## Micron 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

May 2025



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## **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 (USACE) or 19.9 mitigation acres (NYSDEC) toward a total compensation requirement of 414 credits/acres for the entire project. This includes:

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

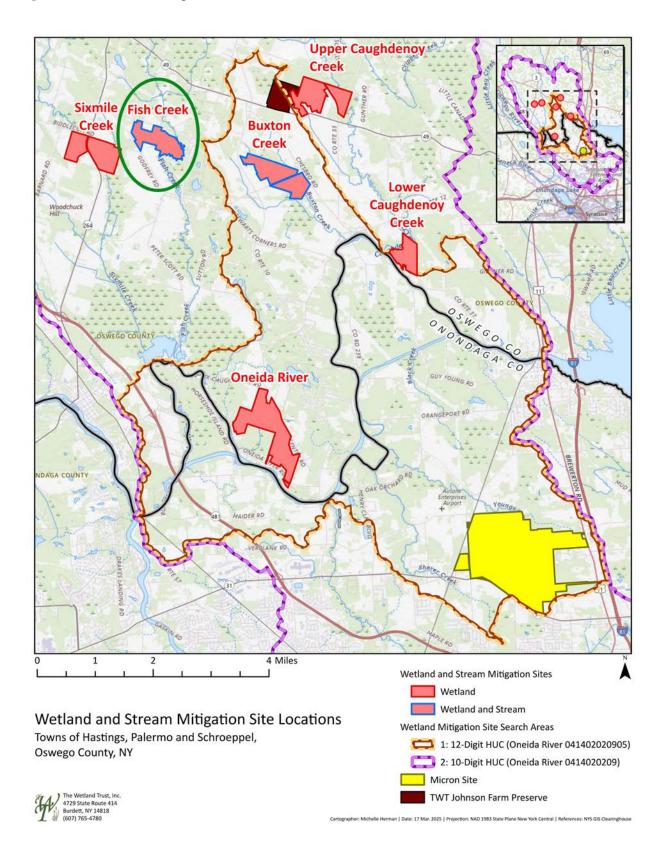
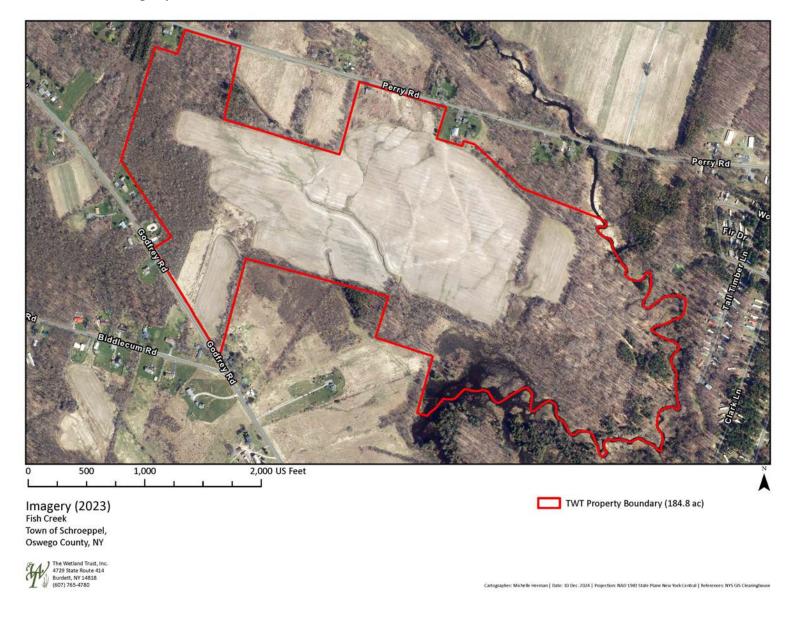


Figure 2-2. Fish Creek Property (2023)



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

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

## 3. Baseline Information

## 3.1 Land Use History

#### Historic

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

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

#### Current Land Use

Current land use largely consists of commercial crop production in corn and soybeans. The site remains in a state of peak hydrologic modification: the central ditch has incised to depths exceeding seven feet due to ongoing head cutting, and the subsurface drainage system rapidly conveys water off-site to support intensive row crop agriculture. Grading and drainage structures are actively maintained to optimize field conditions and maximize agricultural productivity. Much

of the landscape is managed for high-efficiency cultivation. The forested and wettest areas of the property, primarily adjacent to Fish Creek, are not currently being actively modified, and are used for hunting.

## 3.2 Soils

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

Table 3-1. Soil Series Mapped within	in the Mit	igation	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	С
Sodus gravelly fine sandy loam, 15-25% slopes	SgD	3.3	1.79%	Well drained	С
Swanton fine sandy loam	Sw	0.27	0.15%	Poorly drained	C/D
Williamson very fine sandy loam, 2-6% slopes	WIB	39.09	21.15%	Moderately well drained	D
*Derived from NRCS Web Soil Survey					

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

## 3.3 Wetlands and Hydrology

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

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

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

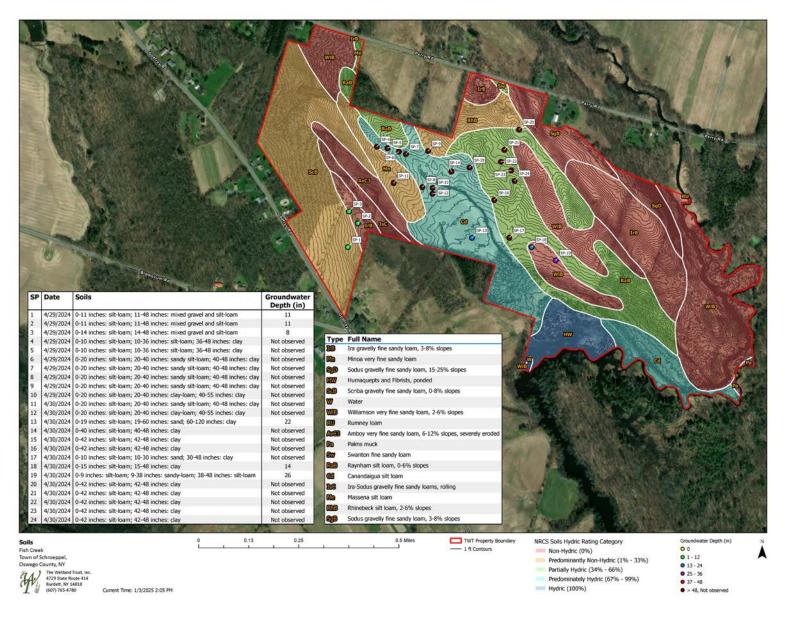
The property has been farmed for over 75 years and contains a mix of clay loam soils and areas of sand and gravel. Wetland establishment is focused on the heavier clay soils and historic tributary corridors, while sandy/gravel areas have been avoided. Surface flows generally trend northwest to southeast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

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

#### Staff Gauges

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

Figure 3-1. Fish Creek Soils



**Figure 3-2.** State and Federal Mapped Wetlands

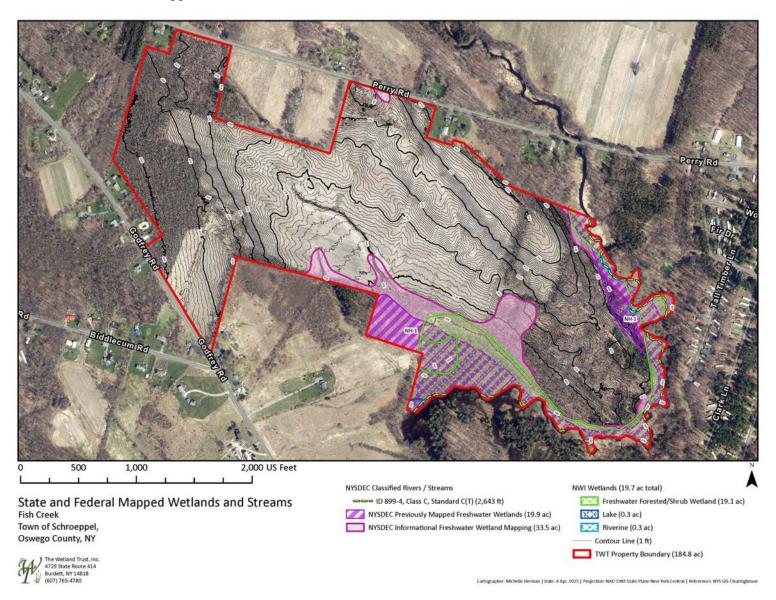
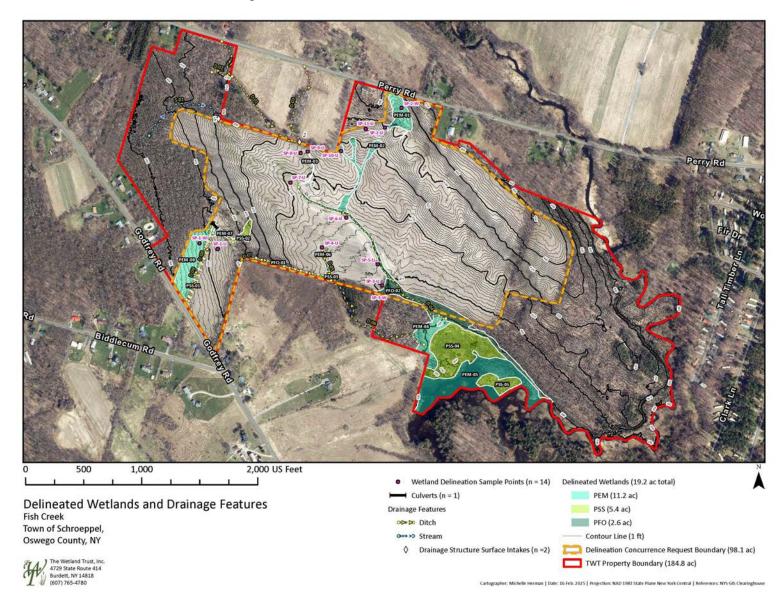


Figure 3-3. Delineated Wetlands and Drainage Features



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

Table 3-2. Sta	ff Gauge Loc	ations		
Gauge Number	Elevation (ft)	Latitude	Longitude	Description
1	405.19	43.29635656	-76.27555738	Located at the shallowest part of the drainage ditch
2	397.23	43.2945881	-76.27297151	Located at the deepest part of the drainage ditch.

## Monitoring Wells

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

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

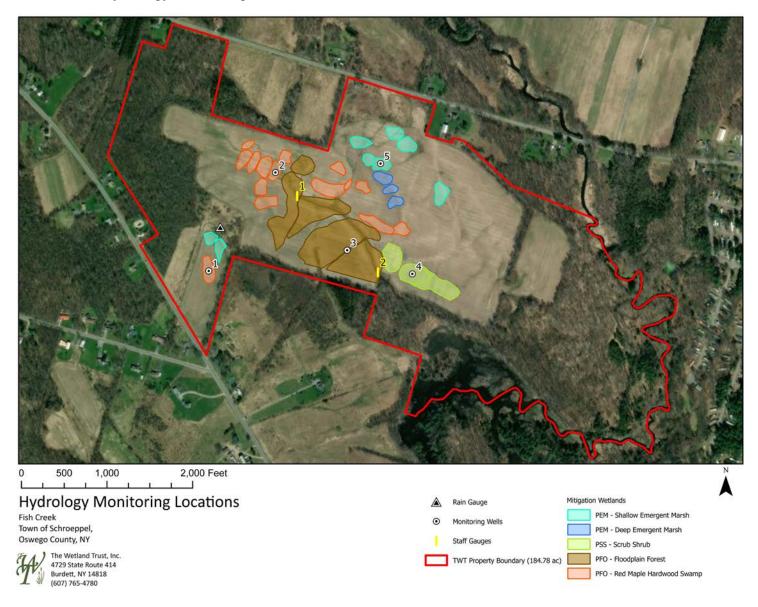
#### Rain Gauge

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

## 3.4 Existing Wildlife

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

Figure 3-4. Fish Creek Hydrology Monitoring Locations



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

#### 3.4.1 Federally Listed Species and Habitat Consideration

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

## 3.5 Existing Vegetation

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

## 3.6 Invasive Species

Key invasives of Fish Creek include purple loosestrife (*Lythrum salicaria*) affecting 3.99 acres, reed canary grass (*Phalaris arundinacea*) affecting 6.79 acres, common reed (*Phragmites australis*) affecting 0.26 acres, and cattail (*Typha spp*) affecting 1.02 acres (**Table 3-4**). In addition to these dominant species, other invasive plants present in the area include Eurasian live forever (*Hylotelephium telephium*), honeysuckle (*Lonicera spp.*), moneywort (*Lysimachia nummularia*), Japanese knotweed (*Reynoutria 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 Cro	eek in 2025			
Invasive Species	1-5% Cover	5-25% Cover	>25% Cover	Total Affected
	(Acres)	(Acres)	(Acres)	Area (Acres)

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

#### 3.7 Cultural and Historic Considerations

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

## 4. Wetland Credit Accounting

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

Wetland type Cowardin	Cover type Edinger	Mitigation Type NYSDEC	Acres	Mitigation type USACE	USACE Ratio (Acre:Credit)	Credits
	Challesy amangant manch	Restoration	2.1	Re-establishment	1:1	2.1
DEM	Shallow emergent marsh	Enhancement	0.1	Rehabilitation	3.5:1	0.028
PEM	Deep emergent marsh	Restoration	0.7	Re-establishment	1:1	0.7
		Enhancement	-	Rehabilitation	3.5:1	-
	Floodplain forest	Restoration	9.2	Re-establishment	1:1	9.2
DEO	Floodplain forest	Enhancement	0.8	Rehabilitation	3.5:1	0.23
PFO	B. 1.1.1.1	Restoration	4.5	Re-establishment	1:1	4.5
	Red maple- hardwood swamp	Enhancement	0.1	Rehabilitation	3.5:1	0.028
DCC	G. L.L. I	Restoration	2.4	Re-establishment	1:1	2.4
PSS	Scrub shrub	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 reestablishment 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  $\leq$ 6.6 ft in depth that do not support rooted-emergent or woody plant species. Areas  $\leq$ 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 reestablished for each area within the Fish Creek Site is based on the cover types outlined in Ecological Communities of New York State (Edinger, 2014) and is guided by the number of acres of each wetland type necessary to meet mitigation requirements for the Micron impacts.

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

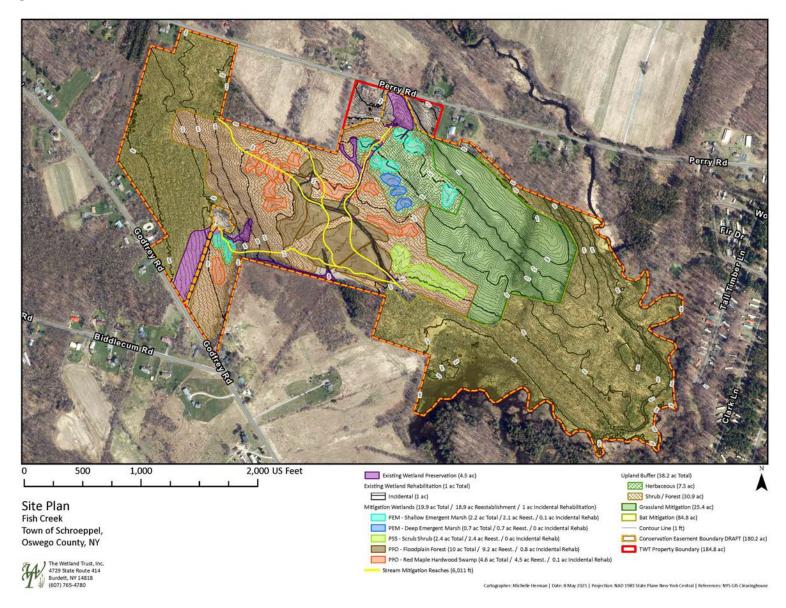
## Floodplain Forest

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

#### Red Maple-Hardwood Swamp

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

Figure 5-1. Fish Creek Site Plan



#### Deep Emergent Marsh

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

#### Shallow Emergent Marsh

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

## Shrub Swamp

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

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

## **5.1 Invasive Vegetation Control**

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

## **5.2** Grading Plan: Re-establishment Wetlands

#### Basin and berm construction

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

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

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

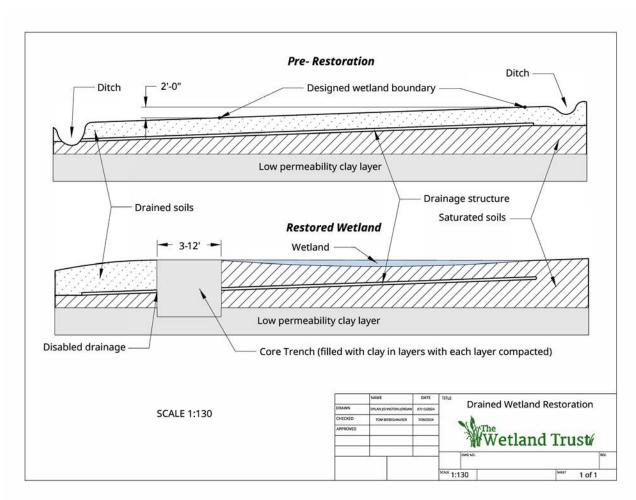
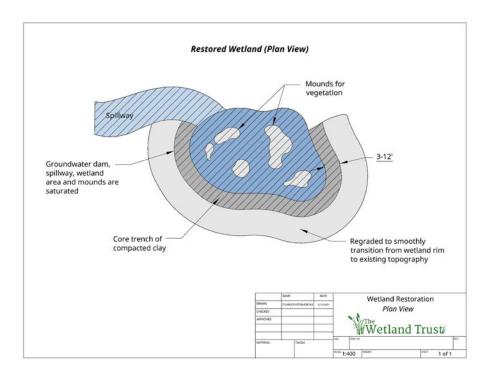


Figure 5-2. Restored Wetland Section View

Figure 5-2. Restored Wetland Plan View



## Microtopography restoration

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

Table 5-1. Fish Creek Grading for W Wetland Type	Maximum wetland basin depth (in)	Average individual mound height (in)*	Average mound diameter (in)	Mound Spacing (ft)	Mound Density/acre
PEM – Shallow Emergent Marsh	24	24	36	30	80
PEM – Deep Emergent Marsh	36	30	36	30	40
PFO – Floodplain Forest	4	12	36	10	200
PFO – Red Maple Hardwood Swamp	1	6	48	10	200
PSS – Scrub-shrub	6	4	12	10	400
*soil is kept uncompacted and will settle by	up to 50%				

Figure 5-4. Wetland Grading Plan

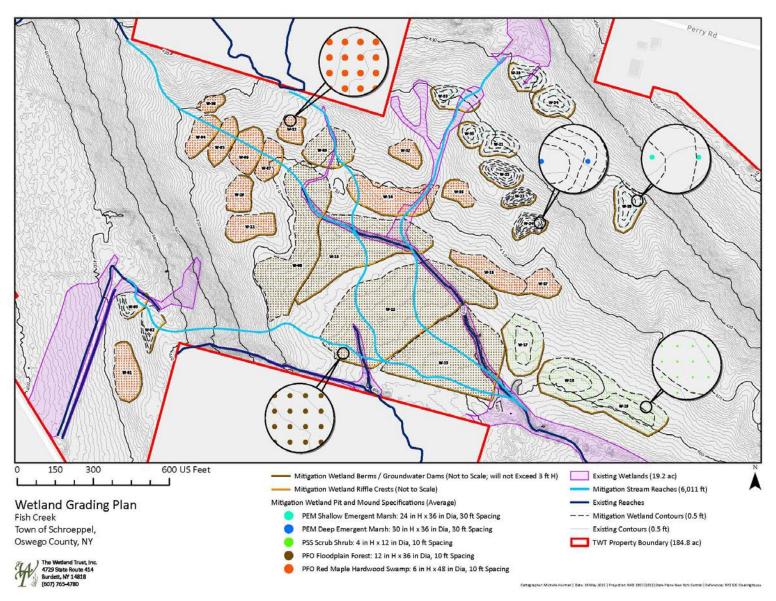


Figure 5-5. Restored Emergent Wetland

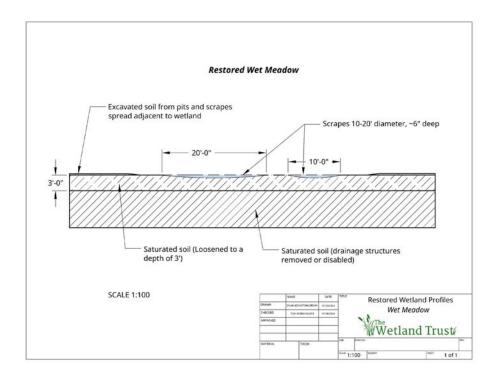
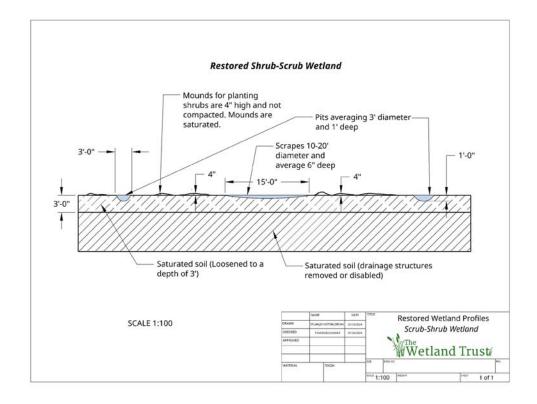


Figure 5-6. Restored Scrub-Shrub Wetland



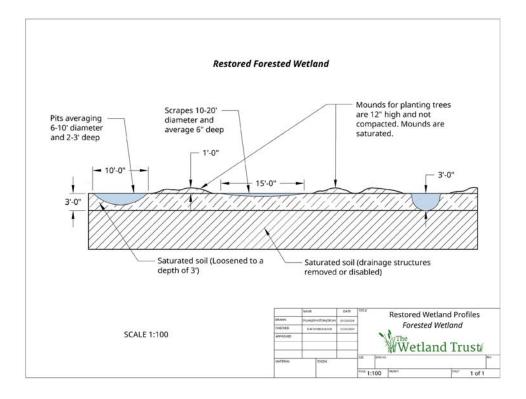


Figure 5-7. Restored Forested Wetland

#### **5.3** Buffer Establishment

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

## **5.4 Planting Plan**

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

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

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

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

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

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

Table 5-2b. Deep Emergent Marsh							
Common Name	Scientific Name	Wetland Indicator	СоС	Planting Rate			
Gray's Sedge	Carex grayi	FACW	5	15-20 pounds/acre			
Cartex lacustris	Carex lacustris	OBL	5				
Royal Fern	Osmunda regalis	OBL	7				
Green Bulrush	Scirpus atrovirens	FACW	4				
Woolgrass	Scirpus cyperinus	FACW	3				
River Bulrush	Scirpus fluviatilis	OBL	6				
Water Parsnip	Sium suave	OBL	5				
Bur-reed	Sparganium americanum	OBL	5				

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

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

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

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

## **5.5 Timing and Sequence**

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

Table 5-3. Mitiga	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	after construc			_	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	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	Summer Year 1	Construction Phase I:					
ditch filling. Erosion control seeding.		Earthwork					
Final grading to develop microtopography, loosening of soil	Summer Year 1	Construction Phase II:					
as necessary.		Topography Enhancement					
Seeding, planting, and mulching per planting plan and	Fall Year 1	Construction Phase III: Seeding					
SWPPP, placement of woody debris for a natural look		& Planting					
Removal of all construction materials and general site clean-	Fall Year 1	Post-construction					
up. Erosion and sediment control structures (silt fencing) will							
be removed once site is stabilized.							
*invasive species management will likely begin prior to this time with	repeat treatments						

## 5.6 Sediment and erosion control measures

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

## 6. Wetland Performance Standards

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

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

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

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

Deep emergent and shallow emergent marsh (Edinger et al. 2014) are the targeted cover types for PEM areas.

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

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

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

- o Floodplain Forest, will be planted adjacent to streams
- o 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

- O 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.
- O 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.
- <u>VIBI</u>: 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 reestablishment and rehabilitation. Interim targets will aim for a score of 15 or more by the first year following planting, ≥20 by Year 3, ≥30 by Year 5, and ≥35 by Year 7.

Table 6-1. Wetland Performance Standards and Interim Goals							
	Interim and Final Goals						
Performance Standard	Year 1 <sup>1</sup>	Year 3	Year 5	Year 7	Year 10 <sup>2</sup>	Year 12	Year 15 <sup>3</sup>
Relative cover by native perennial hydrophytes (FAC or wetter)	20%	40%	60%	80%	90%		
Stem density in PSS areas (per acre, at least 280 must be shrub species)	400	400	400	400	400		
Stem density in PFO areas (per acre, at least 280 must be tree species)	400	400	400	400	400	400	400
Tree height in PFO areas	1 ft	2 ft	3 ft	4 ft	6.6 ft	8ft	9ft

Relative cover of all non-Typha invasive plant species in PEM, PSS, and PFO areas	15%	15%	12.5%	10%	5%	
Total relative cover of all invasive species, including Typha spp. in PEM, PSS, and PFO areas	20%	18.5%	15%	12.5%	10%	
VIBI-FQ score	≥15	≥20	≥30	≥35	≥40	

<sup>1.</sup> First full growing season following planting

## 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

<sup>2.</sup> Final herbaceous/PEM and PSS goals to be met at this time or additional monitoring years added

<sup>3.</sup> Final PFO (tree height and density) goals to be met at this time

**8-1a-e.** Reference reach #1 (**Figure 8-1b**) is most proximate to the Fish Creek property to the north. The imagery shows a stream that is braided with a complex of wetlands on nearly level ground, characteristics that will be present at the Fish Creek Mitigation Site. Bell Creek and Sixmile Creek references reaches #2-4 (**Figures 8-1c-e**) exemplify the sinuosity and presence of wetlands on the floodplain of natural streams in the area.

## **Watershed Characteristics**

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

#### 8.2 Work Plan

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

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

Figure 8-1a. Reference Stream Reaches

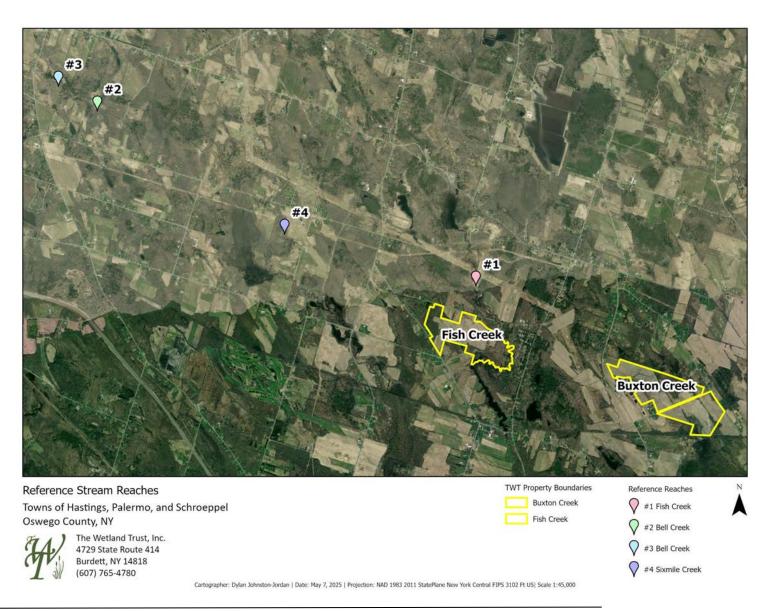
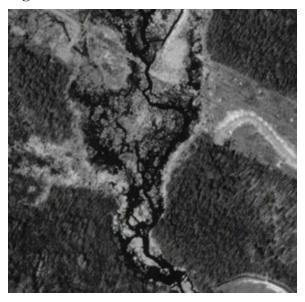


Figure 8-1b. Reference Reach #1 Fish Creek



Imagery: 1994, Location: 43.304067, -76.271105

Figure 8-1c. 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 J**). The stream banks will have slopes ranging from 5-33 percent.

## Floodplains

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

## Established Wetlands and Buffers

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

## Vertical Grade Control

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

## Embedded Rock

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

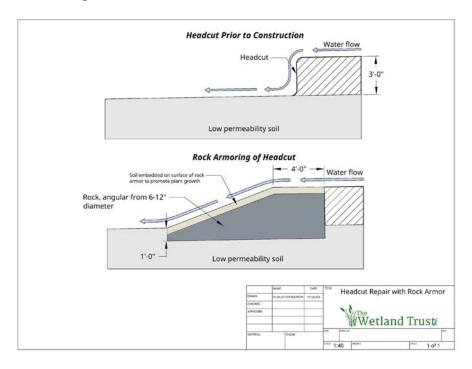
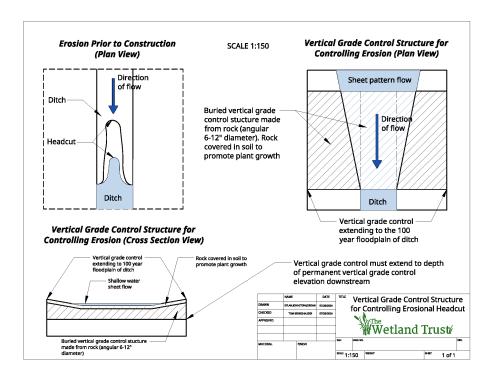


Figure 8-1. Head-cut Repair with Rock Armor

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



## Riffle Crests

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

Figure 8-3. Fish Creek Stream Restoration Profile

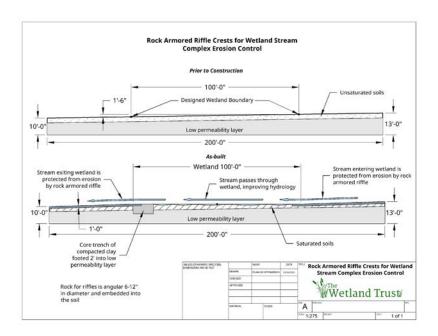
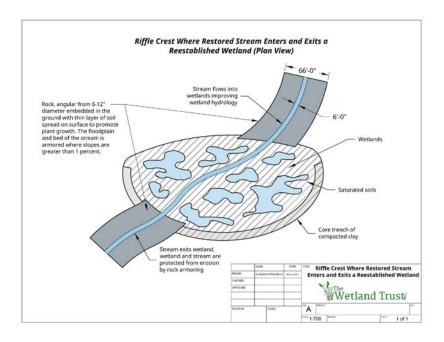


Figure 8-4. Riffle Crest Plan View



## 9. Stream Performance Standards

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

- **Perennial Stream Reaches:** The sections of re-established streams exhibiting perennial flow shall meet the following performance standards:
  - o Less than 15% increase in cross sectional area of stream reaches caused by erosion.
  - o A bank height ratio (BHR) less than 1.2 at riffle cross-sections.
  - o 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.
- <u>Intermittent and Ephemeral Stream Reaches:</u> 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)
  - o Sediment deposition (accumulations of sediment and/or formation of ripples)
  - Sediment sorting (sediment sorting indicated by grain-size distribution within the primary path of flow)
  - Multiple observed flow events (must be documented by gauge data and/or photographs)
  - Destruction of terrestrial vegetation
  - Presence of litter and debris
  - Wracking (deposits of drift material indicating surface water flow)

- Vegetation matted down, bent, or absent (herbaceous or otherwise)
- Leaf litter disturbed or washed away

### Vegetation

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

<b>SVAP 2 Elements</b>
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

Table 9-1. Stream

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:

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

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

# 10. Monitoring Requirements

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

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

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

Each monitoring report will include:

### • Work completed, as-builts, and milestones

- Evaluation of progress toward all performance goals (i.e. Sections 6 and 9) as appropriate.
- Report on the status of all erosion control measures on the mitigation site, and any additional temporary measures needed.
- Weekly mapping of all work completed.

## • Hydrological reporting

- Hydrology data collected from permanent water wells, as well as hydrology information derived from Wetland Determination Data Forms completed throughout the site.
- Maps showing the location and extent of wetland cover types (PEM, PSS, PFO) and other habitat types (e.g., tributaries, ditches, vegetated shallows, deepwater), locations of monitoring wells, staff gauges, and precipitation gauges.
- Vegetated shallows and/or deep-water habitats >0.1 acre in size will be mapped and reported.

## • Vegetation reporting

- o 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.
- o VIBI scores and data sheets for wetland rehabilitation areas.

#### • Wildlife reporting

List of wildlife observed and other salient biological occurrences.

#### • Invasive species reporting

- Relative cover of invasive species with descriptions of the monitoring protocols used.
- Any areas >0.1 acre that are dominated by invasives will be mapped with acreages.

## • Corrective actions proposed/implemented

 Description of remedial actions completed during the monitoring year. Any measures requiring additional soil manipulation or changes in hydrology, all of which will be undertaken only after written approval from NYSDEC and USACE Buffalo District.

## • Other

Photographs at permanent photo points.

# 10.1 Reporting schedule

After an initial Post-Construction As-Built Report, monitoring reports will be submitted by December 31<sup>st</sup> 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.

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

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

# 11. Maintenance Plan

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

## 11.1 Hydrology Maintenance

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

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

## 11.2 Vegetation Maintenance

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

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

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

#### 11.3 General Site Maintenance

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

# 12. Long Term Management Plan

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

## 12.1 Responsible Party

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

# 12.2 Long-Term Monitoring and Management Activities

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

# 12.3 Long-Term Funding Mechanism

TWT has a director-controlled Stewardship Management Investment Account specifically established for Micron mitigation projects. This account's investment income will come from investment instruments that are low-risk and broad-based, (e.g., TWT may use 30-year Treasury Bonds) to support permanent long-term management and maintenance as described in the final LTMP. The entirety of the account will be funded before implementation starts at \$8,000/credit (or per DEC restoration/creation acre) for the wetland compensation and \$60/ft for stream

compensation. The funding level designed in the Long-Term Management Budget in the LTMP is sufficient to sustain the long-term management of all of Micron's wetland and stream compensation. This fund will also have a clause in TWT's Bylaws that provides for its transfer along with the Micron lands to another NGO should that issue arise.

# 13. Adaptive Management Plan

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

- Fire: The effects of a significant fire event can lead to negative impacts on a young, reestablished 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.
- <u>Climate change</u>: 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.
- <u>Disease</u>: 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.
- <u>Flood</u>: Though wetlands aid in flood attenuation, a significant flooding event can have negative effects on a young wetland mitigation project. High energy floodwaters can cause soil erosion and sedimentation, leading to the damage of plant roots and flooding of vegetation. Ditch plugs or groundwater dams/low earthen berms that were installed during

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

## 14. Financial Assurances

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

## 15. References

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# Appendix A.

#### CONSERVATION EASEMENT

On lands of The Wetland Trust, Inc.

184 Godfrey Road, Town of Schroeppel,

Oswego County, NY

covering a 181.1-acre portion of

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

THIS DECLARATION OF CONSERVATION EASEMENT is made as of the \_\_\_\_\_day of \_\_\_\_\_202\_, by The Wetland Trust, Inc. (the "Grantor"), a New York not-for-profit with offices at 4729 State Route 414, Burdett, NY 14818, for the benefit of, but not the burden upon, The Wetland Conservancy, Inc. (the "Holder"), a New York not-for-profit entity having its office at P.O. Box 220, Burdett, New York 14818.

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

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

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

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

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

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

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

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

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

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

#### A. RESTRICTIONS

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

- 1. **General**. There shall be no future fillings, flooding, excavating, mining, or drilling; no removal of natural materials (soil, sand, gravel, rock, minerals, etc.); no dumping of materials; and no alteration of the topography which would materially affect the Protected Property in any manner, except as authorized by the Permit, , and any modifications thereof.
- 2. Waters and Wetlands. In addition to the general restrictions above, within the Protected Property there shall be no draining, dredging, damming, or impounding; no changing the grade or elevation, impairing the flow or circulation of waters, or reducing the reach of waters; and no other discharges or activity requiring a permit under applicable water pollution control laws and regulations, except as authorized by the Permit, and any modifications thereof.
- 3. **Trees/Vegetation**. On the Protected Property there shall be no clearing, burning, cutting, or destroying of trees or vegetation, except as may be necessary to protect public health or safety or as authorized by the Permit, and any modifications thereof; there shall be no planting or introduction of non-native or exotic species of trees or vegetation.
- 4. **Waste Disposal.** There shall be no disposal or storage of liquid or solid waste or other unsightly, hazardous, toxic or offensive material on the Protected Property.
- 5. **Uses**. No agricultural, animal husbandry, industrial, residential development, mining, logging, or commercial activity shall be undertaken or allowed on the Protected Property.
- 6. **Structures**. There shall be no construction, erection, or placement of buildings, billboards, or any other structures, to include fences, parking lots, trailers, mobile homes, camping accommodations, or recreational vehicles, or additions to existing structures, on the Protected Property, except as

authorized by the Permit, and any modifications thereof.

- 7. **New Roads**. There shall be no construction of new roads, trails, or walkways on the Protected Property without the prior written approval (including approval of the manner of construction) of the Holder and the USACE and NYSDEC
- 8. **Utilities**. There shall be no construction or placement of utilities or related facilities (including telecommunications towers and antennas) in, over, or under the Protected Property without the prior written approval (including approval of the manner of construction) of the Holder, the USACE and the NYSDEC.
- 9. Pest Control. There shall be no application of pesticides or biological controls, including controls of problem vegetation, on the Protected Property without prior written approval (including approval of the manner of application) of the Holder, the USACE, the NYSDEC or as authorized by the Permit, and any modifications thereof.
- 10. **Vehicular Use**. There shall be no use of any motorized vehicle or motorized equipment, and no use of any non-motorized bicycle anywhere on the Protected Property, except in the case of emergency, for the purpose of enforcement of applicable laws and regulations, for the purpose of monitoring compliance with the purposes of this Conservation Easement, or as authorized by the Permit, and any modifications thereof.
- 11. **Subdivision**. There shall be no division or subdivision of the Protected Property.
- 12. **Marking**. The Grantor shall mark the limits of the Protected Property in a manner approved by the Holder, USACE, and NYSDEC and shall maintain the marking in place so as to notify the public that the Protected Property is an area preserved for conservation purposes.

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

#### B. RESERVED RIGHTS OF GRANTOR

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

#### C. GENERAL PROVISIONS

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

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

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

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

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

Conservation Easement, by Grantor.

- 4. **Recording.** The Grantor shall have this Conservation Easement duly recorded and indexed as such in the Office of the County Clerk of Oswego County, New York, as described in ECL Section 49-0305.4. Upon recording, the Grantor shall forward a copy of this Conservation Easement as recorded to the Holder, USACE, and NYSDEC and, as described in ECL Section 49-0305.4, the New York Department of Environmental Conservation.
- 5. **Extinguishment.** In the event that changed conditions render impossible the continued use of the Protected Property for conservation purposes, this Conservation Easement may only be extinguished, in whole or in part, by judicial proceeding under authority of ECL Section 49-0307. In accordance with 33 C.F.R. 332.7(a)(3), USACE must be provided 60-day advance notification before any action is taken to amend or terminate this Conservation Easement.
- 6. **Eminent Domain.** If all or part of the Protected Property is taken in the exercise of eminent domain so as to substantially abrogate the Restrictions imposed by this Conservation Easement, the Grantor and the Holder shall promptly notify the USACE and NYSDEC and shall join in appropriate actions at the time of such taking to recover the full value of the taking, and all incidental and direct damages due to the taking. Each party shall be responsible for its own costs in any such legal proceeding.
- 7. **Proceeds of Taking.** This Conservation Easement constitutes a real property interest immediately vested in the Holder. In the event that all or a portion of this Protected Property is sold, exchanged, or involuntarily converted following an extinguishment or the exercise of eminent domain, the Holder shall be entitled to the fair market value of this Conservation Easement. The parties stipulate that the fair market value of this Conservation Easement shall be determined by identifying the fair market value of the Protected Property unencumbered by this Conservation Easement (minus any increase in value after the date of this grant attributable to

improvements) and subtracting the value of the Protected Property with the Conservation Easement at the time of this grant. The values at the time of this grant shall be the values used, or which would have been used, to calculate a deduction for federal income tax purposes, pursuant to Section 170(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.

executed this instrument.

Ву:				
Title:				
STATE OF NEW YORK	ζ) ss.:			
COUNTY OF Schuyler)				
On theday ofstate, personally appears	ed the Grantor		of The Wetland	Trust, Inc. personally
known to me or proved subscribed to the within		•		

by his signature on the instrument, the individual, or the person upon behalf of which the individual acted,

The Wetland Trust, Inc.	Micron Fish Creek Mitigation Plan
Notary Public	
	11

The Wetland Trust, Inc.		Micron Fish Creek Mitigation Plan
A	lea Hallam The Wedley I Co.	
	ce by Holder: The Wetland Cor	nservancy, Inc.
By:		
Title: Chair		
CTATE OF NEW VODE)		
STATE OF NEW YORK) ss: COUNTY OF Tompkins)		
COUNTY OF TOILIPKINS)		
subscribed to the within instrum	nent and acknowledged to me th	evidence to be the individual whose name is nat he executed the same in his capacity, and that son upon behalf of which the individual acted,
Notary Public	Date	

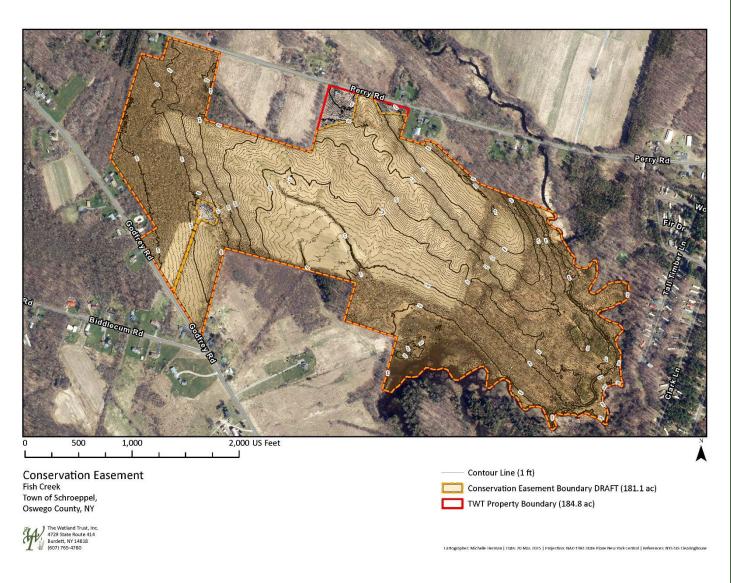
## Schedule A. Legal description of parcel to be covered by this Conservation Easement.

Fish Creek, 184 Godfrey Road

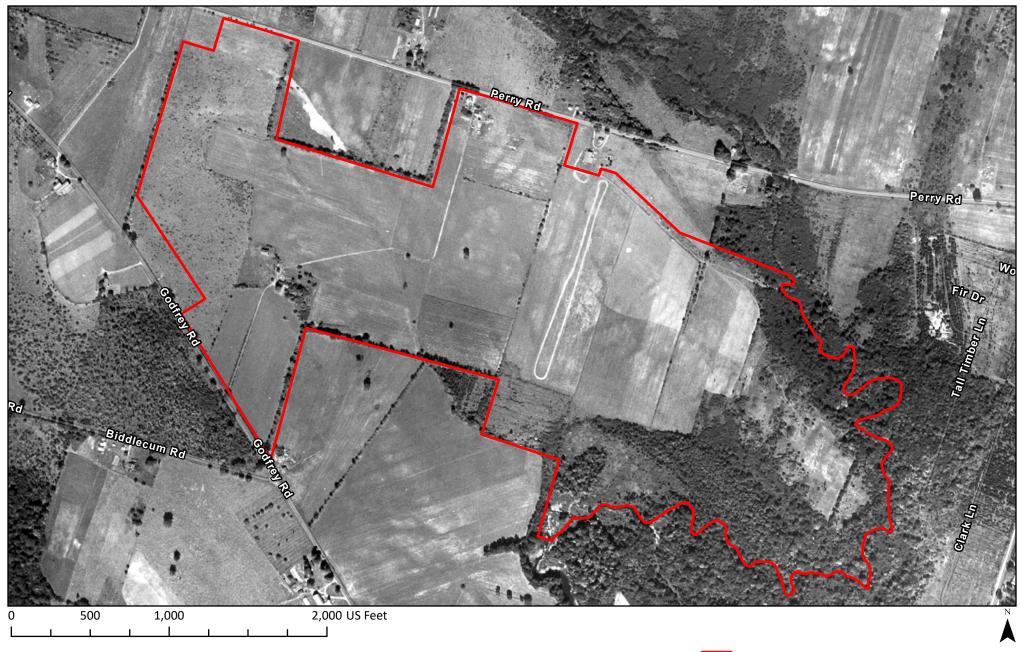
Town of Schroeppel, Oswego County, NY, covering a *181.1*-acre portion of Tax Parcels 256.00-4-14 and 256.00-4-14.01

## ALL THAT TRACT OR PARCEL OF LAND,

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



# Appendix B.



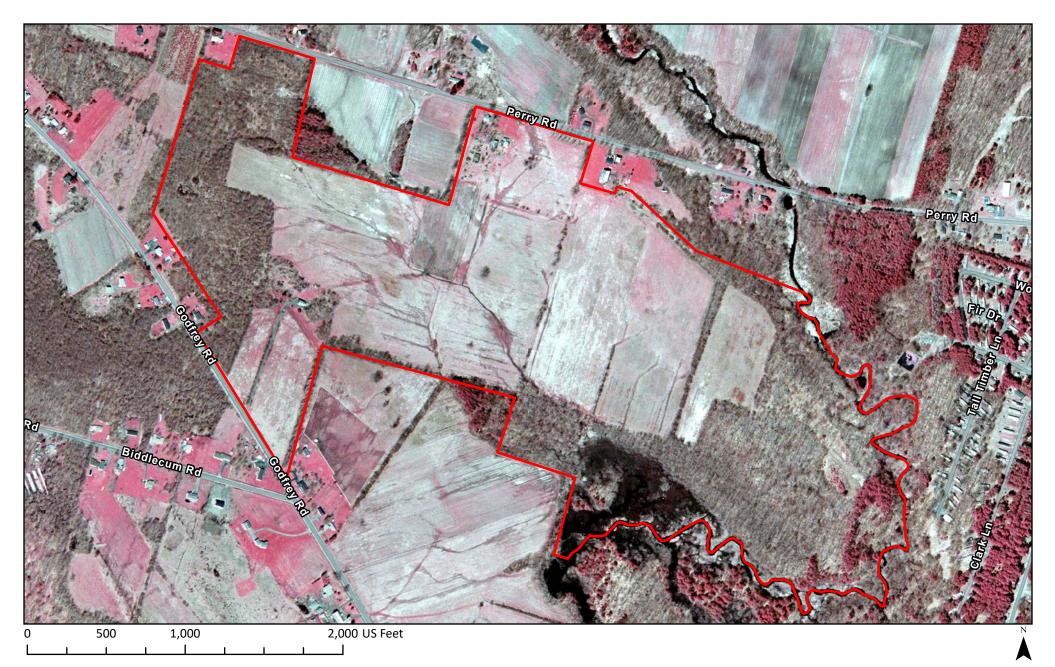
Imagery (1955) Fish Creek Town of Schroeppel, Oswego County, NY

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



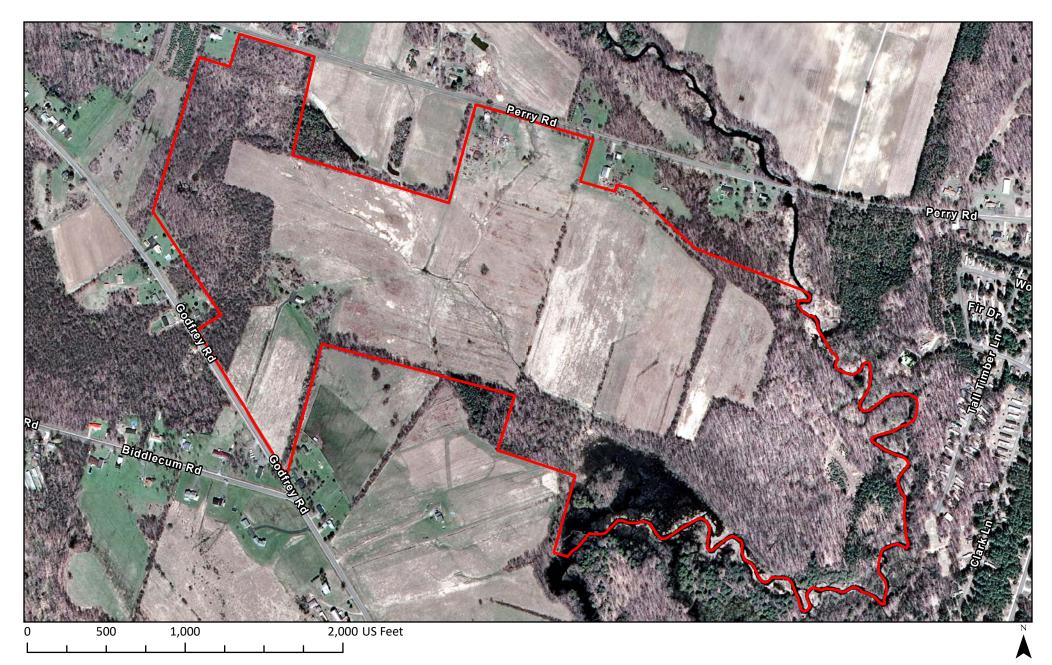
Imagery (1994) Fish Creek Town of Schroeppel, Oswego County, NY

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



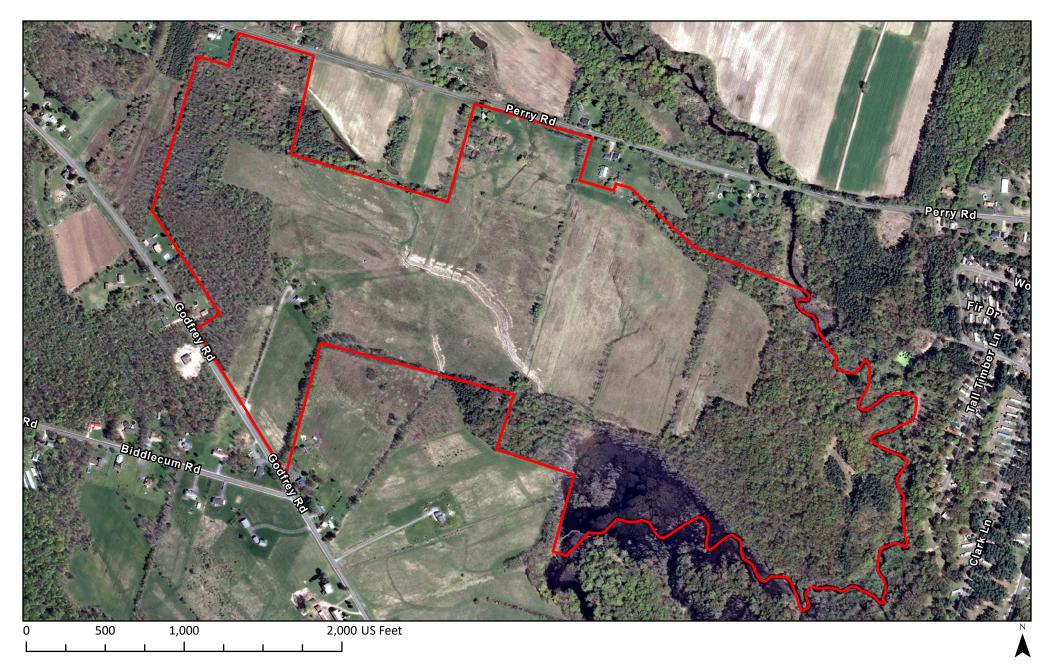
Imagery (2003) Fish Creek Town of Schroeppel, Oswego County, NY

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



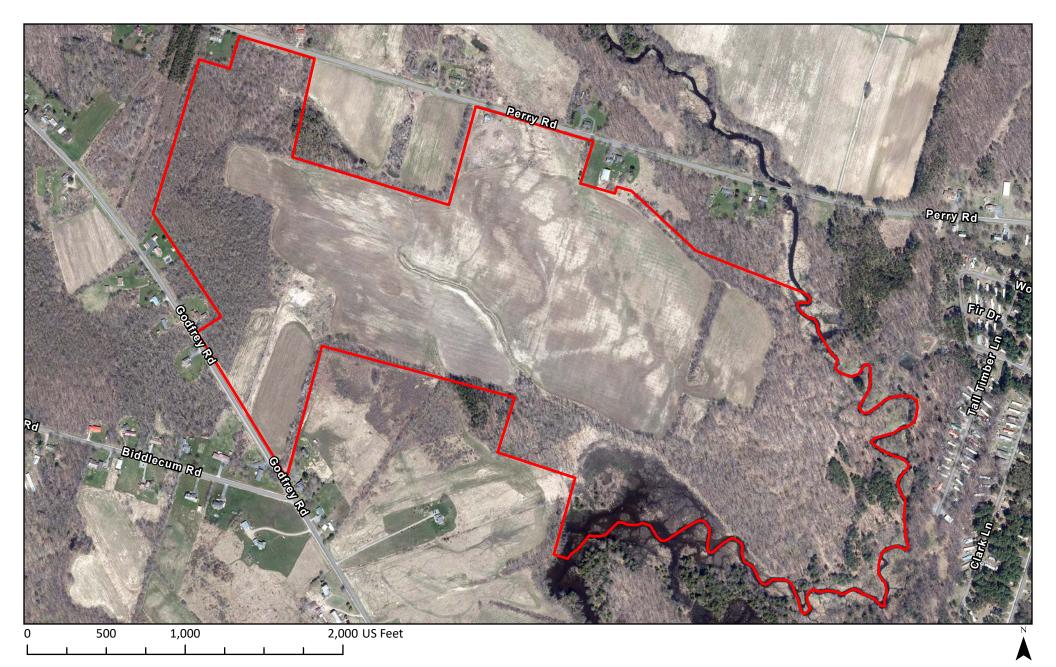
Imagery (2006) Fish Creek Town of Schroeppel, Oswego County, NY

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



Imagery (2011) Fish Creek Town of Schroeppel, Oswego County, NY

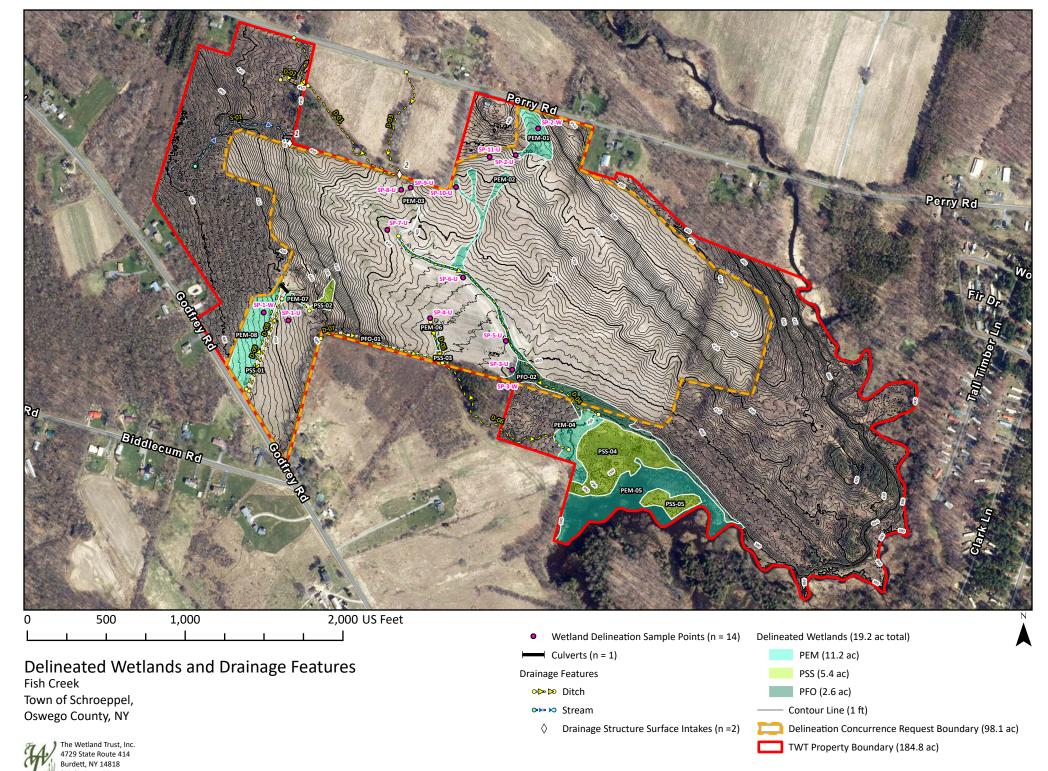
The Wetland Trust, Inc. 4729 State Route 414 Burdett, NY 14818 (607) 765-4780



Imagery (2020) Fish Creek Town of Schroeppel, Oswego County, NY

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

# Appendix C.



# 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 offsite.	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

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:	<del></del>		
Landform (hillside, terrace, etc.	):	Local relief (concave, convex, none):	Slope (%):		
Subregion (LRR or MLRA): LF	RR L Lat: 43.295163	Long: -76.278404			
Soil Map Unit Name: ScB: Scr			WI classification:		
	ons on the site typical for this time of y				
, ,	**				
	, or Hydrologysignificat		· — —		
<del></del> -	, or Hydrologynaturally		answers in Remarks.)		
SUMMARY OF FINDING	SS – Attach site map showing	sampling point locations, tran	sects, important features, etc.		
Hydrophytic Vegetation Prese	nt? Yes No X	Is the Sampled Area			
Hydric Soil Present?	Yes No X		Yes No_X_		
Wetland Hydrology Present?	Yes No X	If yes, optional Wetland Site ID:			
Remarks: (Explain alternative	procedures here or in a separate repo	ort.)			
		,			
HYDROLOGY					
Wetland Hydrology Indicato			dary Indicators (minimum of two required)		
	of one is required; check all that apply)		urface Soil Cracks (B6)		
Surface Water (A1)			rainage Patterns (B10)		
High Water Table (A2)	Aquatic Faun		Moss Trim Lines (B16)		
Saturation (A3)	Marl Deposits		ry-Season Water Table (C2)		
Water Marks (B1)			rayfish Burrows (C8)		
Sediment Deposits (B2)		· · · · · · · · · · · · · · · · · · ·	aturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3) Algal Mat or Crust (B4)		` '	tunted or Stressed Plants (D1) eomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Su		hallow Aquitard (D3)		
Inundation Visible on Aer		• '	icrotopographic Relief (D4)		
Sparsely Vegetated Cond		· —	AC-Neutral Test (D5)		
Field Observations:		<del></del> -	,		
Surface Water Present?	Yes No x Depth (inch	nes):			
Water Table Present?	Yes No x Depth (inch	nes):			
Saturation Present?	Yes No x Depth (inch Yes No x Depth (inch Yes No x Depth (inch	nes): Wetland Hydrology	Present? Yes No_X_		
(includes capillary fringe)					
Describe Recorded Data (stre	am gauge, monitoring well, aerial phot	os, previous inspections), if available:			
Remarks:					

	Absolute	Dominant	Indicator	1	
Tree Stratum (Plot size:)	% Cover	Species?	Status	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)
					(5)
				Percent of Dominant Species	/ A / D
				That Are OBL, FACW, or FAC: 0.0%	(A/B
				Prevalence Index worksheet:	
		=Total Cover		Total % Cover of: Multiply I	oy:
apling/Shrub Stratum (Plot size: 5 ft )				<u> </u>	4
				FACW species 0 x 2 =	)
				FAC species 5 x 3 = 1	5
				FACU species 97 x 4 = 3	38
				UPL species 0 x 5 =	)
				Column Totals: 106 (A) 4	)7 (E
				Prevalence Index = B/A = 3.8	4
				Hydrophytic Vegetation Indicators:	
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetatio	n
erb Stratum (Plot size: 5 ft )				2 - Dominance Test is >50%	
	4	No	OBL	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
				4 - Morphological Adaptations <sup>1</sup> (Provide	aunn artin
Cerastium fontanum	8	No No	FACU	data in Remarks or on a separate she	
Poa annua	<u>75</u>	Yes	FACU		
Veronica peregrina	5	No	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Ex	(plain)
Poa pratensis	12	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrolo	gy must b
Plantago major	1	No	FACU	present, unless disturbed or problematic.	
Plantago lanceolata	1	No	FACU	Definitions of Vegetation Strata:	
				Tree – Woody plants 3 in. (7.6 cm) or more i	n diamete
				at breast height (DBH), regardless of height.	
0				Sapling/shrub – Woody plants less than 3 in	DRH ar
1.				greater than or equal to 3.28 ft (1 m) tall.	i. DDITai
2.					
		=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants, r of size, and woody plants less than 3.28 ft tal	
/oody Vine Stratum (Plot size: )					
				<b>Woody vines</b> – All woody vines greater than height.	3.28 ft in
				noight.	
				Hydrophytic	
·				Vegetation	
·				Present? Yes No X	_
		=Total Cover			

**SOIL** Sampling Point: SP1-U

Profile De	scription: (Describe	to the de				r or conf	irm the absence of	indicators.)		
Depth	Matrix			(Feature		. 2	_	_		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rema	arks	
0-9	10YR 2/2	100					Loamy/Clayey			
9-10	10YR 2/2	87	10YR 5/6	5	С	M	Loamy/Clayey	Prominent redox	concentrations	
			7.5YR 4/6	8	C	<u>M</u>		Prominent redox	concentrations	
10-12	10YR 5/6	100					Loamy/Clayey			
12-16	7.5YR 4/6	100					Sandy			
			_		·					
			_						_	
					(					
1_ 0							21			
	Concentration, D=Dep il Indicators:	oletion, RM	=Reduced Matrix, CS	=Covere	ed or Coat	ed Sand		ation: PL=Pore Lining r Problematic Hydric		
•	sol (A1)		Polyvalue Below	Surface	(S8) (I <b>R</b> E	2 P		ck (A10) (LRR K, L, M		
		•	MLRA 149B)	Suriace	(30) ( <b>LKI</b>	ν,		airie Redox (A16) ( <b>LR</b>	·	
Histic Epipedon (A2) Black Histic (A3)			Thin Dark Surfac	o (SO) (I	DD D M	DA 140		cky Peat or Peat (S3)	·	
							·			
	gen Sulfide (A4)	•	High Chroma Sa					Below Surface (S8) (		
	ied Layers (A5)	(* 44)	Loamy Mucky Mi			, L)		Surface (S9) (LRR K	·	
	ted Below Dark Surfac	ce (A11)	Loamy Gleyed M		2)			ganese Masses (F12)		
	Dark Surface (A12)		Depleted Matrix (				Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy	Mucky Mineral (S1)	Į.	Redox Dark Surf				Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )			
Sandy	Gleyed Matrix (S4)		Depleted Dark S	urface (F	<del>-</del> 7)		Red Parent Material (F21)			
Sandy	Redox (S5)		Redox Depression	ns (F8)			Very Shallow Dark Surface (TF12)			
Stripp	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	<b>K</b> , <b>L</b> )			Other (Explain in Remarks)			
Dark S	Surface (S7)									
<sup>3</sup> Indicators	of hydrophytic vegeta	ition and w	etland hvdrologv mus	be pres	ent. unles	s disturb	ed or problematic.			
	e Layer (if observed)									
Type:										
Depth (ir	nches):						Hydric Soil Pres	sent? Yes	No <u>X</u>	
Remarks:										
	orm is revised from N							Field Indicators of H	ydric Soils version	
7.0 March	2013 Errata. (http://w	ww.nrcs.us	da.gov/Internet/FSE_	росом	EN IS/nrc	s142p2_(	051293.docx)			

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, Town	nship, Range:	<del></del>		
Landform (hillside, terrace, etc.):	Local relief (con	cave, convex, none):	Slope (%):		
Subregion (LRR or MLRA): LRR L		Long: -76.278988	/ Datum:		
Soil Map Unit Name:	<u> </u>	NWI classi			
<u> </u>	nicel for this time of year?				
Are climatic / hydrologic conditions on the site ty	•	es X No (If no, explair			
Are Vegetation, Soil, or Hydrol		Are "Normal Circumstances" p	· · · · · · · · · · · · · · · · · · ·		
	ogynaturally problematic?	(If needed, explain any answer	•		
SUMMARY OF FINDINGS – Attach si	te map showing sampling p	oint locations, transects,	important features, etc.		
Hydrophytic Vegetation Present? Yes	s X No Is the Sa	ımpled Area			
Hydric Soil Present? Yes		Wetland? Yes X	( No		
I		tional Wetland Site ID:	_ <u> </u>		
Remarks: (Explain alternative procedures here	or in a separate report.)				
LIVEROL COV					
HYDROLOGY					
Wetland Hydrology Indicators:		<del></del>	icators (minimum of two required)		
Primary Indicators (minimum of one is required			oil Cracks (B6)		
X Surface Water (A1)	Water-Stained Leaves (B9)		Patterns (B10)		
X High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16) Dry-Season Water Table (C2)		
X Saturation (A3)	Marl Deposits (B15)		· ·		
Water Marks (B1) Sediment Denosits (B2)	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Liv		urrows (C8) Visible on Aerial Imagery (C9)		
Sediment Deposits (B2) Drift Deposits (B3)	Presence of Reduced Iron (C	- · · · · · · · · · · · · · · · · · · ·	Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tille	· —	nic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)		quitard (D3)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		graphic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutr	. ,		
Field Observations:					
Surface Water Present? Yes X No	Depth (inches):				
Water Table Present? Yes X No	Depth (inches):				
Saturation Present? Yes X No	Depth (inches):	Wetland Hydrology Presen	t? Yes X No		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, previous insp	pections), if available:			
Remarks:					

**VEGETATION** – Use scientific names of plants. Sampling Point: SP1-W Absolute Dominant Indicator Tree Stratum (Plot size: \_\_\_\_) % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** That Are OBL, FACW, or FAC: 2. 3 (A) 3. **Total Number of Dominant** Species Across All Strata: 4. (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 100.0% 7. Prevalence Index worksheet: =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 15 ft ) 4<u>2</u> x 1 = OBL species Fraxinus pennsylvanica **FACW** FACW species 67 x 2 = \_\_\_\_1 24 FAC 2. Cornus racemosa No FAC species x 3 = 2 3. FACU species x 4 = 0 x 5 = 4. UPL species 0 5. Column Totals: 135 (A) 256 (B) 6. Prevalence Index = B/A = 1.90 **Hydrophytic Vegetation Indicators:** 6 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: \_\_\_\_5 ft ) X 2 - Dominance Test is >50% Juncus effusus 40 Yes OBL 3 - Prevalence Index is ≤3.01 2. Onoclea sensibilis 4 No **FACW** 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 2 OBL 3. Lythrum salicaria No Rumex crispus 2 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) 4. No FAC 5. Lysimachia nummularia 8 No **FACW** <sup>1</sup>Indicators of hydric soil and wetland hydrology must be Phalaris arundinacea 50 **FACW** present, unless disturbed or problematic. 6 Yes 1 No **FACU Definitions of Vegetation Strata:** 7. Glechoma hederacea 8. Barbarea vulgaris 1 No FAC Tree - Woody plants 3 in. (7.6 cm) or more in diameter 9. Galium mollugo 1 **FACU** at breast height (DBH), regardless of height. 10. Ranunculus acris 20 No FAC Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. 11. Herb - All herbaceous (non-woody) plants, regardless 129 =Total Cover of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: ) Woody vines - All woody vines greater than 3.28 ft in height. Hydrophytic 3. Vegetation Present? Yes X No =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: SP1-W

	scription: (Describe	to the dep				r or conf	irm the absence o	f indicators	.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-14	10YR 2/2	98	10YR 5/8	2	С	M	Loamy/Clayey	Promin	ent redox concentrations	-
-		90						FIOIIIII	ent redox concentrations	
14-18	10YR 5/4	80	10YR 3/1	20	С	<u>M</u>	Sandy	Distin	ct redox concentrations	_
										_
										_
										_
										_
										_
										_
										_
										_
										_
	Concentration, D=Dep	letion, RM	=Reduced Matrix, CS	=Covere	ed or Coat	ed Sand			Pore Lining, M=Matrix.  tic Hydric Soils <sup>3</sup> :	_
-	sol (A1)		Polyvalue Below	Surface	(S8) (I <b>D</b> I	D D			RR K, L, MLRA 149B)	
	Epipedon (A2)	-	MLRA 149B)	Juliace	(50) (EIXI	<b>、</b> 1 <b>、</b> ,			(A16) (LRR K, L, R)	
	Histic (A3)		Thin Dark Surface	se (S9) (I	IRRR M	RΔ 149			Peat (S3) ( <b>LRR K, L, R</b> )	
	gen Sulfide (A4)	-	High Chroma Sa				· ·	-	face (S8) ( <b>LRR K, L</b> )	
	ied Layers (A5)	-	Loamy Mucky M						(9) (LRR K, L)	
	ted Below Dark Surfac	-α (Λ11) <b>-</b>		-		, ∟)		-		
		e (ATT)	Loamy Gleyed M		<del>(</del> )				sses (F12) (LRR K, L, R)	
	Dark Surface (A12)  / Mucky Mineral (S1)	-	Depleted Matrix  Redox Dark Surf						Soils (F19) (MLRA 149B) MLRA 144A, 145, 149B)	
	/ Gleyed Matrix (S4)	-	Depleted Dark S	` '				ent Material (	•	
	/ Redox (S5)	-	Redox Depression	-	-1)				urface (TF12)	
	ed Matrix (S6)	-	Marl (F10) (LRR					xplain in Rer		
	Surface (S7)	-		, _/				Apiani iii ii toi	namo	
	of hydrophytic vegeta e Layer (if observed)		etland hydrology mus	t be pres	sent, unles	s disturb	ed or problematic.			
Type:										
Depth (i	nches):						Hydric Soil Pre	esent?	Yes No X	
Remarks:							, , , , ,			
	orm is revised from No	orthcentral	and Northeast Regio	nal Supp	olement Ve	ersion 2.0	to reflect the NRC	S Field Indic	ators of Hydric Soils versi	on
	2013 Errata. (http://wv								,	

Project/Site: Godfrey Rd		Ci	ty/County: Oswego	)	Sampling Date: 5/17/24		
Applicant/Owner: TWT				State:	NY Sampling Point: SP2		
Investigator(s): MH, HF, KG		Se	ection, Township, R	ange:			
Landform (hillside, terrace, etc.	.):	Loca	l relief (concave, co	onvex, none):	Slope (%):		
Subregion (LRR or MLRA): LF	·		L	·	Datum:		
Soil Map Unit Name:				NWI classit			
		this time of year?	Vaa V		·		
Are climatic / hydrologic conditi		-		No(If no, explain			
Are Vegetation, Soil				Normal Circumstances" pr			
Are Vegetation, Soil	, or Hydrology	naturally probl	ematic? (If nee	eded, explain any answers	s in Remarks.)		
SUMMARY OF FINDING	S – Attach site map	p showing san	npling point lo	cations, transects,	important features, etc.		
Hydrophytic Vegetation Prese	ent? Yes	No X	Is the Sampled	Area			
Hydric Soil Present?	Yes	No X	within a Wetland		No X		
Wetland Hydrology Present?	Yes	No X	If yes, optional W				
Remarks: (Explain alternative	procedures here or in a s	separate report.)					
HYDROLOGY							
Wetland Hydrology Indicato	rs:			Secondary India	cators (minimum of two required		
Primary Indicators (minimum		all that apply)		· · · · · · · · · · · · · · · · · · ·	oil Cracks (B6)		
Surface Water (A1)		Water-Stained Lea	aves (B9)		Patterns (B10)		
High Water Table (A2)		Aquatic Fauna (B1			Moss Trim Lines (B16)		
Saturation (A3)	_	Marl Deposits (B15	5)	Dry-Season	n Water Table (C2)		
Water Marks (B1)		Hydrogen Sulfide (	Odor (C1)	Crayfish Bu	urrows (C8)		
Sediment Deposits (B2)		Oxidized Rhizosph	neres on Living Roo	ots (C3) Saturation	Visible on Aerial Imagery (C9)		
Drift Deposits (B3)		Presence of Reduc	` ,		Stressed Plants (D1)		
Algal Mat or Crust (B4)			ction in Tilled Soils (	· · —	ic Position (D2)		
Iron Deposits (B5)		Thin Muck Surface			quitard (D3)		
Inundation Visible on Aeri		Other (Explain in F	Remarks)		graphic Relief (D4)		
Sparsely Vegetated Cond	ave Surface (B8)			FAC-Neutra	ral Test (D5)		
Field Observations:							
Surface Water Present?	Yes No X	Depth (inches):					
Water Table Present? Saturation Present?	Yes No X Yes No X			Hand Undralagy Process	10 You No Y		
(includes capillary fringe)	Yes NoX	Depth (inches):		tland Hydrology Present	t? Yes No_X		
Describe Recorded Data (stre		ll aerial photos pr	revious inspections	) if available:			
Describe Notified Sam (S. S.	ani gaage, memering			, II availabio.			
Remarks:							

	Absolute	Dominant	Indicator	1		
<u>Tree Stratum</u> (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2.				That Are OBL, FACW, or FAC:	0	(A)
3				Total Number of Dominant		
4				Species Across All Strata:	1	(B)
5				Percent of Dominant Species		
6.				That Are OBL, FACW, or FAC:	0.0%	(A/B)
7.				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: M	ultiply by:	
Sapling/Shrub Stratum (Plot size: )				OBL species 0 x 1 =	0	
1.				FACW species 0 x 2 =	0	
2.				FAC species 9 x 3 =	27	
3.				FACU species 101 x 4 =	404	
1				UPL species 1 x 5 =	5	_
<u> </u>				Column Totals: 111 (A)	436	<u> </u> (В
				Prevalence Index = B/A =		—("
7.				Hydrophytic Vegetation Indicators:		
		=Total Cover				
Harb Stratum (Plataina) Eft		- Total Cover		1 - Rapid Test for Hydrophytic Ve	getation	
Herb Stratum (Plot size: 5 ft )	0	NI.	FAOU	2 - Dominance Test is >50%		
1. Trifolium repens	8	No No	FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2. Trifolium pratense	4	No	FACU	4 - Morphological Adaptations <sup>1</sup> (P data in Remarks or on a separa		portin
3. Sonchus asper	3	No	FACU	·		
4. Cerastium fontanum	60	Yes	FACU	Problematic Hydrophytic Vegetati	onˈ (Explai	n)
5. Veronica peregrina	5	No	FAC	<sup>1</sup> Indicators of hydric soil and wetland h		nust b
6. Plantago lanceolata	10	No	FACU	present, unless disturbed or problema	tic.	
7. Plantago major	10	No	FACU	Definitions of Vegetation Strata:		
8. Taraxacum officinale	2	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or		amete
9. Erigeron annuus	4	No	FACU	at breast height (DBH), regardless of I	height.	
10. Barbarea vulgaris	4	No	FAC	Sapling/shrub – Woody plants less th	nan 3 in. Di	BH an
11. Daucus carota	1	No	UPL	greater than or equal to 3.28 ft (1 m) to	all.	
12				<b>Herb</b> – All herbaceous (non-woody) pl	lants, regar	rdless
	111	=Total Cover		of size, and woody plants less than 3.2	28 ft tall.	
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines great	er than 3.2	8 ft in
1				height.		
2						
3	-			Hydrophytic Vegetation		
4.					lo <u>X</u>	
		=Total Cover				

**SOIL** Sampling Point: SP2-U

Profile De	escription: (Describe	to the dep	th needed to docur	nent the	indicato	r or conf	irm the absence o	of indicators.	)	
Depth	Matrix			x Feature						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-6	10YR 3/4	100					Loamy/Clayey			
6-16	10YR 4/3	90	10YR 4/6	10	С	М	Loamy/Clayey	Distino	ct redox conce	ntrations
									<del></del>	
İ										
1										
	Concentration, D=Dep	letion, RM	Reduced Matrix, CS	=Covere	ed or Coat	ed Sand			Pore Lining, M=	
-	oil Indicators:		Polyvolue Relow	Surface	(CQ) /I <b>D</b> I	0.0			tic Hydric Soil	
	sol (A1) : Epipedon (A2)	_	Polyvalue Below  MLRA 149B)	Sunace	(S8) (LKr	ζК,			R K, L, MLRA (A16) (LRR K,	
	: Еріреdori (A2) : Histic (A3)		Thin Dark Surfac	ار (S9) (ا	IRRR M	I RΔ 149		-	Peat (S3) ( <b>LRR</b>	•
	ogen Sulfide (A4)	_	High Chroma Sa					-	ace (S8) ( <b>LRR</b>	· ·
	fied Layers (A5)	_	Loamy Mucky Mi					rk Surface (S9		. K, L)
	eted Below Dark Surfac	.e (A11)	Loamy Gleyed M	-		, <b>L</b> )		•	ses (F12) ( <b>LRI</b>	R K. L. R)
	Dark Surface (A12)	_	Depleted Matrix		,			Piedmont Floodplain Soils (F19) (MLRA 149B)		
	y Mucky Mineral (S1)	_	Redox Dark Surf		)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
	y Gleyed Matrix (S4)	-	— Depleted Dark S	. ,	,		Red Parent Material (F21)			
	y Redox (S5)	_	Redox Depression		-		Very Shallow Dark Surface (TF12)			
Stripp	ped Matrix (S6)	_	Marl (F10) (LRR	K, L)			Other (Explain in Remarks)			
Dark \$	Surface (S7)						<u>—</u>			
a										
	s of hydrophytic vegetat		tland hydrology mus	t be pres	ent, unles	s disturb	ed or problematic.			
Type:	ve Layer (if observed):	ı								
- · · -			<del></del>				Lindria Sail Dr		Vaa	Na V
Depth (ii	-		<del></del>				Hydric Soil Pre	esent :	Yes	No X
Remarks: This data f	form is revised from No	orthoentral	and Northeast Regio	nal Sunr	olement V	oreion 2 (	) to reflect the NRC	°C Field Indics	atore of Hydric	Soile version
	2013 Errata. (http://ww							O FIGIU IIIUIGG	altors or riyuno	Ouis version
			Ū				•			

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	Secti	on, Township, Range:	<del></del>			
Landform (hillside, terrace, etc.):	Local re	elief (concave, convex, none):	Slope (%):			
Subregion (LRR or MLRA): LRR L	•	Long: -76.272439				
Soil Map Unit Name:			VI classification:			
	- timing for this time of year?					
Are climatic / hydrologic conditions on the sit	•	Yes X No (If no				
Are Vegetation , Soil , or Hy						
Are Vegetation, Soil, or Hy	drologynaturally problen	natic? (If needed, explain any	answers in Remarks.)			
SUMMARY OF FINDINGS – Attach	n site map showing samp	oling point locations, trans	sects, important features, etc.			
Hydrophytic Vegetation Present?	Yes X No I	s the Sampled Area				
· · · · ·			es No X			
T		f yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures h		<u></u>				
(= .,-	, ,					
HYDROLOGY						
Wetland Hydrology Indicators:		Second	lary Indicators (minimum of two required)			
Primary Indicators (minimum of one is requi	ired: check all that apply)		rface Soil Cracks (B6)			
X Surface Water (A1)	Water-Stained Leave		ainage Patterns (B10)			
X High Water Table (A2)	Aquatic Fauna (B13)	· · ·	oss Trim Lines (B16)			
Saturation (A3)	Marl Deposits (B15)		Dry-Season Water Table (C2)			
Water Marks (B1)	Hydrogen Sulfide Od		ayfish Burrows (C8)			
Sediment Deposits (B2)			turation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Presence of Reduced	- · · · · · · · · · · · · · · · · ·	unted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction	` '	eomorphic Position (D2)			
Iron Deposits (B5)	Thin Muck Surface (0	· · · · · · · · · · · · · · · · · · ·	allow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B		•	crotopographic Relief (D4)			
Sparsely Vegetated Concave Surface (	· - · ·	· —	C-Neutral Test (D5)			
Field Observations:		<u></u>	5 Hear at 1991 (29)			
Surface Water Present? Yes X	No Depth (inches):					
Water Table Present? Yes X	No Depth (inches):	3				
Saturation Present? Yes X	No Depth (inches):	Wetland Hydrology	Present? Yes X No			
(includes capillary fringe)	2 span (menses).		<u></u>			
Describe Recorded Data (stream gauge, m	onitoring well, aerial photos, prev	vious inspections), if available:				
3 3 ,	3 , 1 ,1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Remarks:						

**VEGETATION** – Use scientific names of plants. Sampling Point: SP2-W Absolute Dominant Indicator Tree Stratum (Plot size: \_\_\_\_) % Cover Species? Status **Dominance Test worksheet: Number of Dominant Species** That Are OBL, FACW, or FAC: 2. (A) 3. **Total Number of Dominant** Species Across All Strata: 4. (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% 7. Prevalence Index worksheet: =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: \_\_\_\_) 1<u>4</u> x 1 = OBL species FACW species  $107 \times 2 =$ 2. 3 x 3 = FAC species 0 3. FACU species x 4 = 0 x 5 = 4. UPL species 0 5. Column Totals: 124 (A) 237 (B) 6. Prevalence Index = B/A = 1.91 **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 5 ft ) X 2 - Dominance Test is >50% Phalaris arundinacea Yes **FACW** 3 - Prevalence Index is ≤3.01 2. Equisetum arvense 3 No FAC 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) OBL 3. Lythrum salicaria 6 No 7 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) 4. Juncus effusus No OBL 5. Lysimachia nummularia 2 No **FACW** <sup>1</sup>Indicators of hydric soil and wetland hydrology must be Solidago gigantea 3 **FACW** present, unless disturbed or problematic. 6 No Onoclea sensibilis 10 No **FACW Definitions of Vegetation Strata:** 7. 8. Mentha aquatica 1 No OBL Tree - Woody plants 3 in. (7.6 cm) or more in diameter 2 9. Galium obtusum **FACW** at breast height (DBH), regardless of height. 10. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. 11. Herb - All herbaceous (non-woody) plants, regardless 124 =Total Cover of size, and woody plants less than 3.28 ft tall. Woody Vine Stratum (Plot size: ) Woody vines - All woody vines greater than 3.28 ft in height. Hydrophytic 3. Vegetation Present? Yes X No =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL** Sampling Point: SP2-W

Profile De	escription: (Describe	to the dep	th needed to docur	nent the	indicato	r or confi	rm the absence o	f indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 3/2	100						
8-23	10YR 4/3	92	10YR 5/8	3	С	М		Prominent redox concentrations
			10YR 3/1	5	С	М		Distinct redox concentrations
<sup>1</sup> Type: C=	Concentration, D=Dep	letion, RM=	Reduced Matrix, CS	=Covere	ed or Coat	ed Sand 0	Grains. <sup>2</sup> Loo	cation: PL=Pore Lining, M=Matrix.
	il Indicators:	•	,					r Problematic Hydric Soils³:
Histos	sol (A1)	_	Polyvalue Below	Surface	(S8) ( <b>LRF</b>	RR,	2 cm Mu	ck (A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic	Epipedon (A2)		MLRA 149B)				Coast Pr	airie Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfac	e (S9) ( <b>I</b>	LRR R, MI	LRA 149E	5 cm Mu	cky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
— Hydro	gen Sulfide (A4)	·	High Chroma Sa	nds (S11	1) ( <b>LRR K</b>	, L)	Polyvalue	e Below Surface (S8) ( <b>LRR K, L</b> )
Stratif	ied Layers (A5)	_	Loamy Mucky Mi	ineral (F	1) (LRR K	, L)	Thin Dar	k Surface (S9) ( <b>LRR K, L</b> )
Deple	ted Below Dark Surfac	e (A11)	Loamy Gleyed M	latrix (F2	!)		Iron-Man	iganese Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)	` <i>-</i>	Depleted Matrix		•			t Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	Mucky Mineral (S1)	_	Redox Dark Surf		)			oodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4)	_	— Depleted Dark S	urface (F	<del>-</del> 7)			ent Material (F21)
	Redox (S5)	_	Redox Depression		,			allow Dark Surface (TF12)
	ed Matrix (S6)	_	 Marl (F10) ( <b>LRR</b>					xplain in Remarks)
	Surface (S7)	_		,				,
	of hydrophytic vegetat		tland hydrology mus	t be pres	ent, unles	s disturbe	ed or problematic.	
	e Layer (if observed):							
Type:							Uhadaia Cail Daa	No. V
Depth (i	ncnes):						Hydric Soil Pre	esent? Yes No X
Remarks:	form is revised from No	rth control (	and Northagat Dagia	nal Cunn	Jamant \/s	raian 2 0	to reflect the NDC	C Field Indicators of Lludvia Caila version
	2013 Errata. (http://ww							S Field Indicators of Hydric Soils version
7.0 Maron	2010 Errata: (mp.//ww		a.gov/iii.orriogr oz_		21110/1110	011 <u>2</u> p2_0	70 1200.d00x)	

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 Man Unit Name	NWI classification: none
Are climatic / hydrologic conditions on the site typical for t	
	significantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation n , Soil n , or Hydrology n	·
<del></del>	showing sampling point locations, transects, important features,
Hydrophytic Vegetation Present? Yes N	lo x Is the Sampled Area
<u> </u>	lo x within a Wetland? Yes No x
	lo x If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check a	Il that apply) Surface Soil Cracks (B6)
<del></del>	ter-Stained Leaves (B9) Drainage Patterns (B10)
<del>-</del>	atic Fauna (B13) Moss Trim Lines (B16)
<del>-</del>	Dry-Season Water Table (C2)
<del></del>	lrogen Sulfide Odor (C1) Crayfish Burrows (C8)
<del></del>	dized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
l—— · · · · /	sence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Stunted or Stressed Plants (D2)
1 <del></del>	cent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
<del></del>	n Muck Surface (C7) Shallow Aquitard (D3) er (Explain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	<u> </u>
Surface Water Present? Yes No x Dep	pth (inches):
	pth (inches):
Saturation Present? Yes No x Dep	pth (inches): Wetland Hydrology Present? Yes No x
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well	i, aerial photos, previous inspections), if available:
Remarks:	

	Absolute	Dominan	Indicator	Sampling Point: SP3U
<u>Tree Stratum</u> (Plot size: )	% Cover	bominan t	Status	Dominance Test worksheet:
		<u> </u>		Number of Dominant Species
l				That Are OBL, FACW, or
2.				FAC: 0 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 1 (B)
				Percent of Dominant Species
· -				That Are OBL, FACW, or FAC: 0.0% (A/E
5.	<u> </u>			
7				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratun (Plot size:	_)			OBL species0 x 1 =0
L				FACW specie: 0 x 2 = 0
)				FAC species 0 x 3 = 0
				FACU species 0 x 4 = 0
-				· — —
i				UPL species 100 x 5 = 500
5				Column Totals 100 (A) 500 (E
S				Prevalence Index = B/A = 5.00
7				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:				2 - Dominance Test is >50%
	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
1. Glycine max				
2				4 - Morphological Adaptations <sup>1</sup> (Provide supp data in Remarks or on a separate sheet)
3				data in Nemarks of on a separate sheet)
4				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
6.				must be present, unless disturbed or problematic.
_				Definitions of Vegetation Strata:
				Tree – Woody plants 3 in. (7.6 cm) or more in
3.				diameter at breast height (DBH), regardless of
9				height.
10				Sapling/shrub – Woody plants less than 3 in. DE
11				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants,
	100	=Total Cover		regardless of size, and woody plants less than 3. ft tall.
		rotal covol		Te can:
Moody Vine Stratum (Dlot size:	)			Woody vines – All woody vines greater than 3.28
,				
,	<del>-</del> 			ft in height.
1.				
1.				Hydrophytic
2.		<u> </u>		Hydrophytic Vegetation
2.		=Total Cover		Hydrophytic Vegetation

**SOIL** Sampling Point: SP3U

	•	e to the	•			tor or c	onfirm the absence of i	ndicators.)
Depth	Matrix			x Featur		. 2	<b>-</b> .	
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	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			DAA-Daduaad Matrix				21 tion	DI -Dana Limina M-Matrix
	=Concentration, D=De oil Indicators:	epietion, F	RIVI=Reduced IVIALITIX,	CS=C0V	ered or C	oated Sa		n: PL=Pore Lining, M=Matrix.  bblematic Hydric Soils <sup>3</sup> :
-	sol (A1)		Polyvalue Belov	v Surfac	e (S8) ( <b>LF</b>	RR R,		10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)		. , ,			Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfa	ice (S9)	(LRR R, I	ILRA 14		eat or Peat (S3) (LRR K, L, R)
Hydro	ogen Sulfide (A4)		High Chroma S	ands (S1	11) ( <b>LRR</b>	K, L)	Polyvalue Belo	ow Surface (S8) ( <b>LRR K, L</b> )
Strati	fied Layers (A5)		Loamy Mucky N	/lineral (F	=1) ( <b>LRR</b>	K, L)	Thin Dark Sur	face (S9) (LRR K, L)
	eted Below Dark Surfa	ice (A11)				,		se Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)	, ,	x Depleted Matrix		,			odplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mucky Mineral (S1)		Redox Dark Su		6)			(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)		Depleted Dark	Surface	(F7)		Red Parent M	
	y Redox (S5)		Redox Depress					Dark Surface (TF12)
	ped Matrix (S6)		? Marl (F10) ( <b>LRF</b>		,		Other (Explain	
	Surface (S7)			, ,				,
	. ,							
<sup>3</sup> Indicators	s of hydrophytic vegeta	ation and	wetland hydrology m	ust be pr	resent, un	ess distu	urbed or problematic.	
	e Layer (if observed	l):						
Type:								
Depth (	inches):						Hydric Soil Present	t? Yes X No
Remarks:								
								Field Indicators of Hydric Soils
version 7.	U Maich 2013 Eilala.	(Hup.//wv	vw.nrcs.usua.gov/inte	illei/F3E	DOCO	/IEN I S/I	nrcs142p2_051293.docx)	)

US Army Corps of Engineers

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, noneSlope (%):
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	
	antly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation n , Soil n , or Hydrology n naturall	<del></del>
	ving 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:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that a	
<del></del>	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fau	<u>—</u>
Saturation (A3)Marl Depos	<u> </u>
<del></del> -	Sulfide Odor (C1) Crayfish Burrows (C8)
<del></del>	nizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)  f Reduced Iron (C4) Stunted or Stressed Plants (D1)
l <del></del>	Reduction in Tilled Soils (C6)  Geomorphic Position (D2)
1 <del></del>	Surface (C7) Shallow Aquitard (D3)
<del></del>	ain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (incl	nes):
Water Table Present? Yes No x Depth (incl	
Saturation Present? Yes No x Depth (incl	hes):   Wetland Hydrology Present? Yesx No
(includes capillary fringe)	photos provious inapactions) if available:
Describe Recorded Data (stream gauge, monitoring well, aerial	pnotos, previous inspections), if available:
Remarks:	
No signs of wetland hydrology, except oxidized root channels	

**SOIL** Sampling Point: SP3W

Profile D	escription: (Describ	e to the d	epth needed to doc	ument t	he indica	tor or co	onfirm the absence of inc	licators.)
Depth	Matrix		Redox	k Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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				
			7.5yi 5/0					
								_
								_
1 <sub>Type: C</sub>	=Concentration, D=De	nlotion D	M-Raduaad Matrix (		arad or C	antod So	and Crains <sup>2</sup> L coation:	PL=Pore Lining, M=Matrix.
	oil Indicators:	pietion, K	ivi-Reduced Matrix, C	J3-C0V	ered or C	oaleu Sa		lematic Hydric Soils <sup>3</sup> :
-	sol (A1)		Polyvalue Below	Surface	- (S8) (I	OR R		) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)	Ourrace	, (OO) ( <b>L</b> I	XIX IX,		edox (A16) ( <b>LRR K, L, R</b> )
			,	oo (CO) (	1 DD D 1	MI DA 44		
	( Histic (A3)		Thin Dark Surface				· —	at or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)		High Chroma Sa					Surface (S8) (LRR K, L)
	ified Layers (A5)		Loamy Mucky M			<b>K</b> , <b>L</b> )		ce (S9) ( <b>LRR K, L</b> )
Deple	eted Below Dark Surfa	ice (A11)	Loamy Gleyed N	/latrix (F	2)		Iron-Manganese	Masses (F12) (LRR K, L, R)
Thick	Dark Surface (A12)		x Depleted Matrix	(F3)			Piedmont Flood	plain Soils (F19) ( <b>MLRA 149B</b> )
Sand	ly Mucky Mineral (S1)		Redox Dark Sur	face (F6	i)		Mesic Spodic (T	A6) (MLRA 144A, 145, 149B)
Sand	ly Gleyed Matrix (S4)		Depleted Dark S	Surface (	F7)		Red Parent Mat	erial (F21)
	ly Redox (S5)		Redox Depressi					ark Surface (TF12)
	ped Matrix (S6)		Marl (F10) (LRR				Other (Explain in	· ·
	, ,		IVIAIT (I TO) (LIKI	· I <b>\</b> , ∟)			Other (Explain ii	i Kemarks)
Dark	Surface (S7)							
	s of hydrophytic vegeta		wetland hydrology mu	ıst be pr	esent, un	less distu	rbed or problematic.	
	ve Layer (if observed	):						
Type: _								
	inches):						Hydric Soil Present?	Yes X No
Remarks:		larthaantr	al and Northaget Dag	ional Cu	nalomont	Varsian (	2.0 to reflect the NDCS Fi	ald Indicators of Lludric Caile
version 7.							rcs142p2_051293.docx)	eld Indicators of Hydric Soils Test pit down to 20
inches								

US Army Corps of Engineers

Project/Site: Godfrey		City/County: Ha	astings/Oswego		Sam	pling Date: 7/25/	24
Applicant/Owner: The Wetland Trust in	С.			State:	NY	Sampling Point:	SP4U
Investigator(s): EF,HF,KH		Section, Towns	ship, Range:				
Landform (hillside, terrace, etc.):		Local relief (cond	cave, convex, none	Flat		Slope (%	):
Subregion (LRR or MLRA): LRR L, MLR	——————————————————————————————————————	_	Long:			 Datum: W0	SS 84
Soil Map Unit Name				NWI classi	fication		
Are climatic / hydrologic conditions on the	ne site typical for this tim	e of year? Ves	x No (If				
Are Vegetation n , Soil n , or		•					No
Are Vegetation n, Soil n, or							
SUMMARY OF FINDINGS – At	<u></u>						tures,
Hydrophytic Vegetation Present?	Yes No x	Is the San	npled Area				
Hydric Soil Present?	Yes No x	within a W	-	Yes	No	<b>x</b>	
Wetland Hydrology Present?	Yes No x	If yes, opti	onal Wetland Site I	D:	_		
HYDROLOGY							
				1 1 12		/ · · · · · · · · · · · · · · · · · · ·	
Wetland Hydrology Indicators:	required, about all that a		·			(minimum of two	required
Primary Indicators (minimum of one is Surface Water (A1)	-	ned Leaves (B9)		Surface So			
High Water Table (A2)	Aquatic Fa	` '	Drainage Patterns (B10)  Moss Trim Lines (B16)				
Saturation (A3)	Marl Depos		Dry-Season Water Table (C2)				
Water Marks (B1)		Sulfide Odor (C1)		Crayfish B			
Sediment Deposits (B2)		hizospheres on Liv		-		on Aerial Imager	y (C9)
Drift Deposits (B3)	Presence o	of Reduced Iron (C	4)	Stunted or	Stress	ed Plants (D1)	
Algal Mat or Crust (B4)	Recent Iron	n Reduction in Tille	d Soils (C6)	Geomorph	ic Posi	tion (D2)	
Iron Deposits (B5)		Surface (C7)		Shallow Ad	quitard	(D3)	
Inundation Visible on Aerial Image		lain in Remarks)		Microtopog	graphic	Relief (D4)	
Sparsely Vegetated Concave Surf	ace (B8)			FAC-Neutr	al Test	(D5)	
Field Observations:							
Surface Water Present? Yes		ches):					
Water Table Present? Yes Saturation Present? Yes		ches):	Wetland Hydrol	oay Broos	•+2	Voo No	
Saturation Present? Yes (includes capillary fringe)	Nox Depth (inc	ches):	Wetland Hydrolo	ogy Fresei	ILT	Yes No	<u> </u>
Describe Recorded Data (stream gaug	e monitoring well aerial	I nhotos previous i	nspections) if avail	able:			
Bossing Necercon Bata (cheam gaug	o, mormoning won, donar	priotos, proviodo i	nopodiono), n avan	abio.			
Remarks:		. 5					
No signs of wetland hydrology, Bottom drain tile to ditch	of drainage ditch has wa	ater, Plants in ditch	cat tail, drainage d	litch flows s	south to	oward wooded are	<del>≀</del> a,

	Absolute	Dominan	Indicator	
<u>Tree Stratum</u> (Plot size: )	% Cover	bominan t	Status	Dominance Test worksheet:
				Number of Dominant Species
				That Are OBL, FACW, or
· .				FAC: 0 (A)
3				Total Number of Dominant
l				Species Across All Strata: 1 (B)
5.				Percent of Dominant Species That Are OBL, FACW, or
S	_			FAC: 0.0% (A/I
·				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:	)			OBL species 0 x1 = 0
	-			FACW specie: 0 x 2 = 0
				FAC species 0 x3 = 0
3.				FACU species 0 x 4 = 0
· .				UPL species 100 x 5 = 500
5				Column Totals 100 (A) 500 (I
S				Prevalence Index = B/A = 5.00
<b>'</b>				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				2 - Dominance Test is >50%
Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				4 - Morphological Adaptations <sup>1</sup> (Provide supp
				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
· -				Troblematic riyuropriyite vegetation (Explain
				<sup>1</sup> Indicators of hydric soil and wetland hydrology
5				must be present, unless disturbed or problematic
7				Definitions of Vegetation Strata:  Tree – Woody plants 3 in. (7.6 cm) or more in
3.				diameter at breast height (DBH), regardless of
9.				height.
10.				Sapling/shrub – Woody plants less than 3 in. Di
l <b>1</b> .				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants,
	100	=Total Cover		regardless of size, and woody plants less than 3. ft tall.
Noody Vine Stratum (Plot size:	)			
· · · · · · · · · · · · · · · · · · ·	_'			<b>Woody vines</b> – All woody vines greater than 3.2
-				ft in height.
2				Hydrophytic
3				Vegetation
1				Present? Yes No No
		=Total Cover		
Remarks: (Include photo numbers here or on				<u> </u>
Remarks: (include photo numbers here or on Soy bean is thriving no indication of stress	a separate sne	et.)		

