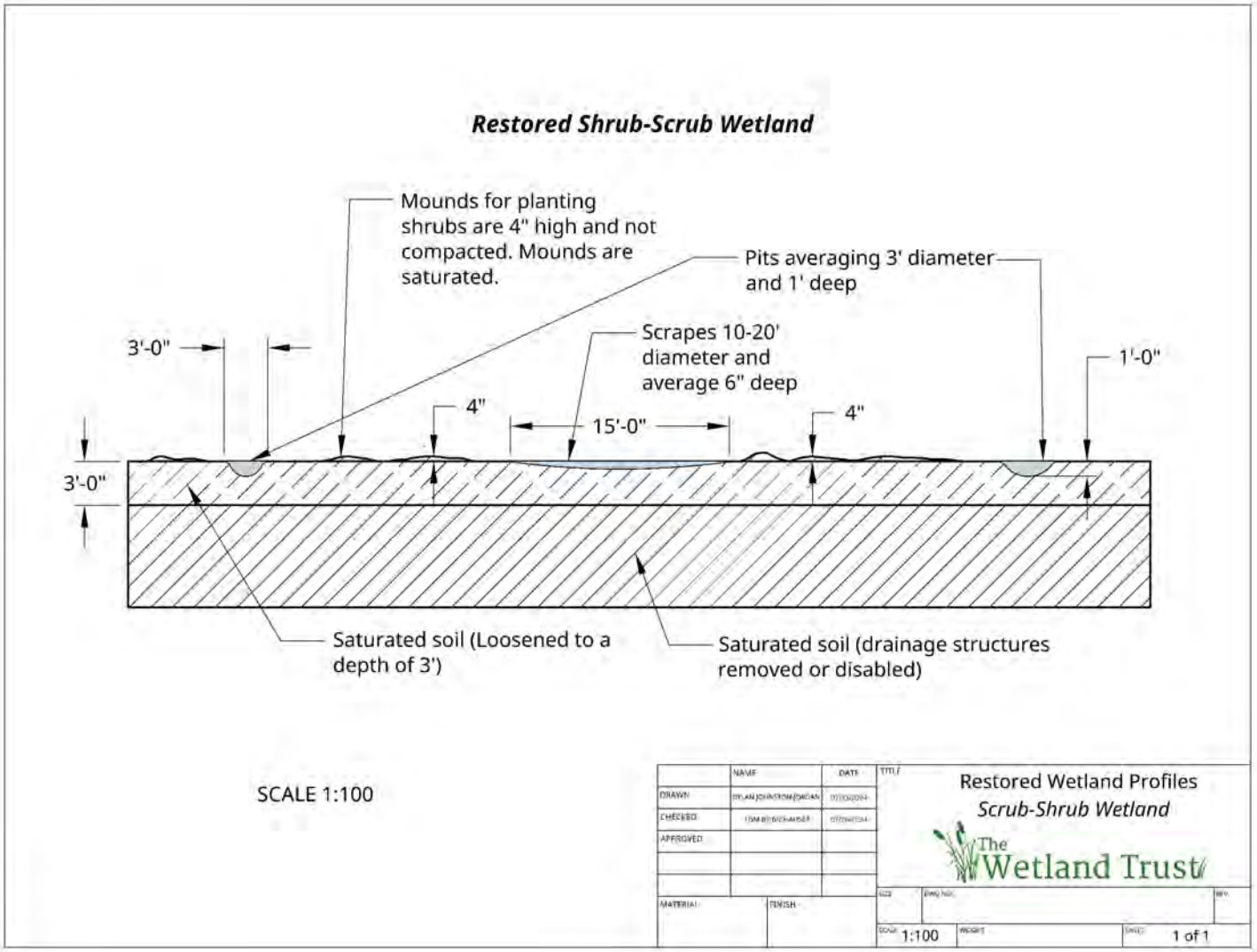
B. Wetland Construction on Convex Topography