**SOIL** Sampling Point: SP4U

	Matrix		epth needed to doc Redo:	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	
			_					
·								
<sup>1</sup> Type: C=	Concentration, D=De	epletion, RI	√=Reduced Matrix, (	CS=Cove	ered or C	oated Sai	nd Grains. <sup>2</sup> Location	on: PL=Pore Lining, M=Matrix.
	oil Indicators:		· · · · · ·					roblematic Hydric Soils <sup>3</sup> :
-	sol (A1)		Polyvalue Below	v Surface	e (S8) ( <b>LF</b>	RR R,		A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic	Epipedon (A2)	-	MLRA 149B)		. , .			e Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfa	ce (S9) (	LRR R, N	/ILRA 149		Peat or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)	-	— High Chroma Sa				· —	elow Surface (S8) ( <b>LRR K, L</b> )
	fied Layers (A5)	-	Loamy Mucky M					urface (S9) ( <b>LRR K, L</b> )
	ted Below Dark Surfa	ace (A11)	Loamy Gleyed N			,		nese Masses (F12) (LRR K, L, R)
Thick	Dark Surface (A12)	_	x Depleted Matrix	(F3)			Piedmont Flo	oodplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy	y Mucky Mineral (S1)	_	Redox Dark Sur	face (F6	)		Mesic Spodi	c (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy	y Gleyed Matrix (S4)	_	Depleted Dark S	Surface (	F7)		Red Parent	Material (F21)
	y Redox (S5)	_	Redox Depressi	ions (F8)	•			v Dark Surface (TF12)
	ed Matrix (S6)	_	 Marl (F10) ( <b>LRF</b>	RK, L)				in in Remarks)
	Surface (S7)	-		,				,
	,							
					ocont un	ess distu		
	s of hydrophytic veget	ation and w	retland hydrology mu	ust de pr	cociii, uiii		rbed or problematic.	
<sup>3</sup> Indicators	s of hydrophytic veget		vetland hydrology mi	ust be pr	esent, un		rbed or problematic.	
<sup>3</sup> Indicators	e Layer (if observed	d):		ust be pr	esent, un		bed or problematic.	
<sup>3</sup> Indicators <b>Restrictiv</b> Type:	e Layer (if observed	d):		ust be pr	esent, um			nt? Yes X No
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (ii	re Layer (if observed	d):		ust be pro	esent, un		Hydric Soil Prese	nt? Yes <u>X</u> No
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in	re Layer (if observed	d):					Hydric Soil Prese	
<sup>3</sup> Indicators Restrictiv Type: Depth (in Remarks: This data f	re Layer (if observed inches):	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data for the version 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data for version 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators Restrictiv Type: Depth (in Remarks: This data f	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data find version 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data find version 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data find version 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data find version 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data find version 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data for version 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data for version 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils
<sup>3</sup> Indicators <b>Restrictiv</b> Type:  Depth (in  Remarks:  This data fiversion 7.0	re Layer (if observed inches):  form is revised from No March 2013 Errata.	d):	ıl and Northeast Reg	jional Su	oplement	Version 2	Hydric Soil Prese	S Field Indicators of Hydric Soils

US Army Corps of Engineers

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	ADAD ALL ME CONTROL OF THE CONTROL O
Are climatic / hydrologic conditions on the site typical for this time	
	cantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation n , Soil n , or Hydrology n natural	
	wing sampling point locations, transects, important features,
Hydrophytic Vegetation Present? Yes No x	Is the Sampled Area
Hydric Soil Present? Yes No x	<del>-</del>
Wetland Hydrology Present? Yes No x	If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that a	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stair	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fa	una (B13) Moss Trim Lines (B16)
Saturation (A3) Marl Depos	
<del></del>	Sulfide Odor (C1) Crayfish Burrows (C8)
	thizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
l <del></del>	of Reduced Iron (C4)  Stunted or Stressed Plants (D1)
<del></del>	n Reduction in Tilled Soils (C6) Geomorphic Position (D2)
	Surface (C7) Shallow Aquitard (D3)  slain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inc	ches):
Water Table Present? Yes No x Depth (inc	
Saturation Present? Yes No x Depth (inc	ches): Wetland Hydrology Present? Yes No x
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if available:
Remarks:	
No signs of wetland hydrology	

Tree Stratum (Plot size: )	Absolute	Dominan	Indicator	
	% Cover	t	Status	Dominance Test worksheet:
				Number of Dominant Species
				That Are OBL, FACW, or
				FAC:(A)
				Total Number of Dominant
·				Species Across All Strata: 1 (B)
j				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 0.0% (A/
_				(**
·				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:	_)			OBL species0 x 1 =0
	_			FACW specie: 0 x 2 = 0
				FAC species 0 x 3 = 0
				FACU species 0 x 4 = 0
				UPL species 100 x 5 = 500
				· — —
5				Column Totals 100 (A) 500 (I
S				Prevalence Index = B/A = 5.00
·				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
-				4 - Morphological Adaptations <sup>1</sup> (Provide supp
-				data in Remarks or on a separate sheet)
3.				,
1				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5.				<sup>1</sup> Indicators of hydric soil and wetland hydrology
5				must be present, unless disturbed or problematic
7				Definitions of Vegetation Strata:
3.				Tree – Woody plants 3 in. (7.6 cm) or more in
				diameter at breast height (DBH), regardless of height.
·				neight.
0				Sapling/shrub – Woody plants less than 3 in. Dl
1				and greater than or equal to 3.28 ft (1 m) tall.
				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.
2				regardless of size, and woody plants less than o.
2	100	=Total Cover		ft tall.
	100	=Total Cover		
Voody Vine Stratum (Plot size:	)	=Total Cover		Woody vines – All woody vines greater than 3.2
Voody Vine Stratum (Plot size:	_)			
Noody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.2 ft in height.
	_)		<u> </u>	Woody vines – All woody vines greater than 3.2
Voody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.2 ft in height.  Hydrophytic

**SOIL** Sampling Point: SP5U

Profile De Depth	scription: (Describe Matrix	to the c		: <b>ument</b> 1 x Featur		itor or co	onfirm the absence of in	dicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	
					· ——			
<sup>1</sup> Type: C=	Concentration, D=Dep	oletion R	M=Reduced Matrix	CS=Cov	ered or C	oated Sa	nd Grains <sup>2</sup> I ocation	PL=Pore Lining, M=Matrix.
	il Indicators:	,	,					plematic Hydric Soils <sup>3</sup> :
Histos	ol (A1)		Polyvalue Belov	v Surfac	e (S8) ( <b>Ll</b>	RR R,	2 cm Muck (A1	0) (LRR K, L, MLRA 149B)
Histic	Epipedon (A2)		MLRA 149B)				Coast Prairie R	edox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ce (S9)	(LRR R, I	MLRA 14	<b>9B</b> ) 5 cm Mucky Pe	eat or Peat (S3) (LRR K, L, R)
Hydro	gen Sulfide (A4)		High Chroma S				Polyvalue Belov	w Surface (S8) (LRR K, L)
	ied Layers (A5)		Loamy Mucky N			<b>K</b> , <b>L</b> )		ace (S9) ( <b>LRR K, L</b> )
	ted Below Dark Surfac	e (A11)			<sup>-</sup> 2)			e Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		x Depleted Matrix		•			Iplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		Redox Dark Su				<del></del> · · · ·	ΓA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4)		Depleted Dark		, ,		Red Parent Ma	terial (F21) ark Surface (TF12)
	Redox (S5) ed Matrix (S6)		Redox Depress Marl (F10) (LRF		)		Other (Explain i	, ,
	Surface (S7)		Warr (i 10) (Litti	<b>、                                    </b>			Other (Explain)	ir remains)
Bark 6	ourrace (07)							
<sup>3</sup> Indicators	of hydrophytic vegeta	tion and	wetland hydrology m	ust be p	resent, un	less distu	rbed or problematic.	
	e Layer (if observed)		, ,,	'	•		'	
Type:								
Depth (ir	nches):						Hydric Soil Present?	Yes X No
Remarks:	, <u> </u>							
	orm is revised from No	orthcentr	al and Northeast Reg	jional Su	upplement	Version	2.0 to reflect the NRCS F	ield Indicators of Hydric Soils
			w.nrcs.usda.gov/Inte	rnet/FSI	E_DOCUI	MENTS/n	rcs142p2_051293.docx)	Soils deeper than10
inches are	consistent with the up	per half						

US Army Corps of Engineers

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	
	antly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation n , Soil n , or Hydrology n naturall	<del></del>
	ving sampling point locations, transects, important features,
Hydrophytic Vegetation Present? Yes No x	Is the Sampled Area
Hydric Soil Present? Yes No x	
Wetland Hydrology Present? Yes X No x	If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that a	
<del></del>	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2)  Aquatic Fau	
Saturation (A3) Marl Depos	<u> </u>
<del></del> -	Sulfide Odor (C1) Crayfish Burrows (C8)
<del></del>	nizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
l <del></del>	f Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Reduction in Tilled Soils (C6)  Geometric Position (D2)
1 <del></del>	n Reduction in Tilled Soils (C6) Geomorphic Position (D2) Surface (C7) Shallow Aquitard (D3)
<del></del>	ain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (incl	nes):
Water Table Present? Yes No _x Depth (incl	nes):
Saturation Present? Yes No _x Depth (incl	hes): Wetland Hydrology Present? Yes X No x
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial	pnotos, previous inspections), if available:
Remarks:	
No signs of wetland hydrology	

	Absolute	Dominan	Indicator	
Tree Stratum (Plot size: )	% Cover	t	Status	Dominance Test worksheet:
				Number of Dominant Species
•				That Are OBL, FACW, or
2				FAC: 0 (A)
3.				Total Number of Dominant
l				Species Across All Strata: 1 (B)
5				Percent of Dominant Species That Are OBL, FACW, or
S				FAC: 0.0% (A/I
7.				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratur (Plot size:		rotal Gover		OBL species 0 x 1 = 0
				FACW specie: 0 x 2 = 0
2				FAC species 0 x 3 = 0
S				FACU species 0 x 4 = 0
l				UPL species0 x 5 =0
5.				Column Totals 0 (A) 0 (I
S				Prevalence Index = B/A =
·				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:		Total Gover		2 - Dominance Test is >50%
	400	.,		
. Glycine max		Yes		3 - Prevalence Index is ≤3.0¹
2				4 - Morphological Adaptations <sup>1</sup> (Provide supp data in Remarks or on a separate sheet)
3.				data in Nemarks of on a separate sheet)
4				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
3				must be present, unless disturbed or problematic
7				Definitions of Vegetation Strata:
3.				Tree – Woody plants 3 in. (7.6 cm) or more in
				diameter at breast height (DBH), regardless of height.
•				neight.
				Sapling/shrub – Woody plants less than 3 in. DE
1				and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants,
12				regardless of size, and woody plants less than 3.
	100	=Total Cover		ft tall.
Voody Vine Stratum (Plot size:	)			Woody vines – All woody vines greater than 3.2
• • • • • • • • • • • • • • • • • • • •	)			<b>Woody vines</b> – All woody vines greater than 3.26 ft in height.
2.				ft in height.  Hydrophytic
2		<u> </u>		Hydrophytic Vegetation
2.		=Total Cover		ft in height.  Hydrophytic

SOIL Sampling Point: SP6U

Profile D	escription: (Describe	e to the de	pth needed to doc	ument t	he indica	tor or co	onfirm the absence of in	ndicators.)
Depth	Matrix		Redo	x Featur				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	
	<u> </u>		3yl 4/0				Loamy/Olaycy	
<sup>1</sup> Type: C:	Concentration, D=De	pletion, RM	=Reduced Matrix,	CS=Cov	ered or C	oated Sa	nd Grains. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric So	oil Indicators:						Indicators for Pro	blematic Hydric Soils <sup>3</sup> :
Histo	sol (A1)	_	Polyvalue Belov	v Surface	e (S8) ( <b>LF</b>	RR R,	2 cm Muck (A1	0) (LRR K, L, MLRA 149B)
Histic	Epipedon (A2)		MLRA 149B)				Coast Prairie R	Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ce (S9)	(LRR R, I	MLRA 14	9B) 5 cm Mucky Pe	eat or Peat (S3) (LRR K, L, R)
Hydro	ogen Sulfide (A4)		High Chroma S	ands (S1	1) ( <b>LRR</b>	K, L)		w Surface (S8) ( <b>LRR K, L</b> )
	fied Layers (A5)	_	Loamy Mucky N					ace (S9) (LRR K, L)
	eted Below Dark Surfa	ce (A11)	Loamy Gleyed I			, ,		e Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)	· · · · -	x Depleted Matrix		_,			dplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mucky Mineral (S1)	_	Redox Dark Su		;)			TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)	_	Depleted Dark		•			
		_					Red Parent Ma	
	y Redox (S5)	_	Redox Depress		1			Dark Surface (TF12)
	ped Matrix (S6)	_	Marl (F10) ( <b>LRF</b>	K N, L)			Other (Explain	in Remarks)
Dark	Surface (S7)							
2								
	s of hydrophytic vegeta		etland hydrology m	ust be pr	esent, un	less distu	rbed or problematic.	
Restrictiv	e Layer (if observed	):						
Type:								
Depth (	inches):						Hydric Soil Present	? Yes X No
Remarks: This data		orthcentral	and Northeast Rec	ional Su	pplement	Version 2	2.0 to reflect the NRCS F	Field Indicators of Hydric Soils
							rcs142p2_051293.docx)	iola maioatore en riyano come
		` '	Ü		_		' = /	

US Army Corps of Engineers

Project/Site: Godfrey	C	ity/County: Hastings/Oswego		Sampling Date: _7	7/25/24
Applicant/Owner: The Wetland Trust	inc.		State:	NY Sampling P	oint: SP7U
Investigator(s): EF,HF,KH	S	Section, Township, Range:			
Landform (hillside, terrace, etc.):	Loc	cal relief (concave, convex, no	ne concave	Slope	e (%): 0-1
Subregion (LRR or MLRA) LRR L, MI	RA 101 Lat	Long:			: WGS 84
Soil Map Unit Name				sification: none	
Are climatic / hydrologic conditions or			-		
Are Vegetation, Soil,					<u> No</u>
Are Vegetation, Soil,	or Hydrology <u>n</u> naturally pro	oblematic? (If needed, expl	ain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS - A	Attach site map showing	sampling point location	ons, trans	ects, 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 Si			
Remarks: (Explain alternative proce					
HYDROLOGY					
Wetland Hydrology Indicators:		<u>s</u>	Secondary Inc	dicators (minimum of	two required
Primary Indicators (minimum of one	is required; check all that apply)		Surface S	oil Cracks (B6)	
Surface Water (A1)	Water-Stained L	` '		Patterns (B10)	
High Water Table (A2)	Aquatic Fauna (	_		n Lines (B16)	
Saturation (A3)	Marl Deposits (E	· -		on Water Table (C2)	
Water Marks (B1) Sediment Deposits (B2)	Hydrogen Sulfid	e Odor (C1) pheres on Living Roots (C3)		Burrows (C8) n Visible on Aerial Im	agan, (CO)
Drift Deposits (B3)	Presence of Rec	· · · · · · · · · · · · · · · · · · ·		r Stressed Plants (D1	
Algal Mat or Crust (B4)		luction in Tilled Soils (C6)	_	nic Position (D2)	')
Iron Deposits (B5)	Thin Muck Surfa	_		quitard (D3)	
Inundation Visible on Aerial Ima		` '		graphic Relief (D4)	
Sparsely Vegetated Concave Su	urface (B8)	· _	FAC-Neut	ral Test (D5)	
Field Observations:			<u> </u>		
Surface Water Present? Yes	No x Depth (inches):				
Water Table Present? Yes	No x Depth (inches):				
Saturation Present? Yes	No x Depth (inches):	Wetland Hyd	rology Prese	ent? Yes X	No x
(includes capillary fringe)					
Describe Recorded Data (stream ga	uge, monitoring well, aerial phot	os, previous inspections), if a	vailable:		
Remarks:					
No signs of wetland hydrology					

Tree Stratum (Plot size: )	Absolute	Dominan	Indicator	
HEE SHAWIH IFIULSIZE.	% Cover	t	Status	Dominance Test worksheet:
				Number of Dominant Species
-				That Are OBL, FACW, or
2				FAC:0(A)
B				Total Number of Dominant
i				Species Across All Strata: 1 (B)
5.				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 0.0% (A/I
_				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:	_)			OBL species0 x 1 =0
				FACW specie: 0 x 2 = 0
				FAC species 0 x 3 = 0
•				FACU species 0 x 4 = 0
				UPL species 100 x 5 = 500
				· —
5.				Column Totals 100 (A) 500 (I
S				Prevalence Index = B/A = 5.00
<b>7</b>				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supp
				data in Remarks or on a separate sheet)
3				, ,
4				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
5				must be present, unless disturbed or problematic
7				Definitions of Vegetation Strata:
3.				Tree – Woody plants 3 in. (7.6 cm) or more in
				diameter at breast height (DBH), regardless of height.
·				neight.
0				Sapling/shrub – Woody plants less than 3 in. Di
1.				and greater than or equal to 3.28 ft (1 m) tall.
				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.
2.				
2.	100	=Total Cover		ft tall.
	100	=Total Cover		ft tall.
Voody Vine Stratum (Plot size:	_)	=Total Cover		ft tall.  Woody vines – All woody vines greater than 3.2
Voody Vine Stratum (Plot size:	_)	=Total Cover		ft tall.
Noody Vine Stratum (Plot size:  .	_)	=Total Cover		ft tall.  Woody vines – All woody vines greater than 3.26 ft in height.
	_)	=Total Cover		ft tall.  Woody vines – All woody vines greater than 3.20
Noody Vine Stratum (Plot size:	_)	=Total Cover		ft tall.  Woody vines – All woody vines greater than 3.2 ft in height.  Hydrophytic

**SOIL** Sampling Point: SP7U

Profile De	escription: (Describ	e to the dep	th needed to do	cument t	he indica	tor or co	onfirm the absence of i	indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	
0-10							Loamy/Olaycy	
								_
			_					
1 <sub>Type:</sub> C-		nlotion DM-	Poduced Matrix		orod or C	ootod So	nd Crains <sup>2</sup> I apation	n: PL=Pore Lining, M=Matrix.
	oil Indicators:	pielion, Kivi-	Reduced Matrix,	C3-C0V	ered or C	oateu Sai		oblematic Hydric Soils <sup>3</sup> :
_	sol (A1)		Polyvalue Belov	w Surface	= (S8) (I <b>F</b>	R R		(10) (LRR K, L, MLRA 149B)
	Epipedon (A2)	_	MLRA 149B)		3 (00) ( <b>L</b> i	ara ra,		Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfa		(IRRR I	VII RA 149		Peat or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)	_	High Chroma S				· —	ow Surface (S8) (LRR K, L)
	fied Layers (A5)	_	Loamy Mucky N	•				face (S9) (LRR K, L)
	eted Below Dark Surfa	 ice (A11)	Loamy Gleyed			, -/		ese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		Depleted Matrix		_,			odplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mucky Mineral (S1)		Redox Dark Su		5)			(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)	_	Depleted Dark		•		Red Parent M	
	y Redox (S5)	_	Redox Depress					Dark Surface (TF12)
l ——	ed Matrix (S6)		Marl (F10) ( <b>LRI</b>	` '	'		Other (Explain	` '
I — · ·	Surface (S7)			, _/				· ····································
	curiuss (ST)							
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and we	tland hydrology m	ust be pr	esent. un	less distur	rbed or problematic.	
	e Layer (if observed			р.			l prozioniano.	
	nches):						Hydric Soil Presen	t? Yes X No
			<del>_</del>				Tryunc 3011 Fresen	1es
Remarks:		lorthoontrol o	and Northoast Bo	nional Cu	nnlomont	Varaian (	2.0 to reflect the NDCS	Field Indicators of Hydric Sails
							z.0 to reflect the NRCS rcs142p2_051293.docx	Field Indicators of Hydric Soils
VOI 01011 1 .	o maron 2010 Enata.	(1100.771111111	"oo.uouu.go v	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		VIL. ( 1 0/1 II	100112p2_001200.d00x	· /

US Army Corps of Engineers

Project/Site: Godfrey	C	City/County: Hastings/Oswego	Sampling Date: 7/25/24	
Applicant/Owner: The Wetland Tru	ıst inc.		State: NY Sampling Point: SP8L	
Investigator(s): EF,HF	S	Section, Township, Range:		
Landform (hillside, terrace, etc.):	Loc	cal relief (concave, convex, none co	oncave Slope (%): 0-1	
Subregion (LRR or MLRA): LRR L, I	MLRA 101 Lat: 43.29741816	Long: -76.275701		
Soil Map Unit Name RhB: Rhinebe			WI classification: none	
· · · · · · · · · · · · · · · · · · ·	•			
Are climatic / hydrologic conditions	•		,	
			tances" present? Yes x No	
Are Vegetation, Soil	, or Hydrology <u>n</u> naturally pro	oblematic? (If needed, explain an	ny answers in Remarks.)	
SUMMARY OF FINDINGS -	<ul> <li>Attach site map showing</li> </ul>	sampling point locations,	transects, important features	
Hydrophytic Vegetation Present?	Yes No x	Is the Sampled Area		
Hydric Soil Present?	Yes No x	·	res No _X	
Wetland Hydrology Present?	Yes No x	If yes, optional Wetland Site ID:	<del></del>	
HYDROLOGY				
Wetland Hydrology Indicators:		Second	dary Indicators (minimum of two require	
Primary Indicators (minimum of or	ne is required; check all that apply)	Su	urface Soil Cracks (B6)	
Surface Water (A1)	Water-Stained L	.eaves (B9) Dra	rainage Patterns (B10)	
High Water Table (A2)	Aquatic Fauna (			
Saturation (A3)	Marl Deposits (E	<u> </u>		
Water Marks (B1)	Hydrogen Sulfid	· · ·	rayfish Burrows (C8)	
Sediment Deposits (B2)		· · · · · · · · · · · · · · · · · · ·	aturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3)	Presence of Red	` '	unted or Stressed Plants (D1)	
Algal Mat or Crust (B4) Iron Deposits (B5)	Thin Muck Surfa		eomorphic Position (D2) nallow Aquitard (D3)	
Inundation Visible on Aerial In		` · ·	icrotopographic Relief (D4)	
Sparsely Vegetated Concave	· , · , <u>—</u> · · ·	· —	AC-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):	Wetland Hydrology	y Present? Yes No x	
(includes capillary fringe)				
Describe Recorded Data (stream of	gauge, monitoring well, aerial phot	os, previous inspections), if availabl	le:	
Remarks:				
No signs of wetland hydrology				

	Abaaluta	Dominon	Indicator	
Tree Stratum (Plot size: )	Absolute % Cover	Dominan t	Indicator Status	Dominance Test worksheet:
				Number of Dominant Species
·				That Are OBL, FACW, or
				FAC: 0 (A)
·				Total Number of Dominant
l				Species Across All Strata: 1 (B)
				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 0.0% (A/
). 				
·				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratur (Plot size:	_)			OBL species0 x 1 =0
• <u> </u>				FACW specie: 0 x 2 = 0
				FAC species 0 x 3 = 0
				FACU species 0 x 4 = 0
				· —
·				UPL species 100 x 5 = 500
5				Column Totals 100 (A) 500 (
ò				Prevalence Index = B/A = 5.00
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:				2 - Dominance Test is >50%
	100	Vaa	LIDI	<del></del>
1. Glycine max		Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2				4 - Morphological Adaptations <sup>1</sup> (Provide supp data in Remarks or on a separate sheet)
3				uata ili Nemarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				16. 6. 4. 4. 61. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4.
•				<sup>1</sup> 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
3				diameter at breast height (DBH), regardless of
9				height.
10				Sapling/shrub – Woody plants less than 3 in. Di
1.				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants,
	100	-Tetal Caver		regardless of size, and woody plants less than 3.
	100	=Total Cover		ft tall.
Noody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.2
l				ft in height.
2				
				Hydrophytic
3.				Vegetation Present? Yes No x
·				
3. 4.		=Total Cover		riesent: No

**SOIL** SP8U Sampling Point:

Profile Des Depth	scription: (Describe Matrix	to the c	lepth needed to doc	<mark>ument t</mark> l k Feature		tor or co	onfirm the absend	ce of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
				10			L comy/Clayey	
0-10	10yr 4/1	90	5yr 4/6	10			Loamy/Clayey	
<sup>1</sup> Type: C=0	Concentration, D=Dep	oletion, R	RM=Reduced Matrix, 0	CS=Cove	ered or C	oated Sa	ınd Grains. <sup>2</sup> Lo	ocation: PL=Pore Lining, M=Matrix.
Hydric Soi	I Indicators:						Indicators f	or Problematic Hydric Soils <sup>3</sup> :
Histoso	ol (A1)		Polyvalue Below	Surface	(S8) ( <b>LF</b>	RR R,	2 cm Mu	uck (A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic E	Epipedon (A2)		MLRA 149B)					rairie Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surface					ucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	gen Sulfide (A4)		High Chroma Sa					ue Below Surface (S8) ( <b>LRR K, L</b> )
	ed Layers (A5)		Loamy Mucky M			<b>K</b> , L)		rk Surface (S9) ( <b>LRR K, L</b> )
	ed Below Dark Surfac	ce (A11)			2)			nganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		x Depleted Matrix		`			nt Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		Redox Dark Sur					podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4)		Depleted Dark S					rent Material (F21)
	Redox (S5) ed Matrix (S6)		Redox Depression Marl (F10) (LRR					allow Dark Surface (TF12) Explain in Remarks)
	Surface (S7)		IVIAII (I-10) (LKK	ι <b>κ</b> , <b>∟</b> )			Other (E	zypiain in itemarks)
Daik S	dilace (37)							
<sup>3</sup> Indicators	of hydrophytic vegeta	tion and	wetland hydrology mu	ıst he nr	esent un	less distu	irbed or problemat	iic
	Layer (if observed)			р.			l progression	•••
Type:								
Depth (in							Hydric Soil Pi	resent? Yes X No
								100 <u>X</u> NO
Remarks:	orm is revised from N	orthcentr	al and Northeast Red	ional Su	onlement	Version	2.0 to reflect the N	IRCS Field Indicators of Hydric Soils
			/w.nrcs.usda.gov/Inter					
US Arr	ny Corps of Engineer	S					Northc	entral and Northeast Region – Version 2.0

# 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: 43.297454	
Soil Map Unit Name RhB: Rhinebeck silt loam, 2-6% slopes	NWI classification: none
Are climatic / hydrologic conditions on the site typical for this tim	<del> </del>
· ·	cantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation n , Soil n , or Hydrology n natura	
<del></del>	wing 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	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that a	apply) Surface Soil Cracks (B6)
Surface Water (A1) Water-Sta	ined Leaves (B9) Drainage Patterns (B10)
<del></del> -	auna (B13) Moss Trim Lines (B16)
Saturation (A3)Marl Depo	<del></del>
<del></del>	Sulfide Odor (C1) Crayfish Burrows (C8)
<u> </u>	Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
l <del></del>	of Reduced Iron (C4) Stunted or Stressed Plants (D1)
<del></del>	on Reduction in Tilled Soils (C6) Geomorphic Position (D2)
<del></del>	Surface (C7) Shallow Aquitard (D3)  Dlain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inc	ches):
Water Table Present? Yes No x Depth (inc	
Saturation Present? Yes No x Depth (inc	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aeria	I photos, previous inspections), if available:
Remarks:	
No signs of wetland hydrology	

	Absolute	Dominan	Indicator	Sampling Point: SP9U
<u>Tree Stratum</u> (Plot size: )	% Cover	Dominan t	Status	Dominance Test worksheet:
				Number of Dominant Species
-				That Are OBL, FACW, or
<u></u>				FAC: 0 (A)
3				Total Number of Dominant
l				Species Across All Strata: 1 (B)
5.				Percent of Dominant Species That Are OBL, FACW, or
5				FAC: 0.0% (A/I
<b>7</b>				Prevalence Index worksheet:
		=Total Cover		Total % Cover of:Multiply by:
Sapling/Shrub Stratur (Plot size:	)			OBL species 0 x 1 = 0
i. <u> </u>	<u> </u>			FACW specie: 0 x 2 = 0
				FAC species 0 x 3 = 0
				FACU species 0 x 4 = 0
				· —
+				· — —
5				Column Totals 100 (A) 500 (B
S				Prevalence Index = B/A = 5.00
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				2 - Dominance Test is >50%
. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2				4 - Morphological Adaptations <sup>1</sup> (Provide supp
3.				data in Remarks or on a separate sheet)
4.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5.				
•				<sup>1</sup> 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
3.				diameter at breast height (DBH), regardless of
9		-		height.
10				Sapling/shrub – Woody plants less than 3 in. DE
l1				and greater than or equal to 3.28 ft (1 m) tall.
12				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.
	100	=Total Cover		ft tall.
Noody Vine Stratum (Plot size:	)			<b>Woody vines</b> – All woody vines greater than 3.29
I.				ft in height.
<u> </u>				
3.				Hydrophytic
4.				Vegetation Present? Yes No x
		=Total Cover		1165ent: 165 165X
				<u> </u>
Remarks: (Include photo numbers here or soy bean is thiving no indication of stress	on a separate she	et.)		
,				

**SOIL** Sampling Point: SP9U

Profile De	escription: (Describ	e to the d	epth needed to doo	ument t	the indica	itor or co	onfirm the absence of	indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	
	Oyi 4/1		Oy1 4/0				Loamyolayey	
								_
	=Concentration, D=De	epletion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sa		n: PL=Pore Lining, M=Matrix.
-	oil Indicators:							oblematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Polyvalue Belov		e (S8) ( <b>Li</b>	RR R,		A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic	Epipedon (A2)		MLRA 149B)				Coast Prairie	Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ce (S9)	(LRR R, I	MLRA 14	<b>9B</b> )5 cm Mucky F	Peat or Peat (S3) (LRR K, L, R)
Hydro	ogen Sulfide (A4)		High Chroma S	ands (S´	11) ( <b>LRR</b>	K, L)	Polyvalue Be	low Surface (S8) ( <b>LRR K, L</b> )
Strati	fied Layers (A5)		Loamy Mucky N	/lineral (l	F1) ( <b>LRR</b>	<b>K</b> , <b>L</b> )	Thin Dark Su	rface (S9) ( <b>LRR K, L</b> )
Deple	eted Below Dark Surfa	ace (A11)	Loamy Gleyed I	Matrix (F	2)		Iron-Mangane	ese Masses (F12) (LRR K, L, R)
Thick	Dark Surface (A12)		x Depleted Matrix	(F3)	-		Piedmont Flo	odplain Soils (F19) ( <b>MLRA 149B</b> )
Sand	y Mucky Mineral (S1)		Redox Dark Su		3)			(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)		—— Depleted Dark \$	-	-		Red Parent M	
	y Redox (S5)		Redox Depress					Dark Surface (TF12)
	ped Matrix (S6)		Marl (F10) (LRF		,			n in Remarks)
	Surface (S7)		Man (i 10) (Litti	· · · · · · · · · · · · · · · · · · ·			Other (Explain	Till Romano)
Dark	Surface (ST)							
31		- 4'					ude a de a a a a de la casa de la	
	s of hydrophytic veget		wetiand nydrology m	ust be pi	resent, un	iess aistu	irbed or problematic.	
	e Layer (if observed	•						
Type:			<del></del>					
Depth (	inches):						Hydric Soil Presen	t? Yes X No
Remarks:							•	
		Northcentra	al and Northeast Reg	jional Su	ıpplement	Version	2.0 to reflect the NRCS	Field Indicators of Hydric Soils
version 7.	0 March 2013 Errata.	(http://ww	w.nrcs.usda.gov/Inte	rnet/FSE	E_DOCUI	MENTS/n	nrcs142p2_051293.doc	<b>(</b> )

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey		C	City/County: Ha	astings/Oswego		_Sampling [	Date: 7/25/24
Applicant/Owner: The Wetland	Trust inc.				State:	NY Sam	pling Point: SP10U
Investigator(s): EF,HF,KH		S	Section, Towns	ship, Range:			
Landform (hillside, terrace, etc.	 ):	Loc	cal relief (cond	ave, convex, nor	ne concave		Slope (%): 0-1
Subregion (LRR or MLRA): LRR	L. MLRA 101 Lat:	43.29746309		Long: -76.27	7439574		Datum: WGS 84
Soil Map Unit Name RhB: Rhine						fication: none	
•		•	νο ο π <sup>Ω</sup>	v. No			
Are climatic / hydrologic condition	-	_	-	x No			
Are Vegetation, Soil							
Are Vegetation, Soil	n , or Hydrology	n naturally pro	oblematic?	(If needed, expla	ain any answe	ers in Remark	s.)
SUMMARY OF FINDING	S – Attach site n	nap showing	sampling	point location	ons, transe	ects, impo	rtant features,
Hydrophytic Vegetation Preser	nt? Yes	No x	Is the Sam	nled Area			
Hydric Soil Present?	Yes		within a W	-	Yes	No X	
Wetland Hydrology Present?	Yes	No x		onal Wetland Sit			_
HYDROLOGY							
Wetland Hydrology Indicator	 's:			S	econdary Ind	cators (minin	num of two required
Primary Indicators (minimum o		ck all that apply)	l			oil Cracks (B6	-
Surface Water (A1)		Water-Stained L	eaves (B9)		Drainage F	Patterns (B10	)
High Water Table (A2)		Aquatic Fauna (	B13)		Moss Trim	Lines (B16)	
Saturation (A3)		Marl Deposits (E	315)			n Water Tabl	e (C2)
Water Marks (B1)		Hydrogen Sulfid		_		urrows (C8)	
Sediment Deposits (B2)		Oxidized Rhizos		-			erial Imagery (C9)
Drift Deposits (B3)		Presence of Rec	`	<i>'</i>		Stressed Pla	, ,
Algal Mat or Crust (B4)		Recent Iron Red		d Soils (C6)		ic Position (D	(2)
Iron Deposits (B5) Inundation Visible on Aeria	al Imageny (B7)	Thin Muck Surfa Other (Explain in	` ,	_		quitard (D3) graphic Relief	: (D4)
Sparsely Vegetated Conce	• , , <u> </u>	Other (Explain ii	i Nemarks)			al Test (D5)	(04)
Field Observations:	210 0411400 (20)			_		u. 1001 (D0)	
	Yes Nox_	Depth (inches):					
	Yes No x						
	Yes No x			Wetland Hydr	ology Prese	nt? Yes_	No x
(includes capillary fringe)							
Describe Recorded Data (streated) Remarks: No signs of wetland hydrology				nspections), if av	railable:		

Tree Stratum (Plot size: )	Absolute	Dominan	Indicator	
rree Stratum (Plot Size: )	% Cover	t	Status	Dominance Test worksheet:
				Number of Dominant Species
•				That Are OBL, FACW, or
2				FAC:0 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 1 (B)
5.				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 0.0% (A/E
· ·				
7				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratur (Plot size:	_)			OBL species0 x 1 =0
I				FACW specie: 0 x 2 = 0
2.				FAC species 0 x 3 = 0
				FACU species 0 x 4 = 0
				UPL species 100 x 5 = 500
i				' <del></del>
5				Column Totals 100 (A) 500 (E
S				Prevalence Index = B/A = 5.00
7				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2				4 - Morphological Adaptations <sup>1</sup> (Provide supp data in Remarks or on a separate sheet)
3				data in Normanie di dina doparate directy
4				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
6				must be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
3.				Tree – Woody plants 3 in. (7.6 cm) or more in
· -				diameter at breast height (DBH), regardless of
9				height.
10				Sapling/shrub – Woody plants less than 3 in. DE
l1				and greater than or equal to 3.28 ft (1 m) tall.
	_			<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.
12				Tegalgiess of size, and woody plants less than 3.
12.	100	=Total Cover		ft tall.
	100	=Total Cover		ft tall.
Woody Vine Stratum (Plot size:	_)	=Total Cover		ft tall.  Woody vines – All woody vines greater than 3.20
Woody Vine Stratum (Plot size:1.	_)	=Total Cover		ft tall.
Woody Vine Stratum (Plot size:	_)			ft tall.  Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size:	_)			ft tall.  Woody vines – All woody vines greater than 3.28 ft in height.  Hydrophytic
Woody Vine Stratum (Plot size:	_)			ft tall.  Woody vines – All woody vines greater than 3.28 ft in height.

**SOIL** Sampling Point: SP10U

Profile D	escription: (Describe	e to the de	pth needed to doc	ument t	he indica	tor or co	onfirm the absence of in	ndicators.)
Depth	Matrix		Redo	x Featur				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-9	5yr 4/1	95	5yr 4/6	5			Loamy/Clayey	
<sup>1</sup> Type: C:	=Concentration, D=De	pletion RM	=Reduced Matrix.	CS=Cov	ered or C	oated Sa	nd Grains. <sup>2</sup> Location:	: PL=Pore Lining, M=Matrix.
	oil Indicators:	p. c.		00 00.	<u></u>			blematic Hydric Soils <sup>3</sup> :
_	sol (A1)		Polyvalue Belov	v Surface	e (S8) (LF	RR R.		(0) (LRR K, L, MLRA 149B)
	Epipedon (A2)	_	MLRA 149B)		- () (	,		Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfa		IRRR I	MI RΔ 14		eat or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)	_	High Chroma S					w Surface (S8) ( <b>LRR K, L</b> )
	fied Layers (A5)	_	Loamy Mucky N	-				ace (S9) (LRR K, L)
	eted Below Dark Surfa		Loamy Gleyed			rx, L)		se Masses (F12) (LRR K, L, R)
		· · · · · · · ·			۷)			
	Dark Surface (A12) y Mucky Mineral (S1)	_	X Depleted Matrix Peday Dark Sur		• \			dplain Soils (F19) (MLRA 149B)
		_	Redox Dark Su		-			TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)	_	Depleted Dark				Red Parent Ma	
	y Redox (S5)	_	Redox Depress					Dark Surface (TF12)
	ped Matrix (S6)	_	Marl (F10) ( <b>LRF</b>	K K, L)			Other (Explain	in Remarks)
Dark	Surface (S7)							
2								
<sup>3</sup> Indicators	s of hydrophytic vegeta	ation and w	etland hydrology m	ust be pr	esent, un	less distu	rbed or problematic.	
Restrictiv	e Layer (if observed	):						
Type:								
Depth (	inches):						Hydric Soil Present	? Yes X No
Remarks:								
		orthcentral	and Northeast Red	nional Su	pplement	Version 2	2 0 to reflect the NRCS F	Field Indicators of Hydric Soils
							rcs142p2_051293.docx)	Total maioatore of Fryance Conc
			_		_		, –	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Godfrey	City/County: H	astings/Oswego	Sampling Date: 7/25/24
Applicant/Owner: The Wetland Trust inc.		State:	NY Sampling Point: SP11U
Investigator(s): EF,HF	Section, Towns	ship, Range:	
Landform (hillside, terrace, etc.):	Local relief (cond	cave, convex, none concave	Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 4	<del></del> 43.2979922350227	Long: -76.273595919586	4 Datum: WGS 84
Soil Map Unit Name RhB: Rhinebeck silt loam, 2-6% s		<del></del>	ification: none
Are climatic / hydrologic conditions on the site typical	•	x No (If no, explai	
Are Vegetation <u>n</u> , Soil <u>n</u> , or Hydrology <u>r</u>	•		•
Are Vegetation n , Soil n , or Hydrology ı		(If needed, explain any answe	
SUMMARY OF FINDINGS – Attach site m	<del></del>		
Hydrophytic Vegetation Present? Yes	No x Is the San	npled Area	
Hydric Soil Present? Yes	No x within a V	•	No X
Wetland Hydrology Present? Yes	No x If yes, opti	onal Wetland Site ID	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Ind	icators (minimum of two required
Primary Indicators (minimum of one is required; chec	ck all that apply)	Surface S	oil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage I	Patterns (B10)
<del></del> -	Aquatic Fauna (B13)	Moss Trim	Lines (B16)
<del></del>	Marl Deposits (B15)		n Water Table (C2)
<del></del>	Hydrogen Sulfide Odor (C1)	<del></del> ·	urrows (C8)
<u> </u>	Oxidized Rhizospheres on Liv	· · · · · · · · · · · · · · · · · · ·	Visible on Aerial Imagery (C9)
	Presence of Reduced Iron (C		Stressed Plants (D1)
l <del></del>	Recent Iron Reduction in Tille	· / ·	ic Position (D2)
<u> </u>	Thin Muck Surface (C7) Other (Explain in Remarks)		quitard (D3) graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	Strict (Explain in Remarks)		ral Test (D5)
Field Observations:			(20)
	Depth (inches):		
	Depth (inches):		
	Depth (inches):	Wetland Hydrology Prese	nt? Yes No x
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring v	well, aerial photos, previous i	nspections), if available:	
Remarks:			
No signs of wetland hydrology			

Tree Stratum (Plot size: )	Absolute	Dominon	Indicator	
(1 lot 6/26.	Absolute % Cover	Dominan t	Indicator Status	Dominance Test worksheet:
			Otatas	Number of Dominant Species
				That Are OBL, FACW, or
2				FAC: 0 (A)
3.				Total Number of Dominant
1				Species Across All Strata: 1 (B)
5				Percent of Dominant Species That Are OBL, FACW, or
3				FAC: 0.0% (A)
7.				Prevalence Index worksheet:
-		=Total Cover		Total % Cover of: Multiply by:
Capling/Charle Ctratus/Dlatains		- Total Gover		
Sapling/Shrub Stratum (Plot size:	_'			OBL species 0 x 1 = 0
l				FACW specie: 0 x 2 = 0
2.				FAC species0 x 3 =0
3				FACU species 0 x 4 = 0
l				UPL species100 x 5 =500
5.				Column Totals 100 (A) 500 (
3.				Prevalence Index = B/A = 5.00
_				Hydrophytic Vegetation Indicators:
7. <u> </u>				
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				2 - Dominance Test is >50%
Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				4 - Morphological Adaptations <sup>1</sup> (Provide sup
3				data in Remarks or on a separate sheet)
4.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explai
5.				
6				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
7				Definitions of Vegetation Strata:  Tree – Woody plants 3 in. (7.6 cm) or more in
3				diameter at breast height (DBH), regardless of
9				height.
10				Sapling/shrub – Woody plants less than 3 in. D
				and greater than or equal to 3.28 ft (1 m) tall.
11.				Herb – All herbaceous (non-woody) plants,
-				
-	100	=Total Cover		regardless of size, and woody plants less than 3
12.	100	=Total Cover		regardless of size, and woody plants less than 3 ft tall.
12		=Total Cover		ft tall.  Woody vines – All woody vines greater than 3.2
12.  Noody Vine Stratum (Plot size:		=Total Cover		ft tall.
12.  Woody Vine Stratum (Plot size:  1.	_)	=Total Cover		ft tall.  Woody vines – All woody vines greater than 3.2 ft in height.
Moody Vine Stratum (Plot size:1.	_)	=Total Cover		ft tall.  Woody vines – All woody vines greater than 3.2 ft in height.  Hydrophytic
Moody Vine Stratum (Plot size:  1.	_)	=Total Cover		ft tall.  Woody vines – All woody vines greater than 3.2 ft in height.

**SOIL** Sampling Point: SP11U

Profile D	escription: (Describe	e to the de	pth needed to do	cument t	he indica	tor or co	onfirm the absence of in	ndicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-11	7 5vr 4/1	95	7 Evr 5/6	5			Loamy/Clayey	
0-11	7.5yr 4/1	95	7.5yr 5/6	5			Loamy/Clayey	
			_					
1	Consortantina D-D-		—Dadusad Matrix				rad Crains 21 asstices	. DI -Dana Lining M-Matrix
	=Concentration, D=De	pietion, Riv	-Reduced Mairix,	CS-C0V	ered or C	oated Sa		: PL=Pore Lining, M=Matrix.
_	oil Indicators:		Dobarduo Dolo	u Curfoo	- (CO) (L	D D		blematic Hydric Soils <sup>3</sup> :
	sol (A1)	_	Polyvalue Belov		e (So) ( <b>Lr</b>	KK K,		10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)		(I DD D I			Redox (A16) ( <b>LRR K, L, R</b> )
	( Histic (A3)	_	Thin Dark Surfa					eat or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)	_	High Chroma S					ow Surface (S8) (LRR K, L)
	fied Layers (A5)		Loamy Mucky N			K, L)		face (S9) (LRR K, L)
	eted Below Dark Surfa	· · · · · -	Loamy Gleyed		2)			se Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	_	x Depleted Matrix					dplain Soils (F19) (MLRA 149B)
	y Mucky Mineral (S1)	_	Redox Dark Su					(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)	_	Depleted Dark		` '		Red Parent Ma	
	y Redox (S5)	_	Redox Depress		)			Dark Surface (TF12)
	oed Matrix (S6)	_	Marl (F10) ( <b>LRI</b>	R K, L)			Other (Explain	in Remarks)
Dark	Surface (S7)							
<sup>3</sup> Indicators	s of hydrophytic vegeta	ation and w	etland hydrology m	ust be pr	esent, un	less distu	rbed or problematic.	
Restrictiv	ve Layer (if observed	):						
Type:								
Depth (	inches):						Hydric Soil Present	? Yes X No
Remarks:	·							
		orthcentral	and Northeast Red	gional Su	pplement	Version 2	2.0 to reflect the NRCS F	Field Indicators of Hydric Soils
							rcs142p2_051293.docx)	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

# Appendix D.

Category	Common Name	Scientific Name	Conservation Status	Indicator Status	Native	Buxton Creek	Lower Caughdenoy Creek	Oneida River	Fish Creek	Upper Caughdenoy Creek	Sixmile Creek
Amphibian	American toad	Anaxyrus americanus	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓	✓	✓	
Amphibian	gray treefrog	Dryophytes versicolor	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Amphibian	northern green frog	Lithobates clamitans melar	c S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓	✓	
Amphibian	northern leopard frog	Lithobates pipiens	S5 G5: secure in NYS and globally	-	Yes		✓		✓	✓	
Amphibian	wood frog	Lithobates sylvaticus	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	red-winged blackbird	Agelaius phoeniceus	S5B G5: secure (breeding) in NYS and	-	Yes		<b>√</b>	✓	1		
Bird	wood duck	Aix sponsa	globally S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	mallard	Anas platyrhynchos	S5 G5: secure in NYS and globally	-	Yes			✓			1
Bird	American pipit	Anthus rubescens	Least concern	-	Yes			✓		✓	✓
Bird	sandhill crane	Antigone canadensis	S1B G5: critically imperiled (breeding) in NYS and secure globally	-	Yes			✓			
Bird	great blue heron	Ardea herodias	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	tufted titmouse	Baeolophus bicolor	S5 G5: secure in NYS and globally	-	Yes			✓		✓	
Bird	Canada goose	Branta canadensis	S5 G5: secure in NYS and globally	-	Yes		✓	✓		✓	✓
Bird	red-tailed hawk	Buteo jamaicensis	S5 G5: secure in NYS and globally	-	Yes			✓			✓
Bird	green heron	Butorides virescens	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	northern cardinal	Cardinalis cardinalis	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	turkey vulture	Cathartes aura	S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			✓
Bird	killdeer	Charadrius vociferus	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Bird	northern harrier	Circus hudsonius	(NYS Threatened Species) S3B, S3N G5: vulnerable (breeding/non- breeding) in NYS and secure globally	-	Yes				<b>✓</b>		1
Bird	northern flicker	Colaptes auratus	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	American crow	Corvus brachyrhynchos	S5 G5: secure in NYS and globally	-	Yes			✓	✓		
Bird	blue jay	Cyanocitta cristata	S5 G5: secure in NYS and globally	-	Yes		✓	✓			
Bird	pileated woodpecker	Dryocopus pileatus	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	gray catbird	Dumetella carolinensis	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓	✓	✓			
Bird	willow flycatcher	Empidonax traillii	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓					
Bird	rusty blackbird	Euphagus carolinus	(NYS High Priority Species of Greatest Conservation Need) S2B G4: imperited (breeding) in NYS and apparently secure globally	-	Yes			<b>√</b>			
Bird	common yellowthroat	Geothlypis trichas	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	bald eagle	Haliaeetus leucocephalus	(NYS Threatened Species) S2S3B, S2N G5: imperited/vulnerable (breeding) and imperited (non- breeding) in NYS, secure globally	-	Yes			<b>4</b>		<b>√</b>	<b>*</b>
Bird	barn swallow	Hirundo rustica	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	wood thrush	Hylocichla mustelina	S5B G4: secure (breeding) in NYS and apparently secure globally	-	Yes			✓	✓		
Bird	Baltimore oriole	Icterus galbula	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓		✓			
Bird	belted kingfisher	Megaceryle alcyon	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	red-bellied woodpecker	Melanerpes carolinus	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	wild turkey	Meleagris gallopavo	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	song sparrow	Melospiza melodia	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	great crested flycatcher	Myiarchus crinitus	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	osprey	Pandion haliaetus	(NYS Species of Special Concern) S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			
Bird	rose-breasted grosbeak	Pheucticus ludovicianus	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	eastern towhee	Pipilo erythrophthalmus	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓				

			CER CEL acquire (breading) in NIVC and						1		
Bird	American woodcock	Scolopax minor	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	yellow warbler	Setophaga petechia	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	1		
Bird	eastern bluebird	Sialia sialis	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	American goldfinch	Spinus tristis	S5 G5: secure in NYS and globally	-	Yes		✓	1	✓		
Bird	European starling	Sturnus vulgaris	SNA G5: not applicable in NYS and	-	No				1		
Bird	solitary sandpiper	Tringa solitaria	secure globally Least concern	-	Yes			✓			
Bird	American robin	Turdus migratorius	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	1		
Bird	eastern kingbird	Tyrannus tyrannus	S5B G5: secure (breeding) in NYS and	-	Yes			1			
Bird	warbling vireo	Vireo gilvus	globally S5B G5: secure (breeding) in NYS and	-	Yes			1	1		
Bird	mourning dove	Zenaida macroura	globally S5 G5: secure in NYS and globally	-	Yes			1			
Fish	brown bullhead	Ameiurus nebulosus	Least concern		Yes		✓				
- 4											
Fungi	morel	Morchella esculenta	-	-	Yes		✓				
Mammal	coyote	Canis latrans	Least concern	-	Yes		✓		<b>✓</b>		
Mammal	North American beaver	Castor canadensis	Least concern	-	Yes		✓				
Mammal	North American porcupine	Erethizon dorsatum	Least concern	-	Yes						🔨
Mammal	white-tailed deer	Odocoileus virginianus	Least concern	-	Yes	✓	<b>√</b>	✓	<b>.</b> .	<b>Y</b> .	1
Mammal	raccoon	Procyon lotor	Least concern	-	Yes		✓	,	<b>1</b>	<b>√</b>	
Mammal	eastern cottontail	Sylvilagus floridanus	Least concern	-	Yes			1	✓		
Plant	box elder	Acer negundo		FAC	Yes						✓
Plant	red maple	Acer rubrum		FAC	Yes		✓	✓	✓	✓	✓
Plant	silver maple	Acer saccharinum		FACW	Yes		✓	✓			
Plant	sugar maple	Acer saccharum	-	FACU	Yes				✓		
Plant	common yarrow	Achillea millefolium		FACU	Yes		<b>→</b>				
Plant	sweet flag	Acorus calamus		OBL	No		<b>→</b>	✓			
Plant	common agrimony	Agrimonia gryposepala		FACU	Yes			✓		✓	
Plant	Rhode Island bentgrass	Agrostis capillaris		FAC	No					✓	
Plant	redtop	Agrostis gigantea		FACW	No	✓	✓			✓	✓
Plant	creeping bent	Agrostis stolonifera		FACW	No	✓				✓	
Plant	American water plantain	Alisma subcordatum		OBL	Yes		✓				
Plant	speckled alder	Alnus incana		FACW	Yes			✓			
Plant	New York fern	Amauropelta noveboracens	· -	FAC	Yes			✓			
Plant	common ragweed	Ambrosia artemisiifolia		FACU	Yes			✓		✓	
Plant	downy serviceberry	Amelanchier arborea	-	FACU	Yes		✓				
Plant	hog peanut	Amphicarpaea bracteata	-	FAC	Yes		✓				
				170	163						
Plant	Canada anemone	Anemone canadensis	-	FACW	Yes		✓				
Plant	Canada anemone sweet vernal grass	Anemone canadensis Anthoxanthum odoratum				<b>√</b>		✓		<b>√</b>	
				FACW	Yes	<b>✓</b>	✓	1		<b>✓</b>	
Plant	sweet vernal grass	Anthoxanthum odoratum		FACW FACU	Yes No	<b>✓</b>	<b>√</b>	<b>√</b>			
Plant Plant	sweet vernal grass Indian hemp	Anthoxanthum odoratum  Apocynum cannabinum		FACU FAC	Yes No Yes	<b>✓</b>	✓	1			<b>✓</b>
Plant Plant Plant	sweet vernal grass Indian hemp swamp milkweed	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata		FACU FAC OBL	Yes No Yes Yes	<b>✓</b>	<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>✓</b>
Plant Plant Plant Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca		FACW FACU FAC OBL UPL	Yes No Yes Yes Yes	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>		<b>✓</b>
Plant Plant Plant Plant Plant Plant Plant Plant Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua		FACW FACU FAC OBL UPL FAC FAC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes Yes	<b>✓</b>	<b>√</b>	√ √ √	<b>✓</b>	✓ ✓ ✓	·
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devit's beggar ticks	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa		FACW FACU FAC OBL UPL FAC FAC	Yes No Yes	<b>✓</b>	<b>√</b>	✓ ✓ ✓	<b>*</b>	<b>√</b>	<i>y</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus		FACW FACU FAC OBL UPL FAC FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No	<b>✓</b>	<i>V V</i>	√ √ √	· ·	✓ ✓ ✓	<i>y</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis	· · · · · · · · · · · · · · · · · · ·	FACW FACU FAC OBL UPL FAC FAC OBL FAC FAC OBL	Yes No Yes Yes Yes Yes Yes Yes No No	✓ ————————————————————————————————————	<i>'</i>	✓ ✓ ✓	· ·	✓ ✓ ✓	<i>'</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda		FACW FACU FAC OBL UPL FAC OBL FAC FAC FAC OBL FACW - FACW - FAC	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes	<b>✓</b>	<i>V V</i>	✓ ✓ ✓ ✓ ✓	· ·	✓ ✓ ✓	<i>V</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yetlow birch gray birch nodding beggar ticks devit's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias yriaca Betula alieghaniensis Betula populifolia Bidens cemua Bidens cemua Bromus commutatus Bromus inermis Carex blanda Carex comosa	· · · · · · · · · · · · · · · · · · ·	FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FACW OBL FACW OBL FACC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes Yes	<b>V</b>	<i>V V V V V V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<i>\</i>	✓ ✓ ✓	<i>✓</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alteghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita		FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FAC OBL OBL OBL OBL OBL OBL	Yes No Yes	<b>V</b>	<i>'</i>	\( \frac{1}{2} \)	<i>V</i>	✓ ✓ ✓	<b>V</b>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava		FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FAC OBL OBL OBL OBL OBL OBL	Yes No Yes	<b>V</b>	<i>V V V V V V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<b>V</b>	✓ ✓ ✓	<i>✓</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yeltow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima		FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FACW OBL GACW OBL FACW FACW FACW FACW FACW FACW FACW FACW	Yes No Yes	✓ ————————————————————————————————————	<i>V V V V V V V V V V</i>	\( \frac{1}{2} \)	<b>V</b>	✓ ✓ ✓	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris		FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FACW OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL OBL	Yes No Yes	✓ ————————————————————————————————————	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	✓	· · · · · · · · · · · · · · · · · · ·	<i>'</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris Carex lacustris Carex intumescens		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL OBL OBL FACU OBL FACU OBL	Yes No Yes	✓ ————————————————————————————————————	\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)	✓	✓ ✓ ✓	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex landa Carex comosa Carex crinita Carex flava Carex flava Carex flava Carex lacustris Carex intumescens Carex lupulina		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL	Yes No Yes	✓ ————————————————————————————————————	\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)	✓ ·	· · · · · · · · · · · · · · · · · · ·	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge take sedge bladder sedge hop sedge sallow sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias yriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex facustris Carex intumescens Carex tupulina Carex lurida		FACW FACU FAC OBL UPL FAC FAC OBL FACW - OBL FACW - FAC OBL OBL OBL OBL FACW OBL	Yes No Yes	✓ ————————————————————————————————————	\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)	✓ — — — — — — — — — — — — — — — — — — —	· · · · · · · · · · · · · · · · · · ·	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge bladder sedge bladder sedge hop sedge sallow sedge troublesome sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens cemua Bidens comua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex fiava Carex gracillima Carex facsitima Carex futurida Carex turida Carex turida Carex Lurida Carex Lurida Carex Lurida Carex Lurida		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes	✓ ————————————————————————————————————	\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)	✓ — — — — — — — — — — — — — — — — — — —	✓ ✓ ✓	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alteghaniensis Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex gracillima Carex intumescens Carex tupulina Carex turida Carex notesta Carex pseudocyperus		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes	<b>Y</b>	\frac{1}{\sqrt{1}}	/ / / / / / / / / / / / / / / / / / /	✓	· · · · · · · · · · · · · · · · · · ·	✓ ·
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bidens rondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex qualitima Carex flava Carex mutumescens Carex luturida Carex notesta Carex pseudocyperus Carex scoparia		FACW FACU FAC OBL UPL FAC FAC OBL FAC OBL OBL FACW OBL OBL OBL OBL OBL FACU OBL FACU OBL FACU OBL FACU OBL FACU OBL FACW OBL FACW OBL FACW OBL FACW OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes	<b>Y</b>	\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)	<i>Y</i>	V V V V V V V V V V V V V V V V V V V	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge bladder sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex lupulina Carex unida Carex molesta Carex pseudocyperus Carex soparia Carex soparia Carex stipata		FACW FACU FAC OBL UPL FAC FAC OBL FAC OBL FACW	Yes No Yes		\frac{1}{\sqrt{1}}	/ / / / / / / / / / / / / / / / / / /		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge bladder sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex luqulina Carex luqulina Carex noesta Carex pseudocyperus Carex soparia Carex stipata Carex stipata Carex stipata Carex stipata		FACW FACU FAC OBL UPL FAC FAC OBL FAC OBL FACW OBL OBL OBL OBL OBL FACU OBL FACU OBL FACW OBL FACW OBL FACW OBL OBL	Yes No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)	· · · · · · · · · · · · · · · · · · ·	V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge fox sedge fox sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex tupulina Carex lurida Carex nesses Carex tupulina Carex pseudocyperus Carex stipata Carex stipata Carex stipata Carex stipata Carex stricta Carex vulpinoidea		FACW FACU FAC OBL UPL FAC OBL FACW FAC OBL OBL OBL OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL	Yes No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	· · · · · · · · · · · · · · · · · · ·
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch modding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge lake sedge lake sedge bladder sedge bladder sedge troublesome sedge troublesome sedge cyperus-like sedge tussock sedge tussock sedge tussock sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias yriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex lacustris Carex lurida Carex molesta Carex comosa Carex curida Carex peeudocyperus Carex scoparia Carex stricta		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW  - OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes		/ / / / /	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge bladder sedge troublesome sedge cyperus-like sedge broom sedge swil-fruited sedge tussock sedge fox sedge ironwood bitternut hickory	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias yriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex fracilitma Carex fracilitma Carex fracilitma Carex lauva Carex urida Carex urida Carex paediotyperus Carex paediotyperus Carex scoparia Carex stricta Carex stricta Carex stricta Carex upipinoidea Carey cordiformis		FACW FACU FAC OBL UPL FAC OBL FACW OBL FACW OBL	Yes No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devit's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge bladder sedge bladder sedge bladder sedge troublesome sedge cyperus-like sedge brom sedge awl-fruited sedge lussock sedge fox sedge ironwood bitternut hickory shagbark hickory	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens cemua Bidens comua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex faccinita Carex funda Carex tupulina Carex tupulina Carex tupulina Carex soparia Carex stipata Carex stipata Carex stipata Carex stipata Carex vulpinoidea Carex vulpinoidea Carpinus caroliniana Carya cordiformis Carya cordiformis Carya cordiformis		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL OBL OBL OBL FACW OBL OBL OBL OBL FACW OBL OBL FACW OBL OBL FACW OBL OBL FACW OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yetlow birch gray birch nodding beggar ticks devit's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yetlow sedge graceful sedge lake sedge bladder sedge hop sedge saltow sedge troublesome sedge cyperus-like sedge broom sedge awt-fruited sedge tussock sedge fox sedge ironwood bitternut hickory shagbark hickory buttonbush	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias yriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bidens commutatus Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex gracillima Carex lava Carex pracillima Carex lupulina Carex notesta Carex sepseudocyperus Carex stipata Carex stipata Carex stipata Carex stricta Carex upulinoidea Carya cordiformis Carya ovata Carya ovata Cephalanthus occidentalis		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{4} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge awt-fruited sedge tussock sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex gracillima Carex turida Carex turida Carex notesta Carex supulina Carex care stricta Carex care stricta Carex caroliniana Carya cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes No No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks davil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge toublesome sedge cyperus-like sedge broom sedge satlow sedge troublesome sedge troublesome sedge troublesome sedge broom sedge awt-fruited sedge tussock sedge fox sedge itronwood bitternut hickory shagbark hickory buttonbush white turtle head lamb's quarters	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula populifolia Bidens cernua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex gracillima Carex tacustris Carex intumescens Carex turida Carex motesta Carex supulina Carex stricta Carex stricta Carex stricta Carex vulpinoidea Carpy covata Carya ovata Cephalanthus occidentalis Chelone glabra Chenopodium album		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL FACU OBL OBL FACU OBL OBL FACU OBL OBL FACW OBL	Yes No Yes Yes Yes Yes Yes No No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{4} \) \( \frac{1}{		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge awt-fruited sedge tussock sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex gracillima Carex turida Carex turida Carex notesta Carex supulina Carex care stricta Carex care stricta Carex caroliniana Carya cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes No No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{4} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>

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Plant	silky dogwood	Cornus amomum	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Plant	gray dogwood	Cornus racemosa	-	FAC	Yes		✓	✓	✓		✓
Plant	red-osier dogwood	Cornus sericea	-	FACW	Yes						1
Plant	hawthorn	Crataegus sp.	-	-	-		<b>√</b>				1
Plank	common yellow nut sedge	Cyperus esculentus		FACW	Yes			<b>/</b>		<b>✓</b>	
Plant				FACW	Yes			· /		· /	
	false yellow nut sedge	Cyperus strigosus				1				<del></del>	_
Plant	orchard grass	Dactylis glomerata	-	FACU	No	_ v				v	
Plant	wild carrot	Daucus carota	-	UPL	No		✓				
Plant	water willow	Decodon verticillatus	-	OBL	Yes			✓			✓
Plant	tufted hair grass	Deschampsia cespitosa	-	-	Yes					✓	
Plant	digit grass	Digitaria eriantha	-	-	No		✓				
Plant	smooth crab grass	Digitaria ischaemum		FACU	No			✓			
Plant	tall flat-topped white aster	Doellingeria umbellata		FACW	Yes					✓	
			-				<b>✓</b>			<u> </u>	1
Plant	common wood fern	Dryopteris intermedia	-	FAC	Yes						· •
Plant	autumn olive	Elaeagnus umbellata	-	-	No		✓				
Plant	blunt spike rush	Eleocharis obtusa	-	OBL	Yes		✓			✓	<b>✓</b>
Plant	fringed wilowherb	Epilobium ciliatum	-	FACW	Yes					✓	
Plant	purpleleaf willowherb	Epilobium coloratum	-	OBL	Yes		<b>√</b>	<b>✓</b>		✓	
Plant	field horsestail	Equisetum arvense	-	FAC	Yes				✓	<b>√</b>	1
Plant	scouringrush horsetail	Equisetum hyemale		FAC	Yes	<b>√</b>			<b>√</b>		
			<u> </u>	FACU		,		1			
Plant	annual daisy fleabane	Erigeron annuus	-		Yes			<b>✓</b>			
Plant	small daisy fleabane	Erigeron strigosus	-	FACU	Yes			V			
Plant	yellow trout lily	Erythronium americanum	-	-	Yes		✓		✓		
Plant	boneset	Eupatorium perfoliatum	-	FACW	Yes			✓		✓	✓
Plant	common flat-topped goldenrod	Euthamia graminifolia	-	FAC	Yes					✓	
Plant	spotted Joe Pye weed	Eutrochium maculatum	-	OBL	Yes	✓					
Plant	American beech	Fagus grandifolia		FACU	Yes				✓	<b>√</b>	
Plant	common wild strawberry	Fragaria virginiana		FACU	Yes		✓			· /	<b>1</b>
Plant				FAC	No No		<u> </u>			·	+ -
	glossy buckthorn	Frangula alnus	<u>-</u>								<del>                                     </del>
Plant	white ash	Fraxinus americana	-	FACU	Yes	<b>—</b> ,	<b>√</b>	<b></b>		,	<b>✓</b>
Plant	green ash	Fraxinus pennsylvanica	-	FACW	Yes	<b>√</b>	✓	✓	✓	<b>√</b>	✓
Plant	hedge bedstraw	Galium album	-	FACU	Yes	✓		✓		✓	
Plant	common marsh bedstraw	Galium palustre	-	OBL	Yes		✓			✓	
Plant	yellow avens	Geum aleppicum	-	FAC	Yes		✓	✓			
Plant	white avens	Geum canadense	-	FAC	Yes			✓			1
Plant	town avens	Geum urbanum		-	No		<b>√</b>	1			
	town avens	Geuin urbanum			INU		•				
Disease	A	04		OBL	NI-			./		./	
Plant	American manna grass	Glyceria maxima	-	OBL	No			✓		<b>√</b>	
Plant Plant	American manna grass fowl manna grass	Glyceria maxima Glyceria striata	-	OBL OBL	No Yes		✓	✓		✓	
						<b>✓</b>	<b>√</b>		<b>√</b>		<b>√</b>
Plant	fowl manna grass	Glyceria striata	-	OBL	Yes	<b>√</b>		✓	<b>√</b>	✓	1
Plant Plant	fowl manna grass soybean	Glyceria striata Glycine max	-	OBL -	Yes -	✓ ✓		<b>√</b>	<b>✓</b>	✓	<b>✓</b>
Plant Plant Plant Plant	fowl manna grass soybean marsh cubweed dame's rocket	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis	-	OBL - FAC	Yes - No No			<b>√</b>	<b>√</b>	✓	<b>√</b>
Plant Plant Plant Plant Plant Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae	-	OBL - FAC FACU OBL	Yes - No No			√ √ √		✓	<b>√</b>
Plant Plant Plant Plant Plant Plant Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium		OBL - FAC FACU OBL -	Yes - No No No No			√ √ √	✓ ✓	✓	
Plant Plant Plant Plant Plant Plant Plant Plant Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp.		OBL - FAC FACU OBL	Yes - No No No No	<b>✓</b>	✓	<i>* * * *</i>		<b>√</b>	✓ ·
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium		OBL - FAC FACU OBL FACW	Yes - No No No No Yes		<b>√</b>	√ √ √		✓	
Plant Plant Plant Plant Plant Plant Plant Plant Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp.		OBL - FAC FACU OBL	Yes - No No No No	✓ ✓	✓ ✓ ✓	<i>y y y y y y y y y y</i>	<b>✓</b>	✓ ✓	<b>√</b>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis	- - - - - -	OBL - FAC FACU OBL FACW	Yes - No No No No Yes	<b>✓</b>	<b>√</b>	<i>* * * *</i>		<b>√</b>	
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor	- - - - - -	OBL - FAC FACU OBL - FACW OBL	Yes - No No No No Yes - Yes	✓ ✓	✓ ✓ ✓	<i>y y y y y y y y y y</i>	<b>✓</b>	✓ ✓	<b>√</b>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis	- - - - - -	OBL - FAC FACU OBL - FACW OBL OBL OBL	Yes - No No No No No Yes Yes Yes	✓ ✓	✓ ✓ ✓	\frac{1}{4}	<b>✓</b>	✓ ✓	· ·
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass	Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides	- - - - - -	OBL - FACU OBL - FACW OBL OBL OBL OBL OBL	Yes - No No No No Yes Yes Yes Yes Yes	✓ ✓	✓ ✓ ✓	\frac{1}{4}	<b>✓</b>	✓ ✓	· ·
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin	- - - - - - - - - -	OBL - FACU OBL - FACW OBL OBL OBL FACC OBL FACCO OBL FACCO OBL	Yes - No No No No No - Yes Yes Yes Yes Yes Yes Yes	✓ ✓	✓ ✓ ✓	\frac{1}{\sqrt{1}}	<b>✓</b>	<i>y y y y y</i>	· ·
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian tive forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iriis versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera	-	OBL - FACU OBL - FACW OBL OBL OBL FACW OBL FACCOBL FACCOBL FACCOBL	Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes	✓ ✓	✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	✓ ✓	· ·
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian tive forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus etnuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata		OBL - FACU OBL - FACW OBL OBL FACW OBL FACC OBL FACC OBL FACC FACW FACU FACU	Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes	✓ ✓	✓ ✓ ✓	\frac{1}{\sqrt{1}}	<b>✓</b>	<i>y y y y y</i>	<i>*</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus telusis Liersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica	-	OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FACC OBL FACC FACW FACU FACW FACU FACU	Yes - No No No No No - Yes	✓ ✓	✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>y y y y y</i>	· ·
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian tive forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus etnuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACW FACU FACU FACU	Yes - No No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes No	✓ ✓	<i>y y y y y</i>	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>y y y y y</i>	<i>*</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus telusis Liersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica		OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FACC OBL FACC FACW FACU FACW FACU FACU	Yes - No No No No No - Yes	✓ ✓	✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>y y y y y</i>	<i>*</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hydrocharis sepansis Iris versicotor Juncus effusus Juncus effusus Juncus effusus Luncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipilera Lobelia inflata Lobelia siphilitica Lolium arundinace		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACW FACU FACU FACU	Yes - No No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes No	✓ ✓	<i>y y y y y</i>	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>y y y y y</i>	<i>*</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle	Glyceria striata  Glycine max  Gnaphalium uliginosum  Hesperis matronalis  Hydrocharis morsus-ranae  Impatiens capensis  Iris versicolor  Juncus effusus  Juncus effusus  Juncus effusus  Juncus effusus  Lincus aproides  Lindera benzoin  Liriodendron tulipifera  Lobelia inflata  Lobelia siphilitica  Lolium arundinace  Lonicera japonica		OBL - FACU OBL - FACW OBL OBL FAC OBL FACW FACW FACU FACU FACU FACU FACU FACU	Yes - No No No No Yes Yes Yes Yes Yes Yes Yes No No No No No No Yes	<i>'</i>	<i>V V V</i>	* * * * * * * * * * * * * * * * * * *	✓ ✓	\frac{1}{4}	<i>*</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobilum arundinace Lonicera japonica Lonicera spp. Lonicera tatarica		OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes No	<i>✓ ✓ ✓ ✓ ✓</i>	/ / / /	* * * * * * * * * * * * * * * * * * *	✓ ✓	\frac{1}{4}	<i>V V V V</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lolium arundinace Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes  No No No No No - Yes Yes Yes Yes Yes Yes You No	<i>'</i>	/ / / /	* * * * * * * * * * * * * * * * * * *	✓ ✓	<i>*</i> **  **  **  **  **  **  **  **  **	<i>V V V V</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lunicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus		OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes  No No No No No Yes Yes Yes Yes Yes Yes Yes Yes No	\(  \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	<i>✓</i>	√ √ √ √ √	<i>V V V V</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water pursiane water whorehound moneywort	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Ilimpatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipiflera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lunicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes  No No No No No Yes	\(  \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	√ √ √ √ √	<i>V V V V</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle mater honeysuckle water purslane water whorehound moneywort purple loosestrife	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iriis versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia siphilitica Louium arundinace Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes  No No No No No Yes	\(  \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	✓ ✓ ✓ ✓	√ √ √ √ √	<i>V V V V</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water pursiane water whorehound moneywort	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Ilimpatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipiflera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lunicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes  No No No No No Yes	\(  \)	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	√ √ √ √ √	<i>V V V V</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle mater honeysuckle water purslane water whorehound moneywort purple loosestrife	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iriis versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia siphilitica Louium arundinace Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes  No No No No No Yes	\(  \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	✓ ✓ ✓ ✓	√ √ √ √ √	<i>*</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honessuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iriis versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria		OBL - FACU OBL - FACW OBL - FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\(  \)	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	√ √ √ √ √	<i>V V V V</i>
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum p. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipitera Lobelia inflata Lobelia inflata Lobelia siphilitica Lonicera japonica Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\(  \)	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	√ √ √ √ √	<i>*</i> **  **  **  **  **  **  **  **  **
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia infilata Lobelia infilata Lobelia infilata Loilium arundinace Lunicera japonica Lunicera tatarica Ludwigia palustris Lycopus americanus Lystmum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\(  \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>*</i> **  **  **  **  **  **  **  **  **
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica		OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	<i>y y y y y y y y</i>	\frac{1}{\sqrt{1}}	· · · · · · · · · · · · · · · · · · ·
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Ilmpatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis		OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACW FACU FACW FACU FACU FACU FACU OBL OBL FACW FACU FACU OBL OBL FACW FACU OBL OBL FACW FACU FACU FACU FACU FACW OBL FACW FACU FACW FACW FACW FACW FACW FACW FACW FACW	Yes	\(  \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum ps. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia japhilitica Lolium arundinace Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Malanthemum canadense Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis		OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	<i>y y y y y y y y</i>	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Ilmpatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	<i>y y y y y y y y</i>	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum ps. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia japhilitica Lolium arundinace Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Malanthemum canadense Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis		OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	<i>y y y y y y y y</i>	\frac{1}{\sqrt{1}}	· · · · · · · · · · · · · · · · · · ·
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern cinnamon fern	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Ilimatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia inflata Louium arundinace Lonicera japonica Lunicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Mateuccia struthiopteris Meliotus albus Mimutus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmundastrum cinnamome		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	<i>y y y y y y y y</i>	\frac{1}{\sqrt{1}}	· · · · · · · · · · · · · · · · · · ·
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian tive forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle Tatarian honeysuckle water pursiane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern cinnamon fern yellow wood sorrel	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Ilinatine scapensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia siphilitica Lobelia siphilitica Lonicera japonica Lonicera japonica Ludwigia palustris Lycopus americanus Lystmachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmunda regalis Osmunda regalis Osmunda regalis Osmundastrum cinnamomei Oxalis dillenii		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\( \frac{1}{4} \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	<i>y y y y y y y y</i>	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Altegheny monkey flower blackgum sensitive fern royal fern cinnamon fern yellow wood sorrel fall panic grass Virginia creeper	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum p. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipitera Lobelia inflata Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda ergalis Osmundastrum cinnamome Oxalis dillenii Panicum dichotomiflorum Parthenocissus quinquefolia		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	Yes	\( \frac{1}{4} \)	/ / / / /	\frac{1}{\sqrt{1}}	<i>y y y y y y y y</i>	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *
Plant	fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern cinnamon fern yellow wood sorrel fall panic grass	Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onnoclea sensibilis Osmunda regalis Osmundastrum cinnamome Oxalis dillenii Panicum dichotomiflorum		OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU OBL FACU FACU OBL FACU FACU OBL FACW OBL FACU OBL FACW OBL FACW OBL FACW OBL FACW FACU FACW FACU FACW FACU FACW FACW FACW FACW FACW FACW FACW OBL	Yes	\( \frac{1}{4} \)	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	<i>y y y y y y y y</i>	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *

Part												
Part   Per	Plant	lady's thumb	Persicaria maculosa	<del>-</del>	FAC	No			1			
Part   Contract property				-					1		1	
Part				-			_					1
Part									•			
Transcript							1		1		,	
Page				-					1			
Proc.   March   Marc	Plant			-	-			✓	1	✓		
Fig. 12   Fig. 20   Fig.	Plant		Picea rubens	-	FACU	Yes		✓				
Part	Plant	white pine	Pinus strobus	-	FACU	Yes		✓		✓		
Part   Seminar Depart   Processing   Processing   Process   Proc	Plant	English plantain	Plantago lanceolata	=	FACU	No	✓	✓		✓	<b>√</b>	
Part	Plant	common plantain	Plantago major	-	FACU	No	✓			✓	<b>✓</b>	✓
Part	Plant	northern tubercled orchid	Platanthera flava	-	FACW	Yes			✓			
Park   Commont Control to Be   Park	Plant	annual blue grass	Poa annua	-	FACU	No				✓		
Part	Plant	wood bluegrass	Poa nemoralias	-	FACU	No			✓			
Part   Canter Continued   Papula Cattones   Pa		common Kentucky blue grass	Poa pratensis	-				✓			✓	<b>✓</b>
Part   Control Companies   Paper of P				-					<b>✓</b>			
Next									,			
Designate Common							<b>-</b>	· ·	<b>✓</b>	✓	✓	✓
Part								<b>*</b>				
Decid   Decide Services   Prices   Pr				-				./			•	
Part   December   Predeferm assistance   Part   P				-					./		./	<del>                                     </del>
Part   Marie Sear				-						_	•	<b>-</b>
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PAGE   Complete planterup   Abanceciale are   PAGE   No								· ·	/			<del>                                     </del>
PAGE   Company Bustinesian   PAGE				-			1		,		1	
Part				<u> </u>			•					
Part							1			<b>✓</b>	•	
Part   Selection				-			·					
Part				-				✓				
Part			Rhamnus cathartica	-	FAC			✓	1		✓	<b>✓</b>
Part				-				1				
Past	Plant		Rosa multiflora	-	FACU	No	✓	1	✓	✓	✓	✓
Public   Sussemp dent-beny	Plant	swamp rose	Rosa palustris	-	OBL	Yes				✓		<b>✓</b>
Paint   red raspberry   Rubou pickecenes   FACU   No	Plant	common blackberry	Rubus allegheniensis	-	FACU	Yes		✓	1			
Paint	Plant	swamp dewberry	Rubus hispidus	-	FACW	Yes			✓			
Paint	Plant	red raspberry	Rubus ideaus	ē	FACU	No		<b>✓</b>	✓			
Paint	Plant	dwarf raspberry	Rubus pubescens	-	FACW	Yes			✓			
Paint   Droud-leaved dock   Rumer cobusifolius   FAC   No	Plant	sheep sorrel	Rumex acetosella	-	FACU	No						
Paint	Plant	curly dock	Rumex crispus	-	FAC	No	✓		✓			✓
Paint   Deb0's willow   Salic debblina   FACW   Yes		broad-leaved dock	Rumex obtusifolius	-		No		✓			<b>✓</b>	
Paint   Dissy willow   Salik discolor   FACW   Yes	Plant	swamp dock		-								
Paint   Diack willow   Salk rigin   OBL   Yes   ✓				<u> </u>					·			
Plant   Dasket willow   Salix purpurea   FACW   No				-					✓	✓		
Plant common elderberry Sambucus nigra - FACW Yes				-				<b>*</b>				
Plant   Lizar's tail   Saiurus cernius   OBL   Yes   ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓				-					· ·			
Plant         soft-stemmed bulrush         Schoenoplactus tabernaemc         -         OBL         Yes         ✓         ✓         Plant         daf-green bulrush         Scirpus atrovirens         -         OBL         Yes         ✓				-				./		<b>-</b>		<del>                                     </del>
Plant dark-green bulrush Scirpus atrovirens - OBL Yes				-				<b>Y</b>	./			
Plant woolgrass Scirpus cyperinus - OBL Yes												-
Plant mad dog skullcap Scutellaria lateriflora - OBL Yes				·					7		1	<b>✓</b>
Plant         horse nettle         Solanum carolinense         FACU         Yes         ✓           Plant         bitter-sweet nightshade         Solanum dulcamara         FAC         No         ✓         ✓           Plant         tall goldenrod         Solidago stissima         - FACU         Yes         ✓         ✓           Plant         Canada goldenrod         Solidago stigantea         - FACU         Yes         ✓         ✓         ✓           Plant         swamp goldenrod         Solidago stigantea         - FACW         Yes         ✓				-					1	•	•	
Plant bitter-sweet nightshade Solanum dulcamara - FAC No									,		1	
Plant tall goldenrod Solidago attissima - FACU Yes   Plant Canada goldenrod Solidago canadensis - FACU Yes   Plant swamp goldenrod Solidago canadensis - FACU Yes   Plant common winkle-leaved goldenr Solidago rigosa - FAC Yes   Plant spiny-leaved sow thistle Sonchus asper - FACU No   Plant green-fruited bur-reed Sparganium chlorocarpum - OBL Yes   Plant green-fruited bur-reed Sparganium chlorocarpum - OBL Yes   Plant grass-leaved stichwort Stellaria graminea - UPL No   Plant white panicle aster Symphyotrichum lanceolatu - FACW Yes   Plant calico aster Symphyotrichum lanceolatu - FACW Yes   Plant new england aster Symphyotrichum novae-angl - FACW Yes   Plant purple-stemmed aster Symphyotrichum novae-angl - FACW Yes   Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes   Plant common dandelion Taraxacum officinale - FACU No   Plant marsh fern Thelypteris palustris - FACU Yes   Plant American basswood Tilia americana - FACU Yes   Plant poison lvy Toxicodendron radicans - FACU No   Plant red clover Trifolium pratense - FACU No   Plant white clover Trifolium pratense - FACU No   Plant white clover Trifolium repens - FACU No   Plant								<b>✓</b>	1		•	
Plant Canada goldenrod Solidago canadensis - FACU Yes												<b>✓</b>
Plant swamp goldenrod Solidago gigantea - FACW Yes							1		1		1	
Plant common wrinkle-leaved golden Solidago rugosa - FAC Yes								✓				1
Plant spiny-leaved sow thistle Sonchus asper - FACU No Plant green-fruited bur-reed Sparganium chlorocarpum - OBL Yes Plant grass-leaved stitchwort Stellaria graminea - UPL No Plant white panicle aster Symphyotrichum lanceolatu - FACW Yes Plant calico aster Symphyotrichum lateriflorun - FAC Yes Plant new england aster Symphyotrichum novae-angl - FACW Yes Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes Plant skunk cabbage Symplocarpus foetidus - FACU No Plant common dandelion Taraxacum officinale - FACU No Plant marsh fern Thelypteris palustris - FACW Yes Plant American basswood Tilia americana - FACU Yes Plant poison lyy Toxicodendron radicans - FACU No Plant red clover Trifolium pratense - FACU No Plant white clover Trifolium repens - FACU No PACU NO				-			<b>✓</b>		<b>√</b>			<b>√</b>
Plant green-fruited bur-reed Sparganium chlorocarpum - OBL Yes				-						✓		
Plant grass-leaved stitchwort Stellaria graminea - UPL No Plant white panicle aster Symphyotrichum lateriflorun - FACW Yes Plant calico aster Symphyotrichum lateriflorun - FAC Yes Plant new england aster Symphyotrichum novae-angl - FACW Yes Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes Plant skunk cabbage Symphocarpus foetidus - OBL Yes Plant common dandelion Taraxacum officinale - FACW No Plant marsh fern Thelypteris palustris - FACW Yes Plant American basswood Tilia americana - FACU Yes Plant poison ivy Toxicodendron radicans - FACU No Plant red clover Trifolium pratense - FACU No Plant white clover Trifolium repens - FACU No PACU NO PAC				-								
Plant white panicle aster Symphyotrichum lanceolatu - FACW Yes		grass-leaved stitchwort	Stellaria graminea	-							✓	
Plant new england aster Symphyotrichum novae-angl - FACW Yes - Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes Plant skunk cabbage Symplocarpus foetidus - OBL Yes Plant common dandelion Taraxacum officinale - FACU No	Plant	white panicle aster		-	FACW	Yes			✓		✓	✓
Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes   Plant skunk cabbage Symplocarpus foetidus - OBL Yes   Plant common dandelion Taraxacum officinale - FACU No   Plant marsh fern Thelypteris palustris - FACW Yes   Plant American basswood Tilia americana - FACU Yes   Plant poison ivy Toxicodendron radicans - FAC Yes   Plant red clover Trifolium pratense - FACU No   Plant white clover Trifolium repens - FACU No   PACU Yes   PACU No   PACU No   PACU Yes   PACU No    Plant	calico aster	Symphyotrichum lateriflorum	-	FAC	Yes		✓			1		
Plant         skunk cabbage         Symplocarpus foetidus         -         OBL         Yes         ✓	Plant	new england aster	Symphyotrichum novae-angl	-	FACW	Yes						✓
Plant         common dandelion         Taraxacum officinale         -         FACU         No         ✓         ✓         ✓         ✓           Plant         marsh fern         Thelypteris palustris         -         FACW         Yes         ✓         ✓           Plant         American basswood         Tilia americana         -         FACU         Yes         ✓         ✓         ✓           Plant         poison ky         Toxicodendron radicans         -         FAC         Yes         ✓         ✓         ✓         ✓         ✓           Plant         red clover         Trifolium pratense         -         FACU         No         ✓         ✓         ✓         ✓           Plant         white clover         Trifolium repens         -         FACU         No         ✓         ✓         ✓         ✓         ✓	Plant	purple-stemmed aster	Symphyotrichum puniceum	-	OBL	Yes	1		1		✓	✓
Plant         marsh fern         Thelypteris palustris         -         FACW         Yes         ✓           Plant         American basswood         Tilia americana         -         FACU         Yes         ✓         ✓           Plant         poison ky         Toxicodendron radicans         -         FAC         Yes         ✓	Plant	skunk cabbage	Symplocarpus foetidus		OBL	Yes				✓		
Plant         American basswood         Tilia americana         -         FACU         Yes         ✓         ✓         ✓         Plant         poison ivy         Toxicodendron radicans         -         FAC         Yes         ✓	Plant	common dandelion	Taraxacum officinale	-	FACU	No	✓	· ·	✓	✓	✓	✓
Plant         poison ivy         Toxicodendron radicans         -         FAC         Yes         ✓         ✓         ✓         ✓         ✓           Plant         red clover         Trifolium pratense         -         FACU         No         ✓         ✓         ✓         ✓           Plant         white clover         Trifolium repens         -         FACU         No         ✓         ✓         ✓	Plant	marsh fern	Thelypteris palustris	-				✓				
Plant         red clover         Trifolium pratense         -         FACU         No         ✓         ✓         ✓           Plant         white clover         Trifolium repens         -         FACU         No         ✓         ✓         ✓         ✓				-								
Plant white clover Trifolium repens - FACU No ✓ ✓ •				-				✓	✓			<b>√</b>
				-						✓		<b>✓</b>
Plant red trillium Trillium erectum - FACU Yes ✓			· ·	-			<b>✓</b>	✓		<u> </u>	✓	✓
	Plant	red trillium	Trillium erectum	-	FACU	Yes				✓		

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



# United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9385 Phone: (607) 753-9334 Fax: (607) 753-9699

Phone: (607) 753-9334 Fax: (607) 753-968 Email Address: <u>fw5es\_nyfo@fws.gov</u>

In Reply Refer To: 04/11/2025 15:39:33 UTC

Project code: 2025-0082147

Project Name: Micron Stream and Wetland Mitigation

Federal Nexus: yes

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

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

Dear Kirsten Gerhardt:

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

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

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

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

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

SpeciesListing StatusDeterminationIndiana Bat (Myotis sodalis)EndangeredMay affect

<u>Consultation with the Service is not complete.</u> Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of "May Affect". Please contact our New York Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Bog Buck Moth *Hemileuca maia menyanthevora (=H. iroquois)* Endangered
- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat Perimyotis subflavus Proposed Endangered

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference the Project Code associated with this Project.

## **Action Description**

You provided to IPaC the following name and description for the subject Action.

#### 1. Name

Micron Stream and Wetland Mitigation

## 2. Description

The following description was provided for the project 'Micron Stream and Wetland Mitigation':

This is a stream and wetland mitigation project in which restoration will occur across six sites. On average, one site will be constructed per year, making the construction period a total of six years approximately. All six sites are located in Hastings or Schroeppel in Oswego County, NY. Two of the sites will undergo stream restoration, one for a degraded portion of Buxton Creek, the other for a degraded portion of Fish Creek. Here, the stream restoration will be integrated with wetland restoration to create a functioning stream/wetland complex. The remaining four sites will be for wetland restoration only.

The approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@43.29530445">https://www.google.com/maps/@43.29530445</a>,-76.2730783955508,14z



# **QUALIFICATION INTERVIEW**

Project code: 2025-0082147

- As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?
   Yes
- 2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

**Note:** This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

- 4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project?

  No
- 5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

**Note:** If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

No

- 8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)? *No*
- 9. Is the lead federal action agency the Natural Resources Conservation Service?
- 10. Will the proposed project involve the use of herbicide where listed species are present? *Yes*

Project code: 2025-0082147

11. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

No

12. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

13. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

14. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

No

15. Will the proposed project affect wetlands where listed species are present?

This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

Yes

16. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

Yes

17. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?

Yes

18. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

No

19. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

No

20. Will the proposed project involve the removal of excess sediment or debris, dredging or instream gravel mining where listed species may be present?

No

21. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

**Note** New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

No

22. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

No

- 23. Will the proposed project involve blasting where listed species may be present? *No*
- 24. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

No

25. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

**Note**: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream. *Yes* 

26. Will the proposed project impact streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography?

Yes

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27. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

No

28. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

Yes

29. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

No

30. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?

## Automatically answered

No

31. [Semantic] Does the project intersect the Indiana bat AOI?

#### Automatically answered

Yes

32. Is the action area within 0.5 mile radius of any known hibernacula (caves or mines) openings or underground features?

**Note:** If you are unsure, contact the appropriate Ecological Services Field Office before continuing through the key.

No

33. Are trees present within the action area?

**Note:** If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter), answer "Yes". If you are unsure, answer "Yes." Or refer to Appendix A of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for definitions and an assessment form that will assist you in determining if suitable habitat is present within your project's action area. Suitable summer habitat for Indiana bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat

Yes

34. Is the action area within known occupied Indiana bat habitat? Known occupied Indiana bat habitat includes established conservation buffers (10-mile buffer around Phase 1 or Phase 2 hibernacula, 5-mile buffer around Phase 3 or Phase 4 hibernacula; 5-mile buffer around Indiana bat captures or detections; 2.5-mile buffer around known roosts).

Yes

35. [Semantic] Does the project intersect the Indiana bat critical habitat?

#### Automatically answered

No

36. [Semantic] Does the project intersect the candy darter critical habitat?

#### Automatically answered

No

37. [Semantic] Does the project intersect the diamond darter critical habitat?

#### Automatically answered

No

38. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?

#### **Automatically answered**

No

39. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

#### Automatically answered

No

40. Do you have any other documents that you want to include with this submission? *No* 

# **PROJECT QUESTIONNAIRE**

- 1. Approximately how many acres of trees would the proposed project remove? .1
- 2. Approximately how many total acres of disturbance are within the disturbance/ construction limits of the proposed project? 500
- 3. Briefly describe the habitat within the construction/disturbance limits of the project site. Active soybean fields and man-made agricultural drainages. Some existing wetlands of degraded quality that will ultimately be rehabilitated.

# **IPAC USER CONTACT INFORMATION**

Agency: The Wetland Trust, Inc.

Name: Kirsten Gerhardt Address: 4729 State Route 414

City: Burdett State: NY Zip: 14818

Email kirsten.gerhardt@gmail.com

Phone: 3028242336

# LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers



# United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9385 Phone: (607) 753-9334 Fax: (607) 753-9699

Email Address: <u>fw5es\_nyfo@fws.gov</u>

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.

Project code: 2025-0082147

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 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: <a href="https://www.google.com/maps/@43.29530445">https://www.google.com/maps/@43.29530445</a>,-76.2730783955508,14z



Counties: Oswego County, New York

# **ENDANGERED SPECIES ACT SPECIES**

Project code: 2025-0082147

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<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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## **MAMMALS**

**NAME STATUS** Indiana Bat Myotis sodalis Endangered 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 Northern Long-eared Bat Myotis septentrionalis Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 Tricolored Bat Perimyotis subflavus **Proposed** No critical habitat has been designated for this species. Endangered Species profile: https://ecos.fws.gov/ecp/species/10515 **INSECTS NAME STATUS** Bog Buck Moth Hemileuca maia menyanthevora (=H. iroquois) Endangered

Monarch Butterfly *Danaus plexippus* 

Proposed

There is **proposed** critical habitat for this species. Your location does not overlap the critical

Threatened

habitat.

Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8023">https://ecos.fws.gov/ecp/species/8023</a>

# **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.

Project code: 2025-0082147 04/11/2025 15:07:39 UTC

# **IPAC USER CONTACT INFORMATION**

Agency: The Wetland Trust, Inc.

Name: Kirsten Gerhardt Address: 4729 State Route 414

City: Burdett State: NY Zip: 14818

Email kirsten.gerhardt@gmail.com

Phone: 3028242336

# Appendix E.

# Fish Creek Invasive Species Management Plan (ISMP)

Oswego County, New York

PREPARED BY:

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

www.thewetlandtrust.org

May 2025

## 1. Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Mitigation (PRM) package on behalf of Micron NY Semiconductor Manufacturing, LLC, is proposing to develop stream and wetland mitigation acres/credits at their Fish Creek Site in the Town of Schroeppel, Oswego County, New York. The Mitigation Plan (Plan) at Fish Creek will contribute toward the fulfillment of required stream and wetland mitigation for impacts associated with the Micron Semiconductor Fabrication Campus project (Proposed Development) in the town of Clay, Onondaga County, New York. This Plan will incorporate wetland Re-establishment, Rehabilitation, Enhancement, Preservation, and stream restoration which involves disturbance to soil during grading activities. As part of the Performance Standards for this Mitigation Plan, invasive species-specific standards must be met. The following is the Invasive Species Management Plan (ISMP) for this Site. It contains the practices and procedures TWT proposes to implement to control the presence and spread of invasive species.

This ISMP will improve ecological outcomes by using a combination of mechanical, biological, cultural, and chemical controls to manage invasive species while minimizing environmental disturbance. By prioritizing early detection, habitat restoration, and targeted interventions, this ISMP is designed to reduce reliance on herbicides, lower the risk of non-target impacts, and promote the long-term success of native vegetation. This adaptive approach enhances wetland resilience, supports biodiversity, and ensures compliance with mitigation performance standards in a sustainable and cost-effective manner.

## 1.1 Purpose and Goal

- Adaptive Management Framework: This plan operates under an adaptive management strategy, ensuring that invasive species control efforts are adjusted based on monitoring results, site conditions, and evolving regulatory guidance. Preventing the establishment or spread of invasive species at this Site relies upon:
  - o Thorough baseline information data collection,
  - o Avoiding and/or treating existing invasive species populations,
  - o Incorporating construction techniques into the Plan that minimize conditions that are favorable for invasive species colonization, and
  - o 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

The Wetland Trust, Inc.

will submit a revised Management Plan and implement Adaptive Management strategies that are approved by USACE and NYSDEC.

#### 1.2 Regulatory Compliance

This ISMP seeks to meet specific performance standards set by the USACE and NYSDEC as a condition of permit approval. These include thresholds for native plant diversity, invasive species control, and hydrological function.

Invasive species targeted by this ISMP are based on those regulated by NYS Regulation 6 NYCRR Part 575 List of Prohibited and Regulated Invasive Plants, developed by the New York Invasive Species Council and New York Department of Environmental Conservation (NYSDEC) and any others identified by NYSDEC or USACE.

#### 2. Identification

Four key invasive plant species regulated by NYCRR Part 575 were identified at the Site during baseline data collection. Key invasive plants include purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), and cattail (*Typha* spp.). These species are highly competitive, forming dense monocultures that outcompete native vegetation, diminish biodiversity, and disrupt wetland functionality. These species are found in most wetland areas on-site and adjacent on wetlands, affecting over 12 acres at the Fish Creek Site at the time of data collection. These species, their common characteristics and their typical locations are provided in Table 2-1 below. In addition to these dominant species, other invasive plants present in the area include Eurasian live forever (*Hylotelephium telephium*), honeysuckle (Lonicera spp.), moneywort (*Lysimachia nummularia*), Japanese knotweed (*Reynoutria japonica*), and multiflora rose (*Rosa multiflora*).

Additional invasive plant species have the potential of occurring at the site, particularly in the post-construction and long-term monitoring phase of this plan. These additional species may require treatment if they meet action thresholds outlined in **Section 6-1**, in which case they will be included in future versions of this plan and treated.

Table 2-1. Invasive Species at the Fish Creek Site 2024					
Species	Common Characteristics	Photo ID	Typical Location		
Common Reed (Phragmites australis)	A perennial grass that can grow over 15 feet tall, forming dense stands with hollow stems and blue-green leaves up to 20 inches long. It spreads through seeds, rhizomes, and stolons, often outcompeting native vegetation in wetlands.		Tidal and non-tidal marshes, lakes, swales, and backwater areas of rivers, and streams		

Reed Canary Grass (Phalaris arundinacea)	A tall, perennial grass that grows 2 to 6 feet high, with rough, flat leaves and dense flower clusters that turn beige as they mature. It thrives in wetlands and spreads aggressively through seeds and rhizomes, forming dense stands that outcompete native vegetation.	Wet habitats such as wetlands, moist meadows, and riparian areas
Cattail (Typha spp.)	Tall, perennial wetland plants characterized by their long, narrow, sword-like leaves and distinctive brown, cylindrical flower spikes. They thrive in shallow waters of marshes, ponds, and lakes, spreading through both wind-dispersed seeds and extensive rhizome networks, often forming dense stands that can outcompete other vegetation.	Wetland habitats, including marshes, river and stream banks, pond edges, lakes, ditches, and reservoirs
Purple Loosestrife (Lythrum salicaria)	An erect, branching perennial native to Europe, Asia, and northern Africa, characterized by dense, woody rootstocks that can produce multiple stems, lance-shaped leaves arranged oppositely or alternately, and showy purple flowers with 5-7 petals clustered on tall spikes. This invasive species thrives in wetlands and moist soils, rapidly displacing native vegetation and disrupting local ecosystems.	Wetland habitats, including marshes, pond and lakeshores, stream and riverbanks, and ditches. Also spreads in upland soils, allowing it to spread into meadows and pastures.

#### 3. Pre-Construction Phase

#### 3.1 Baseline Data Collection

Baseline data collection will identify existing invasive communities within the mitigation site. This process will involve field surveys using GIS mapping, orthoimagery using drones, and photographic documentation to establish the extent and density of invasive species populations. Baseline surveys will include mapping of invasive species distribution with percentage cover estimates. The data collected will be used to inform the site preparation and treatment strategies outlined in later sections of this ISMP. See **Figures X** in **Section 8** for invasive species maps.

#### 3.2 Site Preparation & Prevention Measures

Prior to construction, invasive species control measures will be implemented to prevent the spread and establishment of problematic species. These measures will include:

- **Pre-Treatment of Invasives**: Identified invasive species populations will be treated before ground disturbance begins. This may include manual removal, herbicide application, or smothering techniques depending on the species and infestation severity.
- Equipment Cleaning Protocols: Any construction equipment arriving on-site will be inspected and cleaned to remove soil, plant material, or seeds that may introduce invasive species.

#### 4. Construction Phase

To minimize the introduction and spread of invasive species during construction activities, the following best practices will be implemented:

- **Minimize Disturbance**: Clearing and grading activities will be restricted to designated project areas, reducing soil disturbance that can facilitate invasive species establishment.
- Erosion and Sediment Control: Use of weed-free erosion control materials, such as straw mulch, biodegradable mats, and hydroseeding with native plant mixes, will prevent soil erosion while avoiding the introduction of invasive species.
- **Construction Site Hygiene**: All machinery and equipment will be cleaned before entering and leaving the site, particularly when working in or near known invasive species populations.
- **Hydrology Management**: The project aims to restore natural hydrological conditions where feasible, as proper hydrology can prevent the establishment of invasive wetland species.
- **Native Plant Seeding**: Following ground disturbance, native plants will be seeded and planted in treated areas to prevent re-colonization by invasive species.

#### **5. Post-Construction Phase**

#### **5.1 Monitoring for Early Detection**

To ensure invasive species control measures remain effective, post-construction monitoring will be conducted. Monitoring efforts will include:

- **GPS Mapping and Photo Documentation**: Recording any changes in invasive species distribution.
- **Upstream and Adjacent Area Inspections**: Identifying potential new sources of invasive species propagules.
- **Disturbance Event Tracking**: Observing site conditions after events like flooding or drought, which may encourage invasive species spread.

#### 5.2 Long-Term Monitoring & Adaptive Management

- Yearly Assessments: Evaluate treatment effectiveness and native vegetation recovery.
- Implement additional treatment as needed.
- Adjust Control Strategies: Based on monitoring results, refine methods to reduce reliance on chemical treatments.

## 6. Treatment Thresholds and Control Strategies

#### **6.1 Treatment Thresholds**

Control measures will be implemented when specific action thresholds are met, ensuring timely intervention to prevent invasive species from undermining mitigation success. The following triggers initiate management actions:

#### 1. Invasive Species Coverage Threshold

o 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- <i>Typha</i> Invasive Species (e.g., purple loosestrife, common reed, reed canarygrass)	≤ 15%	≤ 15%	≤ 12.5%	≤ 10%	< 5% cover
All Invasive Species including <i>Typha</i> 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

o If native plant cover falls below required thresholds (typically **70% native cover** or a minimum diversity standard set in the mitigation permit), corrective action is necessary.

o This includes replanting, selective herbicide application, or modifying site conditions to support native species.

#### 3. Encroachment of Invasives into Priority Habitat Areas

o 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

o 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

o 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:

- o Cutting & Flooding: Cutting stems at water level during late summer combined with water level manipulation can drown rhizomes.
- Smothering: Small patches can be covered with black plastic or heavy mulch to prevent regrowth.
- 2. Chemical Control: (Only if necessary, as a last resort in sensitive areas)
  - o 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.
  - o Follow-up with mechanical removal of dead stalks in the winter.

#### 3. Cultural & Biological Control:

- o 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:

- o Mowing in early spring and late summer to deplete energy reserves.
- o Hand-pulling small infestations before seed set.
- o Covering with tarps or thick mulch to shade out new shoots.
- 2. Chemical Control: (Selective use in dense monocultures if needed)
  - o 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:

o Planting native sedges & rushes to outcompete Phalaris.

o 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:
  - o Cut stems below water level to drown rhizomes.
  - o Excavation in high-density areas, followed by native planting.
- 2. Chemical Control: (For monocultures in restoration sites if needed)
  - o Glyphosate-based pesticide applied to standing plants in late summer.
  - o Follow-up by removing dead biomass to prevent thick mats from suppressing native growth.
- 3. Cultural & Biological Control:
  - o 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:
  - o Hand-pull small infestations, removing all roots.
  - o Cut flower heads before seed drop to prevent spread.
- 2. Biological Control (Preferred Method):
  - o Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
  - o Releases should be monitored over multiple years to assess impact.
- 3. Chemical Control: (For large stands if necessary)
  - o Spot treat with glyphosate-based pesticide in late summer.
  - o Follow-up by seeding native competitors.

### 6.3 Pesticide Selection and Application Guidelines

When chemical control is necessary, pesticides will be carefully selected to minimize environmental impact while effectively managing invasive species. The selection and application methods will be determined based on site-specific conditions, regulatory requirements, and best management practices to ensure effective control while reducing unintended ecological impacts.

- **Target-Specific Formulations:** Only herbicides approved for use in wetland environments will be used, with preference given to herbicides that have minimal impact on non-target species.
- **Reduced Persistence and Toxicity:** Herbicides with low residual activity and rapid breakdown in soil and water will be favored to prevent long-term contamination.
- **Application Methods Based on Site Conditions:** Techniques such as cut-stump treatments, wick application, and spot spraying will be prioritized over broadcast spraying, depending on the infestation size, proximity to sensitive habitats, and hydrological conditions.

All pesticides will be applied in accordance with the label and all applicable federal, state, and local regulations to ensure compliance and environmental protection.

All pesticide applications will be conducted by New York State Certified Pesticide Applicators or individuals working under the direct supervision of a certified applicator, in compliance with New York Environmental Conservation Law (ECL) Article 33 and 6 NYCRR Part 325. This ensures that all chemical treatments are applied safely, legally, and in accordance with state regulations governing pesticide use in wetland environments.

### 7.0 Reporting

The Wetland Trust, Inc. will provide an annual wetland restoration monitoring report which details the status of invasive plant species and all control measures. This report will be submitted by December 31<sup>st</sup> each year to USACE and NYSDEC.

## 8. Maps and Figures

Figure 8-1. Purple Loosestrife Percent Cover

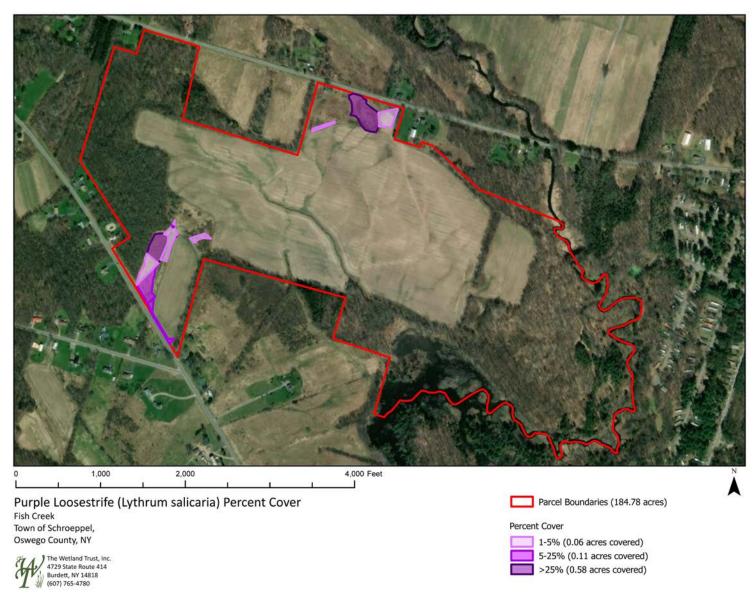


Figure 8-2. Reed Canary Grass Percent Cover

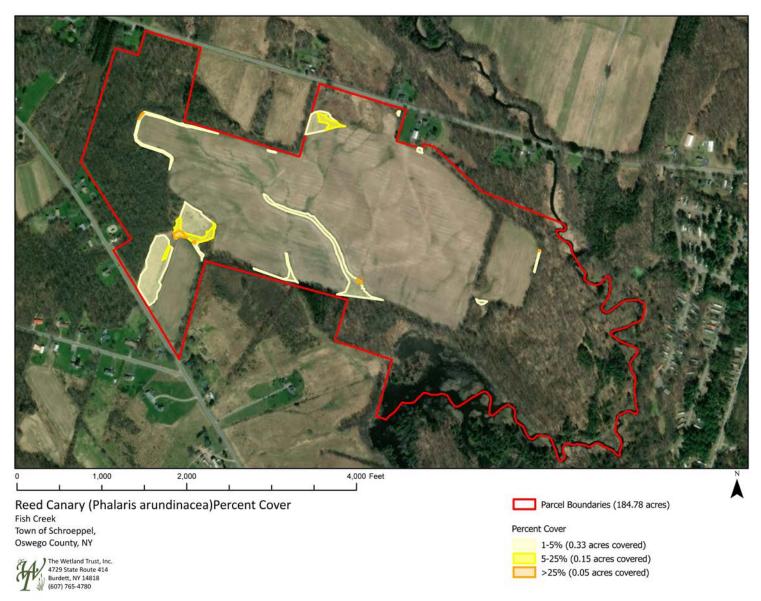


Figure 8-3. Phragmites Percent Cover

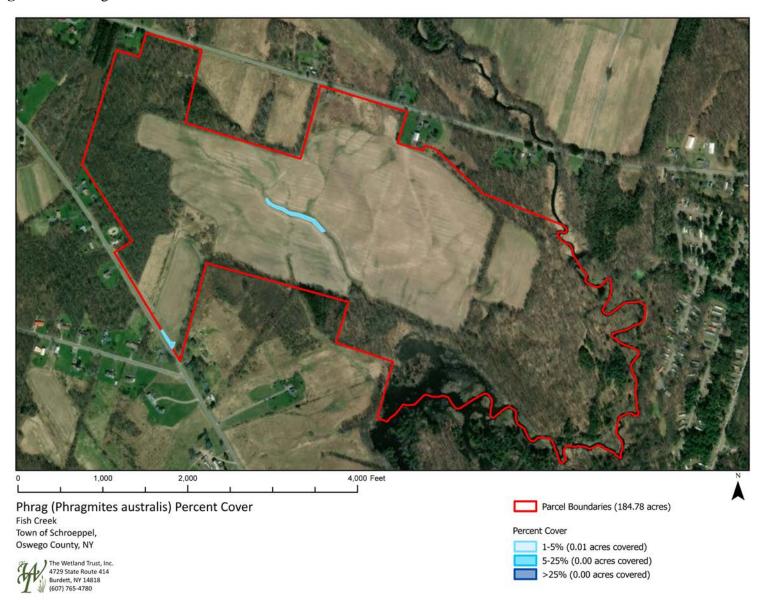


Figure 8-4. Cattail Percent Cover

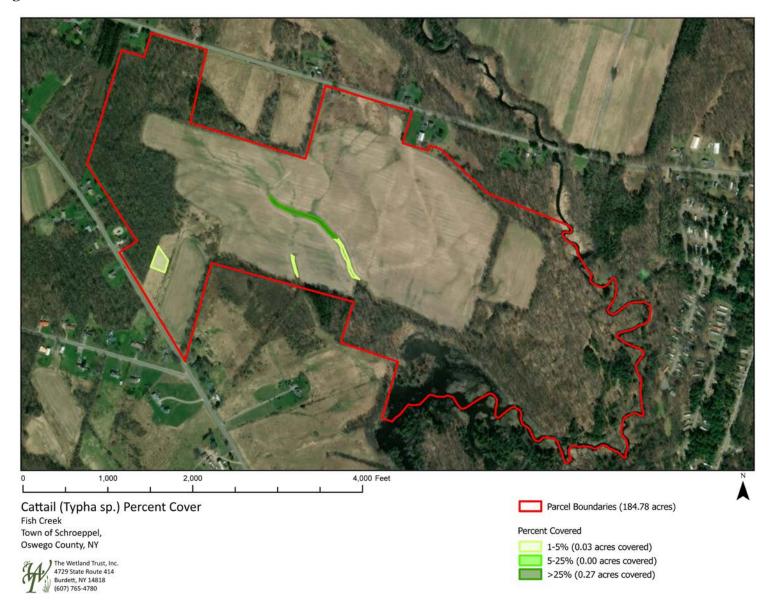


Table 8-1: Invasive Species at Fish Creek				
Invasive Species	1-5% Cover (Affected Acres)	5-25% Cover (Affected Acres)	>25% Cover (Affected Acres)	Total Area (Affected Acres)
Common Reed (Phragmites australis)	0.25	0.00	0.00	0.26
Reed Canary Grass ( <i>Phalaris arundinacea</i> )	5.82	0.83	0.14	6.79
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.



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

# Appendix G.

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 =  $600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 22 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 33 \text{ tons}$ Outlet: 12-feet wide x 75-feet long x 1.0-feet deep =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 50 \text{ tons}$ 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

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.		
Fulldamen of historic durings on filling. A disabling the content of the planned western and disable a large the advent			

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 =  $600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 22 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 33 \text{ tons}$ Outlet: 12-feet wide x 75-feet long x 1.0-feet deep =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 50 \text{ tons}$ 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

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			

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 =  $600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 22 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 33 \text{ tons}$ Outlet: 12-feet wide x 75-feet long x 1.0-feet deep =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 50 \text{ tons}$ 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

	17 Gttd.11 2 GS.B.1 1 GT.11		
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

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

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

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

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 =  $2,600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 96 \text{ yards}^3 \text{ x } 1.5 \text{ tons/yard}^3 = 144 \text{ tons}$ Outlet: 26-feet wide x 100-feet long x 1.0-feet deep =  $2,600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 96 \text{ yards}^3 \text{ x } 1.5 \text{ tons/yard}^3 = 144 \text{ tons}$ 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:

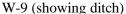
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep =  $600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 22 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 33 \text{ tons}$ Outlet: 12-feet wide x 75-feet long x 1.0-feet deep =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 50 \text{ tons}$ 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 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 =  $2,600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 96 \text{ yards}^3 \text{ x } 1.5 \text{ tons/yard}^3 = 144 \text{ tons}$ Outlet: 26-feet wide x 100-feet long x 1.0-feet deep =  $2,600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 96 \text{ yards}^3 \text{ x } 1.5 \text{ tons/yard}^3 = 144 \text{ tons}$ 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

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 =  $600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 22 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 33 \text{ tons}$ Outlet: 12-feet wide x 75-feet long x 1.0-feet deep =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 50 \text{ tons}$ 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:

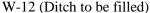
Inlet: 26-feet wide x 100-feet long x 1.0-feet deep =  $2,600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 96 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 144 \text{ tons}$ Outlet: 26-feet wide x 100-feet long x 1.0-feet deep =  $2,600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 96 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 144 \text{ tons}$ 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)

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 =  $2,080 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 77 \text{ yards}^3 \text{ x } 1.5 \text{ tons/yard}^3 = 115 \text{ tons}$ Buried vertical grade control at outlet: (70-feet wide x 80-feet long x 11-feet deep) x (0.5) =  $30,800 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 1,141 \text{ yards}^3 \text{ x } 1.5 \text{ tons/yard}^3 = 1,140 \text{ tons}$ 

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)

Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
	Designer Name. Momas N. Diebignauser
Individuals assisting with the design: Dan Kwa	snowski (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 =  $600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 22 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 33 \text{ tons}$ Outlet: 12-feet wide x 75-feet long x 1.0-feet deep =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 50 \text{ tons}$ 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 (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)

Date: 04-30-2024	
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 orested/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 so 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.			

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.





W-21 W-21

	T				
Site Name: W-22 (Perry Road)	Date: 04-30-2024				
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser				
Landowner. The Wetland Trust Designer Name. Homas R. Diebignauser					
Individuals assisting with the design: Dan Kwa	snowski (The Wetland Trust), Harrison Franz (The Wetland Trust)				
Objectives: Build a naturally appearing	Site Description: An agricultural field that will be planted with				
emergent, forested/shrub-scrub wetland for soybeans. The field is highly erodible due to the silt loam texture so					
mitigation. Control erosion in drainage.	on the surface and steep slopes.				

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.





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.			

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.





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 Site Description: An agricultural field that will be planted with soybeans. The field is highly erodible due to the silt loam texture so				
mitigation. Control erosion in drainage.	on the surface and steep slopes.			

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.





W-24

W-24 (Showing the ditch that would be restored to a stream)

# Appendix H.

# Appendix I.

# StreamStats Report - Perry Road Site

Region ID: NY

Workspace ID: NY20240930121442615000

Clicked Point (Latitude, Longitude): 43.29456, -76.27451

**Time:** 2024-09-30 08:15:04 -0400



Collapse All

#### **▶** Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CENTROIDX	Basin centroid horizontal (x) location in state plane coordinates	396375.8	meters
CENTROIDY	Basin centroid vertical (y) location in state plane units	4794703.8	meters
CSL1085L0	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
CSL1085L0	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
CSL1085L0	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

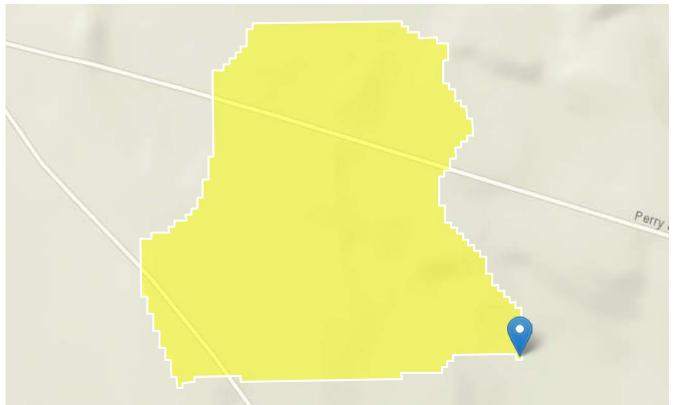
# StreamStats Report - Perry Road Northwest Branch

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
CSL1085L0	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
CSL1085L0	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
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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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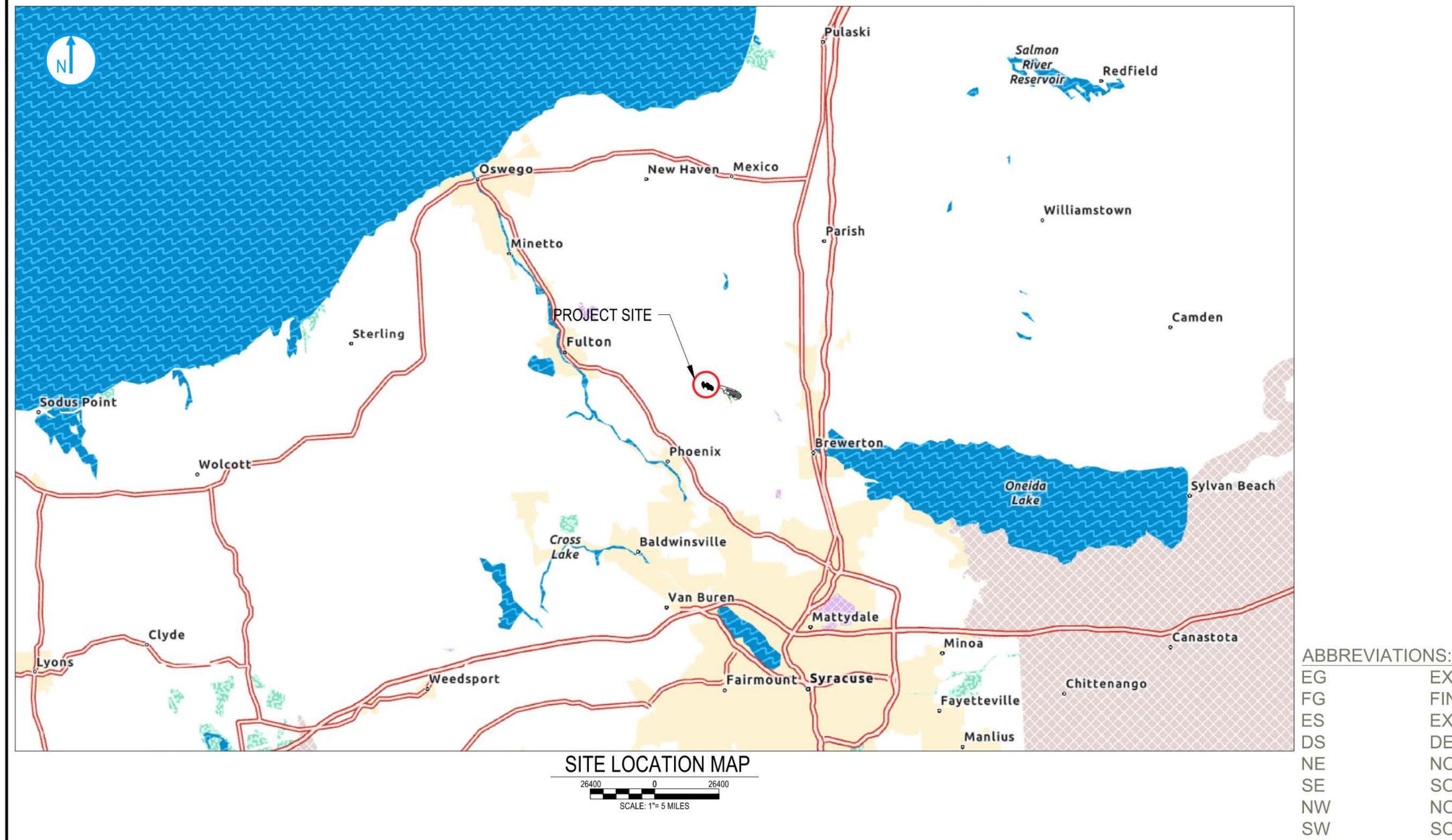
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Application Version: 4.24.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

# Appendix J.



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				

NW SW AVG FT

STATION STA ELEV **ELEVATION** SQUARE FEET SQ **CFPS CUBIC FEET PER** SECOND MAX MAXIMUM MINIMUM **DOWNSTREAM UPSTREAM** TYP TYPICAL **APPROXIMATE** APPR.

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)

PREI	LIMINARY
12 1 2512	OT FOR
CONS	TRUCTION
DATE:	05/13/2025

**EXISTING GROUND** 

**EXISTING STREAM** 

**DESIGN STREAM** 

NORTHEAST

SOUTHEAST

NORTHWEST

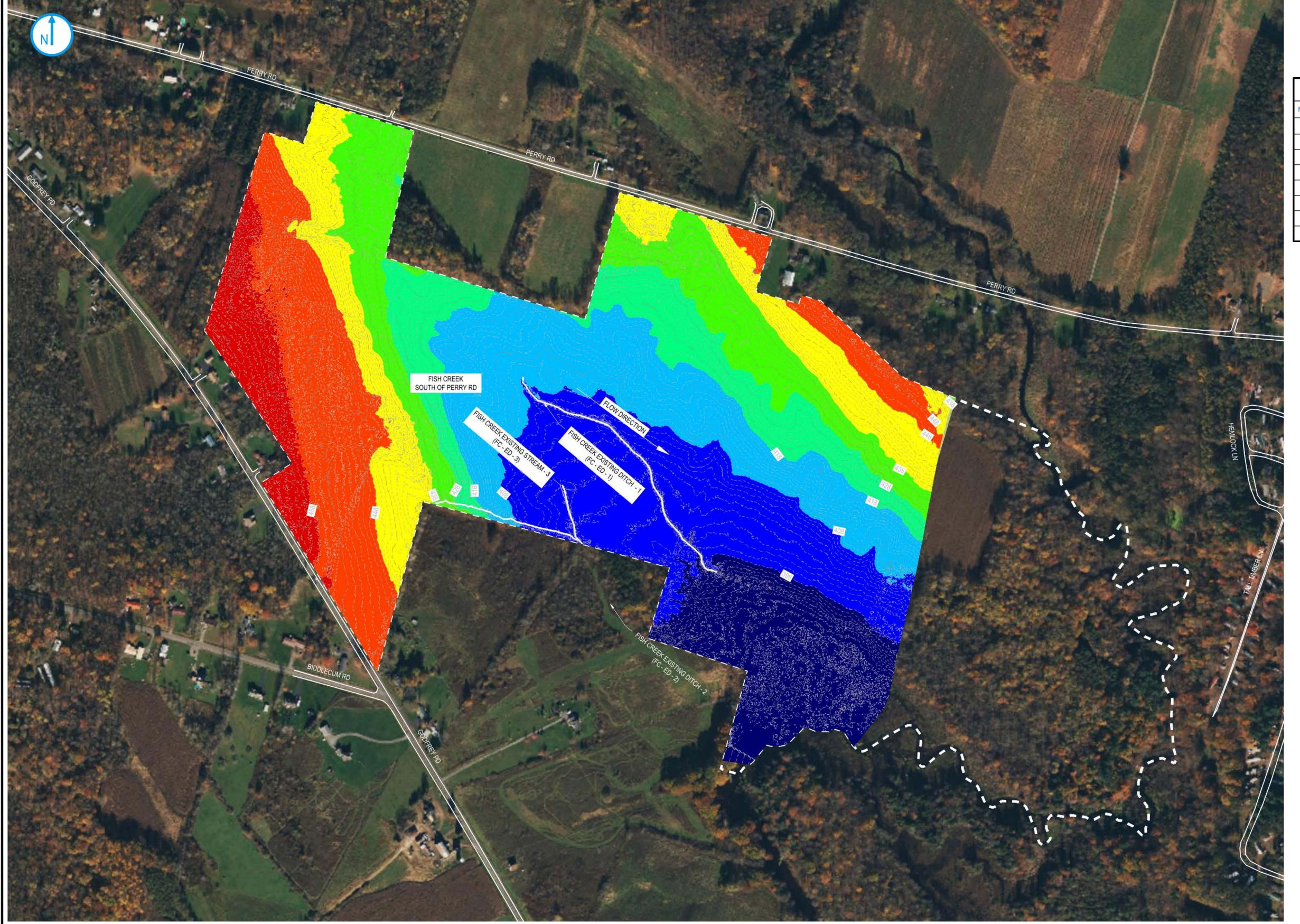
SOUTHWEST

**AVERAGE** 

**FEET** 

FINISH GROUND

NO.	REV DATE		REVISION				11	NT.
AT THE SCAL	TION OF LAW FOR ANY PERSON, I LE INDICATED. INACCURACIES IN INE THE ACTUAL SIZE. DRAWING I	THE STATED SCALE MAY BE INT	RODUCED WHEN DRAW					
Project Detai	ls	Drawing Title			ľ			
FISH CRE	TLAND TRUST EEK SITE STREAM MITIGA D, PENNELLVILLE, NY 131	TION	COVER AND TITLE SHEET		####			
Location: NEW YOR	RK	Designer / Profession	Designer / Professional Engineer Responsible:					
Project Number 194	40111895	Designed by S.M. Ahmadi	Drawn by S.M. Ahmadi	Chec K. Bu	ked by uelow	Approved by P. Domaszczynski	Date ####	
Project ##	##	Drawing C-00	1	1100000		Scale NTS	Sc	Re



EXISTING CONDITIONS SITE PLAN

250 0 250

SCALE: 1"=250'



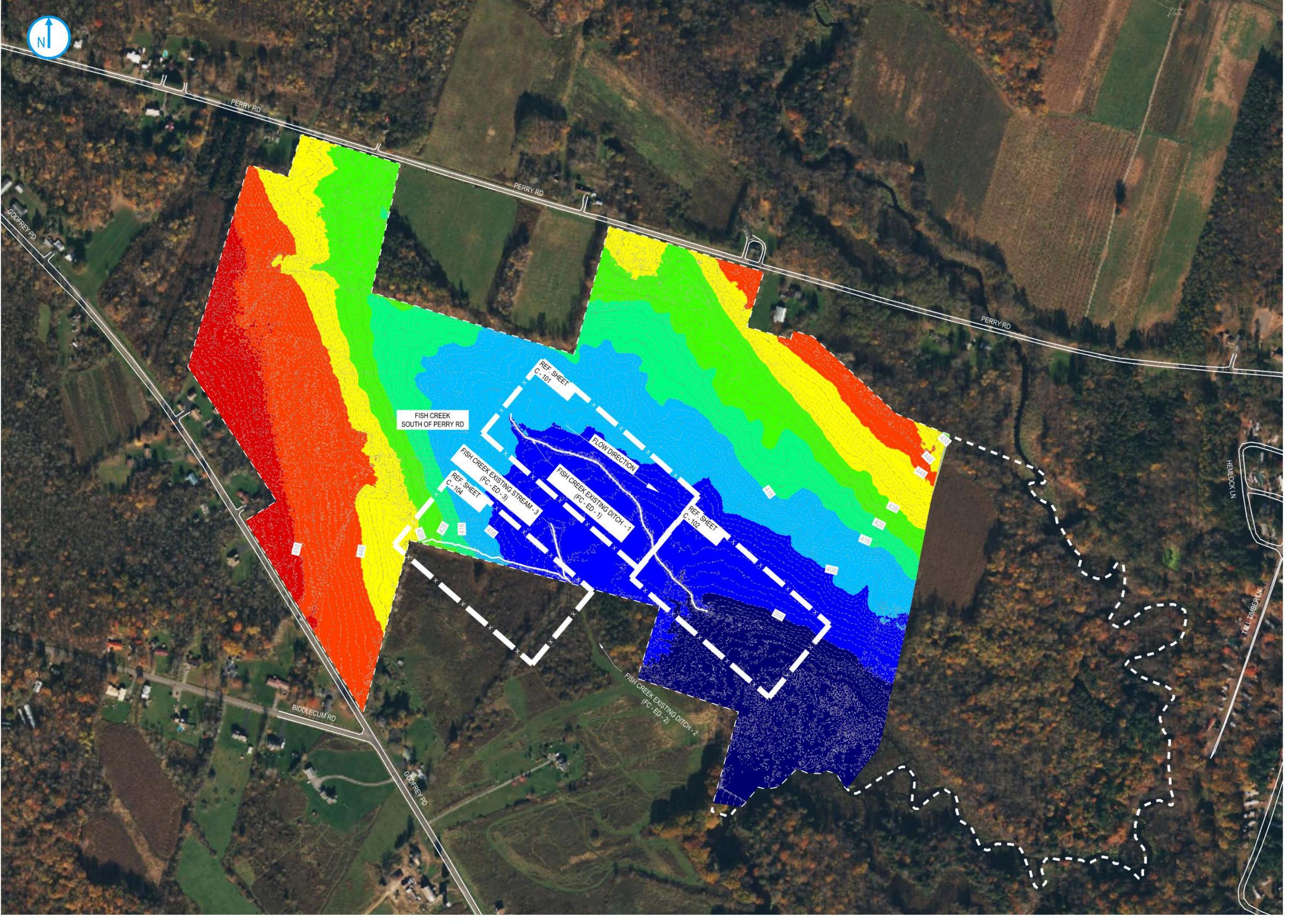
Elevations Table							
UMBER	MINIMUM ELEVATION (FT)	MAXIMUM ELEVATION (FT)	AREA (FT^2)	COLOR			
1	388.00	398.00	704956.77				
2	398.00	408.00	1057721.25				
3	408.00	418.00	992942.12				
4	418.00	428.00	606623.00				
5	428.00	438.00	734665,45				
6	438.00	448.00	719491.44				
7	448.00	458.00	907270.67				
8	458.00	468.00	313431.28				

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

TO DETERMINE THE ACTUAL SIZE. DRAWING IS NOT SO	ALABLE IF NO SCALE	BAR IS PRESENT.					
Project Details	Drawing Title			ľ			
THE WETLAND TRUST FISH CREEK SITE STREAM MITIGATION PERRY RD, PENNELLVILLE, NY 13132 ####	EXISTING CONDITIONS SITE PLAN			####			
Location: #####	Designer / Professional Engineer Responsible:			####			
Project Number 1940111895	Designed by S.M. Ahmadi				Approved by P. Domaszczynski	Date #####	
Project ##### Status	Drawing Number C-002				Scale AS NOTED	Sc X	Rev X



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			

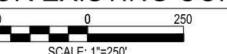
# **LEGEND**

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PROPERTY BOUNDARY LINE

EXISTING STREAM ALIGNMENT

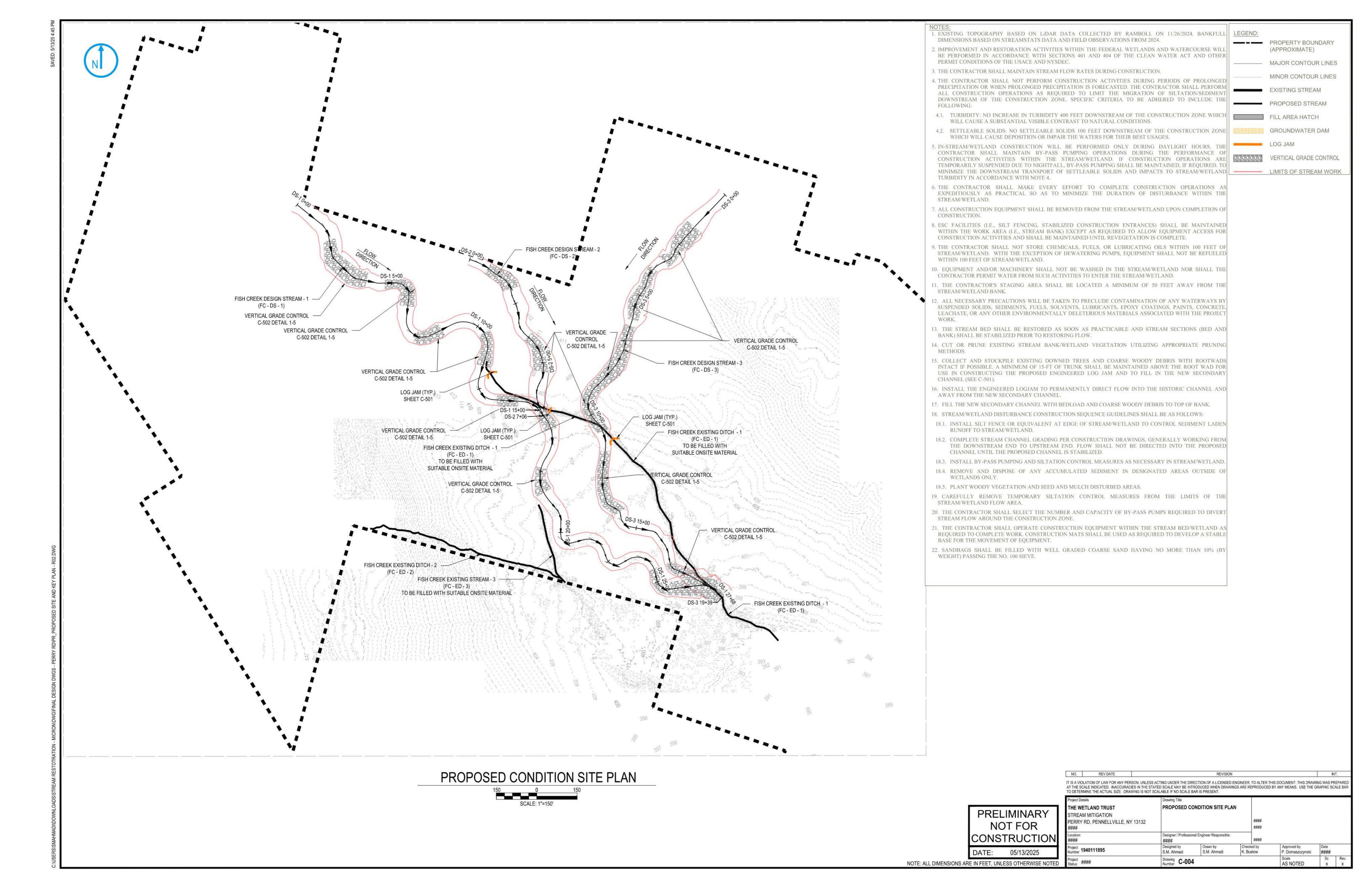
KEY PLAN FOR EXISTING CONDITIONS

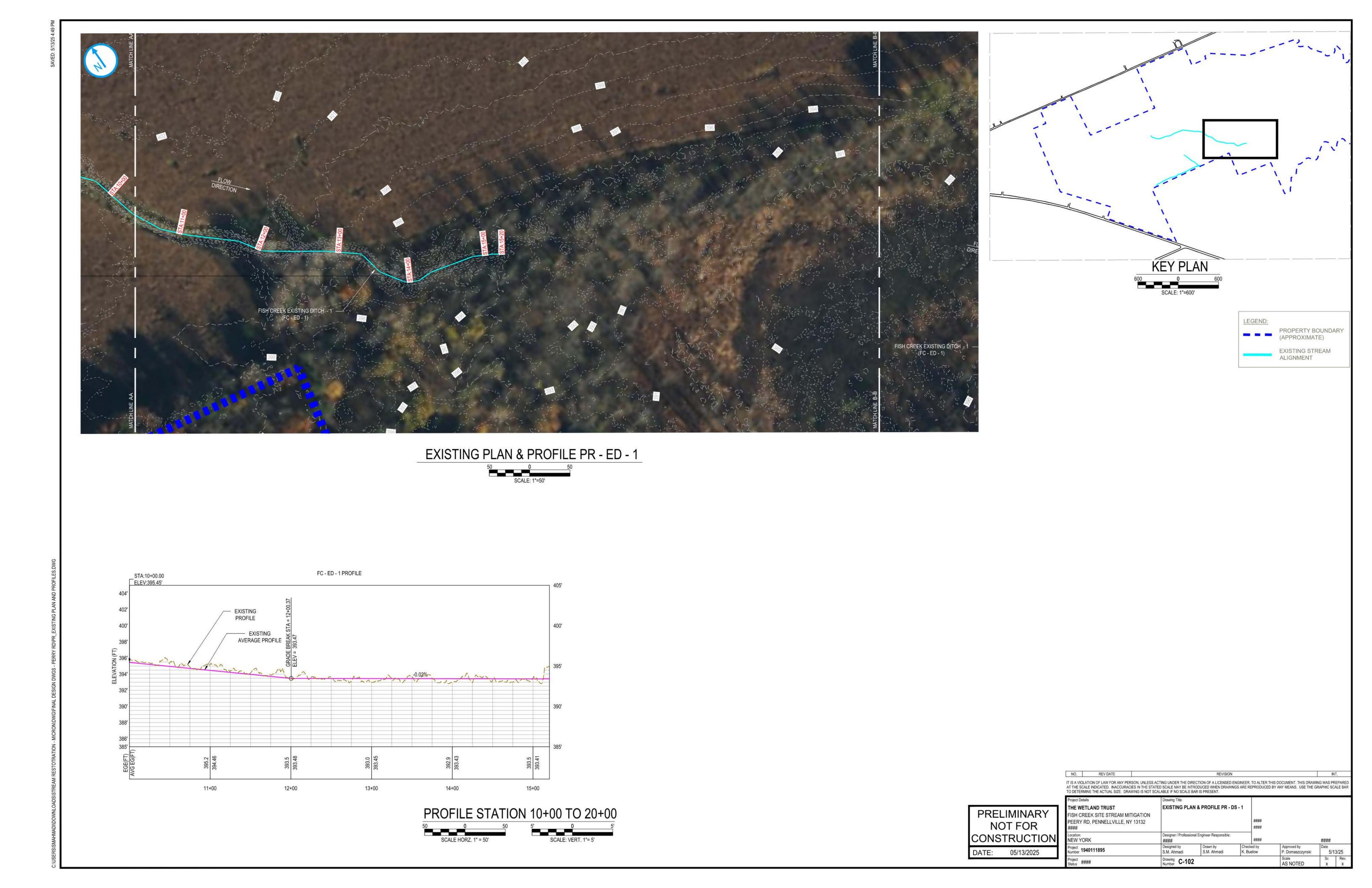


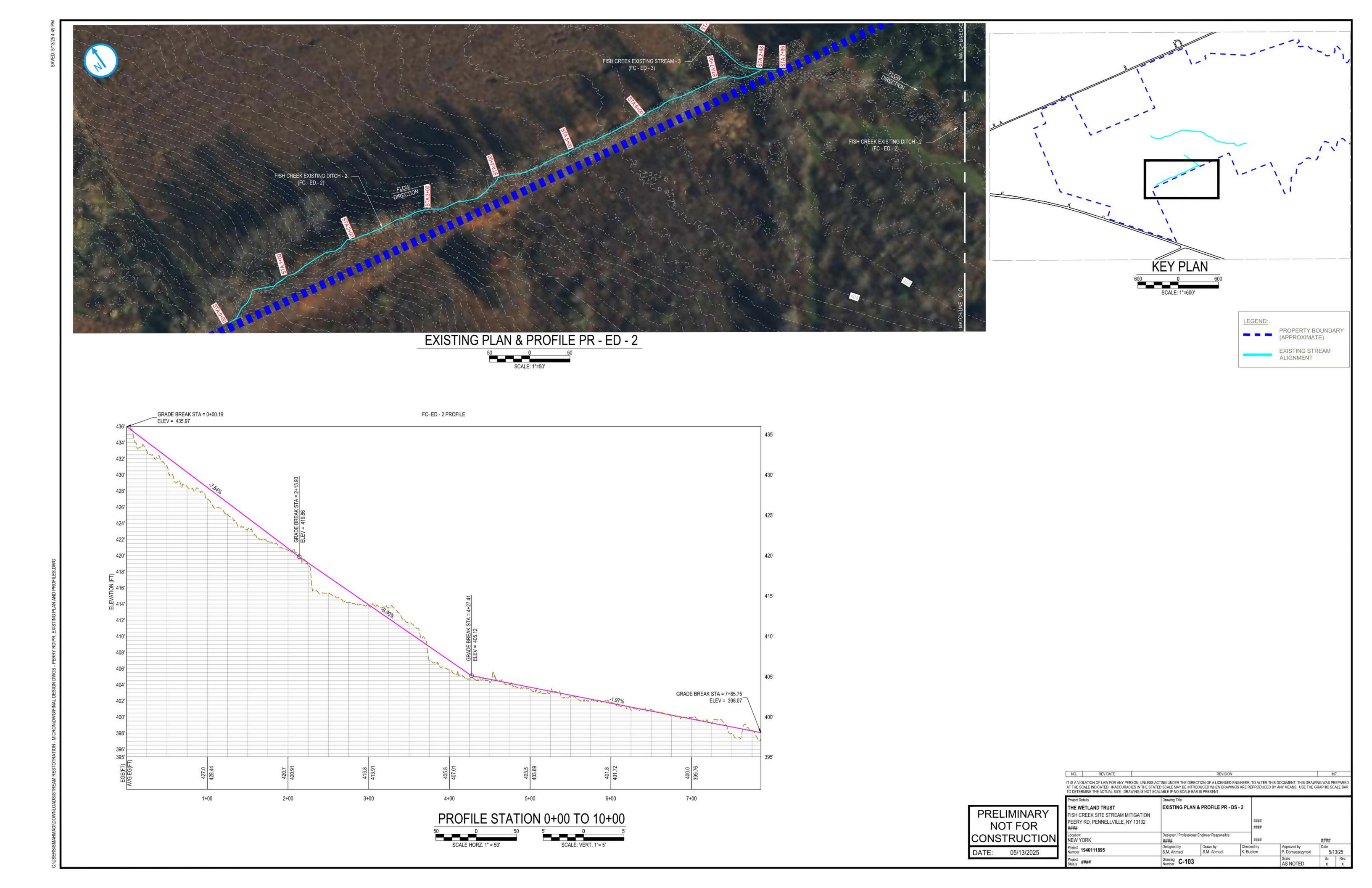
PRE	LIMINARY
NO	OT FOR
CONS	TRUCTION
DATE:	05/13/2025

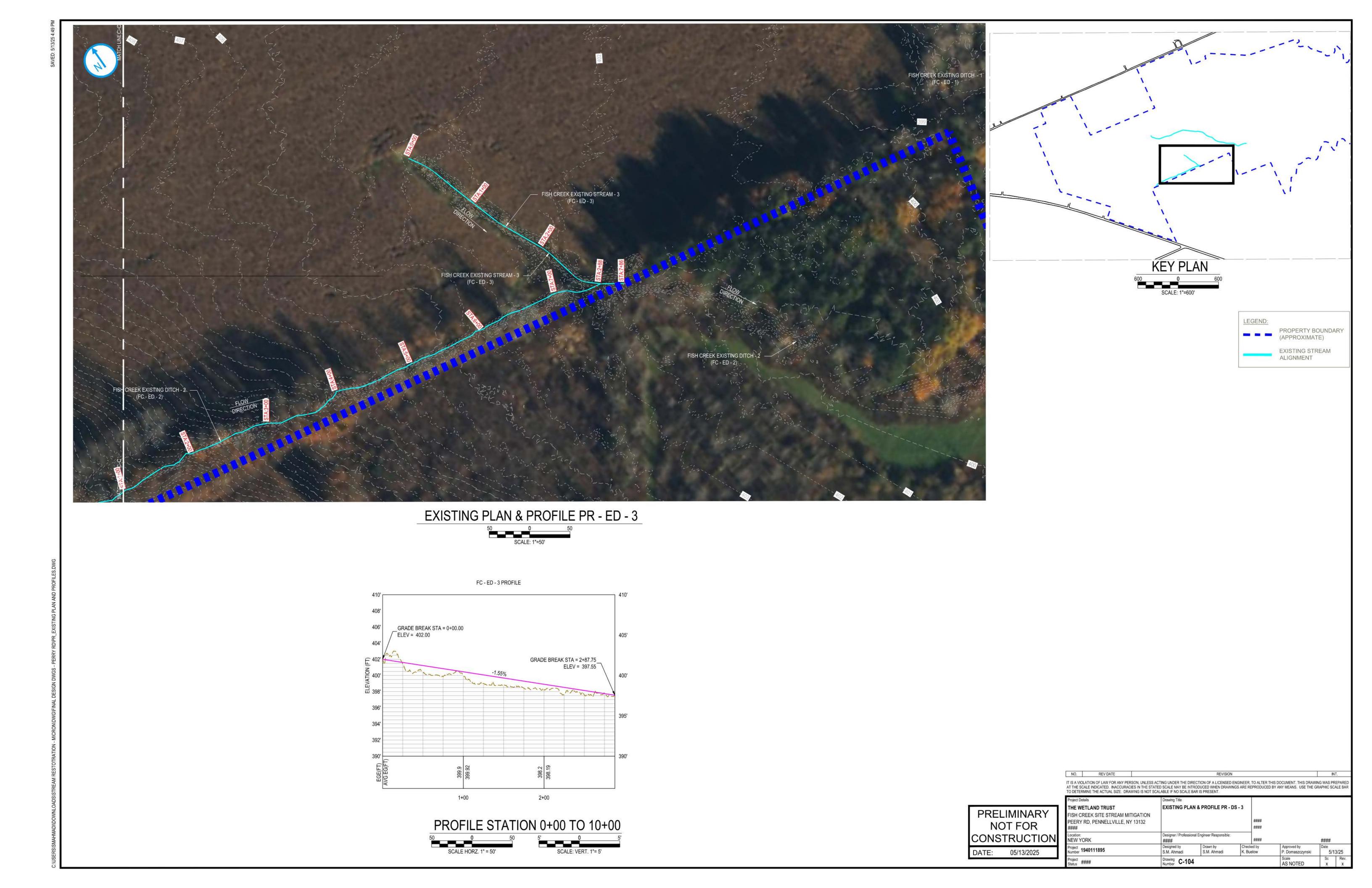
NO.	REV DATE	REVISION			
AT THE SCAL	E INDICATED. INACCURACIES I	UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGI I THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS / IS NOT SCALABLE IF NO SCALE BAR IS PRESENT.	- 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987 - 1987		
Project Detail	s	Drawing Title	·		
THE WET	LAND TRUST	KEY PLAN FOR EXISTING CONDITION	s		
FISH CRE	EK SITE STREAM MITIGA	TION			
	D, PENNELLVILLE, NY 13	132	####		
####		**************************************	####		

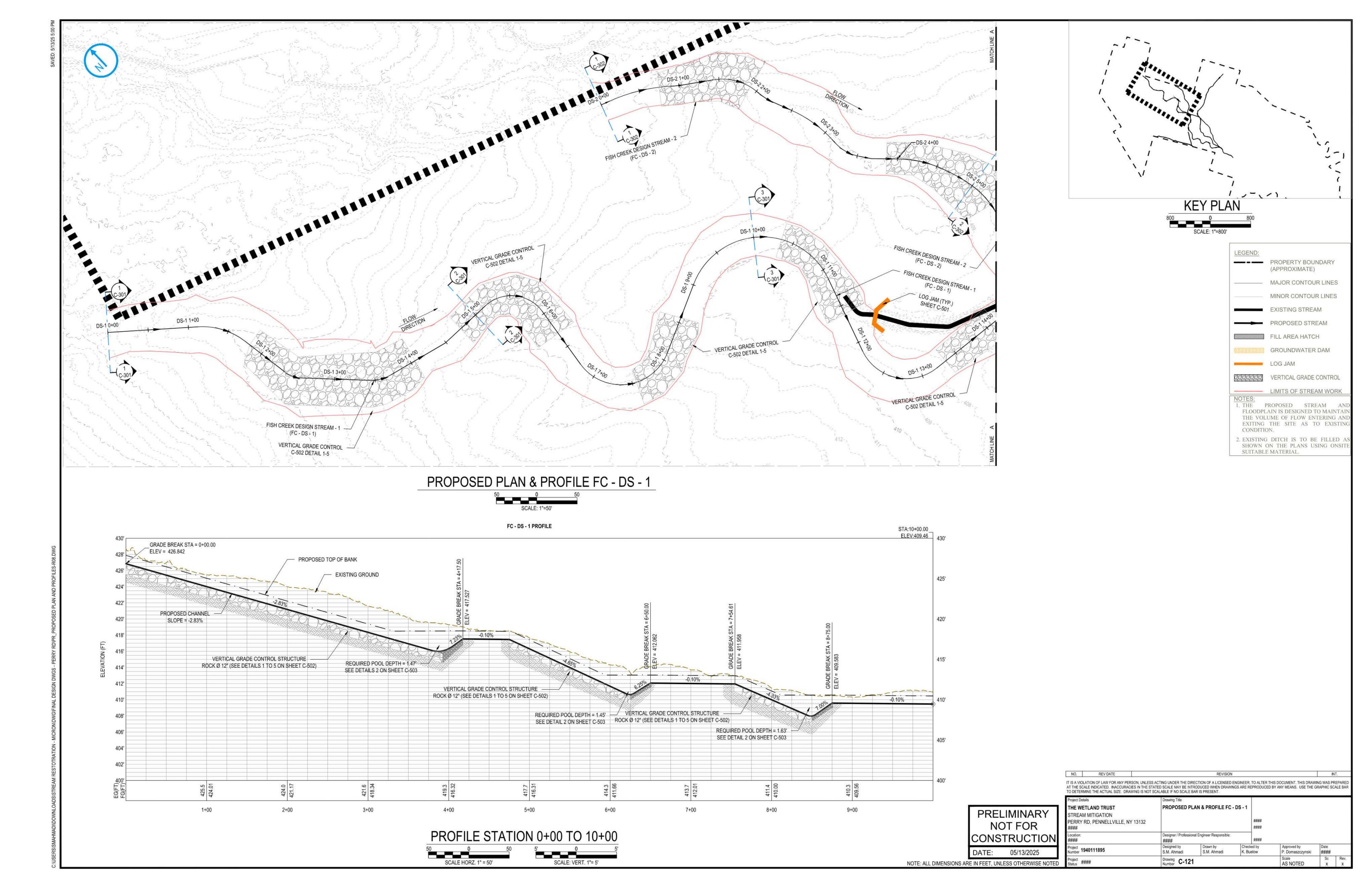
roject Details	Drawing Little						
THE WETLAND TRUST	KEY PLAN FOR EXISTING CONDITIONS						
FISH CREEK SITE STREAM MITIGATION PERRY RD, PENNELLVILLE, NY 13132				####			
ocation:	Designer / Professio	Designer / Professional Engineer Responsible:					
roject 1940111895	Designed by S.M. Ahmadi			200	Approved by P. Domaszczynski	Date ####	
Project ####	Drawing C-003			Scale AS NOTED	Sc X	R	

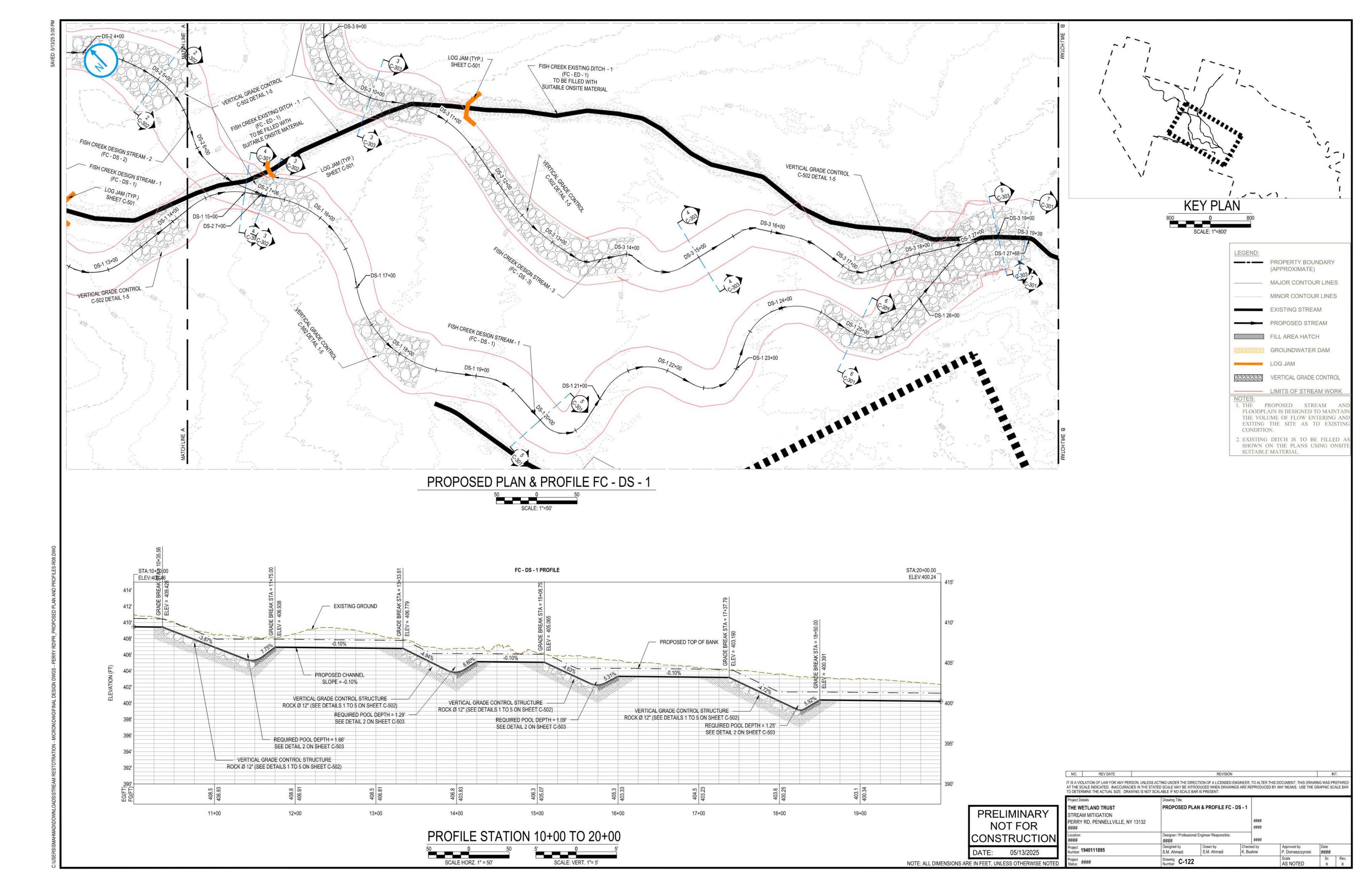


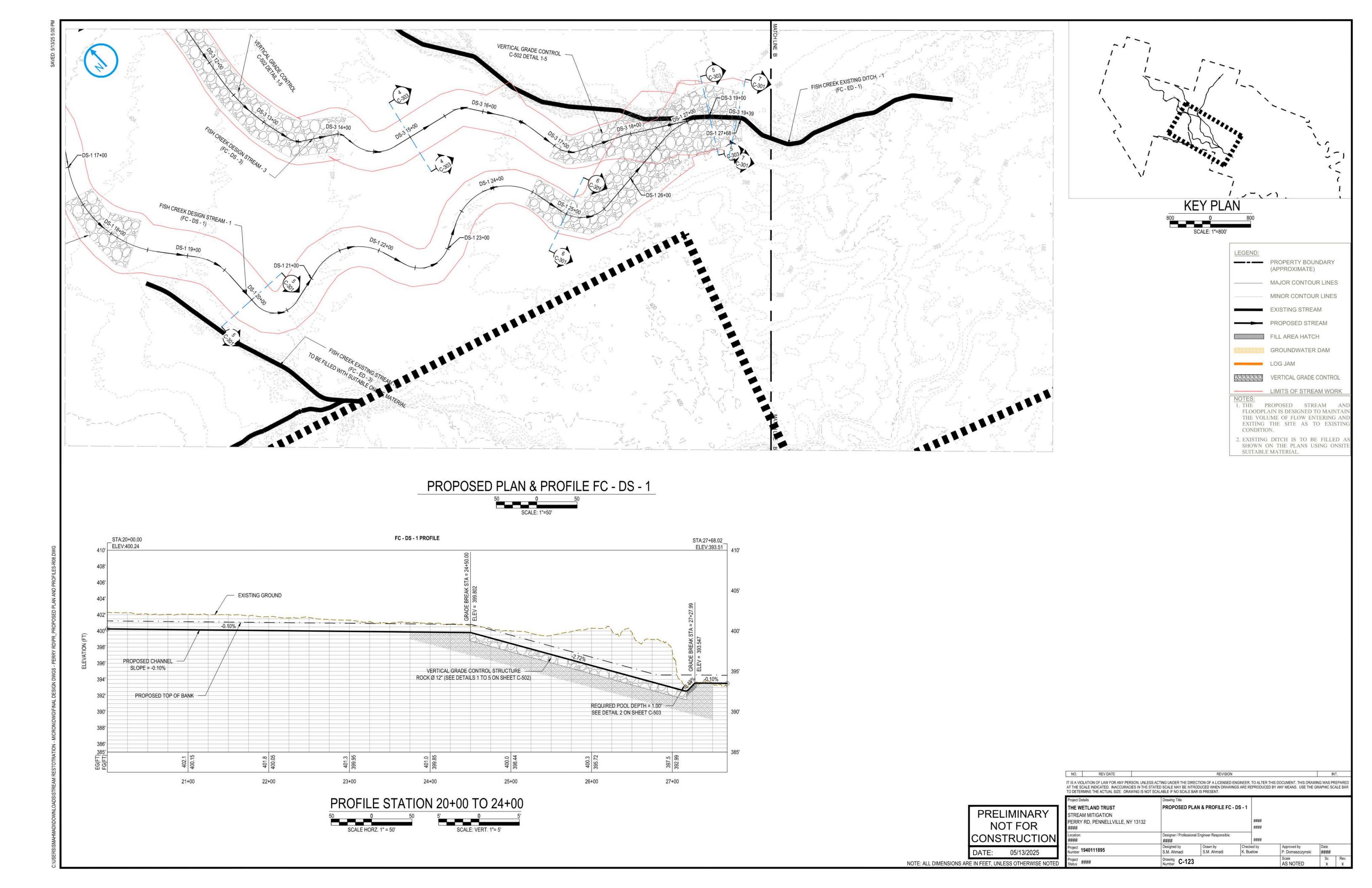


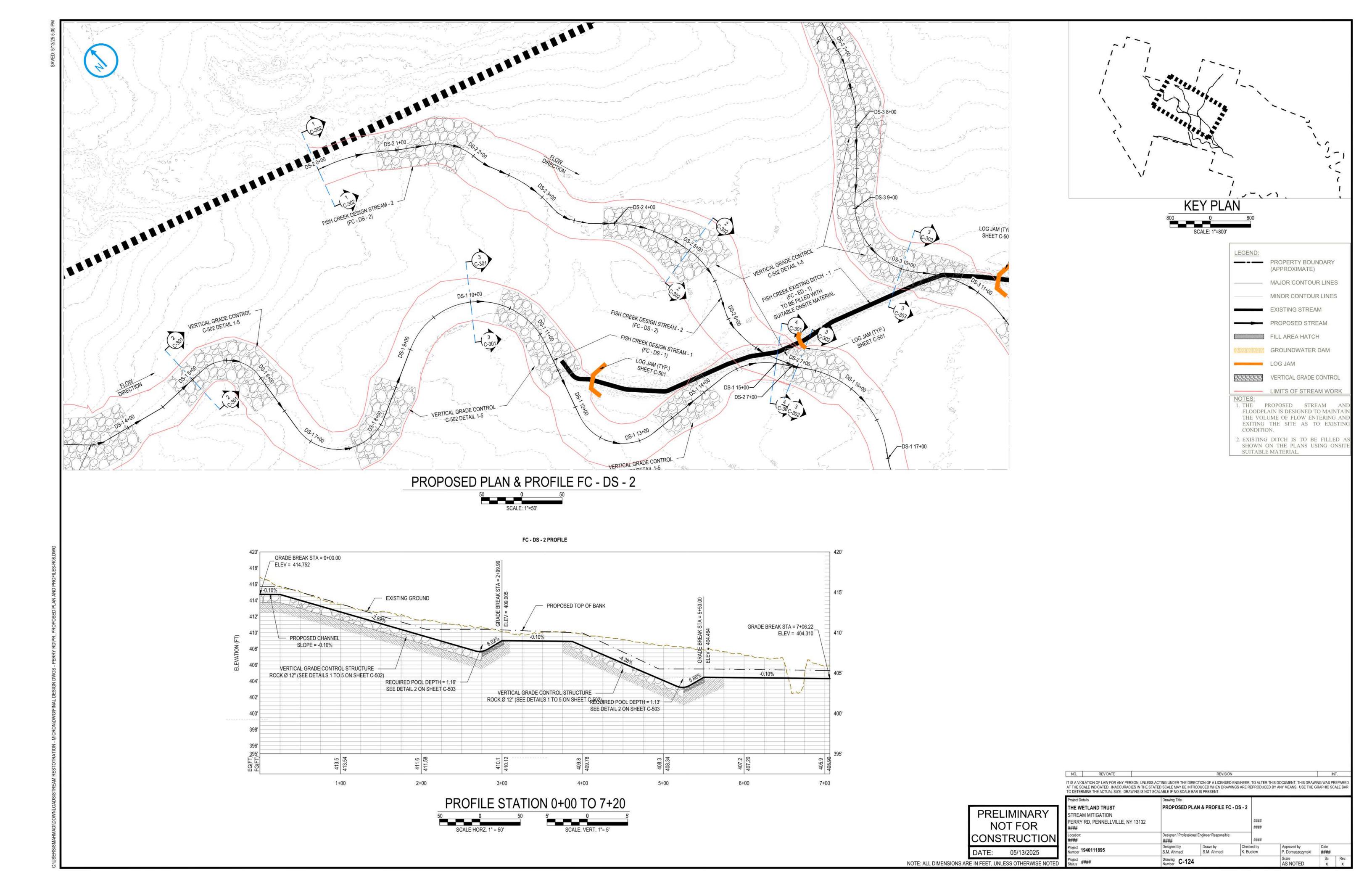


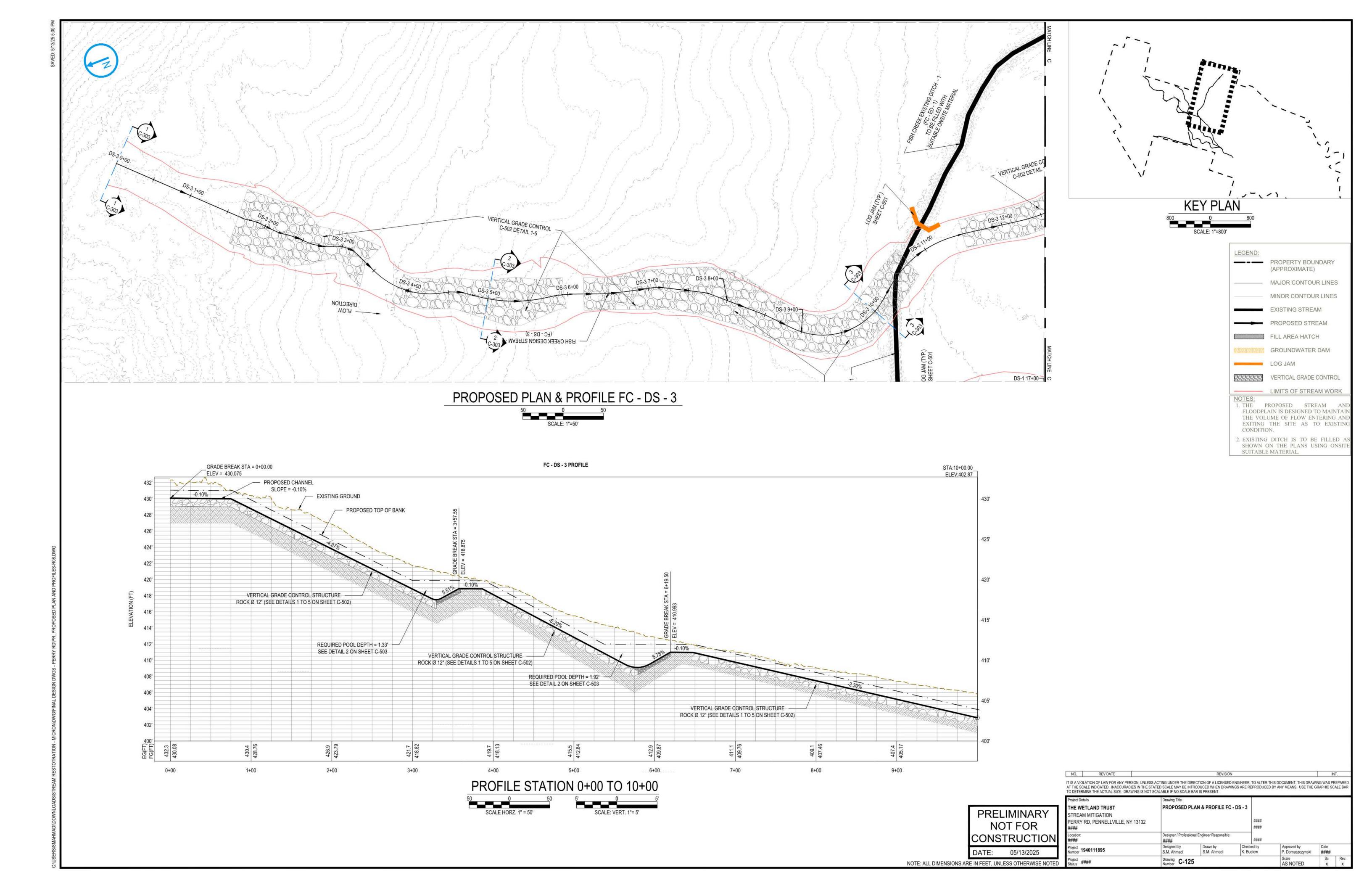


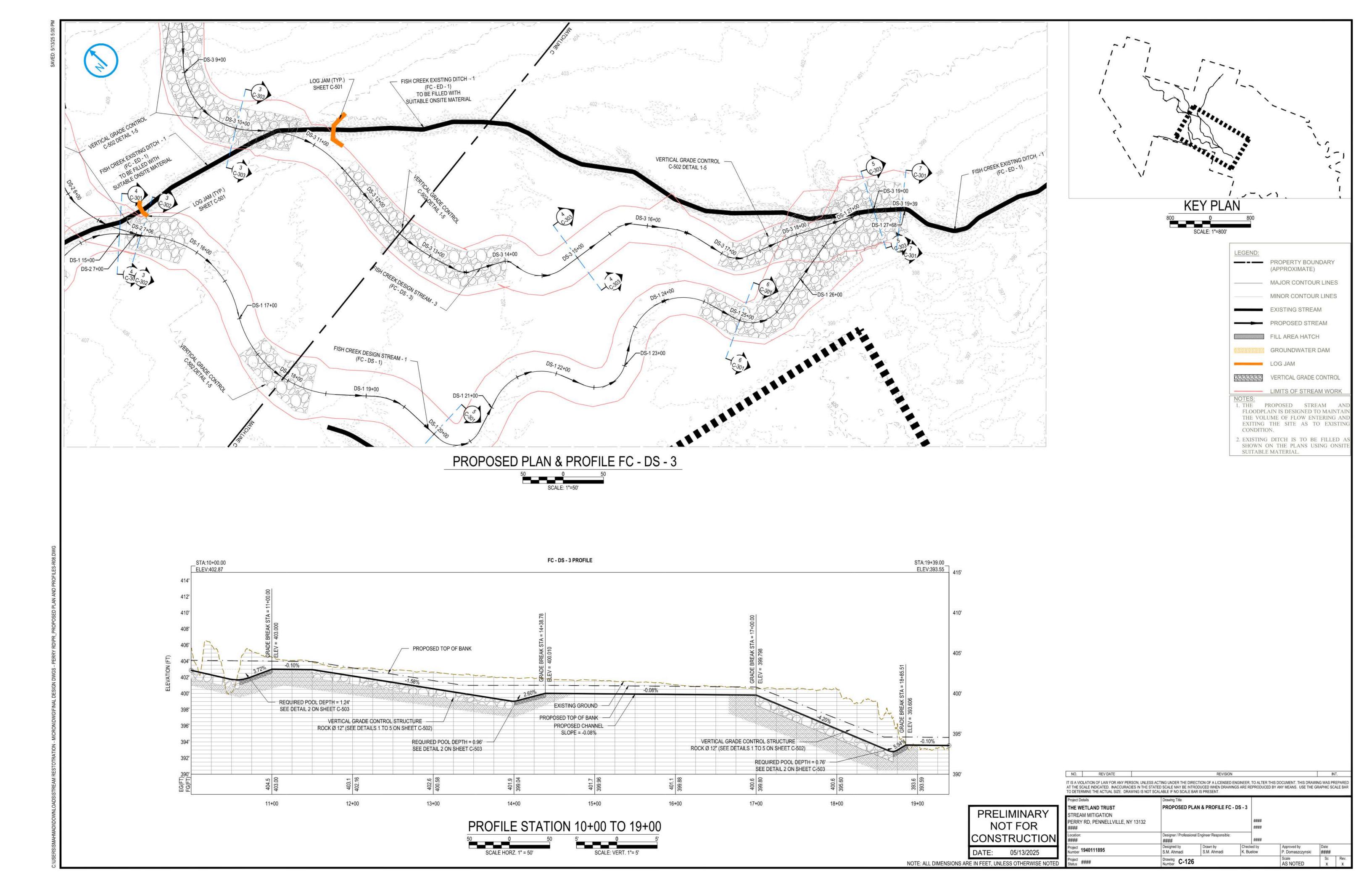


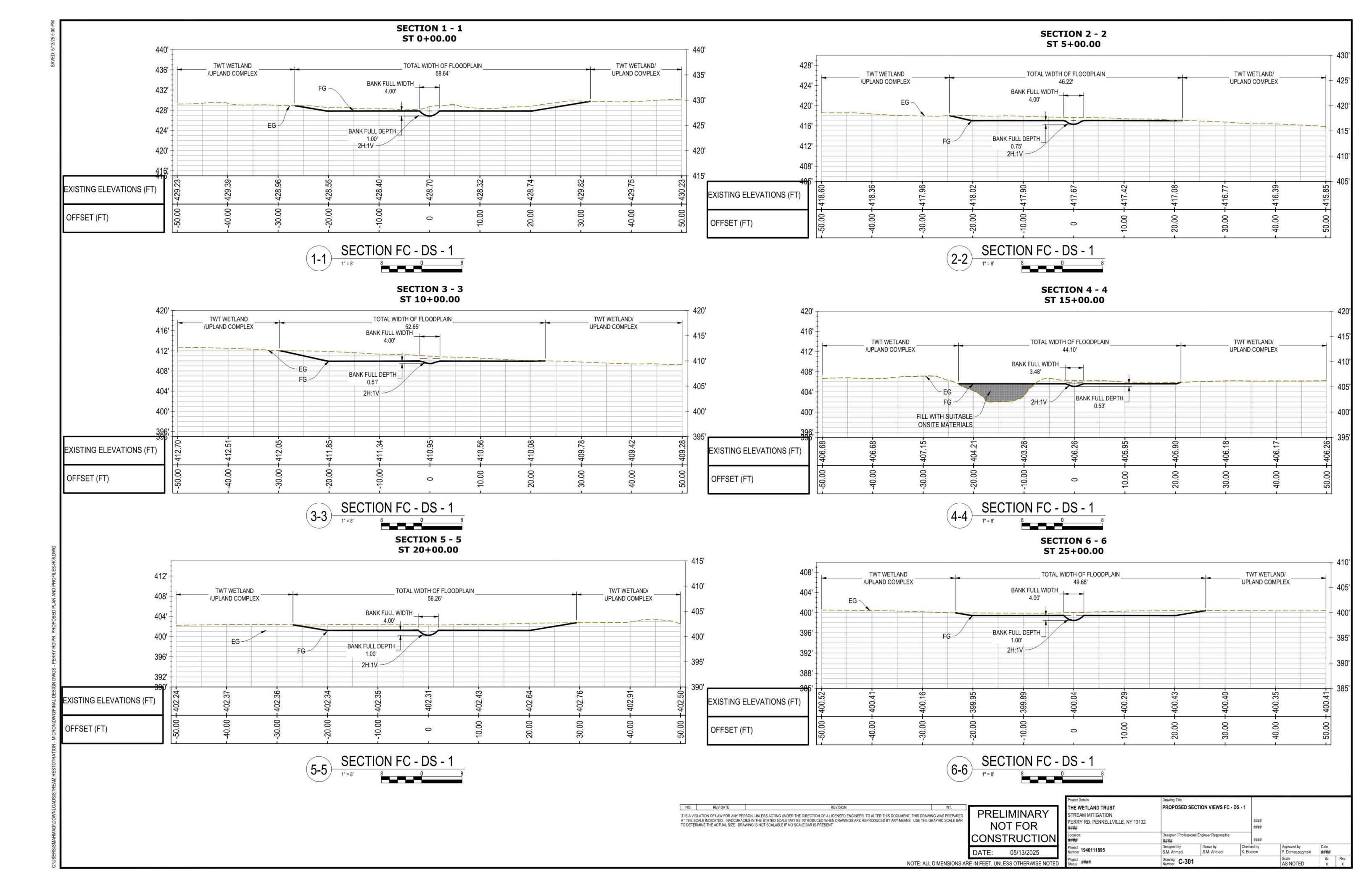


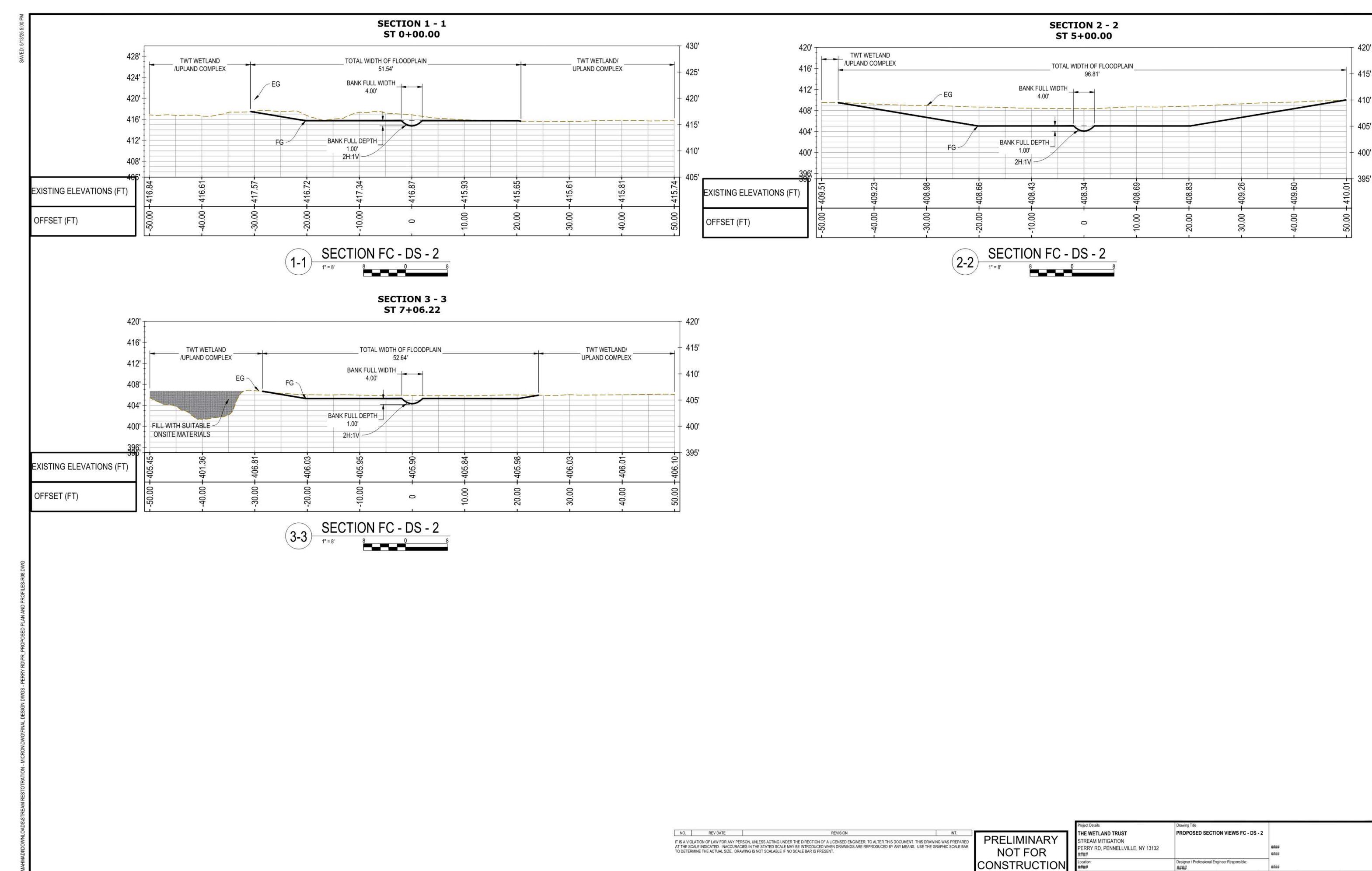






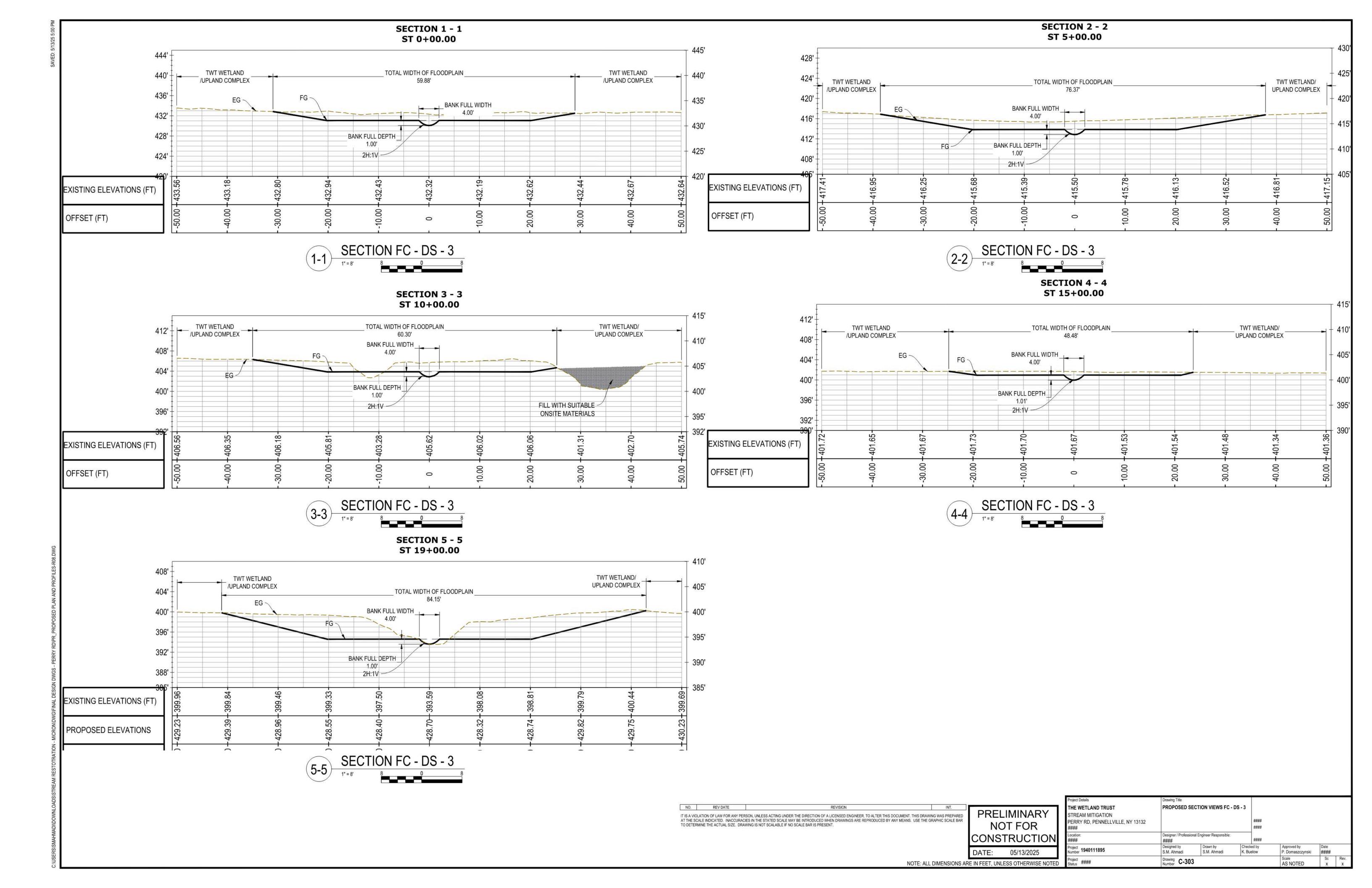


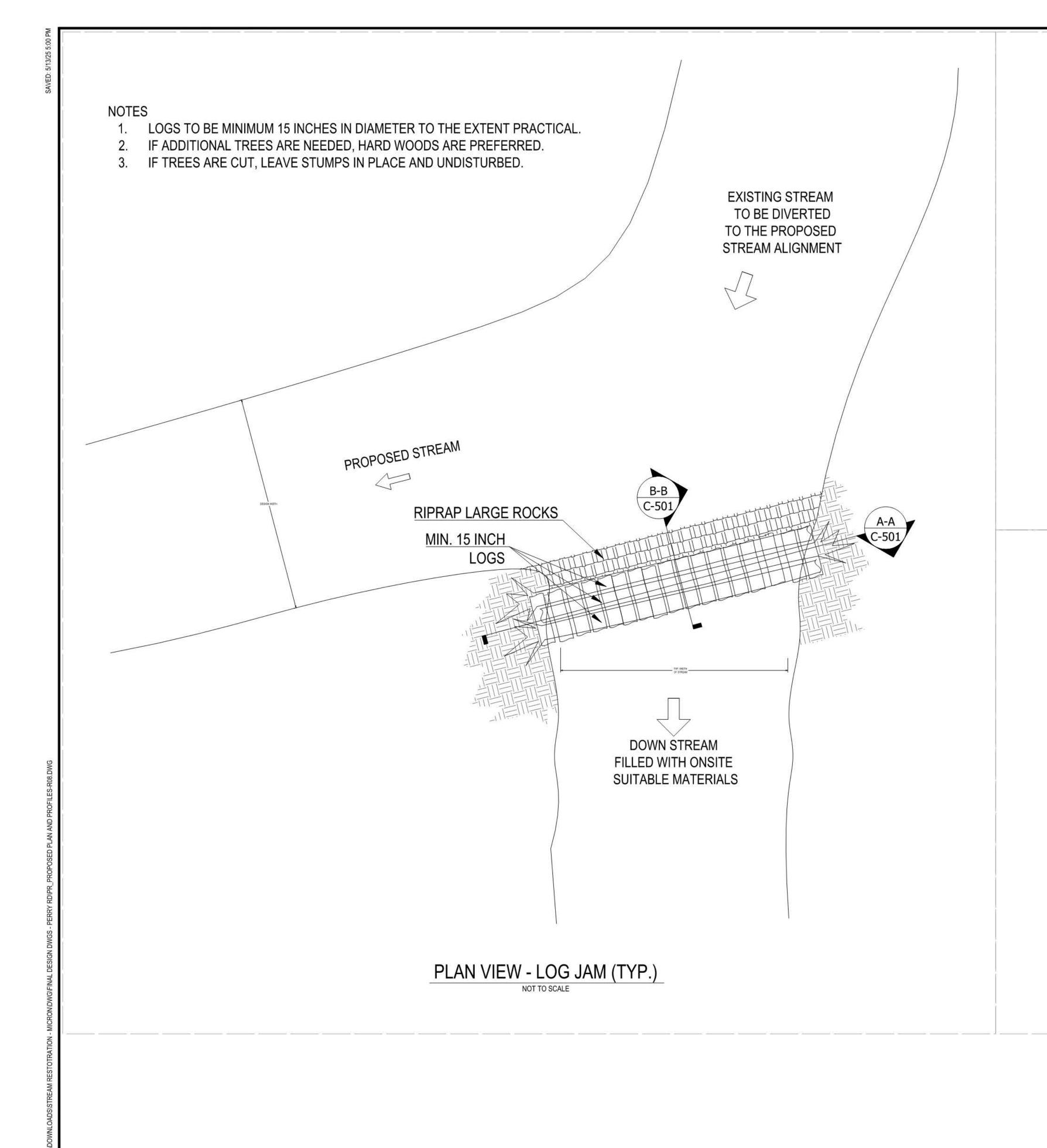


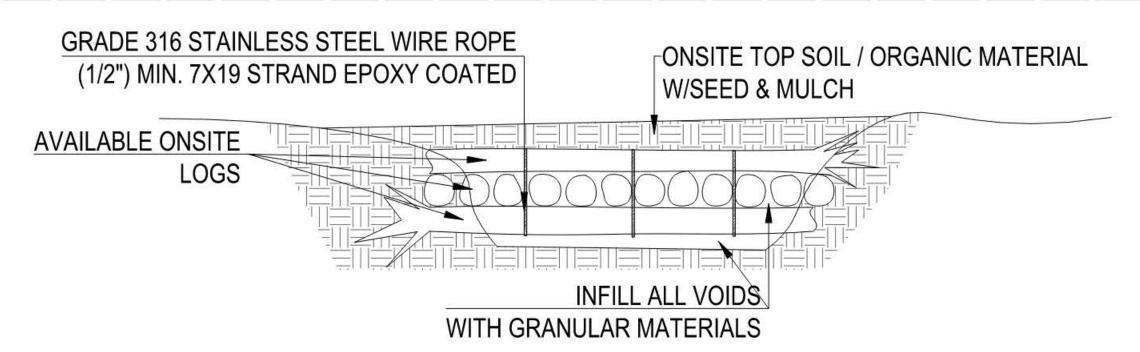


NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

Designer / Professional Engineer Responsible: #### Designed by S.M. Ahmadi Drawn by S.M. Ahmadi Approved by Date P. Domaszczynski #### Scale AS NOTED Drawing C-302



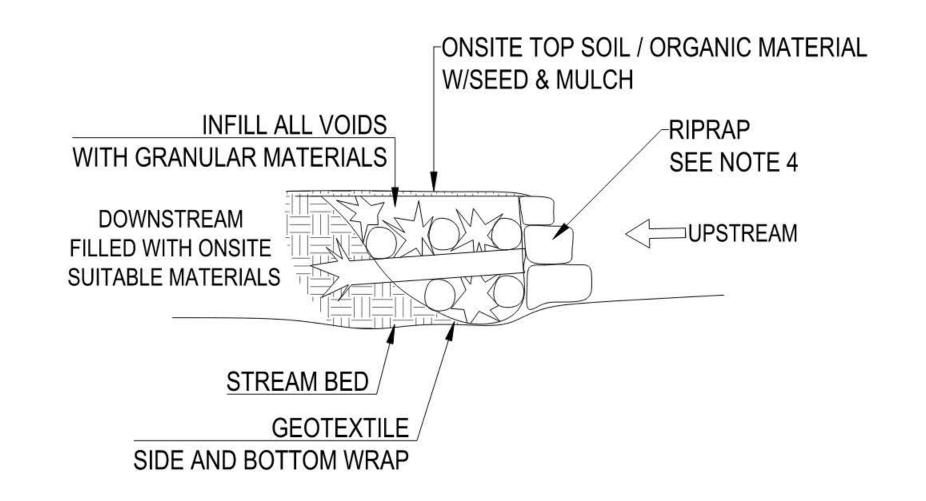




# **NOTES**

- 1. EXISTING DOWNED TREES IF ANY SHALL BE USED TO BUILD THE ENGINEERED LOG JAM.
- ACCESS THE EXITING CREEK DIVERSION FROM TOP OF BANK TO TOP OF BANK.
- 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.

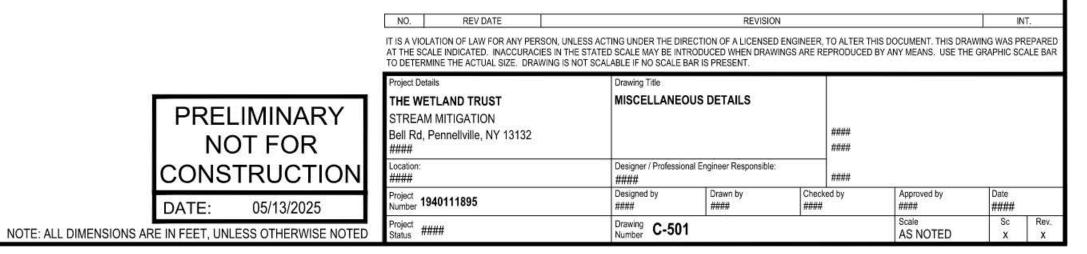


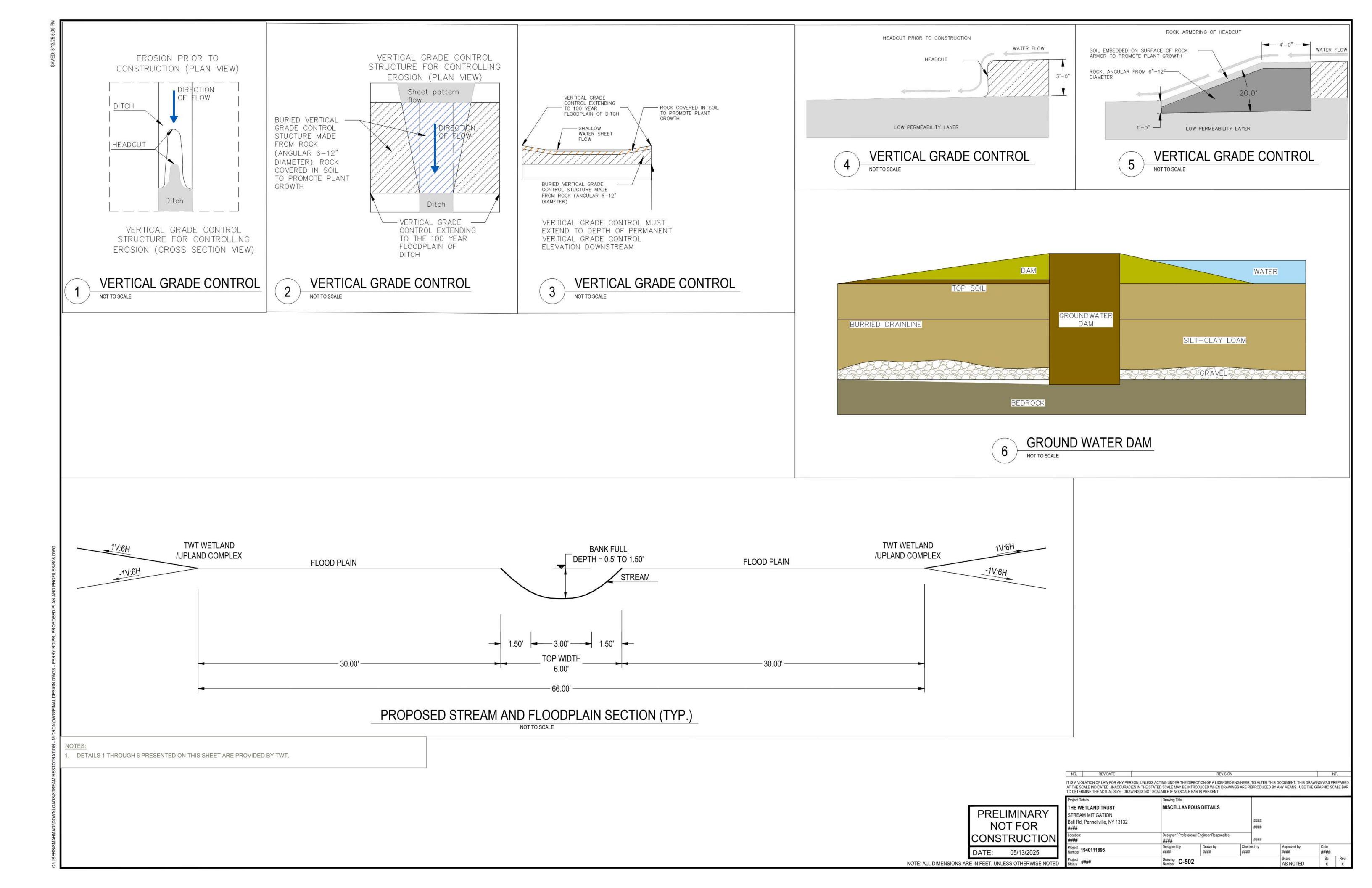


# **NOTES**

- . 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.







CONSTRUCT SMOOTH
TRANSITION INTO—
EXISTING CHANNEL

NO. REV DATE 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

NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

Project Details	Drawing Title						
THE WETLAND TRUST	MISCELLANEOUS DETAILS						
STREAM MITIGATION							
Bell Rd, Pennellville, NY 13132				####			
Location: #####	Designer / Professional Engineer Responsible:			####			
Project Number 1940111895	Designed by		100 miles	Approved by ####	Date ####		
Project ####	Drawing C-503				Scale AS NOTED	Sc	Rev

# Appendix K.

# Fish Creek Long Term Management Plan (LTMP)

Oswego County, New York

PREPARED BY:

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

www.thewetlandtrust.org

May 2025

### 1.0 Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Offsite Compensatory Mitigation Project (Project) on behalf of Micron NY Semiconductor Manufacturing, LLC (Micron), has developed a mitigation plan at the Fish Creek Site, town of Schroeppel, Oswego County, New York (Mitigation Site) to develop wetland and stream mitigation acreage that will contribute to the total compensation needs for the construction of a semiconductor fabrication complex in the town of Clay, Onondaga County, NY. This Long-Term Management Plan (LTMP) has been developed based on anticipated monitoring and management activities for the Mitigation Site. Additional details are to be provided, if necessary, throughout the monitoring period and amended or revised as needed and approved by the USACE and NYSDEC. The purpose of the Long-Term Management Plan (LTMP) is to ensure the long-term sustainability of the protected and restored resources after mitigation performance standards have been achieved.

# 2.0 Responsible Party and Long-Term Steward

Micron is the Responsible Party for all phases of this Permittee Responsible mitigation through monitoring and final acceptance when a Certificate of Completion (or equivalent) will be provided by the agencies. Once the mitigation is complete Micron will transfer long-term management to TWT. As the fee simple owners of the Fish Creek Site, TWT will be the long-term steward and responsible for long-term management of the wetland mitigation site including; identification of needs, development of recommendations, review with regulatory agencies as required, implementation, and efficacy measures. TWT shall implement this LTMP to preserve the habitat and conservation values in accordance with the approved Mitigation Plan, site protection instrument, and this LTMP. Long-term management tasks shall be funded through the Long-Term Management Fund.

# 3.0 Property Description

#### 3.1 Conservation Values

The Mitigation Site provides an opportunity for restoration of a large stream/wetland complex with approximately 19 acres of wetland re-establishment, 1 acres of rehabilitation, and 6,000 linear ft of restored stream reaches in a previously drained and cultivated landscape. The permanent restoration and subsequent protection of this property has several site-specific conservation values that can be enhanced and maintained.

- *Hydrologic Function* Restoring the stream's natural sinuosity and floodplain connection will improve surface water retention, infiltration, and seasonal saturation of soils. Removal of artificial drainage and regrading will help reestablish groundwater-surface water interactions, essential for wetland hydrology.
- Water Quality- Conversion of cropland to wetlands and vegetated buffers will reduce nutrient runoff, sedimentation, and agrochemical inputs into Fish Creek and downstream waters.

## 3.2 Site Improvements

Summary of site improvements including construction and restoration as per the Mitigation Plan. As-built report should be attached as an Appendix to this LTMP.

#### 4.0 Baseline Conditions

Baseline conditions will be provided here with the as-built and final 10-year report referenced and attached. Conditions will be updated throughout the life of the project.

The Wetland Trust, Inc.

# 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.

The Wetland Trust, Inc.

**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	Management Other corrective adaptive management actions to ensure natural stability of site		\$4,800	\$19,910		
Monitoring	To determine implementation tasks	1	\$18	\$25,398		
Administration	dministration For all tasks above including tax exempt status 1 \$600		\$12,444			
Total annual budget*	102,500					
Total Stewardship investm	\$4,100,000					
Total Sector and Secto						

Note: This table is an estimate based on 400 wetland credits @ \$8,000 or (equivalent DEC Acres) and 13,500 stream ft @ \$60

The Wetland Trust, Inc.

# Micron Central New York Semiconductor Manufacturing Complex

**Upper Caughdenoy Creek Wetland Mitigation Plan** 

Oswego County, NY

#### PREPARED BY:

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

www.thewetlandtrust.org

May 2025



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- 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.** SWPPP (to be added in future submittals)
- 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 Lower Caughdenoy Creek Wetland Mitigation Plan Sixmile Creek Wetland Mitigation Plan Oneida River Wetland Mitigation Plan

# 1. Introduction and Objectives

Six sites in Oswego County make up the Permittee Responsible Offsite Compensatory Mitigation Project (Project) for the Micron NY Semiconductor Manufacturing, LLC (Micron) semiconductor fabrication site in the town of Clay, Onondaga County, New York. The Upper Caughdenoy Creek Wetland Mitigation Plan (UCC Plan) location is along County Route 33 and State Route 49 in the Towns of Hastings, Palermo, and Schroeppel NY. The Project will address the total mitigation need for wetland credits and stream restoration to meet Micron permit requirements. The final number of credits required for compensation is still pending as of the drafting of this plan, however, an Overview document accompanying the six plans will be updated with final credit accounting. TWT submits this UCC Plan as one of six plans to satisfy Project mitigation needs and in fulfillment of the requirements of 33 C.F.R. Part 332 (2024).

This Upper Caughdenoy Creek Plan focuses on wetland mitigation components. The objectives are to develop approximately 59.8 wetland mitigation credits (USACE) or 86.7 mitigation acres (NYSDEC) toward a total compensation requirement of 414 credits/acres for the entire project. This includes:

- Re-establish wetlands to generate 49.1 USACE wetland credits equivalent to the creation of 49.1 NYSDEC wetland mitigation acres, including:
  - o 14.8 acres of PEM Shallow Emergent Marsh
  - o 19.1 acres of PEM Deep Emergent Marsh
  - o 2.5 acres of PSS Scrub-Shrub
  - o 12.7 acres of PFO Red Maple Hardwood Swamp
- Rehabilitate wetlands of the above cover types to generate 10.74 USACE wetland credits equivalent to the enhancement of 37.6 NYSDEC wetland mitigation acres.
- Establish 80.7 acres of upland buffer habitat, including:
  - o 53.1 acres of herbaceous buffer habitat
  - o 27.6 acres of shrub/forest buffer habitat

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

# 2. Site Description

The Upper Caughdenoy Creek Site is approximately 238.2 acres in size in the Towns of Hastings, Palermo and Schroeppel, Oswego County, New York (**Figure 2-1**). The Site is within the Oneida River 10-digit HUC (0414020209) watershed, and the U.S. Geological Survey 7.5-minute quadrangle indexed as Central Square. Coordinates for the approximate center of the Site are: [43.30603022, -76.21720126] (**Figure 2-2**).

#### 2.1 Site Selection

The Upper Caughdenoy Creek Mitigation Site was selected along with five other sites to satisfy compensatory mitigation requirements for Micron Campus Impacts using site selection protocols described in Section 2.1 and 4.1 of the Micron Overview of Stream/Wetland Compensation on Six Mitigation Sites document. This Site is particularly well suited for wetland restoration with a combination of:

- flat topography with the majority of slopes being less than 2 percent,
- thick clay layers near the surface,
- large area with opportunity to support expansive wetland connectivity,
- opportunity to reverse extensive agricultural ditching to restore hydrology.

#### 2.2 Site Protection

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

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

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

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

Figure 2-1. Wetland Mitigation Sites Location Overview

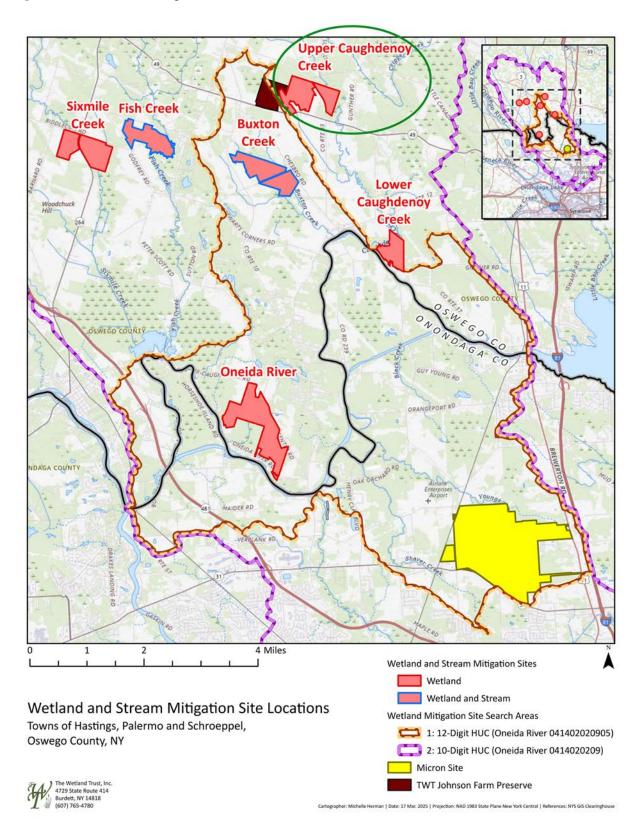


Figure 2-2. Upper Caughdenoy Creek Property (2023)



#### 3. Baseline Information

## 3.1 Land Use History

#### Historic

A review of historic and modern aerial photographs (**Appendix B**) was conducted to understand the property's land use history. The property area was likely first logged in the late 18<sup>th</sup> century or early 19<sup>th</sup> 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	С	
Windsor loamy fine sand, rolling	WnC	0.39	0.16%	Poorly drained	A	

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

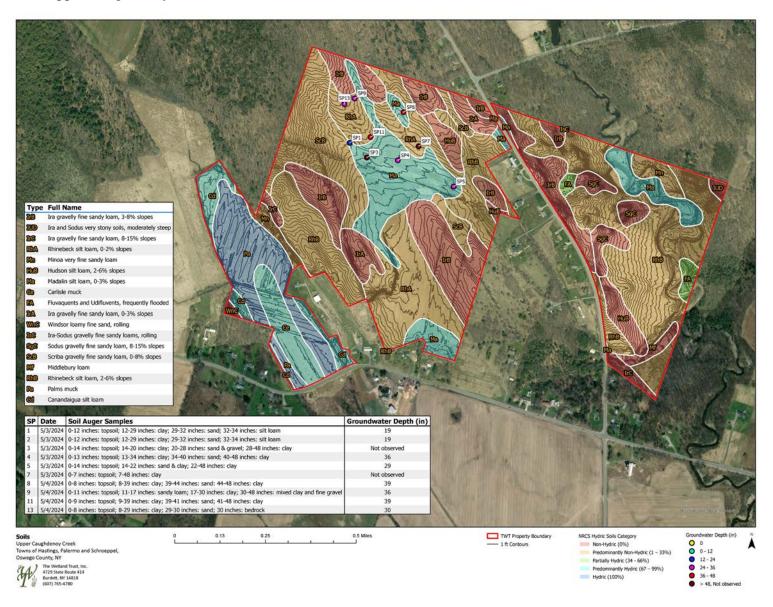
# 3.3 Wetlands and Hydrology

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

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

The site's hydrology is influenced by a combination of surface water runoff, shallow groundwater, and historical agricultural modifications (drainage patterns and flow directions in **Figure 3-3**). Hydrological characteristics at the site are described in three general areas:

Figure 3-1. Upper Caughdenoy Creek Soils



**Figure 3-2.** State and Federal Mapped Wetlands

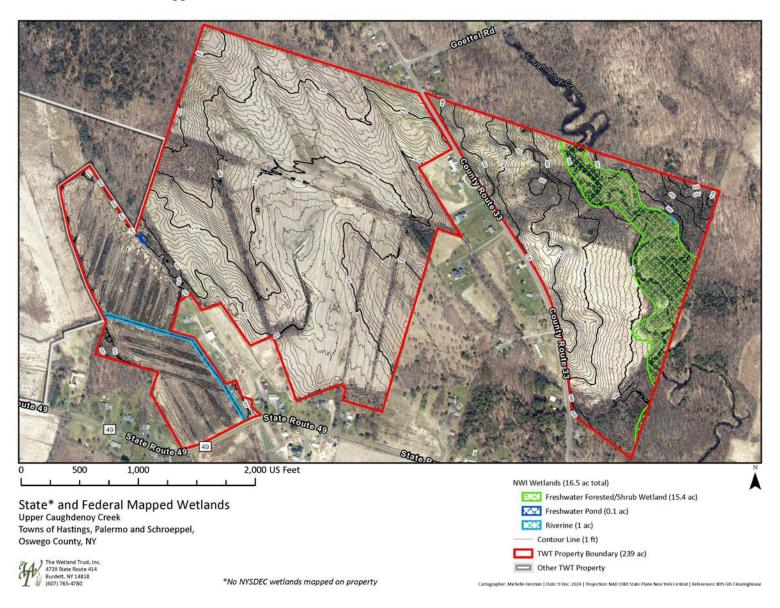
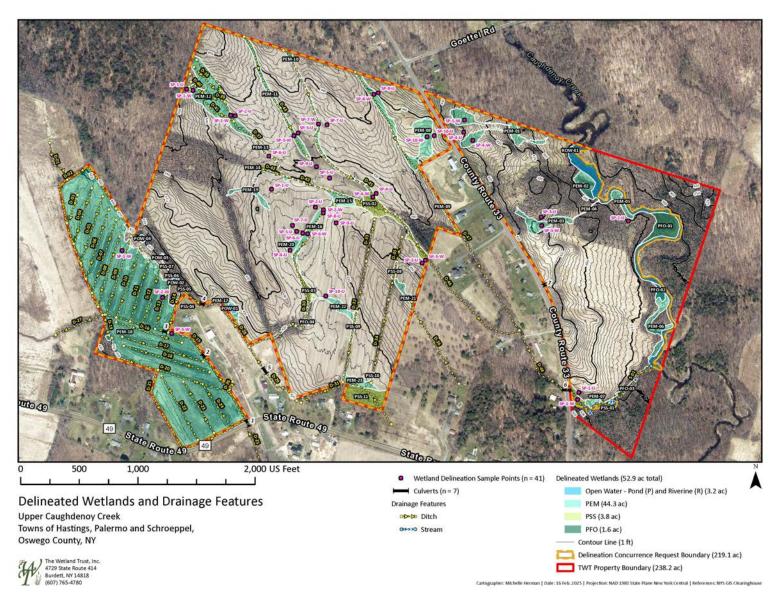


Figure 3-3. Delineated Wetlands and Drainage Features



Area 1 (far western portion, muck farm): This former muck farm contains wetland PEM-18, primarily supported by groundwater with additional surface runoff from higher elevations to the east and south. An altered, unmapped stream channel—visible on historical maps and the NWI—crosses under NYS Route 49. Flows have been diverted by constructed ditches, including reach D-27. Restoration efforts here will focus on disabling existing drainage and monitoring groundwater.

Area 2 (central potion, between NYS Route 49 and County Route 33): This central area has mixed surface and groundwater influences. Heavy clay soils and shallow slopes contribute to wetland hydrology, with runoff generally flowing east toward Area 3, though some drains west into Area 1.

Area 3 (east of County Route 33): This area drains east toward Caughdenoy Creek, which lies well below the elevation of proposed wetland establishment zones. Wetlands here are influenced by surface runoff and poorly drained clay soils.

Hydrology at the site will continue to be monitored until work begins. Staff gauges, groundwater monitoring wells, and a rain gauge will be installed at the site in spring 2025.

#### Staff Gauges

Staff gauges will be installed at Upper Caughdenoy Creek for the purpose of measuring water levels in the streams, ditches, and ponds, providing critical data to monitor surface water dynamics and its relationship to groundwater monitoring well data. A total of 6 staff gauges will be strategically installed based on hydrology, field observations, contour maps, and wetland and stream design plans. Placement will ensure easy accessibility and unobstructed views to accommodate both drone and physical observations. Approximate elevations derived from GIS data will be field verified during installation using survey grade GPS. Details in **Table 3-2** below and **Figure 3-4**.

Table 3-2. Staff Gauge Locations							
Gauge Number	Elevation (ft)	Latitude	Longitude	Description			
1	401.99	43.30424372	-76.22556607	Culvert expelling water from the West field			
2	402.79	43.3038449	-76.22371667	Culvert in West field			
3	403.10	43.30325091	-76.22251684	Culvert in West field			
4	403.69	43.30181476	-76.22122111	Culvert supplying water to the West field			
5	416.63	43.3044004	-76.22159539	Middle of a made pond near drainage channel at			
				Center field			
6	417.74	43.30372123	-76.22024462	Drainage expelling water from Center field			

#### Monitoring Wells

Up to 7 groundwater monitoring wells using Onset HOBO water level dataloggers will be strategically placed across the site to capture critical groundwater data every four hours, with

locations informed by hydrology and drainage patterns, soil delineations, and observed site characteristics. Elevations will be verified during installation to ensure accuracy, and placement adjustments may be made based on field findings. Any changes will be documented in the as built report. See **Table 3-3** and **Figure 3-4** for details.

Table	Table 3-3. Monitoring Well Location							
Well	Elevation	Latitude	Longitude	Location	Description			
#	(ft)							
1	404.37	43.3052511	-76.2249742	West field	Gather groundwater data from East field			
2	418.78	43.30506179	-76.22247678	Center field	Near planned wetland S-07; located on rocky soils			
3	425.89	43.30421866	-76.22047655	Center field	Near planned wetland S-09			
4	443.51	43.30983986	-76.22135294	North field	Near planned wetland W-14; highest elevation point			
5	432.44	43.30800742	-76.22083784	North field	Near planned wetland W-04			
6	403.82	43.30409992	-76.21030372	East field	Near planned wetland E-17; located on rocky soils			
7	435.00	43.30830836	-76.21551861	East field	Near planned wetland E-13; lowest elevation point, adjacent to Creek			

#### Rain Gauge

One HOBO Rain Gauge Data Logger (RG3) is installed at the site to measure precipitation on-site (coordinates: 43.305458, -76.223911) and has been recording data since April 28, 2025. This data will support the interpretation of hydrologic responses observed in monitoring wells and staff gauges. This device will not be used in peak winter as it cannot measure snow, only rainfall.