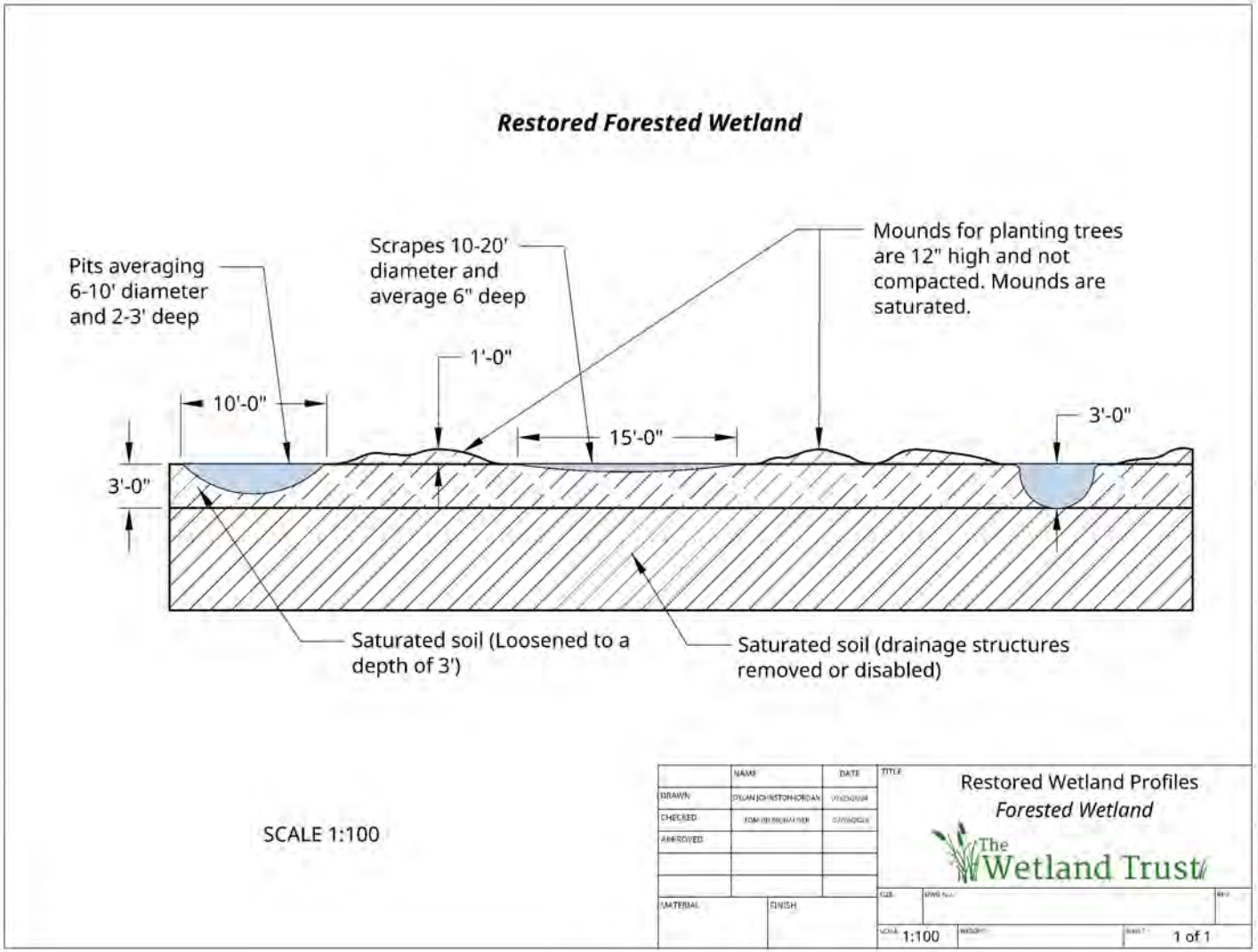
C. Restored Wet Meadow



D. Restored Scrub-Shrub Wetland

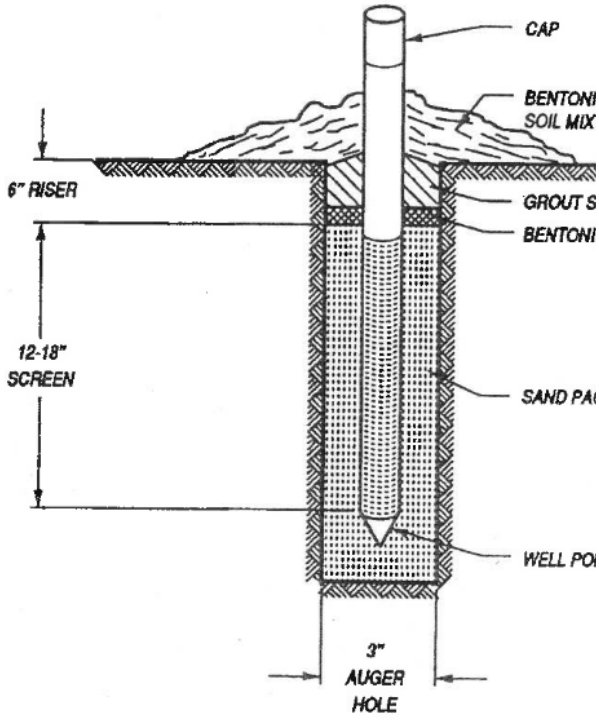


E. Restored Forested Wetland

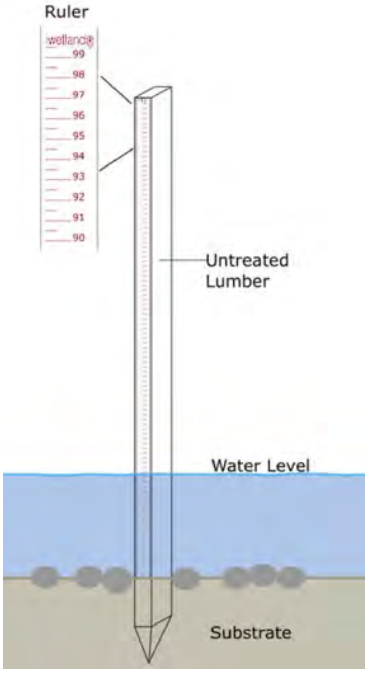


Hydrology Monitoring Structure Typicals

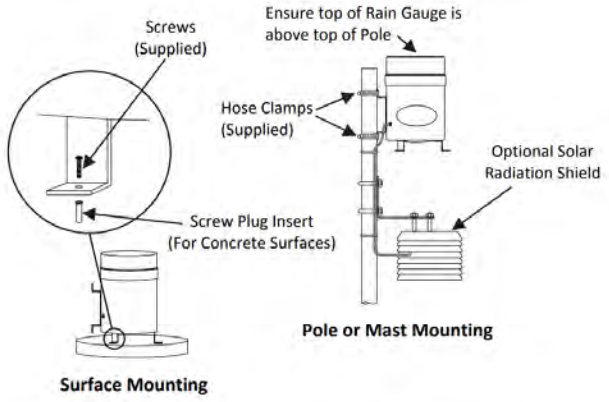
F. Groundwater Monitoring Well



G. Staff Gauge



H. HOBO Rain Gauge Typical



Appendix H.

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Appendix I.

Sixmile 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

July 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 Sixmile Creek Site, town of 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 Sixmile 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 45 acres of wetland re-establishment, and 0.5 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 Sixmile 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 Sixmile 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 45 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 Sixmile 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 1,269 acres.

Category	Task	Frequency	Estimated Cost per acre	Annualized Cost
Adaptive Management	Replanting	5		
	Reshaping terrain	5		
	Invasive species removal	2		
Maintenance	Site manipulation	10		
	Boundary posting	10		
	Other practices	3		
Long-Term Management	Other corrective adaptive management actions to ensure natural stability of site	5		
Monitoring	To determine implementation tasks	1		
Administration	For all tasks above including tax exempt status	1		
Total annual budget*				
Total Stewardship investment**				