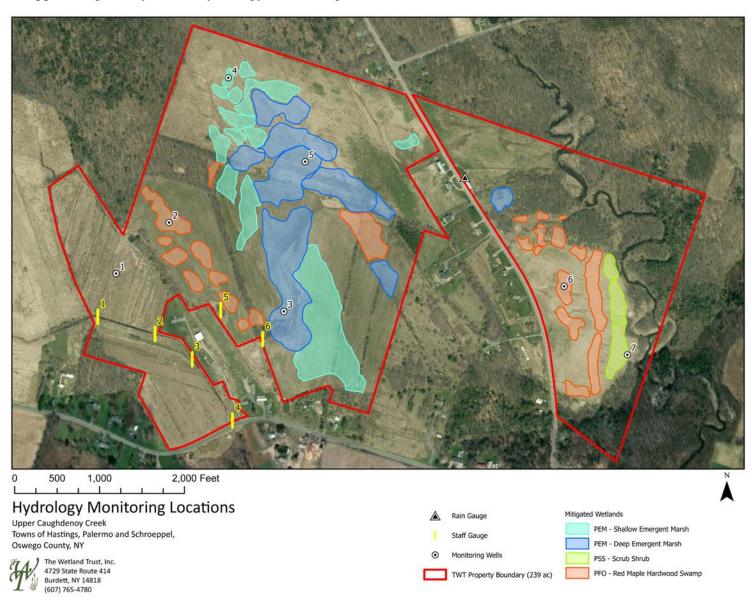
## 3.4 Existing Wildlife

Various wildlife, including amphibian, reptile, bird, and mammal species, have been recorded at the Upper Caughdenoy Creek mitigation site, either through visual or auditory observations. Amphibians were identified by sight using egg mass, juvenile, or adult presence and by sound if mating calls were discernible. Four main species were noted at this site, including the American toad (*Anaxyrus americanus*), gray treefrog (*Dryophytes versicolor*), northern green frog (*Lithobates clamitans melanota*), and northern leopard frog (*Lithobates pipiens*), all of which are secure both statewide and globally. One reptile species, the eastern garter snake (*Thamnophis sirtalis sirtalis*), was visually identified at this site.

Numerous bird species were observed at the Upper Caughdenoy Creek mitigation site using both visual and auditory identification. Several species of note include the American pipit (*Anthus rubescens*), tufted titmouse (*Baeolophus bicolor*), Canada goose (*Branta canadensis*), and killdeer (*Charadrius vociferus*), all of which are secure both statewide and globally or of least conservation concern. Additionally, the bald eagle (*Haliaeetus leucocephalus*), which is a threatened species in New York State, has been documented at the Upper Caughdenoy Creek mitigation site.

Various mammal species were also observed within this site and the immediate area either directly or indirectly (i.e., scat, footprints, etc.), including the white-tailed deer (*Odocoileus virginianus*), coyote (*Canis latrans*), North American beaver (*Castor canadensis*), raccoon (*Procyon lotor*), and

Figure 3-4. Upper Caughdenoy Creek Hydrology Monitoring Locations



eastern cottontail (*Sylvilagus floridanus*), all of which are of least conservation concern. See **Appendix D** for the full list.

### 3.4.1 Federally Listed Species and Habitat Consideration

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

## 3.5 Existing Vegetation

The Upper Caughdenoy Creek site features a mix of agricultural, upland, and wetland ecosystems. A large portion of the site is currently cultivated as a soybean (*Glycine max*) field, resulting in limited vegetative diversity within the agricultural zone. Surrounding the field and perimeter are delineated wetlands that support a combination of native and invasive plant species. Native vegetation, including white turtle head (*Chelone glabra*), allegheny monkey flower (*Mimulus ringens*), and blue vervain (*Verbena hastata*), contribute vital habitat and ecological functions. A complete list of species observed at the UCC site can be found in **Appendix D**.

# 3.6 Invasive Species

Key invasives of Upper Caughdenoy Creek include purple loosestrife (*Lythrum salicaria*) affecting 29.93 acres, reed canary grass (*Phalaris arundinacea*) affecting 6.59 acres, common reed (*Phragmites australis*) affecting 3.80 acres, and cattail (*Typha* spp) affecting 2.99 acres. In addition to these dominant species, other invasive plants present in the area include creeping bentgrass (*Agrostis stolonifera*), reed sweet grass (*Glyceria maxima*), honeysuckle (*Lonicera* spp.), creeping jenny (*Lysimachia nummularia*), Timothy grass (*Phleum pratense*), Kentucky bluegrass (*Poa pratensis*), creeping buttercup (*Ranunculus repens*), common buckthorn (*Rhamnus cathartica*), and multiflora rose (*Rosa multiflora*). Refer to the Invasive Species Management Plan in **Appendix E** for baseline maps of existing key invasive species.

Table 3-4. Invasive Species Coverage at Upper Caughdenoy Creek							
Invasive Species	1-5% Cover	5-25% Cover	>25% Cover	Total Affected			
	(Acres)	(Acres)	(Acres)	Area (Acres)			
Reed Canary Grass (Phalaris arundinacea)	1.63	1.09	3.87	6.59			
Purple Loosestrife (Lythrum salicaria)	5.67	22.85	1.40	29.93			
Cattail (Typha sp.)	0.67	2.24	0.08	2.99			
Common Reed (Phragmites australis)	0.02	0.40	3.38	3.80			

### 3.7 Cultural and Historic Considerations

In accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), initial consultation was initiated with the New York State Historic Preservation Office (NY SHPO) in August 2024 to assess the potential for the proposed mitigation site to affect historic properties or cultural resources. August 09 and September 09, 2024 letters from NY SHPO indicated that no historic properties or cultural resources would be affected by this project. Further tribal consultation with Onondaga Nation required a Phase 1A Report of the site to show why no field work was proposed. A Phase 1A Report was submitted on [date to be inserted- this is still in progress], 2025 (**Appendix F**).

# 4. Wetland Credit Accounting

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

Figure 4-1. USACE Wetland Credit Generation and NYSDEC Mitigation Acreage							
Wetland type Cowardin	Cover type Edinger	Mitigation Type NYSDEC	Acres	Mitigation type USACE	USACE Ratio (Acre:Credit)	Credits	
	Ch - 11	Restoration	14.8	Re-establishment	1:1	14.8	
PEM	Shallow emergent marsh	Enhancement	1.4	Rehabilitation	3.5:1	0.4	
PEM	D	Restoration	19.1	Re-establishment	1:1	19.1	
	Deep emergent marsh	Enhancement	3.3	Rehabilitation	3.5:1	0.94	
PFO	Ded monle handwood arrown	Restoration	12.7	Re-establishment	1:1	12.7	
PFU	Red maple- hardwood swamp	Enhancement	0.2	Rehabilitation	3.5:1	0.06	
PSS	Scrub shrub	Restoration	2.5	Re-establishment	1:1	2.5	
P88	SCrub snrub	Enhancement	32.7	Rehabilitation	3.5:1	9.34	
Total 86.7* 59.8							
* total amount of NYSDEC mitigation acres.							

Open water areas (deep water aquatic habitats and vegetated shallows) greater than 0.1 contiguous acre will only be credited where they equal 10% or less of the total wetland creation and reestablishment 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  $\leq$ 6.6 ft in depth that do not support rooted-emergent or woody plant species. Areas  $\leq$ 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 reestablished for each area within the Upper Caughdenoy Creek Site is based on the cover types outlined in Ecological Communities of New York State (Edinger, 2014) and is guided by the number of acres of each wetland type necessary to meet mitigation requirements for the Micron impacts.

Approximately 14.8 acres of shallow emergent marsh, 19.1 acres of deep emergent marsh, 2.5 acres of scrub-shrub, and 12.7 acres of red maple hardwood swamp will be re-established with an additional 37.6 acres of rehabilitation of these cover types (**Figure 5-1**). The following characteristics guide the locations of each type of wetland to be re-established.

## Red Maple-Hardwood Swamp

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

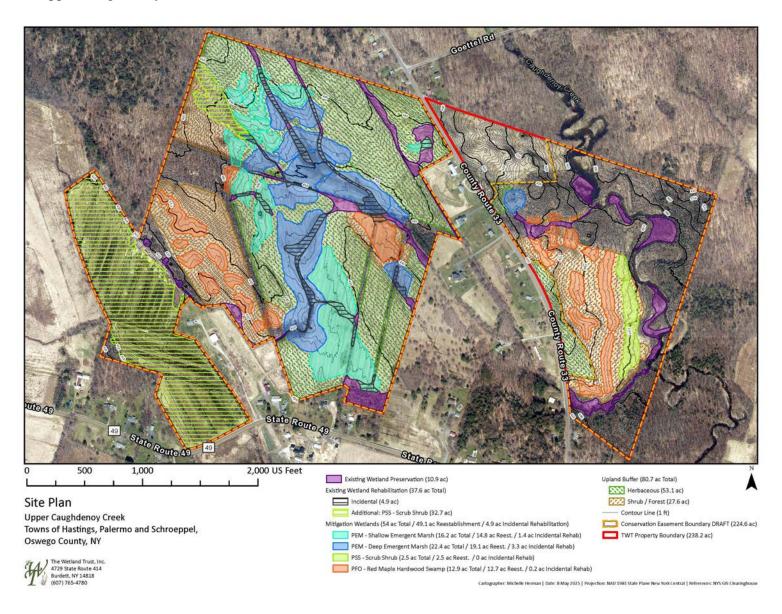
#### Deep Emergent Marsh

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

#### Shallow Emergent Marsh

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

Figure 5-1. Upper Caughdenoy Creek Site Plan



#### Shrub Swamp

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

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

## 5.1 Invasive Vegetation Control

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

# **5.2** Grading Plan

#### Basin and berm construction

A shallow basin will be shaped for each designed wetland. The basins will measure 10 feet in diameter to over 200-feet in diameter based on location characteristics and targeted cover type. The basin is dug so that it is deepest in the center in relation to the low edge of the marked perimeter. Basins will range in depth from 1-inch to 36-inches, based on targeted cover type. Refer to **Figures 5-4 and 5-5** for plan view details. Small, earthen berms around the lower two-thirds of the wetland basin will be constructed from 1.0 to 2.0 feet high at a minimum width of 3-feet wide and gradual 5 percent slopes. Core trenches filled with compacted clay layers will be constructed under the berms to disable the buried drainage structures. See **Figures 5-2 and 5-3** for a typical section and plan view.

An excavator and dozer will be used to shape gradual slopes and bays along the inside edge of the constructed wetland for a natural look and function. Elevations are verified during construction using a laser level. Topsoil will be temporarily stored on site and spread in and around the finished wetland basin. Spoil material removed is shaped with gradual slopes so that it appears like natural

hummock/hollow and ridges. Operators will aim to create wetlands on top of clay texture spoil material by leveling areas of spread soil and creating shallow basins in the soil.

Figure 5-2. Restored Wetland Section View

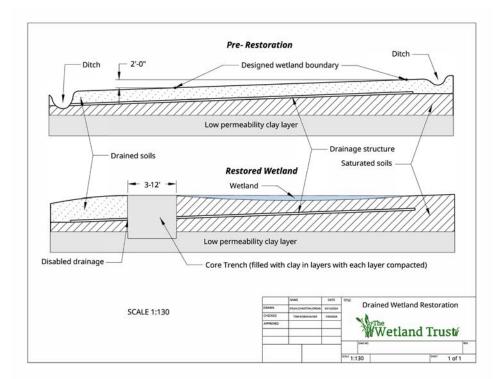


Figure 5-3. Restored Wetland Plan View

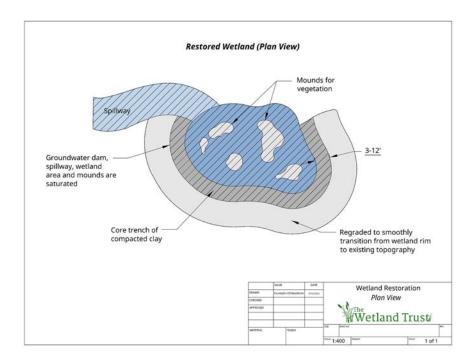


Figure 5-4. Wetland Grading Plan- East

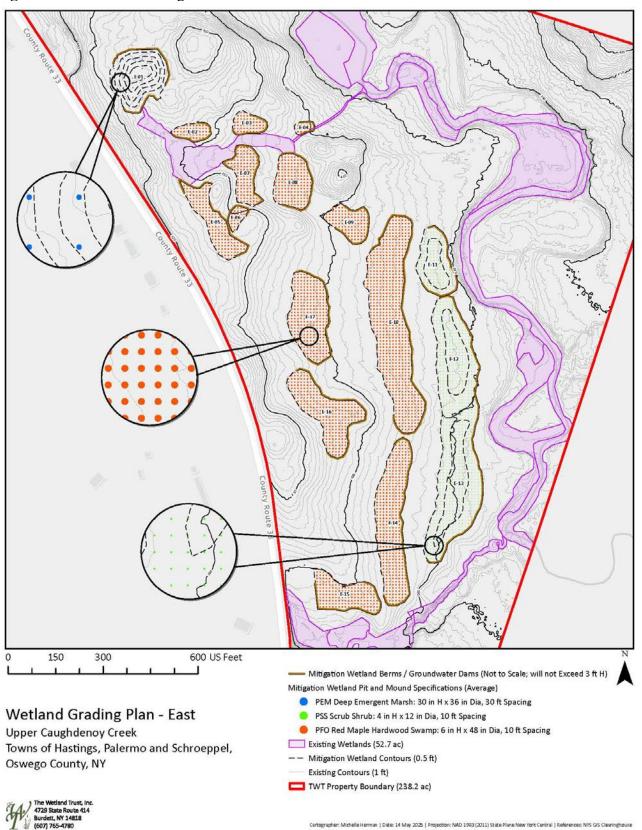
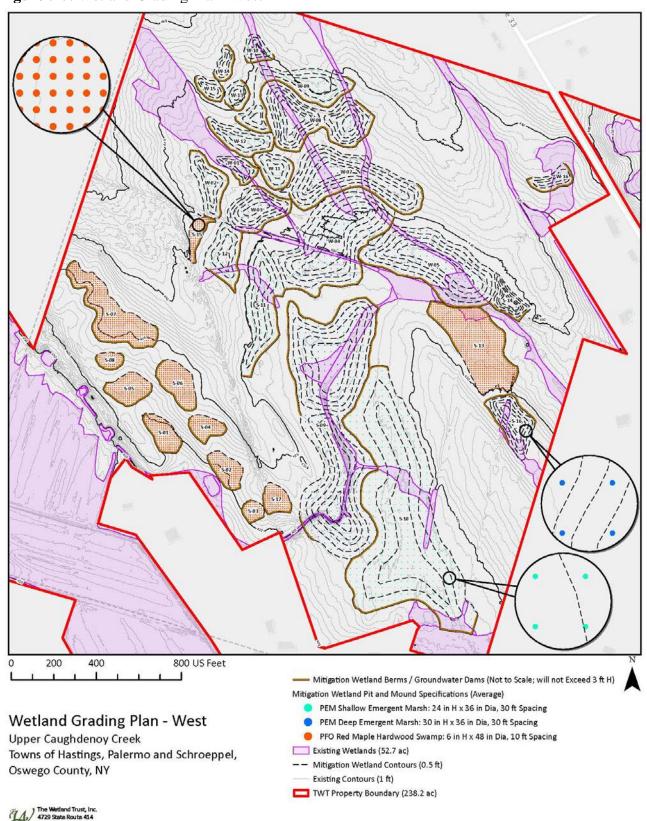


Figure 5-5. Wetland Grading Plan- West



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

### Microtopography restoration

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

Table 5-1. Upper Caughdenoy Creek Grading for Wetland Types							
Wetland Type	Maximum wetland basin depth (in)	Average individual mound height (in)*	Average mound diameter (in)	Mound Spacing (ft)	Mound Density/acre		
PEM – Shallow Emergent Marsh	24	24	36	30	80		
PEM – Deep Emergent Marsh	36	30	36	30	40		
PFO – Red Maple Hardwood Swamp	1	6	48	10	200		
PSS – Scrub-shrub	6	4	12	10	400		
*soil is kept uncompacted and will settle by	up to 50%						

Figure 5-6. Restored Emergent Wetland

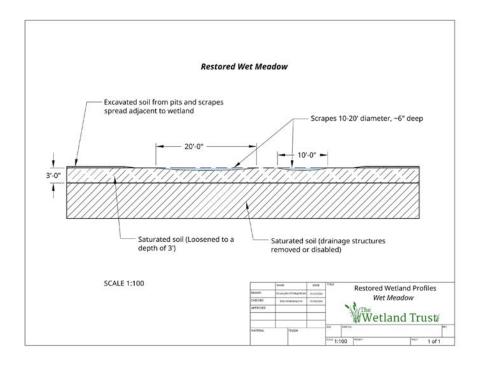


Figure 5-7. Restored Scrub-Shrub Wetland

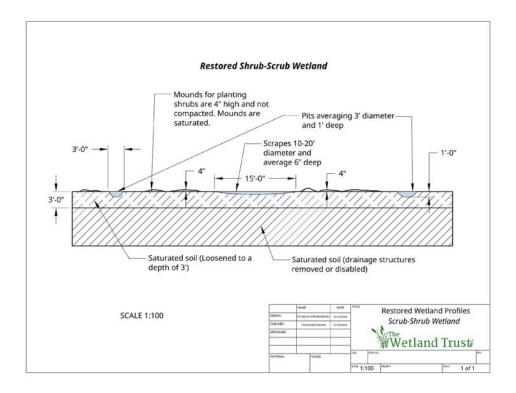
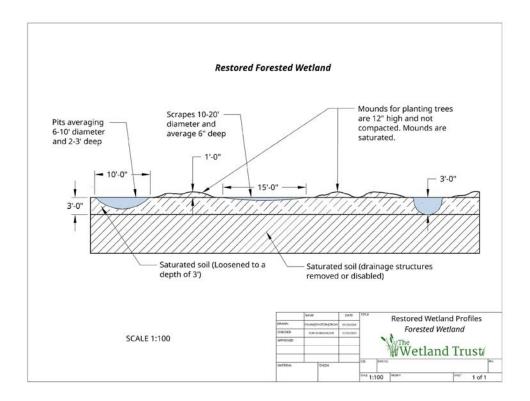


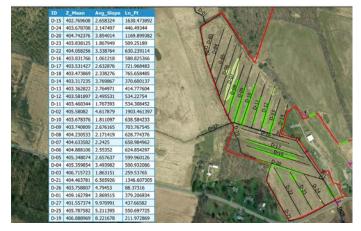
Figure 5-8. Restored Forested Wetland



## **5.3** Rehabilitation/Restoration of Existing Wetlands

Aside from the incidental rehabilitation (where existing wetlands overlap with designed wetland polygons), additional areas of targeted rehabilitation will occur. The main area, PFO-18, or the

muck farm on the westernmost portion, is severely hydrologically altered with over 27 drainage channels with over 17,200 feet. This also includes the channelization of over 2,000 feet of unnamed creek. Current vegetation is dominated by invasive species such as reed canary grass (*Phalaris arundinacea*), purple loosestrife (*Lythrum salicaria*), common reed (*Phalaris arundinacea*), and cattail species (*Typha spp.*). Rehabilitation methods include:



- 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 scrubshrub (PSS), palustrine forested (PFO) wetlands, or restored stream channels, upland buffers will be planted with native shrub and tree species to create structurally diverse, forested buffer zones. These plantings will promote shading, nutrient uptake, and habitat connectivity.

# **5.5 Planting Plan**

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

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

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

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

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

Cardinal Flower	Lobelia cardinalis	FACW	7
Great Blue Lobelia	Lobelia siphilitica	FACW	6
Square-stemmed Monkey Flower	Mimulus ringens	OBL	5
Sensitive Fern	Onoclea sensibilis	FACW	2
Lizard's Tail	Saururus cernuus	OBL	7
Purple-Stemmed Aster	Symphyotrichum puniceum	OBL	4
Marsh Fern	Thelypteris palustris	FACW	4
Blue Vervain	Verbena hastata	FACW	3

Table 5-2b. Deep Emergent Marsh							
Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate			
Gray's Sedge	Carex grayi	FACW	5	15-20 pounds/acre			
Cartex lacustris	Carex lacustris	OBL	5				
Royal Fern	Osmunda regalis	OBL	7				
Green Bulrush	Scirpus atrovirens	FACW	4				
Woolgrass	Scirpus cyperinus	FACW	3				
River Bulrush	Scirpus fluviatilis	OBL	6				
Water Parsnip	Sium suave	OBL	5				
Bur-reed	Sparganium americanum	OBL	5				

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

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

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

Table 5-2e. Targeted Rehabilitation Areas							
Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate			
Red Maple	Acer rubrum	FAC	2	400/acre			
Chokeberry	Aronia melanocarpa	FACW	6	Shrub clusters			
Buttonbush	Cephalanthus occidentalis	OBL	7	Trees 10-25 feet			
Silky dogwood	Cornus amomum	FACW	4	apart			
Red osier dogwood	Cornus sericea	FACW	5				
Spicebush	Lindera benzoin	FAC	5				
Black gum	Nyssa sylvatica	FAC	5				
Swamp white oak	Quercus bicolor	FACW	7				
Bur oak	Quercus macrocarpa	FAC	6				
Pin oak	Quercus palustris	FACW	7				
Black willow	Salix nigra	OBL	2				
Elderberry	Sambucus canadensis	FACW	3				

# 5.5 Timing and Sequence

Micron's large project size will require a phased approach for construction; and the wetland mitigation effort will follow a similar phased approach consistent with regulatory requirements. See 33 C.F.R. § 332.3(m) "Implementation of the compensatory mitigation project shall be, to the maximum extent practicable, in advance of **or concurrent with the activity causing the authorized impacts**." The UCC Site will be the fifth site developed which is proposed to begin in the third construction year (**Table 5-3**).

Table 5-3. Mitiga	ation Sit	te Sequ	ence					
Site Name	2025	2026	2027	2028	2029	2030	2031 ~	∞ In Perpetuity
Buxton Creek Stream and Wetlands		Constr uction begins					·	
Oneida River Wetlands		Constr uction begins						
Lower Caughdenoy Creek Wetlands		Constr uction begins						
Fish Creek Stream and Wetlands			Constr uction begins					
Upper Caughdenoy Creek Wetlands				Construction begins		naintenance, and adaptive n struction for a 15-year perio 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	Spring Year 1	Pre-construction					
implementation.							
Groundwater dam installation, basin excavation, pond	Summer Year 1	Construction Phase I:					
and ditch filling. Erosion control seeding.		Earthwork					
Final grading to develop microtopography, loosening	Summer Year 1	Construction Phase II:					
of soil as necessary.		Topography Enhancement					

Seeding, planting, and mulching per planting plan and	Fall Year 1	Construction Phase III:								
SWPPP, placement of woody debris for a natural look		Seeding & Planting								
Removal of all construction materials and general site	Fall Year 1	Post-construction								
clean-up. Erosion and sediment control structures (silt										
fencing) will be removed once site is stabilized.										
*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

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

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

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

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

Deep emergent and shallow emergent marsh (Edinger et al. 2014) are the targeted cover types for PEM areas.

- Shallow marshes will be 6 inches to 3 feet deep with exposed soils in the summer and very variable in species.
- Deep emergent marshes will be 6 inches to 6 feet deep, less likely to have exposed soils, and very variable in species, with species more likely to be submerged or floating.
- Palustrine Scrub Shrub (PSS): The areas meeting palustrine scrub shrub criteria will have at least 400 native shrubs/trees per acre, and those stems will display normal and healthy growth, free of disease and pests. At least 280 of those stems will be native shrub species. Stem density monitoring will be conducted biannually, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.
- Palustrine Forest (PFO): The areas meeting palustrine forest criteria will have a minimum of 400 native, live, and healthy (disease- and pest-free) woody plants growing per acre. At least 280 of these will be native tree species. Stem density monitoring will be conducted biannually for a period of 15 years, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.

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

- o Floodplain Forest, will be planted adjacent to streams
- o 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.

### • <u>Invasive Species</u>

- O 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.
- O 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.
- <u>VIBI</u>: 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 reestablishment and rehabilitation. Interim targets will aim for a score of 15 or more by the first year following planting, ≥20 by Year 3, ≥30 by Year 5, and ≥35 by Year 7.

Table 6-1. Wetland Performance Standards and Interim Goals											
	Interim and Final Goals										
Performance Standard	Year 1 <sup>1</sup>	Year 3	Year 5	Year 7	Year $10^2$	Year 12	Year 15 <sup>3</sup>				
Relative cover by native perennial hydrophytes (FAC or wetter)	20%	40%	60%	80%	90%						
Stem density in PSS areas (per acre, at least 280 must be shrub species)	400	400	400	400	400						
Stem density in PFO areas (per acre, at least 280 must be tree species)	400	400	400	400	400	400	400				
Tree height in PFO areas	1 ft	2 ft	3 ft	4 ft	6.6 ft	8ft	9ft				
Relative cover of all non-Typha invasive plant species in PEM, PSS, and PFO areas	15%	15%	12.5%	10%	5%						
Total relative cover of all invasive species, including Typha spp. in PEM, PSS, and PFO areas	20%	18.5%	15%	12.5%	10%						
VIBI-FQ score	≥15	≥20	≥30	≥35	≥40						

<sup>1.</sup> First full growing season following planting

# 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.

<sup>2.</sup> Final herbaceous/PEM and PSS goals to be met at this time or additional monitoring years added

<sup>3.</sup> Final PFO (tree height and density) goals to be met at this time

Site monitoring begins after construction is completed and continues for ten (10) years unless additional monitoring is required to demonstrate achievement of performance standards. Monitoring information collected will determine if performance standards are being met and inform maintenance tasks or adaptive management needed to help meet those standards.

Each monitoring report will include:

### • Work completed, as-builts, and milestones

- o Evaluation of progress toward all performance goals (i.e. Section 6) as appropriate.
- Report on the status of all erosion control measures on the mitigation site, and any additional temporary measures needed.
- Weekly mapping of all work completed.

## • <u>Hydrological reporting</u>

- Hydrology data collected from permanent water wells, as well as hydrology information derived from Wetland Determination Data Forms completed throughout the site.
- o 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

- o Description of the general plant health, vigor, and mortality including a prognosis for future survival with qualitative descriptions and photos illustrating tree growth.
- o Relative cover, stem density, and tree height reporting with descriptions of the monitoring protocols used.
- o VIBI scores and data sheets for wetland rehabilitation areas.

#### • Wildlife reporting

o 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 31<sup>st</sup> 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.

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

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

# 8. Maintenance Plan

Periodic maintenance activities will be expected to occur following initial construction and planting to ensure long-term viability of the restored and protected resources on the project sites. Below are descriptions outlining the projected maintenance activities during the monitoring period. Any maintenance activities undertaken will be documented in the appropriate monitoring

report along with a discussion of any anticipated maintenance to be completed in future years. Significant adjustments such as earthwork will require USACE and DEC approval.

### 8.1 Hydrology Maintenance

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

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

# **8.2 Vegetation Maintenance**

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

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

#### **8.3** General Site Maintenance

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

# 9. Long Term Management Plan

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

# 9.1 Responsible Party

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

# 9.2 Long-Term Monitoring and Management Activities

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

# 9.3 Long-Term Funding Mechanism

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

# 10. Adaptive Management Plan

Beyond the anticipated maintenance needs detailed in Section 8, preparedness for unexpected changes in site conditions is imperative to the continued success of the project. This adaptive management strategy outlines the approach for addressing potential challenges and unexpected changes, including those related to fire, climate change, disease, and other factors. Continuous monitoring to inform the adaptation of management strategies will ensure that the protected and restored resources remain resilient and meet long-term conservation goals. Potential challenges warranting adaptive management include:

- Fire: The effects of a significant fire event can lead to negative impacts on a young, reestablished 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.
- <u>Climate change</u>: 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.
- <u>Disease</u>: 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 170(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 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 Wetlan	d Trust, Inc.
	By:	
	Title:	
STAT	E OF NEW YORK) ss.:	
COUN	NTY OF Schuyler)	
state, j known subscr by his	personally appeared the Grantor  to me or proved to me on the b ibed to the within instrument and ac	r 202_ before me, the undersigned, a notary public in and for said, of The Wetland Trust, Inc. personally asis of satisfactory evidence to be the individual whose name is eknowledged to me that executed the same in his capacity, and that dividual, or the person upon behalf of which the individual acted,
Notary	/ Public	Date:

The Wetland Trust, Inc.		Micron Upper Caughdenoy Creek Mitigation Plan
Approval and Acceptan	ce by Holder: The Wetland Con	servancy, Inc.
Ву:		
Title: Chair		
STATE OF NEW YORK) ss:		
COUNTY OF Tompkins)		
state, personally appeared the known to me or proved to me subscribed to the within instrum	Holder <b>Aaron Ristow</b> , Chair of e on the basis of satisfactory of the ent and acknowledged to me the	ne undersigned, a notary public in and for said of The Wetland Conservancy, Inc. personally evidence to be the individual whose name is at he executed the same in his capacity, and that son upon behalf of which the individual acted,
Notary Public	Date	

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

Upper Caughdenoy Creek, 557 County Road 37

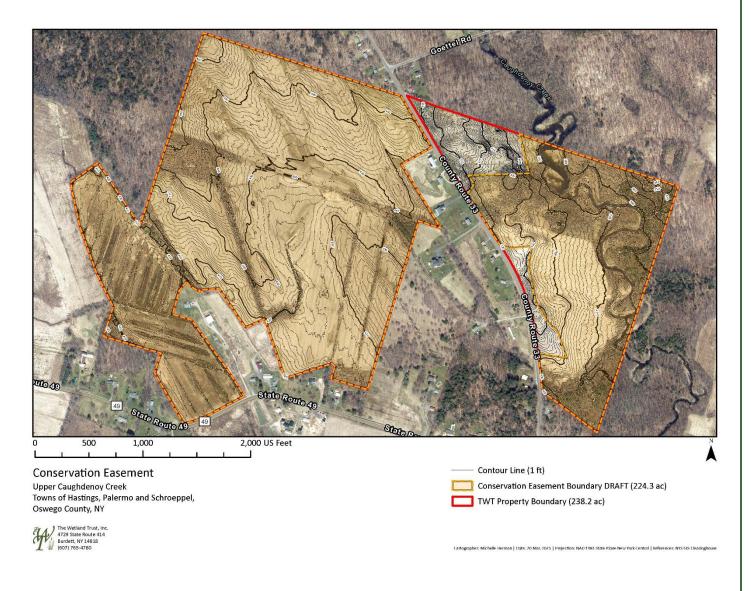
Town of Hastings, Palermo, and Schroeppel, Oswego County, NY

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,

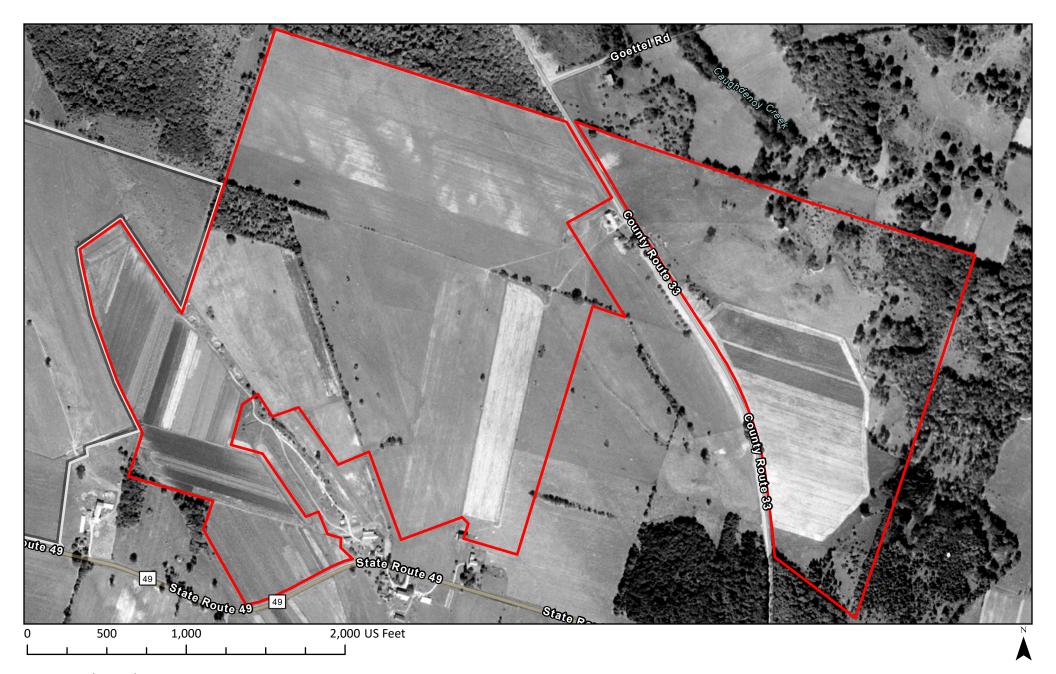
[Left intentionally blank- awaiting boundary survey with descriptions of metes and bounds]



Micron- Upper Caughdenoy Creek Stream and Wetland Mitigation Plan	

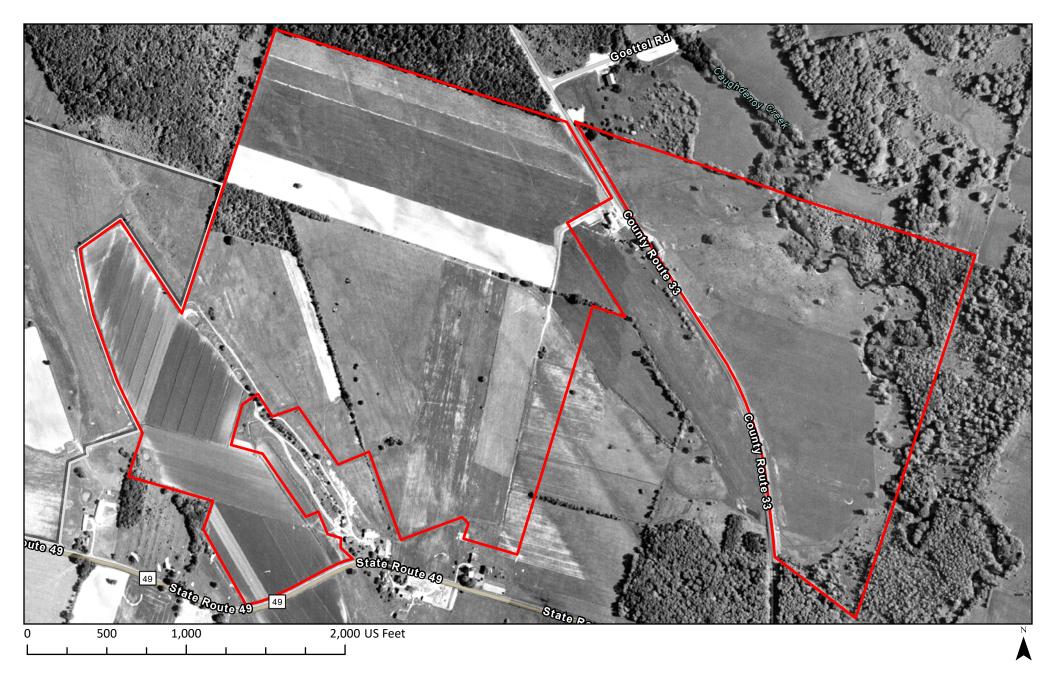
May 2025





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



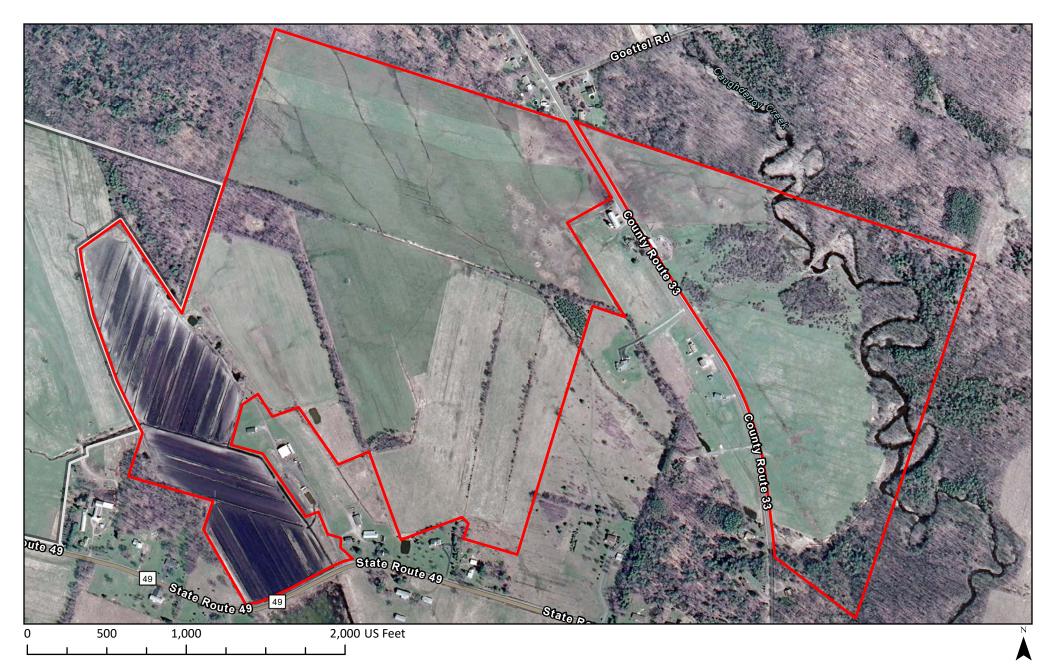
Imagery (1959)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY





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



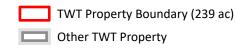
Imagery (2006)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

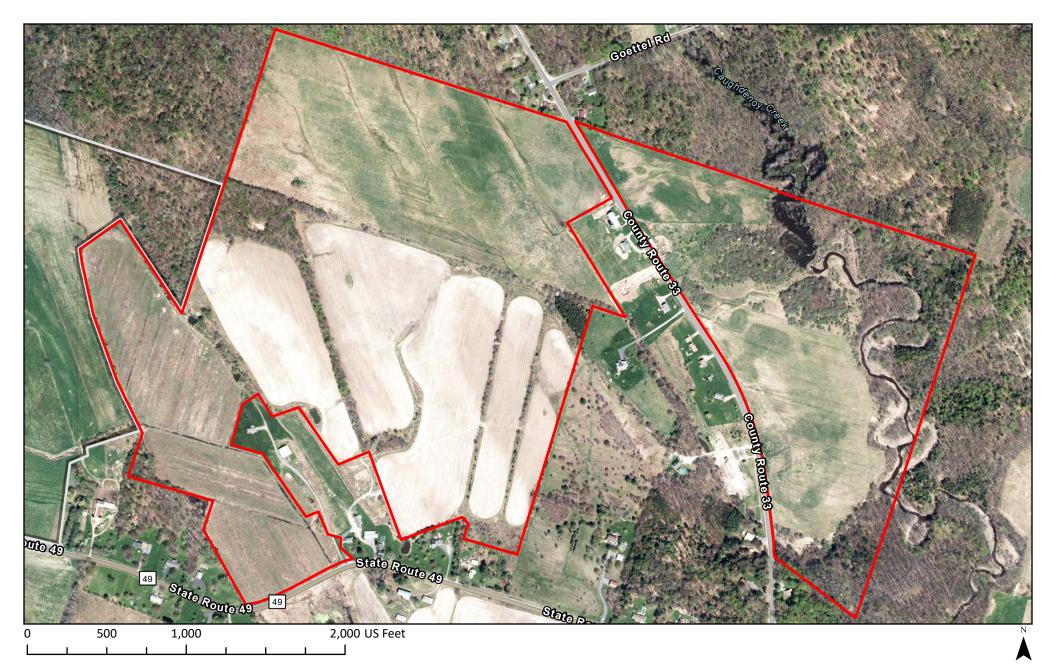




Imagery (2011)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

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





Imagery (2015)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY





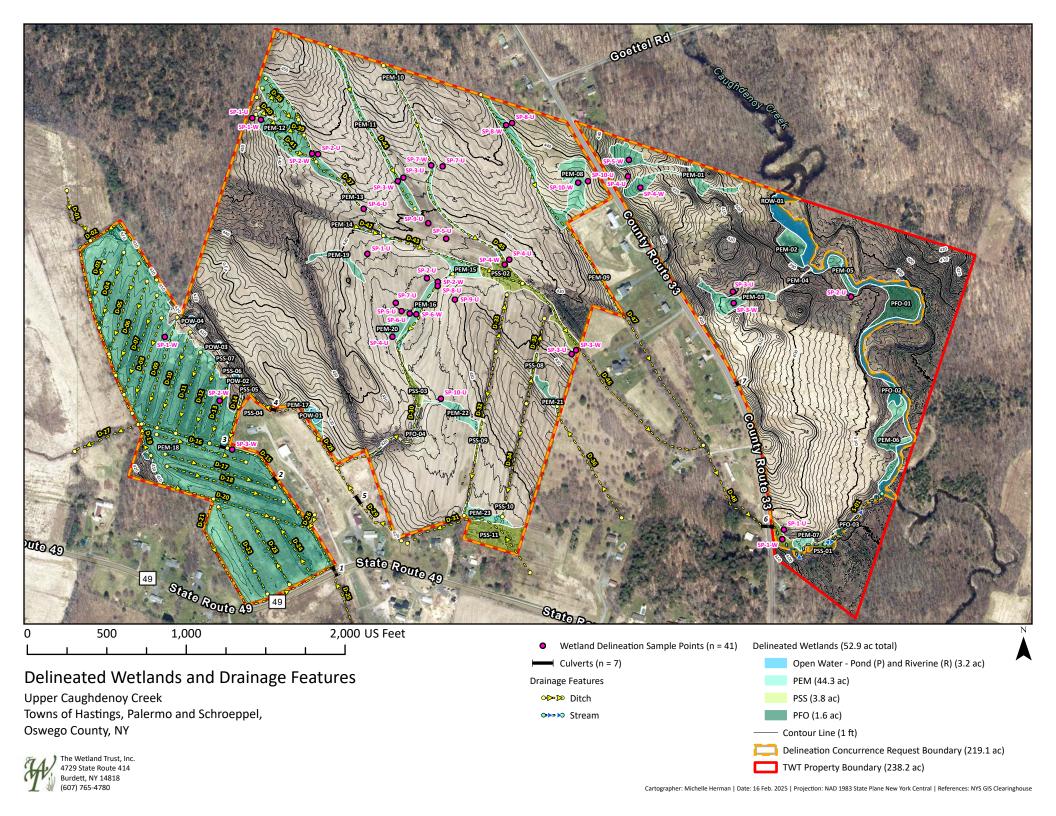
Imagery (2019)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY

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

	Micron- Upper	r Caughdenoy	Creek Stream and	d Wetland Mitigation Plan
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May 2025

# Appendix C.



## **Upper Caughdenoy Creek Wetland Delineation Summary Table**

ID	Wetland Type	Cover Type Edinger	Acres	Linear Feet	Notes	Flow
	Cowardin					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	Intermittent
2 30				17021071720	active agricultural field. Bank height ranges from 3 in at northern end to 8 ft at southern end.	
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

Project/Site: Route 33 East	City/County: Oswego		Sampling Date: <u>09/05/2024</u>	
Applicant/Owner: The Wetland Trust		State: N	NY Sampling Point: SP-1-U	
Investigator(s): E. Frantz, H. Frantz, D. Johnston-Jorda	ın, K. Hastings Section, Township, Range: F	Pennellville	<u> </u>	
Landform (hillside, terrace, etc.): Flat	Local relief (concave, convex, no	one): Flat	Slope (%): 3	
	•	210526°W	Datum: WGS84	
Soil Map Unit Name: Rhinebeck silt loam, 2-6% slopes		NWI classifica		
Are climatic / hydrologic conditions on the site typical for				
		(If no, explain in		
Are Vegetation N, Soil N, or Hydrology		ircumstances" pres		
Are Vegetation N, Soil N, or Hydrology		olain any answers ir	,	
SUMMARY OF FINDINGS – Attach site ma	ρ showing sampling point locations	, transects, imլ	oortant 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 S	ite ID:		
Sample point is in shrub/scrub area between hay field event which exceeded normal rainfall for the entire mo				
HYDROLOGY				
Wetland Hydrology Indicators:		Secondary Indicat	tors (minimum of two required)	
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil (	Cracks (B6)	
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)		
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)		
Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)		
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)		
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3) Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)	FAC-Neutral	, ,	
Field Observations:		1710 Neutral	1001 (100)	
Surface Water Present? Yes No X	Depth (inches):			
Water Table Present? Yes No X	Depth (inches):			
Saturation Present? Yes No X	<u> </u>	drology Present?	Yes No X	
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspections), if avai	ilable:		
Remarks:				
No hydrology indicator observed.				

<b>VEGETATION</b> – Use scientific names of pla	ants.			Sampling Point:	SP-1-U
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Malus domestica  2.	50	Yes	UPL	Number of Dominant Species That Are OBL, FACW, or FAC:	4 (A)
3. 4.				Total Number of Dominant Species Across All Strata:	5 (B)
5. 6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	80.0% (A/B
7.		·		Prevalence Index worksheet:	( 1 -
	50	=Total Cover		Total % Cover of: M	ultiply by:
Sapling/Shrub Stratum (Plot size:	)	<del>-</del>		OBL species 0 x 1 =	0
1. Rhamnus cathartica	25	Yes	FAC	FACW species 16 x 2 =	32
2. Prunus serotina	5	No	FACU	FAC species 36 x 3 =	108
3. Fraxinus pennsylvanica	5	No	FACW	FACU species 6 x 4 =	24
4.				UPL species 52 x 5 =	260
				Column Totals: 110 (A)	424 (B
6.				Prevalence Index = B/A =	3.85
7.	-			Hydrophytic Vegetation Indicators:	
	35	=Total Cover		1 - Rapid Test for Hydrophytic Ve	
Herb Stratum (Plot size: )		- Total Gover		X 2 - Dominance Test is >50%	2gotation
1. Geum macrophyllum	1	No	FACW	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
Persicaria virginiana	1	No	FAC	4 - Morphological Adaptations <sup>1</sup> (F	Provide supportir
Toxicodendron radicans	5	Yes	FAC	data in Remarks or on a separ	
Lysimachia nummularia	10	Yes	FACW	Problematic Hydrophytic Vegetat	tion <sup>1</sup> (Explain)
5. Fragaria vesca	2	No	UPL		
Symphyotrichum lateriflorum	5	Yes	FAC	<sup>1</sup> Indicators of hydric soil and wetland be present, unless disturbed or proble	
7. Agrimonia gryposepala	1	No	FACU	Definitions of Vegetation Strata:	
8			- 77.00	Tree – Woody plants 3 in. (7.6 cm) or	more in diamet
9				at breast height (DBH), regardless of	
11.				Sapling/shrub – Woody plants less t and greater than or equal to 3.28 ft (1	
12.	25	=Total Cover		Herb – All herbaceous (non-woody) pof size, and woody plants less than 3.	
Woody Vine Stratum (Plot size:	)	•		Woody vines – All woody vines great	ter than 3.28 ft ir
1.	-	· <del></del>		height.	
2. 3.	-			Hydrophytic	
4.	-			Vegetation Present? Yes X	Jo.
<del></del>	-	-Total Cover		Present? Tes_X_	No
Remarks: (Include photo numbers here or on a septing No OBL species were observed but a few low perce	,	=Total Cover were dominate	).		

Northcentral and Northeast Region – Version 2.0

US Army Corps of Engineers

**SOIL** Sampling Point: SP-1-U

Profile De: Depth	scription: (Describe Matrix	to the de	pth needed to docui	ment the x Feature		r or con	firm the absence	of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rem	arks
0-7	7.5YR 5/4	100			.,,,-		Loamy/Clayey	Loa	
7-15	10YR 7/3	70	10YR 7/6	30			Loamy/Clayey	Loa	am.
7-13	101K 7/3		1011/1/0	30			Loanny/Clayey	LUa	1111
			_						_
	·							-	
		pletion, RN	M=Reduced Matrix, CS	3=Cover	ed or Coa	ted Sand		ocation: PL=Pore Linir	
_	il Indicators:							or Problematic Hydri	
	ol (A1)	•	Polyvalue Below	Surface	e (S8) ( <b>LR</b>	RR,		uck (A10) ( <b>LRR K, L, I</b>	
	Epipedon (A2) Histic (A3)		MLRA 149B) Thin Dark Surfac	o (SO) (	IDDD M	I DA 140		rairie Redox (A16) ( <b>LF</b> ucky Peat or Peat (S3)	*
	gen Sulfide (A4)		High Chroma Sa				· —	ue Below Surface (S8)	
	ied Layers (A5)	•	Loamy Mucky M					rk Surface (S9) ( <b>LRR</b>	
	ted Below Dark Surfa	ce (A11)	Loamy Gleyed Matrix (F2)					nganese Masses (F12	*
Thick	Dark Surface (A12)		Depleted Matrix (F3)				Piedmont Floodplain Soils (F19) (MLRA 149B)		
Sandy	Mucky Mineral (S1)		Redox Dark Surf	ace (F6	)		Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )		
Sandy	Gleyed Matrix (S4)	•	Depleted Dark S	urface (l	F7)		Red Parent Material (F21)		
	Redox (S5)	,	Redox Depression				Very Shallow Dark Surface (TF12)		
	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	<b>K</b> , <b>L</b> )			Other (E	Explain in Remarks)	
Dark S	Surface (S7)								
<sup>3</sup> Indicators	of hydrophytic veget	ation and v	vetland hydrology mu	et he nre	seent unle	see dietur	hed or problematic		
	e Layer (if observed)		vetiand hydrology mus	st be pre	sserit, urile	ss distui	The disproprietation	,.	_
Type:	(	, <del>-</del>							
Depth (ir	nches):						Hydric Soil Pr	esent? Yes	No X
<u> </u>	,						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<del></del>
Remarks: This data f	orm is revised from N	orthcentra	I and Northeast Regio	nal Sup	plement V	ersion 2	.0 to reflect the NR	CS Field Indicators of	Hydric Soils
			v.nrcs.usda.gov/Interr						,

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, r	one): Flat Slope (%): 1
,	·	.210564°W Datum: WGS84
Soil Map Unit Name: Rhinebeck silt loam, 2-6% slopes	2019. 70	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		· — —
Are Vegetation N, Soil N, or Hydrology N SUMMARY OF FINDINGS – Attach site map		cplain any answers in Remarks.) s, transects, important features, etc.
		<u> </u>
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X	No Is the Sampled Area within a Wetland?	Yes X No
Wetland Hydrology Present? Yes X	No If yes, optional Wetland	
Remarks: (Explain alternative procedures here or in a		
Unusally wet month of August including one rain event	which exceeded normal familian for the entire	e month of August.
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
` '	Marl Deposits (B15)	Dry-Season Water Table (C2)
<del></del>	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
<u> </u>	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
<u> </u>	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
<u> </u>	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
<u> </u>	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) ( Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)	Microtopographic Relief (D4) X FAC-Neutral Test (D5)
Field Observations:		X 1 Ac-Neutral Test (D3)
Surface Water Present? Yes No X	Depth (inches):	
Water Table Present? Yes No X	Depth (inches):	
Saturation Present? Yes X No		ydrology Present? Yes X No
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring we	ll, aerial photos, previous inspections), if ava	ailable:
Remarks:		
Sample point is adjacent to tributary of Caughdenoy Cr	eek. A 3ft culvert crosses Route 33 approxin	nately 75 ft upstream.

	ants.			Sampling Point:	SP-1-\		
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1.				Number of Deminent Charles			
2.				Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)	
3				Total Number of Dominant			
4.		_		Species Across All Strata:	4	(B)	
5				Percent of Dominant Species			
6				· · · · · · · · · · · · · · · · · · ·	100.0%	_(A/B)	
7				Prevalence Index worksheet:			
		=Total Cover		Total % Cover of: M	ultiply by:		
Sapling/Shrub Stratum (Plot size:)	)			OBL species x 1 =	20		
1. Cornus amomum	15	Yes	FACW	FACW species 26 x 2 =	52		
2. Viburnum lentago	15	Yes	FAC	FAC species129 x 3 =	387		
3				FACU species 0 x 4 =	0		
4				UPL species 0 x 5 =	0		
5				Column Totals: 175 (A)	459	(B)	
6				Prevalence Index = B/A =	2.62		
7				Hydrophytic Vegetation Indicators:			
	30	=Total Cover		1 - Rapid Test for Hydrophytic Ve	egetation		
Herb Stratum (Plot size:)				X 2 - Dominance Test is >50%			
1. Eutrochium purpureum	60	Yes	FAC	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>			
2. Euthamia graminifolia	45	Yes	FAC	4 - Morphological Adaptations <sup>1</sup> (Provide support data in Remarks or on a separate sheet)			
3. Toxicodendron radicans	5	No	FAC				
4. Solidago gigantea	5	No	FACW	Problematic Hydrophytic Vegetat	ion¹ (Expla	in)	
5. Chelone glabra	5	No	OBL	<sup>1</sup> Indicators of hydric soil and wetland	hydrology	must	
6. Persicaria sagittata	5	No	OBL	be present, unless disturbed or proble		must	
7. Apocynum cannabinum	1	No	FAC	Definitions of Vegetation Strata:			
8. Ranunculus repens	1	No	FAC	Tree – Woody plants 3 in. (7.6 cm) or	more in di	iamete	
9. Epilobium coloratum	10	No	OBL	at breast height (DBH), regardless of		umoto	
10. Rumex obtusifolius	2	No	FAC	Sapling/shrub – Woody plants less t	han 3 in D	BH	
11. Verbena hastata	1	No	FACW	and greater than or equal to 3.28 ft (1		.Б.	
12. Lysimachia nummularia	5	No	FACW	Herb – All herbaceous (non-woody) p	olants rega	rdless	
	145	=Total Cover		of size, and woody plants less than 3.		ii alooo	
Woody Vine Stratum (Plot size:	)			Woody vines – All woody vines great	ter than 3.2	28 ft in	
1				height.			
2							
3				Hydrophytic Vegetation			
				=	lo		
4.		=Total Cover					

SOIL Sampling Point: SP-1-W

Profile Des Depth	scription: (Describe Matrix	to the de	epth needed to docur	<b>nent the</b> c Feature		r or con	firm the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-9	7.5YR 4/1	97	7.5YR 4/6	3	<u></u>		Loamy/Clayey	Clay Loam
9-15	10YR 5/1	90	10YR 5/6	10			Loamy/Clayey	Sandy Clay
0 10	1011(0/1		10111070				<u> Louiny/Olayoy</u>	Candy Clay
		oletion, RI	M=Reduced Matrix, CS	3=Cover	ed or Coa	ited Sand		ocation: PL=Pore Lining, M=Matrix.
_	il Indicators:		Dalamator Balann	Of	(CO) (LD	D D		or Problematic Hydric Soils <sup>3</sup> :
	ol (A1) Epipedon (A2)		Polyvalue Below MLRA 149B)	Suпасе	(S8) ( <b>LR</b>	KK,		uck (A10) ( <b>LRR K, L, MLRA 149B</b> ) rairie Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfac	:e (S9) ('	IRRR M	I RA 149		ucky Peat or Peat (S3) (LRR K, L, R)
	gen Sulfide (A4)		High Chroma Sa					ue Below Surface (S8) (LRR K, L)
	ied Layers (A5)		Loamy Mucky Mi					rk Surface (S9) ( <b>LRR K, L</b> )
Deplet	ted Below Dark Surfac	ce (A11)	Loamy Gleyed M	atrix (F2	2)		Iron-Mar	nganese Masses (F12) ( <b>LRR K, L, R</b> )
Thick I	Dark Surface (A12)		X Depleted Matrix (	(F3)			Piedmor	nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy	Mucky Mineral (S1)		Redox Dark Surf	ace (F6)	)		Mesic S	podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4)		Depleted Dark S	•	F7)			rent Material (F21)
	Redox (S5)		Redox Depression					allow Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	K, L)			Other (E	Explain in Remarks)
Dark S	Surface (S7)							
<sup>3</sup> Indicators	of hydrophytic vegeta	ition and	wetland hydrology mus	st be pre	esent unle	ess distur	bed or problematic	<b>,</b>
	e Layer (if observed)						Toda or propromise	
Type:								
Depth (ir	nches):						Hydric Soil Pro	resent? Yes X No
Remarks:								
This data for								CS Field Indicators of Hydric Soils
version 7.0	) March 2013 Errata. (	http://ww	w.nrcs.usda.gov/Intern	et/FSE_	_DOCUME	ENTS/nrc	s142p2_051293.dd	ocx)

Project/Site: Route 33 East	City/County: O	swego	Sampling Date: <u>09/05/2024</u>			
Applicant/Owner: The Wetland Trust		State:	NY Sampling Point: SP-2-U			
Investigator(s): E. Frantz, H. Frantz, D Johnston-Jorda	an. K. Hastings Section, Towns	hip, Range: Pennellville				
Landform (hillside, terrace, etc.): Hillside	Local relief (conc	ave, 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		<u> </u>	sification: None			
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes	No X (If no, expla	in in Remarks.)			
Are Vegetation N, Soil N, or Hydrology	N significantly disturbed?	Are "Normal Circumstances" p	present? Yes No X			
Are Vegetation N , Soil N , or Hydrology	N naturally problematic?	(If needed, explain any answe	ers in Remarks.)			
SUMMARY OF FINDINGS – Attach site maj	—— p showing sampling poi	nt locations, transects,	important features, etc.			
Hydrophytic Vegetation Present? Yes	No X Is the Sam	pled Area				
Hydric Soil Present? Yes	No X within a W	•	No X			
Wetland Hydrology Present? Yes	No X If yes, option	If yes, optional Wetland Site ID:				
upland and wetland plants. Unusally wet month of Aug SP-2-W was taken due to hieght of Caughdenoy Cree			, and the second			
HYDROLOGY						
Wetland Hydrology Indicators:		<u></u>	dicators (minimum of two required)			
Primary Indicators (minimum of one is required; check			Soil Cracks (B6)			
	Water-Stained Leaves (B9) Aquatic Fauna (B13)		Patterns (B10)			
	Marl Deposits (B15)		Moss Trim Lines (B16) Dry-Season Water Table (C2)			
	Hydrogen Sulfide Odor (C1)		Burrows (C8)			
	Oxidized Rhizospheres on Livir	<del></del> ·	n Visible on Aerial Imagery (C9)			
	Presence of Reduced Iron (C4)	• • • • • • • • • • • • • • • • • • • •	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled	Soils (C6) Geomorp	Geomorphic Position (D2)			
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquitard (D3)			
	Other (Explain in Remarks)		Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)		FAC-Neu	tral Test (D5)			
Field Observations:	5 4 6 1 )					
Surface Water Present? Yes No X Water Table Present? Yes No X	Depth (inches):					
Saturation Present? Yes No X	Depth (inches): Depth (inches):	Wetland Hydrology Prese	nt? Yes No X			
(includes capillary fringe)	Deptil (illiches).	wettand flydrology Frese	iit: 163NO_X			
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous insp	ections), if available:				
Remarks:						
No hydrology indicators were observed						

VEGETATION – Use scientific names of pla		Dawr:	India-4	Sampling Point:	SP-2-l	
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1.						
2.				Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
3.						- ` ′
4.				Total Number of Dominant Species Across All Strata:	1	(B)
5.						_ ` ′
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)
7.				Prevalence Index worksheet:		_( /
		=Total Cover		Total % Cover of: M	lultiply by:	
Sapling/Shrub Stratum (Plot size:)		-		OBL species 0 x 1 =	0	_
1				FACW species 11 x 2 =	22	_
2				FAC species 41 x 3 =		_
				FACU species 65 x 4 =	260	_
4				UPL species 0 x 5 =		_
				Column Totals: 117 (A)	405	— (B)
				Prevalence Index = B/A =		<b>—</b> (D)
7				Hydrophytic Vegetation Indicators:		
<i></i>		=Total Cover		1 - Rapid Test for Hydrophytic Ve		
Herb Stratum (Plot size: )		- Total Gover		2 - Dominance Test is >50%	2gotation	
1. Solidago gigantea	7	No	FACW	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
Toxicodendron radicans	2	No	FAC	4 - Morphological Adaptations <sup>1</sup> (F	Provide sun	norting
3. Prunella vulgaris	20	No	FAC	data in Remarks or on a separ		porting
4. Solidago rugosa	5	No	FAC	Problematic Hydrophytic Vegetal	tion <sup>1</sup> (Evola	uin)
5. Fraxinus pennsylvanica	3	No	FACW	Troblematic Hydrophytic vegetal	IIOII (Explai	111)
6. Euthamia graminifolia	7	No	FAC	<sup>1</sup> Indicators of hydric soil and wetland be present, unless disturbed or proble		must
7. Ranunculus repens	5	No	FAC	Definitions of Vegetation Strata:	manc.	
<u> </u>	1	No	FACW	Definitions of Vegetation Strata.		
Carex intumescens     Plantago lanceolata	60	Yes	FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of		amete
Tanayo lanceolata     Taraxacum officinale	5			at breast neight (DBH), regardless or	neigni.	
	2	No No	FACU FAC	Sapling/shrub – Woody plants less t		ВН
11. Symphyotrichum lateriflorum		No No	FAC	and greater than or equal to 3.28 ft (1	i m) tan.	
12	447			Herb – All herbaceous (non-woody) p		rdless
MALE du Vine Christine (Diet sine)	117	=Total Cover		of size, and woody plants less than 3	.28 II Iaii.	
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines great	ter than 3.2	28 ft in
1.				height.		
2.				Hydrophytic		
3.				Vegetation		
4				Present? Yes	No X	
		=Total Cover				
Remarks: (Include photo numbers here or on a sepa 100% Herbaceous coverage. Scattered beyond samp			Eutrochium n	ournureum (Ioe Pve) and Eupatorium ne	rfoliatum	
(Boneset) at 3% coverage. Adjacent to sample point					Hollatum	

**SOIL** Sampling Point: SP-2-U

Profile De Depth	scription: (Describe Matrix	to the de		<b>ment the</b>		or or con	firm the absence	of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-6	7.5YR 5/2	100	Color (moist)		Турс		Loamy/Clayey	Clay Loam	
6-14	10YR 5/3	70	10YR 6/6	20			Loamy/Clayey	Clay Loam	
			7.5YR 3/1	10					
			_						
<sup>1</sup> Type: C=	Concentration, D=De	pletion, RN	—————————————————————————————————————	S=Cover	ed or Coa	ited Sand	d Grains. <sup>2</sup> Lo	ocation: PL=Pore Lining, M=Matrix.	
	il Indicators:	· · · · ·	·					or Problematic Hydric Soils <sup>3</sup> :	
Histos	sol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b>	RR,	2 cm Mu	uck (A10) ( <b>LRR K, L, MLRA 149B</b> )	
Histic	Epipedon (A2)	'	MLRA 149B)				Coast P	rairie Redox (A16) (LRR K, L, R)	
	Histic (A3)		Thin Dark Surfac	e (S9) (I	LRR R. M	LRA 149		ucky Peat or Peat (S3) ( <b>LRR K, L, R</b>	2)
	gen Sulfide (A4)	•	—— High Chroma Sa					ue Below Surface (S8) (LRR K, L)	,
	fied Layers (A5)	•	Loamy Mucky M					rk Surface (S9) ( <b>LRR K, L</b> )	
	ted Below Dark Surfa	ce (A11)	Loamy Gleyed M			<b> \_</b> )		nganese Masses (F12) ( <b>LRR K, L, F</b>	٥١
		Ce (ATT)		,	.)			• • • • • • • • • • • • • • • • • • • •	,
	Dark Surface (A12)	•	Depleted Matrix	. ,				nt Floodplain Soils (F19) (MLRA 149	
	y Mucky Mineral (S1)		Redox Dark Surf					podic (TA6) ( <b>MLRA 144A, 145, 149</b>	B)
	y Gleyed Matrix (S4)	•	Depleted Dark S		<del>-</del> 7)			rent Material (F21)	
	y Redox (S5)		Redox Depression					allow Dark Surface (TF12)	
Stripp	ed Matrix (S6)	•	Marl (F10) ( <b>LRR</b>	<b>K</b> , <b>L</b> )			Other (E	Explain in Remarks)	
Dark S	Surface (S7)								
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and v	vetland hydrology mus	st be pre	sent, unle	ess distur	bed or problematio	).	
	e Layer (if observed)	):							
Type:									
Depth (i	nches):						Hydric Soil Pr	esent? Yes No	<u>~</u>
Remarks: This data f	form is revised from N	orthcentra	I and Northeast Regio	nal Sup	olement \	/ersion 2	0 to reflect the NR	CS Field Indicators of Hydric Soils	
	0 March 2013 Errata.								
			-				. –	,	

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, r		Slope (%): 5		
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3	·	· ·	Datum: WGS84		
Soil Map Unit Name: RhB: Rhinebeck silt loam, 2-6% slopes		NWI classific			
·					
Are climatic / hydrologic conditions on the site typical for this		N (If no, explain in			
	•	Circumstances" pres			
Are Vegetation N, Soil N, or Hydrology N	naturally problematic? (If needed, ex	xplain any answers i	n Remarks.)		
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point location	s, transects, im	portant features, etc.		
Hydrophytic Vegetation Present? Yes N	o X Is the Sampled Area				
	o X within a Wetland?	Yes	No X		
Wetland Hydrology Present? Yes N					
Remarks: (Explain alternative procedures here or in a sepa Hayfield on gradual slope adjacent to overgrown apple orcl for the entire month of August.		uding one rain event	which exceeded normal rainfall		
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum of one is required; check all the	nat apply)	Surface Soil	Cracks (B6)		
Surface Water (A1) Wate	er-Stained Leaves (B9)	Drainage Pat	terns (B10)		
1 <del></del>	atic Fauna (B13)	Moss Trim Li	` ,		
<del></del>	Deposits (B15)	Dry-Season Water Table (C2)			
<u> </u>	rogen Sulfide Odor (C1)	Crayfish Burr			
<u> </u>	lized Rhizospheres on Living Roots (C3)		sible on Aerial Imagery (C9)		
1 <del></del>	sence of Reduced Iron (C4)		ressed Plants (D1)		
<u> </u>	ent Iron Reduction in Tilled Soils (C6)  Muck Surface (C7)	Shallow Aqui	Position (D2)		
<u> </u>	er (Explain in Remarks)		phic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)	(Explain in Normano)	FAC-Neutral	. , ,		
Field Observations:					
Surface Water Present? Yes No _X De	pth (inches):				
Water Table Present? Yes No X De	pth (inches):				
	pth (inches): Wetland H	ydrology Present?	Yes NoX		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, a	eriai pnotos, previous inspections), ir ava	aliadie:			
Remarks:					
No signs of hydrology					

	olants.			Sampling Point:	SP-3-L	<u></u>
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1.				Number of Dominant Species		
2.				That Are OBL, FACW, or FAC:	0	(A)
3.				Total Number of Demisers		
4.				Total Number of Dominant Species Across All Strata:	2	(B)
5.						-
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)
7.				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: Mu	ultiply by:	
Sapling/Shrub Stratum (Plot size:	)	•		OBL species 0 x 1 =	0	
1.	<del>_</del>			FACW species 0 x 2 =	0	
_		·		FAC species 0 x 3 =		
				FACU species 90 x 4 =		
4				·		_
4	_	·			0	
5.				Column Totals: 90 (A)		(B)
6.				Prevalence Index = B/A =	4.00	
7	_			Hydrophytic Vegetation Indicators:		
		=Total Cover		1 - Rapid Test for Hydrophytic Ve	getation	
Herb Stratum (Plot size:)				2 - Dominance Test is >50%		
1. Dactylis glomerata	70		FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
<ol> <li>Phleum pratense</li> <li>.</li> </ol>			FACU	4 - Morphological Adaptations <sup>1</sup> (P		portino
4.				Problematic Hydrophytic Vegetati	on¹ (Explai	in)
5 6.				<sup>1</sup> Indicators of hydric soil and wetland l be present, unless disturbed or proble		nust
7		·		Definitions of Vegetation Strata:	mauo.	
8.						
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of l		amete
10				Sapling/shrub – Woody plants less th	nan 3 in Di	RH
11	_			and greater than or equal to 3.28 ft (1		511
12				Herb – All herbaceous (non-woody) p	lants rega	rdless
	90	=Total Cover		of size, and woody plants less than 3.		raicoo
Woody Vine Stratum (Plot size:	_)			Woody vines – All woody vines great	er than 3.2	8 ft in
1				height.	or triair 0.2	0 11 111
2.						
3.				Hydrophytic		
				Vegetation Present? Yes N	o X	
4.	_	=Total Cover			<u> </u>	
4						

SOIL Sampling Point: SP-3-U

Profile De	escription: (Describe	to the de	pth needed to docu	ment the	e indicato	r or con	firm the absence o	of indicators.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rem	narks
0-12	7.5YR 4/3	100					Loamy/Clayey	Clay	loam
12-16	10YR 5/4	80	10YR 5/8				Loamy/Clayey	Clay	loam
								<u>,                                      </u>	
	Concentration, D=Dep	letion, RM	I=Reduced Matrix, C	S=Cover	ed or Coa	ted Sand		cation: PL=Pore Lini	-
•	oil Indicators:		Debagelye Belev	Curtos	(CO) (LD	D D		or Problematic Hydr	
	sol (A1) : Epipedon (A2)	-	Polyvalue Below  MLRA 149B)	Surface	(S6) (LK	ĸĸ,		ick (A10) ( <b>LRR K, L,</b> rairie Redox (A16) ( <b>L</b> l	•
	: Histic (A3)		Thin Dark Surface	ce (S9) (	IRRR M	I RA 149		icky Peat or Peat (S3	•
	ogen Sulfide (A4)	=	High Chroma Sa				· —	e Below Surface (S8	, , , , , ,
	fied Layers (A5)	-	Loamy Mucky M					k Surface (S9) ( <b>LRR</b>	
	eted Below Dark Surfac	e (A11)	Loamy Gleyed N			. ,		nganese Masses (F12	-
Thick	Dark Surface (A12)		Depleted Matrix	(F3)			Piedmor	nt Floodplain Soils (F	19) ( <b>MLRA 149B</b> )
Sand	y Mucky Mineral (S1)	_	Redox Dark Sur	face (F6	)		Mesic Sp	oodic (TA6) (MLRA 1	44A, 145, 149B)
Sand	y Gleyed Matrix (S4)	_	Depleted Dark S	Surface (	F7)		Red Pare	ent Material (F21)	
	y Redox (S5)	-	Redox Depression	` '				allow Dark Surface (T	ΓF12)
	oed Matrix (S6)	_	Marl (F10) ( <b>LRR</b>	(K, L)			Other (E	xplain in Remarks)	
Dark	Surface (S7)								
31		e							
	s of hydrophytic vegeta ve Layer (if observed):		retiand nydrology mu	st be pre	esent, unie	ess distur	bed or problematic.	•	
Type:	e Layer (II observed)								
_	inches):						Hydric Soil Pre	esent? Yes	No X
Remarks:	<u> </u>						,	_	
	form is revised from No	orthcentral	and Northeast Region	onal Sup	plement V	ersion 2.	0 to reflect the NR	CS Field Indicators o	f Hydric Soils
	0 March 2013 Errata. (								,

Project/Site: Route 33 East	City/County: Osweg	Jo	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
· · · · · · · · · · · · · · · · · · ·	•	Long: 76.211690	Datum: WGS84
Soil Map Unit Name: Rhinebeck silt loam, 2-6% slopes		-	ification: None
	his time of year? Vos		
Are climatic / hydrologic conditions on the site typical for t	•	`` ′ '	
Are Vegetation Y, Soil N, or Hydrology N		"Normal Circumstances" p	<del></del>
Are Vegetation N, Soil N, or Hydrology N		eeded, explain any answer	,
SUMMARY OF FINDINGS – Attach site map	showing sampling point lo	cations, transects, i	mportant features, etc.
Hydrophytic Vegetation Present? Yes X	No Is the Sampled	Δrea	
Hydric Soil Present? Yes X	No within a Wetlar		No
Wetland Hydrology Present? Yes X		Wetland Site ID:	
Swale in hayfield, noticably wet and soft compared to su including one rain event which exceeded normal rainfall		heads toward drainage. U	Inusally wet month of August
HYDROLOGY			
Wetland Hydrology Indicators:	-	Secondary Indi	icators (minimum of two required)
Primary Indicators (minimum of one is required; check al	I that apply)		oil Cracks (B6)
Surface Water (A1) W	ater-Stained Leaves (B9)	Drainage F	Patterns (B10)
High Water Table (A2)	quatic Fauna (B13)	Moss Trim	Lines (B16)
	arl Deposits (B15)	Dry-Seaso	n Water Table (C2)
Water Marks (B1)	ydrogen Sulfide Odor (C1)		urrows (C8)
Sediment Deposits (B2)  X O	xidized Rhizospheres on Living Ro	ots (C3) Saturation	Visible on Aerial Imagery (C9)
<del></del>	resence of Reduced Iron (C4)		Stressed Plants (D1)
<del></del>	ecent Iron Reduction in Tilled Soils	· / ·	ic Position (D2)
<del></del>	nin Muck Surface (C7)		quitard (D3)
Inundation Visible on Aerial Imagery (B7) Oi Sparsely Vegetated Concave Surface (B8)	ther (Explain in Remarks)		graphic Relief (D4)
Field Observations:		X FAC-Neutr	rai rest (D5)
	Depth (inches):		
	Depth (inches):		
	· · · · · · · · · · · · · · · · · · ·	etland Hydrology Presen	t? Yes X No
(includes capillary fringe)	' '	,	· · · · · · · · · · · · · · · · · · ·
Describe Recorded Data (stream gauge, monitoring well	, aerial photos, previous inspection	ns), if available:	
Remarks:			
Area drains to the east, soils moist to surface, evidence	of tractor ruts.		

	ants.			Sampling Point:	SP-3-W
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1		·		Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
				mat Ale OBL, FACW, 01 FAC.	(A)
3. 4.				Total Number of Dominant Species Across All Strata:	1 (B)
5.					
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 1	00.0% (A/B
7.				Prevalence Index worksheet:	`
		=Total Cover		Total % Cover of: Mu	Itiply by:
Sapling/Shrub Stratum (Plot size: )				OBL species 23 x 1 =	23
1.				FACW species 102 x 2 =	204
_	-				3
				FACU species 0 x 4 =	0
				UPL species 1 x 5 =	5
				Column Totals: 127 (A)	235 (B
				Prevalence Index = B/A =	,
7				Hydrophytic Vegetation Indicators:	1.03
1.		=Total Cover		1 - Rapid Test for Hydrophytic Veg	nototion
Herb Stratum (Plot size: )		- Total Cover		X 2 - Dominance Test is >50%	jetation
	100	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
Lysimachia nummularia     Ivnous efficius				<del></del>	rovido ovenentim
2. Juncus effusus	15	No No	OBL	4 - Morphological Adaptations <sup>1</sup> (Pr data in Remarks or on a separa	ovide supportir te sheet)
3. Lycopus americanus	3	No No	OBL		
4. Galium palustre	5	No No	OBL	Problematic Hydrophytic Vegetation	on (Explain)
5. Cyperus esculentus	2	No No	FACW	<sup>1</sup> Indicators of hydric soil and wetland h	
6. Symphyotrichum patens	1	No No	UPL	be present, unless disturbed or probler	natic.
7. Agrostis capillaris	1	<u>No</u>	FAC	Definitions of Vegetation Strata:	
8 9.				Tree – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of h	
10.					
11.				Sapling/shrub – Woody plants less than digreater than or equal to 3.28 ft (1)	
12				Herb – All herbaceous (non-woody) pla	ants regardles
	127	=Total Cover		of size, and woody plants less than 3.2	, 0
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greate	er than 3.28 ft ir
1				height.	
2				Hydrophytic	
				Hydrophytic Vegetation	
3				Present? Yes X No	
3.       4.					

SOIL Sampling Point: SP-3-W

Profile De Depth	scription: (Describe Matrix	to the de		nent the Feature		r or con	firm the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
<u> </u>	10YR 3/1	95	10YR 3/6	5	<del></del>		Loamy/Clayov	Clay Loam
0-14	10113/1	95	10113/0				Loamy/Clayey	Clay Loam
	Concentration, D=Dep	letion, RI	M=Reduced Matrix, CS	S=Cover	ed or Coa	ted Sand		cation: PL=Pore Lining, M=Matrix.
-	il Indicators:							or Problematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Below	Surface	e (S8) ( <b>LR</b>	R R,		uck (A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)	- (00) (				rairie Redox (A16) (LRR K, L, R)
	Histic (A3)		Thin Dark Surfac					ucky Peat or Peat (S3) (LRR K, L, R)
	gen Sulfide (A4) ied Layers (A5)		High Chroma Sa Loamy Mucky Mi					re Below Surface (S8) ( <b>LRR K, L</b> ) rk Surface (S9) ( <b>LRR K, L</b> )
	ted Below Dark Surfac	· (Δ11)	Loamy Gleyed M			K, L)		nganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	e (ATT)	X Depleted Matrix (		<del>-</del> )			nt Floodplain Soils (F19) (MLRA 149B)
	/ Mucky Mineral (S1)		Redox Dark Surf	' '	)			podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	/ Gleyed Matrix (S4)		Depleted Dark S					ent Material (F21)
	/ Redox (S5)		Redox Depression		,			allow Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>					explain in Remarks)
	Surface (S7)						<del></del>	
<sup>3</sup> Indicators	of hydrophytic vegeta	tion and v	vetland hydrology mus	st be pre	esent, unle	ess distur	bed or problematic	
Restrictive	e Layer (if observed):	:						
Type:								
Depth (ir	nches):						Hydric Soil Pr	esent? Yes X No
Remarks:							1	
								CS Field Indicators of Hydric Soils
version 7.0	) March 2013 Errata. (	http://wwv	w.nrcs.usda.gov/Intern	et/FSE_	_DOCUME	ENTS/nrc	s142p2_051293.dd	ocx)

Project/Site: Route 33 East	City/County: Osw	ego	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	e, convex, none): Convex	Slope (%): 5		
<u> </u>	43.308498°N	Long: 76.214175°W	Datum: WGS84		
Soil Map Unit Name: Ira gravelly fine sandy loam, 3-8%		_	ification: None		
	·		<u>-</u>		
Are climatic / hydrologic conditions on the site typical fo		` ` ' '			
Are Vegetation N, Soil N, or Hydrology		e "Normal Circumstances" рі			
Are Vegetation N, Soil N, or Hydrology		needed, explain any answer	,		
SUMMARY OF FINDINGS – Attach site map	o showing sampling point	locations, transects, i	mportant features, etc.		
Hydrophytic Vegetation Present? Yes X	No Is the Sample	ed Area			
Hydric Soil Present? Yes	No X within a Wetl		No X		
Wetland Hydrology Present? Yes	No X If yes, optiona	al Wetland Site ID:			
is meeting criteria on one FAC species					
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)		
Primary Indicators (minimum of one is required; check			oil Cracks (B6)		
	Water-Stained Leaves (B9)		Patterns (B10)		
<u> </u>	Aquatic Fauna (B13)		uss Trim Lines (B16)		
· · · · · · · · · · · · · · · · · · ·	Marl Deposits (B15) Hydrogen Sulfide Odor (C1)		-Season Water Table (C2) yfish Burrows (C8)		
	Oxidized Rhizospheres on Living I	<del></del>	Visible on Aerial Imagery (C9)		
	Presence of Reduced Iron (C4)		Stressed Plants (D1)		
<del></del>	Recent Iron Reduction in Tilled Sc		ic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow A	quitard (D3)		
<u> </u>	Other (Explain in Remarks)	Microtopoç	graphic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		FAC-Neutr	ral Test (D5)		
Field Observations:					
Surface Water Present? Yes No X Water Table Present? Yes No X	Depth (inches):				
Water Table Present? Yes No X Saturation Present? Yes No X	Depth (inches): Depth (inches):	Wetland Hydrology Presen	t? Yes No X		
(includes capillary fringe)	Deptil (illolles).	Wetland Hydrology Fresen	t? Yes No X		
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspect	ions), if available:			
Remarks:					
No hydrology was observed					

			1 11 1	Sampling Point:	SP-4-l	
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1.				Number of Dominant Species		
2.				That Are OBL, FACW, or FAC:	1	(A)
3.				Total Number of Deminent		_
4.				Total Number of Dominant Species Across All Strata:	2	(B)
5.						
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	50.0%	(A/B)
7.				Prevalence Index worksheet:		_ ` ′
		=Total Cover		Total % Cover of: M	ultiply by:	
Sapling/Shrub Stratum (Plot size: )		•		OBL species 4 x 1 =		
1				FACW species 1 x 2 =	2	
				FAC species 47 x 3 =		_
					380	
4				UPL species 1 x 5 =	5	
				Column Totals: 148 (A)		— (B)
6				Prevalence Index = B/A =		— (D
7				Hydrophytic Vegetation Indicators:		
7.						
Herb Stratum (Plot size: )		=Total Cover		1 - Rapid Test for Hydrophytic Ve 2 - Dominance Test is >50%	getation	
	00	V	FACIL	<del></del>		
Dactylis glomerata	90	Yes	FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2. Ranunculus repens	40	Yes	FAC	4 - Morphological Adaptations <sup>1</sup> (F		portin
3. Euthamia graminifolia	4	No No	FAC		,	
4. Solanum carolinense	2	No No	FACU	Problematic Hydrophytic Vegetat	ion' (Expla	in)
5. Rumex crispus	1	No No	FAC	<sup>1</sup> Indicators of hydric soil and wetland		must
6. Taraxacum officinale	1	<u>No</u>	FACU	be present, unless disturbed or proble	ematic.	
7. Juncus effusus	4	No No	OBL	Definitions of Vegetation Strata:		
8. Calystegia sepium	2	No	FAC	Tree – Woody plants 3 in. (7.6 cm) or		amete
9. Symphyotrichum lanceolatum	1	No	FACW	at breast height (DBH), regardless of	height.	
10. Oxalis corniculata	1	No	FACU	Sapling/shrub – Woody plants less the	han 3 in. D	ВН
11. Solidago canadensis	1	No	FACU	and greater than or equal to 3.28 ft (1	m) tall.	
12. Deschampsia cespitosa	1	No	UPL	Herb – All herbaceous (non-woody) p	lants, rega	ırdless
	148	=Total Cover		of size, and woody plants less than 3.		
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines great	er than 3.2	28 ft in
		. <u></u>		height.		
1						
1 2				Hydrophytic		
2.				Vegetation	lo	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

**SOIL** Sampling Point: SP-4-U

Profile De Depth	scription: (Describe Matrix	to the de	pth needed to docur	<b>nent th</b> cFeatur		r or conf	irm the absence of	indicato	rs.)	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remark	S
			7.5YR 5/8	5			Condy		Candy La	-m
0-12	7.5YR 3/4	95	7.51K 5/6				Sandy		Sandy Loa	aiii
								-		
			·							
<sup>1</sup> Type: C=	Concentration, D=De	pletion, RN	M=Reduced Matrix, CS	S=Cove	red or Coa	ted Sand	Grains. <sup>2</sup> Loca	ation: PL:	=Pore Lining,	M=Matrix.
Hydric So	il Indicators:						Indicators for	Problem	atic Hydric S	oils³:
Histos	sol (A1)		Polyvalue Below	Surface	e (S8) ( <b>LR</b>	R R,	2 cm Muc	k (A10) ( <b>L</b>	RR K, L, ML	RA 149B)
Histic	Epipedon (A2)		MLRA 149B)				Coast Prairie Redox (A16) (LRR K, L, R)			
Black	Histic (A3)		Thin Dark Surface	e (S9) (	LRR R, M	LRA 1491	<b>B</b> )5 cm Muc	ky Peat o	r Peat (S3) ( <b>L</b>	RR K, L, R)
Hydro	gen Sulfide (A4)		High Chroma Sa	nds (S1	1) ( <b>LRR</b> K	(, L)	Polyvalue	Below Su	urface (S8) ( <b>L</b>	RR K, L)
Stratif	ied Layers (A5)		Loamy Mucky M	neral (F	1) ( <b>LRR K</b>	(, L)	Thin Dark	Surface (	(S9) ( <b>LRR K,</b> 1	L)
Deple	ted Below Dark Surfa	ce (A11)	Loamy Gleyed Matrix (F2)				Iron-Manganese Masses (F12) (LRR K, L, R)			
Thick Dark Surface (A12)			Depleted Matrix			Piedmont Floodplain Soils (F19) (MLRA 149B)				
Sandy Mucky Mineral (S1)			Redox Dark Surf					(MLRA 144 <i>A</i>	A, 145, 149B)	
Sandy Gleyed Matrix (S4)			Depleted Dark Surface (F7)				Red Pare			
Sandy Redox (S5)			Redox Depressions (F8)				Very Shallow Dark Surface (TF12)			
Stripped Matrix (S6)			Marl (F10) ( <b>LRR K, L</b> )				Other (Explain in Remarks)			
Dark S	Surface (S7)									
311:4	-£	_4:		.4						
	, , , ,		wetland hydrology mus	st be pre	esent, unie	ess disturt	bed or problematic.			
	e Layer (if observed)	):								
Type:										
Depth (ir	nches):						Hydric Soil Pres	ent?	Yes	NoX
Remarks:										
Soil is non-	-hydric.									

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: Po	ennellville
Landform (hillside, terrace, etc.): Hillside	Local relief (concave, convex, no	ne): Concave Slope (%): 5
	43.308305°N Long: 76.2	
Soil Map Unit Name: Ira gravelly fine sandy loam, 3-8%		NWI classification: None
·	<u> </u>	
Are climatic / hydrologic conditions on the site typical fo		(If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology		rcumstances" present? Yes No X
Are Vegetation N, Soil N, or Hydrology		lain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p 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 Si	
Remarks: (Explain alternative procedures here or in a Sample point is 130 ft. from adjacent road Route 33. L characteristics. Unusally wet month of August including	and is in use as a pasture for cattle. Two conc	
HYDROLOGY  Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil Cracks (B6)
X Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)
X High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)
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)
Field Observations:           Surface Water Present?         Yes         X         No           Water Table Present?         Yes         X         No           Saturation Present?         Yes         X         No           (includes capillary fringe)	Depth (inches): 0 Depth (inches): 10 Depth (inches): 0 Wetland Hyd	drology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspections), if avail	able:
Remarks: Saturation Present to surface. Standing water is presented as a surface.	nt in cow hoof prints at the time of the wetland	determination.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)			
3. 4.				Total Number of Dominant Species Across All Strata: 2 (B)			
5.       6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)			
7				Prevalence Index worksheet:			
		=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size:)				OBL species 39 x 1 = 39			
1				FACW species 84 x 2 = 168			
2				FAC species 20 x 3 = 60			
3.				FACU species 0 x 4 = 0			
4.				UPL species 0 x 5 = 0			
5.				Column Totals: 143 (A) 267 (B)			
6.				Prevalence Index = B/A = 1.87			
7.				Hydrophytic Vegetation Indicators:			
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size:)				X 2 - Dominance Test is >50%			
Juncus effusus	35	Yes	OBL	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>			
2. Ranunculus repens	20	No	FAC	4 - Morphological Adaptations¹ (Provide supporting			
3. Agrostis gigantea	80	Yes	FACW	data in Remarks or on a separate sheet)			
4. Mimulus ringens	1	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
5. Epilobium coloratum	1	No	OBL	1			
6. Solidago gigantea	1	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
7. Epilobium ciliatum	1	No	FACW	Definitions of Vegetation Strata:			
8.							
9. Cyperus strigosus	1	No	FACW	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.			
10. Carex ssp.	1	No	OBL				
11. Eleocharis ssp.	1	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
12. Lysimachia nummularia	1	No	FACW				
	143	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size:)				Weedy vines All weedy vines greater than 2.29 ft in			
1.				Woody vines – All woody vines greater than 3.28 ft in height.			
2.							
3.				Hydrophytic			
4.				Vegetation Present? Yes X No			
		=Total Cover					
Remarks: (Include photo numbers here or on a sepa		•		1			
100% herbaceous cover. Cattle have been grazing t	he sample lo	cation.					

Sampling Point: SP-4-W

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**VEGETATION** – Use scientific names of plants.

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SOIL Sampling Point: SP-4-W

Profile De	escription: (Describe	to the de	epth needed to docu	ment the	e indicato	r or conf	firm the absence of i	ndicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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				
								_
	Concentration, D=Dep	letion, RI	M=Reduced Matrix, C	S=Cover	ed or Coa	ted Sand		ion: PL=Pore Lining, M=Matrix.
•	oil Indicators:							Problematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Below	Surface	e (S8) ( <b>LR</b>	R R,		(A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)					ie Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surface	ce (S9) (	LRR R, M	LRA 149	<b>B</b> )5 cm Mucky	y Peat or Peat (S3) ( <b>LRR K, L, R</b> )
Hydro	gen Sulfide (A4)		High Chroma Sa	inds (S1	1) ( <b>LRR K</b>	, L)	Polyvalue B	Below Surface (S8) ( <b>LRR K, L</b> )
Stratif	fied Layers (A5)		Loamy Mucky M	ineral (F	1) (LRR K	(, L)	Thin Dark S	Surface (S9) (LRR K, L)
Deple	eted Below Dark Surfac	ce (A11)	Loamy Gleyed M	1atrix (F2	2)		Iron-Manga	nese Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)		X Depleted Matrix					loodplain Soils (F19) (MLRA 149B)
	y Mucky Mineral (S1)		Redox Dark Surf		١			lic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)		Depleted Dark S		F7)			Material (F21)
	y Redox (S5)		Redox Depression	` '				w Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	K, L)			Other (Expl	ain in Remarks)
Dark	Surface (S7)							
	s of hydrophytic vegeta		wetland hydrology mu	st be pre	esent, unle	ess disturl	bed or problematic.	
	e Layer (if observed)	:						
Type: _								
	nches):						Hydric Soil Prese	ent? Yes <u>X</u> No
Remarks: This data		orthcentra	al and Northeast Regio	nal Sup	plement \	ersion 2.	0 to reflect the NRCS	Field Indicators of Hydric Soils
	0 March 2013 Errata. (							

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: Pe	ennellville
Landform (hillside, terrace, etc.): Hillside	Local relief (concave, convex, nor	
	3.308784°N Long: 76.2	
Soil Map Unit Name: Rhinebeck silt loam 2-6% slopes	<u></u>	NWI classification: None
	" " " No. V	
Are climatic / hydrologic conditions on the site typical for		(If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N		cumstances" present? Yes No X
Are Vegetation N, Soil N, or Hydrology N		ain 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 NoX
Wetland Hydrology Present? Yes X	No If yes, optional Wetland Sit	e ID:
Remarks: (Explain alternative procedures here or in a s Sample point is 150 ft. from adjacent road Route 33. Lat characteristics. Unusally wet month of August including	nd is in use as a pasture for cattle. Two conca	
HYDROLOGY  Western Understand		Company to the following of the required
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check a		Surface Soil Cracks (B6)
\ <u> </u>	Vater-Stained Leaves (B9)	Drainage Patterns (B10)
1 <del></del>	quatic Fauna (B13)	Moss Trim Lines (B16)
<del></del>	larl Deposits (B15) lydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2) Crayfish Burrows (C8)
<del></del>		
<del></del>	Oxidized Rhizospheres on Living Roots (C3) resence of Reduced Iron (C4)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
1 <del></del>	tecent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
— · · · · · —	hin Muck Surface (C7)	Shallow Aquitard (D3)
— · · · · · · —	other (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		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 Wetland Hyd	rology Present? Yes X No
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring wel	, aerial photos, previous inspections), if availa	able:
Remarks:		
Standing water was not present. The water table was no	ot observed at the depths reached for the soil	testing, but the soils were somewhat saturated.

		<u> </u>		Sampling Point:		
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1.				Number of Deminent Chasins		
2.				Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
3.						<b>-</b> ` ′
4.				Total Number of Dominant Species Across All Strata:	2	(B)
5.				<u> </u>		_` ′
				Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B
6 7.	-			Prevalence Index worksheet:	100.070	_(/ (/ )
···		=Total Cover			ultiply by:	
Copling/Chrub Ctrotum (Diet size:		- Total Cover				
Sapling/Shrub Stratum (Plot size:)					65	
1		·		FACW species 117 x 2 =	234	
2				FAC species 5 x 3 =	15	
3.				FACU species 0 x 4 =	0	
4				UPL species 0 x 5 =	0	
5		. <u></u>		Column Totals: 187 (A)	314	(B
6.				Prevalence Index = B/A =	1.68	
7				Hydrophytic Vegetation Indicators:		
		=Total Cover		1 - Rapid Test for Hydrophytic Ve	getation	
Herb Stratum (Plot size: 15 )				X 2 - Dominance Test is >50%		
1. Juncus effusus	60	Yes	OBL	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>		
Lysimachia nummularia	80	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (P	rovide sup	portir
Solidago gigantea	5	No	FACW	data in Remarks or on a separa	ate sheet)	
Symphyotrichum lanceolatum	6	No	FACW	Problematic Hydrophytic Vegetati	ion¹ (Expla	ain)
5. Agrostis gigantea	25	No	FACW	1.		
6. Ranunculus repens	3	No	FAC	<sup>1</sup> Indicators of hydric soil and wetland l be present, unless disturbed or proble		must
7. Euthamia graminifolia	1	No	FAC	Definitions of Vegetation Strata:	mano.	
Cyperus strigosus	1	No	FACW	John Mond of Togotation Chata		
<del></del>	2		OBL	Tree – Woody plants 3 in. (7.6 cm) or		iamet
9. Lythrum salicaria		No No		at breast height (DBH), regardless of	neignt.	
10. Rumex crispus	1	No No	FAC	Sapling/shrub – Woody plants less th		ВН
11. Galium palustre	2	No No	OBL	and greater than or equal to 3.28 ft (1	m) taii.	
12. Carex stricta	1	<u>No</u>	OBL	<b>Herb</b> – All herbaceous (non-woody) p		ardles
	187	=Total Cover		of size, and woody plants less than 3.	28 ft tall.	
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines great	er than 3.2	28 ft ir
4				height.		
1						
	-			Hydrophytic		
2.				Vegetation		
1		·		Vegetation         Yes X         N	lo	

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**SOIL** Sampling Point: SP-5-W

Profile De Depth	escription: (Describe Matrix	to the de	epth needed to docum	<b>nent the</b> c Feature		r or con	firm the absence	of indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	R	temarks	
0-14	10YR 3/2	95	5YR 4/6	5			Loamy/Clayey	CI	ay Loam	
14-18	10YR 5/2	50	10YR 4/6	25			Loamy/Clayey		Clay	
			10YR 2/1	25						
										_
<sup>1</sup> Type: C=	Concentration D-Der	letion PM	——————————————————————————————————————	S=Cover	ed or Coa	ted Sand	d Grains 2Lo	cation: PL=Pore I	ining M	-Matrix
•	il Indicators:	netion, Kr	w-Reduced Matrix, Co	)-Cover	eu or Coa	ileu Sanc		or Problematic Hy		
-	sol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b>	R R,		ıck (A10) ( <b>LRR K,</b>		
Histic	Epipedon (A2)		MLRA 149B)					rairie Redox (A16)		
	Histic (A3)		Thin Dark Surfac	e (S9) (I	RR R, M	LRA 149		ıcky Peat or Peat (		
	gen Sulfide (A4)		High Chroma Sai					ie Below Surface (		
	fied Layers (A5)		Loamy Mucky Mi					rk Surface (S9) ( <b>Ll</b>		,
	ted Below Dark Surfac	ce (A11)	Loamy Gleyed M			-, -,		nganese Masses (		R K. L. R)
	Dark Surface (A12)	<i>(</i> , (, , , , , , , , , , , , , , , , , ,	X Depleted Matrix (		• /			nt Floodplain Soils		
	Mucky Mineral (S1)		Redox Dark Surfa	. ,				podic (TA6) ( <b>MLR</b>		
										143, 1430)
	Gleyed Matrix (S4)		Depleted Dark Si		-7)			ent Material (F21)		
	/ Redox (S5)		Redox Depressio					allow Dark Surface		
	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	<b>K</b> , L)			Other (E	xplain in Remarks	•)	
Dark \$	Surface (S7)									
			wetland hydrology mus	t be pre	sent, unle	ess distur	bed or problematic			
	e Layer (if observed)									
Type:							IIII O. II B.		V	M.
Depth (i	nches):						Hydric Soil Pro	esent? Yes	<u> </u>	No
Remarks:	dric soils with some int	erestina a	carbon concreations in	the 14-	18 in sam	nle				
Clourly Hy	and done with donne in	orooung (			ro iii odiii	pio				

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: I	Pennellville	
Landform (hillside, terrace, etc.): Flat	Local relief (concave, convex, n	one): Flat	Slope (%): 0
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.30	 05761 Long: -76	6.225144	Datum: WGS84
Soil Map Unit Name: Palms muck		NWI classifi	
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes X No		
Are Vegetation, Soil, or Hydrologys		Circumstances" pre	
Are Vegetation , Soil , or Hydrology r		plain any answers	
SUMMARY OF FINDINGS – Attach site map she			
Hydrophytic Vegetation Present? Yes X No	o Is the Sampled Area		
Hydric Soil Present? Yes X No		Yes_X	No
Wetland Hydrology Present? Yes X No	o If yes, optional Wetland S	Site ID:	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all the			l Cracks (B6)
1 <del></del>	er-Stained Leaves (B9)		atterns (B10)
1 <del></del>	atic Fauna (B13)	Moss Trim L	, ,
<del></del>	Deposits (B15) rogen Sulfide Odor (C1)	Crayfish Bu	Water Table (C2)
— · · · · · · · · · · · · · · · · · ·	ized Rhizospheres on Living Roots (C3)		/isible on Aerial Imagery (C9)
l <del></del>	ence of Reduced Iron (C4)		Stressed Plants (D1)
<u> </u>	ent Iron Reduction in Tilled Soils (C6)		c Position (D2)
<u> </u>	Muck Surface (C7)	Shallow Aqu	uitard (D3)
Inundation Visible on Aerial Imagery (B7) Other	er (Explain in Remarks)	Microtopogr	raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutra	al Test (D5)
Field Observations:	. 11. (2 - 1 - 2)		
Surface Water Present?         Yes         No         X         Dep           Water Table Present?         Yes         X         No         Dep			
Saturation Present? Yes X No Dep		ydrology Present	? Yes X No
(includes capillary fringe)	(e.)	,	· · · · · · · · · · · · · · · · · · ·
Describe Recorded Data (stream gauge, monitoring well, as	erial photos, previous inspections), if ava	ailable:	
Remarks:			
A small amount of standing water is present in the linear dit	ches in some places but in the areas bef	tween the ditches.	

	nts.			Sampling Point: _	SP-1-W	
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A	١)
						-,
4.				Total Number of Dominant Species Across All Strata:	2 (B	3)
5				Percent of Dominant Species		
6.				· ·	50.0% (A	(B)
7.				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: Mu	Itiply by:	
Sapling/Shrub Stratum (Plot size: )				OBL species 46 x 1 =	46	
1.				FACW species 51 x 2 =	102	
2.				FAC species 0 x 3 =	0	
3.				FACU species 50 x 4 =	200	
4				UPL species 0 x 5 =	0	
5.				Column Totals: 147 (A)	348	(B)
				Prevalence Index = B/A =	2.37	(-)
7				Hydrophytic Vegetation Indicators:	2.07	
1.		=Total Cover		1 - Rapid Test for Hydrophytic Veg	rotation	
Herb Stratum (Plot size: )		- Total Cover		2 - Dominance Test is >50%	getation	
	10	No	EACIA/			
1. Bidens frondosa	-	No	FACW	X 3 - Prevalence Index is ≤3.0¹		4:
2. Impatiens capensis	40	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Pr data in Remarks or on a separa	ovide suppor te sheet)	rung
3. Persicaria sagittata		No No	OBL			
4. Epilobium coloratum	1	No No	OBL	Problematic Hydrophytic Vegetation	on (Explain)	
5. Lythrum salicaria	25	No No	OBL	<sup>1</sup> Indicators of hydric soil and wetland h		st
6. Ambrosia artemisiifolia	50	Yes	FACU	be present, unless disturbed or probler	natic.	
7. Agrostis gigantea	1	<u>No</u>	FACW	Definitions of Vegetation Strata:		
9.				Tree – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of h		etei
10.						
11.				Sapling/shrub – Woody plants less th and greater than or equal to 3.28 ft (1		
12				Herb – All herbaceous (non-woody) pla	ants regardle	ess
	147	=Total Cover		of size, and woody plants less than 3.2	, 0	
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greate	er than 3.28 ft	t in
1.				height.		
2				Hydrophytic		
				Vegetation		
3.					_	
3. 4.		=Total Cover		Present? Yes X No	·	

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SOIL Sampling Point: SP-1-W

Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks  0-18 10YR 2/1 100
0-18 10YR 2/1 100 Muck Organic Muck  18-24 N 3/ 100 Loamy/Clayey Clay
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils <sup>3</sup> :
X Histosol (A1) — Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  X Histic Epipedon (A2) MLRA 149B) — Coast Prairie Redox (A16) (LRR K, L, R)
X Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)  X Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)
Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)
Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Iron-Manganese Masses (F12) (LRR K, L, R)
Thick Dark Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21)
Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12)
Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)
Dark Surface (S7)
<sup>3</sup> 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)

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: F	Pennellville
Landform (hillside, terrace, etc.): Flat	Local relief (concave, convex, no	one): Flat Slope (%): 0
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.30	 04655 Long: -76	
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 Hydrologys		Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology n		plain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho		
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area	
Hydric Soil Present? Yes X No		Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland S	
arundinacea		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all the	at apply)	Surface Soil Cracks (B6)
\ <del></del>	er-Stained Leaves (B9)	Drainage Patterns (B10)
<u> </u>	itic Fauna (B13)	Moss Trim Lines (B16)
<u> </u>	Deposits (B15)	Dry-Season Water Table (C2)
<u> </u>	ogen Sulfide Odor (C1) zed Rhizospheres on Living Roots (C3)	Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
<u> </u>	ence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
l — · · · · /	ent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
<u> </u>	Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	r (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No X Dep		
Water Table Present?         Yes X         No         Dep           Saturation Present?         Yes X         No         Dep		rdrology Present? Yes X No
(includes capillary fringe)	wettand ny	rdrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, ac	erial photos, previous inspections), if avai	ilable:
Remarks:		
A small amount of standing water is present in the linear dit	ches in some places but in the areas bet	ween the ditches.

	ants.			Sampling Point: _	SP-2-W
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1				Number of Dominant Species	
2.				That Are OBL, FACW, or FAC:	1 (A)
3.				Total Number of Dominant	
4.				Species Across All Strata:	1 (B)
5.					
				Percent of Dominant Species That Are OBL, FACW, or FAC: 10	00.0% (A/B
7.				Prevalence Index worksheet:	70.070 (742)
· ·		=Total Cover			tiply by:
Conling/Chruh Stratum (Diet aize)		- Total Gover			1
Sapling/Shrub Stratum (Plot size:	)			<u> </u>	
1.	· ———			FACW species 92 x 2 =	
2.				FAC species 0 x 3 =	
3.				FACU species0 x 4 =	0
4.				UPL species 0 x 5 =	0
5.				Column Totals: 93 (A)	185 (B
6.				Prevalence Index = B/A =	1.99
7.				Hydrophytic Vegetation Indicators:	
		=Total Cover		1 - Rapid Test for Hydrophytic Veg	etation
Herb Stratum (Plot size: )		•		X 2 - Dominance Test is >50%	
1. Phalaris arundinacea	90	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
Impatiens capensis	2	· ——	FACW	4 - Morphological Adaptations <sup>1</sup> (Pro	ovide supportin
Scirpus cyperinus			OBL	data in Remarks or on a separat	
	1	110	OBL	Problematic Hydrophytic Vegetatio	n <sup>1</sup> (Evoloin)
4.				Problematic hydrophytic vegetatio	n (⊏xpiain)
5.				<sup>1</sup> Indicators of hydric soil and wetland hy	
6.				be present, unless disturbed or problem	natic.
7				Definitions of Vegetation Strata:	
8.				Tree – Woody plants 3 in. (7.6 cm) or n	nore in diamete
9				at breast height (DBH), regardless of he	eight.
10				Sapling/shrub – Woody plants less tha	an 3 in DBH
11				and greater than or equal to 3.28 ft (1 r	
12				Harb All borboscous (non woods) nic	unto romandicos
	93	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plated of size, and woody plants less than 3.2.	inis, regardiess 8 ft tall.
Woody Vine Stratum (Plot size:	)	•			
1.	,			<b>Woody vines</b> – All woody vines greate height.	r than 3.28 ft in
···				1119.11	
2		· ·		Hydrophytic	
2.					
3.				Vegetation Vegetation	
·		=Total Cover		Vegetation Present? Yes X No	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

**SOIL** Sampling Point: SP-2-W

Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks  0-18 10YR 2/1 100
0-18 10YR 2/1 100 Muck Organic Muck  18-24 N 3/ 100 Loamy/Clayey Clay
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils <sup>3</sup> :
X Histosol (A1) — Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  X Histic Epipedon (A2) MLRA 149B) — Coast Prairie Redox (A16) (LRR K, L, R)
X Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)  X Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)
Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)
Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Iron-Manganese Masses (F12) (LRR K, L, R)
Thick Dark Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21)
Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12)
Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)
Dark Surface (S7)
<sup>3</sup> 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)

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, Rar	nge: Pennellville				
Landform (hillside, terrace, etc.): Flat	Local relief (concave, con	ivex, none): Flat	Slope (%): 0			
	 _at: 43.303811 Lor	ng: 76.223563	Datum: WGS84			
Soil Map Unit Name: Palms muck		NWI class				
	If all in the control of the control					
Are climatic / hydrologic conditions on the site typica	·	<del></del>	in in Remarks.)			
Are Vegetation, Soil, or Hydrology		ormal Circumstances" p				
Are Vegetation, Soil, or Hydrology	naturally problematic? (If need	led, explain any answe	rs in Remarks.)			
SUMMARY OF FINDINGS – Attach site n	nap showing sampling point loca	tions, transects,	important features, etc.			
Hydrophytic Vegetation Present? Yes	( No Is the Sampled Ar	rea				
Hydric Soil Present? Yes	<del>_</del>		X No			
Wetland Hydrology Present? Yes						
Remarks: (Explain alternative procedures here or i	n a separate report.)					
Selected sample point is located in one of the linear		ge patches of invasives	3.			
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Inc	dicators (minimum of two required)			
Primary Indicators (minimum of one is required; che	eck all that apply)	·	Soil Cracks (B6)			
X Surface Water (A1)	Water-Stained Leaves (B9)		Patterns (B10)			
High Water Table (A2)	Aquatic Fauna (B13)		n Lines (B16)			
Saturation (A3)	Marl Deposits (B15)		Dry-Season Water Table (C2)			
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish E	Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots	(C3) Saturation	n Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted o	r Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C	C6) Geomorph	hic Position (D2)			
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow A	Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopo	ographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)		X FAC-Neut	tral Test (D5)			
Field Observations:						
Surface Water Present? Yes X No	Depth (inches):					
Water Table Present? Yes X No	Depth (inches):					
Saturation Present? Yes X No	Depth (inches): Wetla	and Hydrology Preser	nt? Yes X No			
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring	g well, aerial photos, previous inspections)	, if available:				
Remarks:						
Standing water is present in the ditch						

<b>VEGETATION</b> – Use scientific names of pla	nts.			Sampling Point:	SP-3-V	Ν
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2.				That Are OBL, FACW, or FAC:	3	(A)
3				Total Number of Dominant		
4				Species Across All Strata:	3	_(B)
5				Percent of Dominant Species		
6				That Are OBL, FACW, or FAC:	100.0%	_(A/B)
7				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: M	lultiply by:	
Sapling/Shrub Stratum (Plot size:)				OBL species <u>85</u> x 1 =	85	
1				FACW species 3 x 2 =	6	
2				FAC species 0 x 3 =	0	
3				FACU species 0 x 4 =	0	
4				UPL species0 x 5 =	0	
5				Column Totals: 88 (A)	91	(B)
6				Prevalence Index = B/A =	1.03	
7.				Hydrophytic Vegetation Indicators:		
		=Total Cover		1 - Rapid Test for Hydrophytic Ve	egetation	
Herb Stratum (Plot size: )		•		X 2 - Dominance Test is >50%		
1. Persicaria sagittata	30	Yes	OBL	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2. Leersia oryzoides	20	Yes	OBL	4 - Morphological Adaptations <sup>1</sup> (F	Provide sup	porting
3. Bidens cernua	20	Yes	OBL	data in Remarks or on a separ	ate sheet)	
4. Persicaria hydropiper	10	No	OBL	Problematic Hydrophytic Vegetal	tion <sup>1</sup> (Expla	ain)
5. Sparganium americanum	5	No	OBL	1		
6. Persicaria pensylvanica	3	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland be present, unless disturbed or proble		must
7.				Definitions of Vegetation Strata:		
8.						
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of		ametei
10.						
11.				Sapling/shrub – Woody plants less t and greater than or equal to 3.28 ft (1		ВН
12.				,	•	
	88	=Total Cover		Herb – All herbaceous (non-woody) pof size, and woody plants less than 3		ırdless
Woody Vine Stratum (Plot size: )		•				
1.				<b>Woody vines</b> – All woody vines greatheight.	ter than 3.2	28 ft in
2.						
3.				Hydrophytic		
4.				Vegetation Present? Yes X	No	
	-	=Total Cover				
Remarks: (Include photo numbers here or on a sepa	rate sheet \	10101 00101		<u> </u>		
60% herbaceous cover.	iale sileel.)					

Northcentral and Northeast Region - Version 2.0

SOIL Sampling Point: SP-3-W

Depth	Matrix			x Feature			irm the absence of inc	,
	olor (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
1- 00	5.5						2	D. D
		iletion, RIV	1=Reduced Matrix, C	S=Cover	ed or Coa	ted Sand		n: PL=Pore Lining, M=Matrix.
Hydric Soil Indic			D. L. J. D. L.	0 (	(00) (LD			oblematic Hydric Soils <sup>3</sup> :
Histosol (A1)		-	Polyvalue Below	Surface	(S8) ( <b>LR</b>	RR,		A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) MLRA 149B)							Redox (A16) ( <b>LRR K, L, R</b> )	
Black Histic			Thin Dark Surface				· —	Peat or Peat (S3) (LRR K, L, R)
Hydrogen Su	, ,		High Chroma Sa	•	, ,	•		low Surface (S8) (LRR K, L)
Stratified La	•		Loamy Mucky M	,	, ,	(, L)		rface (S9) (LRR K, L)
	low Dark Surfac	e (A11)	Loamy Gleyed M	,	2)			ese Masses (F12) ( <b>LRR K, L, R</b> )
	Surface (A12)		Depleted Matrix	` '				odplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mineral (S1)		Redox Dark Surf					(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	ed Matrix (S4)		Depleted Dark S	,	F7)		Red Parent M	
Sandy Redo	. ,		Redox Depression					Dark Surface (TF12)
Stripped Mat			Marl (F10) ( <b>LRR</b>	K, L)			Other (Explain	n in Remarks)
Dark Surface	∍ (S7)							
_								
•			vetland hydrology mu	st be pre	esent, unle	ess disturb	ped or problematic.	
Restrictive Laye	r (if observed):	:						
Туре:								
Depth (inches)	:						Hydric Soil Present	t? Yes X No
Remarks:							-	
	as taken due to	sample p	oint being in ditch. Hy	dric soil	s are assi	ımed to b	e present	
		oup.o p	o	, 4	o a. o aoo.		о р. ооо	

Project/Site: Route 33	City/County: Hastings/ Oswego		Sampling Date: <u>11/06/2024</u>
Applicant/Owner: The Wetland Trust	<u> </u>	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: <u>-</u> -76.219	9929	Datum: WSG84
Soil Map Unit Name: Scriba gravelly fine sandy loam		NWI classific	ation: None
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes X No (	– (If no, explain iı	n Remarks.)
Are VegetationY, SoilY, or HydrologyN signific	cantly disturbed? Are "Normal Circur	mstances" pres	sent? Yes X No
Are Vegetation Y , Soil Y , or Hydrology N natura		n any answers i	n Remarks.)
SUMMARY OF FINDINGS – Attach site map showin		ansects, im	portant 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 II	D:	
soil. Recently harvested with large combines/ tractors leaving deemorning.	p futs and compacted sons around san	пріє ропії. Зієє	ady famian unougnout mynt and
HYDROLOGY			
Wetland Hydrology Indicators:	<u>Se</u>	condary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	)y)	_Surface Soil	Cracks (B6)
	ned Leaves (B9)	Drainage Pat	tterns (B10)
High Water Table (A2) Aquatic Fa		Moss Trim Li	` '
Saturation (A3)Marl Depos	· · ·		Water Table (C2)
	Sulfide Odor (C1)	_Crayfish Burr	, ,
<del></del> -	thizospheres on Living Roots (C3)	_	sible on Aerial Imagery (C9)
	of Reduced Iron (C4)		tressed Plants (D1)
<del></del>	n Reduction in Tilled Soils (C6)	_	Position (D2)
<del></del>	Surface (C7)	_ Shallow Aqui	nard (D3) ophic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	lain in Remarks)	FAC-Neutral	
Field Observations:	<del></del>	_ I AO-INCARA	Test (DO)
Surface Water Present? Yes No X Depth (in	ches):		
	ches):		
Saturation Present? Yes No X Depth (in		logy Present?	Yes No X
(includes capillary fringe)	,		
Describe Recorded Data (stream gauge, monitoring well, aerial p	notos, previous inspections), if available	e:	
Remarks: Standing water in tractor ruts that surround sample point approxin hydrology indicators such as: soil cracking, oxidized root channels			depth of 15 inches. No

	11115.			Sampling Point:	SP-1-l	J
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC:	0	(A)
3				Total Number of Dominant		
4				Species Across All Strata:	1	(B)
E				Percent of Dominant Species		
6				That Are OBL, FACW, or FAC:	0.0%	(A/B)
7				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: Mi	ultiply by:	
	0					
1				FACW species 0 x 2 =	0	
2.				FAC species 0 x 3 =	0	
2				FACU species 0 x 4 =	0	
4				UPL species 100 x 5 =	500	
				Column Totals: 100 (A)	500	— (B)
6					5.00	<u>      `                              </u>
7				Hydrophytic Vegetation Indicators:		
		<u> </u>			getation	
Herb Stratum (Plot size:		10101 00101			gotation	
	100	Yes	LIPI	1 <del></del>		
		100	<u> </u>		rovide sun	nortino
				data in Remarks or on a separa	ate sheet)	porting
				Problematic Hydrophytic Vegetati	on <sup>1</sup> (Expla	in)
6						nust
7					mado.	
	-			Definitions of Vegetation Strata.		
0.						ametei
10				at breast fieight (DBH), regardless of	leigitt.	
						ВН
	-			and greater than or equal to 3.26 it (1	m) tan.	
12						rdless
W 1 1/2 0/1 (D) 1	100	= Fotal Cover		of size, and woody plants less than 3.	28 ft tall.	
Woody Vine Stratum (Plot size:)					er than 3.2	8 ft in
				height.		
2.				Hydrophytic		
2. 3.				Vegetation		
2.				Vegetation	o_X_	

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**SOIL** Sampling Point: SP-1-U

Profile Des Depth	scription: (Describe Matrix	to the de	-	<b>nent the</b>		or or con	firm the absence of in	dicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	
			_						
			_						
		pletion, RN	M=Reduced Matrix, CS	S=Cover	ed or Coa	ited Sand		on: PL=Pore Lining, M=M	
-	il Indicators:		Dobarduo Polow	Surface	. (CO) (I D	D D		roblematic Hydric Soils <sup>3</sup>	
	ol (A1) Epipedon (A2)		Polyvalue Below  MLRA 149B)	Surrace	(S6) (LR	κκ,		A10) ( <b>LRR K, L, MLRA 1</b> Redox (A16) ( <b>LRR K, L,</b>	
	Histic (A3)		Thin Dark Surfac	e (S9) (I	LRR R. M	LRA 149		Peat or Peat (S3) (LRR F	
	gen Sulfide (A4)		High Chroma Sa					elow Surface (S8) ( <b>LRR K</b>	
	ied Layers (A5)		Loamy Mucky Mi					urface (S9) (LRR K, L)	
Deplet	ted Below Dark Surfa	ce (A11)	Loamy Gleyed M	latrix (F2	2)		Iron-Mangar	nese Masses (F12) ( <b>LRR</b>	K, L, R)
Thick I	Dark Surface (A12)		X Depleted Matrix	(F3)			Piedmont Flo	oodplain Soils (F19) ( <b>MLF</b>	RA 149B)
Sandy	Mucky Mineral (S1)		Redox Dark Surf	ace (F6)	)		Mesic Spodi	c (TA6) ( <b>MLRA 144A, 14</b>	5, 149B)
Sandy	Gleyed Matrix (S4)		Depleted Dark S	urface (F	<del>-</del> 7)		Red Parent I	Material (F21)	
	Redox (S5)		Redox Depression					v Dark Surface (TF12)	
	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	<b>K</b> , <b>L</b> )			Other (Expla	iin in Remarks)	
Dark S	Surface (S7)								
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and v	vetland hydrology mus	st be pre	sent, unle	ess distur	bed or problematic.		
	e Layer (if observed)	:							
Type:									
Depth (ir	nches):						Hydric Soil Preser	nt? Yes X N	No
Remarks:		L   L -	-1						
Soils are in	nore compact at 7 inc	nes and be	elow.						

Project/Site: Route 33	City/County: Hastings/ Oswe	•go	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, r	none): None	Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.30		6.218939	Datum: WSG84
Soil Map Unit Name: Madalin Silt Loam			fication: None
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes X No	(If no, explain	
Are Vegetation Y , Soil Y , or Hydrology N si		—— ` Circumstances" pr	
Are Vegetation Y , Soil Y , or Hydrology N na		xplain any answers	
SUMMARY OF FINDINGS – Attach site map sho			
Hydrophytic Vegetation Present? Yes No	X Is the Sampled Area	,	
Hydric Soil Present? Yes X No		Yes	No X
Wetland Hydrology Present? Yes X No	If yes, optional Wetland	Site ID:	
soil. Recently harvested with large combines/ tractors leaving and morning. Adjacent to a delineated wetland.	,		
HYDROLOGY			<del></del>
Wetland Hydrology Indicators:		-	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all that			oil Cracks (B6)
<del></del>	-Stained Leaves (B9) ic Fauna (B13)		Patterns (B10) Lines (B16)
	Deposits (B15)		n Water Table (C2)
	gen Sulfide Odor (C1)		urrows (C8)
<del></del>	ed Rhizospheres on Living Roots (C3)		Visible on Aerial Imagery (C9)
	nce of Reduced Iron (C4)		Stressed Plants (D1)
	nt Iron Reduction in Tilled Soils (C6)		ic Position (D2)
Iron Deposits (B5)Thin N	luck Surface (C7)	Shallow Ac	quitard (D3)
	(Explain in Remarks)	Microtopog	graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutra	al Test (D5)
Field Observations:			
	th (inches):		
	th (inches): 14 th (inches): Wetland H	lydrology Present	t? Vos Y No
(includes capillary fringe)	Wettand H	yurology Fresem	t? Yes X No
Describe Recorded Data (stream gauge, monitoring well, ae	rial photos, previous inspections), if av	ailable:	
( 3 3 )	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Remarks: Water in hole at 14 inched below surface, tractor ruts have s algal mats and no drainage pattern.	tanding water. No hydrology indicators	such as: soil crac	king, oxidized root channels, no

<b>VEGETATION</b> – Use scientific names of pla	nts.			Sampling Point:	SP-2-U	J
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC:	0	(A)
3	1	. <u></u>		Total Number of Dominant		
4				Species Across All Strata:	1	(B)
E				Dereent of Deminent Species		
				That Are OBL, FACW, or FAC:	0.0%	(A/B)
7				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: M	lultiply by:	
Absolute Species? Status    Pominant   Species   Status   Status	0	_				
	-				1	_
2						_
				· <del></del>		_
					500	— (B)
				` '		— <sup>(B)</sup>
7		· · · · · · · · · · · · · · · · · · ·				
		= Iotal Cover			egetation:	
	100	Yes	UPL			
				4 - Morphological Adaptations¹ (F data in Remarks or on a separ	rovide sup ate sheet)	porting
		· -		Problematic Hydrophytic Vegetat	tion¹ (Explai	in)
E				1 Indicators of hydric coil and wetland	hudrologu r	munt
6						IIust
7				Definitions of Vegetation Strata:		
8.						
9.						ameter
10.	1					
11						BH
12	1	. <u></u>		Harb — All herbaceous (non-woody) r	olante rega	rdlace
	100	=Total Cover				ruicss
Woody Vine Stratum (Plot size:)				Woody vines All woody vines greet	tor than 2.2	Q ft in
1					lei tilali 5.2	O It III
2.						
3.						
4.					No X	
		=Total Cover				
Remarks: (Include photo numbers here or on a sepa				1		
Soy was thriving and tall. Soy litters the ground with r	o understor	y vegetation.				

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**SOIL** Sampling Point: SP-2-U

Profile Des Depth		to the de		<b>nent the</b> c Feature		r or con	firm the absence of in	dicators.)
(inches)	Matrix Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10yr 3/1	100	Color (molecy		1,700		Loamy/Clayey	rtomanto
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	
			_					
17			A-D-dud Matrix Of			4	21	DI Lining M-M-triv
	Concentration, D=Dep	pletion, Ki	/I=Reduced Matrix, CS	s=Cover	ed or Coa	ited Sand		on: PL=Pore Lining, M=Matrix.  roblematic Hydric Soils <sup>3</sup> :
-	ol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b>	R R,		A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic	Epipedon (A2)		MLRA 149B)					e Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfac	e (S9) (I	LRR R, M	LRA 149	<b>5</b> cm Mucky	Peat or Peat (S3) (LRR K, L, R)
Hydro	gen Sulfide (A4)		High Chroma Sa	nds (S1	1) (LRR K	(, <b>L</b> )	Polyvalue Be	elow Surface (S8) ( <b>LRR K, L</b> )
Stratif	ied Layers (A5)		Loamy Mucky Mi	ineral (F	1) ( <b>LRR k</b>	(, L)	Thin Dark Su	urface (S9) ( <b>LRR K, L</b> )
? Deplet	ted Below Dark Surfa	ce (A11)	Loamy Gleyed M	latrix (F2	2)		Iron-Mangan	nese Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)		X Depleted Matrix	` '				oodplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy	Mucky Mineral (S1)		Redox Dark Surf	ace (F6)	)		Mesic Spodio	c (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4)		Depleted Dark S		<del>-</del> 7)			Material (F21)
	Redox (S5)		Redox Depression					v Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	<b>K</b> , <b>L</b> )			Other (Explain	in in Remarks)
Dark S	Surface (S7)							
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and v	vetland hydrology mus	st be pre	sent, unle	ess distur	bed or problematic.	
	e Layer (if observed)	:						
Type:								
Depth (ir	nches):						Hydric Soil Presen	nt? Yes X No
Remarks:	- 4 1							
No redox ir	n top layer							

Project/Site: Route 33	City/County: Ha	astings/ Oswego	Sampling Date: <u>11/06/2024</u>
Applicant/Owner: The Wetland Trust		State:	NY Sampling Point: SP-3-U
Investigator(s): E. Frantz, K. Hastings	Section, Townsl	hip, Range:	
Landform (hillside, terrace, etc.): Slope	Local relief (conca	ave, convex, none): None	Slope (%): 2-3
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 4	13.305435	Long: £76.215527	Datum: WSG84
Soil Map Unit Name: Rhinebeck Silt Loam			fication: None
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes	X No (If no, explair	
Are Vegetation Y , Soil Y , or Hydrology N	-	Are "Normal Circumstances" pr	
Are Vegetation Y , Soil Y , or Hydrology N	<del></del>	(If needed, explain any answer	
SUMMARY OF FINDINGS – Attach site map	<del></del>	nt locations, transects, i	mportant features, etc.
Hydrophytic Vegetation Present? Yes	No X Is the Sam	pled Area	
Hydric Soil Present? Yes	No X within a W		No X
Wetland Hydrology Present? Yes	No X If yes, option	onal Wetland Site ID:	
soil. Recently harvested with large combines/ tractors le towards wetland to the Northeast.	eaving deep ruis and compacte	u sons. Sample point is in traci	or turn around. Slightly sloping
HYDROLOGY			
Wetland Hydrology Indicators:		<u></u>	cators (minimum of two required)
Primary Indicators (minimum of one is required; check a			oil Cracks (B6)
	Vater-Stained Leaves (B9)		Patterns (B10)
	Aquatic Fauna (B13)		Lines (B16)
<u>—</u>	Marl Deposits (B15)	<del></del> ·	n Water Table (C2)
<del></del>	Hydrogen Sulfide Odor (C1)	<del></del> '	urrows (C8)
	Oxidized Rhizospheres on Livin Presence of Reduced Iron (C4)		Visible on Aerial Imagery (C9) Stressed Plants (D1)
	Recent Iron Reduction in Tilled		ic Position (D2)
<del></del>	Thin Muck Surface (C7)	• • •	quitard (D3)
	Other (Explain in Remarks)	·	graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	(=,		ral Test (D5)
Field Observations:		<del></del>	
Surface Water Present? Yes No _X	Depth (inches):		
Water Table Present? Yes No _X	Depth (inches):		
Saturation Present? Yes No X	Depth (inches):	Wetland Hydrology Presen	t? Yes No _X
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring we	ll, aerial photos, previous inspe	ections), if available:	
Remarks:  No hydrology indicators such as: soil cracking, oxidized morning. Water pooling in tractor ruts but does not control.			/ rainfall throughout the night and

<b>VEGETATION</b> – Use scientific names of p	olants.			Sampling Point:	SP-3-	U
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC:	0	(A)
3.				Total Number of Dominant		
4				Species Across All Strata:	1	(B)
E				Dercent of Deminent Species		
				That Are OBL, FACW, or FAC:	0.0%	(A/B)
7				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of:	/lultiply by:	
	0					
	<del>_</del>				0	
					0	_
2						_
				<u> </u>		_
					500	— (B)
-						— <sup>(b)</sup>
	_	·		<u> </u>		
1.						
		= Iotal Cover			'egetation	
				<del></del>		
	100	Yes	UPL	<del></del>		
_				4 - Morphological Adaptations data in Remarks or on a sepa	Provide sup rate sheet)	porting
		·		Problematic Hydrophytic Vegeta	ation <sup>1</sup> (Expla	ıin)
						must
		·			lematic.	
	_			Definitions of Vegetation Strata:		
8. 9	_					iametei
10				at Broadt Holght (BBH), regulations	i noigna	
11						BH
12				Havb All berbassaya (non woody)	nlanta raga	rdlooo
_	100	=Total Cover				liuless
Woody Vine Stratum (Plot size:	_)			Woody vines – All woody vines great	ater than 3.2	28 ft in
1	_			height.		
2.						
3.						
4					No X	
		=Total Cover				
4. Remarks: (Include photo numbers here or on a se	eparate sheet.)	•	on		No X	

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SOIL Sampling Point: SP-3-U

Profile De Depth	scription: (Describe Matrix	e to the de		m <b>ent th</b> x Featur		or or con	firm the absence o	f indicato	ers.)	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remark	S
0-8	10yr 4/2	100	, , , , ,				Loamy/Clayey			
8-12	10yr 6/2	70	7.5yr 5/6	30			Loamy/Clayey			
0-12	1091 6/2	70	7.5yi 5/6	30			Loamy/Clayey			
1										
	Concentration, D=De	pletion, RM	1=Reduced Matrix, C	S=Cover	red or Coa	ited Sand	d Grains. <sup>2</sup> Loc Indicators fo		=Pore Lining,	
-	il Indicators: sol (A1)		Polyvalue Below	Surface	- (S8) ( <b>I R</b>	RR			RR K, L, ML	
	Epipedon (A2)	•	MLRA 149B)	Ouriace	3 (00) ( <b>LI</b>	ix ix,			x (A16) ( <b>LRR</b>	
	Histic (A3)		Thin Dark Surface	ce (S9) (	LRR R, M	LRA 149			r Peat (S3) ( <b>L</b>	
	gen Sulfide (A4)	•	High Chroma Sa						urface (S8) ( <b>L</b>	
Stratif	ied Layers (A5)	•	Loamy Mucky M	ineral (F	1) ( <b>LRR k</b>	<b>(</b> , L)	Thin Dark	κ Surface (	(S9) ( <b>LRR K,</b> l	L)
Deple	ted Below Dark Surfa	ice (A11)	Loamy Gleyed M	1atrix (F	2)		Iron-Man	ganese Ma	asses (F12) ( <b>I</b>	RR K, L, R)
	Dark Surface (A12)	•	Depleted Matrix	. ,				-	, ,	(MLRA 149B)
	/ Mucky Mineral (S1)		Redox Dark Surf						) (MLRA 144 <i>A</i>	A, 145, 149B)
	Gleyed Matrix (S4)		Depleted Dark S					ent Materia		.,
	/ Redox (S5) ed Matrix (S6)		Redox Depression  Marl (F10) (LRR					illow Dark : xplain in Re	Surface (TF12	2)
	Surface (S7)	•	IMAII (F10) ( <b>LKK</b>	κ, ∟)			Other (Ex	piaiii iii Ne	elliaiks)	
Bank 0	Surrace (61)									
<sup>3</sup> Indicators	of hydrophytic veget	ation and w	vetland hydrology mu	st be pre	esent, unle	ess distur	bed or problematic.			
Restrictive	e Layer (if observed	):								
Туре:										
Depth (ir	nches):						Hydric Soil Pre	sent?	Yes	No X
Remarks:										
No redox i	n top layer									

Project/Site: Route 33	City/County: Hastin	ngs/ 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: 4	<u> </u>	Long: £76.215423	Datum: WSG84
Soil Map Unit Name: Rhinebeck Silt Loam		· · ·	fication: None
Are climatic / hydrologic conditions on the site typical for	this time of year? Ves Y	No (If no, explain	
Are Vegetation N , Soil N , or Hydrology N		"Normal Circumstances" pr	
<del></del> _ <del></del>		needed, explain any answers	
Are Vegetation N, Soil N, or Hydrology N SUMMARY OF FINDINGS – Attach site map		•	,
Hydrophytic Vegetation Present?  Yes X	No Is the Sampled		No.
Hydric Soil Present? Yes X  Wetland Hydrology Present? Yes X	No within a Wetla  No If yes, optional	wetland Site ID:	No
Remarks: (Explain alternative procedures here or in a s		Wettaria Oite ib.	
Shrub wetland on the edge of a drain that has been man agriculture farm field.	ilpulated/ dug out in the past. App	Toximently To leet away no	m drain. Adjacent to an
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)
Primary Indicators (minimum of one is required; check a			vil Cracks (B6)
<u> </u>	/ater-Stained Leaves (B9)		Patterns (B10)
<u> </u>	quatic Fauna (B13) Iarl Deposits (B15)		Lines (B16) n Water Table (C2)
	ydrogen Sulfide Odor (C1)	<del></del> ·	urrows (C8)
	xidized Rhizospheres on Living Ro		Visible on Aerial Imagery (C9)
	resence of Reduced Iron (C4)	` '	Stressed Plants (D1)
<u> </u>	ecent Iron Reduction in Tilled Soil	ls (C6) Geomorphi	ic Position (D2)
Iron Deposits (B5)	hin Muck Surface (C7)	Shallow Ad	juitard (D3)
	ther (Explain in Remarks)	Microtopog	raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutra	al Test (D5)
Water Table Present? Yes X No	Depth (inches):         1           Depth (inches):         10           Depth (inches):         W	√etland Hydrology Present	? Yes <u>X</u> No
Describe Recorded Data (stream gauge, monitoring wel	I, aerial photos, previous inspectic	ons), if available:	
( 0 0 /		,	
Remarks:			
Standing water within the plot. Water in hole 10 inches b	pelow surface. No oxidized root ch	nannels	

<b>VEGETATION</b> – Use scientific names of plants	ants.			Sampling Point:	SP-3-W
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. 2.				Number of Dominant Species That Are OBL, FACW, or FAC:	4 (A)
3. 4.				Total Number of Dominant Species Across All Strata:	4 (B)
5. 6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0% (A/B
7.				Prevalence Index worksheet:	`
		=Total Cover		Total % Cover of: M	ultiply by:
Sapling/Shrub Stratum (Plot size:	)			OBL species 2 x 1 =	2
1. Cornus amomum	30	Yes	FACW	FACW species 86 x 2 =	172
2. Viburnum dentatum	5	No	FAC	FAC species 30 x 3 =	90
3. Cornus racemosa	25	Yes	FAC	FACU species 6 x 4 =	24
4. Lonicera tatarica	5	No	FACU	UPL species 5 x 5 =	25
5. Salix spp.	15	No	FACW	Column Totals: 129 (A)	313 (B
6.				Prevalence Index = B/A =	2.43
7.				Hydrophytic Vegetation Indicators:	
	80	=Total Cover		1 - Rapid Test for Hydrophytic Ve	
Herb Stratum (Plot size: )		- Total Cover		X 2 - Dominance Test is >50%	getation
	20	Vaa	EAC)A/	<u> </u>	
1. Solidago gigantea	20	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2. <u>Leersia oryzoides</u>	2	No No	OBL	4 - Morphological Adaptations <sup>1</sup> (F	
3. Symphyotrichum lanceolatum	20	Yes	FACW	·	
4. Fragaria vesca	5	<u>No</u>	UPL	Problematic Hydrophytic Vegetat	ion' (Explain)
5. <u>Taraxacum officinale</u>	1	<u>No</u>	FACU	<sup>1</sup> Indicators of hydric soil and wetland	
6. Carex spp.	1	No	FACW	be present, unless disturbed or proble	matic.
7.				Definitions of Vegetation Strata:	
8. 9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of	
10 11.				Sapling/shrub – Woody plants less t and greater than or equal to 3.28 ft (1	
12.		-Tatal Causa		Herb – All herbaceous (non-woody) p	olants, regardless
Woody Vine Stratum (Diet eize:	-	=Total Cover		of size, and woody plants less than 3.	.20 II lall.
Woody Vine Stratum (Plot size:	·			<b>Woody vines</b> – All woody vines great height.	er than 3.28 ft in
2.					
3				Hydrophytic Vegetation	
4				=	lo
		=Total Cover			
		=Total Cover		Vegetation Present? Yes X	lo

SOIL Sampling Point: SP-3-W

Profile De Depth	escription: (Describe Matrix	to the de	pth needed to docun	nent the Feature		or or con	firm the absence of	of indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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						
								<u>,</u>		
<sup>1</sup> Type: C=	Concentration, D=Dep	oletion, RI	——————————————————————————————————————	 3=Cover	ed or Coa	ted Sand	d Grains. <sup>2</sup> Loo	cation: PL=Pore	Lining, M	=Matrix.
	il Indicators:	•	,					or Problematic F		
Histos	sol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b>	RR,	2 cm Mu	ick (A10) ( <b>LRR K</b>	ί, L, MLRA	A 149B)
	Epipedon (A2)		MLRA 149B)					airie Redox (A16		
	Histic (A3)		Thin Dark Surfac	e (S9) (	LRR R. M	LRA 149		icky Peat or Peat		
	gen Sulfide (A4)		High Chroma Sai					e Below Surface		
	fied Layers (A5)		Loamy Mucky Mi					k Surface (S9) ( <b>I</b>		, =/
		oo (A11)				<b>(, L</b> )				DK L D)
	ted Below Dark Surfa	ce (ATT)	Loamy Gleyed M		<u>2)</u>			nganese Masses	` ' '	
	Dark Surface (A12)		X Depleted Matrix (	. ,				nt Floodplain Soil		
Sandy	y Mucky Mineral (S1)		Redox Dark Surfa	ace (F6)	)		Mesic Sp	oodic (TA6) ( <b>MLF</b>	RA 144A, 1	145, 149B)
Sandy	y Gleyed Matrix (S4)		Depleted Dark St	urface (l	F7)		Red Pare	ent Material (F21	1)	
Sandy	y Redox (S5)		Redox Depressio	ns (F8)			Very Sha	allow Dark Surfac	ce (TF12)	
Stripp	ed Matrix (S6)		Marl (F10) (LRR	K, L)			Other (E	xplain in Remark	(s)	
	Surface (S7)			, ,					,	
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and v	wetland hydrology mus	st be pre	esent, unle	ess distur	bed or problematic.			
Restrictiv	e Layer (if observed)	:								
Type:										
Depth (i	nches):						Hydric Soil Pre	esent? Ye	s X	No
Remarks: Redox in to	op laver									
	,									

Project/Site: Route 33	City/County: Hastings/ Oswego	Sampling Date: <u>11/06/2024</u>
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		ification: None
Are climatic / hydrologic conditions on the site typical for this time of		
Are Vegetation Y , Soil Y , or Hydrology N significa		
Are Vegetation Y , Soil Y , or Hydrology N naturally		
SUMMARY OF FINDINGS – Attach site map showing		
Hydrophytic Vegetation Present?  Yes No X  Hydric Soil Present?  Yes X No	Is the Sampled Area within a Wetland? Yes	No. Y
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:	No X
soil. Recently harvested with large combines/ tractors leaving deep 8-0 feet deep	ruts and compacted soils around sample point. A	djacent to a ditch that ranges from
HYDROLOGY		
High Water Table (A2) Saturation (A3) Water Marks (B1) Hydrogen St Sediment Deposits (B2) Orift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Aquatic Faur Arrived Faur Agraed Presence of Algal Mat or Crust (B4) Thin Muck S	Surface Some ded Leaves (B9)  red (B13)  Moss Trim  Dry-Seaso  Crayfish B  Saturation  Freduced Iron (C4)  Reduced Iron (C4)  Reduction in Tilled Soils (C6)  Geomorph  Surface (C7)  Shallow Ar  Microtopog  FAC-Neutr  hes):  hes):  hes):  Wetland Hydrology Present	icators (minimum of two required) oil Cracks (B6) Patterns (B10) n Lines (B16) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) nic Position (D2) quitard (D3) graphic Relief (D4) ral Test (D5)  ht? Yes NoX
Remarks: No hydrology indicators such as: soil cracking, oxidized root channel morning. Water pooling in tractor ruts does not reflect hydrology ob		

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 x1 = 0  FACW species  0 x2 = 0  FAC species  0 x3 = 0  FACU species  0 x4 = 0
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
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
Species Across All Strata:         1         (B)           Percent of Dominant Species         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
Species Across All Strata:         1         (B)           Percent of Dominant Species         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
That Are OBL, FACW, or FAC: 0.0% (A/B)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         0 x1 = 0           FACW species         0 x2 = 0           FAC species         0 x3 = 0
That Are OBL, FACW, or FAC: 0.0% (A/B)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         0 x1 = 0           FACW species         0 x2 = 0           FAC species         0 x3 = 0
Total % Cover of:         Multiply by:           OBL species         0         x 1 =         0           FACW species         0         x 2 =         0           FAC species         0         x 3 =         0
OBL species         0         x 1 =         0           FACW species         0         x 2 =         0           FAC species         0         x 3 =         0
OBL species         0         x 1 =         0           FACW species         0         x 2 =         0           FAC species         0         x 3 =         0
FACW species         0         x 2 =         0           FAC species         0         x 3 =         0
FAC species 0 x 3 = 0
17100 openies a x 1
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 ≤3.0¹
4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<sup>1</sup> Indicators of hydric soil and wetland hydrology must
be present, unless disturbed or problematic.  Definitions of Vegetation Strata:
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.
<b>Herb</b> – 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
-

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**SOIL** Sampling Point: SP-4-U

Profile De Depth		to the de	pth needed to docur	<b>nent the</b> Feature		r or con	firm the absence of	indicators.)
(inches)	Matrix Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	10yr 3/1	100	Color (molecy		1,700		Loamy/Clayey	remane
6-9	10yr 4/1	90	7.5yr 5/6	10			Loamy/Clayey	Clay
9-12		80		20				Clay
9-12	7.5yr 5/2	- 60	7.5yr 5/7				Loamy/Clayey	Clay
<sup>1</sup> Type: C=	Concentration, D=De	pletion, RN	/I=Reduced Matrix, CS	S=Cover	ed or Coa	ted Sand		tion: PL=Pore Lining, M=Matrix.
-	il Indicators:		5 5.	0 (	(00) (I <b>D</b>			Problematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Below	Surface	(S8) (LR	R R,		(A10) (LRR K, L, MLRA 149B)
	Epipedon (A2) Histic (A3)		MLRA 149B) Thin Dark Surfac	ا) (92) م	RRR M	Ι <b>Ρ</b> Δ 1 <i>Α</i> 0		rie Redox (A16) ( <b>LRR K, L, R</b> ) ky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	gen Sulfide (A4)		High Chroma Sa					Below Surface (S8) (LRR K, L)
	ied Layers (A5)		Loamy Mucky Mi					Surface (S9) (LRR K, L)
	ted Below Dark Surfa	ce (A11)	Loamy Gleyed M			-, -/		anese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	()	X Depleted Matrix		,			Floodplain Soils (F19) (MLRA 149B)
	/ Mucky Mineral (S1)		Redox Dark Surf	. ,				odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4)		Depleted Dark S					nt Material (F21)
	Redox (S5)		Redox Depression	ns (F8)				ow Dark Surface (TF12)
Stripp	ed Matrix (S6)		Marl (F10) (LRR	<b>K</b> , <b>L</b> )			Other (Exp	olain in Remarks)
Dark S	Surface (S7)							
<sup>3</sup> Indicators	of hydrophytic veget	ation and v	vetland hydrology mus	et he nre	cont unla	see dietur	hed or problematic	
	e Layer (if observed)		veliand hydrology mus	st be pre	Serit, urile	รรร นารเนา	bed of problematic.	
Type:								
Depth (in							Hydric Soil Pres	ent? Yes <u>X</u> No
Remarks:							•	
Dense clay	y below 6 inches							

Project/Site: Route 33	City/County: Has	stings/ 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, Townshi	ip, Range:	
Landform (hillside, terrace, etc.): Flat	Local relief (concav	ve, convex, none): None	Slope (%): 0-1
	<u>4</u> 3.306189	Long: -76.219544	Datum: WSG84
Soil Map Unit Name: Madalin Silt Loam			fication: None
•	r this time of year? Van		-
Are climatic / hydrologic conditions on the site typical for		X No (If no, explain	
Are Vegetation Y , Soil Y , or Hydrology 1		re "Normal Circumstances" pr	<del></del>
Are Vegetation Y, Soil Y, or Hydrology I		If needed, explain any answer	
SUMMARY OF FINDINGS – Attach site map	snowing sampling point		mportant features, etc.
Hydrophytic Vegetation Present? Yes	No X Is the Samp	led Area	
Hydric Soil Present? Yes X	No within a We		NoX
Wetland Hydrology Present? Yes	No X If yes, option	nal Wetland Site ID:	
soil. Recently harvested with large combines/ tractors le 8-0 feet deep.	eaving deep ruts and compacted	l soils around sample point. a	djacent to a ditch that ranges from
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface So	oil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage F	Patterns (B10)
<del></del>	Aquatic Fauna (B13)		Lines (B16)
<u> </u>	Marl Deposits (B15)	<del></del> ·	n Water Table (C2)
<del></del>	Hydrogen Sulfide Odor (C1)		urrows (C8)
<u> </u>	Oxidized Rhizospheres on Living	` ' —	Visible on Aerial Imagery (C9)
<u> </u>	Presence of Reduced Iron (C4)		Stressed Plants (D1)
<u> </u>	Recent Iron Reduction in Tilled S Thin Muck Surface (C7)	· / ·	ic Position (D2) quitard (D3)
<u> </u>	Other (Explain in Remarks)		graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)		ral Test (D5)
Field Observations:			( - 1)
Surface Water Present? Yes No _ X	Depth (inches):		
Water Table Present? Yes No X	Depth (inches):		
Saturation Present? Yes No _X	Depth (inches):	Wetland Hydrology Presen	t? Yes No X
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring we	ગ્રી, aerial photos, previous inspec	ctions), if available:	
Remarks:			
No hydrology indicators such as: soil cracking, oxidized			
morning. Water pooling in tractor ruts does not reflect h	nydrology observations at sample	e point. No saturation or water	r in the test pit.

	ınts.			Sampling Point:	SP-5-L	<u> </u>
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC:	0	(A)
3				Total Number of Dominant		
4				Species Across All Strata:	1	(B)
5				Percent of Dominant Species		
6				That Are OBL, FACW, or FAC:	0.0%	(A/B)
7				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: Mi	ultiply by:	
Sapling/Shrub Stratum (Plot size: )				OBL species 0 x 1 =	0	
1					0	
2.					0	,
3.				FACU species 0 x 4 =		
4.				UPL species 100 x 5 =	500	
5.				Column Totals: 100 (A)	500	— (B)
6		·		Prevalence Index = B/A =		(
7				Hydrophytic Vegetation Indicators:	0.00	
··		=Total Cover		1 - Rapid Test for Hydrophytic Ve	actation	
Horb Stratum (Diet size:		- Total Cover		2 - Dominance Test is >50%	getation	
Herb Stratum (Plot size:)	400	V.	LIDI			
1. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2. 3.				4 - Morphological Adaptations <sup>1</sup> (P	rovide sup ate sheet)	porting
4				Problematic Hydrophytic Vegetati	on¹ (Explai	in)
5.				1 Indicators of hydric coil and watland	audrologu n	nuot
6.				<sup>1</sup> Indicators of hydric soil and wetland l be present, unless disturbed or proble		nust
7.	·			Definitions of Vegetation Strata:		
8.						
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of		ameter
10.						
11.	'			Sapling/shrub – Woody plants less the and greater than or equal to 3.28 ft (1		ВН
12.					,	
	100	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) p of size, and woody plants less than 3.		rdless
	100	- Total Gover		or size, and woody plants less than 5.	zo it tall.	
Woody Vine Stratum (Plot size:				Woody vines - All woody vines great		
Woody Vine Stratum (Plot size:)					er than 3.2	8 ft in
1.				height.	er than 3.2	8 ft in
1. 2.				height.	er than 3.2	8 ft in
1				height.  Hydrophytic Vegetation		8 ft in
1		=Total Cover		height.  Hydrophytic Vegetation	er than 3.2 • X	8 ft in

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**SOIL** Sampling Point: SP-5-U

Profile De Depth	scription: (Describe Matrix	to the de		ment the x Feature		or or con	firm the absence of i	indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	
<sup>1</sup> Type: C=	Concentration, D=De	pletion, R	M=Reduced Matrix, C	S=Cover	ed or Coa	ted Sand	d Grains. <sup>2</sup> Locat	tion: PL=Pore Lining, M=Matrix.
	il Indicators:							Problematic Hydric Soils <sup>3</sup> :
	ol (A1)		Polyvalue Below	/ Surface	e (S8) ( <b>LR</b>	RR,		(A10) ( <b>LRR K, L, MLRA 149B</b> )
	Epipedon (A2)		MLRA 149B)	(00) (		U DA 440		rie Redox (A16) (LRR K, L, R)
	Histic (A3) gen Sulfide (A4)		Thin Dark Surface High Chroma Sa					y Peat or Peat (S3) ( <b>LRR K, L, R</b> ) Below Surface (S8) ( <b>LRR K, L</b> )
	ied Layers (A5)		Loamy Mucky M					Surface (S9) ( <b>LRR K, L</b> )
	ted Below Dark Surfa	ce (A11)	Loamy Gleyed N			-, -,		anese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	,	X Depleted Matrix		,			Floodplain Soils (F19) (MLRA 149B)
Sandy	Mucky Mineral (S1)		Redox Dark Sur	face (F6)	)		Mesic Spoo	dic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy	Gleyed Matrix (S4)		Depleted Dark S	Surface (l	F7)		Red Parent	t Material (F21)
	Redox (S5)		Redox Depression					ow Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	( <b>K</b> , <b>L</b> )			Other (Expl	lain in Remarks)
Dark S	Surface (S7)							
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and	wetland hydrology mu	st he pre	esent unle	ess distur	bed or problematic	
	e Layer (if observed)		Woulding Hydrology Illa	ot bo pro	oone, and	oo alotal	problemate.	
Type:								
Depth (in	nches):						Hydric Soil Prese	ent? Yes X No
Remarks:	·							<del></del>

Project/Site: Route 33	City/County: Hasti	ngs/ 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	·	e, convex, none): None	Slope (%): 0-1
	<u> </u>	Long: 43.306146	Datum: WSG84
,	±0.000140		
Soil Map Unit Name: Rhinebeck Silt Loam			fication: None
Are climatic / hydrologic conditions on the site typical for	•	X No (If no, explain	
Are Vegetation Y, Soil Y, or Hydrology I		e "Normal Circumstances" pr	
Are VegetationY _ , SoilY _ , or HydrologyI		needed, explain any answers	•
SUMMARY OF FINDINGS – Attach site map	showing sampling point	locations, transects, in	mportant features, etc.
Hydrophytic Vegetation Present? Yes	No X Is the Sample	ed Area	
Hydric Soil Present? Yes X	No within a Wetla		No X
Wetland Hydrology Present? Yes		I Wetland Site ID:	
soil. Recently harvested with large combines/ tractors le ruts surround point. Adjacent ditch is 6 inches deep but		solls. Sample point was picke	ed on area with no tractor ruts but
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface Sc	oil Cracks (B6)
<u> </u>	Water-Stained Leaves (B9)		Patterns (B10)
<del></del>	Aquatic Fauna (B13)		Lines (B16)
<u> </u>	Marl Deposits (B15)	<del></del>	n Water Table (C2)
<u> </u>	Hydrogen Sulfide Odor (C1)	<del></del> ·	urrows (C8)
	Oxidized Rhizospheres on Living F		Visible on Aerial Imagery (C9)
	Presence of Reduced Iron (C4)		Stressed Plants (D1)
<u> </u>	Recent Iron Reduction in Tilled So Thin Muck Surface (C7)	` '	ic Position (D2) quitard (D3)
<del></del>	Other (Explain in Remarks)		graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	outer (Explain in Heliante)		al 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):	Wetland Hydrology Present	t? Yes No _X
(includes capillary fringe)	<u> </u>		
Describe Recorded Data (stream gauge, monitoring we	आ, aerial photos, previous inspecti	ons), if available:	
Remarks:			
No hydrology indicators such as: soil cracking, oxidized morning. Water pooling in tractor ruts does not reflect h			
morning. Water pooling in tractor ruts does not reflect t	lydrology observations at sample	politi. No saturation of water	iii tile test pit.

	ınts.			Sampling Point:	SP-6-L	<u> </u>
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC:	0	(A)
3				Total Number of Dominant		
4		. <u></u>		Species Across All Strata:	1	(B)
5				Percent of Dominant Species		
6				That Are OBL, FACW, or FAC:	0.0%	(A/B)
7				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: Me	ultiply by:	
Sapling/Shrub Stratum (Plot size: )				OBL species 0 x 1 =	0	
1				<u> </u>	0	
2.					0	
3.				FACU species 0 x 4 =		
4.				UPL species 100 x 5 =	500	
5.				Column Totals: 100 (A)	500	— (B)
		· · ·		Prevalence Index = B/A =		(
7				Hydrophytic Vegetation Indicators:		_
··		=Total Cover		1 - Rapid Test for Hydrophytic Ve		
Horb Stratum (Diet size:		- rotal Cover		2 - Dominance Test is >50%	getation	
Herb Stratum (Plot size:)	400	V.	LIDI			
1. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2. 3.				4 - Morphological Adaptations <sup>1</sup> (F	rovide sup ate sheet)	porting
4				Problematic Hydrophytic Vegetat	ion <sup>1</sup> (Explai	in)
5.				1 Indicators of hydric coil and watland	hydrology r	munt
6.				<sup>1</sup> Indicators of hydric soil and wetland be present, unless disturbed or proble		nust
7.				Definitions of Vegetation Strata:		
8.	-					
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of		ameter
10.						
11.				Sapling/shrub – Woody plants less the and greater than or equal to 3.28 ft (1		ВН
12.	-				,	
	100	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) p of size, and woody plants less than 3.		rdless
	100	- Total Gover		or size, and woody plants less than 5.	ZO IT tall.	
Woody Vine Stratum (Plot size:						
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines great	er than 3.2	8 ft in
1.		<u> </u>		Woody vines – All woody vines great height.	er than 3.2	8 ft in
1. 2.				height.	er than 3.2	8 ft in
1				height.  Hydrophytic Vegetation		8 ft in
1		=Total Cover		height.  Hydrophytic Vegetation	er than 3.2	8 ft in

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**SOIL** Sampling Point: SP-6-U

Profile Des		to the de	pth needed to docur	<b>nent the</b> Feature		r or con	firm the absence of	of indicators.)
(inches)	Matrix Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	10yr 3/1	100	Color (molocy		1,750		Loamy/Clayey	Tomane
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	
10-13	7.5yi 5/2		7.5yr 5/6	+0			Loamy/Claycy	
<sup>1</sup> Type: C=0	Concentration, D=Deյ	oletion, RI	M=Reduced Matrix, CS	S=Cover	ed or Coa	ted Sand	d Grains. <sup>2</sup> Loc	cation: PL=Pore Lining, M=Matrix.
Hydric Soi	I Indicators:							or Problematic Hydric Soils <sup>3</sup> :
	ol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b>	RR,		ck (A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)	- (CO) (I	DD D M	L DA 440		airie Redox (A16) (LRR K, L, R)
	Histic (A3) gen Sulfide (A4)		Thin Dark Surface High Chroma Sa					cky Peat or Peat (S3) ( <b>LRR K, L, R</b> ) e Below Surface (S8) ( <b>LRR K, L</b> )
	ed Layers (A5)		Loamy Mucky Mi					k Surface (S9) ( <b>LRR K</b> , <b>L</b> )
	ed Below Dark Surfa	ce (A11)	Loamy Gleyed M			-, -,		nganese Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)	` ,	X Depleted Matrix	•	•			t Floodplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy	Mucky Mineral (S1)		Redox Dark Surf	ace (F6)			Mesic Sp	podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy	Gleyed Matrix (S4)		Depleted Dark S	urface (F	<del>-</del> 7)		Red Pare	ent Material (F21)
	Redox (S5)		Redox Depression					allow Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	K, L)			Other (Ex	xplain in Remarks)
Dark S	Surface (S7)							
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and v	vetland hydrology mus	st he pre	sent unle	ess distur	bed or problematic	
	Layer (if observed)		remains injuriology illus	p. 0		oo alota.		
Туре:								
Depth (ir	nches):						Hydric Soil Pre	esent? Yes X No
Remarks:							1	
								CS Field Indicators of Hydric Soils
version 7.0	March 2013 Errata.	(nttp://ww\	w.nrcs.usda.gov/Intern	et/FSE_	DOCUME	EN I S/nrc	:s142p2_051293.do	ocx)

Project/Site: Route 33	City/County: Hasting	s/ 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, R		
Landform (hillside, terrace, etc.): Flat	Local relief (concave, c	onvex, none): None	Slope (%): 0-1
	·	ong: 43.306134	Datum: WSG84
Soil Map Unit Name: Rhinebeck Silt Loam		-	fication: None
Are climatic / hydrologic conditions on the site typical for	this time of year? Vos. V	No (If no, explain	
Are Vegetation Y , Soil Y , or Hydrology N	•	Normal Circumstances" pr	
		•	
Are VegetationY, SoilY, or HydrologyN SUMMARY OF FINDINGS – Attach site map		eded, explain any answers cations, transects, ir	•
Hydrophytic Vegetation Present? Yes	No X Is the Sampled	Area	
Hydric Soil Present? Yes X	No within a Wetlan		No
Wetland Hydrology Present? Yes X	No If yes, optional W		
soil. Recently harvested with large combines/ tractors le	aving deep ruts and compacted son	is around sample point.	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)
Primary Indicators (minimum of one is required; check a			oil Cracks (B6)
<u> </u>	Vater-Stained Leaves (B9)		Patterns (B10)
<u> </u>	Aquatic Fauna (B13) Marl Deposits (B15)		Lines (B16) n Water Table (C2)
<u> </u>	lydrogen Sulfide Odor (C1)		urrows (C8)
	Oxidized Rhizospheres on Living Roo		Visible on Aerial Imagery (C9)
	Presence of Reduced Iron (C4)		Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils	(C6) Geomorphi	ic Position (D2)
Iron Deposits (B5)	hin Muck Surface (C7)	Shallow Ac	juitard (D3)
	Other (Explain in Remarks)	Microtopog	raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutra	al Test (D5)
Field Observations:	D = (1-/2-1-)		
Surface Water Present?         Yes X         No	Depth (inches): 1 Depth (inches): 0		
Saturation Present? Yes X No		etland Hydrology Present	? Yes X No
(includes capillary fringe)			<u></u> <u></u>
Describe Recorded Data (stream gauge, monitoring we	ll, aerial photos, previous inspection	s), if available:	
Remarks:			
No hydrology indicators such as: soil cracking, oxidized	<del>-</del>	o drainage pattern. Steady	rainfall throughout the night and
morning. Standing surface water in areas where there v	as no disturbance from tractor.		

	olants.	Dominant	Indicator	Sampling Point:	
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
I				North and Branch Country	
2.				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
					( /
				Total Number of Dominant	4 (D)
·				Species Across All Strata:	1 (B)
i	_			Percent of Dominant Species	
S				That Are OBL, FACW, or FAC: 0	.0% (A/B)
, 				Prevalence Index worksheet:	
		=Total Cover		Total % Cover of: Mult	tiply by:
apling/Shrub Stratum (Plot size:	)			OBL species 0 x 1 =	0
	<del>_</del>			FACW species 0 x 2 =	
				FAC species 0 x 3 =	
	_				
·	_			FACU species 0 x 4 =	0
·	_			UPL species 100 x 5 =	500
i				Column Totals: 100 (A)	500 (B)
S				Prevalence Index = B/A =	5.00
				Hydrophytic Vegetation Indicators:	
		=Total Cover		1 - Rapid Test for Hydrophytic Vege	etation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%	
	400		LIDI	<del></del>	
. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2				4 - Morphological Adaptations <sup>1</sup> (Production of the data in Remarks or on a separate	
4.				Problematic Hydrophytic Vegetation	n <sup>1</sup> (Explain)
5. 5.				<sup>1</sup> Indicators of hydric soil and wetland hy be present, unless disturbed or problem	
				Definitions of Vegetation Strata:	iduo.
3.					
				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or m at breast height (DBH), regardless of he	
10.	_			Sapling/shrub – Woody plants less tha	ın 3 in DRH
1	_			and greater than or equal to 3.28 ft (1 m	
2.				Hards All Is a de a constitue de la constitue	
	100	=Total Cover		Herb – All herbaceous (non-woody) pla of size, and woody plants less than 3.28	
Noody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater	than 3 28 ft in
I	_			height.	
2.		<u> </u>			
-				Hydrophytic	
3. <u> </u>	_			Vegetation	V
•		=Total Cover		Present? Yes No	<u>X</u>
4					

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SOIL Sampling Point: SP-6-W

Profile De	scription: (Describe	to the de	pth needed to docui	ment the	indicato	r or con	firm the absence of ind	icators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	_
								_
<sup>1</sup> Type: C=	Concentration, D=Dep	letion, RI	//=Reduced Matrix, CՏ	S=Cover	ed or Coa	ted Sand		: PL=Pore Lining, M=Matrix.
•	il Indicators:							blematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Below	Surface	e (S8) ( <b>LR</b>	R R,		10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)	(0.0)				Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surface					eat or Peat (S3) ( <b>LRR K, L, R</b> )
	gen Sulfide (A4)		High Chroma Sa					ow Surface (S8) ( <b>LRR K, L</b> )
Stratif	ied Layers (A5)		Loamy Mucky M	ineral (F	1) (LRR K	K, L)	Thin Dark Surf	face (S9) ( <b>LRR K, L</b> )
Deplet	ted Below Dark Surfac	e (A11)	X Loamy Gleyed M	1atrix (F2	2)		Iron-Manganes	se Masses (F12) ( <b>LRR K, L, R</b> )
Thick	Dark Surface (A12)		Depleted Matrix	(F3)			Piedmont Floo	odplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy	/ Mucky Mineral (S1)		Redox Dark Surf	ace (F6)	)		Mesic Spodic (	(TA6) (MLRA 144A, 145, 149B)
Sandy	Gleyed Matrix (S4)		Depleted Dark S	urface (I	F7)		Red Parent Ma	aterial (F21)
	Redox (S5)		Redox Depression		ŕ		Very Shallow [	Dark Surface (TF12)
	ed Matrix (S6)		 Marl (F10) ( <b>LRR</b>	, ,			Other (Explain	
	Surface (S7)			, ,				,
	of hydrophytic vegeta e Layer (if observed)		vetland hydrology mu	st be pre	sent, unle	ss distur	bed or problematic.	
Type:	e Layer (ii observed)	•						
Depth (ir	nches):						Hydric Soil Present	? Yes X No
Remarks:	·		·				· L	
								eld Indicators of Hydric Soils
version 7.0	) March 2013 Errata. (	nttp://ww\	v.nrcs.usda.gov/interr	iet/FSE_	DOCOME	EN I S/nrc	s142p2_051293.docx)	

Project/Site: Route 33	City/County: Ha	astings/ 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, Townsh	hip, Range:						
Landform (hillside, terrace, etc.):	Local relief (conca	ave, convex, none): None	Slope (%): 1					
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 4	<u></u>	Long: 43.306331	Datum: WSG84					
Soil Map Unit Name: Madaline Silt Loam			ification: None					
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes	X No (If no, explain	n in Remarks.)					
Are Vegetation Y, Soil Y, or Hydrology N	significantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No					
Are Vegetation Y , Soil Y , or Hydrology N		(If needed, explain any answer	rs in Remarks.)					
SUMMARY OF FINDINGS – Attach site map		nt locations, transects, i	mportant features, etc.					
Hydrophytic Vegetation Present? Yes	No X Is the Sam	pled Area						
Hydric Soil Present? Yes X	No within a We	etland? Yes	NoX					
Wetland Hydrology Present? Yes X	No If yes, optio	onal Wetland Site ID:						
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:		<u></u>	icators (minimum of two required)					
Primary Indicators (minimum of one is required; check a			oil Cracks (B6)					
	Vater-Stained Leaves (B9) Aquatic Fauna (B13)		Patterns (B10)					
<del></del>	Marl Deposits (B15)							
<u>—</u>	Hydrogen Sulfide Odor (C1)		Burrows (C8)					
	Oxidized Rhizospheres on Living		Visible on Aerial Imagery (C9)					
<del></del>	Presence of Reduced Iron (C4)	· · · —	r Stressed Plants (D1)					
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled		nic Position (D2)					
	Thin Muck Surface (C7)	Shallow A	quitard (D3)					
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopo	graphic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)		FAC-Neutr	ral Test (D5)					
Field Observations:								
Surface Water Present? Yes No X	Depth (inches):							
	Depth (inches): 10	Matley of the duals on a Duals on	Was V Na					
Saturation Present? Yes X No (includes capillary fringe)	Depth (inches): 10	Wetland Hydrology Presen	nt? Yes X No					
Describe Recorded Data (stream gauge, monitoring we	II. aerial photos, previous inspe	ections), if available:						
(	.,							
Remarks:  No hydrology indicators such as: soil cracking, oxidized morning. Wate in hole 10 inches below surface.	root channels, no algal mats a	nd no drainage pattern. Stead	y rainfall throughout the night and					

<u>Tree Stratum</u> (Plot size:	nts.			Sampling Point:	SP-7-l	J
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC:	0	(A)
3.				Total Number of Dominant		
4				Species Across All Strata:	1	(B)
5.				Description of Description		_
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)
7.				Prevalence Index worksheet:		_ `
		=Total Cover		Total % Cover of: M	ultiply by:	
Sapling/Shrub Stratum (Plot size: )				OBL species 0 x 1 =		
					0	
					0	
2						
3.				· —		
4.				UPL species 100 x 5 =		
5				Column Totals: 100 (A)	500	(B)
6.				Prevalence Index = B/A =	5.00	
7.				Hydrophytic Vegetation Indicators:		
		=Total Cover		1 - Rapid Test for Hydrophytic Ve	egetation	
Herb Stratum (Plot size:)				2 - Dominance Test is >50%		
1. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2.				4 - Morphological Adaptations <sup>1</sup> (F	Provide sup	porting
3				data in Remarks or on a separ	ate sheet)	
4.				Problematic Hydrophytic Vegetal	tion¹ (Expla	in)
5.				1		
6.				<sup>1</sup> Indicators of hydric soil and wetland be present, unless disturbed or proble		nust
7.				Definitions of Vegetation Strata:		
8.						
9				Tree – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of		ameter
10.				at breast neight (BBH), regardless of	noight.	
				Sapling/shrub – Woody plants less t and greater than or equal to 3.28 ft (1		BH
11.				and greater than or equal to 3.26 ft (	i iii) taii.	
12				Herb – All herbaceous (non-woody) p		rdless
	100	=Total Cover		of size, and woody plants less than 3		
				l c. c.zc, aacca, p.ac	.28 ft tall.	
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines grea		8 ft in
Woody Vine Stratum (Plot size:)  1						8 ft in
				Woody vines – All woody vines greatheight.		8 ft in
1.			<u> </u>	Woody vines – All woody vines greatheight.  Hydrophytic Vegetation	ter than 3.2	8 ft in
1		<u>=</u>		Woody vines – All woody vines greatheight.  Hydrophytic Vegetation		8 ft in

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**SOIL** Sampling Point: SP-7-U

Profile De	escription: (Describe	to the de	pth needed to docur	nent the	indicato	r or conf	firm the absence of in	dicators.)	
Depth	Matrix		Redox	Feature	es				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	_
					' <u></u>				
					' <u></u>				
					-				
<sup>1</sup> Type: C=	Concentration, D=Dep	letion, RM	I=Reduced Matrix, CS	S=Cover	ed or Coa	ted Sand		on: PL=Pore Lining, M=Ma	trix.
•	oil Indicators:							roblematic Hydric Soils <sup>3</sup> :	
	sol (A1)	-	Polyvalue Below	Surface	e (S8) ( <b>LR</b>	R R,		A10) (LRR K, L, MLRA 149	-
	Epipedon (A2) Histic (A3)		MLRA 149B) Thin Dark Surfac	o (SO) (	IDDD M	I DA 140		e Redox (A16) ( <b>LRR K, L, F</b> Peat or Peat (S3) ( <b>LRR K,</b>	
	ogen Sulfide (A4)	-	High Chroma Sa					elow Surface (S8) (LRR K,	. ,
	fied Layers (A5)	-	Loamy Mucky Mi					urface (S9) (LRR K, L)	_,
	eted Below Dark Surfac	e (A11)	Loamy Gleyed M			, ,		ese Masses (F12) (LRR K	, L, R)
Thick	Dark Surface (A12)	_	X Depleted Matrix	(F3)			Piedmont Flo	oodplain Soils (F19) ( <b>MLR</b>	A 149B)
Sand	y Mucky Mineral (S1)		Redox Dark Surf	ace (F6)	)		Mesic Spodi	c (TA6) (MLRA 144A, 145,	149B)
	y Gleyed Matrix (S4)	-	Depleted Dark S		F7)			Material (F21)	
	y Redox (S5)	-	Redox Depression	. ,				Dark Surface (TF12)	
	ped Matrix (S6)	-	Marl (F10) ( <b>LRR</b>	K, L)			Other (Expla	in in Remarks)	
Dark	Surface (S7)								
<sup>3</sup> Indicators	s of hydrophytic vegeta	tion and w	vetland hydrology mus	st be pre	sent. unle	ss disturl	bed or problematic.		
	e Layer (if observed):		, 3,		,		,		
Туре: _									
Depth (i	nches):						Hydric Soil Preser	nt? Yes X No	· <u> </u>
Remarks:									
Clay beco	mes more dense belov	6 inches							

Project/Site: Route 33	City/County: Has	stings/ Oswego	Sampling Date: <u>11/06/2024</u>			
Applicant/Owner: The Wetland Trust		State:	NY Sampling Point: SP-8-U			
Investigator(s): E. Frantz, K. Hastings	Section, Townsh	ip, Range:				
Landform (hillside, terrace, etc.):	Local relief (conca	ve, convex, none): None	Slope (%): 0-1			
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.30	0662	Long: -76.218688	Datum: WSG84			
Soil Map Unit Name: Madaline Silt Loam			fication: None			
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes _	X No (If no, explain	ı in Remarks.)			
Are Vegetation Y , Soil Y , or Hydrology N		Are "Normal Circumstances" pr				
Are Vegetation Y , Soil Y , or Hydrology N I		If needed, explain any answers				
SUMMARY OF FINDINGS – Attach site map sh						
Hydrophytic Vegetation Present? Yes No	lo X Is the Samp	oled Area				
	lo within a We		No X			
Wetland Hydrology Present? Yes No	lo X If yes, option	nal Wetland Site ID:				
soil. Recently harvested with large combines/ tractors leavir wetland to the North. We included a small drainage feature sample point, reguardless of call this point an upland sample	e as wetland connecting the					
HYDROLOGY						
Wetland Hydrology Indicators:		<u></u>	cators (minimum of two required)			
Primary Indicators (minimum of one is required; check all the			oil Cracks (B6)			
	er-Stained Leaves (B9) atic Fauna (B13)	X Drainage P				
	l Deposits (B15)					
<del></del>	rogen Sulfide Odor (C1)	<del></del>	urrows (C8)			
<u> </u>	lized Rhizospheres on Living	<del></del> '	Visible on Aerial Imagery (C9)			
	sence of Reduced Iron (C4)	, , <u>—</u>	Stressed Plants (D1)			
	ent Iron Reduction in Tilled S		ic Position (D2)			
Iron Deposits (B5)Thin	Muck Surface (C7)	Shallow Ac	quitard (D3)			
Inundation Visible on Aerial Imagery (B7)	er (Explain in Remarks)	Microtopog	graphic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)		FAC-Neutra	al Test (D5)			
Field Observations:						
	epth (inches):					
	epth (inches):		V			
	epth (inches):	Wetland Hydrology Present	t? Yes No_X_			
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, a	erial photos, previous inspe					
Describe Necorded Data (stream gauge, morntoling wen, as	chai photos, previous inspec	stions), if available.				
Remarks:  No hydrology indicators such as: soil cracking, oxidized roomorning. Water pooling in tractor ruts does not reflect hydreatureand we suspect that there is tiled drinage in this area	rology observations at samp					

<b>VEGETATION</b> – Use scientific names of plan	nts.			Sampling Point:	SP-8-U	
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC:	<u> </u>	A)
3	1			Total Number of Dominant		
4				Species Across All Strata:	1 (E	B)
5.				Percent of Dominant Species		
6.				That Are OBL, FACW, or FAC:	0.0% (A	A/B)
7.				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of: M	lultiply by:	
Sapling/Shrub Stratum (Plot size: )		•		OBL species 0 x 1 =	0	-
1					0	-
2.	-				0	-
2				FACU species 0 x 4 =		-
				UPL species 100 x 5 =		-
				Column Totals: 100 (A)		<b>-</b> (B)
				Prevalence Index = B/A =		_(D)
6.		·		<u> </u>		
7		· ·		Hydrophytic Vegetation Indicators:		
		=Total Cover		1 - Rapid Test for Hydrophytic Ve	egetation	
Herb Stratum (Plot size:)				2 - Dominance Test is >50%		
1. Glycine max	100	Yes	<u>UPL</u>	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2. 3.				4 - Morphological Adaptations <sup>1</sup> (F	Provide suppo ate sheet)	orting
4.				Problematic Hydrophytic Vegeta	tion¹ (Explain)	)
5				<sup>1</sup> Indicators of hydric soil and wetland	hydrology mu	ust
6	-			be present, unless disturbed or proble	ematic.	
7	-			Definitions of Vegetation Strata:		
8	-			Tree – Woody plants 3 in. (7.6 cm) or		netei
9				at breast height (DBH), regardless of	height.	
10				Sapling/shrub – Woody plants less t	han 3 in. DB⊦	4
11				and greater than or equal to 3.28 ft (1	m) tall.	
12				Herb – All herbaceous (non-woody) p	olants, regardl	less
	100	=Total Cover		of size, and woody plants less than 3		
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines grea	ter than 3 28 f	ft in
1				height.		
2.						
3				Hydrophytic Vegetation		
4.					No X	
		=Total Cover				
Remarks: (Include photo numbers here or on a sepal Soy was thriving and tall. Lots of soy litter on the grounds	,	erstory vegetati	on			

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SOIL Sampling Point: SP-8-U

		to the de				r or con	firm the absence of indic	cators.)
Depth	Matrix			(Feature		. 2		
(inches)	Color (moist)	<u></u> %	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	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
<sup>1</sup> Type: C=	Concentration, D=Dep	letion RI	——————————————————————————————————————	S=Covere	ed or Coa	ted Sand	d Grains <sup>2</sup> Location	PL=Pore Lining, M=Matrix.
	oil Indicators:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	vi rtoddodd Matrix, Ot	3 001011	54 01 000	ttou ouric		lematic Hydric Soils <sup>3</sup> :
_	sol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b>	RR.		0) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)		` , `	•		edox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfac	e (S9) ( <b>I</b>	RR R, M	LRA 149		at or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)		High Chroma Sa					v Surface (S8) (LRR K, L)
	fied Layers (A5)		Loamy Mucky M					ice (S9) ( <b>LRR K, L</b> )
	eted Below Dark Surface	ce (A11)	Loamy Gleyed M			-, -,		e Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)	, (, t )	X Depleted Matrix		,			Iplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mucky Mineral (S1)		Redox Dark Surf					TA6) (MLRA 144A, 145, 149B)
	y Gleyed Matrix (S4)						Red Parent Ma	
	• • • • • •		Depleted Dark S		-7)			` '
	y Redox (S5)		Redox Depression					ark Surface (TF12)
	ped Matrix (S6)		Marl (F10) ( <b>LRR</b>	K, L)			Other (Explain i	n Remarks)
Dark	Surface (S7)							
<sup>3</sup> Indicators	s of hydrophytic vegeta	tion and	wetland hydrology mu	st be pre	sent, unle	ess distur	bed or problematic.	
Restrictiv	e Layer (if observed)	:						
Type:								
Depth (i	nches):						Hydric Soil Present?	Yes X No
Remarks: No water i								
Water	iii iiolo							

Project/Site: Route 33	City/County: Hastings/ Os	wego	Sampling Date: <u>11/06/2024</u>			
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, conve	, none): None	Slope (%): 3			
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3	06386 Long:	-76.218281	Datum: WSG84			
Soil Map Unit Name: Ira gravelly fone sandy loam			fication: None			
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes X No	(If no, explain	in Remarks.)			
Are Vegetation Y , Soil Y , or Hydrology N		—— ∖ al Circumstances" pr				
Are Vegetation Y , Soil Y , or Hydrology N		explain any answers				
SUMMARY OF FINDINGS – Attach site map sh			,			
Hydrophytic Vegetation Present? Yes N	o X Is the Sampled Area					
	within a Wetland?	Yes	No X			
Wetland Hydrology Present? Yes N	o X If yes, optional Wetlar	d Site ID:				
Agriculture field planted with Soybeans. Field has been hat soil. Recently harvested with large combines/ tractors leavi towards farm ditch		,	0			
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)			
Primary Indicators (minimum of one is required; check all the			il Cracks (B6)			
	er-Stained Leaves (B9)		Patterns (B10)			
	atic Fauna (B13)					
<del></del>	Deposits (B15)		n Water Table (C2)			
	rogen Sulfide Odor (C1)		urrows (C8)			
<del></del>	lized Rhizospheres on Living Roots (C	-	Visible on Aerial Imagery (C9)			
	sence of Reduced Iron (C4)		Stressed Plants (D1)			
	ent Iron Reduction in Tilled Soils (C6)  Muck Surface (C7)		juitard (D3)			
	er (Explain in Remarks)		raphic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	(Explain in Romaine)		al Test (D5)			
Field Observations:						
Surface Water Present? Yes No _X De	epth (inches):					
Water Table Present? Yes No X De	epth (inches):					
Saturation Present? Yes No X De	epth (inches): Wetland	<b>Hydrology Present</b>	? Yes No X			
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, a	erial photos, previous inspections), if	available:				
Remarks:						
No hydrology indicators such as: soil cracking, oxidized roc morning. Limited tractor rutting	t channels, no algal mats and no drai	nage pattern. Steady	rainfall throughout the night and			
monning. Elimited addition realing						

<b>VEGETATION</b> – Use scientific names of plan	nts.			Sampling Point:	SP-9-L	J
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC:	0	(A)
3.				Total Number of Dominant		
4				Species Across All Strata:	1	(B)
5.				Percent of Dominant Species		
6.				That Are OBL, FACW, or FAC:	0.0%	(A/B)
7.				Prevalence Index worksheet:		-
		=Total Cover		Total % Cover of: M	lultiply by:	
Sapling/Shrub Stratum (Plot size: )		•		OBL species 0 x 1 =	0	
1					0	
2.					0	_
2				FACU species 0 x 4 =		_
				UPL species 100 x 5 =		
				Column Totals: 100 (A)	500	— (B)
				Prevalence Index = B/A =		— <sup>(B)</sup>
6.				<u> </u>		
7		· ·		Hydrophytic Vegetation Indicators:		
Not of the Control (DIA)		=Total Cover		1 - Rapid Test for Hydrophytic Ve	getation	
Herb Stratum (Plot size:)				2 - Dominance Test is >50%		
1. Glycine max	100	Yes	<u>UPL</u>	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2. 3.				4 - Morphological Adaptations <sup>1</sup> (F	rovide sup ate sheet)	porting
4.				Problematic Hydrophytic Vegetat	tion¹ (Explai	in)
5.				<sup>1</sup> Indicators of hydric soil and wetland	hydrology r	munt
6.				be present, unless disturbed or proble		nust
7.				Definitions of Vegetation Strata:		
8.				_ ,,, , , , , , , , , , , , , , , , , ,		
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of		ametei
10.						
11.				Sapling/shrub – Woody plants less t and greater than or equal to 3.28 ft (1		BH
12				Herb – All herbaceous (non-woody) p	nlants rega	rdless
	100	=Total Cover		of size, and woody plants less than 3.		ruicss
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines great	tor than 2.2	Q ft in
1.				height.	ei illali 3.2	O IL III
2.						
3.				Hydrophytic		
4.				Vegetation Present? Yes	No X	
		=Total Cover				
Remarks: (Include photo numbers here or on a sepa				<u>I</u>		
Soy was thriving and tall. Lots of soy litter on the grou	,	erstory vegetati	on			

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SOIL Sampling Point: SP-9-U

		to the de				r or con	firm the absence of inc	dicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature %	es Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
<del></del>			Color (moist)		Турс			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							2	
	Concentration, D=Depoil Indicators:	oletion, Ri	M=Reduced Matrix, C	S=Cover	ed or Coa	ited Sand		n: PL=Pore Lining, M=Matrix.  bblematic Hydric Soils <sup>3</sup> :
_	sol (A1)		Polyvalue Below	Surface	e (S8) (L <b>R</b>	R R.		.10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)	Ouridoo	) (00) ( <b>=</b> 10	,		Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfac	ce (S9) (	LRR R, M	LRA 149		Peat or Peat (S3) (LRR K, L, R)
	gen Sulfide (A4)		High Chroma Sa					ow Surface (S8) (LRR K, L)
Stratif	fied Layers (A5)		Loamy Mucky M	ineral (F	1) (LRR <b>F</b>	<b>(</b> , <b>L</b> )	Thin Dark Sui	face (S9) ( <b>LRR K, L</b> )
Deple	ted Below Dark Surfa	ce (A11)	Loamy Gleyed M	1atrix (F2	2)		Iron-Mangane	ese Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)		X Depleted Matrix					odplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mucky Mineral (S1)		Redox Dark Surf					(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)		Depleted Dark S				Red Parent M	
	y Redox (S5) ed Matrix (S6)		Redox Depression  Marl (F10) (LRR					Dark Surface (TF12) n in Remarks)
	Surface (S7)		Wall (F10) ( <b>LKK</b>	. K, L)			Other (Explain	ili Kelilaiks)
Bank \	ouridos (or)							
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and	wetland hydrology mu	st be pre	esent, unle	ess distur	bed or problematic.	
Restrictiv	e Layer (if observed)	:						
Type:								
Depth (i	nches):						Hydric Soil Present	? Yes X No
Remarks:							•	
Rocky soil	s							

Project/Site: Route 33	City/County: Hasti	ings/ 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	e, convex, none): None	Slope (%): 1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 4	43.304674	Long: -76.218621	Datum: WSG84
Soil Map Unit Name: Rhinebeck Silt Loam			fication: None
	r this time of year?		
Are climatic / hydrologic conditions on the site typical for	•	X No (If no, explair	
Are Vegetation Y , Soil Y , or Hydrology I		e "Normal Circumstances" pr	
Are VegetationY_ , SoilY_ , or Hydrology! SUMMARY OF FINDINGS – Attach site map		needed, explain any answer  locations, transects, i	
			<u> </u>
Hydrophytic Vegetation Present? Yes	No X Is the Sample		No. V
Hydric Soil Present? Yes X Wetland Hydrology Present? Yes		and? Yes Il Wetland Site ID:	No_X_
Remarks: (Explain alternative procedures here or in a	separate report.)		
Agriculture field planted with Soybeans. Field has beer soil. Recently harvested with large combines/ tractors le		. ,	
point	saving deep ruis and compacted s	solis around sample point. of	it deep ditor to west of sample
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface So	oil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage F	Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim	Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Seaso	n Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish B	urrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living F	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 So	oils (C6) Geomorph	ic Position (D2)
<del></del>	Thin Muck Surface (C7)		quitard (D3)
	Other (Explain in Remarks)		graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutr	al 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):	Wetland Hydrology Presen	t? Yes No_X
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring we	ell aerial photos, previous inspect	ions) if available:	
Describe Necorded Data (stream gauge, monitoring we	in, acriai priotos, previous irispecti	ons, ii available.	
Remarks:			
Soils are damp but not saturated. Steady rainfall through			
of algal, not mats, sparce around sample point. No oxic sample point.	lized root channels. Water poolin	g in tractor ruts does not refl	ect hydrology observations at
sample point.			

				Sampling Point:	SP-10-	<u> </u>	
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1.	_			Number of Dominant Species			
2				That Are OBL, FACW, or FAC:	0	(A)	
3				Total Number of Dominant			
4	_			Species Across All Strata:	1	(B)	
5.	_			Percent of Dominant Species			
6				That Are OBL, FACW, or FAC:	0.0%	(A/B)	
7				Prevalence Index worksheet:			
		=Total Cover		Total % Cover of: Mu	ultiply by:		
Sapling/Shrub Stratum (Plot size:	)			OBL species 0 x 1 =	0		
1.	_'			FACW species 0 x 2 =	0		
2.					0		
				FACU species 0 x 4 =			
4				UPL species 100 x 5 =			
5	-			Column Totals: 100 (A)		(B)	
6.	_			Prevalence Index = B/A =	5.00		
7				Hydrophytic Vegetation Indicators:			
		=Total Cover		1 - Rapid Test for Hydrophytic Ve	1 - Rapid Test for Hydrophytic Vegetation		
Herb Stratum (Plot size:)				2 - Dominance Test is >50%			
1. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>			
<ol> <li></li></ol>				4 - Morphological Adaptations <sup>1</sup> (P		portin	
4.				Problematic Hydrophytic Vegetati	on¹ (Expla	iin)	
5				<sup>1</sup> Indicators of hydric soil and wetland he be present, unless disturbed or proble		must	
7.				Definitions of Vegetation Strata:			
8.							
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of l		amete	
10 11.	_			Sapling/shrub – Woody plants less the and greater than or equal to 3.28 ft (1		ВН	
	_			and greater than or equal to 0.20 it (1	m, tan.		
12.		=Total Cover		<b>Herb</b> – All herbaceous (non-woody) p of size, and woody plants less than 3.		ırdless	
	١			Woody vines – All woody vines great			
Woody Vine Stratum (Plot size:	,				er than 3.2	28 ft in	
Woody Vine Stratum (Plot size:1.	. <i>'</i> - ———			height.	er than 3.2	28 ft in	
1.	., 			height.	er than 3.2	28 ft in	
1				height.  Hydrophytic	er than 3.2	28 ft in	
1				height.  Hydrophytic Vegetation	er than 3.2	28 ft in	

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SOIL Sampling Point: SP-10-U

Profile De	escription: (Describe	to the de	pth needed to docu	ment th	e indicato	r or con	firm the absence of indi	cators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	7.5yr 4/1		_				Loamy/Clayey	
6-12	7.5yr 3/1	95	5yr 4/4	5			Loamy/Clayey	
			_					
								_
¹Type: C=	Concentration, D=Dep	letion, RN	//=Reduced Matrix, C	S=Cove	red or Coa	ted Sand	I Grains. <sup>2</sup> Location:	: PL=Pore Lining, M=Matrix.
	oil Indicators:							blematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Polyvalue Below	/ Surface	e (S8) ( <b>LR</b>	R R,	2 cm Muck (A1	0) (LRR K, L, MLRA 149B)
Histic	Epipedon (A2)		MLRA 149B)				Coast Prairie R	Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ce (S9) (	LRR R, M	LRA 149	B)5 cm Mucky Pe	eat or Peat (S3) ( <b>LRR K, L, R</b> )
—— Hydro	ogen Sulfide (A4)		High Chroma Sa	ands (S1	1) (LRR K	(, <b>L</b> )	Polyvalue Belo	w Surface (S8) ( <b>LRR K, L</b> )
Stratif	fied Layers (A5)		Loamy Mucky M	lineral (F	1) (LRR <b>k</b>	(, L)	Thin Dark Surfa	ace (S9) ( <b>LRR K, L</b> )
	eted Below Dark Surfac	e (A11)	Loamy Gleyed N			•		se Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	( )	X Depleted Matrix		,			dplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mucky Mineral (S1)		Redox Dark Sur		)			(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)		Depleted Dark S  Redox Depressi				Red Parent Ma	Dark Surface (TF12)
	y Redox (S5)			` '				, ,
	ped Matrix (S6)		Marl (F10) ( <b>LRF</b>	(K, L)			Other (Explain	in Remarks)
Dark	Surface (S7)							
<sup>3</sup> Indicators	s of hydrophytic vegeta	tion and v	vetland hydrology mu	ist be pre	esent, unle	ess distur	bed or problematic.	
	e Layer (if observed):		,				·	
Туре:								
Depth (i	inches):						Hydric Soil Present?	? Yes X No
Remarks:								
								eld Indicators of Hydric Soils
version 7.	0 March 2013 Errata. (I	nttp://www	v.nrcs.usda.gov/Inter	net/FSE_	_DOCUME	-NIS/nrc	s142p2_051293.docx)	

Project/Site: Wisner		City/	/County: Hastings/	Oswego	Sampling Date: 05/23/2024	4		
Applicant/Owner: The Wetla	nd Trust, Inc.			State:	NY Sampling Point: SP1	1-U		
Investigator(s): E. Frantz, H. I	Frantz, K. Gerhardt, M. Her	man, G. Deyo Sect	tion, Township, Rar	nge:				
Landform (hillside, terrace, etc	c.): Edge of woods	Local r	relief (concave, cor	nvex, none): None	Slope (%): 4-	.5		
Subregion (LRR or MLRA): L	RR L, MLRA 101 Lat:	43.3095349717	Lor	ng: -76.2230525117	Datum: WGS 84			
Soil Map Unit Name: ScB: Sci			_		fication: None	_		
•		•	Yes X		-			
Are climatic / hydrologic condi	• •	•		<del></del> -	in Remarks.)			
Are Vegetation N, Soil				ormal Circumstances" pr 				
Are Vegetation N, Soil	N , or Hydrology	N naturally proble	matic? (If need	ded, explain any answers	s in Remarks.)			
SUMMARY OF FINDING	3S – Attach site ma	p showing samp	oling point loca	ations, transects, ir	mportant features, etc.			
Hydrophytic Vegetation Pres	ent? Yes X	No	Is the Sampled Ar	rea				
Hydric Soil Present?	Yes		within a Wetland?		No X			
Wetland Hydrology Present?			If yes, optional We		<u> </u>			
Edge of western boundary w	oods (top of drainage); be	ecoming drier upland	l forest.					
HYDROLOGY								
Wetland Hydrology Indicate	ors:			Secondary India	cators (minimum of two require	d)		
Primary Indicators (minimum	of one is required; check	all that apply)		Surface So	il Cracks (B6)			
Surface Water (A1)		Water-Stained Leave	` '		atterns (B10)			
High Water Table (A2)		Aquatic Fauna (B13	•		Moss Trim Lines (B16)			
Saturation (A3)		Marl Deposits (B15)			Dry-Season Water Table (C2) Crayfish Burrows (C8)			
Water Marks (B1)		Hydrogen Sulfide Od						
Sediment Deposits (B2) Drift Deposits (B3)		Oxidized Rhizospher Presence of Reduce	_	· · · · · · · · · · · · · · · · · · ·	Visible on Aerial Imagery (C9) Stressed Plants (D1)			
Algal Mat or Crust (B4)		Recent Iron Reduction	` '		ic Position (D2)			
Iron Deposits (B5)		Thin Muck Surface (	,	X Shallow Aq				
Inundation Visible on Ae	rial Imagery (B7)	Other (Explain in Re			raphic Relief (D4)			
Sparsely Vegetated Con	cave Surface (B8)			FAC-Neutra	al Test (D5)			
Field Observations:								
Surface Water Present?	Yes No X							
Water Table Present?	Yes No X	· · · / <u>—</u>						
Saturation Present?	Yes No X	Depth (inches):	Wetla	and Hydrology Present	t? Yes X No	_		
(includes capillary fringe)		vall parial phatas pr		if available.				
Describe Recorded Data (str	eam gauge, monitoring w	eli, aeriai priotos, pre	evious inspections)	ı, ır avallable:				
Remarks: No water observed in soil tes	at pit.							

**VEGETATION** – Use scientific names of plants. Sampling Point: SP1-U Absolute Indicator <u>Tree Stratum</u> (Plot size: % Cover Dominance Test worksheet: Species? Status 1. **Number of Dominant Species** That Are OBL, FACW, or FAC: 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B) 6. Prevalence Index worksheet: =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: \_\_\_\_) OBL species 3 x 1 = FACW species 11 x 2 = 1. 82 x 3 = 2. FAC species 60 FACU species 3. x 4 = x 5 = 0 4. UPL species Λ 5. Column Totals: 156 (A) 511 Prevalence Index = B/A = 6. 3.28 7. **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 5 ft ) 2 - Dominance Test is >50% Solidago rugosa 3 - Prevalence Index is ≤3.0<sup>1</sup> FAC 1. Anthoxanthum odoratum **FACU** 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 10 Onoclea sensibilis **FACW** 3 Nο 4. Juncus effusus No OBL Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) FAC 5 Acer rubrum 1 Nο <sup>1</sup>Indicators of hydric soil and wetland hydrology must be 6. Carya cordiformis FAC present, unless disturbed or problematic. **FACW** 7 Solidago gigantea **Definitions of Vegetation Strata:** 8. Tree - Woody plants 3 in. (7.6 cm) or more in diameter at 9. 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 156 =Total Cover size, and woody plants less than 3.28 ft tall. (Plot size: Woody Vine Stratum Woody vines - All woody vines greater than 3.28 ft in 1. height. 2. Hydrophytic Vegetation Yes X No Present? =Total Cover 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 De	scription: (Describe t	o the dept	n needed to documer	nt the ind	licator or	confirm tl	he absence of indicator	rs.)			
Depth	Matrix			x Feature	s						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0-6	10YR 3/2	100					Loamy/Clayey				
6-12	10YR 3/3	85	10YR 4/4	15							
			_			<u> </u>					
1 <sub>Tymes</sub> C-	Concentration D-Dept	tion DM-F	Paduand Matrix CC=C			and Crain	21 continu	. DI =Doro Lining M-Metrix			
	Concentration, D=Deple il Indicators:	elion, Rivi-r	Reduced Mairix, CS=C	overed or	Coaled S	and Grains		: PL=Pore Lining, M=Matrix. blematic Hydric Soils <sup>3</sup> :			
-	sol (A1)		Polyvalue Below S	Surface (S	S8) (I <b>RR</b> I	2		10) (LRR K, L, MLRA 149B)			
	Epipedon (A2)	-	MLRA 149B)	Juliuce (C	oo) (Litit i	ν,		Redox (A16) ( <b>LRR K, L, R</b> )			
	Histic (A3)		Thin Dark Surface	- (SQ) (I I	RRR MII	2Δ 149R)		eat or Peat (S3) (LRR K, L, R)			
	gen Sulfide (A4)	-	High Chroma San					w Surface (S8) (LRR K, L)			
	fied Layers (A5)	-				-		face (S9) (LRR K, L)			
	ted Below Dark Surface	. (Δ11)	Loamy Mucky Mineral (F1) (LRR K, L)  Loamy Gleyed Matrix (F2)					se Masses (F12) (LRR K, L, R)			
		. (A11)									
	Dark Surface (A12)  / Mucky Mineral (S1)	-	Depleted Matrix (F Redox Dark Surfa					dplain Soils (F19) (MLRA 149B)			
		-			7)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
	/ Gleyed Matrix (S4)	-	Depleted Dark Su	•	)		Red Parent Material (F21)  Very Shallow Dark Surface (TF12)				
	/ Redox (S5) ed Matrix (S6)	-	Redox Depression Marl (F10) (LRR I				Other (Explain	· ·			
	Surface (S7)	-	Warr (1 10) (ERRY)	it, =/			Other (Explain	in remarks)			
Daik	Surface (ST)										
3Indicators	of hydrophytic vegetati	on and wetl	and hydrology must be	nrecent	unless dis	turbed or	problematic				
	e Layer (if observed):	on and wen	and nydrology must be	present,	uniess un	iturbeu or	problematic.				
Type: A											
_	•	40					Uhadaia Cail Bassanti	No. No. V			
Depth (ii	nches).	12					Hydric Soil Present?	? Yes No X			
Remarks:											
		•					est boundary: 5YR 4/3 (	70%) 5YR 5/4 (30%). cators of Hydric Soils version 7.0			
	3 Errata. (http://www.ni		_					cators of riguric 30ils version 7.0			
		· ·	_			_	•				

Applicant/Owner: The Wetland Trust, Inc.  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 (%):  Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3095055350 Long: -76.2228483133 Datum: WGS  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	4-5			
Landform (hillside, terrace, etc.): Depression				
Landform (hillside, terrace, etc.): Depression				
Soil Map Unit Name: ScB: Scriba gravelly fine sandy loam, 0-8% slopes  Are climatic / hydrologic conditions on the site typical for this time of year?  Are Vegetation N, Soil N, or Hydrology N significantly disturbed?  Are "Normal Circumstances" present?  Yes X, No Mormal Circumstances year?  Yes X, No Mormal Circumstances year?	84			
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 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 significantly disturbed? Are "Normal Circumstances" present? Yes X, No.				
<del>_</del>				
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:				
Near western property line (dry, forested area); drainage area surrounded by agriculture.				
HYDROLOGY				
Wetland Hydrology Indicators:  Secondary Indicators (minimum of two requirements)	<u>ired)</u>			
Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10)				
1 <del></del>	Moss Trim Lines (B16)			
	Dry-Season Water Table (C2)			
Water Marks (B1)Hydrogen Sulfide Odor (C1)Crayfish Burrows (C8)	٥١			
Sediment Deposits (B2)  X Oxidized Rhizospheres on Living Roots (C3)  Saturation Visible on Aerial Imagery (C4)  Styntad or Stressed Plants (C4)	<del>)</del> )			
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)  X 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)				
Field Observations:				
Surface Water Present? Yes No X Depth (inches):				
Water Table Present? Yes X No Depth (inches): 5				
Saturation Present? Yes X No Depth (inches): Wetland Hydrology Present? Yes X No				
(includes capillary fringe)				
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.				

	ints.			Sampling Point:	SP1-V	_
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2				That Are OBL, FACW, or FAC:	2	(A)
3				Total Number of Dominant		
4.				Species Across All Strata:	2	(B)
5.						_
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)
7.				Prevalence Index worksheet:		<u>-`                                    </u>
		=Total Cover		Total % Cover of: Mi	ultiply by:	
Sapling/Shrub Stratum (Plot size:)	-			OBL species 19 x 1 =	19	
1				FACW species 46 x 2 =	92	
2.				FAC species 36 x 3 =	108	
				<u></u>	8	
3				· — — ·	_	
4 -				UPL species 0 x 5 =	0	
5				Column Totals: 103 (A)	227	(B)
6				Prevalence Index = B/A =	2.20	
7				Hydrophytic Vegetation Indicators:		
		=Total Cover		1 - Rapid Test for Hydrophytic Ve	getation	
Herb Stratum (Plot size: 5 ft )				X 2 - Dominance Test is >50%		
Onoclea sensibilis	30	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2. Solidago rugosa	35	Yes	FAC	4 - Morphological Adaptations <sup>1</sup> (P		portin
3. Solidago gigantea	15	No	FACW	data in Remarks or on a separa	ate sneet)	
4. Juncus effusus	15	No	OBL	Problematic Hydrophytic Vegetati	ion <sup>1</sup> (Expla	iin)
5. Ranunculus	3	No		<sup>1</sup> Indicators of hydric soil and wetland l	hydrology i	muet
6. Carex vulpinoidea	3	No	OBL	be present, unless disturbed or proble		must
7. Agrostis gigantea	1	No	FACW	Definitions of Vegetation Strata:		
8. Glyceria striata	1	No	OBL	Tree Meady plants 2 in (7.6 am) as	mara in di	
9. Liriodendron tulipifera	1	No	FACU	<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of		amete
10. Acer rubrum	1	No	FAC			
11. Anthoxanthum odoratum	1	No	FACU	Sapling/shrub – Woody plants less the and greater than or equal to 3.28 ft (1	nan 3 in. D m) tall.	ВН
12.	-					
	106	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) p of size, and woody plants less than 3.		ırdless
Woody Vine Stratum (Plot size: )	100	- Total Cover		or size, and woody plants less than 5.	ZO IT tall.	
· — · · · · · · · · · · · · · · · · · ·				Woody vines – All woody vines great	er than 3.2	28 ft in
1				height.		
				Hydrophytic		
2		<u></u>		Vegetation		
3.						
•				_	lo	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point: SP1-W

Profile Des	scription: (Describe t	o the dept	h needed to documer	nt the ind	licator or	confirm t	he absence of indi	cators.)		
Depth	Matrix			x Feature		2				
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u></u> %	Type <sup>1</sup>	Loc <sup>2</sup>	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			
						—				
	Concentration, D=Deple	etion, RM=I	Reduced Matrix, CS=C	overed or	Coated S	and Grain		cation: PL=Pore Lining, M=Matrix.		
-	I Indicators:		Debaratus Dalaur (	Curfoso (	20\ /LDD			r Problematic Hydric Soils <sup>3</sup> :		
Histosol (A1) Polyvalue Below Surface (S8) (LRR R,					к,	2 cm Muck (A10) (LRR K, L, MLRA 149B)				
	Epipedon (A2) Histic (A3)		MLRA 149B) Thin Dark Surface	e (S9) ( <b>I I</b>	RRR MII	RA 149R)		airie Redox (A16) ( <b>LRR K, L, R</b> ) cky Peat or Peat (S3) ( <b>LRR K, L, R</b> )		
	gen Sulfide (A4)		High Chroma Sar			-		Below Surface (S8) (LRR K, L)		
	ed Layers (A5)	•	Loamy Mucky Mir		•	-		Surface (S9) ( <b>LRR K, L</b> )		
	ed Below Dark Surface	(A11)	Loamy Gleyed Ma			,	Iron-Manganese Masses (F12) (LRR K, L, R)			
Thick I	Dark Surface (A12)		X Depleted Matrix (I	F3)			Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy	Mucky Mineral (S1)	·	Redox Dark Surfa	ace (F6)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy	Gleyed Matrix (S4)		Depleted Dark Su	ırface (F7	<b>'</b> )		Red Parent Material (F21)			
Sandy	Redox (S5)	,	Redox Depression	ns (F8)			Very Shallow Dark Surface (TF12)			
	ed Matrix (S6)	•	Marl (F10) (LRR	<b>K</b> , <b>L</b> )			Other (Explain in Remarks)			
Dark S	Surface (S7)									
<sup>3</sup> Indicators	of hydrophytic vegetation	on and wet	and hydrology must be	nresent	unless di	sturbed or	problematic			
	Layer (if observed):	on and wet	and flydrology must be	ргозоп,	unicoo un	oturbea or	problematic.			
Type: A	quitard									
Depth (in	iches):						Hydric Soil Pres	sent? Yes X No		
Remarks:										
								d Indicators of Hydric Soils version 7.0		
March 2013	3 Errata. (http://www.nr	cs.usaa.go	W/Internet/FSE_DOCU	JIVIEN I S/	nrcs142p2	2_051293.	docx)			

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:
	ocal relief (concave, convex, none): None Slope (%): 3-5
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.308905485	· · · · · · · · · · · · · · · · · · ·
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 your conditions on the site typical for this time of your climatic part of the site of your conditions on the site typical for this time of your	
Are Vegetation N, Soil N, or Hydrology N significant	
Are Vegetation N, Soil N, or Hydrology N naturally p	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	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 repo	rt.)
LIVEROLOGY	
HYDROLOGY  Western Underland Indicators	Cocondany Indicators (asimirary as fitus year incid
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained	<u> </u>
High Water Table (A2)  Aquatic Fauna  Anal Deposits	<u> </u>
Saturation (A3)Marl Deposits	· · · · · · · · · · · · · · · · · · ·
Water Marks (B1) Hydrogen Sulf Sediment Deposits (B2) Oxidized Rhize	ide Odor (C1) Crayfish Burrows (C8) ospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
<u> </u>	educed Iron (C4)  Stunted or Stressed Plants (D1)
<del></del>	eduction in Tilled Soils (C6)  Geomorphic Position (D2)
Iron Deposits (B5)  Thin Muck Sur	· · · · · · · · · · · · · · · · · · ·
Inundation Visible on Aerial Imagery (B7)  Other (Explain	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inche	s).
Water Table Present? Yes No X Depth (inche	
Saturation Present? Yes No X Depth (inche	
(includes capillary fringe)	, <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photo	os, previous inspections), if available:
Remarks:	

**VEGETATION** – Use scientific names of plants. Sampling Point: SP2-U Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Status Dominance Test worksheet: Species? 1. **Number of Dominant Species** That Are OBL, FACW, or FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: 6. 0.0% (A/B) Prevalence Index worksheet: =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: \_\_\_\_) OBL species 0 x 1 = FACW species x 2 = 0 1. 1 x 3 = 2. FAC species FACU species 3. 106 x 4 = x 5 = 0 4. UPL species Λ 5. Column Totals: 107 (A) 427 Prevalence Index = B/A = 6. 3 99 7. **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation Herb Stratum (Plot size: 5 ft ) 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0<sup>1</sup> Anthoxanthum odoratum FACU 1. 2. Solidago canadensis Yes FACU 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 8 3 Ranunculus Nο 4. Dactylis glomerata No **FACU** Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) 5 Taraxacum officinale 2 No **FACU** <sup>1</sup>Indicators of hydric soil and wetland hydrology must be 6. Trifolium pratense FACU present, unless disturbed or problematic. 7 Plantago major No **FACU Definitions of Vegetation Strata:** 8. Plantago lanceolata Nο **FACU** Tree - Woody plants 3 in. (7.6 cm) or more in diameter at FAC 9. Rumex crispus breast height (DBH), regardless of height. 10. Sapling/shrub – Woody plants less than 3 in. DBH and 11. greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of 115 =Total Cover size, and woody plants less than 3.28 ft tall. (Plot size: Woody Vine Stratum Woody vines - All woody vines greater than 3.28 ft in 1. height. 2. Hydrophytic Vegetation Yes \_\_\_\_ No \_X Present? =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: SP2-U

Profile De Depth	scription: (Describe	to the dep		ment the		r or conf	irm the absence of	indicators.)		
(inches)	Matrix Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
<u> </u>					Туре	LUC	Texture	remarks		
1-7	5YR 3/3	85	5YR 4/6	15						
7-14	5YR 4/3	70	5YR 4/6	30						
							<u> </u>	_		
			_							
			_					_		
								_		
<sup>1</sup> Type: C=	Concentration, D=Dep	oletion, RM	=Reduced Matrix, CS	3=Cover	ed or Coa	ted Sand	Grains. <sup>2</sup> Locat	tion: PL=Pore Lining, M=Matrix.		
Hydric So	il Indicators:						Indicators for I	Problematic Hydric Soils <sup>3</sup> :		
Histos	ol (A1)	_	Polyvalue Below	Surface	(S8) ( <b>LR</b>	R R,	2 cm Muck	(A10) ( <b>LRR K, L, MLRA 149B</b> )		
	Epipedon (A2)		MLRA 149B)				Coast Prair	rie Redox (A16) ( <b>LRR K, L, R</b> )		
Black	Histic (A3)	=	Thin Dark Surfac	e (S9) ( <b>I</b>	LRR R, M	LRA 149E	<b>3</b> )5 cm Muck	sy Peat or Peat (S3) ( <b>LRR K, L, R</b> )		
Hydro	gen Sulfide (A4)	-	High Chroma Sa					Below Surface (S8) ( <b>LRR K, L</b> )		
	ied Layers (A5)	-	Loamy Mucky Mi			K, L)		Surface (S9) ( <b>LRR K, L</b> )		
	ted Below Dark Surfac	ce (A11)	Loamy Gleyed M	•	2)			anese Masses (F12) ( <b>LRR K, L, R</b> )		
	Dark Surface (A12)	-	Depleted Matrix	` '				Floodplain Soils (F19) (MLRA 149B)		
	Mucky Mineral (S1)	-	Redox Dark Surf				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
	Gleyed Matrix (S4)	-	Depleted Dark S		-7)			t Material (F21)		
	r Redox (S5) ed Matrix (S6)	-	Redox Depression  Marl (F10) (LRR					ow Dark Surface (TF12) lain in Remarks)		
	Surface (S7)	-	IVIAIT (I 10) (LIKK	rx, L)			Other (Exp	iaiii iii Neiliaiks)		
Dank (	Surface (O7)									
<sup>3</sup> Indicators	of hydrophytic vegeta	ition and w	retland hydrology mus	st be pre	sent. unle	ss disturb	ed or problematic.			
	e Layer (if observed)		, ,,		,		<u> </u>			
Type:										
Depth (ii	nches):						Hydric Soil Prese	ent? Yes No X		
Remarks:			<u></u>							
This data f								Field Indicators of Hydric Soils		
version 7.0	) March 2013 Errata. (	http://www	nrcs.usda.gov/Intern	et/FSE_	DOCUME	NTS/nrcs	s142p2_051293.docx	<b>(</b> )		

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:
	ocal relief (concave, convex, none): Concave Slope (%): 2-3
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.308915631	7 Long: -76.2216442967 Datum: WGS 84
Soil Map Unit Name: ScB: Scriba gravelly fine sandy loam, 0-8% slope	es NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of ye	
Are Vegetation N , Soil N , or Hydrology N significant	
Are Vegetation N , Soil N , or Hydrology N naturally p	
	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:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained	<u> </u>
High Water Table (A2)  Aquatic Fauna  Mad Denseits	<u> </u>
X Saturation (A3) Marl Deposits Water Marks (B1) Hydrogen Sulf	· · · · · · · · · · · · · · · · · · ·
<del></del>	ospheres on Living Roots (C3)  Saturation Visible on Aerial Imagery (C9)
<u> </u>	educed Iron (C4)  Stunted or Stressed Plants (D1)
<del></del>	eduction in Tilled Soils (C6)  Geomorphic Position (D2)
Iron Deposits (B5)  Thin Muck Sur	· · · · · · · · · · · · · · · · · · ·
Inundation Visible on Aerial Imagery (B7)  Other (Explain	<u> </u>
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inche	s):
Water Table Present? Yes X No Depth (inche	
Saturation Present? Yes X No Depth (inche	s): Wetland Hydrology Present? Yes X No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photo	
Describe Recorded Data (stream gauge, monitoring well, aerial priore	ss, previous inspections), ii available.
Remarks:	

				Sampling Point:	
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1	_			Number of Dominant Species	
2				That Are OBL, FACW, or FAC:	2 (A)
3	_			Total Number of Dominant	
4.				Species Across All Strata:	2 (B)
5.					
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: 1	00.0% (A/B
7.				Prevalence Index worksheet:	`
		=Total Cover		Total % Cover of: Mu	Itiply by:
Sapling/Shrub Stratum (Plot size:	)	•		OBL species 80 x 1 =	80
	_			FACW species 68 x 2 =	136
·	_			FAC species 2 x 3 =	6
	_				
3				FACU species 0 x 4 =	0
·	_	·		UPL species 0 x 5 =	0
i				Column Totals: 150 (A)	222 (B
i	_			Prevalence Index = B/A =	1.48
·		·		Hydrophytic Vegetation Indicators:	
		=Total Cover		1 - Rapid Test for Hydrophytic Vec	getation
Herb Stratum (Plot size: 5 ft )				X 2 - Dominance Test is >50%	
. Carex stipata	65	Yes	OBL	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2. Solidago gigantea	50	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Pr	
3. Juncus effusus	10	No	OBL	data in Remarks or on a separa	te sheet)
Eupatorium perfoliatum	10	No	FACW	Problematic Hydrophytic Vegetation	on¹ (Explain)
onoclea sensibilis	8	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland h	vdrology must
6. Carex pseudocyperus	5	No	OBL	be present, unless disturbed or probler	
Acer rubrum	2	No	FAC	Definitions of Vegetation Strata:	
3. Ranunculus	2	No		Tree Meaduribute 2 in (7.0 cm) and	
).				Tree – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of h	
0.					
1.	_			Sapling/shrub – Woody plants less the and greater than or equal to 3.28 ft (1)	
2.					
	152	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants less than 3.2	
Voody Vine Stratum (Plot size:		- Total Cover		of size, and woody plants less than 5.2	.o it tall.
	=			Woody vines – All woody vines greate	er than 3.28 ft ir
·				height.	
2	_			Hydrophytic	
3	_			Vegetation	
1.				Present? Yes X No	<b></b>
		=Total Cover			

SOIL Sampling Point: SP2-W

	scription: (Describe	to the de	•			r or conf	irm the absence of i	indicators.)		
Depth	Matrix			Feature		. 2	<b>-</b> .	5		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	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										
	Concentration, D=Dep	letion, RN	1=Reduced Matrix, CS	S=Covere	ed or Coa	ted Sand		ion: PL=Pore Lining, M=Matrix.		
-	il Indicators: sol (A1)		Polyvalue Below	Surface	(S8) (I <b>D</b>	D D		Problematic Hydric Soils <sup>3</sup> : (A10) (LRR K, L, MLRA 149B)		
	Epipedon (A2)	•	MLRA 149B)	Surface	(30) (LK	K K,		ie Redox (A16) ( <b>LRR K, L, R</b> )		
			,	o (SO) (I	DD D M	I DA 140E				
	Histic (A3)	,	Thin Dark Surfac					y Peat or Peat (S3) (LRR K, L, R)		
	gen Sulfide (A4)	•	High Chroma Sa					Below Surface (S8) (LRR K, L)		
	ied Layers (A5)	,	Loamy Mucky Mi			k, L)		Surface (S9) (LRR K, L)		
Deple	ted Below Dark Surfac	e (A11)	Loamy Gleyed M	atrix (F2	)			nese Masses (F12) ( <b>LRR K, L, R</b> )		
Thick	Dark Surface (A12)	,	X Depleted Matrix (	(F3)				Floodplain Soils (F19) ( <b>MLRA 149B</b> )		
Sandy	/ Mucky Mineral (S1)		Redox Dark Surfa	ace (F6)			Mesic Spoo	dic (TA6) ( <b>MLRA 144A, 145, 149B</b> )		
Sandy	Gleyed Matrix (S4)	,	Depleted Dark St	urface (F	7)		Red Parent Material (F21)			
Sandy	Redox (S5)		Redox Depressio	ns (F8)			Very Shallo	w Dark Surface (TF12)		
Stripp	ed Matrix (S6)		Marl (F10) (LRR	<b>K</b> , <b>L</b> )			Other (Explain in Remarks)			
Dark S	Surface (S7)	'					<del></del>			
<sup>3</sup> Indicators	of hydrophytic vegeta	tion and v	vetland hydrology mus	et he nre	sent unle	see dieturh	ned or problematic			
	e Layer (if observed):		vettaria frydrology ffida	st be pre-	SCIII, UIIIC	Jos Gistari	ped of problematic.			
Type:										
Depth (in	nches):						Hydric Soil Prese	ent? Yes X No		
Remarks:										
								Field Indicators of Hydric Soils		
version 7.0	) March 2013 Errata. (	nup://wwv	v.nrcs.usua.gov/intern	evrse_	DOCUME	EN I S/IIICS	3142p2_051293.docx	)		

Project/Site: Wisner		Ci	ty/County: Ha	stings/Oswego		_Sampling Date:	7/23/24		
Applicant/Owner: The Wetland	d Trust inc.				State:	NY Sampling	Point: SP3U		
Investigator(s): EF,HF,KH		Se	ection, Townsh	nip, Range:					
Landform (hillside, terrace, etc.	):	Loca	al relief (conca	ve, convex, nor	ne): none	Slo	pe (%): 0-1		
Subregion (LRR or MLRA): LRI		43.3084951887	,		2194849133		m: WGS 84		
Soil Map Unit Name: Ma: Mada						cation: none			
Are climatic / hydrologic condition	• •	•	_	xNo	<b>-</b> ` ' '				
Are Vegetation, Soil	n , or Hydrology	n significantly o	listurbed?	Are "Normal Cir	cumstances" pre	esent? Yes _	x No		
Are Vegetation, Soil	n , or Hydrology	n naturally prob	lematic?	(If needed, expl	ain any answers	in Remarks.)			
SUMMARY OF FINDINGS	S – Attach site ma	p showing san	npling poin	t locations,	transects, in	nportant featu	res, etc.		
Hydrophytic Vegetation Preser	nt? Yes	No x	Is the Sam	pled Area					
Hydric Soil Present?	Yes x	No No	within a We		Yes	No X			
Wetland Hydrology Present?	Yes	No x	If yes, optio	nal Wetland Sit	e ID:				
Remarks: (Explain alternative Rolling topography, 20 feet aw	•	,							
HYDROLOGY					0	-A (	· · · · · · · · · · · · · · · · · · ·		
Wetland Hydrology Indicator						ators (minimum of	two required)		
Primary Indicators (minimum of Surface Water (A1)	one is required; check	Water-Stained Le	avec (R0)			l Cracks (B6)			
High Water Table (A2)		Aquatic Fauna (B	` '	-	Drainage Patterns (B10)  Moss Trim Lines (B16)				
Saturation (A3)		Marl Deposits (B1		-	Dry-Season Water Table (C2)				
Water Marks (B1)		Hydrogen Sulfide	•	-	Crayfish Burrows (C8)				
Sediment Deposits (B2)		Oxidized Rhizospl		n Roots (C3)	Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3)		Presence of Redu		g 110013 (00)		Stressed Plants (D	,		
Algal Mat or Crust (B4)		Recent Iron Redu	` ,	Soils (C6)		Position (D2)	'/		
Iron Deposits (B5)		Thin Muck Surfac			Shallow Aq	, ,			
Inundation Visible on Aeria	al Imagery (B7)	Other (Explain in I	, ,	-		aphic Relief (D4)			
Sparsely Vegetated Conca	ave Surface (B8)	· ·	,	-	FAC-Neutra	l Test (D5)			
Field Observations:									
Surface Water Present?	Yes No x	Depth (inches):							
Water Table Present?	Yes No x								
Saturation Present?	Yes No x	Depth (inches):		Wetland Hyd	rology Present	? Yes	No_x		
(includes capillary fringe)									
Describe Recorded Data (strea	am gauge, monitoring w	vell, aerial photos,	previous inspe	ections), if availa	able:				
Remarks: No signs of wetland hydrology									

	olants.			Sampling Point: _	
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.				Number of Dominant Species	
2.				That Are OBL, FACW, or FAC:	0 (A)
3.				T tables to the form	
4.				Total Number of Dominant Species Across All Strata:	1 (B)
5.					``
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: (	D.0% (A/B
7.				Prevalence Index worksheet:	
		=Total Cover		Total % Cover of: Mul	tiply by:
Sapling/Shrub Stratum (Plot size:				OBL species 0 x 1 =	
	<del>_</del>			FACW species 0 x 2 =	-
					0
2.					
3.				FACU species 0 x 4 =	
4				UPL species100 x 5 =	500
5				Column Totals: 100 (A)	500 (B
6				Prevalence Index = B/A =	5.00
7				Hydrophytic Vegetation Indicators:	
		=Total Cover		1 - Rapid Test for Hydrophytic Veg	etation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%	
1. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2				4 - Morphological Adaptations <sup>1</sup> (Production of the data in Remarks or on a separate	
3. 4.				Problematic Hydrophytic Vegetation	,
_				<u> </u>	
-				<sup>1</sup> Indicators of hydric soil and wetland hybe present, unless disturbed or problen	ydrology must natic.
7				Definitions of Vegetation Strata:	
3.					
).				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or r at breast height (DBH), regardless of he	
10.				Continue to have be a way and a sea the	on 2 in DDII
11.				Sapling/shrub – Woody plants less that and greater than or equal to 3.28 ft (1 r	
12				Harb All barbassaus (non woody) nie	nto rogardioo
	100	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plat of size, and woody plants less than 3.2	
Woody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greate	r than 3 28 ft ir
1.				height.	i tilali 3.20 it il
2.					
				Hydrophytic	
				Vegetation Veg	
				Present? Yes No	) X
4.		=Total Cover			<u> </u>

SOIL Sampling Point: SP3U

	escription: (Describe	to the de				r or conf	firm the absence of	f indicators.)
Depth	Matrix	0/		x Feature		. 2	T	D Iv
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	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				
								_
			_					
								<del>-</del>
<sup>1</sup> Type: C=	-Concentration, D=Dep	oletion. RN	M=Reduced Matrix. C	S=Cover	ed or Coa	ted Sand	I Grains. <sup>2</sup> Loca	ation: PL=Pore Lining, M=Matrix.
	oil Indicators:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			<u> </u>			Problematic Hydric Soils <sup>3</sup> :
-	sol (A1)		Polyvalue Below	Surface	e (S8) ( <b>LR</b>	R R,		k (A10) ( <b>LRR K, L, MLRA 149B</b> )
	Epipedon (A2)		MLRA 149B)		, , ,	·		nirie Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfac	ce (S9) (	LRR R, M	LRA 149		ky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	ogen Sulfide (A4)		High Chroma Sa					Below Surface (S8) (LRR K, L)
	fied Layers (A5)		Loamy Mucky M					Surface (S9) (LRR K, L)
	eted Below Dark Surfac	ce (A11)	Loamy Gleyed N			-, -,		ganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	()	x Depleted Matrix		-,			Floodplain Soils (F19) (MLRA 149B)
	y Mucky Mineral (S1)		Redox Dark Sur	. ,	)			odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)		Depleted Dark S					nt Material (F21)
	y Redox (S5)		Redox Depression	,	• • •			low Dark Surface (TF12)
	ped Matrix (S6)		Marl (F10) (LRR					plain in Remarks)
	Surface (S7)			, -,			(	,
Buik	curiuse (er)							
3Indicators	s of hydrophytic vegeta	ition and v	wetland hydrology mu	st be pre	esent. unle	ss disturl	bed or problematic.	
	e Layer (if observed)				,			
Type:	,							
Depth (i	inches).						Hydric Soil Pres	sent? Yes X No
							Tryunc con ries	<u> </u>
Remarks:			Land North Control	1.0		,	0.4 NDO	0.5: 111-1:0.7-
	orm is revised from No 0 March 2013 Errata. (							S Field Indicators of Hydric Soils
	ring more sandy soils,			1001 02_	_DOOO!!!!	21410/1110	5142P2_001200.d00	by Bolow to mones we are

Project/Site: Wisner	City/County: Has	stings/Oswego	Sampling Date: 7/23/24
Applicant/Owner: The Wetland Trust inc.		State:	NY Sampling Point: SP3W
Investigator(s): EF,HF,KH	Section, Townshi	p, Range:	
Landform (hillside, terrace, etc.): Drainage Swale	Local relief (concav	ve, convex, none): concave	Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.30843428	_	Long: -76.2196189063	Datum: WGS 84
Soil Map Unit Name: Madalin silt loam			fication: none
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes	x No (If no, explain	ı in Remarks.)
Are Vegetation n , Soil n , or Hydrology n significa	_	re "Normal Circumstances" pr	
Are Vegetation n , Soil n , or Hydrology n naturally		f needed, explain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing		locations, transects, in	nportant features, etc.
Hydrophytic Vegetation Present? Yes x No	Is the Samp	led Area	_
Hydric Soil Present? Yes x No	within a Wet		No
Wetland Hydrology Present? Yes x No	If yes, option	nal Wetland Site ID:	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	• •		oil Cracks (B6)
<del></del>	ed Leaves (B9)		Patterns (B10)
High Water Table (A2) Saturation (A3) Aquatic Faul			Lines (B16) n Water Table (C2)
<del></del>	fulfide Odor (C1)	Crayfish Bu	
<del></del>	nizospheres on Living		Visible on Aerial Imagery (C9)
<u> </u>	f Reduced Iron (C4)	` '	Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron	Reduction in Tilled S		ic Position (D2)
Iron Deposits (B5) Thin Muck S	Surface (C7)	Shallow Ag	juitard (D3)
Inundation Visible on Aerial Imagery (B7)x Other (Expla	ain in Remarks)	Microtopog	raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutra	al Test (D5)
Field Observations:			
Surface Water Present? Yes No x Depth (incl			
Water Table Present?  Yes No x Depth (incl Saturation Present?  Yes No x Depth (incl		Watland Undralam, Drasani	No. v. No.
Saturation Present? Yes No _x Depth (incl (includes capillary fringe)		Wetland Hydrology Present	? Yes <u>x</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspec	 ctions), if available:	
	,, ,	,,	
Remarks:			
Area is acting as a drainage feature, wet swale,drainage patterns			

VEGETATION – Use scientific names of pla	nts.			Sampling Point:	SP3W	<u>v</u>
<u>Tree Stratum</u> (Plot size:	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1.				l		
2.				Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
3.		· ——		_		<b>-</b> ` ′
4				Total Number of Dominant Species Across All Strata:	2	(B)
				<u> </u>		_ \_ /
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)
7.				Prevalence Index worksheet:	1001070	_(' '' ''
		=Total Cover		Total % Cover of:	Multiply by:	
Sapling/Shrub Stratum (Plot size: )		•		OBL species 46 x 1 =	46	
1.				FACW species 56 x 2 =	112	
2				FAC species 25 x 3 =	-	_
2				FACU species 0 x 4 =		_
				UPL species 0 x 5 =		
_	·			Column Totals: 127 (A)	233	— (B)
				Prevalence Index = B/A =		—( <sup>D</sup> )
6				Hydrophytic Vegetation Indicators		
· -		=Total Cover		1 - Rapid Test for Hydrophytic V		
Herb Stratum (Plot size: )		-		X 2 - Dominance Test is >50%	ogotation	
1. Euthamia graminifolia	25	No	FAC	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>		
Solidago gigantea	40	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (	Provide sur	porting
Eupatorium perfoliatum	5	No	FACW	data in Remarks or on a sepa		.,
4. Leersia oryzoides	40	Yes	OBL	Problematic Hydrophytic Vegeta	ation¹ (Expla	ain)
5. Juncus effusus	1	No	OBL			
6. Symphyotrichum lanceolatum	10	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland be present, unless disturbed or probl		must
7. Carex lurida	5	No	OBL	Definitions of Vegetation Strata:		
8. Phalaris arundinacea	1	No	FACW	_		
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) of at breast height (DBH), regardless of		iamete
10.						
11.				Sapling/shrub – Woody plants less and greater than or equal to 3.28 ft (		вн
12.				l		
	127	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) of size, and woody plants less than 3		ardless
Woody Vine Stratum (Plot size: )						00 (1)
1.				<b>Woody vines</b> – All woody vines greatheight.	ater than 3.2	28 TT IN
2.						
3.				Hydrophytic		
4.				Vegetation Present? Yes X	No	
		=Total Cover				
Remarks: (Include photo numbers here or on a sepa	rate sheet )	_		<u>'</u>		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)					

Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point: SP3W

Profile De Depth	escription: (Describe Matrix	to the de		<b>nent the</b> Feature		r or conf	firm the absence o	of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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				
17 24	7.0yl 0/1		7.0y1 0/0					
	Concentration, D=Dep	oletion, RI	M=Reduced Matrix, CS	S=Cover	ed or Coa	ted Sand		cation: PL=Pore Lining, M=Matrix.
-	oil Indicators:		Dobavoluo Polow	Curfood	(CO) (I D	D D		or Problematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Below	Suпасе	(58) ( <b>LR</b>	KK,		ck (A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)	- (CO) (I	LDD D M	I DA 440		airie Redox (A16) (LRR K, L, R)
	Histic (A3)		Thin Dark Surface					cky Peat or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)		High Chroma Sa					e Below Surface (S8) (LRR K, L)
	fied Layers (A5)		Loamy Mucky Mi			(, L)		k Surface (S9) ( <b>LRR K, L</b> )
	ted Below Dark Surfac	ce (A11)	Loamy Gleyed M	,	2)			iganese Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)		x Depleted Matrix	. ,				t Floodplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy	y Mucky Mineral (S1)		Redox Dark Surf	ace (F6)	)		Mesic Sp	podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy	y Gleyed Matrix (S4)		Depleted Dark S	urface (l	F7)		Red Pare	ent Material (F21)
Sandy	y Redox (S5)		Redox Depression	ns (F8)			Very Sha	allow Dark Surface (TF12)
Stripp	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	<b>K</b> , <b>L</b> )			Other (Ex	xplain in Remarks)
Dark	Surface (S7)							
<sup>3</sup> Indicators	s of hydrophytic vegeta	ition and i	wetland hydrology mus	st he nre	sent unle	es disturt	hed or problematic	
	e Layer (if observed)		wouldn't right ology mad	or po pre	oone, ame	oo alotari	Problemane.	
Type:								
Depth (i	nches):						Hydric Soil Pre	esent? Yes X No
Remarks:							1	
This data f	form is revised from N	orthcentra	al and Northeast Regio	nal Sup	plement √	ersion 2.	0 to reflect the NRC	CS Field Indicators of Hydric Soils
version 7.0 go deeper	0 March 2013 Errata. (	http://ww	w.nrcs.usda.gov/Intern	et/FSE_	DOCUME	ENTS/nrc	s142p2_051293.do	ocx) Soils becoming more clay as we

Project/Site: Wisner	City/County: Ha	stings/Oswego	Sampling Date: 7/23/24				
Applicant/Owner: The Wetland Trust inc.		State:	NY Sampling Point: SP4U				
Investigator(s): EF,HF,KH	Section, Townsh	nip, Range:					
Landform (hillside, terrace, etc.):	Local relief (conca	ve, convex, none): none	Slope (%): 0-1				
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.3070	703858	Long: -76.2169925395	Datum: WGS 84				
Soil Map Unit Name: Madalin silt loam			fication: none				
Are climatic / hydrologic conditions on the site typical for this tim	ne of year? Yes	x No (If no, explain					
Are Vegetation N , Soil n , or Hydrology n sign	_	Are "Normal Circumstances" pro					
Are Vegetation n , Soil n , or Hydrology n natu		If needed, explain any answers					
SUMMARY OF FINDINGS – Attach site map show		t locations, transects, ir	nportant features, etc.				
Hydrophytic Vegetation Present?  Hydric Soil Present?  Yes No Yes x No	x Is the Samp		No. V				
Hydric Soil Present? Yes x No Wetland Hydrology Present? Yes No		etland? Yes nal Wetland Site ID:	NoX				
Remarks: (Explain alternative procedures here or in a separate Sample point selected based upon arial photographs wet signated by the selected based upon arial photographs wet signated by the selected based upon arial photographs wet signated by the selected based upon arial photographs wet signated by the selected based upon arial photographs wet signated by the selected based upon arial photographs wet signated by the selected based upon arial photographs wet signated by the selected based upon arial photographs wet signated by the selected based upon arial photographs wet signated by the selected based upon arial photographs wet signated by the selected based upon arial photographs wether the selected based upon arial photographs were selected by the selected based upon arial photographs are selected by the selected based upon arial photographs are selected by the selected based upon arial photographs are selected by the selected based upon arial photographs.	. ,	g in this location					
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indic	cators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that	apply)	Surface So	il Cracks (B6)				
<del></del>	Stained Leaves (B9)		Drainage Patterns (B10)				
— · · · · · · · · · · · · · · · · · ·	Fauna (B13)		Moss Trim Lines (B16)				
<del></del>	posits (B15)		n Water Table (C2)				
1 — · · · · · · — · · · · · — · · · · ·	en Sulfide Odor (C1)		urrows (C8)				
<u> </u>	d Rhizospheres on Living		Visible on Aerial Imagery (C9)				
<u> </u>	ce of Reduced Iron (C4)  Iron Reduction in Tilled 9		Stunted or Stressed Plants (D1)				
1 <del></del>	ick Surface (C7)	· /	C6) Geomorphic Position (D2) Shallow Aquitard (D3)				
<u> </u>	Explain in Remarks)	Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	spiair ir remarkoj		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):	Wetland Hydrology Present	? Yes No x				
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aeria	ıl photos, previous inspe	ctions), if available:					
Remarks: No signs of wetland hydrology							
The signs of welland flydrology							

Tree Stratum (Plot size:)	·		Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:	0	
2. 3. 4	·				0	
3. 4.					0	
4.					U	(A)
4				Total Number of Dominant		
E				Species Across All Strata:	1	(B)
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)
7.				Prevalence Index worksheet:	0.070	(,,,,)
· ·		Total Cover			Multiply by:	
Sapling/Shrub Stratum (Plot size: )		10tai 0010i		OBL species 0 x 1 =		
				· · · · · · · · · · · · · · · · · · ·	: 0	—
				· —		
2				<u> </u>	: 0	
3				FACU species 0 x 4 =		
4				<u> </u>	500	
5				Column Totals: 100 (A)	500	(B)
6				Prevalence Index = B/A =	5.00	
7				Hydrophytic Vegetation Indicators	s:	
	=7	Total Cover		1 - Rapid Test for Hydrophytic \	/egetation	
Herb Stratum (Plot size:)				2 - Dominance Test is >50%		
1. Glycine max 1	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2.				4 - Morphological Adaptations <sup>1</sup>	(Provide sur	portino
3.				data in Remarks or on a sepa		
4.				Problematic Hydrophytic Veget	ation <sup>1</sup> (Expla	ain)
5				<sup>1</sup> Indicators of hydric soil and wetland		must
6				be present, unless disturbed or prob	iematic.	
7				Definitions of Vegetation Strata:		
8				<b>Tree</b> – Woody plants 3 in. (7.6 cm) at breast height (DBH), regardless of		iameteı
				at breast fielgfit (DBH), regardless to	ii neignt.	
10 11.				Sapling/shrub – Woody plants less and greater than or equal to 3.28 ft		BH
12.				,	. ,	
	100 =7	Total Cover		<b>Herb</b> – All herbaceous (non-woody) of size, and woody plants less than		ardless
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines gre	ator than 2 (	00 ft in
1				height.	ater triair 3.2	20 11 111
2.						
3.				Hydrophytic		
4.				Vegetation Present? Yes	No_x_	
		Total Cover		11636111:	<u> </u>	

Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point: SP4U

Depth   Martix   Redout Features	Profile De	escription: (Describe	to the de	pth needed to docu	ment the	e indicato	r or con	firm the absence of	indicators.)
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  *Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix, Hydric Soil Indicators: Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, L) Stratified Layers (A5) Thin Dark Surface (S8) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S8) (LRR R, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (A12) Sandy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S8) (LRR R, L) Polyvalue Below Surface (S8) (LRR K, L, R) Piedmont Floodplain Soils (F19) (LRR R, L) Thin Dark Surface (S8) (LRR K, L) Thin Dark Surface (S8) (LRR R, L) Polyvalue Below Surface (S8) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S8) (LRR K, L) Thin Dark Surface (S8) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S8) (LRR K, L) Thin Dark Surface (S8) (LRR K, L) Polyvalue Below Surface (S8) (	Depth			Redox	x Feature				
12-16 10yr 5/3 90 10yr 5/8 10 Sandy  *Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  *Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  *Hydric Soil Indicators:    Histosol (A1)	(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  **Junction: PL=Pore Lining, M=Matrix.   Hydric Soil Indicators:   Indicators for Problematic Hydric Soils*:   Histosol (A1)	0-12	2.5yr 5/1	80	2.5yr 4/4	20			Loamy/Clayey	
Hydric Soil Indicators:  Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Cast Prairie Redox (A16) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (S1) (LRR K, L) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7)  Alidicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  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	12-16	10yr 5/3	90	10yr 5/8	10			Sandy	
Hydric Soil Indicators:  Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Cast Prairie Redox (A16) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (S1) (LRR K, L) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7)  Alidicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  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									
Hydric Soil Indicators:  Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7)  Are dox Dark Surface (F7) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7)  Are dox Dark K, L)  Are dox Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Dark Surface (S7)  Are dox Dark K, L)  Are dox Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Dark Surface (S7)  Are dox Dark K, L)  Are dox Dark Surface (F7) Red Parent Material (F21)									
Hydric Soil Indicators:  Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7)  Are dox Dark Surface (F7) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7)  Are dox Dark K, L)  Are dox Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Dark Surface (S7)  Are dox Dark K, L)  Are dox Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Dark Surface (S7)  Are dox Dark K, L)  Are dox Dark Surface (F7) Red Parent Material (F21)									
Hydric Soil Indicators:  Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A11) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7)  Are dox Dark Surface (F7) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7)  Are dox Dark K, L)  Are dox Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Dark Surface (S7)  Are dox Dark K, L)  Are dox Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Dark Surface (S7)  Are dox Dark K, L)  Are dox Dark Surface (F7) Red Parent Material (F21)									
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Hydric Soil Indicators:  Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Cast Prairie Redox (A16) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (S1) (LRR K, L) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7)  Alidicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  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									
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Hydric Soil Indicators:  Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Cast Prairie Redox (A16) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (S1) (LRR K, L) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7)  Alidicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  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	<sup>1</sup> Type: C=	Concentration. D=Dep	letion. RN	—————————————————————————————————————	S=Cover	ed or Coa	ted Sand	Grains. <sup>2</sup> Locat	tion: PL=Pore Lining, M=Matrix.
Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Sandy Redox (S5)  Redox Depressions (F8)  Very Shallow Dark Surface (TF12)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Piedmont Floodplain Soils (F19) (MLRA 144A, 145, 149B)  Coast Prairie Redox (A16) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic				, , , , , , , , , , , , , , , , , , , ,					
Black Histic (A3)	Histos	sol (A1)		Polyvalue Below	Surface	e (S8) ( <b>LR</b>	R R,	2 cm Muck	(A10) ( <b>LRR K, L, MLRA 149B</b> )
Hydrogen Sulfide (A4)	Histic	Epipedon (A2)		MLRA 149B)				Coast Prair	rie Redox (A16) ( <b>LRR K, L, R</b> )
Stratified Layers (A5)	Black	Histic (A3)		Thin Dark Surface	ce (S9) (	LRR R, M	LRA 149	B) 5 cm Muck	xy Peat or Peat (S3) ( <b>LRR K, L, R</b> )
Stratified Layers (A5)	Hydro	gen Sulfide (A4)		High Chroma Sa	inds (S1	1) ( <b>LRR K</b>	, L)	Polyvalue B	Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2)									
Thick Dark Surface (A12)			e (A11)				. ,		
Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21)  Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12)  Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  3Indicators 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			,			,			
Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Red Parent Material (F21)  Very Shallow Dark Surface (TF12)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Jank Surface (S7)   **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						)			
Sandy Redox (S5)									
Stripped Matrix (S6)				·	•	•			` '
Dark Surface (S7)  3Indicators 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					` '				
3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Depth (inches):				Man (F10) ( <b>LRR</b>	<b>K</b> , L)			Other (Exp	iain in Remarks)
Restrictive Layer (if observed):  Type:  Depth (inches):  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	Dark	Surface (S7)							
Restrictive Layer (if observed):  Type:  Depth (inches):  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	<sup>3</sup> Indicators	s of hydrophytic vegeta	tion and v	vetland hydrology mu	st be pre	esent, unle	ss distur	bed or problematic.	
Depth (inches):								·	
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	Type:								
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	Depth (i	nches):						Hydric Soil Prese	ent? Yes X No
version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) Soils look very similar below 10	Remarks:								
		0 March 2013 Errata. (	http://www	v.nrcs.usda.gov/Interr	net/FSE_	_DOCUME	NTS/nrc	s142p2_051293.docx	κ) Soils look very similar below 10
	inches								

Project/Site: Wisner	City/County: Has	tings/Oswego	Sampling Date: 7/23/24
Applicant/Owner: The Wetland Trust inc.		State:	NY Sampling Point: SP4W
Investigator(s): EF,HF,KH	Section, Township	p, Range:	
Landform (hillside, terrace, etc.):	Local relief (concav	re, convex, none): Concave	Slope (%): 0-1
	 13.3069857092	Long: -76.2170981020	Datum: WGS 84
Soil Map Unit Name: Madalin silt loam		NWI classit	
•	this time of year?		
Are climatic / hydrologic conditions on the site typical for	· · · · · · · · · · · · · · · · · · ·	x No (If no, explain re "Normal Circumstances" pr	
Are Vegetation, Soil, or Hydrology		•	<del></del>
Are Vegetation, Soil, or Hydrology		f needed, explain any answers	,
SUMMARY OF FINDINGS – Attach site map	showing sampling point	locations, transects, in	mportant features, etc.
Hydrophytic Vegetation Present? Yes X	No Is the Sampl	led Area	
Hydric Soil Present? Yes X	No within a Wet		No
Wetland Hydrology Present? Yes X	No If yes, options	al Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a s	separate report.)		
(=-4			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	cators (minimum of two required)
Primary Indicators (minimum of one is required; check a	all that apply)	· · · · · · · · · · · · · · · · · · ·	il Cracks (B6)
	Nater-Stained Leaves (B9)	<del></del>	atterns (B10)
<u> </u>	Aquatic Fauna (B13)		Lines (B16)
<u> </u>	Marl Deposits (B15)	<del></del>	n Water Table (C2)
<u> </u>	Hydrogen Sulfide Odor (C1)	Crayfish Bu	
<u> </u>	Oxidized Rhizospheres on Living		Visible on Aerial Imagery (C9)
<u> </u>	Presence of Reduced Iron (C4)		Stressed Plants (D1)
<u> </u>	Recent Iron Reduction in Tilled S		c Position (D2)
<u> </u>	Thin Muck Surface (C7)	Shallow Aq	` '
<u> </u>	Other (Explain in Remarks)		raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	,	X FAC-Neutra	. ,
Field Observations:		<del></del>	
Water Table Present? Yes Nox	Depth (inches):		
Saturation Present? Yes No _x	Depth (inches):	Wetland Hydrology Present	? Yes X No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring we	II, aerial photos, previous inspec	tions), if available:	
Remarks: oxidized root channels, Appears recent rain event water	r was at surface soil is moist 1-2	? foot lower small maintaned o	litch in center of feature
, sales is a sale is a sal		. root long of all all maintained	

<b>VEGETATION</b> – Use scientific names of pla	nts.			Sampling Point:	SP4W	/
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2.				That Are OBL, FACW, or FAC:	2	(A)
3.				Total Number of Deminerat		_
4.				Total Number of Dominant Species Across All Strata:	2	(B)
5.				<u> </u>		- ` ′
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0%	(A/B)
7.				Prevalence Index worksheet:		_(-,-)
		=Total Cover		Total % Cover of: N	fultiply by:	
Sapling/Shrub Stratum (Plot size: )		<del>-</del>		OBL species 4 x 1 =		_
				FACW species 104 x 2 =		_
2				FAC species 0 x 3 =	-	_
3		· ——		FACU species 0 x 4 =		_
				UPL species 0 x 5 =		—
4						— (D)
5		· <del></del>		Column Totals: 108 (A)		(B)
6		· <del></del>		Prevalence Index = B/A =		
7				Hydrophytic Vegetation Indicators		
Harb Ctratura (Diat size)		=Total Cover		1 - Rapid Test for Hydrophytic V	egetation	
Herb Stratum (Plot size:)		.,		X 2 - Dominance Test is >50%		
1. Agrostis gigantea	60	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2. Symphyotrichum lanceolatum	40	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (l		porting
3. Cyperus esculentus		<u>No</u>	FACW		,	
4. Persicaria sagittata	1	No	OBL	Problematic Hydrophytic Vegeta	tion' (Explai	in)
5. <u>Carex scoparia</u>	1	<u>No</u>	FACW	<sup>1</sup> Indicators of hydric soil and wetland		must
6. Juncus effusus	3	No	OBL	be present, unless disturbed or proble	ematic.	
7				Definitions of Vegetation Strata:		
8.				Tree – Woody plants 3 in. (7.6 cm) o		ametei
9.				at breast height (DBH), regardless of	height.	
10				Sapling/shrub – Woody plants less	than 3 in. D	ВН
11				and greater than or equal to 3.28 ft (		
12				<b>Herb</b> – All herbaceous (non-woody)	olants rega	ırdless
	108	=Total Cover		of size, and woody plants less than 3		4.000
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines grea	iter than 3.2	28 ft in
1				height.		
2.						
3				Hydrophytic Vegetation		
4.					No	
		=Total Cover				
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			•		
, , ,	,					

Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point: SP4W

Profile De Depth	escription: (Describe Matrix	to the de		<b>nent the</b> Feature		r or con	firm the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	2.5yr 4/1	95	2.5yr 4/6	5	Турс		Loamy/Clayey	Nomarko
8-13	2.5yr 4/1	70	2.5yr 4/6	30			Loamy/Clayey	
								-
			<del></del>					
1	0						21	E. B. B. allina M. M. C.
	Concentration, D=Dep	letion, Ri	M=Reduced Matrix, CS	s=Cover	ed or Coa	ited Sand		ocation: PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
-	oil Indicators: sol (A1)		Polyvalue Below	Surface	(S8) (I <b>R</b>	R R		uck (A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)	Ouriacc	, (00) ( <b>LI</b>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		rairie Redox (A16) (LRR K, L, R)
	Histic (A3)		Thin Dark Surfac	e (S9) (	LRR R. M	LRA 149		ucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	ogen Sulfide (A4)		High Chroma Sa					ue Below Surface (S8) ( <b>LRR K, L</b> )
	fied Layers (A5)		Loamy Mucky Mi					rk Surface (S9) ( <b>LRR K, L</b> )
Deple	ted Below Dark Surfac	ce (A11)	Loamy Gleyed M	atrix (F2	2)		Iron-Ma	nganese Masses (F12) ( <b>LRR K, L, R</b> )
Thick	Dark Surface (A12)		x Depleted Matrix (	(F3)			Piedmo	nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
Sand	y Mucky Mineral (S1)		Redox Dark Surf	ace (F6)	)		Mesic S	podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy	y Gleyed Matrix (S4)		Depleted Dark S	urface (l	F7)		Red Par	rent Material (F21)
	y Redox (S5)		Redox Depression					allow Dark Surface (TF12)
	ped Matrix (S6)		Marl (F10) ( <b>LRR</b>	<b>K</b> , <b>L</b> )			Other (E	Explain in Remarks)
Dark	Surface (S7)							
31. 12. 1						P. A.		
	of hydrophytic vegeta		wetiand nydrology mus	st be pre	esent, unie	ess distur	bed or problemation	).
Type:	e Layer (if observed)	•						
	:						Unadaia Cail Da	
Depth (i	ncnes)						Hydric Soil Pr	esent? Yes X No No
Remarks:	f : i   f N		.l			/: O	0 t	IOO Field lediesters of thodais Caile
	0 March 2013 Errata. (							CS Field Indicators of Hydric Soils ocx)
	,	•	<b>5</b>	_	-			,

Project/Site: Wisner		Ci	ty/County: Hastings/O	swego	Sampling Date:	7/23/2024	
Applicant/Owner: The Wetlan	d Trust inc.			State:	NY Sampling	Point: SP5U	
Investigator(s): EF,HF,KH		Se	ection, Township, Rang	e: Town of Hasting			
Landform (hillside, terrace, etc.	.):	Loca	ıl relief (concave, conv	ex, none): Concave	Slo	pe (%): 0-1	
Subregion (LRR or MLRA): LR		: 43.3074362815	•	: -76.2184815063		m: WGS 84	
Soil Map Unit Name: Madalin s					ification: none		
Are climatic / hydrologic conditi		•			n in Remarks.)		
Are Vegetation N, Soil	N , or Hydrology	N significantly o	isturbed? Are "Norr	nal Circumstances" p	resent? Yes _	x No	
Are Vegetation N, Soil	N , or Hydrology	N naturally prob	lematic? (If neede	d, explain any answe	rs in Remarks.)		
SUMMARY OF FINDING	S – Attach site ma	p showing san	npling point locat	ions, transects, i	mportant featu	res, etc.	
Hydrophytic Vegetation Prese	ent? Yes	No x	Is the Sampled Are	a			
Hydric Soil Present?	Yes x	No No	within a Wetland?	Yes	NoX		
Wetland Hydrology Present?	Yes	No x	If yes, optional Wetla	and Site ID:			
Seledcted location based upo	n arial photographs wet	signature,					
HYDROLOGY							
Wetland Hydrology Indicator	rs:			Secondary Ind	icators (minimum of	two required)	
Primary Indicators (minimum o	of one is required; checl	k all that apply)		Surface S	oil Cracks (B6)		
Surface Water (A1)		Water-Stained Le	aves (B9)	Drainage I	Patterns (B10)		
High Water Table (A2)		_Aquatic Fauna (B			Moss Trim Lines (B16)		
Saturation (A3)		Marl Deposits (B1	,		n Water Table (C2)		
Water Marks (B1)		Hydrogen Sulfide			urrows (C8)	(00)	
Sediment Deposits (B2)		•	neres on Living Roots (	· —	Visible on Aerial In	,	
Drift Deposits (B3)		Presence of Redu	` ,		Stressed Plants (D nic Position (D2)	1)	
Algal Mat or Crust (B4) Iron Deposits (B5)		Thin Muck Surfac	ction in Tilled Soils (C6	<i>-</i>	quitard (D3)		
Inundation Visible on Aeri	ial Imagery (B7)	Other (Explain in I	` '		graphic Relief (D4)		
Sparsely Vegetated Conc		Other (Explain in I	(Ciliaiks)		ral Test (D5)		
Field Observations:	avo curidos (Bo)			1710 11001	141 1661 (20)		
Surface Water Present?	Yes No x	Depth (inches):					
Water Table Present?	Yes No x	-					
Saturation Present?	Yes No x	Depth (inches):		d Hydrology Presen	t? Yes	No x	
(includes capillary fringe)		/ .				- —	
Describe Recorded Data (stre	am gauge, monitoring v	vell, aerial photos,	orevious inspections), i	f available:			
Remarks: No signs of wetland hydrology	,						

2.	er Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:  Percent of Dominant Species	0	_(A) _(B)
2.			That Are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:		_ ` '
3. 4. 5. 6. 7.			That Are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:		_ ` '
4.			Species Across All Strata:	1	_(B)
4.			Species Across All Strata:	1	_(B)
5			Percent of Dominant Species		
6			I Percent of Dominant Species		
7.			That Are OBL, FACW, or FAC:	0.0%	(A/B)
			Prevalence Index worksheet:	0.070	(,,,,)
	=Total Cover			Multiply by:	
Sapling/Shrub Stratum (Plot size: )			OBL species 0 x 1 =		_
				0	—
1			· ——	-	—
2	_		<u> </u>	0	—
3			FACU species0 x 4 =		—
4			UPL species 90 x 5 =	450	—
5			Column Totals: 90 (A)	450	(B)
6			Prevalence Index = B/A =	5.00	
7			Hydrophytic Vegetation Indicators	s:	
	=Total Cover		1 - Rapid Test for Hydrophytic V	egetation/	
Herb Stratum (Plot size:)			2 - Dominance Test is >50%		
1. Glycine max 90	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2.			4 - Morphological Adaptations <sup>1</sup> (	Provide sup	porting
3.			data in Remarks or on a sepa	rate sheet)	
4.			Problematic Hydrophytic Vegeta	ation <sup>1</sup> (Expla	ain)
5			<sup>1</sup> Indicators of hydric soil and wetland		must
6.	_		be present, unless disturbed or prob	iematic.	
7			Definitions of Vegetation Strata:		
8			Tree – Woody plants 3 in. (7.6 cm) o		iameter
9			at breast height (DBH), regardless of	f height.	
10			Sapling/shrub – Woody plants less	than 3 in. D	вн
11			and greater than or equal to 3.28 ft (	(1 m) tall.	
12			<b>Herb</b> – All herbaceous (non-woody)	plants rega	ardless
90	=Total Cover		of size, and woody plants less than 3		4.555
Woody Vine Stratum (Plot size:)			Woody vines – All woody vines grea	ater than 3.2	28 ft in
1			height.	ator triair 0.2	-0 10 111
2					
3.			Hydrophytic		
4.			Vegetation Present? Yes	No x	
	=Total Cover				
Remarks: (Include photo numbers here or on a separate sheet					

Northcentral and Northeast Region – Version 2.0

US Army Corps of Engineers

SOIL Sampling Point: SP5U

Profile De	escription: (Describe	to the de	pth needed to docu	ment the	indicato	r or con	firm the absence of in	dicators.)
Depth	Matrix		Redox	x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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			4-Dadus d Matrix Ci				21	DI -Dana Linina Manadria
	-Concentration, D=Depoil Indicators:	letion, Ri	M=Reduced Matrix, C	S=Cover	ed or Coa	ted Sand		n: PL=Pore Lining, M=Matrix.  oblematic Hydric Soils <sup>3</sup> :
•	sol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b>	R R.		A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)		( - / (	,		Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfac	ce (S9) (	LRR R, M	LRA 149		Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	ogen Sulfide (A4)		—— High Chroma Sa					low Surface (S8) (LRR K, L)
	fied Layers (A5)		Loamy Mucky M					rface (S9) (LRR K, L)
	eted Below Dark Surfac	e (A11)	Loamy Gleyed M			-, -,		ese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	( ,	x Depleted Matrix		,			odplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mucky Mineral (S1)		Redox Dark Surf		١			c (TA6) ( <b>MLRA 144A, 145, 149B</b> )
							Red Parent N	
	y Gleyed Matrix (S4)		Depleted Dark S  Redox Depression		-7)			Dark Surface (TF12)
	y Redox (S5)			` '				, ,
	ped Matrix (S6)		Marl (F10) ( <b>LRR</b>	K, L)			Other (Explai	n in Remarks)
Dark	Surface (S7)							
<sup>3</sup> Indicators	s of hydrophytic vegeta	tion and v	wetland hydrology mu	st be pre	sent, unle	ss distur	bed or problematic.	
Restrictiv	e Layer (if observed):							
Type:								
Depth (i	inches):						Hydric Soil Presen	t? Yes <u>x</u> No
Remarks:			Jana Narthagat Dagis	anal Cum	mlamant\	laraian O	O to reflect the NDCC F	iold Indicators of Hudric Caile
	0 March 2013 Errata. (							ield Indicators of Hydric Soils
70.0.0	oa. o 20 10 2a.a. (.		go.,,go.,,				o:::_p=_oo:=oo:uoo.,	

Project/Site: Wisner		Ci	ty/County: Has	stings/Oswego		Sampling Date:	7/23/2024
Applicant/Owner: The Wetlan	nd Trust inc.				State: N	NY Sampling I	Point: SP6U
Investigator(s): EF,HF,KH		Se	ection, Townshi	ip, Range:			
Landform (hillside, terrace, etc	c.):	Loca	al relief (conca	ve, convex, non	e): Concave	Slop	pe (%): 0-1
Subregion (LRR or MLRA): LI	RR L, MLRA 101 Lat	: 43.3079588018		Long: -76.22	204291663	Datum	n: WGS 84
Soil Map Unit Name: Madalin					NWI classifica	ation: none	-
Are climatic / hydrologic condi		or this time of year?	7 Yes	x No	(If no, explain in		
, ,	n , or Hydrology	•			cumstances" pres		x No
	n , or Hydrology				ain any answers ir	_	<u> </u>
SUMMARY OF FINDING				•	•	,	es, etc.
Hydrophytic Vegetation Pres	ent? Yes	No x	Is the Samp	oled Area			
Hydric Soil Present?	Yes x	No No	within a We		Yes	No X	
Wetland Hydrology Present?	Yes	No No	If yes, option	nal Wetland Site	= ID:		
within agricultural areas have	some degree of disturb	ance to 3 paramete	:FS				
HYDROLOGY							
Wetland Hydrology Indicate				<u>s</u>	Secondary Indicat	-	two required)
Primary Indicators (minimum	of one is required; checl		(DO)	<del></del> -	Surface Soil (	` '	
Surface Water (A1)		_Water-Stained Lea	, ,	_	Drainage Pati		
High Water Table (A2) Saturation (A3)		_Aquatic Fauna (B1	•	_	Moss Trim Lir	, ,	
Water Marks (B1)		_Marl Deposits (B15 Hydrogen Sulfide	,	_	Crayfish Burro	Vater Table (C2)	
Sediment Deposits (B2)		Oxidized Rhizosph	` '	Poots (C3)		sible on Aerial Ima	ageny (CQ)
Drift Deposits (B3)		Presence of Redu	•			ressed Plants (D1	,
Algal Mat or Crust (B4)		Recent Iron Reduc	` ,	Soils (C6)	Geomorphic F	,	1)
Iron Deposits (B5)		Thin Muck Surface			Shallow Aquit	` '	
Inundation Visible on Ae	rial Imagery (B7)	Other (Explain in F	` '	_		phic Relief (D4)	
Sparsely Vegetated Con	- , , ,	_ ` ` ` '	,	_	FAC-Neutral		
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):		Wetland Hydr	ology Present?	Yes	No
(includes capillary fringe)							
Describe Recorded Data (str	eam gauge, monitoring v	vell, aerial photos, p	orevious inspec	ctions), if availal	ble:		
Remarks: No signs of wetland hydrolog							
Two signs of welland flydrolog	Jy						

nts.			Sampling Point:	SP6U	
Absolute % Cover	Dominant Species?	Indicator Status	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	0.00/	(
				0.0% (	(A/B)
	-Total Cayon			ltinly by	
	- Total Cover				-
			<u> </u>		_
					_
				0	_
			FACU species 0 x 4 =	0	_
			UPL species <u>80</u> x 5 =	400	_
	-		Column Totals: 80 (A)	400	(B)
			Prevalence Index = B/A =	5.00	
			Hydrophytic Vegetation Indicators:		
	=Total Cover		1 - Rapid Test for Hydrophytic Ved	getation	
				,	
80	Voc	LIDI	<del></del>		
-	163	<u> </u>	I—	rovido ounn	ortin
			data in Remarks or on a separa	te sheet)	orunç
			Problematic Hydrophytic Vegetation	on <sup>1</sup> (Explain	1)
					ust
			Definitions of Vegetation Strata:		
					mete
			Sapling/shrub – Woody plants less th	an 3 in. DBI	Н
			<b>Herb</b> – All herbaceous (non-woody) pl	ants, regard	dless
80	=Total Cover		of size, and woody plants less than 3.2	28 ft tall.	
			<b>Woody vines</b> – All woody vines greate height.	er than 3.28	ft in
			Hydrophytic Vegetation		
			Present? Yes No	о <u>х</u>	
	80	% Cover Species?  =Total Cover  =Total Cover  80 Yes	% Cover Species? Status	Species?   Status   Dominance Test worksheet:	Month   Mont

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SOIL Sampling Point: SP6U

		to the de	pth needed to docur			r or conf	firm the absence o	of indicators.)
Depth	Matrix			Feature		2		_
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	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 <sub>Type:</sub> C=C	Concentration D=Den	Lation Di	A=Reduced Matrix CS	-Cover	ad or Coo	tod Cond	Croins 2l os	ection: DI = Doro Lining M=Matrix
	Concentration, D=Dep	ietion, Kr	M=Reduced Matrix, CS	s=Cover	ed or Coa	ited Sand		cation: PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
Histoso			Polyvalue Below	Surface	(S8) ( <b>LR</b>	RR,		ck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	Epipedon (A2)		MLRA 149B)		( - / (	,		airie Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfac	e (S9) (I	RR R. M	LRA 149		cky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	gen Sulfide (A4)		High Chroma Sa					e Below Surface (S8) ( <b>LRR K, L</b> )
	ed Layers (A5)		Loamy Mucky Mi					k Surface (S9) ( <b>LRR K, L</b> )
	ed Below Dark Surfac	e (A11)	Loamy Gleyed M			-, -,		iganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	<i>( ( ( ( ( ( ( ( ( (</i>	x Depleted Matrix	•	•)			t Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		Redox Dark Surf	` '				podic (TA6) (MLRA 144A, 145, 149B)
			Depleted Dark S	, ,				
	Gleyed Matrix (S4) Redox (S5)		Redox Depression	•	-7)			ent Material (F21) allow Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) (LRR					xplain in Remarks)
	urface (S7)		Wall (F10) (LKK	κ, ∟)			Other (EX	Chair in Remarks)
Dark S	unace (S7)							
<sup>3</sup> Indicators	of hydrophytic vegeta	tion and v	wetland hydrology mus	st be pre	sent, unle	ess disturl	bed or problematic.	
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil Pre	esent? Yes x No No
Remarks:							1	
								CS Field Indicators of Hydric Soils
		http://www	w.nrcs.usda.gov/Intern	et/FSE_	DOCUME	ENTS/nrcs	s142p2_051293.do	cx) Horizon depths shallow due to
periodic flo	od events							

Project/Site: Wisner	City/County: H	astings/Oswego	Sampling Date: 7/23/24			
Applicant/Owner: The Wetland Trust inc.		State:	NY Sampling Point: SP7U			
Investigator(s): EF,HF,KH	Section, Towns	hip, Range:				
Landform (hillside, terrace, etc.):	Local relief (conc	ave, 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 classi	fication: none			
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes	x No (If no, explain	n in Remarks.)			
Are Vegetation, Soil, or Hydrology	n significantly disturbed?	Are "Normal Circumstances" pr	resent? Yes x No			
Are Vegetation n , Soil n , or Hydrology	n naturally problematic?	(If needed, explain any answer	s in Remarks.)			
SUMMARY OF FINDINGS – Attach site ma	p showing sampling poi	nt locations, transects, i	mportant features, etc.			
Hydrophytic Vegetation Present? Yes	No x Is the Sam	ipled Area				
Hydric Soil Present? Yes x	No within a W		NoX			
Wetland Hydrology Present? Yes	No x If yes, option	onal Wetland Site ID:				
75 feet from drainage swale in agricultural field						
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)			
Primary Indicators (minimum of one is required; check	k all that apply)	Surface So	oil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage F	Patterns (B10)			
High Water Table (A2)	_Aquatic Fauna (B13)		Moss Trim Lines (B16)			
Saturation (A3)	Marl Deposits (B15)		Dry-Season Water Table (C2)			
Water Marks (B1)	Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizospheres on Livir		Visible on Aerial Imagery (C9)			
Drift Deposits (B3) Algal Mat or Crust (B4)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled		Stressed Plants (D1) iic Position (D2)			
Iron Deposits (B5)	Thin Muck Surface (C7)	• • • • • • • • • • • • • • • • • • • •	quitard (D3)			
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		graphic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	/		ral Test (D5)			
Field Observations:		<del></del>				
Surface Water Present? Yes No x	Depth (inches):					
Water Table Present? Yes No x	Depth (inches):					
Saturation Present? Yes No _x	Depth (inches):	Wetland Hydrology Presen	t? Yes Nox			
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring w	vell, aerial photos, previous insp	ections), if available:				
Remarks:						
No signs of wetland hydrology, no drainage patterns						

<u>Tree Stratum</u> (Plot size:)  1				Sampling Point:		<u> </u>
1	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
		. <u></u>		Number of Dominant Species		
2.				That Are OBL, FACW, or FAC:	0	(A)
3.				Total Number of Densire and		_
4.				Total Number of Dominant Species Across All Strata:	1	(B)
E						- ` ′
6				Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0%	(A/B)
7.				Prevalence Index worksheet:	0.070	(,,,,,)
		=Total Cover			ultiply by:	
Sapling/Shrub Stratum (Plot size: )		,		OBL species 0 x 1 =		
					0	
2				FAC species 0 x3 =		
·				· -		
3				FACU species 0 x 4 =	0	
4				UPL species100 x 5 =		
5				Column Totals: 100 (A)	500	(B)
6				Prevalence Index = B/A =	5.00	
7		. <u></u>		Hydrophytic Vegetation Indicators:		
<u>-</u>		=Total Cover		1 - Rapid Test for Hydrophytic Ve	egetation	
Herb Stratum (Plot size:)				2 - Dominance Test is >50%		
1. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2.				4 - Morphological Adaptations <sup>1</sup> (F		porting
3.		. <u> </u>		data in Remarks or on a separ	ate sheet)	
4				Problematic Hydrophytic Vegetat	ion¹ (Expla	in)
5				<sup>1</sup> Indicators of hydric soil and wetland	hydrology i	muet
6.				be present, unless disturbed or proble		must
7				Definitions of Vegetation Strata:		
8.				Trace (Managharda 2 in (7 C arra) an		4
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of		ameter
10.						
11.				Sapling/shrub – Woody plants less t and greater than or equal to 3.28 ft (1		ВН
12.					,	
	100	=Total Cover		Herb – All herbaceous (non-woody) p of size, and woody plants less than 3.		ırdless
- <u>Woody Vine Stratum</u> (Plot size: )	100	Total Gover		or size, and weddy plants less than of	20 It tail.	
(1 lot size.				<b>Woody vines</b> – All woody vines great height.	ter than 3.2	28 ft in
1		· -		neight.		
1						
2.				Hydrophytic		
2				Hydrophytic Vegetation		
2.		=Total Cover		Vegetation	lox	

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**SOIL** Sampling Point: SP7U

Profile De	escription: (Describe	to the de	pth needed to docu	ment the	indicato	r or con	firm the absence of ind	icators.)
Depth	Matrix			x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	
	Concentration, D=Dep	letion, RI	M=Reduced Matrix, C	S=Cover	ed or Coa	ted Sand		: PL=Pore Lining, M=Matrix.
•	oil Indicators:		5 5.		(00) (1.5			blematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b>	RR,		10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)	(00) (				Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surface					eat or Peat (S3) ( <b>LRR K, L, R</b> )
Hydro	ogen Sulfide (A4)		High Chroma Sa	ands (S1	1) ( <b>LRR K</b>	(, L)	Polyvalue Belo	ow Surface (S8) ( <b>LRR K, L</b> )
Stratif	fied Layers (A5)		Loamy Mucky M	ineral (F	1) (LRR K	(, L)	Thin Dark Surf	ace (S9) ( <b>LRR K, L</b> )
Deple	eted Below Dark Surfac	e (A11)	Loamy Gleyed N	/latrix (F2	2)		Iron-Manganes	se Masses (F12) ( <b>LRR K, L, R</b> )
Thick	Dark Surface (A12)		x Depleted Matrix	(F3)			Piedmont Floo	dplain Soils (F19) ( <b>MLRA 149B</b> )
Sand	y Mucky Mineral (S1)		Redox Dark Sur	face (F6)	)		Mesic Spodic (	(TA6) (MLRA 144A, 145, 149B)
Sand	y Gleyed Matrix (S4)		Depleted Dark S	Surface (I	<del>-</del> 7)		Red Parent Ma	aterial (F21)
	y Redox (S5)		Redox Depression	•	,		Verv Shallow [	Dark Surface (TF12)
	ped Matrix (S6)		 Marl (F10) ( <b>LRR</b>				Other (Explain	` '
	Surface (S7)			, -,				,
	s of hydrophytic vegeta		vetland hydrology mu	st be pre	sent, unle	ess distur	bed or problematic.	
Type:	re Layer (if observed):							
_	inches):						Hydric Soil Present	? Yes X No
Remarks:							, , , , , , , , , , , , , , , , , , , ,	
		orthcentra	l and Northeast Region	onal Sup	plement \	ersion 2.	0 to reflect the NRCS Fie	eld Indicators of Hydric Soils
	0 March 2013 Errata. (I							·

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	
	cantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation _ n _, Soil _ n _, or Hydrology _ n _ natural	
<u> </u>	ving 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:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that a	spply) Surface Soil Cracks (B6)
<del></del>	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fa	
Saturation (A3) Marl Depos	<u> </u>
	Sulfide Odor (C1) Crayfish Burrows (C8)
	hizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
	of Reduced Iron (C4) Stunted or Stressed Plants (D1) Stunted or Stressed Plants (D2)
1 <del></del>	n Reduction in Tilled Soils (C6) Geomorphic Position (D2)
	Surface (C7) Shallow Aquitard (D3) lain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inc	hes):
Water Table Present? Yes No x Depth (inc	
Saturation Present? Yes No x Depth (inc	hes): Wetland Hydrology Present? Yes X No x
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if available:
Remarks:	
No signs of wetland hydrology except for oxidized root channels	\$

Absolute	Dominan	Indicator	
% Cover	t	Status	Dominance Test worksheet:
			Number of Dominant Species
_			That Are OBL, FACW, or FAC: 2 (A
			(A
			Total Number of Dominant
			Species Across All Strata: 2 (B Percent of Dominant Species
			That Are OBL, FACW, or
			FAC: 100.0% (A
			Prevalence Index worksheet:
	=Total Cover		Total % Cover of: Multiply by:
_)			OBL species4 x 1 =4
			FACW specie: 80 x 2 = 160
			FAC species 3 x 3 = 9
			FACU species 1 x 4 = 4
			UPL species 0 x 5 = 0
			Column Totals 88 (A) 177 (
			Prevalence Index = B/A = 2.01
			Hydrophytic Vegetation Indicators:
	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
			X 2 - Dominance Test is >50%
25	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
3	No	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide sup
15	No	FACW	data in Remarks or on a separate sheet)
	No		Problematic Hydrophytic Vegetation <sup>1</sup> (Expla
	No		
			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problemati
			Definitions of Vegetation Strata:
	103	TAOW	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. D
			and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants,
			regardless of size, and woody plants less than 3
88	=Total Cover		ft tall.
_)			Woody vines – All woody vines greater than 3.2
			ft in height.
			Hydrophytic
			Vegetation Present? Yes X No
		## Cover t	## Cover t Status    Status

**SOIL** SP8U Sampling Point:

Profile De Depth	scription: (Describ Matrix	e to the d	•	<b>ument t</b> x Feature		itor or co	onfirm the absence	e of indicat	tors.)		
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remar	ks	
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				
			_								
			_								
<sup>1</sup> Type: C=	Concentration, D=De	epletion, R	M=Reduced Matrix, (	CS=Cov	ered or C	oated Sa				g, M=Matrix.	
_	il Indicators:		Daharahar Balan	. 0	· (OO) (LI		Indicators fo		-		
	ol (A1) Epipedon (A2)		Polyvalue Below MLRA 149B)		e (58) ( <b>Li</b>	KK K,		ск (А10) ( <b>L</b> airie Redox		ILRA 149B)	
	Histic (A3)		Thin Dark Surfa		LRR R. I	MLRA 14				(LRR K, L, F	₹)
	gen Sulfide (A4)		High Chroma Sa				· —	e Below Su			-,
	ied Layers (A5)	,	Loamy Mucky M					k Surface (\$		•	
Deplet	ted Below Dark Surfa	ace (A11)	Loamy Gleyed N	√atrix (F	2)		Iron-Man	ganese Ma	sses (F12)	(LRR K, L, F	R)
Thick I	Dark Surface (A12)	•	Depleted Matrix	(F3)			Piedmon	t Floodplair	Soils (F19	) (MLRA 149	9B)
Sandy	Mucky Mineral (S1)	·	Redox Dark Sur	face (F6	i)		Mesic Sp	odic (TA6)	(MLRA 14	4A, 145, 149	<b>9B</b> )
Sandy	Gleyed Matrix (S4)		Depleted Dark S	Surface (	(F7)		Red Pare	ent Material	(F21)		
Sandy	Redox (S5)		Redox Depressi	ons (F8)			Very Sha	llow Dark S	Surface (TF	12)	
Strippe	ed Matrix (S6)		Marl (F10) ( <b>LRF</b>	R K, L)			Other (Ex	xplain in Re	marks)		
Dark S	Surface (S7)										
<sup>3</sup> Indicators	of hydrophytic veget	ation and v	wetland hydrology mu	ust be pr	esent, un	less distu	urbed or problemation	<b>D</b> .			
Restrictive	e Layer (if observed										
Type:											
Depth (ir	nches):						Hydric Soil Pre	esent?	Yes	NoX	
	orm is revised from N March 2013 Errata.									f Hydric Soils below 20 inct	
US Arı	my Corps of Enginee	rs					Northce	ntral and N	ortheast Re	eaion — Versi	ion 2.(

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	e of year? Yes x No (If no, explain in Remarks.)
	eantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation n , Soil n , or Hydrology n natural	
	ving 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:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that a	pply) Surface Soil Cracks (B6)
<del></del>	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fa	<u>—</u>
Saturation (A3)Marl Depos	<u> </u>
<del></del> -	Sulfide Odor (C1) Crayfish Burrows (C8)
	hizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
l <del></del>	of Reduced Iron (C4) Stunted or Stressed Plants (D1)  Reduction in Tilled Soils (C6) Geomorphic Position (D2)
1 <del></del>	n Reduction in Tilled Soils (C6) Geomorphic Position (D2) Surface (C7) Shallow Aquitard (D3)
<del></del>	lain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (inc	hes):
Water Table Present? Yes No _x Depth (inc	hes):
Saturation Present? Yes No _x Depth (inc	hes): Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
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	,

Tree Stratum (Plot size:	A	bsolute	Dominan	Indicator	
,		Cover	t	Status	Dominance Test worksheet:
					Number of Dominant Species That Are OBL, FACW, or
2					FAC: 1 (A)
3.	<u> </u>				
					Total Number of Dominant Species Across All Strata: 1 (B)
1 5.					Percent of Dominant Species
					That Are OBL, FACW, or FAC: 100.0% (A/
			-		Prevalence Index worksheet:
'					
)   (O)   O( ( (D) ( )	_		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:	)				OBL species18 x 1 =18
l					FACW specie: 80 x 2 = 160
2					FAC species0 x 3 =0
3.					FACU species 1 x 4 = 4
l					UPL species0 x 5 =0
5					Column Totals 99 (A) 182 (
S					Prevalence Index = B/A = 1.84
7					Hydrophytic Vegetation Indicators:
			=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:	)				X 2 - Dominance Test is >50%
Agrostis gigantea		10	No	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Carex vulpinoidea		15	No	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide sup
3. Juncus effusus		3	No	OBL	data in Remarks or on a separate sheet)
Agrostis stolonifera		70	Yes	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explai
					Problematic Hydrophytic Vegetation (Expla
5. Lonicera tatarica		1	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology
S					must be present, unless disturbed or problematic
7					Definitions of Vegetation Strata:  Tree – Woody plants 3 in. (7.6 cm) or more in
3.					diameter at breast height (DBH), regardless of
9					height.
10					Sapling/shrub – Woody plants less than 3 in. D
1					and greater than or equal to 3.28 ft (1 m) tall.
					<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3
12		99 :	=Total Cover		ft tall.
12					
	)				Mandy vines All woods vines greater than 2.5
Noody Vine Stratum (Plot size:					<b>Woody vines</b> – All woody vines greater than 3.2 ft in height.
Woody Vine Stratum (Plot size:					
1					ft in height.  Hydrophytic
Woody Vine Stratum (Plot size:  1. 2.					Hydrophytic Vegetation
Woody Vine Stratum (Plot size:			=Total Cover		ft in height.  Hydrophytic

**SOIL** Sampling Point: SP9W

Profile D	escription: (Describ	e to the d	epth needed to doc	ument t	he indica	tor or co	onfirm the absence of i	ndicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	
							<u> </u>	
<sup>1</sup> Type: C:	=Concentration, D=De	epletion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sa	and Grains. <sup>2</sup> Location	n: PL=Pore Lining, M=Matrix.
Hydric So	oil Indicators:						Indicators for Pro	oblematic Hydric Soils <sup>3</sup> :
Histo:	sol (A1)		Polyvalue Belov	w Surfac	e (S8) ( <b>LF</b>	RR R,		10) ( <b>LRR K, L, MLRA 149B</b> )
	Epipedon (A2)		MLRA 149B)					Redox (A16) ( <b>LRR K, L, R</b> )
	(Histic (A3)		Thin Dark Surfa				<b>19B</b> ) 5 cm Mucky P	Peat or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)		High Chroma S					ow Surface (S8) ( <b>LRR K, L</b> )
	fied Layers (A5)		Loamy Mucky N			<b>K</b> , <b>L</b> )		face (S9) ( <b>LRR K, L</b> )
	eted Below Dark Surfa	ace (A11)	Loamy Gleyed		2)			se Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		x Depleted Matrix					odplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mucky Mineral (S1)		Redox Dark Su	•	•			(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)		Depleted Dark				Red Parent M	
	y Redox (S5)		Redox Depress		)			Dark Surface (TF12)
	ped Matrix (S6)		Marl (F10) ( <b>LRF</b>	₹ K, L)			Other (Explain	in Remarks)
Dark	Surface (S7)							
3Indicator	s of hydrophytic veget	ation and	watland budralagu m	uat ha nr	ocent un	logo dioti	irhad ar problematic	
	ve Layer (if observed		wettand nydrology m	ust be pr	esent, un	iess disit	problematic.	
Type:	• `	•						
							Hydric Soil Present	12 Van V Na
	inches):						nyuric 3011 Present	t? Yes X No
Remarks:		lorthoontr	al and Northagat Pag	rional Cu	nnlomont	Vorsion	2.0 to reflect the NDCS	Field Indicators of Hydric Soils
							2.0 to reflect the NRCS (arcs142p2_051293.docx)	
	e clay we find		<b>3</b>		_		, _ , , , , , , , , , , , , , , , , , ,	, , ,

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

Project/Site: Wisner	City/County: Hasting	js/Oswego	Sampling Date: <u>7/23/2024</u>
Applicant/Owner: The Wetland Trust inc.		State:	NY Sampling Point: SP9U
Investigator(s): EF,HF,KH	Section, Township, I	Range:	
Landform (hillside, terrace, etc.):	Local relief (concave,	convex, none Concave	Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat:		 _ong:	Datum: WGS 84
Soil Map Unit Name Madalin silt loam		-	fication: none
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes x	No (If no, explair	
Are Vegetation, Soil, or Hydrology			,
Are Vegetation, Soil, or Hydrology		eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site ma		•	•
Hydrophytic Vegetation Present? Yes	No X Is the Sampled	Δrea	
Hydric Soil Present? Yes x	No within a Wetlan		No X_
Wetland Hydrology Present? Yes	No X If yes, optional \		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required
Primary Indicators (minimum of one is required; checl	k all that apply)	Surface Sc	oil Cracks (B6)
Surface Water (A1)	Vater-Stained Leaves (B9)	Drainage F	Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim	Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Seasor	n Water Table (C2)
<u> </u>	lydrogen Sulfide Odor (C1)		urrows (C8)
<u> </u>	Oxidized Rhizospheres on Living R	· / <del></del>	Visible on Aerial Imagery (C9)
<u> </u>	Presence of Reduced Iron (C4)		Stressed Plants (D1)
<u> </u>	Recent Iron Reduction in Tilled Soi	` '	ic Position (D2)
<del></del>	Thin Muck Surface (C7)		quitard (D3)
Inundation Visible on Aerial Imagery (B7) CS Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)		graphic Relief (D4) al Test (D5)
Field Observations:		PAC-Neuti	ai Test (D3)
	Depth (inches):		
	Depth (inches):		
		etland Hydrology Preser	nt? Yes No X
(includes capillary fringe)	· · · /		
Describe Recorded Data (stream gauge, monitoring w	vell, aerial photos, previous inspec	ctions), if available:	
Remarks:			
No signs of wetland hydrology			

Tree Stratum (Plot size: )	Absolute	Dominan	Indicator	
Tree Stratum (Plot size:	% Cover	t	Status	Dominance Test worksheet:
				Number of Dominant Species
•				That Are OBL, FACW, or
2				FAC: (A)
B				Total Number of Dominant
i				Species Across All Strata: 1 (B)
5.				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 0.0% (A/I
-				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:	_)			OBL species0 x 1 =0
				FACW specie: 0 x 2 = 0
)				FAC species $0 \times 3 = 0$
•				FACU species 0 x 4 = 0
				UPL species 100 x 5 = 500
				· — —
5				Column Totals 100 (A) 500 (I
S				Prevalence Index = B/A = 5.00
·				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supp
				data in Remarks or on a separate sheet)
3.				, ,
1				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
S				must be present, unless disturbed or problematic
7.				Definitions of Vegetation Strata:
3.				Tree – Woody plants 3 in. (7.6 cm) or more in
				diameter at breast height (DBH), regardless of height.
·				neight.
0				Sapling/shrub – Woody plants less than 3 in. Di
1				and greater than or equal to 3.28 ft (1 m) tall.
				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.
12		=Total Cover		ft tall.
12.	100			it tall.
	100			
Voody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.2
Voody Vine Stratum (Plot size:	_)			
Noody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.26 ft in height.
	_)			Woody vines – All woody vines greater than 3.20
Noody Vine Stratum (Plot size:	_)	<u> </u>		Woody vines – All woody vines greater than 3.26 ft in height.  Hydrophytic

**SOIL** Sampling Point: SP9U

Profile D	escription: (Describ	e to the c	lepth needed to doc	ument t	he indica	itor or co	onfirm the absence of ind	icators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	
								_
	=Concentration, D=De	pletion, R	M=Reduced Matrix, 0	CS=Cov	ered or C	oated Sa		PL=Pore Lining, M=Matrix.
-	oil Indicators:							ematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Below		e (S8) ( <b>Ll</b>	RR R,		) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)					dox (A16) ( <b>LRR K, L, R</b> )
	K Histic (A3)		Thin Dark Surfa				·	t or Peat (S3) ( <b>LRR K, L, R</b> )
	ogen Sulfide (A4)		High Chroma Sa					Surface (S8) (LRR K, L)
	ified Layers (A5)		Loamy Mucky M			<b>K</b> , <b>L</b> )		ce (S9) ( <b>LRR K, L</b> )
	eted Below Dark Surfa	ice (A11)			2)			Masses (F12) ( <b>LRR K, L, R</b> )
	Dark Surface (A12)		x Depleted Matrix					plain Soils (F19) (MLRA 149B)
	ly Mucky Mineral (S1)		Redox Dark Sur					A6) ( <b>MLRA 144A, 145, 149B</b> )
	ly Gleyed Matrix (S4)		Depleted Dark S				Red Parent Mate	
	ly Redox (S5)		Redox Depressi		)			rk Surface (TF12)
	ped Matrix (S6)		Marl (F10) ( <b>LRF</b>	R K, L)			Other (Explain in	Remarks)
Dark	Surface (S7)							
3								
	s of hydrophytic vegeta		wetland hydrology mi	ust be pr	esent, un	less distu	ırbed or problematic.	
	ve Layer (if observed	•						
Type:								
Depth (	(inches):						Hydric Soil Present?	Yes x No
Remarks							•	
								eld Indicators of Hydric Soils
version 7.	.0 March 2013 Errata.	(http://ww	/w.nrcs.usda.gov/Inte	rnet/FSE	E_DOCUI	MENTS/n	nrcs142p2_051293.docx)	

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Micron- Upper Caughdenoy Creek Stream and Wetland Mitigation Plan	May 2025
Appendix D.	

Category	Common Name	Scientific Name	Conservation Status	Indicator Status	Native	Buxton Creek	Lower Caughdenoy Creek	Oneida River	Fish Creek	Upper Caughdenoy Creek	Sixmile Creek
Amphibian	American toad	Anaxyrus americanus	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓	✓	✓	
Amphibian	gray treefrog	Dryophytes versicolor	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Amphibian	northern green frog	Lithobates clamitans melar	c S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓	✓	
Amphibian	northern leopard frog	Lithobates pipiens	S5 G5: secure in NYS and globally	-	Yes		✓		✓	✓	
Amphibian	wood frog	Lithobates sylvaticus	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	red-winged blackbird	Agelaius phoeniceus	S5B G5: secure (breeding) in NYS and	-	Yes		<b>√</b>	<b>√</b>	1		
Bird	wood duck	Aix sponsa	globally S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	mallard	Anas platyrhynchos	S5 G5: secure in NYS and globally	-	Yes			<b>√</b>			1
Bird	American pipit	Anthus rubescens	Least concern	-	Yes			✓		✓	✓
Bird	sandhill crane	Antigone canadensis	S1B G5: critically imperiled (breeding) in NYS and secure globally	-	Yes			✓			
Bird	great blue heron	Ardea herodias	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	tufted titmouse	Baeolophus bicolor	S5 G5: secure in NYS and globally	-	Yes			✓		✓	
Bird	Canada goose	Branta canadensis	S5 G5: secure in NYS and globally	-	Yes		✓	✓		✓	✓
Bird	red-tailed hawk	Buteo jamaicensis	S5 G5: secure in NYS and globally	-	Yes			✓			✓
Bird	green heron	Butorides virescens	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	northern cardinal	Cardinalis cardinalis	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	turkey vulture	Cathartes aura	S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			✓
Bird	killdeer	Charadrius vociferus	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Bird	northern harrier	Circus hudsonius	(NYS Threatened Species) S3B, S3N G5: vulnerable (breeding/non- breeding) in NYS and secure globally	-	Yes				<b>✓</b>		1
Bird	northern flicker	Colaptes auratus	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	American crow	Corvus brachyrhynchos	S5 G5: secure in NYS and globally	-	Yes			✓	✓		
Bird	blue jay	Cyanocitta cristata	S5 G5: secure in NYS and globally	-	Yes		✓	✓			
Bird	pileated woodpecker	Dryocopus pileatus	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	gray catbird	Dumetella carolinensis	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓	✓	✓			
Bird	willow flycatcher	Empidonax traillii	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓					
Bird	rusty blackbird	Euphagus carolinus	(NYS High Priority Species of Greatest Conservation Need) S2B G4: imperited (breeding) in NYS and apparently secure globally	-	Yes			<b>*</b>			
Bird	common yellowthroat	Geothlypis trichas	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	bald eagle	Haliaeetus leucocephalus	(NYS Threatened Species) S2S3B, S2N G5: imperited/vulnerable (breeding) and imperited (non- breeding) in NYS, secure globally	-	Yes			<b>4</b>		✓	<b>*</b>
Bird	barn swallow	Hirundo rustica	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	wood thrush	Hylocichla mustelina	S5B G4: secure (breeding) in NYS and apparently secure globally	-	Yes			✓	✓		
Bird	Baltimore oriole	Icterus galbula	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓		✓			
Bird	belted kingfisher	Megaceryle alcyon	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	red-bellied woodpecker	Melanerpes carolinus	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	wild turkey	Meleagris gallopavo	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	song sparrow	Melospiza melodia	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	great crested flycatcher	Myiarchus crinitus	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	osprey	Pandion haliaetus	(NYS Species of Special Concern) S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			
Bird	rose-breasted grosbeak	Pheucticus ludovicianus	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	eastern towhee	Pipilo erythrophthalmus	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓				

			CER CEL acquire (breading) in NIVC and						1		
Bird	American woodcock	Scolopax minor	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	yellow warbler	Setophaga petechia	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	1		
Bird	eastern bluebird	Sialia sialis	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	American goldfinch	Spinus tristis	S5 G5: secure in NYS and globally	-	Yes		✓	1	✓		
Bird	European starling	Sturnus vulgaris	SNA G5: not applicable in NYS and	-	No				1		
Bird	solitary sandpiper	Tringa solitaria	secure globally Least concern	-	Yes			<b>√</b>			
Bird	American robin	Turdus migratorius	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	1		
Bird	eastern kingbird	Tyrannus tyrannus	S5B G5: secure (breeding) in NYS and	-	Yes			1			
Bird	warbling vireo	Vireo gilvus	globally S5B G5: secure (breeding) in NYS and	-	Yes			1	✓		
Bird	mourning dove	Zenaida macroura	globally S5 G5: secure in NYS and globally	-	Yes			1			
Fish	brown bullhead	Ameiurus nebulosus	Least concern		Yes		✓				
- 4											
Fungi	morel	Morchella esculenta	-	-	Yes		✓				
Mammal	coyote	Canis latrans	Least concern	-	Yes		✓		<b>✓</b>		
Mammal	North American beaver	Castor canadensis	Least concern	-	Yes		✓				
Mammal	North American porcupine	Erethizon dorsatum	Least concern	-	Yes				l .		🔨
Mammal	white-tailed deer	Odocoileus virginianus	Least concern	-	Yes	✓	<b>√</b>	✓	<b>.</b> .	<b>Y</b> .	1
Mammal	raccoon	Procyon lotor	Least concern	-	Yes		✓	,	<b>1</b>	<b>√</b>	
Mammal	eastern cottontail	Sylvilagus floridanus	Least concern	-	Yes			1	✓		
Plant	box elder	Acer negundo		FAC	Yes						✓
Plant	red maple	Acer rubrum		FAC	Yes		✓	✓	✓	✓	✓
Plant	silver maple	Acer saccharinum		FACW	Yes		✓	✓			
Plant	sugar maple	Acer saccharum	-	FACU	Yes				✓		
Plant	common yarrow	Achillea millefolium		FACU	Yes		<b>→</b>				
Plant	sweet flag	Acorus calamus		OBL	No		<b>→</b>	✓			
Plant	common agrimony	Agrimonia gryposepala		FACU	Yes			✓		✓	
Plant	Rhode Island bentgrass	Agrostis capillaris		FAC	No					✓	
Plant	redtop	Agrostis gigantea		FACW	No	✓	✓			✓	✓
Plant	creeping bent	Agrostis stolonifera		FACW	No	✓				✓	
Plant	American water plantain	Alisma subcordatum		OBL	Yes		✓				
Plant	speckled alder	Alnus incana		FACW	Yes			✓			
Plant	New York fern	Amauropelta noveboracens	· -	FAC	Yes			✓			
Plant	common ragweed	Ambrosia artemisiifolia		FACU	Yes			✓		✓	
Plant	downy serviceberry	Amelanchier arborea	-	FACU	Yes		✓				
Plant	hog peanut	Amphicarpaea bracteata	-	FAC	Yes		✓				
				170	163						
Plant	Canada anemone	Anemone canadensis	-	FACW	Yes		✓				
Plant	Canada anemone sweet vernal grass	Anemone canadensis Anthoxanthum odoratum				<b>√</b>		<b>√</b>		<b>√</b>	
				FACW	Yes	<b>✓</b>	✓	1		<b>✓</b>	
Plant	sweet vernal grass	Anthoxanthum odoratum		FACW FACU	Yes No	<b>√</b>	<b>√</b>	<b>√</b>			
Plant Plant	sweet vernal grass Indian hemp	Anthoxanthum odoratum  Apocynum cannabinum		FACU FAC	Yes No Yes	<b>✓</b>	✓	1			<b>✓</b>
Plant Plant Plant	sweet vernal grass Indian hemp swamp milkweed	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata		FACU FAC OBL	Yes No Yes Yes	<b>✓</b>	<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>	✓ ·
Plant Plant Plant Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca		FACW FACU FAC OBL UPL	Yes No Yes Yes Yes	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>		<b>✓</b>
Plant Plant Plant Plant Plant Plant Plant Plant Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua		FACW FACU FAC OBL UPL FAC FAC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes Yes	<b>✓</b>	<b>√</b>	√ √ √	<b>✓</b>	✓ ✓ ✓	·
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devit's beggar ticks	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa		FACW FACU FAC OBL UPL FAC FAC	Yes No Yes	<b>✓</b>	<b>√</b>	✓ ✓ ✓	<b>*</b>	<b>√</b>	<i>y</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus		FACW FACU FAC OBL UPL FAC FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No	<b>✓</b>	<i>V V</i>	√ √ √	· ·	✓ ✓ ✓	<i>y</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis	· · · · · · · · · · · · · · · · · · ·	FACW FACU FAC OBL UPL FAC FAC OBL FAC FAC OBL	Yes No Yes Yes Yes Yes Yes Yes No No	✓ ————————————————————————————————————	<i>'</i>	✓ ✓ ✓	· ·	✓ ✓ ✓	<i>'</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda		FACW FACU FAC OBL UPL FAC OBL FAC FAC FAC FAC FAC FACW FACW FACW FACC	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes	<b>✓</b>	<i>V V</i>	✓ ✓ ✓ ✓ ✓	· ·	✓ ✓ ✓	<i>V</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yetlow birch gray birch nodding beggar ticks devit's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias yriaca Betula alieghaniensis Betula populifolia Bidens cemua Bidens cemua Bromus commutatus Bromus inermis Carex blanda Carex comosa	· · · · · · · · · · · · · · · · · · ·	FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FACW OBL FACW OBL FACC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes Yes	<b>V</b>	<i>V V V V V V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<i>\</i>	✓ ✓ ✓	<i>✓</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alteghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita		FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FAC OBL OBL OBL OBL OBL OBL	Yes No Yes	<b>V</b>	<i>'</i>	\( \frac{1}{2} \)	<i>V</i>	✓ ✓ ✓	<b>V</b>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava		FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FAC OBL OBL OBL OBL OBL OBL	Yes No Yes	<b>Y</b>	<i>V V V V V V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<b>V</b>	✓ ✓ ✓	<i>✓</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yeltow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima		FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FACW OBL GACW OBL FACW FACW FACW FACW FACW FACW FACW FACW	Yes No Yes	✓ ————————————————————————————————————	<i>V V V V V V V V V V</i>	\( \frac{1}{2} \)	<b>V</b>	✓ ✓ ✓	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris		FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FACW OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL OBL	Yes No Yes	✓ ————————————————————————————————————	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	✓	· · · · · · · · · · · · · · · · · · ·	<i>'</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris Carex lacustris Carex intumescens		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL OBL FACU OBL FACU OBL	Yes No Yes	✓ ————————————————————————————————————	<i>Y Y Y Y Y Y</i>	\frac{1}{\sqrt{1}}	✓	✓ ✓ ✓	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex landa Carex comosa Carex crinita Carex flava Carex flava Carex flava Carex lacustris Carex intumescens Carex lupulina		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL	Yes No Yes	✓ ————————————————————————————————————	\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)	✓ ·	· · · · · · · · · · · · · · · · · · ·	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge take sedge bladder sedge hop sedge sallow sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias yriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex facustris Carex intumescens Carex tupulina Carex lurida		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL	Yes No Yes	✓ ————————————————————————————————————	<i>Y Y Y Y Y Y</i>	\frac{1}{\sqrt{1}}	✓ — — — — — — — — — — — — — — — — — — —	· · · · · · · · · · · · · · · · · · ·	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge bladder sedge bladder sedge hop sedge sallow sedge troublesome sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens cemua Bidens comua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex facililima Carex facililima Carex facililima Carex futurida Carex turida Carex turida Carex Lurida Carex Lurida Carex Lurida Carex Lurida		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes	✓ ————————————————————————————————————	<i>Y Y Y Y Y Y</i>	\( \frac{1}{2} \)	✓ — — — — — — — — — — — — — — — — — — —	✓ ✓ ✓	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alteghaniensis Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex gracillima Carex intumescens Carex tupulina Carex turida Carex notesta Carex pseudocyperus		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes	<b>Y</b>	\frac{1}{\sqrt{1}}	/ / / / / / / / / / / / / / / / / / /	✓	· · · · · · · · · · · · · · · · · · ·	✓
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bidens rondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex facustris Carex Intumescens Carex lurida Carex notesta Carex notesta Carex pseudocyperus Carex scoparia		FACW FACU FAC OBL UPL FAC FAC OBL FAC OBL OBL FACW OBL OBL OBL OBL OBL FACU OBL FACU OBL FACU OBL FACU OBL FACU OBL FACW OBL FACW OBL FACW OBL FACW OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes	<b>Y</b>	<i>Y Y Y Y Y Y</i>	\( \frac{1}{2} \)	<i>Y</i>	V V V V V V V V V V V V V V V V V V V	
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge bladder sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex lupulina Carex unida Carex molesta Carex pseudocyperus Carex soparia Carex soparia Carex stipata		FACW FACU FAC OBL UPL FAC FAC OBL FAC OBL FACW	Yes No Yes		\frac{1}{\sqrt{1}}	/ / / / / / / / / / / / / / / / / / /		V V V V V V V V V V V V V V V V V V V	· · · · · · · · · · · · · · · · · · ·
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge bladder sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex luqulina Carex luqulina Carex noesta Carex pseudocyperus Carex soparia Carex stipata Carex stipata Carex stipata Carex stipata		FACW FACU FAC OBL UPL FAC FAC OBL FAC OBL FACW OBL OBL OBL OBL OBL FACU OBL FACU OBL FACW OBL FACW OBL FACW OBL OBL	Yes No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)	<i>✓</i>	V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge fox sedge fox sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex tupulina Carex lurida Carex nesses Carex tupulina Carex pseudocyperus Carex stipata Carex stipata Carex stipata Carex stipata Carex stricta Carex vulpinoidea		FACW FACU FAC OBL UPL FAC OBL FACW FAC OBL OBL OBL OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL	Yes No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	· · · · · · · · · · · · · · · · · · ·
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch modding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge lake sedge lake sedge bladder sedge bladder sedge troublesome sedge troublesome sedge cyperus-like sedge busok sedge troublesome sedge twoublesome sedge tussock sedge tussock sedge tussock sedge tussock sedge	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias yriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex lacustris Carex lurida Carex molesta Carex comosa Carex comosa Carex upulina Carex paeducyperus Carex scoparia Carex scoparia Carex stricta Carex stricta Carex stricta Carex stricta Carex stricta Carex stricta Carex vulpinoidea Carex stricta		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW  - OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes		\frac{1}{1}	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge bladder sedge troublesome sedge cyperus-like sedge broom sedge swil-fruited sedge tussock sedge fox sedge ironwood bitternut hickory	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias yriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex fracilitma Carex fracilitma Carex fracilitma Carex lauva Carex urida Carex urida Carex paediotyperus Carex paediotyperus Carex scoparia Carex stricta Carex stricta Carex stricta Carex upipinoidea Carey cordiformis		FACW FACU FAC OBL UPL FAC OBL FACW OBL FACW OBL	Yes No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devit's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge bladder sedge bladder sedge bladder sedge troublesome sedge cyperus-like sedge brom sedge awl-fruited sedge lussock sedge fox sedge ironwood bitternut hickory shagbark hickory	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens cemua Bidens comua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex faccinita Carex funda Carex tupulina Carex tupulina Carex tupulina Carex soparia Carex stipata Carex stipata Carex stipata Carex stipata Carex vulpinoidea Carex vulpinoidea Carpinus caroliniana Carya cordiformis Carya cordiformis Carya cordiformis		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL OBL OBL OBL FACW OBL OBL OBL OBL FACW OBL OBL FACW OBL OBL FACW OBL OBL FACW OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yetlow birch gray birch nodding beggar ticks devit's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yetlow sedge graceful sedge lake sedge bladder sedge hop sedge saltow sedge troublesome sedge cyperus-like sedge broom sedge awt-fruited sedge tussock sedge fox sedge ironwood bitternut hickory shagbark hickory buttonbush	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias yriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bidens commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex gracillima Carex lava Carex pracillima Carex turida Carex notesta Carex sepseudocyperus Carex stipata Carex stipata Carex stipata Carex stipata Carex upulinoidea Carey indinoidea Carya cordiformis Carya ovata Carya ovata Carya ovata		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{4} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge awt-fruited sedge tussock sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex gracillima Carex turida Carex turida Carex notesta Carex supulina Carex carex supulina Carex carefulina Carex carefulinana Carex cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes No No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{2} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks davil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge toublesome sedge cyperus-like sedge broom sedge satlow sedge troublesome sedge troublesome sedge troublesome sedge broom sedge awt-fruited sedge tussock sedge fox sedge itronwood bitternut hickory shagbark hickory buttonbush white turtle head lamb's quarters	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex gracillima Carex tacustris Carex intumescens Carex turida Carex notesta Carex stricta Carex stricta Carex stricta Carex vulpinoidea Carya ovata Cephalanthus occidentalis Chelone glabra Chenopodium album		FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL FACU OBL OBL FACU OBL OBL FACU OBL OBL FACW OBL	Yes No Yes Yes Yes Yes Yes No No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{4} \) \( \frac{1}{		V V V V V V V V V V V V V V V V V V V	<i>*</i>
Plant	sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge awt-fruited sedge tussock sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head	Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula populifolia Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bidens cernua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex gracillima Carex turida Carex turida Carex notesta Carex supulina Carex carex supulina Carex carefulina Carex carefulinana Carex cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra		FACW FACU FAC OBL UPL FAC OBL FAC OBL	Yes No Yes Yes Yes Yes Yes Yes No No No Yes		\frac{1}{\sqrt{1}}	\( \frac{1}{4} \)		V V V V V V V V V V V V V V V V V V V	<i>*</i>

Color							1					
March   Marc	Plant	silky dogwood	Cornus amomum	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Note   Notice   Not	Plant	gray dogwood	Cornus racemosa	-	FAC	Yes		✓	✓	✓		✓
Part	Plant	red-osier dogwood	Cornus sericea	-	FACW	Yes						1
Property	Plant	hawthorn	Crataegus sp.	-	-	-		<b>√</b>				1
Marchester Langle	Plank	common vallow nut sadda		_	FACW	Voc			1			
Color   Colo												
Section   Sect												
Process		orcnard grass	Dactylis glomerata	-			<b>V</b>				<u> </u>	
Part	Plant	wild carrot	Daucus carota	-	UPL	No		✓				
Part	Plant	water willow	Decodon verticillatus	-	OBL	Yes			✓			✓
Section   Company   Comp	Plant	tufted hair grass	Deschampsia cespitosa	-	-	Yes					✓	
Proc.	Plant	digit grass	Digitaria eriantha	-	-	No		✓				
March			-		FACU				1			
March   Section of the   Department   Depa												
Fig.											•	
Part												-
Part	Plant	autumn olive	Elaeagnus umbellata	-		No						
Description of Section	Plant	blunt spike rush	Eleocharis obtusa	-	OBL	Yes		✓				✓
Part	Plant	fringed wilowherb	Epilobium ciliatum	-	FACW	Yes					✓	
Part	Plant	purpleleaf willowherb	Epilobium coloratum	-	OBL	Yes		<b>√</b>	<b>✓</b>		<b>√</b>	
Part	Plant	field horsestail	Equisetum arvense	-	FAC	Yes				✓	✓	1
Medical   Security Production   Security Secur				_	FAC		/			_		
Test   Secret   Sec									1			
Part				-								
				-	FACU				V			
Part	Plant	yellow trout lily	Erythronium americanum	-	-	Yes		✓		✓		
Part	Plant	boneset	Eupatorium perfoliatum	-	FACW	Yes			✓			✓
Part	Plant	common flat-topped goldenrod	Euthamia graminifolia		FAC	Yes					✓	
Part	Plant	spotted Joe Pye weed	Eutrochium maculatum	-	OBL	Yes	✓					
Part   Common wild strainworthy   Frageth arginates   PACU   Yes	Plant	American beech	Fagus grandifolia		FACU	Yes				<b>✓</b>	<b>√</b>	
Part								_				/
PACE   great subtracted   PACE   Yes				-							·	
Part				<u>-</u>								
Parel   Design prefetters							<b>,</b>		<b>_</b>		,	<b>Y</b>
Part	Plant	green ash	Fraxinus pennsylvanica	-		Yes		✓		✓	•	✓
Pack   yellow avers   Geum alappicum   FAC   Yes	Plant	hedge bedstraw	Galium album	-	FACU	Yes	✓		✓		✓	
Part   Stand Series   Seum canaderse   FAC   Yes	Plant	common marsh bedstraw	Galium palustre	-	OBL	Yes		✓			✓	
Part	Plant	yellow avens	Geum aleppicum	-	FAC	Yes		✓	✓			
Design   D	Plant	white avens			FAC	Yes			<b>√</b>			1
Part												
Pacif   Description   Descri	rtant											
Past	Diame			-				•	-/			
Paint marish cultivated Grigophalum oliginissum		American manna grass	Glyceria maxima	-	OBL	No						
Paint   dame's sockat		American manna grass	Glyceria maxima		OBL	No		✓	✓		✓	
Paint   Common tropical   Psychocharis moresus-variable   OBL   No	Plant	American manna grass fowl manna grass	Glyceria maxima Glyceria striata	-	OBL OBL	No Yes	<b>√</b>	✓	✓	<b>√</b>	✓	<b>✓</b>
Paint   St. John's wort	Plant Plant	American manna grass fowl manna grass soybean	Glyceria maxima Glyceria striata Glycine max	-	OBL OBL	No Yes	<b>✓</b>	✓	<b>√</b>	<b>✓</b>	✓	<b>✓</b>
Paint   St. John's wort	Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum	-	OBL OBL - FAC	No Yes - No		✓	<b>√</b>	<b>✓</b>	✓	<b>√</b>
Paint   St. Dohn's wort   Appericum sp.	Plant Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis	-	OBL OBL - FAC FACU	No Yes - No No		✓	√ √ √	<b>√</b>	✓	<b>✓</b>
Paint   Spotted provided   Impatients Caperals   FACW   Yes	Plant Plant Plant Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae	-	OBL OBL FAC FACU OBL	No Yes - No No No		✓	√ √ √		✓	<b>✓</b>
Plant   Diue flag   Iris versicolor   OBL   Yes	Plant Plant Plant Plant Plant Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever	Glyceria maxima  Glyceria striata  Glycine max  Gnaphalium uliginosum  Hesperis matronalis  Hydrocharis morsus-ranae  Hylotelephium telephium		OBL OBL FAC FACU OBL -	No Yes - No No No No		✓	√ √ √		✓	
Plant	Plant Plant Plant Plant Plant Plant Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort	Glyceria maxima  Glyceria striata  Glycine max  Gnaphalium uliginosum  Hesperis matronalis  Hydrocharis morsus-ranae  Hylotelephium telephium  Hypericum sp.		OBL OBL FAC FACU OBL -	No Yes - No No No No	<b>√</b>	<b>√</b>	<i>* * * *</i>		<b>√</b>	
Plant path rush Juncus terruls - FAC Yes - Service of Security of Service Serv	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort	Glyceria maxima  Glyceria striata  Glycine max  Gnaphalium uliginosum  Hesperis matronalis  Hydrocharis morsus-ranae  Hylotelephium telephium  Hypericum sp.		OBL OBL FAC FACU OBL - FACW	No Yes - No No No No Yes - Yes	<b>√</b>	<b>√ ✓</b>	<i>* * * *</i>		<b>√</b>	
Plant   rice cut grass   Leersia onyzoides   OBL   Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis	- - - - - - -	OBL OBL FAC FACU OBL - FACW	No Yes - No No No No Yes - Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	<i>y y y y y y y y y y</i>	<b>✓</b>	<b>√ √</b>	<b>√</b>
Plant spicebush Lindera berzoin - FACW Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor	- - - - - - -	OBL OBL - FAC FACU OBL - FACW OBL	No Yes - No No No No Yes - Yes Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	\frac{1}{4}	<b>✓</b>	<b>√ √</b>	· ·
Plant spicebush Lindera berzoin - FACW Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian tive forever St. John's wort spotted jewelweed blue flag soft rush	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus	- - - - - - -	OBL OBL - FAC FACU OBL - FACW OBL OBL OBL	No Yes - No No No No Yes - Yes Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	\frac{1}{4}	<b>✓</b>	<b>√ √</b>	· ·
Plant tulip poplar Liriddendron tulipitera - FACU Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis	- - - - - - -	OBL OBL - FAC FACU OBL FACW OBL OBL FACW	No Yes  No No No No Yes  Yes Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	\frac{1}{4}	<b>✓</b>	<b>√ √</b>	· ·
Plant         Indian tobacco         Lobelia inflata         -         FACU         Yes         ✓         ✓           Plant         great blue lobelia         Lobelia isphillica         -         FACW         Yes         —         ✓ <td>Plant Plant /td> <td>American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass</td> <td>Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum p. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides</td> <td></td> <td>OBL OBL - FAC FACU OBL FACW OBL OBL OBL FAC OBL</td> <td>No Yes  No No No No Yes  Yes Yes Yes Yes Yes</td> <td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td> <td><i>V V V V V</i></td> <td>\frac{1}{\sqrt{1}}</td> <td><b>✓</b></td> <td><b>√ √</b></td> <td>· ·</td>	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum p. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides		OBL OBL - FAC FACU OBL FACW OBL OBL OBL FAC OBL	No Yes  No No No No Yes  Yes Yes Yes Yes Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	\frac{1}{\sqrt{1}}	<b>✓</b>	<b>√ √</b>	· ·
Plant great blue lobelia Lobelia sphilitica - FACW Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin		OBL OBL - FACU OBL - FACW OBL OBL OBL FACW OBL FACCO OBL FACCO OBL	No Yes  No No No No Yes  Yes Yes Yes Yes Yes Yes	· · · · · · · · · · · · · · · · · · ·	<i>V V V V V</i>	\frac{1}{\sqrt{1}}	<b>✓</b>	<i>*</i>	· ·
Plant tall rye grass Lolium arundinace - FACU No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera		OBL OBL - FAC OBL - FACW OBL OBL FACW OBL FAC OBL FACC OBL FACC OBL FACCOBL	No Yes  No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes	· · · · · · · · · · · · · · · · · · ·	<i>V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>*</i>	· ·
Plant Japanese honeysuckle Lonicera japonica - FACU No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iriis versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW OBL FACC OBL FACC FACW FACW FACW FACU	No Yes No No No No Yes	· · · · · · · · · · · · · · · · · · ·	<i>V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>*</i>	<i>'</i>
Plant honeysuckle Lonicera spp No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicotor Juncus effusus Juncus effusus Juncus etnuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata		OBL OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FACC OBL FACW FACW FACW FACW FACW FACW	No Yes No No No No Yes	· · · · · · · · · · · · · · · · · · ·	<i>V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>*</i>	<i>'</i>
Plant Tatarian honeysuckle Lonicera tatarica - FACU No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicotor Juncus effusus Juncus effusus Juncus etnuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACW FACW FACW FACW FACU FACW FACU	No Yes  - No No No No - Yes	· · · · · · · · · · · · · · · · · · ·	✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>*</i>	<i>'</i>
Plant Tatarian honeysuckle Lonicera tatarica - FACU No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus telusis Lieersia oryzoides Lindera benzoin Liriodendron tulipilera Lobelia siphilitica Lolium arundinace		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACW FACW FACW FACW FACU FACW FACU	No Yes  - No No No No - Yes	· · · · · · · · · · · · · · · · · · ·	✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>*</i>	<i>'</i>
Plant water purslane	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian tive forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica		OBL OBL - FACU OBL - FACW OBL OBL FACC OBL FACW FACW FACW FACU FACU FACU FACU FACU FACU	No Yes  - No No No No - Yes	<i>1</i>	<i>*</i> **  **  **  **  **  **  **  **  **	* * * * * * * * * * * * * * * * * * *	✓ ✓	<i>* * * * * * * *</i>	<i>'</i>
Plant water whorehound Lycopus americanus - OBL Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp.		OBL OBL - FACU OBL - FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No Yes  - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes Yes No	<i>1</i>	✓ ✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓	<i>* * * * * * * *</i>	<i>'</i>
Plant moneywort Lysimachia nummularia - FACW No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipitera Lobelia siphilitica Lobium arundinace Lonicera japonica Lonicera spp. Lonicera tatarica		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU	No Yes  - No No No No No - Yes Yes Yes Yes Yes Yes Yes No	<i>✓ ✓ ✓ ✓ ✓ ✓</i>	✓ ✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓	<i>* * * * * * * *</i>	<i>y y y y y y</i>
Plant purple loosestrife Lythrum salicaria - OBL No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum Juncus effusus Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia inflata Loilium arundinace Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris		OBL OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   -	<i>✓ ✓ ✓ ✓ ✓ ✓</i>	✓ ✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓	<i>* * * * * * * *</i>	<i>y y y y y y</i>
Plant Canada mayflower Maianthemum canadense - FACU Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia japonica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus		OBL OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACW FACU FACU FACU FACU FACU FACU OBL	No   Yes   -	\frac{1}{1}	V V V V V V V V V V V V V V V V V V V	* * * * * * * * * * * * * * * * * * *	<i>✓</i>	\frac{1}{\sqrt{1}}	<i>y y y y y y</i>
Plant ostrich fem Matteuccia struthiopteris - FAC Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lonicera japonica Lunicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU	No Yes  No No No No No Yes	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	<i>*</i>	\frac{1}{\sqrt{1}}	<i>y y y y y y</i>
Plant white sweet clover Melilotus albus - FACU No Plant Allegheny monkey flower Mimulus ringens - OBL Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalls Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria		OBL OBL OBL - FACU OBL - FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   -	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>y y y y y y</i>
Plant Allegheny monkey flower Mimulus ringens - OBL Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalls Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria		OBL OBL OBL - FACU OBL - FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   -	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>'</i>
Plant Allegheny monkey flower Mimulus ringens - OBL Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water whorehound moneywort purple loosestrife Canada mayflower	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hydrocharis morsus-ranae Hydrocharis morsus-ranae Hypterium selephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus effusus Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. Lonicera statarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense		OBL OBL OBL - FACU OBL - FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>'</i>
Plant blackgum Nyssa sylvatica - FAC Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobilia rundinace Lonicera japonica Lonicera spp. Lonicera atarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris		OBL OBL OBL FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>*</i> **  **  **  **  **  **  **  **  **
Plant sensitive fern Onoclea sensibilis - FACW Yes V V V V Plant royal fern Osmunda regalis - OBL Yes V V V V V Plant cinnamon fern Osmundastrum cinnamomei - FACW Yes V V V V V V V V V V V V V V V V V V V	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water whorehound moneywort purple loosestrife Canada mayflower ostrich fern	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus		OBL OBL OBL FACU OBL FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   No   No   No   No   Yes   No   No   Yes   Yes   Yes   No   No   Yes   Y	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>*</i> **  **  **  **  **  **  **  **  **
Plant royal fern Osmunda regalis - OBL Yes   Plant cinnamon fern Osmundastrum cinnamomei - FACW Yes   Plant yellow wood sorrel Oxalis dillenii - FACU Yes   Plant fall panic grass Panicum dichotomiflorum - FACW Yes   Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes   Plant green arrow arum Peltandra virginica - OBL Yes   V	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hylotelephium telephium Hylotelephium sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipitera Lobelia inflata Lobelia inflata Lobelia siphilitica Lonicera japonica Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens		OBL OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>*</i> **  **  **  **  **  **  **  **  **
Plant cinnamon fern Osmundastrum cinnamome - FACW Yes   Plant yellow wood sorrel Oxalis dillenii - FACU Yes   Plant fall panic grass Panicum dichotomiflorum - FACW Yes   Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes   Plant green arrow arum Pettandra wirginica - OBL Yes   V	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Loulium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica		OBL OBL - FACU OBL - FACU OBL	No   Yes	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	<i>Y Y Y Y Y Y Y Y</i>
Plant yellow wood sorrel Oxalis dillenii - FACU Yes   Plant fall panic grass Panicum dichotomiflorum - FACW Yes  Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes  Plant green arrow arum Peltandra virginica - OBL Yes  ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums Irin versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Loulium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis		OBL OBL OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	· · · · · · · · · · · · · · · · · · ·
Plant fall panic grass Panicum dichotomiflorum - FACW Yes   Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes   ✓  Plant green arrow arum Peltandra virginica - OBL Yes   ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern	Glyceria maxima Glyceria striata Glycine max Glycine max Cnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lystmachia nummularia Lythrum salicaria Malanthemum canadense Maleucia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis		OBL OBL - FACU OBL - FACU OBL FACW OBL OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU OBL FACU OBL FACU FACU OBL FACU OBL FACU OBL FACU OBL FACU OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL	No	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	· · · · · · · · · · · · · · · · · · ·
Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes   ✓   Plant green arrow arum Peltandra virginica - OBL Yes   ✓   ✓   ✓   ✓   ✓   ✓   ✓   ✓   ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern	Glyceria maxima Glyceria striata Glycine max Glycine max Cnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lystmachia nummularia Lythrum salicaria Malanthemum canadense Maleucia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis		OBL OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACW FACU FACU FACU FACU FACU OBL OBL FACCU FACU FACU OBL OBL FACU OBL OBL FACU OBL OBL FACW OBL	No   Yes   Yes   Yes   Yes   Yes   No   No   Yes   Yes   No   No   Yes   Yes	\( \sqrt{1} \)	V V V V V V V V V V V V V V V V V V V	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	· · · · · · · · · · · · · · · · · · ·
Plant green arrow arum Peltandra virginica - OBL Yes ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern cinnamon fern	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia japhilitica Lolium arundinace Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Meliotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmundastrum cinnamome		OBL OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACW FACU FACU FACU FACU FACU OBL OBL FACCU FACU FACU OBL OBL FACU OBL OBL FACU OBL OBL FACW OBL	No   Yes   Yes   Yes   Yes   Yes   No   No   Yes   Yes   No   No   Yes   Yes	\( \sqrt{1} \)	V V V V V V V V V V V V V V V V V V V	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	<i>Y Y Y Y Y Y Y Y</i>
Plant green arrow arum Peltandra virginica - OBL Yes   ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern cinnamon fern yellow wood sorrel	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilous albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmunda regalis Osmunda regalis Osmundastrum cinnamomei Oxalis dillenii		OBL OBL OBL FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No	\( \sqrt{1} \)	V V V V V V V V V V V V V V V V V V V	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *
	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern cinnamon fern yellow wood sorrel fall panic grass	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilous albus Himulus ringens Nyssa sylvatica Onnoclea sensibilis Osmunda regalis Osmundastrum cinnamome Oxalis dillenii Panicum dichotomiflorum		OBL OBL OBL FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No	\( \sqrt{1} \)	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *
	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern cionamon fern yellow wood sorrel fall panic grass Virginia creeper	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflatica Lolium arundinace Lonicera japonica Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmundastrum cinnamome Oxalis dillenii Panicum dichotomiflorum Parthenocissus quinquefolia		OBL OBL OBL FACU OBL FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	<i>Y Y Y Y Y Y Y Y</i>

Part												
Table of Management		lady's thumb	Persicaria maculosa	-	FAC	No			1			
Process			-	-					1		1	
The control forcing			-	-								
Proc.   Proc							,		•	•	•	•
Processor   Proc							1		1		,	
Procedure				-					1			
Part				-	-			✓	1	✓		
Part			Picea rubens	-	FACU	Yes		✓				
Proceedings	Plant	white pine	Pinus strobus	-	FACU	Yes		✓		✓		
The content aborties and the present of the content aborties and the content aborties	Plant	English plantain	Plantago lanceolata	-	FACU	No	✓	✓		✓	✓	
Miles	Plant	common plantain	Plantago major	-	FACU	No	✓			✓	✓	✓
Page	Plant	northern tubercled orchid	Platanthera flava	-	FACW	Yes			✓			
Proc.   Proc	Plant	annual blue grass	Poa annua	-	FACU	No				✓		
Page	Plant	wood bluegrass	Poa nemoralias	-	FACU	No			✓			
Page		common Kentucky blue grass	Poa pratensis	-				✓			✓	✓
Page				-					✓			
Part   Processor									,			
March   Substant Services   March							<b>-</b>		<b>✓</b>	✓	✓	<b>-</b>
March   Marc								•				
March   March   Process   Process   March				-				./			•	
Part				-					./		./	
Miles   Mile				-				•		_	•	
Medical   Medi				-					•			
Marco				-					/			
Sect   Concept Office   Recorded pages   FIC No				-			/		,		<b>✓</b>	
Part   Common Excellent		·		<u> </u>			•	•				
Sect   Description   Programmer   Programm							1			<b>✓</b>		
Method   M				-								
Reserved				-				✓				
Part			Rhamnus cathartica	-	FAC			✓	1		✓	✓
Part				-				1				
Section   Part			Rosa multiflora	-	FACU	No	<b>✓</b>	✓	✓	✓	✓	✓
Part	Plant	swamp rose	Rosa palustris	-	OBL	Yes				✓		<b>✓</b>
Part   Mouse delaware   Pacus   Pacu	Plant	common blackberry	Rubus allegheniensis	-	FACU	Yes		✓	1			
Parent	Plant	swamp dewberry	Rubus hispidus	-	FACW	Yes			✓			
Part   Select   Rumer acetosella	Plant	red raspberry	Rubus ideaus	-	FACU	No		✓	✓			
Part	Plant	dwarf raspberry	Rubus pubescens	-	FACW	Yes			✓			
Part   Droad-leaved dock   Rumes oblisation   FAC   No	Plant	sheep sorrel	Rumex acetosella	-	FACU	No						
Parent   Swamp dock   Rumex verticilistus   OBL   Yes	Plant	curly dock	Rumex crispus	-	FAC	No	✓		✓			✓
Part   Bebb's willow   Salid Section   FACW   Yes		broad-leaved dock	Rumex obtusifolius	-		No		✓			✓	
Plant bisck willow Salk discolor FACW Yes	Plant	swamp dock		-								
Plant basket villow Salix nigra - OBL Yes - Salix nigra - OBL Yes - Salix nigra - OBL Yes - Salix nigra - FACW No - Salix purpurea - FACW No - Salix purpurea - FACW Yes - Sambucus nigra - FACW Yes - Sambucus - FACW Yes - Sambu				-					·			
Plant to basket willow Salis purpurea - FACW No				-					✓	✓		
Plant common elderberry Sambucus nigra - FACW Yes				-				✓				
Plant Uzard's tall Sauruus cennuus - OBL Yes				-					· ·			
Plant dark-green bulrush Schoenoplectus tabernaemc - OBL Yes		-		-						<b>V</b>		
Plant woolgrass Scipus strowers - OBL Yes				-				*	./			
Plant mad dog skullcap Scutellaria laterithora - OBL Yes								./				
Plant   mad dog skullcap   Scutellaria lateriflora   OBL   Yes				-					7		1	
Plant bitter-sweet nightshade Solanum carolinense - FACU Yes				-					1	•	•	
Plant bitter-sweet nightshade Solanum dulcamara - FAC No									,		1	
Plant tall goldenrod Solidago attissima - FACU Yes								<b>√</b>	1		•	
Palant   Canada goldernod   Solidago canadensis   - FACU   Yes												<b>—</b>
Plant swamp goldenrod Solidago gigantea - FACW Yes		-	-				1	,	1		✓	
Plant common wrinkle-leaved goldenr Solidago rugosa - FAC Yes								✓				<b>✓</b>
Plant spiny-leaved sow thistle Sonchus asper - FACU No				-			<b>✓</b>		<b>√</b>			
Plant green-fruited bur-reed Sparganium chlorocarpum - OBL Yes				-						<b>✓</b>		
Plant white panicle aster Symphyotrichum lanceolatur - FACW Yes		green-fruited bur-reed	·	-					✓			
Plant white panicle aster Symphyotrichum lanceolatu - FACW Yes	Plant	grass-leaved stitchwort	Stellaria graminea	-	UPL	No					✓	
Plant new england aster Symphyotrichum novae-angl - FACW Yes	Plant	white panicle aster		-	FACW	Yes			✓		✓	✓
Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes	Plant	calico aster	Symphyotrichum lateriflorum	-	FAC	Yes		✓			✓	
Plant         skunk cabbage         Symplocarpus feetidus         -         OBL         Yes         ✓	Plant	new england aster	Symphyotrichum novae-angl	-	FACW	Yes						✓
Plant common dandelion Taraxacum officinale - FACU No	Plant	purple-stemmed aster	Symphyotrichum puniceum	-	OBL	Yes	✓		✓		✓	✓
Plant         marsh fern         Thelypteris palustris         -         FACW         Yes         ✓         ✓           Plant         American basswood         Tilia americana         -         FACU         Yes         ✓	Plant	skunk cabbage	Symplocarpus foetidus	-	OBL	Yes				✓		
Plant         American basswood         Tilia americana         -         FACU         Yes         ✓	Plant	common dandelion	Taraxacum officinale	-	FACU	No	✓		✓	✓	✓	✓
Plant poison ivy Toxicodendron radicans - FAC Yes \( \start \) \( \sta	Plant	marsh fern	Thelypteris palustris	-				✓				
Plant red clover Trifolium pratense - FACU No 🗸 🗸 🗸  Plant white clover Trifolium repens - FACU No 🗸 🗸				-								
Plant white clover Trifolium repens - FACU No 🗸 🗸				-				✓	✓		The state of the s	
				-						✓		
Plant red trillium Trillium erectum - FACU Yes ✓				-			<b>V</b>	✓		<u> </u>	✓	<b>—</b>
	Plant	red trillium	Trillium erectum	-	FACU	Yes				✓		

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



# United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9385 Phone: (607) 753-9334 Fax: (607) 753-9699

Email Address: <u>fw5es\_nyfo@fws.gov</u>

In Reply Refer To: 04/11/2025 15:39:33 UTC

Project code: 2025-0082147

Project Name: Micron Stream and Wetland Mitigation

Federal Nexus: yes

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

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

Dear Kirsten Gerhardt:

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

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

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

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

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

SpeciesListing StatusDeterminationIndiana Bat (Myotis sodalis)EndangeredMay affect

<u>Consultation with the Service is not complete.</u> Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of "May Affect". Please contact our New York Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Bog Buck Moth *Hemileuca maia menyanthevora (=H. iroquois)* Endangered
- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat Perimyotis subflavus Proposed Endangered

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference the Project Code associated with this Project.

#### **Action Description**

You provided to IPaC the following name and description for the subject Action.

#### 1. Name

Micron Stream and Wetland Mitigation

#### 2. Description

The following description was provided for the project 'Micron Stream and Wetland Mitigation':

This is a stream and wetland mitigation project in which restoration will occur across six sites. On average, one site will be constructed per year, making the construction period a total of six years approximately. All six sites are located in Hastings or Schroeppel in Oswego County, NY. Two of the sites will undergo stream restoration, one for a degraded portion of Buxton Creek, the other for a degraded portion of Fish Creek. Here, the stream restoration will be integrated with wetland restoration to create a functioning stream/wetland complex. The remaining four sites will be for wetland restoration only.

The approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@43.29530445">https://www.google.com/maps/@43.29530445</a>,-76.2730783955508,14z



# **QUALIFICATION INTERVIEW**

Project code: 2025-0082147

- As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?
   Yes
- 2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

**Note:** This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

- 4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project?

  No
- 5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

**Note:** If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

No

- 8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)? *No*
- 9. Is the lead federal action agency the Natural Resources Conservation Service?
- 10. Will the proposed project involve the use of herbicide where listed species are present? *Yes*

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11. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

No

12. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

13. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

14. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

No

15. Will the proposed project affect wetlands where listed species are present?

This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

Yes

16. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

Yes

17. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?

Yes

18. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

No

19. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

No

20. Will the proposed project involve the removal of excess sediment or debris, dredging or instream gravel mining where listed species may be present?

No

21. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

**Note** New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

No

22. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

No

- 23. Will the proposed project involve blasting where listed species may be present? *No*
- 24. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

No

25. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

**Note**: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream. *Yes* 

26. Will the proposed project impact streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography?

Yes

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27. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

No

28. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

Yes

29. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

No

30. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?

#### Automatically answered

No

31. [Semantic] Does the project intersect the Indiana bat AOI?

#### Automatically answered

Yes

32. Is the action area within 0.5 mile radius of any known hibernacula (caves or mines) openings or underground features?

**Note:** If you are unsure, contact the appropriate Ecological Services Field Office before continuing through the key.

No

33. Are trees present within the action area?

**Note:** If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter), answer "Yes". If you are unsure, answer "Yes." Or refer to Appendix A of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for definitions and an assessment form that will assist you in determining if suitable habitat is present within your project's action area. Suitable summer habitat for Indiana bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat

Yes

34. Is the action area within known occupied Indiana bat habitat? Known occupied Indiana bat habitat includes established conservation buffers (10-mile buffer around Phase 1 or Phase 2 hibernacula, 5-mile buffer around Phase 3 or Phase 4 hibernacula; 5-mile buffer around Indiana bat captures or detections; 2.5-mile buffer around known roosts).

Yes

35. [Semantic] Does the project intersect the Indiana bat critical habitat?

#### Automatically answered

No

36. [Semantic] Does the project intersect the candy darter critical habitat?

#### Automatically answered

No

37. [Semantic] Does the project intersect the diamond darter critical habitat?

#### Automatically answered

No

38. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?

#### **Automatically answered**

No

39. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

#### Automatically answered

No

40. Do you have any other documents that you want to include with this submission? *No* 

# **PROJECT QUESTIONNAIRE**

- 1. Approximately how many acres of trees would the proposed project remove? .1
- 2. Approximately how many total acres of disturbance are within the disturbance/ construction limits of the proposed project? 500
- 3. Briefly describe the habitat within the construction/disturbance limits of the project site. Active soybean fields and man-made agricultural drainages. Some existing wetlands of degraded quality that will ultimately be rehabilitated.

# **IPAC USER CONTACT INFORMATION**

Agency: The Wetland Trust, Inc.

Name: Kirsten Gerhardt Address: 4729 State Route 414

City: Burdett State: NY Zip: 14818

Email kirsten.gerhardt@gmail.com

Phone: 3028242336

# LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers



# United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9385 Phone: (607) 753-9334 Fax: (607) 753-9699

Email Address: <u>fw5es\_nyfo@fws.gov</u>

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.

Project code: 2025-0082147

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 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: <a href="https://www.google.com/maps/@43.29530445">https://www.google.com/maps/@43.29530445</a>,-76.2730783955508,14z



Counties: Oswego County, New York

#### **ENDANGERED SPECIES ACT SPECIES**

Project code: 2025-0082147

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<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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#### **MAMMALS**

**NAME STATUS** Indiana Bat Myotis sodalis Endangered 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 Northern Long-eared Bat Myotis septentrionalis Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 Tricolored Bat Perimyotis subflavus **Proposed** No critical habitat has been designated for this species. Endangered Species profile: https://ecos.fws.gov/ecp/species/10515 **INSECTS NAME STATUS** Bog Buck Moth Hemileuca maia menyanthevora (=H. iroquois) Endangered

Monarch Butterfly *Danaus plexippus* 

Proposed

There is **proposed** critical habitat for this species. Your location does not overlap the critical

Threatened

habitat.

Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8023">https://ecos.fws.gov/ecp/species/8023</a>

#### **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.

Project code: 2025-0082147 04/11/2025 15:07:39 UTC

## **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

Micron- Upper	Caughdenov	Creek Stream a	and Wetland Mi	tigation Plan
Transfer of pro-				

May 2025

# Appendix E.

# Upper Caughdenoy Creek Invasive Species Management Plan (ISMP)

Oswego County, New York

PREPARED BY:

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

www.thewetlandtrust.org

May 2025

#### 1. Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Mitigation (PRM) package on behalf of Micron NY Semiconductor Manufacturing, LLC, is proposing to develop wetland mitigation acres/credits at their Upper Caughdenoy Creek Site in the Towns of Hastings, Palermo and Schroeppel, Oswego County, New York. The Mitigation Plan (Plan) at Upper Caughdenoy Creek will contribute toward the fulfillment of required wetland mitigation for impacts associated with the Micron Semiconductor Fabrication Campus project (Proposed Development) in the town of Clay, Onondaga County, New York. This Plan will incorporate wetland Re-establishment, Rehabilitation, Enhancement, and Preservation, which involves disturbance to soil during grading activities. As part of the Performance Standards for this Mitigation Plan, invasive species-specific standards must be met. The following is the Invasive Species Management Plan (ISMP) for this Site. It contains the practices and procedures TWT proposes to implement to control the presence and spread of invasive species.

This ISMP will improve ecological outcomes by using a combination of mechanical, biological, cultural, and chemical controls to manage invasive species while minimizing environmental disturbance. By prioritizing early detection, habitat restoration, and targeted interventions, this ISMP is designed to reduce reliance on herbicides, lower the risk of non-target impacts, and promote the long-term success of native vegetation. This adaptive approach enhances wetland resilience, supports biodiversity, and ensures compliance with mitigation performance standards in a sustainable and cost-effective manner.

#### 1.1 Purpose and Goal

- Adaptive Management Framework: This plan operates under an adaptive management strategy, ensuring that invasive species control efforts are adjusted based on monitoring results, site conditions, and evolving regulatory guidance. Preventing the establishment or spread of invasive species at this Site relies upon:
  - o Thorough baseline information data collection,
  - o Avoiding and/or treating existing invasive species populations,
  - o Incorporating construction techniques into the Plan that minimize conditions that are favorable for invasive species colonization, and
  - o Implementing thorough monitoring and maintenance practices throughout the life of the Project and beyond.
- Long-Term Ecological Success: The presence of invasive plant species can degrade wetland function by outcompeting native vegetation, altering soil and water chemistry, and reducing habitat quality for wildlife. This ISMP aims to restore and sustain native plant communities using minimal environmental disturbance construction techniques per the Mitigation Plan.
- The goal of this ISMP is to minimize presence and prevent expansion of invasive species within the Mitigation Site not only during the monitoring period, but in perpetuity, as TWT is the long-term owner and steward. Invasive species control will be considered successful only if invasive species are kept at or below the threshold outlined in Section 6 of the Mitigation Plan for the work areas and 0% net increase in invasive species found elsewhere at the Site is realized. Annual monitoring will help determine whether goals are being met. If it is determined the Site is not on track with its goals, TWT will submit

a revised Management Plan and implement Adaptive Management strategies that are approved by USACE and NYSDEC.

#### 1.2 Regulatory Compliance

This ISMP seeks to meet specific performance standards set by the USACE and NYSDEC as a condition of permit approval. These include thresholds for native plant diversity, invasive species control, and hydrological function.

Invasive species targeted by this ISMP are based on those regulated by NYS Regulation 6 NYCRR Part 575 List of Prohibited and Regulated Invasive Plants, developed by the New York Invasive Species Council and New York Department of Environmental Conservation (NYSDEC) and any others identified by NYSDEC or USACE.

#### 2. Identification

Four key invasive plant species regulated by NYCRR Part 575 were identified at the Site during baseline data collection. Key invasive plants include purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), and cattail (*Typha* spp.). These species are highly competitive, forming dense monocultures that outcompete native vegetation, diminish biodiversity, and disrupt wetland functionality. These species are found in most wetland areas on-site and adjacent on wetlands, affecting over 43 acres at the Upper Caughdenoy Creek Site at the time of data collection. In addition to these dominant species, other invasive plants present in the area include creeping bentgrass (*Agrostis stolonifera*), reed sweet grass (*Glyceria maxima*), honeysuckle (*Lonicera spp.*), creeping jenny (*Lysimachia nummularia*), Timothy grass (*Phleum pratense*), Kentucky bluegrass (*Poa pratensis*), creeping buttercup (*Ranunculus repens*), common buckthorn (*Rhamnus cathartica*), and multiflora rose (*Rosa multiflora*). These species, their common characteristics and their typical locations are provided in Table 2-1 below. Additional invasive plant species have the potential of occurring at the site, particularly in the post-construction and long-term monitoring phase of this plan. These additional species may require treatment if they meet action thresholds outlined in **Section 6-1**, in which case they will be included in future versions of this plan and treated.

Table 2-1. Invasiv	e Species at the Upper Caughd	enoy Creek Site 2024	
Species	Common Characteristics	Photo ID	Typical Location
Common Reed (Phragmites australis)	A perennial grass that can grow over 15 feet tall, forming dense stands with hollow stems and blue-green leaves up to 20 inches long. It spreads through seeds, rhizomes, and stolons, often outcompeting native vegetation in wetlands.		Tidal and non-tidal marshes, lakes, swales, and backwater areas of rivers, and streams
Reed Canary Grass (Phalaris arundinacea)	A tall, perennial grass that grows 2 to 6 feet high, with rough, flat leaves and dense flower clusters that turn beige as they mature. It thrives in wetlands and spreads aggressively through seeds and rhizomes, forming dense stands that outcompete native vegetation.		Wet habitats such as wetlands, moist meadows, and riparian areas
Cattail (Typha spp.)	Tall, perennial wetland plants characterized by their long, narrow, sword-like leaves and distinctive brown, cylindrical flower spikes. They thrive in shallow waters of marshes, ponds, and lakes, spreading through both wind-dispersed seeds and extensive rhizome networks, often forming dense stands that can outcompete other vegetation.		Wetland habitats, including marshes, river and stream banks, pond edges, lakes, ditches, and reservoirs
Purple Loosestrife (Lythrum salicaria)	An erect, branching perennial native to Europe, Asia, and northern Africa, characterized by dense, woody rootstocks that can produce multiple stems, lance-shaped leaves arranged oppositely or alternately, and showy purple flowers with 5-7 petals clustered on tall spikes. This invasive species thrives in wetlands and moist soils, rapidly displacing native vegetation and disrupting local ecosystems.		Wetland habitats, including marshes, pond and lakeshores, stream and riverbanks, and ditches. Also spreads in upland soils, allowing it to spread into meadows and pastures.

#### 3. Pre-Construction Phase

#### 3.1 Baseline Data Collection

Baseline data collection will identify existing invasive communities within the mitigation site. This process will involve field surveys using GIS mapping, orthoimagery using drones, and photographic documentation to establish the extent and density of invasive species populations. Baseline surveys will include mapping of invasive species distribution with percentage cover estimates. The data collected will be used to inform the site preparation and treatment strategies outlined in later sections of this ISMP. See **Figures 8-1 to 8-4** in **Section 8** for invasive species maps.

#### 3.2 Site Preparation & Prevention Measures

Prior to construction, invasive species control measures will be implemented to prevent the spread and establishment of problematic species. These measures will include:

- **Pre-Treatment of Invasives**: Identified invasive species populations will be treated before ground disturbance begins. This may include manual removal, herbicide application, or smothering techniques depending on the species and infestation severity.
- **Equipment Cleaning Protocols:** Any construction equipment arriving on-site will be inspected and cleaned to remove soil, plant material, or seeds that may introduce invasive species.

#### 4. Construction Phase

To minimize the introduction and spread of invasive species during construction activities, the following best practices will be implemented:

- **Minimize Disturbance**: Clearing and grading activities will be restricted to designated project areas, reducing soil disturbance that can facilitate invasive species establishment.
- Erosion and Sediment Control: Use of weed-free erosion control materials, such as straw mulch, biodegradable mats, and hydroseeding with native plant mixes, will prevent soil erosion while avoiding the introduction of invasive species.
- **Construction Site Hygiene**: All machinery and equipment will be cleaned before entering and leaving the site, particularly when working in or near known invasive species populations.
- **Hydrology Management**: The project aims to restore natural hydrological conditions where feasible, as proper hydrology can prevent the establishment of invasive wetland species.
- **Native Plant Seeding**: Following ground disturbance, native plants will be seeded and planted in treated areas to prevent re-colonization by invasive species.

#### **5. Post-Construction Phase**

#### **5.1 Monitoring for Early Detection**

To ensure invasive species control measures remain effective, post-construction monitoring will be conducted. Monitoring efforts will include:

- **GPS Mapping and Photo Documentation**: Recording any changes in invasive species distribution.
- **Upstream and Adjacent Area Inspections**: Identifying potential new sources of invasive species propagules.
- **Disturbance Event Tracking**: Observing site conditions after events like flooding or drought, which may encourage invasive species spread.

#### 5.2 Long-Term Monitoring & Adaptive Management

- Yearly Assessments: Evaluate treatment effectiveness and native vegetation recovery.
- Implement additional treatment as needed.
- Adjust Control Strategies: Based on monitoring results, refine methods to reduce reliance on chemical treatments.

## 6. Treatment Thresholds and Control Strategies

#### **6.1 Treatment Thresholds**

Control measures will be implemented when specific action thresholds are met, ensuring timely intervention to prevent invasive species from undermining mitigation success. The following triggers initiate management actions:

#### 1. Invasive Species Coverage Threshold

o 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- <i>Typha</i> Invasive Species (e.g., purple loosestrife, common reed, reed canarygrass)	≤ 15%	≤ 15%	≤ 12.5%	≤ 10%	< 5% cover
All Invasive Species including <i>Typha</i> 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

o If native plant cover falls below required thresholds (typically **70% native cover** or a minimum diversity standard set in the mitigation permit), corrective action is necessary.

o This includes replanting, selective herbicide application, or modifying site conditions to support native species.

#### 3. Encroachment of Invasives into Priority Habitat Areas

o 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

o 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

o 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. Tro	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:

- o Cutting & Flooding: Cutting stems at water level during late summer combined with water level manipulation can drown rhizomes.
- Smothering: Small patches can be covered with black plastic or heavy mulch to prevent regrowth.
- 2. Chemical Control: (Only if necessary, as a last resort in sensitive areas)
  - o 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.
  - o Follow-up with mechanical removal of dead stalks in the winter.
- 3. Cultural & Biological Control:
  - o 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:
  - o Mowing in early spring and late summer to deplete energy reserves.
  - Hand-pulling small infestations before seed set.
  - o Covering with tarps or thick mulch to shade out new shoots.
- 2. Chemical Control: (Selective use in dense monocultures if needed)
  - o 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:

- o Planting native sedges & rushes to outcompete Phalaris.
- o 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:
  - o Cut stems below water level to drown rhizomes.
  - o Excavation in high-density areas, followed by native planting.
- 2. Chemical Control: (For monocultures in restoration sites if needed)
  - o Glyphosate-based pesticide applied to standing plants in late summer.
  - o Follow-up by removing dead biomass to prevent thick mats from suppressing native growth.
- 3. Cultural & Biological Control:
  - o 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:
  - o Hand-pull small infestations, removing all roots.
  - Cut flower heads before seed drop to prevent spread.
- 2. Biological Control (Preferred Method):
  - o Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
  - o Releases should be monitored over multiple years to assess impact.
- 3. Chemical Control: (For large stands if necessary)
  - Spot treat with glyphosate-based pesticide in late summer.
  - o Follow-up by seeding native competitors.

#### 6.3 Pesticide Selection and Application Guidelines

When chemical control is necessary, pesticides will be carefully selected to minimize environmental impact while effectively managing invasive species. The selection and application methods will be determined based on site-specific conditions, regulatory requirements, and best management practices to ensure effective control while reducing unintended ecological impacts.

- **Target-Specific Formulations:** Only herbicides approved for use in wetland environments will be used, with preference given to herbicides that have minimal impact on non-target species.
- **Reduced Persistence and Toxicity:** Herbicides with low residual activity and rapid breakdown in soil and water will be favored to prevent long-term contamination.
- **Application Methods Based on Site Conditions:** Techniques such as cut-stump treatments, wick application, and spot spraying will be prioritized over broadcast spraying, depending on the infestation size, proximity to sensitive habitats, and hydrological conditions.

All pesticides will be applied in accordance with the label and all applicable federal, state, and local regulations to ensure compliance and environmental protection.

All pesticide applications will be conducted by New York State Certified Pesticide Applicators or individuals working under the direct supervision of a certified applicator, in compliance with New York Environmental Conservation Law (ECL) Article 33 and 6 NYCRR Part 325. This ensures that all chemical treatments are applied safely, legally, and in accordance with state regulations governing pesticide use in wetland environments.

## 7.0 Reporting

The Wetland Trust, Inc. will provide an annual wetland restoration monitoring report which details the status of invasive plant species and all control measures. This report will be submitted by December 31<sup>st</sup> each year to USACE and NYSDEC.

# 8. Maps and Figures

Figure 8-1. Purple Loosestrife Percent Cover

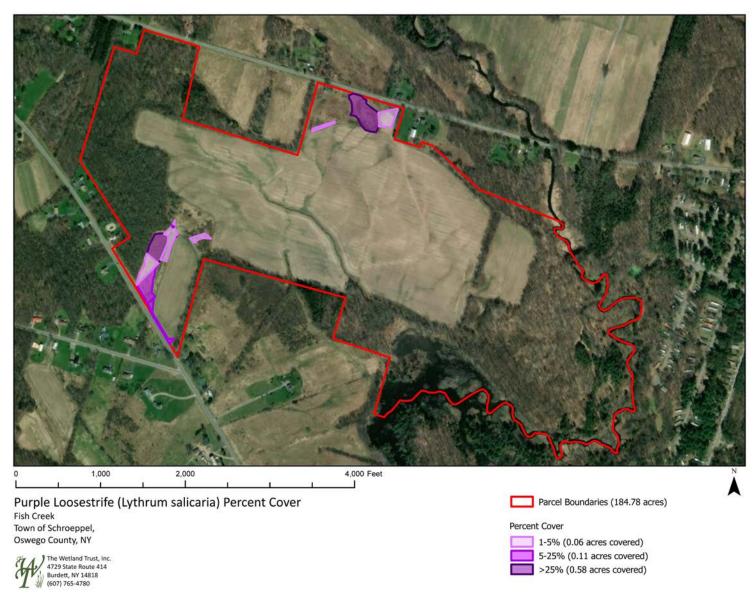


Figure 8-2. Reed Canary Grass Percent Cover

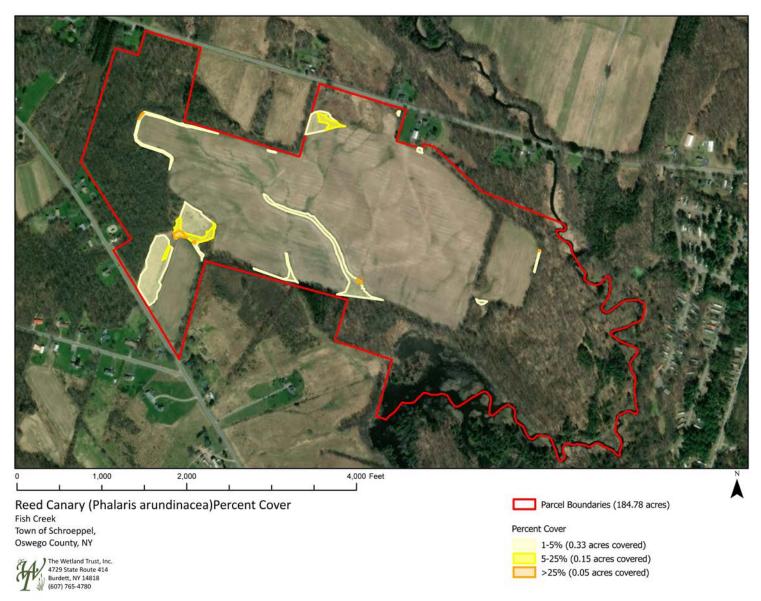


Figure 8-3. Phragmites Percent Cover

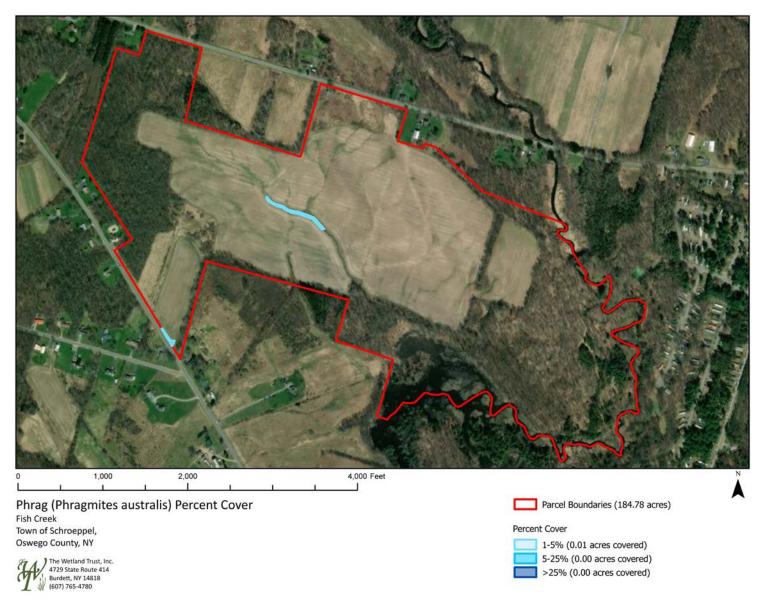


Figure 8-4. Cattail Percent Cover

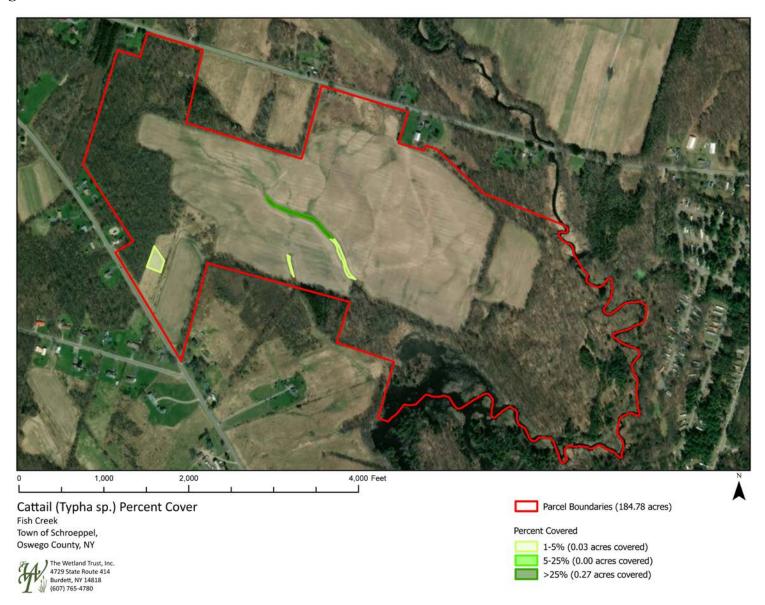


Table 8-1: Invasive Species Coverage at Upper Caughdenoy Creek				
Invasive Species	1-5% Cover (Affected	5-25% Cover (Affected	>25% Cover (Affected	Total Area (Affected Acres)
Reed Canary Grass (Phalaris arundinacea)	1.63	1.09	3.87	6.59
Purple Loosestrife (Lythrum salicaria)	5.67	22.85	1.40	29.93
Cattail (Typha sp.)	0.67	2.24	0.08	2.99
Common Reed (Phragmites australis)	0.02	0.40	3.38	3.80

	Micron-	Upper	Caughdenov	Creek Stream	and Wetland	Mitigation Plan
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May 2025

# Appendix F.



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



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



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



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

	Micron-	Upper	Caughdenov	Creek Stream	and Wetland	Mitigation Plan
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May 2025

# Appendix G.

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.			
	s are present in each drainage and along the south edge of the buried drainage systems and drain historic natural wetland basins. 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°V				

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

Site Name: Wisner 2	Date: 05-03-2024				
Landowner: The Wetland Trust	Landowner: The Wetland Trust Designer Name: Thomas R. Biebighauser				
Individuals assisting with the design: Dan Kwa	snowski (The Wetland Trust), Michelle Herman (The Wetland Trust),				
Gabby Deyo (The Wetland Trust)					
Objectives: Build a naturally appearing and	Site Description: An agricultural field planted to soybeans.				
functioning wetland for mitigation.					
Evidence of historic drainage or filling: Ditches	s 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 How the planned wetland is marked on the ground: Orange wire					
planted to soybeans flags					
Invasive species: Reed Canary grass on Groundwater elevation in test hole? 19-inches below the surface.					
neighboring private land.					
Hydric soil present near the surface? No Elevation-change upper to lower edge of designed wetland: 2.0-fee					
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 pla	anned 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

Site Name: Wisner 3	Date: 05-03-2024		
Landowner: The Wetland Trust Designer Name: Thomas R. Biebighauser			
Individuals assisting with the design: Dan Kwa Gabby Deyo (The Wetland Trust)	asnowski (The Wetland Trust), Michelle Herman (The Wetland Trust),		
Objectives: Build a naturally appearing and functioning wetland for mitigation.	Site Description: An agricultural field planted to soybeans.		
	s are present in each drainage and along the south edge of the r buried drainage systems and drain historic natural wetland basins. 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-fee		
Test Hole location: 43.307863°N 76.220329°V	V		

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

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 = tensoil 13.34 inches = clay 34.40 inches = cand 40.48 inches = clay				

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

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 flag				
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 =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \times 1.5 \text{ tons/yard}^3 = 50 \text{ tons}$ Outlet = 12-feet wide x 50-feet long x 1.5-feet thick =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 50 \text{ tons}$ 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

Site Name: Wisner 7	Date: 05-03-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Dan Kwa Gabby Deyo (The Wetland Trust)	snowski (The Wetland Trust), Michelle Herman (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.
	are present in each drainage and along the south edge of the buried drainage systems and drain historic natural wetland basins. vill 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	·

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)

Site Name: Wisner 8	Date: 05-04-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Michell	e 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.
	es are present in each drainage and along the south edge of the or buried drainage systems and drain historic natural wetland basins.
•	will dialified farilling.
Plant species: Bare ground that is now planted to soybeans	How the planned wetland is marked on the ground: White wire flags
planted to soybeans	How the planned wetland is marked on the ground: White wire flags

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

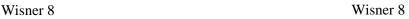
Inlet: 12-feet wide x 50-feet long x 1.5-feet thick =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \times 1.5 \text{ tons/yard}^3 = 50 \text{ tons}$ Outlet = 12-feet wide x 50-feet long x 1.5-feet thick =  $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 50 \text{ tons}$ 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.







Site Name: Wisner 9	Date: 05-04-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Michelle	e 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.
	es are present in each drainage and along the south edge of the or buried drainage systems and drain historic natural wetland basins. 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

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<sup>3</sup>/27 feet<sup>3</sup>/yard<sup>3</sup> = 33 yards<sup>3</sup> x 1.5 tons/yard<sup>3</sup> = 50 tons

Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet<sup>3</sup>/27 feet<sup>3</sup>/yard<sup>3</sup> = 33 yards<sup>3</sup> x 1.5 tons/yard<sup>3</sup> = 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

ite Name: Wisner 10 Date: 05-04-2024						
andowner: The Wetland Trust Designer Name: Thomas R. Biebighauser						
Individuals assisting with the design: Michelle	e 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.					
	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<sup>3</sup>/27 feet<sup>3</sup>/yard<sup>3</sup> = 33 yards<sup>3</sup> x 1.5 tons/yard<sup>3</sup> = 50 tons
Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet<sup>3</sup>/27 feet<sup>3</sup>/yard<sup>3</sup> = 33 yards<sup>3</sup> x 1.5 tons/yard<sup>3</sup> = 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

Site Name: Wisner 11 Date: 05-04-2024					
andowner: The Wetland Trust Designer Name: Thomas R. Biebighauser					
Individuals assisting with the design: Michel	le 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

ite Name: Wisner 12 Date: 05-04-2024					
andowner: 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.					

Test Hole location: 43.309410°N 76.221220°W

Hydric soil present near the surface? No

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.





Elevation-change upper to lower edge of designed wetland: 2.0-feet

Wisner 13 Wisner 13

Site Name: Wisner 14	Date: 05-04-2024				
Landowner: The Wetland Trust Designer Name: Thomas R. Biebighauser					
Individuals assisting with the design: Michello	e 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

ite Name: Wisner 15 Date: 05-04-2024					
andowner: The Wetland Trust Designer Name: Thomas R. Biebighauser					
Individuals assisting with the design: Michel	lle 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.				
	es are present in each drainage and along the south edge of the or buried drainage systems and drain historic natural wetland basins.				
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-fee				

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

	Micron-	Upper	Caughdenov	Creek Stream	and Wetland	Mitigation Plan
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May 2025

# Appendix H.

Micron- Upper Caughdenoy Creek Stream and Wetland Mitigation Plan
Appendix I.

May 2025

# 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.

The Wetland Trust, Inc.

## 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.

The Wetland Trust, Inc.

**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	Replanting 5		\$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
N	- 1 400 41 1 1'4- @ \$0 000 (114 D)	504 ) 1125	00	

Note: This table is an estimate based on 400 wetland credits @ \$8,000 or (equivalent DEC Acres) and 13,500 stream ft @ \$60

The Wetland Trust, Inc.

# Micron Central New York Semiconductor Manufacturing Complex

# **Lower Caughdenoy Creek Wetland Mitigation Plan**

Oswego County, NY

#### PREPARED BY:

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

www.thewetlandtrust.org

May 2025



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**Appendix C.** Wetland Determination Map, Summary Table, and Data Forms

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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 Upper Caughdenoy Creek Wetland Mitigation Plan Sixmile Creek Wetland Mitigation Plan Oneida River Wetland Mitigation Plan

# 1. Introduction and Objectives

Six sites in Oswego County make up the Permittee Responsible Offsite Compensatory Mitigation Project (Project) for the Micron NY Semiconductor Manufacturing, LLC (Micron) semiconductor fabrication site in the town of Clay, Onondaga County, New York. The Lower Caughdenoy Creek Wetland Mitigation Plan (LCC Plan) location is along County Route 37 in the Town of Hastings, Oswego County, NY. The Project will address the total mitigation need for wetland credits and stream restoration to meet Micron permit requirements. The final number of credits required for compensation is still pending as of the drafting of this plan, however, an Overview document accompanying the six plans will be updated with final credit accounting. TWT submits this LCC Plan as one of six plans to satisfy Project mitigation needs and in fulfillment of the requirements of 33 C.F.R. Part 332 (2024).

This Lower Caughdenoy Creek Plan focuses on wetland mitigation components only. The objectives of the LCC Plan are to develop approximately 53.3 wetland mitigation credits (USACE) or 58 mitigation acres (NYSDEC) toward a total compensation requirement of 414 credits/acres for the entire project. This includes:

- Re-establish wetlands to generate 51.5 USACE wetland credits equivalent to the creation of 51.5 NYSDEC wetland mitigation acres, including:
  - o 3.3 acres of PEM Shallow Emergent Marsh
  - o 2.4 acres of PEM Deep Emergent Marsh
  - o 0.35 acres of PSS Scrub-Shrub
  - o 11.2 acres of PFO Floodplain Forest
  - o 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:
  - o 3.6 acres of herbaceous buffer habitat
  - o 25.1 acres of shrub/forest buffer habitat

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

## 2. Site Description

The Lower Caughdenoy Creek Site is approximately 118 acres in size in the Town of Hastings, Oswego County, New York (**Figure 2-1**). The Site is within the Oneida River 10-digit HUC (0414020209) watershed, and the U.S. Geological Survey 7.5-minute quadrangle indexed as Central Square. Coordinates for the approximate center of the Site are: [43.26633486, -76.18747077]. The Site is located along County Route 37 which is adjacent to the Oneida River. Caughdenoy Creek meanders across the northern portion of the property (**Figure 2-2**).

#### 2.1 Site Selection

The Lower Caughdenoy Creek Mitigation Site was selected along with five other sites to satisfy compensatory mitigation requirements for Micron Campus Impacts using site selection protocols described in Section 2.1 and 4.1 of the Micron Overview of Stream/Wetland Compensation on Six Mitigation Sites document. This Site is particularly well suited for wetland restoration with a combination of:

- very flat topography,
- thick clay and compacted sand/clay layers near the surface,
- large area with opportunity to support expansive wetland connectivity

#### 2.2 Site Protection

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

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

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

Figure 2-1. Wetland Mitigation Sites Location Overview

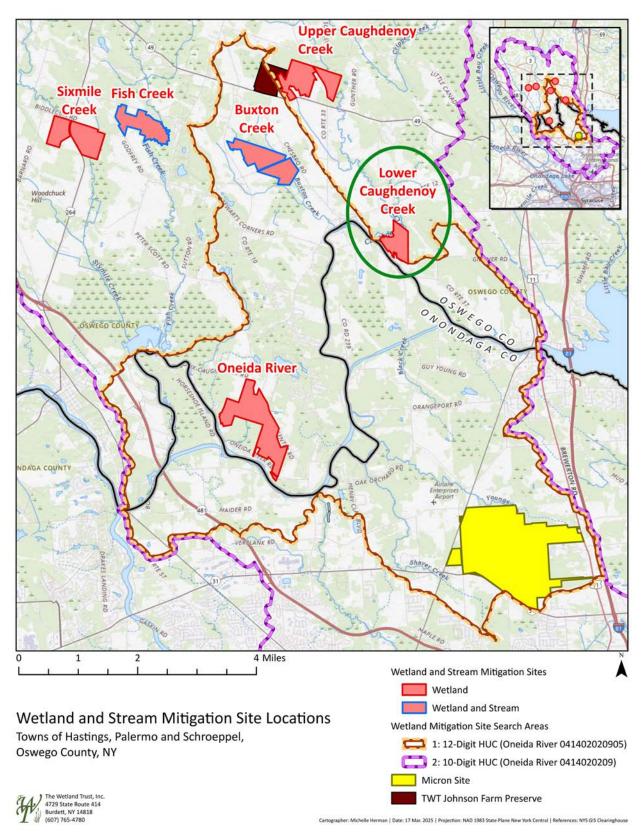


Figure 2-2. Lower Caughdenoy Creek Property (2023)



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



TWT Property Boundary (118.1 ac)

Cartographer: Michelle Herman | Date: 4 Dec. 2024 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

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

#### 3. Baseline Information

#### 3.1 Land Use History

#### Historic

A review of historic aerial photographs (**Appendix B**) was conducted to understand the property's land use history. Early aerial photos show a local landscape largely denuded of forest, with only sparse tree coverage in the immediate vicinity of Caughdenoy Creek. The earliest available aerial imagery (1951) depicts the entire region in agricultural use, with nearly the entire property under cultivation. Linear features suggest efforts to drain the land. Between 1978 and 1994, a triangular section on the southwestern edge of the property near the Oneida River and a rectangular section in the northeastern part near Caughdenoy Creek were converted into pine tree farms. These areas remain forested in 2024. Between 2011 and 2013, a 0.375-acre square in the center of the eastern field was allowed to go fallow.

By 1966, a sand pit was excavated in the southeastern section. This sand pit and its adjacent area have since been used as the land's "farm dump," where a wide variety of agricultural machinery has been deposited. Additionally, between 1978 and 1994, two ponds were created on the eastern edge of the property. By 2023, the fingers of land between these ponds and the adjacent scrub/forest on the property boundary were no longer in agricultural use.

#### Current Use

Current land use is primarily dedicated to commercial crop production, with fields planted in corn and soybeans. Grading and drainage infrastructure are actively maintained to optimize field conditions and enhance agricultural productivity. Successional vegetation development and forest growth continues in areas that have been allowed to regrow.

#### 3.2 Soils

USDA Natural Resources Conservation Service (NRCS) soil mapping of the site is summarized in **Table 3-1** and **Figure 3-1** below. The Lower Caughdenoy Creek site has relatively uniform soils, with 85.64 acres (76.21% of the total area) consisting of Rhinebeck silt loam. The other significant soil type present is Madalin silt loam at 23.64 acres (20.02% of the total area). Only 3% of the land on the property is characterized as well drained, with most of the site being very poorly, poorly, or somewhat poorly drained. The land is predominantly flat with gentle slopes.

Table 3-1. Soil Series Mapped within the Mitigation Area						
Series	Symbol	Acres	% of Area	Drainage Class	Hydrologic Soil Group	
Fonda mucky silt loam	Fn	0.91	0.77%	Very poorly drained	C/D	
Hudson silt loam, 2-6% slopes	HuB	3.54	3.00%	Moderately well drained	C/D	
Madalin silt loam, 0-3% slopes	Ma	23.64	20.02%	Poorly drained	C/D	
Rhinebeck silt loam, 0-2% slopes	RhA	61.66	52.23%	Somewhat poorly drained	C/D	
Rhinebeck silt loam, 2-6% slopes	RhB	28.33	23.98%	Somewhat poorly drained	C/D	

A 4-foot-long open-faced clay auger was used to sample soils across the property, revealing clay layers sufficient for holding water on site in every test hole. Locations of soil test pits and the description of soil textures and depth to groundwater are detailed in **Figure 3-1** below.

#### 3.3 Wetlands and Hydrology

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

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

Caughdenoy Creek borders the north side of the site at approximately 370 feet in elevation, and the Oneida River lies just southwest of the property at around 369 feet. Existing on-site wetlands range from 370 to 378 feet in elevation and may have limited hydrologic connectivity to these surface waters. However, the dominant factor influencing wetland hydrology across the site is the presence of clay loam to clay soils, typically within 10 inches of the surface.

Drainage features such as D-03 and D-13 (**Figure 3-3**), combined with heavy clay soils, support wetland areas including PEM-05a, PEM-05b, and PEM-06. PEM-09 and PEM-10 may receive some groundwater influence from the Oneida River, but site observations—such as crop stress, soil cracking, and algal mats—indicate poor drainage due primarily to shallow clay soils. D-03 through D-13 may represent a remnant natural tributary to Caughdenoy Creek, whereas D-14 is a

Figure 3-1. Lower Caughdenoy Creek Soils

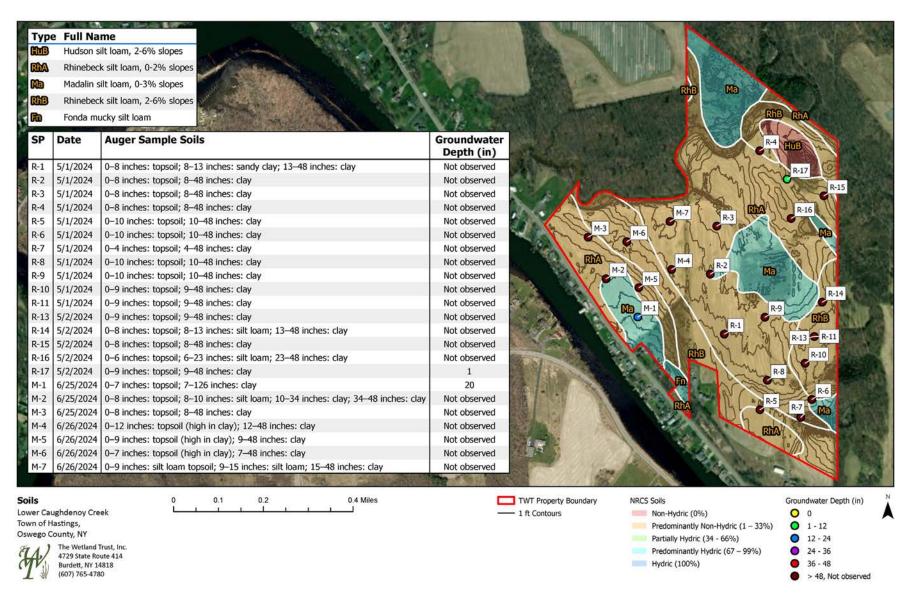


Figure 3-2. State and Federal Mapped Wetlands

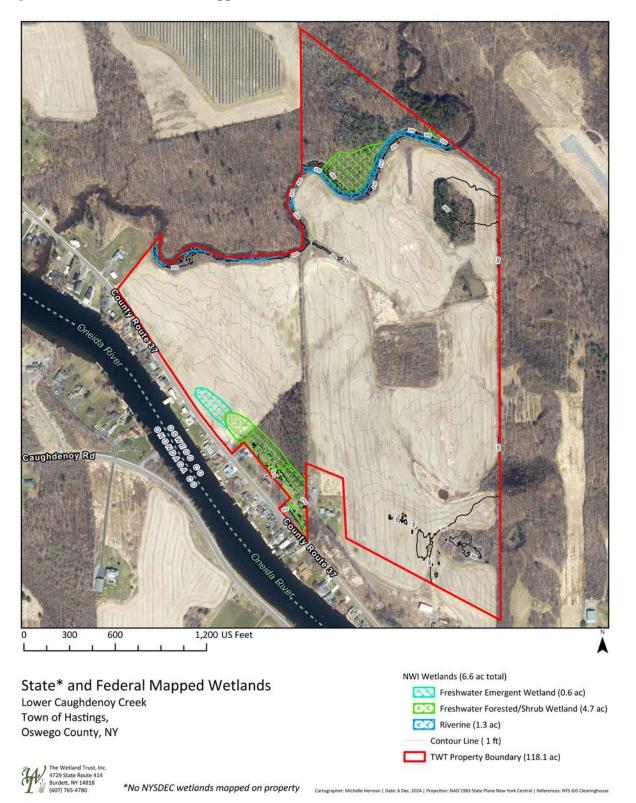
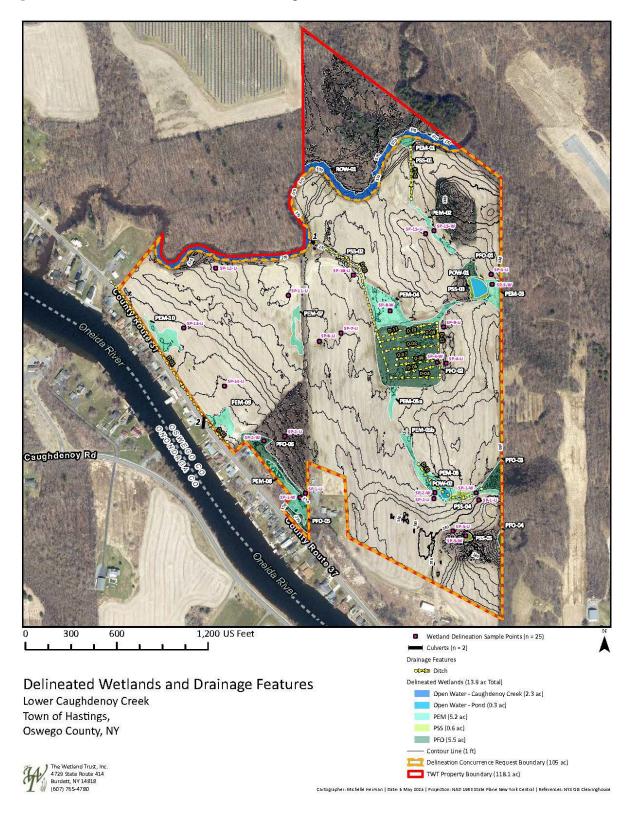


Figure 3-3. Delineated Wetlands and Drainage Features



constructed swale with no signs of being a natural feature. Western wetland areas like PFO-05 and PEM-10 may have historically connected to the Oneida River before the construction of County Route 37 and surrounding development.

Hydrology at the site will continue to be monitored until work begins. Groundwater monitoring wells and a rain gauge will be installed at the site in spring 2025. No staff gauges are proposed on this site based on current site conditions and the limited relationship between site hydrology and Caughdenoy Creek. If further investigation and comments require a staff gauge, one or two will be placed in Caughdenoy Creek and the plan will be adjusted

#### **Monitoring Wells**

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

Table 3-3. Monitoring Well Location					
Well	I Elevation Latitude Longitude Description			Description	
#	(ft)				
1	373.35	43.26571742	-76.19041613	Near wetland M-05, determines groundwater on West side	
2	373.04	43.26803153	-76.18722095	Near wetland R-03, determines groundwater on North side	
3	376.88	43.2653242	-76.1846052	Near wetland R-14, determines groundwater on East side	
4	376.22	43.26379919	-76.18712522	Between wetland R-01 and R-08, determines groundwater South side	

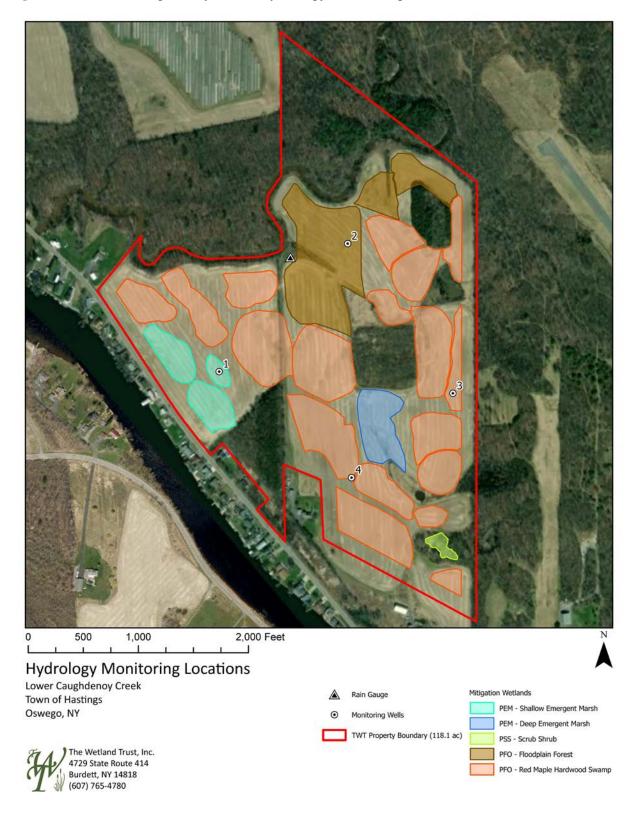
#### Rain Gauge

One HOBO Rain Gauge Data Logger (RG3) is installed at the site to measure precipitation on-site (coordinates: 43.267800, -76.188647, Elevation: 373.51) and has been recording data since April 28, 2025. This data will support the interpretation of hydrologic responses observed in monitoring wells and staff gauges. This device will not be used in peak winter as it cannot measure snow, only rainfall.

# 3.4 Existing Wildlife

Various wildlife, including amphibian, reptile, fish, bird, and mammal species, have been recorded at the Lower Caughdenoy Creek mitigation site, either through visual or auditory observations. Amphibians were identified by sight using egg mass, juvenile, or adult presence and by sound if mating calls were discernible. Four main species were noted at this site, including the American toad (*Anaxyrus americanus*), gray treefrog (*Dryophytes versicolor*), northern green frog (*Lithobates clamitans melanota*), and northern leopard frog (*Lithobates pipiens*), all of which are secure both statewide and globally. Two reptile species, the painted turtle (*Chrysemys picta*) and eastern garter snake (*Thamnophis sirtalis sirtalis*), and one fish species, the brown bullhead

Figure 3-4. Lower Caughdenoy Creek Hydrology Monitoring Locations



(*Ameiurus nebulosus*), were visually identified at this site. These species are secure both statewide and globally or of least conservation concern.

Numerous bird species were observed at the Lower Caughdenoy Creek mitigation site through both visual and auditory identification. Notable species include the red-winged blackbird, wood duck, Canada goose, northern cardinal, and pileated woodpecker. All observed species are considered secure both statewide and globally. Various mammal species were also observed at this site either directly or indirectly (i.e., scat, footprints, etc.), including the white-tailed deer (*Odocoileus virginianus*), coyote (*Canis latrans*), North American beaver (*Castor canadensis*), and raccoon (*Procyon lotor*), all of which are of least conservation concern. See **Appendix D** for the full list of observed wildlife.

#### 3.4.1 Federally Listed Species and Habitat Consideration

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

# 3.5 Existing Vegetation

The Lower Caughdenoy Creek site features a mix of agricultural, upland, and wetland ecosystems. A large portion of the site is currently cultivated as a soybean (*Glycine max*) field, resulting in limited vegetative diversity within the agricultural zone. Surrounding the field and perimeter are delineated wetlands that support a combination of native and invasive plant species. Native vegetation, including Canada anemone (*Anemone canadensis*), blue flag (*Iris versicolor*), yellow trout lily (*Erythronium americanum*) contributes vital habitat and ecological functions in these areas. A complete list of species observed at the Lower Caughdenoy Creek site can be found in **Appendix D**.

# **3.6 Invasive Species**

The key invasives of Lower Caughdenoy Creek include glossy buckthorn (*Frangula alnus*) affecting 8.81 acres, purple loosestrife (*Lythrum salicaria*) affecting 1.62 acres, reed canary grass (*Phalaris arundinacea*) affecting 6.00 acres, common reed (*Phragmites australis*) affecting 0.60 acres, and cattail (*Typha spp*) affecting 0.07 acres (**Table 3-4**). In addition to these dominant species, other invasive plants present in the area include smooth brome (*Bromus inermis*), bull thistle (*Cirsium vulgare*), autumn olive (*Elaeagnus umbellata*), honeysuckle (*Lonicera spp.*), moneywort (*Lysimachia nummularia*), common Timothy (*Phleum pratense*), common Kentucky bluegrass (*Poa pratensis*), buckthorn (*Rhamnus cathartica*), multiflora rose (*Rosa multiflora*),

bittersweet nightshade (Solanum dulcamara). Refer to **Appendix E** for baseline maps of key invasive species extent.

Table 3-4. Invasive Species Coverage at Lower Caughdenoy Creek						
Invasive Species	1-5% Cover	5-25% Cover	>25% Cover	Total Affected		
	(Acres)	(Acres)	(Acres)	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 8<sup>th</sup>, 2025 (**Appendix F**) with Phase 1B field work completed on May 1<sup>st</sup>, 2025. No sites were identified.

# 4. Wetland Credit Accounting

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

Figure 4-1. USACE Wetland Credit Generation and NYSDEC Mitigation Acreage							
Wetland type Cowardin	Cover type Edinger	Mitigation Type NYSDEC	Acres	Mitigation type USACE	USACE Ratio (Acre:Credit)	Credits	
PEM	Shallow emergent marsh	Restoration	3.3	Re-establishment	1:1	3.3	
		Enhancement	0.3	Rehabilitation	3.5:1	0.09	
	Deep emergent marsh	Restoration	2.4	Re-establishment	1:1	2.4	
		Enhancement	0.3	Rehabilitation	3.5:1	0.09	
PFO	Floodplain forest	Restoration	11.2	Re-establishment	1:1	11.2	
	r 100upiani 10rest	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	Comple chamb	Restoration	0.35	Re-establishment	1:1	0.35
155	Scrub shrub	Enhancement	0.05	Rehabilitation	3.5:1	0.01
		Total	58*			53.3
* total amount of NYSDEC mitigation acres						

Open water areas (deep water aquatic habitats and vegetated shallows) greater than 0.1 contiguous acre will only be credited where they equal 10% or less of the total wetland creation and reestablishment 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  $\leq$ 6.6 ft in depth that do not support rooted-emergent or woody plant species. Areas  $\leq$ 6.6 ft mean annual depth that support only submergent aquatic plants are vegetated shallows, not wetlands. The 2 acres of open water (POW) that will be impacted will be accommodated by POW areas within the wetlands where they are not counted toward the credit total.

# 5. Wetland Mitigation Work Plan

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

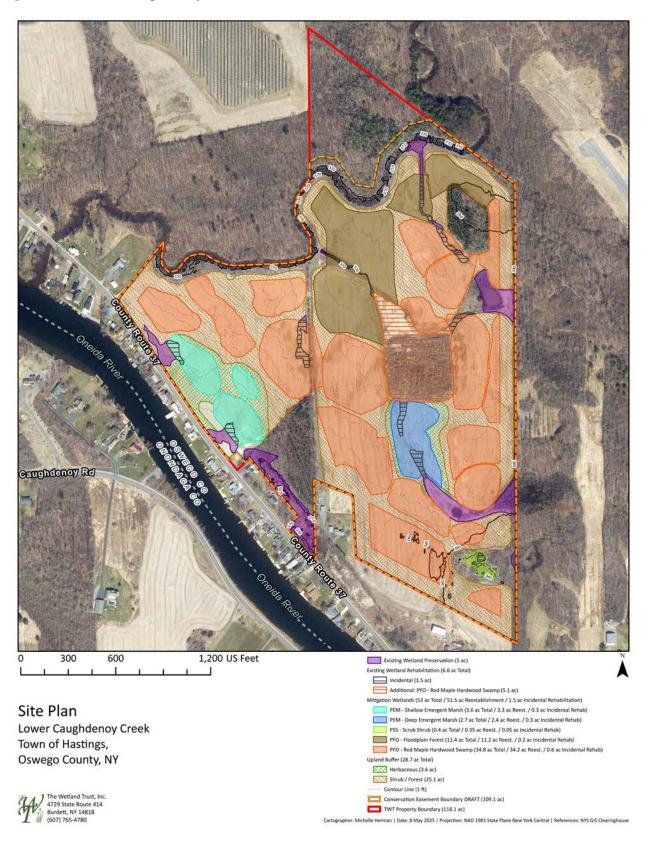
Wetlands were designed at the site in May and June 2024 by TWT staff. Field design forms were filled out for each wetland polygon (**Appendix G**). Determination of the types of wetlands to be re-established for each area within the Lower Caughdenoy Creek Site is based on the cover types outlined in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

Approximately 3.3 acres of shallow emergent marsh, 2.4 acres of deep emergent marsh, 0.35 acres of scrub-shrub, 11.2 acres of floodplain forest and 34.2 acres of red maple hardwood swamp will be re-established with an additional 6.5 acres of rehabilitation of these cover types (**Figure 5-1**). The following characteristics guide the locations of each type of wetland to be re-established.

#### Floodplain Forest

• Low terraces of river floodplains, and the floodplains of stream restoration areas

Figure 5-1. Lower Caughdenoy Creek Site Plan



- Low areas of inundation in spring and irregular inundation of high areas
- Mineral soils

#### Red Maple-Hardwood Swamp

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

#### Deep Emergent Marsh

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

#### **Shallow Emergent Marsh**

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

#### Shrub Swamp

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

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

# **5.1 Invasive Vegetation Control**

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

resources. All treated areas will be monitored to ensure the effectiveness of the control measures, and follow-up treatments will be applied as necessary.

#### 5.2 Grading Plan: Re-establishment Wetlands

#### Basin and berm construction

A shallow basin will be shaped for each designed wetland. The basins will measure 10 feet in diameter to over 200-feet in diameter based on location characteristics and targeted cover type. The basin is dug so that it is deepest in the center in relation to the low edge of the marked perimeter. Basins will range in depth from 1-inch to 36-inches, based on targeted cover type. Refer to **Figures 5-4** for plan view details. Small, earthen berms around the lower two-thirds of the wetland basin will be constructed from 1.0 to 2.0 feet high at a minimum width of 3-feet wide and gradual 5 percent slopes. Core trenches filled with compacted clay layers will be constructed under the berms to disable the buried drainage structures. See **Figures 5-1 and 5-2** for a typical section and plan view.

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

Figure 5-1. Restored Wetland Section View

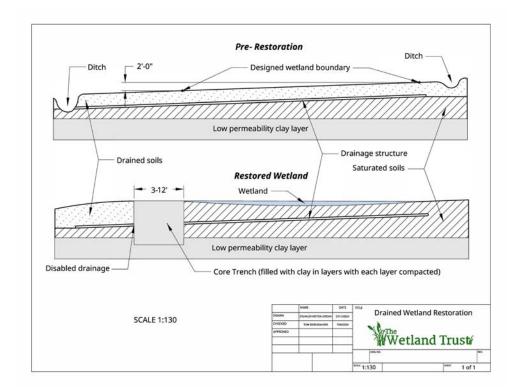
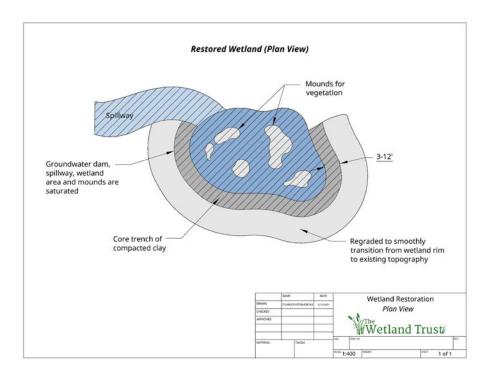


Figure 5-2. Restored Wetland Plan View



#### Microtopography restoration

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

Table 5-1. Lower Caughdenoy Creek Grading for Wetland Types **Wetland Type** Maximum Mound Mound Average Average wetland basin individual mound Spacing (ft) Density/acre diameter (in) depth (in) mound height (in)\* 24 24 30 80 PEM - Shallow Emergent Marsh 36 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 4 12 10 400 PSS - Scrub-shrub 6 \*soil is kept uncompacted and will settle by up to 50%

Figure 5-4. Wetland Grading Plan

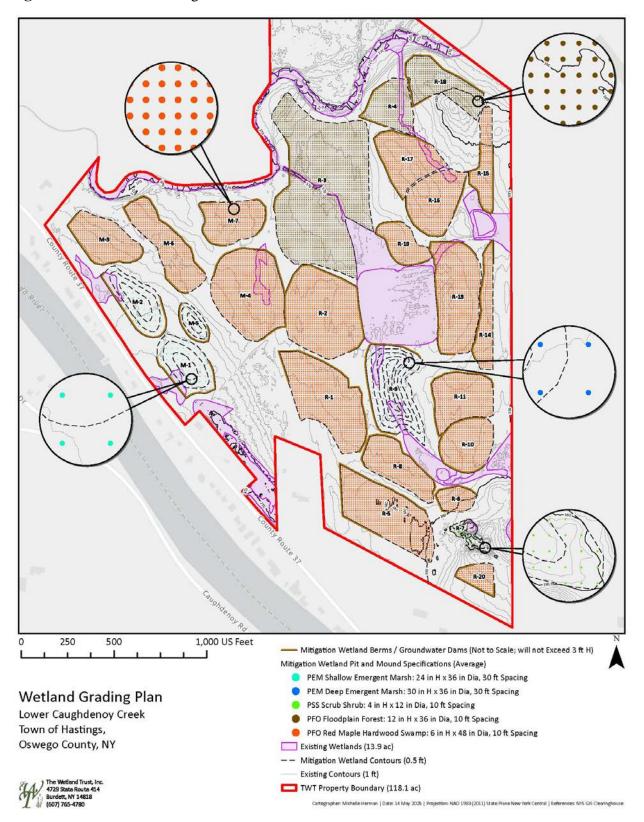


Figure 5-6. Restored Emergent Wetland

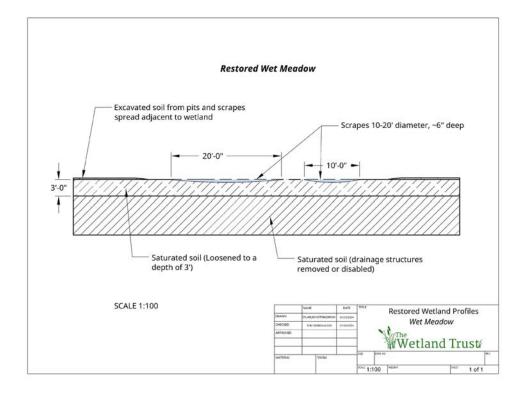
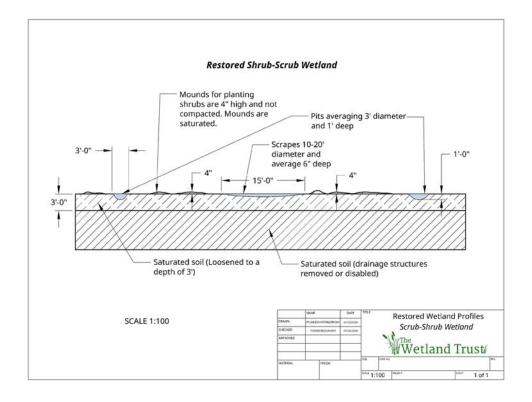


Figure 5-7. Restored Scrub-Shrub Wetland



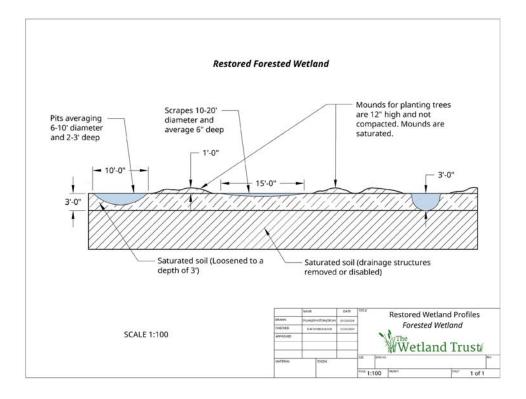


Figure 5-8. Restored Forested Wetland

## **5.3** Rehabilitation/Restoration of Existing Wetlands

Aside from the incidental rehabilitation (where existing wetlands overlap with designed wetland polygons), additional areas of targeted rehabilitation will occur. The main area, PFO-02 and PEM-04, is a forested patch in the center of the property that was a former pine tree farm that grades out into a degraded emergent wetland to the north. PFO-02 has concentrated agriculture drainage of over 3,700 linear feet of drainage with possible buried drainage features also present. PEM-04 is currently dominated by invasives; purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), reed canary (*Phalaris arundinacea*), cattail species (*Typha spp*), and glossy buckthorn (*Frangula anlus*). Rehabilitation methods include:

- Hydrology- Select ditch plugs where drainage features are altering existing hydrology.
- Vegetation- Control invasive species including manually and/or chemically removing the species. Native herbaceous and woody plants will be installed once invasives have been controlled.

#### 5.4 Buffer Establishment

Upland buffers will be established surrounding all re-established, restored, or rehabilitated wetland areas to enhance habitat quality, protect water quality, and improve ecological function. Where

buffers surround re-established palustrine emergent (PEM) wetlands, they will be planted with native herbaceous upland species to maintain open habitat structure and provide transitional zones that support pollinators and other wildlife. In areas adjacent to re-established palustrine scrubshrub (PSS), palustrine forested (PFO) wetlands, or restored stream channels, upland buffers will be planted with native shrub and tree species to create structurally diverse, forested buffer zones. These plantings will promote shading, nutrient uptake, and habitat connectivity.

## **5.5** Planting Plan

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

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

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

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

Table 5-2a. PEM- Shallow Emergent Marsh Planting List						
Common Name	mmon Name  Scientific Name  Wetland Indicator Coefficient of Conservatism (CoC)					
Swamp Milkweed	Asclepias incarnata	OBL	6	15-20		
Longhair Sedge	Carex comosa	OBL	5	pounds/acre		
Fringed Sedge	Carex crinita	OBL	5			
Bottlebrush Sedge	Carex hystericina	OBL	4			
Shallow Sedge	Carex lurida	OBL	3			
Pointed Broom Sedge	Carex scoparia	FACW	2			
Upright Sedge	Carex stricta	OBL	6			
Hairy-fruited sedge	Carex trichocarpa	OBL	5			

Fox Sedge	Carex vulpinoidea	FACW	3
White Turtlehead	Chelone glabra	OBL	7
Swamp Loosestrife	Decodon verticillatus	OBL	8
Three-way Sedge	Dulichium arundinaceum	OBL	5
Common Spikerush	Eleocharis palustris	OBL	4
Riverbank Wildrye	Elymus riparius	FACW	5
Virginia Wildrye	Elymus virginicus	FACW	4
Joe-Pye Weed	Eupatorium fistulosum	OBL	6
Boneset	Eupatorium perfoliatum	FACW	4
Spotted Touch-me-not	Impatiens capensis	FACW	2
Pale Touch-me-not	Impatiens pallida	FACW	3
Northern Blue Flag	Iris versicolor	OBL	7
Canada Rush	Juncus canadensis	OBL	5
Soft Rush	Juncus effusus	OBL	3
Cardinal Flower	Lobelia cardinalis	FACW	7
Great Blue Lobelia	Lobelia siphilitica	FACW	6
Square-stemmed Monkey Flower	Mimulus ringens	OBL	5
Sensitive Fern	Onoclea sensibilis	FACW	2
Lizard's Tail	Saururus cernuus	OBL	7
Purple-Stemmed Aster	Symphyotrichum puniceum	OBL	4
Marsh Fern	Thelypteris palustris	FACW	4
Blue Vervain	Verbena hastata	FACW	3

Table 5-2b. Deep Emergent Marsh						
Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate		
Gray's Sedge	Carex grayi	FACW	5	15-20 pounds/acre		
Cartex lacustris	Carex lacustris	OBL	5			
Royal Fern	Osmunda regalis	OBL	7			
Green Bulrush	Scirpus atrovirens	FACW	4			
Woolgrass	Scirpus cyperinus	FACW	3			
River Bulrush	Scirpus fluviatilis	OBL	6			
Water Parsnip	Sium suave	OBL	5			
Bur-reed	Sparganium americanum	OBL	5			

# Table 5-2c. Scrub Shrub

Common Name	Scientific Name	Wetland Indicator	CoC	Planting/Spacing Rate
Smooth alder	Alnus serrulata	OBL	7	400/acre
Coastal shadbush	Amelanchier canadensis	FAC	7	Shrub clusters
Chokeberry	Aronia melanocarpa	FACW	6	Trees 10-25 feet
Purple chokeberry	Aronia prunifolia	FACW	7	apart
Buttonbush	Cephalanthus occidentalis	OBL	8	
Silky dogwood	Cornus amomum	FACW	5	
Gray dogwood	Cornus racemosa	FAC	2	
Red osier dogwood	Cornus sericea	FACW	5	
Common winterberry	Ilex verticillata	FACW	7	
Northern spicebush	Lindera benzoin	FACW	6	
Ninebark	Physocarpus opulifolius	FACW	5	
Swamp rose	Rosa palustris	FACW	9	
Bebbs willow	Salix bebbiana	FACW	3	
Pussy willow	Salix discolor	FACW	4	
Silky willow	Salix sericea	OBL	6	
Common elderberry	Sambucus canadensis	FACW	3	
Meadow-sweet	Spiraea alba	FACW	5	
High bush blueberry	Vaccinium corymbosum	FACW	6	
Northern wild raisin	Viburnum cassinoides	FACW	7	
Arrow-wood	Viburnum dentatum	FAC	4	
Nannyberry	Viburnum Lentago	FAC	4	
Highbush cranberry	Viburnum opulus	FACW	3	

Table 5-2d. PFO- Floodplain Forest					
Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate	
Boxelder	Acer negundo	FACW	0	400/acre	
Red maple	Acer rubrum	FAC	1	Shrub	
Silver maple	Acer saccharinum	OBL	2	clusters	
Grey birch	Betula populifolia	FAC	4	Trees 10-25	
Hackberry	Celtis occidentalis	FAC	4	feet apart	
Buttonbush	Cephalanthus occidentalis	OBL	8		

Silky dogwood	Cornus amomum	FACW	5
Red osier dogwood	Cornus sericea	FACW	4
Keu osiei uogwood	Cornus sericea	FACW	4
Green ash	Fraxinus pennsylvanica	FACW	2
Spicebush	Lindera benzoin	FACW	6
Black gum	Nyssa sylvatica	FAC	5
Ninebark	Physocarpus opulifolius	FACW	5
American sycamore	Platanus occidentalis	FACW	3
Eastern cottonwood	Populus deltoides	FAC	2
Swamp white oak	Quercus bicolor	FACW	7
Bur oak	Quercus macrocarpa	FAC	6
Pin oak	Quercus palustris	FACW	7
Black willow	Salix nigra	OBL	3

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

Table 5-2f. Targeted Rehabilitation Areas					
Common Name	Scientific Name	Wetland Indicator	CoC	Planting Rate	
Red Maple	Acer rubrum	FAC	2	400/acre	
Chokeberry	Aronia melanocarpa	FACW	6	Shrub clusters	
Buttonbush	Cephalanthus occidentalis	OBL	7	Trees 10-25 feet	
Silky dogwood	Cornus amomum	FACW	4	apart	
Red osier dogwood	Cornus sericea	FACW	5		
Spicebush	Lindera benzoin	FAC	5		
Black gum	Nyssa sylvatica	FAC	5		

Swamp white oak	Quercus bicolor	FACW	7
Bur oak	Quercus macrocarpa	FAC	6
Pin oak	Quercus palustris	FACW	7
Black willow	Salix nigra	OBL	2
Elderberry	Sambucus canadensis	FACW	3

## 5.5 Timing and Sequence

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

Table 5-3. Mitiga	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		Ο,		<del></del> -		Permanent stewardship begins after monitoring period ends, pending agency approval
Fish Creek Stream and Wetlands			Construction begins					
Upper Caughdenoy Creek Wetlands				Construction begins				
Sixmile Creek Wetlands					Construction begins			

The construction sequence at LCC follows that shown in **Table 5-4**. The site will be constructed in approximately one year with the following spring dedicated to planting that will initiate the 10-year monitoring and maintenance window to meet success criteria. Planting in the fall may occur if it is advantageous to plant establishment.

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

Table 5-4. LCC Construction Sequence				
Activity	Timing	Phase		
Invasive species management.	Spring Year 1*	Pre-construction		

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

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

• Hydrology: the wetland area is inundated, or the water table is ≤12 inches below the soil surface for ≥14 consecutive days during the growing season at a minimum frequency of 5 years in 10. Any combination of inundation or shallow water table is acceptable in meeting the 14-day minimum requirement. For wetland re-establishment areas, deepwater aquatic habitats and/or vegetated shallows will only be credited where they equal 10% or less of the re-establishment areas on the site and are part of a well-integrated complex. Vegetated shallows and/or deep-water habitats over 0.1 acre in size will be mapped in each monitoring report/delineation. It is not anticipated that any such aquatic habitats will develop at the site.

- Vegetation: the wetland area demonstrates a relative dominance of Facultative (FAC) or wetter plant coverage, meeting one or more USACE Wetland Determination Data Form Hydrophytic Vegetation Indicators.
- Soils: the wetland area contains soil profiles that demonstrate one or more USACE Wetland Determination Data Form Hydric Soil Indicators.

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

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

Deep emergent and shallow emergent marsh (Edinger et al. 2014) are the targeted cover types for PEM areas.

- Shallow marshes will be 6 inches to 3 feet deep with exposed soils in the summer and very variable in species.
- Deep emergent marshes will be 6 inches to 6 feet deep, less likely to have exposed soils, and very variable in species, with species more likely to be submerged or floating.
- Palustrine Scrub Shrub (PSS): The areas meeting palustrine scrub shrub criteria will have at least 400 native shrubs/trees per acre, and those stems will display normal and healthy growth, free of disease and pests. At least 280 of those stems will be native shrub species. Stem density monitoring will be conducted biannually, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.
- Palustrine Forest (PFO): The areas meeting palustrine forest criteria will have a minimum of 400 native, live, and healthy (disease- and pest-free) woody plants growing per acre. At least 280 of these will be native tree species. Stem density monitoring will be conducted biannually for a period of 15 years, providing sufficient time to assess progress and account for any adaptive management needs to ensure final success criteria will be met.

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

- o Floodplain Forest, will be planted adjacent to streams
- o 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

- O 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.
- O 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.
- <u>VIBI</u>: 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 reestablishment and rehabilitation. Interim targets will aim for a score of 15 or more by the first year following planting, ≥20 by Year 3, ≥30 by Year 5, and ≥35 by Year 7.

Table 6-1. Wetland Performance Standards and Interim Goals									
	Interim and Final Goals								
Performance Standard	Year 1 <sup>1</sup>	Year 3	Year 5	Year 7	Year 10 <sup>2</sup>	Year 12	Year 15 <sup>3</sup>		
Relative cover by native perennial hydrophytes (FAC or wetter)	20%	40%	60%	80%	90%				
Stem density in PSS areas (per acre, at least 280 must be shrub species)	400	400	400	400	400				
Stem density in PFO areas (per acre, at least 280 must be tree species)	400	400	400	400	400	400	400		
Tree height in PFO areas	1 ft	2 ft	3 ft	4 ft	6.6 ft	8ft	9ft		
Relative cover of all non-Typha invasive plant species in PEM, PSS, and PFO areas	15%	15%	12.5%	10%	5%				
Total relative cover of all invasive species, including Typha spp. in PEM, PSS, and PFO areas	20%	18.5%	15%	12.5%	10%				
VIBI-FQ score	≥15	≥20	≥30	≥35	≥40				

<sup>1.</sup> First full growing season following planting

<sup>2.</sup> Final herbaceous/PEM and PSS goals to be met at this time or additional monitoring years added

<sup>3.</sup> Final PFO (tree height and density) goals to be met at this time

## 7. Monitoring Requirements

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

Site monitoring begins after construction is completed and continues for ten (10) years unless additional monitoring is required to demonstrate achievement of performance standards. Monitoring information collected will determine if performance standards are being met and inform maintenance tasks or adaptive management needed to help meet those standards.

Each monitoring report will include:

## • Work completed, as-builts, and milestones

- o 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.
- o 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.
- o 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

- o 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.
- o 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 31<sup>st</sup> 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.

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

<sup>\*</sup>Location of wells and gauges will be detailed in the as-built report

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

## 8. Maintenance Plan

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

## 8.1 Hydrology Maintenance

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

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

## 8.2 Vegetation Maintenance

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

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

- Supplemental planting/seeding of native trees, shrubs, or herbaceous vegetation,
- Managing invasive species as needed through mechanical or chemical control using aquatic-safe herbicides by a licensed applicator.

#### **8.3** General Site Maintenance

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

# 9. Long Term Management Plan

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

## 9.1 Responsible Party

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

# 9.2 Long-Term Monitoring and Management Activities

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

## 9.3 Long-Term Funding Mechanism

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

sufficient to sustain the long-term management of all of Micron's wetland and stream compensation. This fund will also have a clause in TWT's Bylaws that provides for its transfer along with the Micron lands to another NGO should that issue arise.

# 10. Adaptive Management Plan

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

- <u>Fire</u>: The effects of a significant fire event can lead to negative impacts on a young, reestablished 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.
- <u>Climate change</u>: 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.
- <u>Disease</u>: 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.
- <u>Flood</u>: 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.

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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 170(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 The Wetland Trust, Inc.

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 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	d Trust, Inc.
	By:	
	Title:	
STAT	E OF NEW YORK) ss.:	
COUN	VTY OF Schuyler)	
state, p known subscr by his	personally appeared the Grantor  to me or proved to me on the b ibed to the within instrument and ac	202_ before me, the undersigned, a notary public in and for said, of The Wetland Trust, Inc. personally asis of satisfactory evidence to be the individual whose name is eknowledged to me that executed the same in his capacity, and that dividual, or the person upon behalf of which the individual acted,
Notary	/ Public	Date:

The Wetland Trust, Inc.		Micron Lower Caughdenoy Creek Mitigation Plan
Approval and Acc	eptance by Holder: The Wetland Co	onservancy, Inc.
Ву:		
Title: Chair		
STATE OF NEW YORK	) ss:	
COUNTY OF Tompkins)		
known to me or proved subscribed to the within in	to me on the basis of satisfactory astrument and acknowledged to me to	r of The Wetland Conservancy, Inc. personally evidence to be the individual whose name is that he executed the same in his capacity, and that rson upon behalf of which the individual acted,
Notary Public	Date	

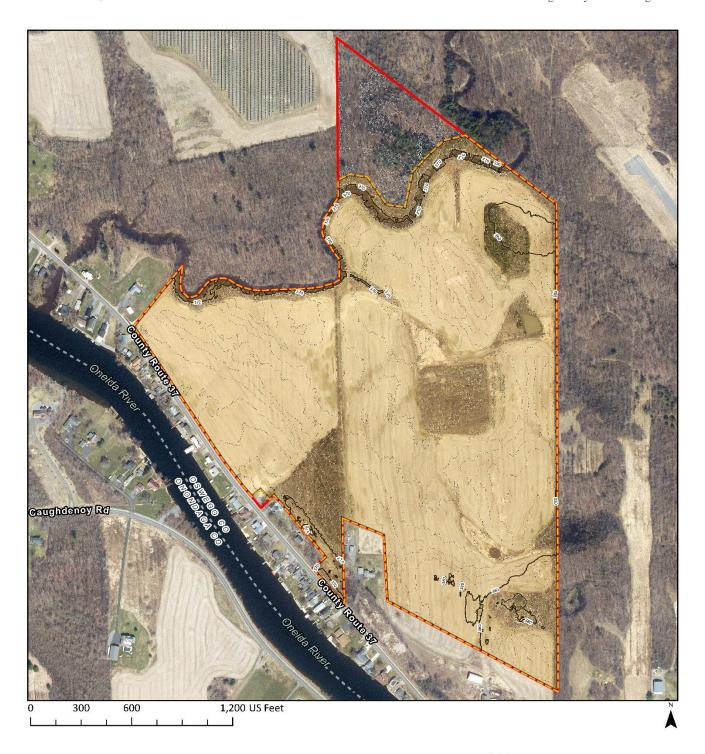
## Schedule A. Legal description of parcel to be covered by this Conservation Easement.

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

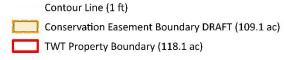
ALL THAT TRACT OR PARCEL OF LAND,

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



# **Conservation Easement**

Lower Caughdenoy Creek Town of Hastings, Oswego County, NY



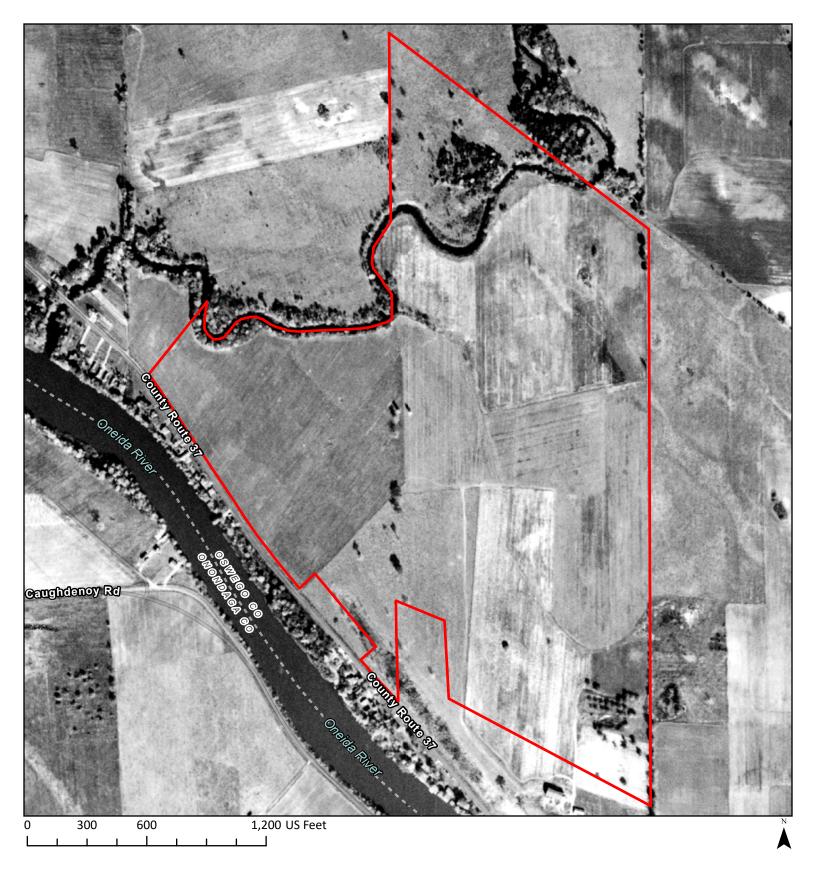


Cartographer: Michelle Herman | Date: 20 Mar. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

Micron- Lowe	er Caughdenov	Creek Stream	and Wetland	Mitigation Plan
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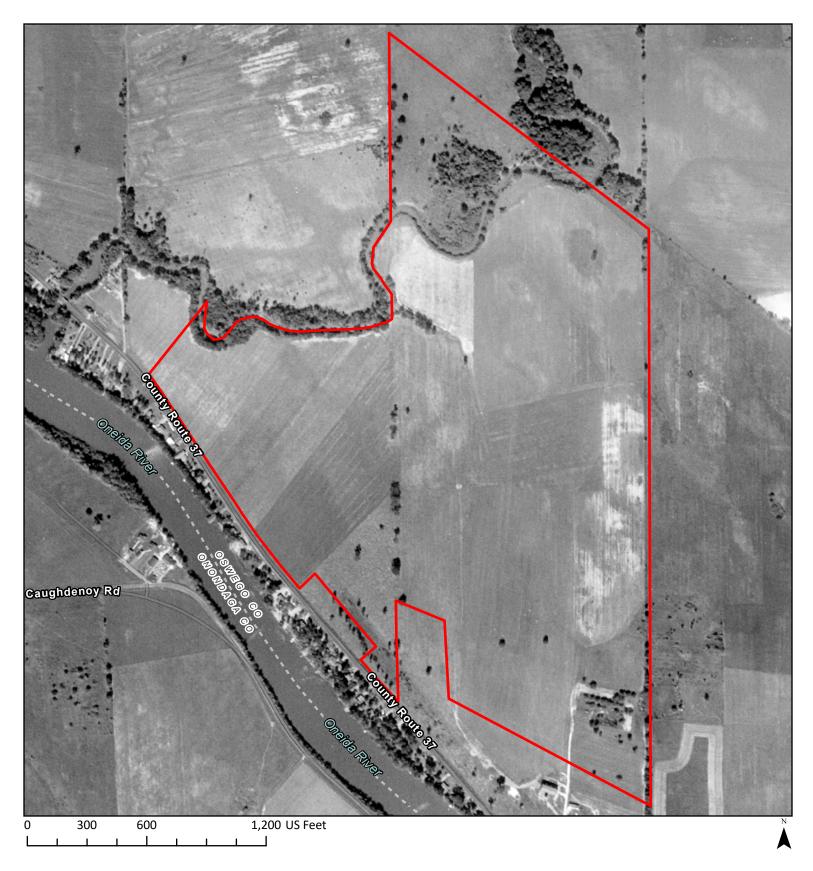
May 2025

# Appendix B.



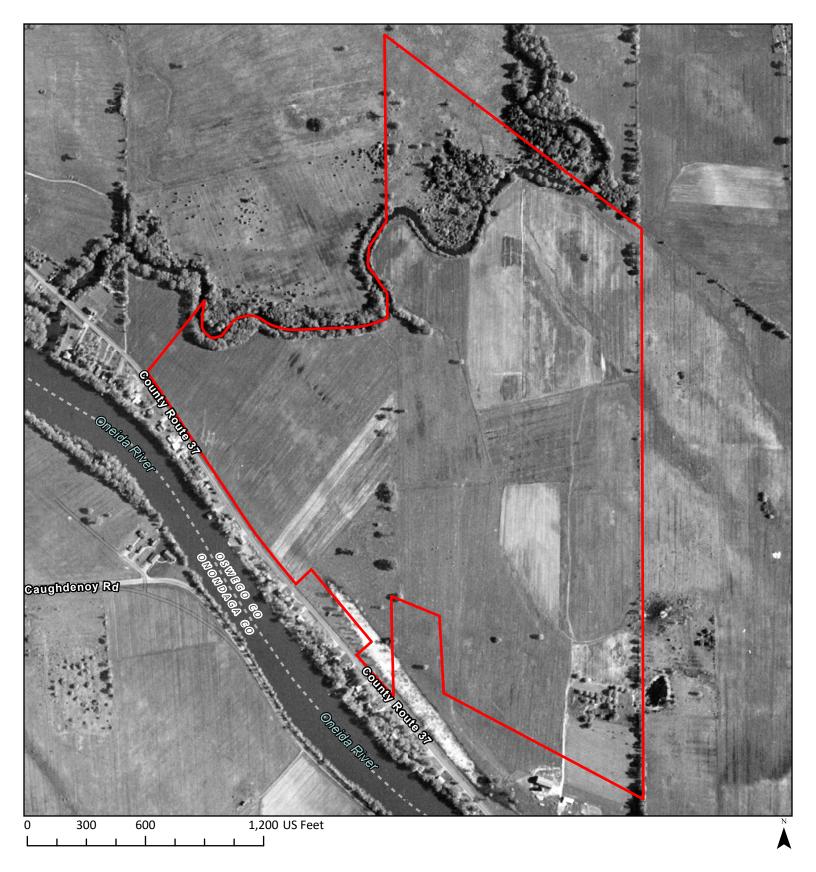
Imagery (1951) Lower Caughdenoy Creek Town of Hastings, Oswego County, NY





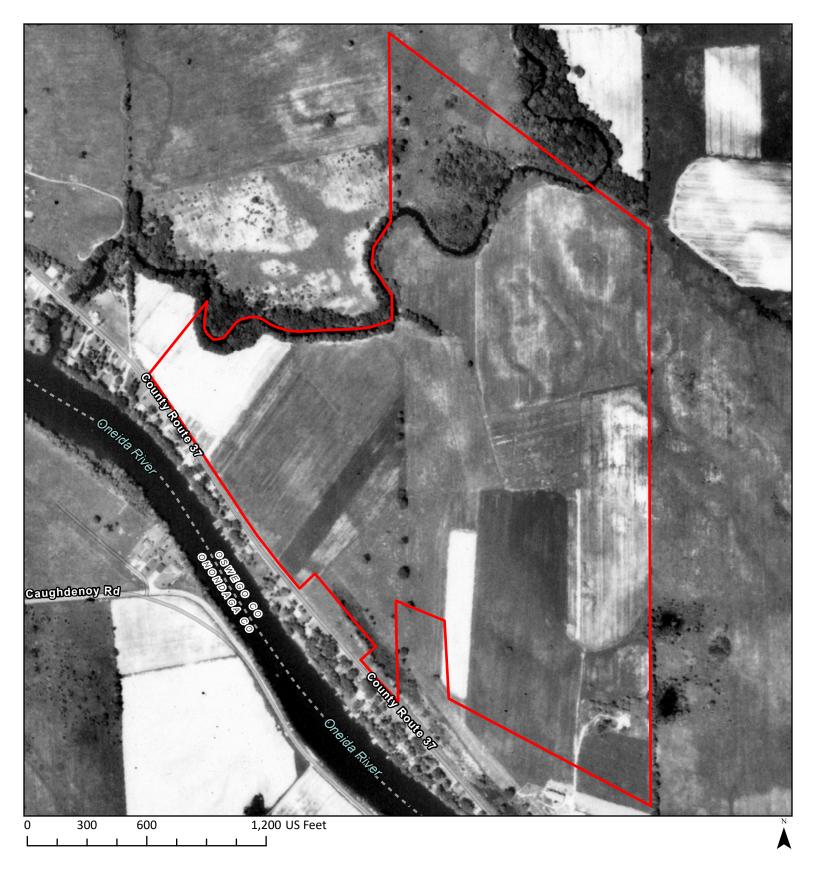
Imagery (1955)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY





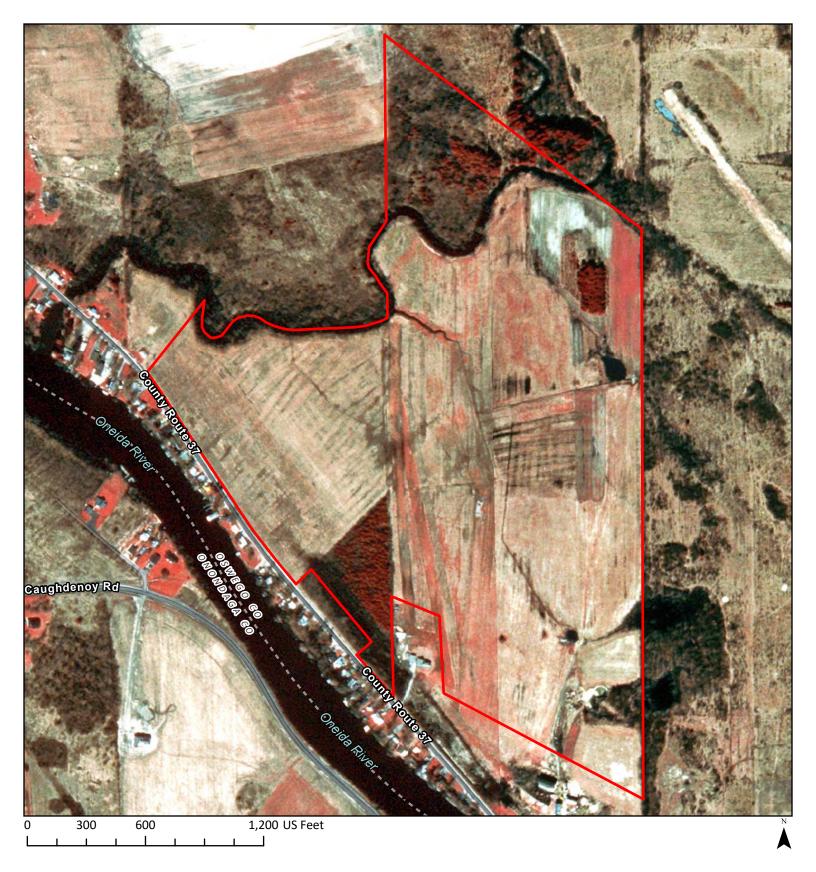
Imagery (1959)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY





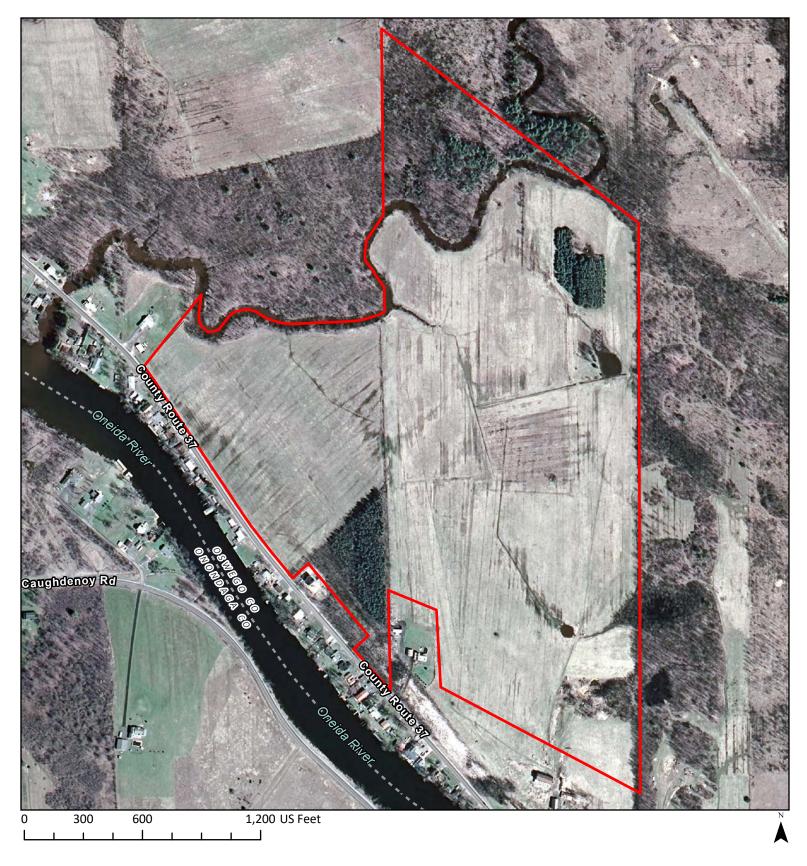
Imagery (1966)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY





Imagery (1994) Lower Caughdenoy Creek Town of Hastings, Oswego County, NY





TWT Property Boundary (118.1 ac)

Imagery (2006) Lower Caughdenoy Creek Town of Hastings, Oswego County, NY



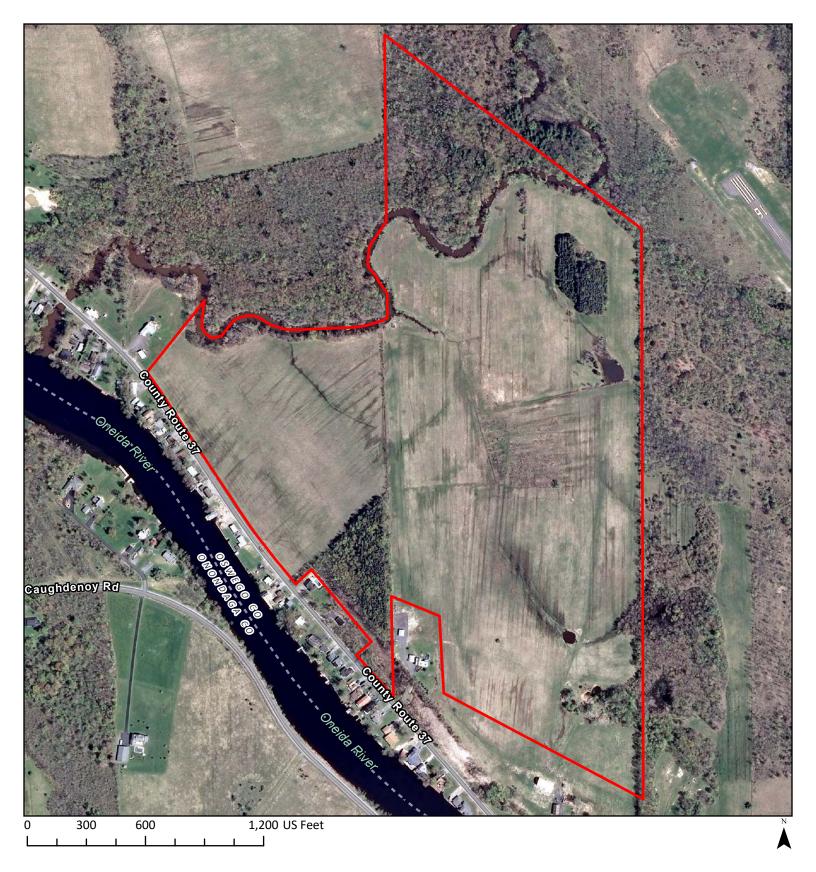


Figure: Imagery (2011)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY



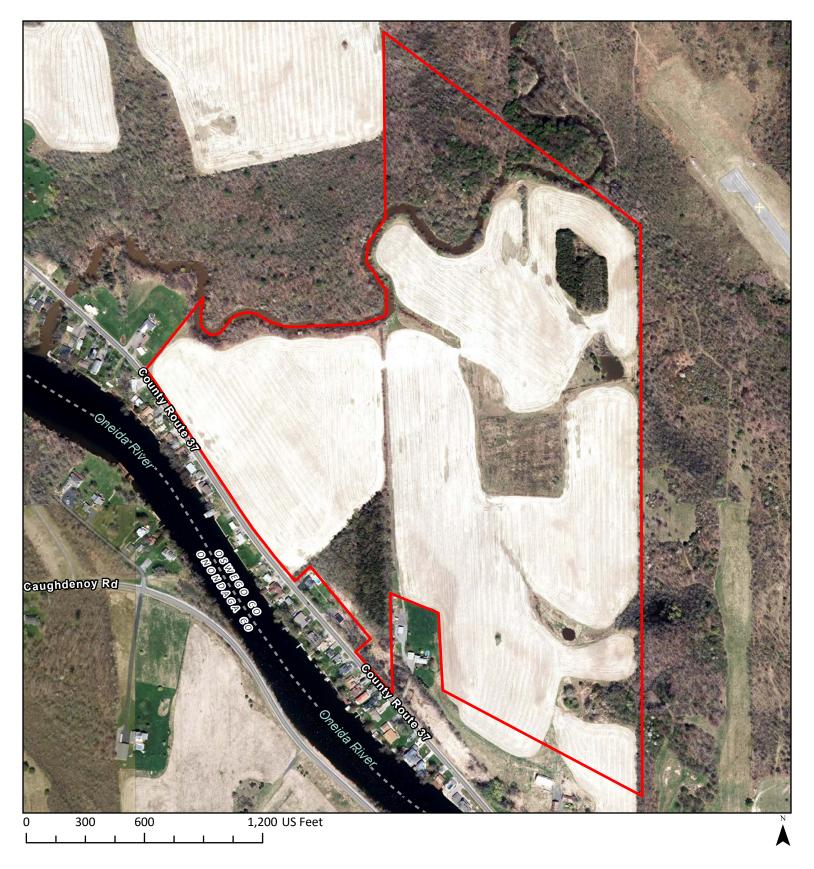


Figure: Imagery (2015)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY



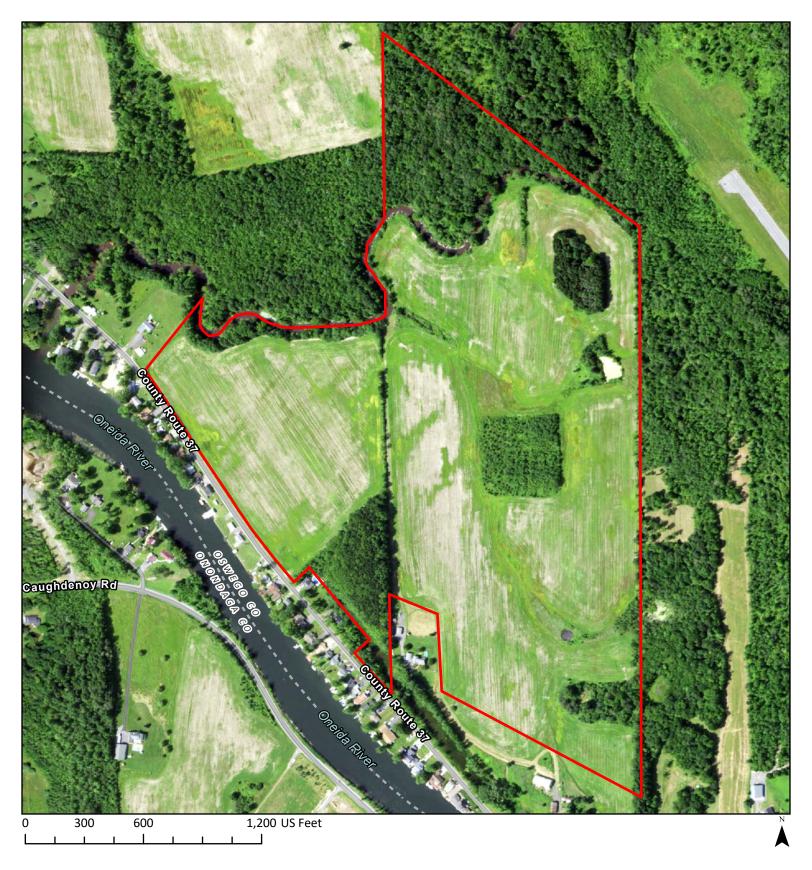


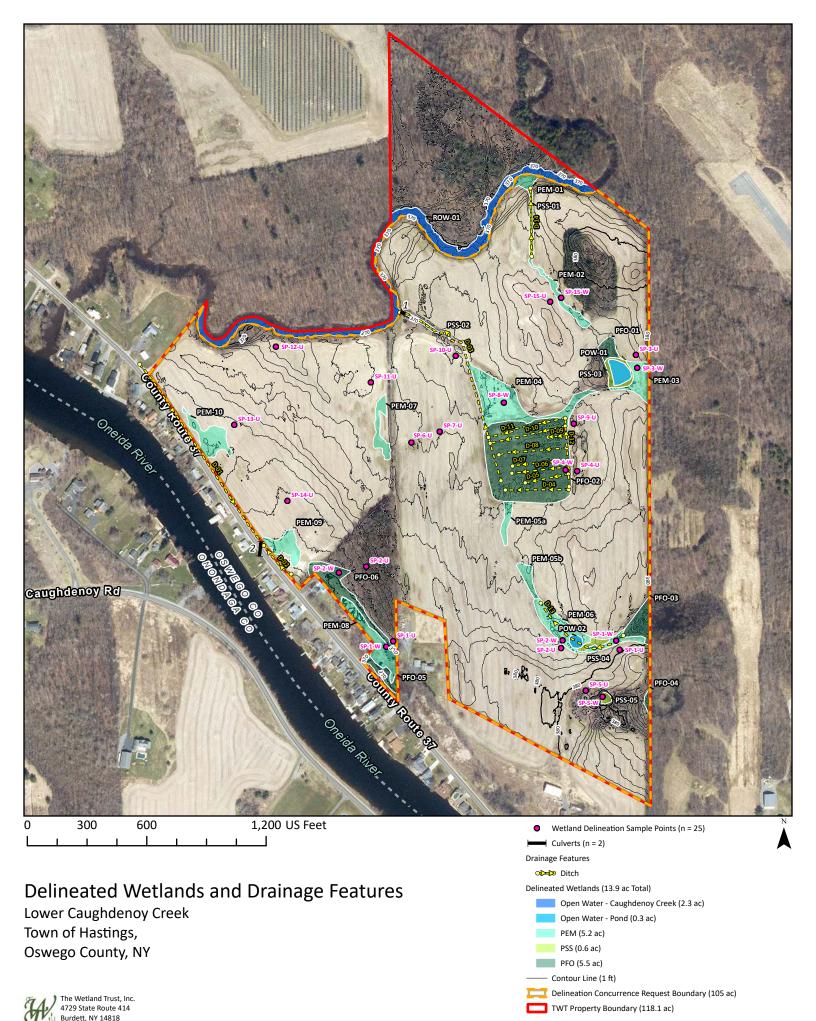
Figure: Imagery (2019)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY



Micron- Lowe	er Caughdenov	Creek Stream	and Wetland	Mitigation Plan
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May 2025

# Appendix C.



## **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.	
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.	
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

Project/Site: Meyers	City/County: O:	swego	Sampling Date: 6/3/24			
Applicant/Owner: The Wetland Trust		State:	NY Sampling Point: SP1U			
Investigator(s): EF, HF, KH, DJJ	Section, Towns	ship, Range:				
Landform (hillside, terrace, etc.): flat	Local relief (cond	cave, 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 class	ification: Yes: PSS1/EM5E Freshwater Forested/Shrub Wetland			
Are climatic / hydrologic conditions on the site typica	I for this time of year? Yes	X No (If no, explai	·			
Are Vegetation N , Soil N , or Hydrology	•		•			
Are Vegetation N , Soil N , or Hydrology	<u>-</u>	(If needed, explain any answe	<del></del>			
SUMMARY OF FINDINGS – Attach site r						
Hydrophytic Vegetation Present? Yes X	No Is the San	npled Area				
Hydric Soil Present? Yes	No X within a W	-	No X			
Wetland Hydrology Present? Yes		onal Wetland Site ID:				
Dominated by red spruce     Sparsely vegetated						
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Ind	licators (minimum of two required			
Primary Indicators (minimum of one is required; che			oil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (B9)		Drainage Patterns (B10)			
High Water Table (A2)	_Aquatic Fauna (B13)	<del></del>	Moss Trim Lines (B16)			
Saturation (A3) Water Marks (B1)	_Marl Deposits (B15) Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2) Crayfish Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizospheres on Liv	<del></del> ·	Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Presence of Reduced Iron (C	· · · · · · · · · · · · · · · · · · ·	Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction in Tille	<i></i>	nic Position (D2)			
Iron Deposits (B5)	Thin Muck Surface (C7)	· · · —	quitard (D3)			
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		graphic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	•		ral Test (D5)			
Field Observations:						
Surface Water Present? Yes No x	Depth (inches):					
Water Table Present? Yes No _x	· · · —					
Saturation Present? Yes No _x	Depth (inches):	Wetland Hydrology Prese	nt? Yes No x			
(includes capillary fringe)	well coriel whater province is					
Describe Recorded Data (stream gauge, monitoring	j weii, aeriai pnotos, previous ii	ispections), if available:				
Remarks:						
No hydrology presant						

#### VEGETATION - Use scientific names of plants. Sampling Point: Absolute Dominan Indicator <u>Tree Stratum</u> (Plot size: 15 ) Status % Cover **Dominance Test worksheet:** t Number of Dominant Species UPL Picea abies 40 Yes That Are OBL, FACW, or 2. Acer rubrum FAC 20 Yes FAC: (A) 3. Total Number of Dominant 4. Species Across All Strata: (B) Percent of Dominant Species 5. That Are OBL, FACW, or 6. (A/B) Prevalence Index worksheet: 60 =Total Cover Total % Cover of: Multiply by: 0 \_ x 1 = Sapling/Shrub Stratum (Plot size: 6 ) OBL species 0 \_\_\_\_ 1 No FACU x 2 = 1. Lonicera tatarica FACW species 11 22 2. FAC species 24 x 3 = 5 x 4 = 3. FACU species 4. UPL species 41 x 5 = 205 5. Column Totals 81 319 (B) (A) Prevalence Index = B/A = 3.94 6. **Hydrophytic Vegetation Indicators:** 1 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% Herb Stratum (Plot size: Fraxinus pennsylvanica FACW 3 - Prevalence Index is ≤3.01 1 Geum urbanum No UPL 4 - Morphological Adaptations<sup>1</sup> (Provide support 2. data in Remarks or on a separate sheet) 2 Yes FAC 3. Toxicodendron radicans Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) 4. Symphyotrichum lateriflorum 1 No FAC 5. Taraxacum officinale 1 FACU <sup>1</sup>Indicators of hydric soil and wetland hydrology Lysimachia nummularia 1 **FACW** must be present, unless disturbed or problematic. 7. Oxalis dillenii 1 FACU **Definitions of Vegetation Strata:** Tree – Woody plants 3 in. (7.6 cm) or more in Circaea canadensis 8 2 Yes FACU diameter at breast height (DBH), regardless of 1 Vitis riparia FAC 9 heiaht. 10. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. 11. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 20 =Total Cover Woody Vine Stratum (Plot size: ) Woody vines - All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Yes X No \_\_\_\_ Present? =Total Cover

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

<sup>•</sup>Dominated by red spruce

<sup>·</sup>Sparsely vegetated

<sup>•</sup>Pine needles littered the ground

<sup>•75%</sup> tree cover, 1% shrub, 25% herb cover

SP1U

Profile De Depth	scription: (Describe Matrix	e to the d	•	<b>:ument t</b> x Featur		tor or co	onfirm the absenc	e of indicato	rs.)	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-2									Organic lay	er
									Organio lay	<u> </u>
2-8	7.5yr 3/3	100								
8-16	7.5yr 5/3	95	7.5yr 5/8	5						
	_		_							_
			-							
1 <sub>T</sub> , C-	Composition D-D-		NA-Dadusad Matrix				21 -			14-N 4-t
	Concentration, D=De il Indicators:	pletion, R	M=Reduced Matrix,	CS=Cov	erea or C	oated Sai		cation: PL=P		
-	ol (A1)		Polyvalue Belov	v Surfac	e (S8) (L <b>F</b>	RR.		ick (A10) ( <b>LR</b> I	-	
	Epipedon (A2)		MLRA 149B)		o (00) ( <u>—</u> .	,		rairie Redox (/		
	Histic (A3)		Thin Dark Surfa		(LRR R, I	/ILRA 149		cky Peat or P		
	gen Sulfide (A4)		—— High Chroma S		-			e Below Surfa		-
Stratifi	ed Layers (A5)		Loamy Mucky N	/lineral (F	=1) ( <b>LRR</b>	K, L)	Thin Dar	k Surface (S9	9) (LRR K, L	_)
Deplet	ed Below Dark Surfa	ice (A11)	Loamy Gleyed	Matrix (F	2)		Iron-Mar	iganese Mass	ses (F12) ( <b>L</b>	RR K, L, R)
Thick I	Dark Surface (A12)		Depleted Matrix	(F3)			Piedmor	nt Floodplain S	Soils (F19) (	MLRA 149B)
Sandy	Mucky Mineral (S1)		Redox Dark Su	rface (F6	6)		Mesic S	oodic (TA6) (N	VILRA 144A	, 145, 149B)
Sandy	Gleyed Matrix (S4)		Depleted Dark	Surface	(F7)		Red Par	ent Material (F	F21)	
	Redox (S5)		Redox Depress		)		Very Sha	allow Dark Su	ırface (TF12	2)
	ed Matrix (S6)		Marl (F10) ( <b>LRI</b>	R K, L)			Other (E	xplain in Rem	ıarks)	
Dark S	Surface (S7)									
3										
	of hydrophytic vegeta Layer (if observed		wetland hydrology m	ust be pr	resent, un	ess distui	rbed or problemati	C.		
	• •	•								
Depth (ir	nches):						Hydric Soil Pr	esent?	Yes	No X
Remarks:										
no signs of	hydric soil indicators									
US Arr	my Corps of Enginee	rs					Northce	entral and Nor	theast Regi	on – Version 2.0

Project/Site: Meyers	City/County: Os	swego	Sampling Date: 6/3/24
Applicant/Owner: The Wetland Trust		State:	NY Sampling Point: SP1W
Investigator(s): HF, KH, GD, DJJ	Section, Towns	hip, Range:	
Landform (hillside, terrace, etc.): flat	Local relief (conca	ave, convex, none): convex	Slope (%): 0
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat	t: 43.2634026432	Long:76.1889977173	Datum: WGS84
Soil Map Unit Name: Fonda mucky silt loam		NWI classi	fication: 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, explair	n in Remarks.)
Are Vegetation N , Soil N , or Hydrology	•	Are "Normal Circumstances" pr	
Are Vegetation N , Soil N , or Hydrology	N naturally problematic?	(If needed, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	—— ap showing sampling poir	nt locations, transects, i	mportant features, etc.
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X	No Is the Sam within a W	•	No
Remarks: (Explain alternative procedures here or in  •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 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)  Field Observations:  Surface Water Present? Yes X No  Water Table Present? Yes X No  Saturation Present? Yes X No  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring vegets)	Water-Stained Leaves (B9) Aquatic Fauna (B13) Marl Deposits (B15) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches): 1in Depth (inches): <6 Depth (inches): 0	Surface So  Drainage F  Moss Trim  Dry-Seaso  Crayfish Bi Saturation  Stunted or  Soils (C6)  Geomorph  Shallow Ad  Microtopog  X FAC-Neutr	. ,
Remarks: •Surface water present when stepping down •Shallow pond near us, <6in deep			

Tree Stratum (Plot size: 15 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Fraxinus pennsylvanica	5	Yes	FACW	Bollinance rest worksheet.
Acer saccharinum		Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
<u> </u>				That Ale Obl., FACW, OF FAC
3. Ulmus americana	_ 1	No	FACW	Total Number of Dominant
4				Species Across All Strata: 5 (B)
5. 6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.		· -		Prevalence Index worksheet:
	11	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15	)	•		OBL species 39 x 1 = 39
Cephalanthus occidentalis	25	Yes	OBL	FACW species 113 x 2 = 226
2. Fraxinus pennsylvanica	20	Yes	FACW	FAC species 9 x 3 = 27
3. Cornus amomum	2	No	FACW	FACU species 0 x 4 = 0
4. Rhamnus alnifolia	2	No	OBL	UPL species 0 x 5 = 0
5.				Column Totals: 161 (A) 292 (B)
6.				Prevalence Index = B/A = 1.81
7.				Hydrophytic Vegetation Indicators:
	49	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 6 )	-			X 2 - Dominance Test is >50%
Onoclea sensibilis	70	Yes	FACW	X_3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Thelypteris palustris	8	No	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
3. Symphyotrichum boreale	5	No	OBL	data in Remarks or on a separate sheet)
4. Viburnum dentatum	8	No	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. Typha X glauca	5	No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
6. Carex sp.	20	No		be present, unless disturbed or problematic.
7. Rumex obtusifolius	11	No	FAC	Definitions of Vegetation Strata:
8. Saururus cernuus	11	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
9. Impatiens capensis	2	No	FACW	at breast height (DBH), regardless of height.
10. Acorus calamus	1	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	121	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.28 ft in
1				height.
2.				

=Total Cover

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

3.

Yes \_\_X \_\_ No \_\_\_\_

Hydrophytic

Vegetation

Present?

<sup>•10%</sup> tree cover, 50% shrub, 100% herb

<sup>•</sup>Invasive species are not dominate but present; cattail

<sup>•</sup>Unknown carex, no inflorescence

SOIL Sampling Point: SP1W

Profile Des	scription: (Describe Matrix	to the de	pth needed to docum	nent the Feature		r or con	firm the absence of	indicators.)			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
<u> </u>					- 71						
1-7	7.50.5/4	400						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				
			<u> </u>								
1 -											
	Concentration, D=Dep il Indicators:	oletion, RM	1=Reduced Matrix, CS	=Covere	ed or Coa	ted Sand		tion: PL=Pore Lining, Note   Problematic Hydric So			
-	ol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b>	R R.		(A10) (LRR K, L, MLR			
	Epipedon (A2)	•	MLRA 149B)		(55) (=11	,	Coast Prairie Redox (A16) (LRR K, L, R)				
	Histic (A3)		Thin Dark Surfac	e (S9) (I	LRR R, M	LRA 149		ky Peat or Peat (S3) ( <b>LR</b>	·		
Hydro	gen Sulfide (A4)		High Chroma Sai	nds (S1	1) (LRR K	(, L)		Below Surface (S8) (LR			
Stratifi	ed Layers (A5)	-	Loamy Mucky Mi	neral (F	1) ( <b>LRR K</b>	(, L)	Thin Dark	Surface (S9) (LRR K, L	)		
Deplet	ed Below Dark Surfa	ce (A11)	Loamy Gleyed M	atrix (F2	2)		Iron-Manganese Masses (F12) (LRR K, L, R)				
Thick I	Dark Surface (A12)		X Depleted Matrix (	F3)			Piedmont Floodplain Soils (F19) (MLRA 149B)				
Sandy	Mucky Mineral (S1)	-	Redox Dark Surfa				Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )				
	Gleyed Matrix (S4)		Depleted Dark St	•	<del>-</del> 7)		Red Parent Material (F21)				
	Redox (S5)	-	Redox Depressio	, ,				ow Dark Surface (TF12)	)		
	ed Matrix (S6)	•	Marl (F10) ( <b>LRR</b>	K, L)			Other (Exp	olain in Remarks)			
Dark S	Surface (S7)										
<sup>3</sup> Indicators	of hydrophytic vegeta	ition and w	vetland hydrology mus	st be pre	sent, unle	ess distur	bed or problematic.				
	Layer (if observed)		, , , , ,		,		1				
Туре:											
Depth (ir	nches):						Hydric Soil Pres	ent? Yes X	No		
Remarks:			•				_ <b></b>	•			
High in clay	y content.										

Project/Site: Meyer		C	ity/County: Osv	wego		Samplir	ng Date: <u>6/4/24</u>
Applicant/Owner: The Wetla	and Trust				State:	NY S	Sampling Point: SP2U
Investigator(s): KH, EF, HF.	. DJJ	S	ection, Townsh	nip, Range:			
Landform (hillside, terrace, e	etc.): flat	Loc	al relief (conca	ive, convex, no	ne none		Slope (%): 2
Subregion (LRR or MLRA) L	•			Long: -76.18			Datum: WGS84
Soil Map Unit Name Rhinebe					NWI class	ification: N	
· · · · · · · · · · · · · · · · · · ·		.1.6		V N			
Are climatic / hydrologic con		_			• `		•
Are Vegetation N, Soil							
Are Vegetation N, Soil	N , or Hydrology	N naturally pro	blematic? (l	f needed, expla	ain any answe	ers in Rem	arks.)
SUMMARY OF FINDIN	NGS – Attach site	map showing	sampling p	ooint location	ons, trans	ects, im	portant features
Hydrophytic Vegetation Pre	esent? Yes X	No	Is the Samp	oled Area			
Hydric Soil Present?	Yes X		within a We		Yes	No_	Х
Wetland Hydrology Present		No x	If yes, option	nal Wetland Sit	te ID:		<del></del>
HYDROLOGY							
						,	
Wetland Hydrology Indica				<u>S</u>			inimum of two require
Primary Indicators (minimum	m of one is required; cr				Surface S		
Surface Water (A1) High Water Table (A2)		Water-Stained L Aquatic Fauna (I	` '	_	Drainage		
Saturation (A3)	_	Marl Deposits (B	<u>—</u>				
Water Marks (B1)		Hydrogen Sulfide					
Sediment Deposits (B2	<u>—</u> 2)	Oxidized Rhizos		ng Roots (C3)	<b>—</b> '	•	n Aerial Imagery (C9)
Drift Deposits (B3)	<u> </u>	Presence of Red	duced Iron (C4)		Stunted or	Stressed	Plants (D1)
Algal Mat or Crust (B4)	<u> </u>	Recent Iron Red	uction in Tilled	Soils (C6)	Geomorph	nic Positior	າ (D2)
Iron Deposits (B5)	_	_ Thin Muck Surfa	ice (C7)	_	Shallow A	quitard (D	3)
Inundation Visible on A	• , · , <u> </u>	_Other (Explain in	ı Remarks)	_	Microtopo	•	` ,
Sparsely Vegetated Co	oncave Surface (B8)			_	FAC-Neut	ral Test (D	5)
Field Observations:							
Surface Water Present?	Yes No No						
Water Table Present? Saturation Present?	Yes No No	Depth (inches): Depth (inches):	<del></del>	Wetland Hydr	rology Proco	n+2 V	es No X
(includes capillary fringe)	165100	Deptil (illiches).	<del></del>	welland nyul	ology Flese	111.5	es No_X
Describe Recorded Data (s	tream gauge monitorir	ng well aerial nhoto	os previous ins	spections) if av	/ailahle·		
Becombe recorded Bata (e	area and gauge, memorin	ig wen, dendi pried	so, providuo irie	5p00ti0110), ii u i	ranabio.		
Remarks: No wetland hydrology or dra	ainge indicators preser	nt.					
No welland hydrology or dia	allige illulcators presen	ıı					

#### VEGETATION - Use scientific names of plants. Sampling Point: Absolute Dominan Indicator Tree Stratum (Plot size: 15 ) % Cover Status **Dominance Test worksheet:** Number of Dominant Species FAC Acer rubrum 10 No That Are OBL, FACW, or Ulmus americana 30 Yes FACW FAC: (A) 10 3 Fraxinus pennsylvanica Nο **FACW** Total Number of Dominant 25 UPL 4. Picea abies Species Across All Strata: (B) Percent of Dominant Species 5. That Are OBL, FACW, or FAC: 6. (A/B) Prevalence Index worksheet: 75 =Total Cover Total % Cover of: Multiply by: 0 x 1 = Sapling/Shrub Stratum (Plot size: ) OBL species 0 x 2 = 1. FACW species 40 \_\_\_\_\_ FAC species 15 x 3 = 5 x 4 = FACU species 25 4. UPL species x 5 = 125 Column Totals 85 (A) 270 (B) Prevalence Index = B/A = 3.18 6. **Hydrophytic Vegetation Indicators:** =Total Cover 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% Herb Stratum (Plot size: Viburnum dentatum FAC 3 - Prevalence Index is ≤3.01 2 \_ \_ Toxicodendron radicans FAC 4 - Morphological Adaptations<sup>1</sup> (Provide support 2. data in Remarks or on a separate sheet) 1 3. Solidago sp. No 2 Yes Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Cornus racemosa FAC 5. Prunus serotina FACU <sup>1</sup>Indicators of hydric soil and wetland hydrology 6. must be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** Tree – Woody plants 3 in. (7.6 cm) or more in 8. diameter at breast height (DBH), regardless of heiaht. 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 11 =Total Cover Woody Vine Stratum (Plot size: ) Woody vines - All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Yes X No No Present? =Total Cover

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

<sup>•75%</sup> tree, 20% vegetation, 30% tree debris

<sup>•40%</sup> dead ash, standing and fallen over

<sup>•</sup>Sparsely vegetated due to leaf/needle litter and fallen trees/ branches

**SOIL** SP2U Sampling Point:

Profile De	scription: (Describe Matrix	e to the o	depth needed to doc Redo	<b>ument tl</b> x Feature		tor or co	nfirm the absence	e of indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-5	10yr 2/2	100								
5-14	10yr 2/2	50	10yr 5/6	30						
			10yr 4/6	20						
·										
<del></del>										
<del></del>										
¹Type: C=	Concentration, D=De	pletion, F	RM=Reduced Matrix, 0	CS=Cove	ered or C	oated Sa	nd Grains. <sup>2</sup> Loc	cation: PL=Pore Lining, M=Matrix.		
	il Indicators:		,					r Problematic Hydric Soils <sup>3</sup> :		
Histose			Polyvalue Below	/ Surface	e (S8) ( <b>LF</b>	RR R,		ck (A10) ( <b>LRR K, L, MLRA 149B</b> )		
Histic I	Epipedon (A2)		MLRA 149B)					airie Redox (A16) (LRR K, L, R)		
	Histic (A3)		Thin Dark Surfa					cky Peat or Peat (S3) ( <b>LRR K, L, R</b> )		
	gen Sulfide (A4)		High Chroma Sa			-		e Below Surface (S8) (LRR K, L)		
	ed Layers (A5)		Loamy Mucky M			<b>K</b> , <b>L</b> )		k Surface (S9) (LRR K, L)		
	ed Below Dark Surfa	ce (A11)			2)			ganese Masses (F12) (LRR K, L, R)		
	Dark Surface (A12)		x Depleted Matrix		· ·			t Floodplain Soils (F19) (MLRA 149B)		
	Mucky Mineral (S1)		Redox Dark Sur					podic (TA6) (MLRA 144A, 145, 149B)		
	Gleyed Matrix (S4)		Depleted Dark S				Red Parent Material (F21)			
	Redox (S5)		Redox Depressi					allow Dark Surface (TF12)		
	ed Matrix (S6) Surface (S7)		Marl (F10) ( <b>LRR</b>	ι <b>ι</b> , <b>ι</b> )			Other (E)	xplain in Remarks)		
Dark S	ourrace (ST)									
			wetland hydrology mu	ust be pre	esent, un	less distu	rbed or problemation	3.		
	e Layer (if observed									
Depth (in							Hydric Soil Pre	esent? Yes X No		
Remarks:							<u>I</u>			
Soils indica	ite depleted matrix, n	o other h	ydric indicators preser	nt, matrix	and red	ox colors :	50% chroma<2 and	d 50>2, border linr hydric		
US Arr	my Corps of Engineer	rs .					Northce	ntral and Northeast Region – Version 2.0		

Project/Site: Meyers		City/	/County: Oswego		Sampli	ng Date: <u>6/4/24</u>	
Applicant/Owner: The Wetla	and Trust			State:	NY S	Sampling Point: SP2W	
Investigator(s): KH, HF, EH	I, DJJ	Sec	tion, Township, Range:		·		
Landform (hillside, terrace, e	etc.): flat	Local	relief (concave, convex, n	one non		Slope (%): 2	
Subregion (LRR or MLRA): L	RR L. MLRA 101 L	at: 43.2644180000	Lona: =B1	7-76.1898801	400	Datum: WGS84	
Soil Map Unit Name Madalir				NWI class			
			-0 V N		_		
Are climatic / hydrologic con				_` ' '		•	
Are Vegetation N, Soil							
Are Vegetation N, Soil	N , or Hydrology	N naturally proble	ematic? (If needed, exp	olain any answ	ers in Rem	narks.)	
SUMMARY OF FINDIN	NGS – Attach site	map showing s	ampling point locat	ions, trans	ects, im	portant features,	
Hydrophytic Vegetation Pre	esent? Yes X	. No	Is the Sampled Area				
Hydric Soil Present?	esent? Yes X Yes X		within a Wetland?	Yes X	. No		
Wetland Hydrology Present			If yes, optional Wetland S		_ '''-		
Remarks: (Explain alternat	ive procedures here or	r in a separate report.)					
HYDROLOGY							
Wetland Hydrology Indica	ators:			Secondary Inc	licators (m	ninimum of two required	
Primary Indicators (minimul	m of one is required; c	heck all that apply)		Surface S	oil Cracks	(B6)	
Surface Water (A1)	_	Water-Stained Lea	ves (B9)	Drainage	Patterns (	B10)	
High Water Table (A2)	_	Aquatic Fauna (B1	Moss Trim Lines (B16)				
Saturation (A3)	_	Marl Deposits (B15	• • • • • • • • • • • • • • • • • • • •				
Water Marks (B1)	_	Hydrogen Sulfide (	Odor (C1)	Crayfish E	Burrows (C	(8)	
Sediment Deposits (B2	<u>_</u>	Oxidized Rhizosph	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3)	_	Presence of Reduc	educed Iron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)	· _		tion in Tilled Soils (C6)	Geomorpl			
Iron Deposits (B5)		Thin Muck Surface	` '		quitard (D	•	
Inundation Visible on A		Other (Explain in R	emarks)	Microtopo	•	, ,	
Sparsely Vegetated Co	ncave Surface (B8)			FAC-Neut	ral Test (L	)5)	
Field Observations:	V N-	D = = 41= /:= = 1 = = 1.					
Surface Water Present? Water Table Present?	Yes No No						
Saturation Present?	Yes No No	Depth (inches): Depth (inches):		drology Prese	nt? V	es X No	
(includes capillary fringe)	10010	Bepair (infortes):		urology r resc		<u> </u>	
Describe Recorded Data (s	stream gauge, monitori	ng well, aerial photos.	previous inspections), if	available:			
(-	gg-,		, p , , , , , ,				
Remarks:							
No hydrology recorded, ass	sume hydrology is pres	sent due to hydric vege	etation and soil.				

Tana Charles (District)	Absolute	Dominan	Indicator	Deminor of Test weeks heat		
ree Stratum (Plot size: 15 )	% Cover	t	Status	Dominance Test worksheet:  Number of Dominant Species		
. Acer rubrum	30	Yes	FAC	That Are OBL, FACW, or		
2				FAC:(A)		
3				Total Number of Dominant		
·				Species Across All Strata: 3 (B) Percent of Dominant Species		
				That Are OBL, FACW, or		
i				FAC: <u>66.7%</u> (A/B)		
·				Prevalence Index worksheet:		
	30	=Total Cover		Total % Cover of: Multiply by:		
apling/Shrub Stratum (Plot size: 6 )				OBL species0 x 1 =0		
Lindera benzoin	3	No	FACW	FACW specie: 9 x 2 = 18		
Lonicera japonica	15	Yes	FACU	FAC species 70 x 3 =210		
Rhamnus cathartica	3	No	FAC	FACU species 17 x 4 = 68		
				UPL species4 x 5 =20		
·				Column Totals 100 (A) 316 (B)		
·		-		Prevalence Index = B/A = 3.16		
				Hydrophytic Vegetation Indicators:		
	21	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation		
lerb Stratum (Plot size: 6 )				X 2 - Dominance Test is >50%		
Persicaria virginiana	30	Yes	FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
. Oxalis dillenii	1	No	FACU	4 - Morphological Adaptations¹ (Provide sup data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explating Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
. Fraxinus pennsylvanica	5	No	FACW			
. Geum urbanum	1	No	UPL			
. Toxicodendron radicans	5	No	FAC			
. Viburnum dentatum	1	No	FAC			
. Lysimachia nummularia	1	No	FACW	Definitions of Vegetation Strata:		
. Fragaria virginiana	1	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in		
. Picea abies	3	No	UPL	diameter at breast height (DBH), regardless of height.		
0. Carex blanda	1	No	FAC			
 1.				Sapling/shrub – Woody plants less than 3 in. DBI and greater than or equal to 3.28 ft (1 m) tall.		
2				Herb – All herbaceous (non-woody) plants,		
·	49	=Total Cover		regardless of size, and woody plants less than 3.2 ft tall.		
Voody Vine Stratum (Plot size: )		10101 00101				
				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.		
				it in neight.		
				Hydrophytic		
·				Vegetation		
·				Present? Yes X No No		
		=Total Cover				

**SOIL** 

	escription: (Describ	e to the o	-			tor or co	onfirm the absence	of indicators.)
Depth	Matrix			x Featur		. 2	<b>-</b> .	5
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	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				
<sup>1</sup> Type: C=		nletion F	M=Reduced Matrix (	 CS=Cov	ered or C	nated Sa	and Grains <sup>2</sup> Loca	ation: PL=Pore Lining, M=Matrix.
	oil Indicators:	piction, r	tivi rteadoca iviatiix, t	000	crea or o	outou ot		Problematic Hydric Soils <sup>3</sup> :
-	sol (A1)		Polyvalue Belov	v Surface	e (S8) ( <b>LF</b>	RR R,		k (A10) (LRR K, L, MLRA 149B)
Histic	Epipedon (A2)		MLRA 149B)				Coast Pra	irie Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ce (S9)	(LRR R, I	ILRA 14	19B) 5 cm Mucl	ky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
— Hydro	ogen Sulfide (A4)		High Chroma Sa	ands (S1	1) (LRR	K, L)	Polyvalue	Below Surface (S8) (LRR K, L)
Strati	fied Layers (A5)		Loamy Mucky M	1ineral (F	1) ( <b>LRR</b>	<b>K</b> , L)	Thin Dark	Surface (S9) (LRR K, L)
Deple	eted Below Dark Surfa	ice (A11)	Loamy Gleyed I	Matrix (F	2)		Iron-Mang	anese Masses (F12) (LRR K, L, R)
Thick	Dark Surface (A12)		X Depleted Matrix	(F3)			Piedmont	Floodplain Soils (F19) (MLRA 149B)
Sand	y Mucky Mineral (S1)		Redox Dark Sur	face (F6	5)		Mesic Spo	odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)		Depleted Dark S	Surface (	(F7)			nt Material (F21)
	y Redox (S5)		Redox Depressi	ons (F8)	, ,			low Dark Surface (TF12)
	ped Matrix (S6)		Marl (F10) (LRF	RK, L)				olain in Remarks)
Dark	Surface (S7)						<u> </u>	
<sup>3</sup> Indicators	s of hydrophytic vegeta	ation and	wetland hydrology mi	ıst he nr	esent un	less disti	irhed or problematic	
	e Layer (if observed		wettaria riyarology ini	aot be pi	coort, an	ooo diote	Troca or problematic.	
Type:								
Depth (i	inches):						Hydric Soil Pres	sent? Yes <u>X</u> No
Remarks:	d three colors and high	n in clay						
J-1211111aC	i tillee colors and riigi	i ii i ciay						
US A	rmy Corps of Enginee	rs					Northcen	ntral and Northeast Region – Version 2.0

Sampling Point: SP2W

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: 43.2670	0478700 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	
	nificantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation _ n _, Soil _ n _, or Hydrology _ n _ natu	<del></del> <del></del>
<del></del> <del></del>	owing sampling point locations, transects, important features,
Hydrophytic Vegetation Present? Yes No	x Is the Sampled Area
Hydric Soil Present? Yes x No	
Wetland Hydrology Present? Yes No	x If yes, optional Wetland Site ID:
HANDOLOGA	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that	
<u> </u>	Stained Leaves (B9) Drainage Patterns (B10)
<del>-</del>	Fauna (B13) Moss Trim Lines (B16)
<u> </u>	posits (B15) Dry-Season Water Table (C2) en Sulfide Odor (C1) Crayfish Burrows (C8)
<u> </u>	d Rhizospheres on Living Roots (C3)  Saturation Visible on Aerial Imagery (C9)
<u> </u>	the of Reduced Iron (C4)  Stunted or Stressed Plants (D1)
l <del></del>	Iron Reduction in Tilled Soils (C6)  Geomorphic Position (D2)
1 <del></del>	ick Surface (C7)  Shallow Aquitard (D3)
<del></del>	Explain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (	(inches):
	(inches):
	(inches): Wetland Hydrology Present? Yes No _x
(includes capillary fringe)	vial photos provious inspections) if available.
Describe Recorded Data (stream gauge, monitoring well, ae	nai priotos, previous inspections), ii available.
Remarks:	
No signs of wetland hydrology	

ree Stratum (Plot size: )	Absoluto	Dominan	Indicator	Sampling Point: SP11	
	Absolute % Cover	Dominan t	Indicator Status	Dominance Test worksheet:	
				Number of Dominant Species	
				That Are OBL, FACW, or	/A !
				FAC:0	_ (A)
· .				Total Number of Dominant	
·				Species Across All Strata: 1	_ (B)
i				Percent of Dominant Species	
i				That Are OBL, FACW, or FAC: 0.0%	(A
				Prevalence Index worksheet:	_ (
		=Total Cover			
	<u> </u>	- Total Cover			
Sapling/Shrub Stratum (Plot size:	)			OBL species0 x 1 =0	
·				FACW specie: 0 x 2 = 0	
·				FAC species0 x 3 =0	
•				FACU species 0 x 4 = 0	
				UPL species 100 x 5 = 500	
				Column Totals 100 (A) 500	
-				Prevalence Index = B/A = 5.00	
·				Hydrophytic Vegetation Indicators:	
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation	on
erb Stratum (Plot size:)				2 - Dominance Test is >50%	
Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
				4 - Morphological Adaptations <sup>1</sup> (Provide	1112
				data in Remarks or on a separate she	
				1	
·				Problematic Hydrophytic Vegetation <sup>1</sup> (E	xpla
·				<sup>1</sup> Indicators of hydric soil and wetland hydrol	oav
				must be present, unless disturbed or proble	
· <u></u>				Definitions of Vegetation Strata:	
				Tree – Woody plants 3 in. (7.6 cm) or more	
				diameter at breast height (DBH), regardless height.	of
				neight.	
).				Sapling/shrub – Woody plants less than 3	
-				and greater than or equal to 3.28 ft (1 m) ta	
1.				and greater than or equal to 3.28 ft (1 m) ta <b>Herb</b> – All herbaceous (non-woody) plants,	II.
1.		=Total Cover		and greater than or equal to 3.28 ft (1 m) ta	II.
1. 2.		=Total Cover		and greater than or equal to 3.28 ft (1 m) ta <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less th ft tall.	II. an
1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.		=Total Cover		and greater than or equal to 3.28 ft (1 m) ta  Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less th ft tall.  Woody vines – All woody vines greater tha	II. an :
1		=Total Cover		and greater than or equal to 3.28 ft (1 m) ta <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less th ft tall.	II. an :
1		=Total Cover		and greater than or equal to 3.28 ft (1 m) ta  Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less th ft tall.  Woody vines – All woody vines greater tha ft in height.	II. an (
1		=Total Cover		and greater than or equal to 3.28 ft (1 m) ta  Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less th ft tall.  Woody vines – All woody vines greater tha	II. an (
1. 2. /oody Vine Stratum (Plot size:		=Total Cover		and greater than or equal to 3.28 ft (1 m) ta  Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less th ft tall.  Woody vines – All woody vines greater tha ft in height.  Hydrophytic	II. an (

**SOIL** Sampling Point: SP11U

Profile D	escription: (Describ	e to the c	lepth needed to doc	ument t	he indica	tor or co	onfirm the absence of in	ndicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	
	·							
<sup>1</sup> Type: C:	=Concentration, D=De	epletion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sa	and Grains. <sup>2</sup> Location	: PL=Pore Lining, M=Matrix.
Hydric So	oil Indicators:						Indicators for Pro	blematic Hydric Soils <sup>3</sup> :
Histo:	sol (A1)		Polyvalue Belov	v Surfac	e (S8) ( <b>Ll</b>	RR R,	2 cm Muck (A	10) ( <b>LRR K, L, MLRA 149B</b> )
Histic	Epipedon (A2)		MLRA 149B)				Coast Prairie F	Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ice (S9)	(LRR R, I	MLRA 14	19B)5 cm Mucky P	eat or Peat (S3) (LRR K, L, R)
Hydro	ogen Sulfide (A4)		High Chroma S	ands (S´	11) ( <b>LRR</b>	K, L)	Polyvalue Belo	ow Surface (S8) ( <b>LRR K, L</b> )
Strati	fied Layers (A5)		Loamy Mucky N	/lineral (F	-1) ( <b>LRR</b>	<b>K</b> , <b>L</b> )	Thin Dark Surf	face (S9) (LRR K, L)
Deple	eted Below Dark Surfa	ace (A11)	Loamy Gleyed I	Matrix (F	2)		Iron-Manganes	se Masses (F12) (LRR K, L, R)
Thick	Dark Surface (A12)		x Depleted Matrix	(F3)			Piedmont Floo	odplain Soils (F19) ( <b>MLRA 149B</b> )
Sand	y Mucky Mineral (S1)		Redox Dark Su	rface (F6	3)		Mesic Spodic (	(TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sand	y Gleyed Matrix (S4)		Depleted Dark	Surface	(F7)		Red Parent Ma	aterial (F21)
Sand	y Redox (S5)		Redox Depress	ions (F8)	)		Very Shallow [	Dark Surface (TF12)
Stripp	oed Matrix (S6)		Marl (F10) ( <b>LRF</b>	R K, L)			Other (Explain	in Remarks)
Dark	Surface (S7)							
<sup>3</sup> Indicators	s of hydrophytic veget	ation and	wetland hydrology m	ust be pr	resent, un	less distu	urbed or problematic.	
Restrictiv	ve Layer (if observed	l):						
Type:								
Depth (	inches):						Hydric Soil Present	? Yes X No
Remarks:								
		Vorthcentr	al and Northeast Reg	gional Su	pplement	Version	2.0 to reflect the NRCS I	Field Indicators of Hydric Soils
version 7.	0 March 2013 Errata.	(http://ww	w.nrcs.usda.gov/Inte	rnet/FSE	E_DOCUI	MENTS/r	nrcs142p2_051293.docx)	Dry soils

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

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, noneSlope (%): 1-2
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.267546	0530 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 tim	
, , ,	cantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation _ n _, Soil _ n _, or Hydrology _ n _ natura	
	wing sampling point locations, transects, important features,
Hydrophytic Vegetation Present? Yes No x	Is the Sampled Area
Hydric Soil Present? Yes x No	<del>-</del>
Wetland Hydrology Present? Yes No x	If yes, optional Wetland Site ID:
upland species growing at a lower elevation than sample point	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that a	Surface Soil Cracks (B6)
1 <del></del>	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fa	· · · · · · · · · · · · · · · · · · ·
Saturation (A3) Marl Depo	<u> </u>
	Sulfide Odor (C1) Crayfish Burrows (C8)
	thizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
<u> </u>	of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  Reduction in Tilled Soils (C6)  Comparable Resition (D2)
<u> </u>	n Reduction in Tilled Soils (C6) Geomorphic Position (D2) Surface (C7) Shallow Aquitard (D3)
	lain in Remarks)  Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	17/6 Neutral 165((56)
	ches):
Water Table Present? Yes No x Depth (inc	
Saturation Present? Yes No x Depth (inc	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aeria	photos, previous inspections), if available:
Remarks:	
No signs of wetland hydrology	

Tree Stratum (Plot size:	A book its	Dominon	Indicator	
	Absolute % Cover	Dominan t	Indicator Status	Dominance Test worksheet:
				Number of Dominant Species
				That Are OBL, FACW, or FAC: 0 (A)
-				FAC:0 (A)
3				Total Number of Dominant
4				Species Across All Strata: 1 (B)
5				Percent of Dominant Species That Are OBL, FACW, or
6				FAC: 0.0% (A/
7				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratur (Plot size:	)			OBL species 0 x1 = 0
1.	<b>—</b> ′			FACW specie: 0 x 2 = 0
				FAC species 0 x 3 = 0
3.				FACU species 0 x 4 = 0
ł				UPL species 100 x 5 = 500
5				Column Totals 100 (A) 500 (
5.				Prevalence Index = B/A = 5.00
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide sup
				data in Remarks or on a separate sheet)
3.				· · · · · ·
4				Problematic Hydrophytic Vegetation <sup>1</sup> (Explai
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
6				must be present, unless disturbed or problematic
7				Definitions of Vegetation Strata:
3.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
9.				height.
10.				
· ·				Sapling/shrub – Woody plants less than 3 in. D and greater than or equal to 3.28 ft (1 m) tall.
11				and greater than or equal to 0.20 it (1 iii) tail.
-				<b>Herb</b> – All herbaceous (non-woody) plants,
-				• • • • • • • • • • • • • • • • • • • •
12.	100 =	=Total Cover		
12.		=Total Cover		regardless of size, and woody plants less than 3. ft tall.
12	)	=Total Cover		regardless of size, and woody plants less than 3.
12. <u>Woody Vine Stratum</u> (Plot size:  1.	)	=Total Cover		regardless of size, and woody plants less than 3. ft tall.  Woody vines – All woody vines greater than 3.2
12	)	=Total Cover		regardless of size, and woody plants less than 3. ft tall.  Woody vines – All woody vines greater than 3.2 ft in height.  Hydrophytic
12	)	=Total Cover		regardless of size, and woody plants less than 3. ft tall.  Woody vines – All woody vines greater than 3.2 ft in height.

**SOIL** Sampling Point: SP12U

Profile D	escription: (Describ	e to the c	lepth needed to doo	ument t	he indica	tor or co	onfirm the absence of	indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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				
	=Concentration, D=De	pletion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sa		n: PL=Pore Lining, M=Matrix.
-	oil Indicators:							oblematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Belov		e (S8) ( <b>Li</b>	RR R,		A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)					Redox (A16) (LRR K, L, R)
	(Histic (A3)		Thin Dark Surfa				· —	Peat or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)		High Chroma S			-		low Surface (S8) (LRR K, L)
	fied Layers (A5)		Loamy Mucky N			<b>K</b> , <b>L</b> )		rface (S9) ( <b>LRR K, L</b> )
	eted Below Dark Surfa	ace (A11)			2)			ese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		x Depleted Matrix					odplain Soils (F19) ( <b>MLRA 149B</b> )
	y Mucky Mineral (S1)		Redox Dark Su	rface (F6	6)		Mesic Spodio	(TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sand	y Gleyed Matrix (S4)		Depleted Dark	Surface	(F7)		Red Parent N	faterial (F21)
Sand	y Redox (S5)		Redox Depress	ions (F8)	)		Very Shallow	Dark Surface (TF12)
Stripp	oed Matrix (S6)		Marl (F10) ( <b>LRF</b>	R K, L)			Other (Explain	n in Remarks)
Dark	Surface (S7)							
31	<b> </b>	- 4:		4 1			ude and a manufacture of the	
	s of hydrophytic veget ve Layer (if observed		wetland hydrology m	ust be pr	esent, un	less distu	irbed or problematic.	
Type:	• `	•						
	inches):						Hydric Soil Presen	nt? Yes X No
Remarks:							11,411.10 00111 10001	<u> </u>
		Jorthcentr	al and Northeast Red	nional Su	pplement	Version	2.0 to reflect the NRCS	Field Indicators of Hydric Soils
							rcs142p2_051293.doc>	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

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: 43.2664	<del></del>
Soil Map Unit Name RhA: Rhinebeck silt loam	NWI classification: none
Are climatic / hydrologic conditions on the site typical for this	
	nificantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation n , Soil n , or Hydrology n nat	
<del></del>	nowing sampling point locations, transects, important features,
Hydrophytic Vegetation Present? Yes No	x Is the Sampled Area
Hydric Soil Present? Yes x No	
Wetland Hydrology Present? Yes No	<del></del>
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all the	at apply) Surface Soil Cracks (B6)
Surface Water (A1) Water-S	Stained Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic	Fauna (B13) Moss Trim Lines (B16)
	posits (B15) Dry-Season Water Table (C2)
<u> </u>	en Sulfide Odor (C1) Crayfish Burrows (C8)
1 <del></del>	d Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
l <del></del>	ce of Reduced Iron (C4)  Stunted or Stressed Plants (D1)
1 <del></del>	Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
	ck Surface (C7) Shallow Aquitard (D3)  System in Remarks) Microtopographic Relief (D4)
Inundation Visible on Aerial Imagery (B7) Other (I Sparsely Vegetated Concave Surface (B8)	Explain in Remarks) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	i AO-Nedital Test (D3)
	(inches):
·	(inches):
	(inches): Wetland Hydrology Present? Yes No x
(includes capillary fringe)	· · · <del> </del>
Describe Recorded Data (stream gauge, monitoring well, as	rial photos, previous inspections), if available:
Remarks:	
No signs of wetland hydrology	

	Absolute	Dominan	Indicator	
<u>Free Stratum</u> (Plot size: )	% Cover	t	Status	Dominance Test worksheet:
<u> </u>				Number of Dominant Species
				That Are OBL, FACW, or
2				FAC:0(A)
3				Total Number of Dominant
l				Species Across All Strata: 1 (B)
5				Percent of Dominant Species That Are OBL, FACW, or
3.				FAC: 0.0% (A/E
7.				Prevalence Index worksheet:
		=Total Cover		
	. ——	- Total Cover		<del></del>
Sapling/Shrub Stratum (Plot size:	.)			OBL species 0 x 1 = 0
				FACW specie: 0 x 2 = 0
2				FAC species0 x 3 =0
3.				FACU species 0 x 4 = 0
i				UPL species 10 x 5 = 50
-				Column Totals 10 (A) 50 (B
S				Prevalence Index = B/A = 5.00
·				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
<u>Herb Stratum</u> (Plot size: )				2 - Dominance Test is >50%
. Glycine max	10	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supp
				data in Remarks or on a separate sheet)
3.				
1				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
5.				must be present, unless disturbed or problematic
7				Definitions of Vegetation Strata:
3.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
).				height.
10.				
				Sapling/shrub – Woody plants less than 3 in. DE and greater than or equal to 3.28 ft (1 m) tall.
-				Herb – All herbaceous (non-woody) plants,
12.				regardless of size, and woody plants less than 3.
·-··	10	=Total Cover		ft tall.
	)			Woody vines – All woody vines greater than 3.2
Noody Vine Stratum (Plot size:				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
Noody Vine Stratum (Plot size:				
Woody Vine Stratum (Plot size:				Hydrophytic
Noody Vine Stratum (Plot size:				ft in height.  Hydrophytic Vegetation
Woody Vine Stratum (Plot size:	- ————————————————————————————————————	=Total Cover		ft in height.  Hydrophytic

**SOIL** Sampling Point: SP13U

Profile De	escription: (Describ	e to the d	epth needed to doc	ument t	he indica	tor or co	onfirm the absence of	indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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				
			,					
<sup>1</sup> Type: C=	Concentration, D=De	pletion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sa	and Grains. <sup>2</sup> Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Sc	oil Indicators:						Indicators for Pr	oblematic Hydric Soils <sup>3</sup> :
Histos	sol (A1)		Polyvalue Belov	v Surfac	e (S8) ( <b>LF</b>	RR R,	2 cm Muck (A	A10) (LRR K, L, MLRA 149B)
Histic	Epipedon (A2)		MLRA 149B)				Coast Prairie	Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ce (S9)	(LRR R, I	VILRA 14	19B)5 cm Mucky I	Peat or Peat (S3) (LRR K, L, R)
Hydro	gen Sulfide (A4)		High Chroma S	ands (S´	11) ( <b>LRR</b>	K, L)	Polyvalue Be	low Surface (S8) (LRR K, L)
Stratif	fied Layers (A5)		Loamy Mucky N	/lineral (F	-1) ( <b>LRR</b>	K, L)	Thin Dark Su	rface (S9) (LRR K, L)
Deple	ted Below Dark Surfa	ce (A11)	Loamy Gleyed I	Matrix (F	2)		Iron-Mangane	ese Masses (F12) (LRR K, L, R)
Thick	Dark Surface (A12)		x Depleted Matrix	(F3)			Piedmont Flo	odplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy	y Mucky Mineral (S1)		Redox Dark Su	rface (F6	3)		Mesic Spodio	(TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy	y Gleyed Matrix (S4)		Depleted Dark S	Surface	(F7)		Red Parent N	Naterial (F21)
Sandy	y Redox (S5)		Redox Depress	ions (F8)	)			Dark Surface (TF12)
Stripp	ed Matrix (S6)		Marl (F10) ( <b>LRF</b>	R K, L)			Other (Explain	n in Remarks)
Dark	Surface (S7)							
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and	wetland hydrology m	ust be pr	resent, un	less distu	urbed or problematic.	
	e Layer (if observed	•						
Type:								
Depth (i	nches):						Hydric Soil Presen	nt? Yes X No
Remarks:							1	
This data	form is revised from N							Field Indicators of Hydric Soils
				rnet/FSE	E_DOCUM	MENTS/r	nrcs142p2_051293.doc	k) Below 16 inches we are
encounter	ing more sandy soils,	soils mois	t at 20 inches					

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

Project/Site: Rio/Meyer	City/C	ounty: 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	on, Township, Range:	
Landform (hillside, terrace, etc.):	Local re	lief (concave, convex, none none	Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 La	t· 43 2654188557	Long: -76.190848096	
Soil Map Unit Name Ma: Madalin silt loam			assification: none
	al far this time of war		
Are climatic / hydrologic conditions on the site typical	•		•
Are Vegetation, Soil, or Hydrology _			
Are Vegetation, Soil, or Hydrology _	n naturally probler	natic? (If needed, explain any an	swers in Remarks.)
<b>SUMMARY OF FINDINGS – Attach site</b>	map showing sa	mpling point locations, tra	nsects, important features,
Hydrophytic Vegetation Present? Yes	No. v. Is	the Sampled Area	
Hydric Soil Present? Yes x		rithin a Wetland? Yes	No X
Wetland Hydrology Present? Yes		yes, optional Wetland Site ID:	No_X_
larger depression roughly less than 1 acre			
HYDROLOGY  Wetland Hydrology Indicators:		Secondary	Indicators (minimum of two required
Primary Indicators (minimum of one is required; ch	ack all that apply)	•	e Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leave		ge Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)		rim Lines (B16)
Saturation (A3)	Marl Deposits (B15)		ason Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Oc		h Burrows (C8)
Sediment Deposits (B2)	_		tion Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduce	d Iron (C4) Stunted	d or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction	on in Tilled Soils (C6) Geomo	orphic Position (D2)
Iron Deposits (B5)	_ Thin Muck Surface (	C7)Shallov	v Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Re	marks) Microto	ppographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-N	eutral Test (D5)
Field Observations:			
Surface Water Present? Yes No _x	_		
	Depth (inches):		No.
Saturation Present? Yes No x	Depth (inches):	Wetland Hydrology Pre	esent? Yes No x
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitorin	a well perial photos r	revious inspections) if available:	
Describe Recorded Data (Stream gauge, monitorin	g weii, aeriai priotos, p	revious inspections), ii available.	
Remarks: No signs of wetland hydrology			
The signs of welland flydrology			

	Absolute	Dominan	Indicator	
Tree Stratum (Plot size:)	% Cover	t	Status	Dominance Test worksheet:
				Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 0 (A)
3.				
				Total Number of Dominant Species Across All Strata: 1 (B)
				Percent of Dominant Species
-				That Are OBL, FACW, or FAC: 0.0% (A/I
				Prevalence Index worksheet:
·				
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratur (Plot size:	_)			OBL species0 x 1 =0
l				FACW specie: 0 x 2 = 0
2.				FAC species 0 x 3 = 0
3				FACU species 0 x 4 = 0
l				UPL species 75 x 5 = 375
5				Column Totals 75 (A) 375 (E
S				Prevalence Index = B/A = 5.00
7				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
1. Glycine max	75	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				4 - Morphological Adaptations <sup>1</sup> (Provide supp
				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
· ·				
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
7.				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in
3.				diameter at breast height (DBH), regardless of
9				height.
10				Sapling/shrub – Woody plants less than 3 in. DE
11				and greater than or equal to 3.28 ft (1 m) tall.
12				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.
	75	=Total Cover		ft tall.
Noody Vine Stratum (Plot size:	)			<b>Woody vines</b> – All woody vines greater than 3.2
1				ft in height.
2				
3.				Hydrophytic
4.				Vegetation Present? Yes No x
		=Total Cover		
Remarks: (Include photo numbers here or or				<u> </u>
Soy bean thriving	i a separate site	:ci.)		
-				

**SOIL** Sampling Point: SP14U

Profile D	escription: (Describ	e to the c	lepth needed to doo	ument t	he indica	tor or co	onfirm the absence of	indicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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				
<sup>1</sup> Type: C:	=Concentration, D=De	epletion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sa	and Grains. <sup>2</sup> Locatio	n: PL=Pore Lining, M=Matrix.
Hydric So	oil Indicators:						Indicators for Pr	oblematic Hydric Soils <sup>3</sup> :
Histo:	sol (A1)		Polyvalue Belov	v Surfac	e (S8) ( <b>Ll</b>	RR R,	2 cm Muck (A	A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic	Epipedon (A2)		MLRA 149B)				Coast Prairie	Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ice (S9)	(LRR R, I	MLRA 14	<b>9B</b> )5 cm Mucky F	Peat or Peat (S3) (LRR K, L, R)
Hydro	ogen Sulfide (A4)		High Chroma S	ands (S1	11) ( <b>LRR</b>	K, L)	Polyvalue Be	low Surface (S8) (LRR K, L)
Strati	fied Layers (A5)		Loamy Mucky N	/lineral (F	-1) ( <b>LRR</b>	<b>K</b> , <b>L</b> )	Thin Dark Su	rface (S9) ( <b>LRR K, L</b> )
Deple	eted Below Dark Surfa	ace (A11)	Loamy Gleyed I	Matrix (F	2)		Iron-Mangane	ese Masses (F12) (LRR K, L, R)
Thick	Dark Surface (A12)		x Depleted Matrix	(F3)			Piedmont Flo	odplain Soils (F19) ( <b>MLRA 149B</b> )
Sand	y Mucky Mineral (S1)		Redox Dark Su	rface (F6	3)		Mesic Spodio	(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)		Depleted Dark	Surface	(F7)		Red Parent M	Naterial (F21)
	y Redox (S5)		Redox Depress					Dark Surface (TF12)
	ped Matrix (S6)		Marl (F10) ( <b>LRF</b>		,			n in Remarks)
	Surface (S7)			, ,				,
	` ,							
<sup>3</sup> Indicators	s of hydrophytic veget	ation and	wetland hydrology m	ust be pr	resent, un	less distu	irbed or problematic.	
Restrictiv	ve Layer (if observed	l):						
Type:								
Depth (	inches):						Hydric Soil Presen	it? Yes X No
Remarks:	-							
		Vorthcentr	al and Northeast Red	gional Su	pplement	Version	2.0 to reflect the NRCS	Field Indicators of Hydric Soils
							nrcs142p2_051293.doc>	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

Project/Site: Rio	City/County: Ce	ntral Square	Sampling Date: 6/4/24
Applicant/Owner: the Wetland Trust		State:	NY Sampling Point: SP1U
Investigator(s): KH, EF, HF, DJJ	Section, Townsl	hip, Range:	
Landform (hillside, terrace, etc.):	Local relief (conca	ave, convex, none none	Slope (%): 2-6
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43	3.2633441380	Long:76.1845950707	Datum: WGS84
Soil Map Unit Name Rhineback silt loam		NWI classi	fication: No
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes	X No (If no, explain	
Are Vegetation Y , Soil Y , or Hydrology Y	_		,
Are Vegetation N , Soil N , or Hydrology N		If needed, explain any answe	
SUMMARY OF FINDINGS – Attach site ma	<u> </u>	point locations, transe	ects, important features,
Hydrophytic Vegetation Present? Yes	No x Is the Sam	pled Area	
Hydric Soil Present? Yes	No X within a We	etland? Yes	No X
Wetland Hydrology Present? Yes	No X If yes, optio	nal Wetland Site ID:	
HYDROLOGY	_		
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required
Primary Indicators (minimum of one is required; check			oil Cracks (B6)
<del></del>	/ater-Stained Leaves (B9)		Patterns (B10)
	quatic Fauna (B13)		Lines (B16)
—                       —	larl Deposits (B15) ydrogen Sulfide Odor (C1)		n Water Table (C2) urrows (C8)
<del></del>	xidized Rhizospheres on Livir	<del></del> '	Visible on Aerial Imagery (C9)
<del></del>	resence of Reduced Iron (C4		Stressed Plants (D1)
<del></del>	ecent Iron Reduction in Tilled	<i></i>	ic Position (D2)
Iron Deposits (B5)	hin Muck Surface (C7)	Shallow Ad	quitard (D3)
Inundation Visible on Aerial Imagery (B7)O	ther (Explain in Remarks)	Microtopog	graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutr	al Test (D5)
Field Observations:			
	Depth (inches):		
	Depth (inches):	Wetland Hydrology Preser	nt? Yes No X
(includes capillary fringe)	Depth (inches):	Welland Hydrology Fresei	nt? Yes No_X
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous in	spections), if available:	
Remarks:			
No hydrology present			

solute Dominan Cover t		Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC:  Prevalence Index worksheet:
		That Are OBL, FACW, or FAC:  O (A)  Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC:  0 (A)
		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/I
		Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/
		Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/
		Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/
		That Are OBL, FACW, or FAC: 0.0% (A/
		FAC: 0.0% (A/
		Prevalence Index worksheet:
		Total % Cover of: Multiply by:
		OBL species0 x 1 =0
		FACW specie: 0 x 2 = 0
		FAC species0 x 3 =0
		FACU species 0 x 4 = 0
		UPL species 25 x 5 = 125
		Column Totals 25 (A) 125 (
		Prevalence Index = B/A = 5.00
		Hydrophytic Vegetation Indicators:
=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
		2 - Dominance Test is >50%
25 Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
		4 - Morphological Adaptations <sup>1</sup> (Provide supp
		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
		Problematic Hydrophytic Vegetation (Explain
		<sup>1</sup> Indicators of hydric soil and wetland hydrology
		must be present, unless disturbed or problematic
		Definitions of Vegetation Strata:
		<b>Tree</b> – 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. Dl 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.
25 =Total Cover	•	ft tall.
		Woody vines – All woody vines greater than 3.2
		ft in height.
		Hydrophytic
		Vegetation Present? Yes No x
=Total Cavar		11050HC 105 115
	=Total Cover  25 Yes  25 =Total Cover	=Total Cover  25 Yes UPL  25 Yes UPL  25 =Total Cover

Depth	Matrix	e to the t	<b>deptin needed to doc</b> Redo	x Featur		itor or co	oniiriii tile absenc	e or maica	1015.)	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remar	·ks
0-7	7.5yr 5/4	100								
7-11	10yr 6/3	50	7.5yr 5/6	50			Loamy/Clayey			
										-
										_
										_
<sup>1</sup> Type: C=	Concentration, D=De	epletion, F	RM=Reduced Matrix,	CS=Cov	ered or C	oated Sa	and Grains. <sup>2</sup> Lo	cation: PL:	=Pore Linin	g, M=Matrix.
-	il Indicators:						Indicators fo		-	
	ol (A1)		Polyvalue Belov		e (S8) ( <b>Ll</b>	RR R,				ILRA 149B)
	Epipedon (A2)		MLRA 149B)		(I DD D )	W DA 44			(A16) ( <b>LR</b>	· ·
	Histic (A3) gen Sulfide (A4)		Thin Dark Surfa High Chroma S		•		· —	-	r Peat (S3) ırface (S8) (	(LRR K, L, R)
	ied Layers (A5)		Loamy Mucky N			-			S9) ( <b>LRR K</b>	
	ted Below Dark Surfa	ace (A11)				· · · · · · · · · · · · · · · · · · ·				(LRR K, L, R)
	Dark Surface (A12)	,	Depleted Matrix		,			-		) (MLRA 149B)
Sandy	Mucky Mineral (S1)		Redox Dark Su	rface (F6	3)		Mesic Sp	odic (TA6)	(MLRA 14	4A, 145, 149B)
Sandy	Gleyed Matrix (S4)		Depleted Dark	Surface	(F7)		Red Par	ent Materia	l (F21)	
Sandy	Redox (S5)		Redox Depress	ions (F8	)		Very Sha	allow Dark	Surface (TF	12)
	ed Matrix (S6)		Marl (F10) ( <b>LRF</b>	R K, L)			Other (E	xplain in Re	emarks)	
Dark S	Surface (S7)									
<sup>3</sup> Indicators	of hydrophytic veget	ation and	wetland hydrology m	ust he n	resent un	leee dietu	irhed or problemati	^		
	e Layer (if observed		wedana nyarology m	dot be p	reserit, un	icos dista	Troca or problemati	<u>.                                    </u>		
Type:	, ,	-								
Depth (ir	nches):						Hydric Soil Pr	esent?	Yes	No X
Remarks:	-						I			
	hydric soil indicators	3								
US Ar	my Corps of Enginee	ers					Northce	entral and N	lortheast Re	egion - Version 2.0

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	2 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 tim					
	cantly disturbed? Are "Normal Circumstances" present? Yes X No				
<del></del> <del></del>	<del></del> -				
Are Vegetation N, Soil N, or Hydrology N natura  SUMMARY OF FINDINGS – Attach site map show	wing 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:				
Influenced by modified drainage Leads to natural wetland to the east Agricultural surrounding Pond at tip of finger					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required				
Primary Indicators (minimum of one is required; check all that a	apply) Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stai	ined Leaves (B9) Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fa	<u>—</u>				
X Saturation (A3) Marl Depos	<u> </u>				
<del></del>	Sulfide Odor (C1) Crayfish Burrows (C8)				
<del></del>	Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) of Reduced Iron (C4) Stunted or Stressed Plants (D1)				
	n Reduction in Tilled Soils (C6)  Geomorphic Position (D2)				
<del></del>	Surface (C7) X Shallow Aquitard (D3)				
	olain in Remarks) Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X Depth (inc	ches):				
Water Table Present? Yes X No Depth (inc					
Saturation Present? Yes X No Depth (inc	ches): 0 Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial	l photos, previous inspections), if available:				
D					
Remarks: Shallow aquiclude; strong clay layer 5in from surface layer					

ran Ctratum (Distrains)	Absolute	Dominan	Indicator	
ree Stratum (Plot size:	) % Cover	t	Status	Dominance Test worksheet:
				Number of Dominant Species That Are OBL, FACW, or
				FAC: 2
				Total Number of Dominant
				Species Across All Strata: 2 Percent of Dominant Species
				That Are OBL, FACW, or
				FAC: <u>100.0%</u>
				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
apling/Shrub Stratum (Plot size:	6 )	_		OBL species 8 x 1 = 8
. Fraxinus pennsylvanica		Yes	FACW	FACW specie: 97 x 2 = 194
				FAC species 0 x 3 = 0
				FACU species 0 x 4 = 0
				UPL species0 x 5 =0
·				Column Totals 105 (A) 202
				Prevalence Index = B/A = 1.92
				Hydrophytic Vegetation Indicators:
	5	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
erb Stratum (Plot size: 6		- rotal cover		X 2 - Dominance Test is >50%
	<del></del> ^			<del></del>
Phalaris arundinacea	90	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Carex crinita	2	No	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide s
. Impatiens capensis	2	No	FACW	data in Remarks or on a separate sheet
. Iris versicolor	1	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Exp
. Typha latifolia	5	No	OBL	1
- <del></del>				<sup>1</sup> Indicators of hydric soil and wetland hydrolog must be present, unless disturbed or problema
				Definitions of Vegetation Strata:
-				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in
				diameter at breast height (DBH), regardless o
				height.
0				Sapling/shrub – Woody plants less than 3 in.
1				and greater than or equal to 3.28 ft (1 m) tall.
2.				Herb – All herbaceous (non-woody) plants,
	100	=Total Cover		regardless of size, and woody plants less than ft tall.
Voody Vine Stratum (Plot size:	)	=		
				Woody vines – All woody vines greater than 3
·				ft in height.
				Hydrophytic
				Hydrophytic Vegetation
				Present? Yes X No

**SOIL** Sampling Point: SP1W

Profile De Depth	escription: (Describe Matrix	e to the d	-	cument t		tor or co	onfirm the absend	ce of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	· · · · ·							Organic
0-2								Organic
2-10	10yr 5/2	95	7.5yr 5/6	5			Loamy/Clayey	
					·			
1- 0								
	Concentration, D=De	pletion, R	M=Reduced Matrix,	CS=Cove	ered or C	oated Sa		ocation: PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
-	sol (A1)		Polyvalue Belov	v Surface	e (S8) ( <b>I F</b>	RR R.		uck (A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)		3 (00) (2:	,		rairie Redox (A16) (LRR K, L, R)
	Histic (A3)		Thin Dark Surfa		LRR R, I	VILRA 14		ucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )
	gen Sulfide (A4)		High Chroma S					ue Below Surface (S8) (LRR K, L)
Stratif	ied Layers (A5)		Loamy Mucky N				Thin Da	rk Surface (S9) ( <b>LRR K, L</b> )
Deple	ted Below Dark Surfa	ce (A11)	Loamy Gleyed	Matrix (F	2)		Iron-Mai	nganese Masses (F12) ( <b>LRR K, L, R</b> )
Thick	Dark Surface (A12)		x Depleted Matrix	(F3)			Piedmoi	nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy	/ Mucky Mineral (S1)		Redox Dark Su	rface (F6	5)		Mesic S	podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy	Gleyed Matrix (S4)		Depleted Dark	Surface (	(F7)			rent Material (F21)
	/ Redox (S5)		Redox Depress	, ,				allow Dark Surface (TF12)
	ed Matrix (S6)		? Marl (F10) ( <b>LRI</b>	R K, L)			Other (E	Explain in Remarks)
Dark S	Surface (S7)							
31	. <b></b>	4:						
	of hydrophytic vegeta e Layer (if observed		wetiand nydrology m	ust be pr	esent, un	iess alsit	Irbed or problemat	IC.
Type:	e Layer (II Observed	<b>)</b> -						
	nahaa):						Uvdeia Cail D	veccent? Vec V Ne
Depth (ii	nches).						Hydric Soil Pr	resent? Yes X No
Remarks:	leyed, heavy in clay be	-l O :	.h 0 40 in 050/ II.ul	1 4/40	مرج حجالة الد		:	
solis are gi	leyeu, rieavy iri ciay bi	BIOW Z II IC	nies. 2-10 is 95% gi	ey 1 4/ 10	y the cor	iiputei w	iii not let me input t	ırıat.
US Ar	my Corps of Engineer	s					Northc	entral and Northeast Region – Version 2.0

Project/Site: Rio	City/Coun	y: Central Square	Sampling Date: 6/4/24			
Applicant/Owner: the Wetland Trust		State:	NY Sampling Point: SP1U			
Investigator(s): KH, EF, HF, DJJ	Section, T	ownship, Range:				
Landform (hillside, terrace, etc.): Flat	Local relief	concave, convex, none none	Slope (%): 0-2			
Subregion (LRR or MLRA): LRR L, MLRA 101 L	_at: 43.2633724997	Long: -76.185700	Datum: WGS84			
Soil Map Unit Name RhA: Rhinebeck silt loam			sification: None			
Are climatic / hydrologic conditions on the site typi	ical for this time of year?	Yes X No (If no, expla				
Are VegetationY, SoilY, or Hydrology			,			
Are Vegetation N, Soil N, or Hydrology	' <u></u>		<u> </u>			
SUMMARY OF FINDINGS – Attach site						
Hydrophytic Vegetation Present? Yes	No x Is the	Sampled Area				
Hydric Soil Present? Yes		a Wetland? Yes	No X_			
Wetland Hydrology Present? Yes		optional Wetland Site ID:				
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary In	dicators (minimum of two required			
Primary Indicators (minimum of one is required; of	check all that apply)	Surface S	Soil Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (B	9) Drainage	Drainage Patterns (B10)			
High Water Table (A2)	Aquatic Fauna (B13)	<u> </u>				
Saturation (A3)	Marl Deposits (B15)	Dry-Seas	son Water Table (C2)			
Water Marks (B1)	Hydrogen Sulfide Odor (0	<u> </u>	Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizospheres o	· · · · · · · · · · · · · · · · · · ·	n Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Presence of Reduced Iro	` '	or Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction in	` ' '	ohic Position (D2) Aquitard (D3)			
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7) Other (Explain in Remark		ographic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	Culoi (Explain in Noman	· —	itral Test (D5)			
Field Observations:			,			
Surface Water Present? Yes No	x Depth (inches):					
Water Table Present? Yes No	x Depth (inches):	_				
Saturation Present? Yes No	Depth (inches):	Wetland Hydrology Prese	ent? Yes No x			
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previo	ous inspections), if available:				
Remarks:						
No hydrology present						

	Absolute	Dominan	Indicator	
ree Stratum (Plot size:		t	Status	Dominance Test worksheet:
	<u> </u>			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/I
				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
(Ol	. —	- Total Cover		<del></del>
	)			OBL species0 x 1 =0
				FACW specie: 0 x 2 = 0
				FAC species0 x 3 =0
		. <u> </u>		FACU species 0 x 4 = 0
				UPL species 25 x 5 = 125
				Column Totals 25 (A) 125 (I
				Prevalence Index = B/A = 5.00
				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
erb Stratum (Plot size:	)			2 - Dominance Test is >50%
Glycine max	- 0.5	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supp
				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
-				Problematic Hydrophytic Vegetation (Explain
				<sup>1</sup> Indicators of hydric soil and wetland hydrology
				must be present, unless disturbed or problematic
				Definitions of Vegetation Strata:
		. <u></u>		Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
				height.
).				
1.				Sapling/shrub – Woody plants less than 3 in. Df and greater than or equal to 3.28 ft (1 m) tall.
-				Herb – All herbaceous (non-woody) plants,
2				regardless of size, and woody plants less than 3.
	25	=Total Cover		ft tall.
oody Vine Stratum (Plot size:	)			Woody vines – All woody vines greater than 3.2
				ft in height.
				Hydrophytic
				Vegetation Present? Yes No x
		-Total Cover		
emarks: (Include photo numbers he		=Total Cover		<u> </u>
emarks: (include photo numbers her oy beans were sprouting with no othe	•	et.)		
-, - same mens oprouding with no other				

SP1U

Profile De	escription: (Describ	e to the de	-			tor or co	onfirm the absence of in	dicators.)	
Depth	Matrix			x Featur					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	s
0-7	7.5yr 5/4	100							
7-11	10yr 6/3	50	7.5yr 5/6	50			Loamy/Clayey		
	1031 0/0		7.0y. 0/0				<u> Louiny, Giayoy</u>		
	Concentration, D=De	epletion, RN	/I=Reduced Matrix,	CS=Cov	ered or C	oated Sa		PL=Pore Lining,	
-	oil Indicators:				(00) (1.		Indicators for Prob	_	
I —	sol (A1)	-	Polyvalue Belov		e (S8) ( <b>Li</b>	RR R,		0) (LRR K, L, ML	
	Epipedon (A2) Histic (A3)		MLRA 149B) Thin Dark Surfa		/I DD D I	MI D A 14		edox (A16) ( <b>LRR</b>	
	gen Sulfide (A4)	_	High Chroma S				· —	at or Peat (S3) ( <b>I</b> v Surface (S8) ( <b>L</b>	•
	ied Layers (A5)	_	Loamy Mucky N					ice (S9) ( <b>LRR K</b> ,	-
	ted Below Dark Surfa	ace (A11)	Loamy Gleyed			it, L)		e Masses (F12) (I	•
	Dark Surface (A12)	_	Depleted Matrix		_,			Iplain Soils (F19)	•
	Mucky Mineral (S1)	_	' Redox Dark Su		5)			ΓA6) ( <b>MLRA 144</b>	
Sandy	Gleyed Matrix (S4)	_	 Depleted Dark	-	-		Red Parent Ma		
Sandy	Redox (S5)		Redox Depress	ions (F8	)		Very Shallow D	ark Surface (TF1	2)
Strippe	ed Matrix (S6)	_	Marl (F10) ( <b>LRI</b>	R K, L)			Other (Explain i	n Remarks)	
Dark S	Surface (S7)								
2									
	of hydrophytic veget		etland hydrology m	ust be pi	resent, un	less distu	rbed or problematic.		
	e Layer (if observed	-							
			<del></del>						
Depth (ir	nches):						Hydric Soil Present?	Yes	No x
Remarks:									
no signs of	f hydric soil indicators	;							
US Arı	my Corps of Enginee	ers					Northcentral a	nd Northeast Rec	ion – Version 2.0

Project/Site: Rio C	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 Lo	cal 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	<del></del>
Are Vegetation N , Soil N , or Hydrology N naturally pr	<del></del> -
<del></del>	g 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:
Small patch of phragmites 100 yards away  Area dominated by reed canary grass  Surrounded by agricultural	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that apply	<u>—</u>
X Surface Water (A1) Water-Stained	<u> </u>
High Water Table (A2)  Aquatic Fauna  And Danasits (A2)	<u> </u>
Saturation (A3) Marl Deposits (  Water Marks (B1) Hydrogen Sulfic	<u> </u>
l <del></del>	spheres on Living Roots (C3) x Saturation Visible on Aerial Imagery (C9)
<del></del>	duced Iron (C4)  Stunted or Stressed Plants (D1)
I — · · · · · · · —	duction in Tilled Soils (C6)  Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surf	
Inundation Visible on Aerial Imagery (B7) Other (Explain i	n Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	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)	: Wetland Hydrology Present? Yes X No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos previous inspections) if available:
Describe Necorded Data (stream gauge, monitoring well, aerial pho	ios, previous inspections), ii available.
Remarks:	
<ul> <li>Saturated: water is sitting on surface by clay is lower so it's not per</li> <li>Man made pond 25ft away, 1ft lower than sample point</li> </ul>	etrating
- Mail made pond 25it away, 1it lower than sample point	

	Dominan t	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:  1 (A)
			Number of Dominant Species That Are OBL, FACW, or FAC:1(A)
			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/
			Prevalence Index worksheet:
	-Total Cover		
	- Total Cover		
			OBL species0 x 1 =0
			FACW specie: 99 x 2 = 198
			FAC species0 x 3 =0
			FACU species 0 x 4 = 0
			UPL species 0 x 5 = 0
			Column Total: 99 (A) 198 (
			Prevalence Index = B/A = 2.00
			Hydrophytic Vegetation Indicators:
	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
			X 2 - Dominance Test is >50%
95	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
3	No	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supp
	No		data in Remarks or on a separate sheet)
<u> </u>	110	171011	Problematic Hydrophytic Vegetation <sup>1</sup> (Explai
			Problematic Trydrophytic Vegetation (Explai
			<sup>1</sup> Indicators of hydric soil and wetland hydrology
			must be present, unless disturbed or problematic
			Definitions of Vegetation Strata:
			<b>Tree</b> – 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. Di 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.
99 :	=Total Cover		ft tall.
			Woody vines – All woody vines greater than 3.2
			ft in height.
			Hydrophytic
			Vegetation Present? Yes X No
			Fresent? Tes A No
,	=Total Cover		
	95 3 1	=Total Cover  95	=Total Cover  =Total Cover  =Total Cover  95

Depth	Matrix		Redo	x Feature				· · · · · · · · · · · · · · · · · · ·
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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				
	_							
	_	·						
<sup>1</sup> Type: C=0	Concentration, D=De	epletion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sa	nd Grains. <sup>2</sup> Loc	cation: PL=Pore Lining, M=Matrix.
•	I Indicators:							r Problematic Hydric Soils <sup>3</sup> :
Histoso			Polyvalue Belov		e (S8) ( <b>LF</b>	RR R,		ck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	Epipedon (A2)		MLRA 149B)		(I DD D I	AL DA 44		airie Redox (A16) (LRR K, L, R)
	Histic (A3) gen Sulfide (A4)		Thin Dark Surfa High Chroma S		•			cky Peat or Peat (S3) (LRR K, L, R) e Below Surface (S8) (LRR K, L)
	ed Layers (A5)		Loamy Mucky N					k Surface (S9) (LRR K, L)
	ed Below Dark Surfa	ace (A11)	Loamy Gleyed I			· · · · · · · · · · · · · · · · · · ·		ganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	,	X Depleted Matrix		_,			t Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	Mucky Mineral (S1)		Redox Dark Su		6)			podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy	Gleyed Matrix (S4)		Depleted Dark	Surface (	(F7)		Red Pare	ent Material (F21)
	Redox (S5)		Redox Depress		)			allow Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) ( <b>LRF</b>	R K, L)			Other (Ex	xplain in Remarks)
Dark S	urface (S7)							
<sup>3</sup> Indicators	of hydrophytic yogot	ation and	wetland hydrology m	uet ha nr	ocont un	loce dietu	rhad ar problematic	2
	Layer (if observed		welland hydrology m	usi be pi	eseni, un	<del>เธออ นเอเน</del>	rbed of problematic	υ.
Type:		-						
Depth (in							Hydric Soil Pre	esent? Yes X No
Remarks:							1	
12in gleyed								
IIC A	ny Corps of Enginee	ro.					Northoo	entral and Northeast Region – Version 2.0

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: 43.20		S84
Soil Map Unit Name RhA: Rhinebeck silt loam	NWI classification: No	
Are climatic / hydrologic conditions on the site typical for the		
	significantly disturbed? Are "Normal Circumstances" present? Yes Y N	о
Are Vegetation N , Soil N , or Hydrology N r	naturally problematic? (If needed, explain any answers in Remarks.)	
<del></del> <del></del>	showing sampling point locations, transects, important feat	ures,
Hydrophytic Vegetation Present? Yes No	x Is the Sampled Area	
Hydric Soil Present? Yes X No		
Wetland Hydrology Present? Yes No		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two re	equired
Primary Indicators (minimum of one is required; check all	that apply) Surface Soil Cracks (B6)	
<del></del>	er-Stained Leaves (B9) Drainage Patterns (B10)	
	ttic Fauna (B13) Moss Trim Lines (B16)	
<del></del>	Deposits (B15) Dry-Season Water Table (C2)	
<del></del>	ogen Sulfide Odor (C1) Crayfish Burrows (C8)	(0.0)
1 <del></del>	zed Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery	(C9)
<u> </u>	ence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)  September 1 Stressed Plants (D2)  September 2 Stressed Plants (D2)	
l — · · · · · —	ent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)  Muck Surface (C7) Shallow Aquitard (D3)	
l — · · · · · · · —	Muck Surface (C7) Shallow Aquitard (D3) r (Explain in Remarks) Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)	
Field Observations:		
	th (inches):	
·	th (inches):	
		х
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspections), if available:	
Remarks:		
No hydrology present		

Absolute % Cover			Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or
			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/I
			Prevalence Index worksheet:
	=Total Cover		Total % Cover of: Multiply by:
)			OBL species 0 x1 = 0
•			FACW specie: 0 x 2 = 0
			' <del></del>
			FACU species 0 x 4 = 0
			UPL species 10 x 5 = 50
			Column Totals 10 (A) 50 (I
			Prevalence Index = B/A = 5.00
			Hydrophytic Vegetation Indicators:
:	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
10	Yes	UPI	3 - Prevalence Index is ≤3.0 <sup>1</sup>
			4 - Morphological Adaptations <sup>1</sup> (Provide supp
			data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
			<sup>1</sup> Indicators of hydric soil and wetland hydrology
			must be present, unless disturbed or problematic
			Definitions of Vegetation Strata:
			<b>Tree</b> – 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. De 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.
10	= Fotal Cover		ft tall.
_)			Woody vines – All woody vines greater than 3.28
			ft in height.
			Hydrophytic Vegetation
			Present? Yes No x
	=Total Cover		
a separate sne	et.)		
		=Total Cover=Total Cover	=Total Cover  =Total Cover  =Total Cover  10 Yes UPL  10 =Total Cover  11 =Total Cover

SP3U

		e to the	-			tor or co	onfirm the absence of in	dicators.)			
Depth	Matrix			Feature		. 2					
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	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- 0							2, ,,	5. 5			
		pletion, I	RM=Reduced Matrix, C	CS=Cove	ered or C	oated Sa		PL=Pore Lining, M=Matrix.			
-	oil Indicators: sol (A1)		Polyvalue Below	Surface	. (SQ) (I E	D D		olematic Hydric Soils <sup>3</sup> :			
_	Epipedon (A2)		MLRA 149B)	Suriace	5 (30) ( <b>L</b> r	ın n,	2 cm Muck (A10) ( <b>LRR K, L, MLRA 149B</b> ) Coast Prairie Redox (A16) ( <b>LRR K, L, R</b> )				
_	Histic (A3)		Thin Dark Surface	ce (SQ) (	IRRR N	/II RΔ 1/4		eat or Peat (S3) (LRR K, L, R)			
	ogen Sulfide (A4)		High Chroma Sa				Polyvalue Below Surface (S8) (LRR K, L)				
	fied Layers (A5)		Loamy Mucky M			-		ace (S9) (LRR K, L)			
	eted Below Dark Surfa	ce (A11)				<b>(</b> , <b>∟</b> )					
	Dark Surface (A12)	ce (ATT)	X Depleted Matrix		۷)		Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)				
	y Mucky Mineral (S1)		Redox Dark Sur		)						
			Depleted Dark S				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
	y Gleyed Matrix (S4)			,	•		Red Parent Material (F21)				
	y Redox (S5)		Redox Depression				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				
	oed Matrix (S6) Surface (S7)		Marl (F10) ( <b>LRR</b>	. K, L)			Other (Explain)	iii Remarks)			
	Cuuco (C.)										
			wetland hydrology mu	ist be pr	esent, un	ess distu	rbed or problematic.				
Type:	e Layer (if observed	)-									
	nches):						Hydric Soil Present?	? Yes X No			
Remarks:							1 -				
B horixon	appears to by hydric										
US Ar	rmy Corps of Engineer	rs					Northcentral a	nd Northeast Region – Version 2.0			

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	
Are Vegetation N, Soil N, or Hydrology N significa	<u> </u>
Are Vegetation N , Soil N , or Hydrology N natural	ly problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving 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:
Dominated by reed canary grass     Pond 35ft away, 2ft lower than sample point	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that a	
l <del></del>	ned Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fat	· / /
Saturation (A3)Marl Depos	<u> </u>
<u> </u>	Sulfide Odor (C1) Crayfish Burrows (C8) hizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
<del></del>	f Reduced Iron (C4)  Stunted or Stressed Plants (D1)
<del></del>	n Reduction in Tilled Soils (C6)  Geomorphic Position (D2)
1 <u> </u>	Surface (C7) Shallow Aguitard (D3)
l <del></del>	ain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (incl	•
Water Table Present? Yes No X Depth (incl	
Saturation Present? Yes No X Depth (incl	hes): Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
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 pr •No drainage pattern	resent on some level

	Absolute	Dominan	Indicator	
Tree Stratum (Plot size:)	% Cover	t	Status	Dominance Test worksheet: Number of Dominant Species
1				That Are OBL, FACW, or
2				FAC: 2 (A)
3				Total Number of Dominant
4				Species Across All Strata: 2 (B)
5.				Percent of Dominant Species
•				That Are OBL, FACW, or FAC: 100.0% (A/I
o. 7.				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratur (Plot size: 6	)	rotal Gover		OBL species 1 x1 = 1
Fraxinus pennsylvanica	_ ′ 2	No	FACW	FACW specie: 104 x 2 = 208
Lonicera tatarica		No	FACU	FAC species 0 x 3 = 0
	1	INO	FACU	
3				FACU species 1 x 4 = 4
4				UPL species0 x 5 =0
5				Column Totals 106 (A) 213 (E
6				Prevalence Index = B/A = 2.01
7				Hydrophytic Vegetation Indicators:
	3	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 6 )				X 2 - Dominance Test is >50%
1. Solidago gigantea	25	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Phalaris arundinacea	70	Yes	FACW	4 - Morphological Adaptations¹ (Provide supp
3. Carex vulpinoidea	1	No	OBL	data in Remarks or on a separate sheet)
4. Onoclea sensibilis	5	No	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5. Agrostis gigantea	2	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology
6.				must be present, unless disturbed or problematic
7.				Definitions of Vegetation Strata:
8.				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10				noight.
10				Sapling/shrub – Woody plants less than 3 in. DE
11				and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants,
12				regardless of size, and woody plants less than 3.
	103	=Total Cover		ft tall.
Woody Vine Stratum (Plot size:	_)			<b>Woody vines</b> – All woody vines greater than 3.29
1				ft in height.
2.				
				Hydrophytic
				Vegetation
4				Present? Yes X No No
		=Total Cover		
Remarks: (Include photo numbers here or on				
No tree or much of shrubs. Dominated by herl	o cover, mostly	iiivasive reed	canary gras	55

**SOIL** Sampling Point:

SP3W

	scription: (Describe	e to the c				tor or co	onfirm the absence	e of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
4-6	7.5yr 4/1	70	7.5yr 5/6	30	1,700		Loamy/Clayey	romano
6-12	7.5yr 5/1	90	7.5yr 5/6	10			Loamy/Clayey	
<del></del> -								
<sup>1</sup> Type: C=	Concentration, D=De	nletion R	M=Reduced Matrix (	CS=Cove	red or Co	nated Sa	nd Grains <sup>2</sup> l oc	cation: PL=Pore Lining, M=Matrix.
	il Indicators:	piction, r	in-reduced Matrix,	00-0040	ica oi oi	batcu oa		r Problematic Hydric Soils <sup>3</sup> :
Histos			Polyvalue Belov	v Surface	(S8) ( <b>LF</b>	RR R,		ck (A10) ( <b>LRR K, L, MLRA 149B</b> )
Histic I	Epipedon (A2)		MLRA 149B)				Coast Pra	airie Redox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ce (S9) ( <b>I</b>	LRR R, N	/ILRA 14	<b>9B</b> )5 cm Mud	cky Peat or Peat (S3) (LRR K, L, R)
Hydro	gen Sulfide (A4)		High Chroma S	ands (S1	1) ( <b>LRR</b> I	K, L)	Polyvalue	Below Surface (S8) (LRR K, L)
	ed Layers (A5)		Loamy Mucky N			K, L)		Surface (S9) ( <b>LRR K, L</b> )
	ed Below Dark Surfa	ice (A11)	Loamy Gleyed I		2)			ganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		X Depleted Matrix					t Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	Mucky Mineral (S1)		Redox Dark Sui					odic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4)		Depleted Dark S		=7)			ent Material (F21)
	Redox (S5)		Redox Depress					llow Dark Surface (TF12)
	ed Matrix (S6) Surface (S7)		Marl (F10) ( <b>LRF</b>	( K, L)			Other (Ex	φlain in Remarks)
Daik S	duriace (S7)							
<sup>3</sup> Indicators	of hydrophytic vegeta	ation and	wetland hydrology m	ust be pre	esent, unl	ess distu	rbed or problemation	<u> </u>
	E Layer (if observed		, ,,		,		'	
Type:								
Depth (in							Hydric Soil Pre	esent? Yes X No
Remarks:							•	
solid clay a	t 16inches							
US Arr	my Corps of Enginee	rs					Northce	ntral and Northeast Region – Version 2.0

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: 43.26	58108630 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 th	
	ignificantly disturbed? Are "Normal Circumstances" present? Yes Y No
Are Vegetation N , Soil N , or Hydrology N n	
<del></del> <del></del>	showing sampling point locations, transects, important features,
Hydrophytic Vegetation Present? Yes No	x Is the Sampled Area
Hydric Soil Present? Yes X No	
Wetland Hydrology Present? Yes No	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all	that apply) Surface Soil Cracks (B6)
Surface Water (A1) Wate	r-Stained Leaves (B9) Drainage Patterns (B10)
High Water Table (A2)	tic Fauna (B13) Moss Trim Lines (B16)
Saturation (A3) Marl I	Deposits (B15) Dry-Season Water Table (C2)
<del></del>	ogen Sulfide Odor (C1) Crayfish Burrows (C8)
	zed Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
<del></del>	ence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)
1 <del></del>	nt Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
<del></del>	Muck Surface (C7) Shallow Aquitard (D3)  (Explain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
	h (inches):
·	h (inches):
	h (inches): Wetland Hydrology Present? Yes No X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspections), if available:
Remarks:	
No hydrology present	

T. 01 to (DL)	Absolute	Dominan	Indicator	Barriero Tartanadal art
Tree Stratum (Plot size:)	% Cover	t	Status	Dominance Test worksheet:  Number of Dominant Species
1				That Are OBL, FACW, or
2				FAC:(A)
3				Total Number of Dominant
4				Species Across All Strata: 1 (B)
5				Percent of Dominant Species That Are OBL, FACW, or
6.				FAC: 0.0% (A/B)
7.				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratur (Plot size:	_)			OBL species 0 x 1 = 0
1				FACW specie: 0 x 2 = 0
2.				FAC species 0 x 3 = 0
3.				FACU species 0 x4 = 0
4.				UPL species 25 x 5 = 125
5.				Column Totals 25 (A) 125 (B)
6.				Prevalence Index = B/A = 5.00
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:				2 - Dominance Test is >50%
1. Glycine max	25	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				4 - Morphological Adaptations <sup>1</sup> (Provide support
3.				data in Remarks or on a separate sheet)
4.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
6				must be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
9.				height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants,
	25	=Total Cover		regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:	_)			Woody vines All woody vines greater than 3.29
1.	_			<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
2.				-
3.				Hydrophytic
4				Vegetation Present? Yes No_X_
4.		=Total Cover		1165 H. 105 H. 105 K.
Remarks: (Include photo numbers here or on				1
No vegetation present, on July 1 soy bean ap	•	,		
		•		

**VEGETATION** – Use scientific names of plants.

Sampling Point:

SP4U

SP4U

Depth	Matrix			x Featur	es			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	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	Consontuation D-D-		ONA-Daduard Matrix				21 -	action. DI -Dona Lining Manager
	il Indicators:	epietion, F	RM=Reduced Matrix, 0	JS=C0V	erea or C	oated Sa		cation: PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
•	ol (A1)		Polyvalue Below	/ Surface	e (S8) ( <b>LF</b>	RR R.		ck (A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)		( -/(	,		airie Redox (A16) (LRR K, L, R)
	Histic (A3)		Thin Dark Surfa	ce (S9)	(LRR R, I	VILRA 14		cky Peat or Peat (S3) (LRR K, L, R)
Hydro	gen Sulfide (A4)		High Chroma Sa	ands (S1	1) ( <b>LRR</b>	K, L)	Polyvalue	e Below Surface (S8) ( <b>LRR K, L</b> )
Stratifi	ed Layers (A5)		Loamy Mucky M	1ineral (F	1) ( <b>LRR</b>	<b>K</b> , <b>L</b> )	Thin Darl	k Surface (S9) ( <b>LRR K, L</b> )
	ted Below Dark Surfa	ace (A11)			2)			ganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		X Depleted Matrix					tt Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		Redox Dark Sur	-				podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4) Redox (S5)		Depleted Dark S Redox Depressi					ent Material (F21) allow Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) (LRF		1			xplain in Remarks)
	Surface (S7)		Warr (1 10) (ERR)	· · · · · · /				Apail in remarks)
	(0.)							
<sup>3</sup> Indicators	of hydrophytic veget	ation and	wetland hydrology mu	ust be pr	esent, un	ess distu	irbed or problemation	C.
Restrictive	e Layer (if observed	d):						
Type:								
Depth (ir	nches):						Hydric Soil Pre	esent? Yes X No
Remarks:							1	
High in clay	y							
US Arr	my Corps of Enginee	ers					Northce	entral and Northeast Region – Version 2.0

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: 43.26	
Soil Map Unit Name Ma: Madalin silt loam,	NWI classification: No
· · · · · · · · · · · · · · · · · · ·	
Are climatic / hydrologic conditions on the site typical for the Are Vegetation N , Soil N , or Hydrology N s	is time of year? Yes X No (If no, explain in Remarks.)  ignificantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation N , Soil N , or Hydrology N r	
<u> </u>	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:
•Surrounded by agriculture	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all	that apply) Surface Soil Cracks (B6)
<del></del>	r-Stained Leaves (B9) Drainage Patterns (B10)
	tic Fauna (B13) Moss Trim Lines (B16)
	Deposits (B15) Dry-Season Water Table (C2)
<del></del>	ogen Sulfide Odor (C1) Crayfish Burrows (C8)
	zed Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
	ence of Reduced Iron (C4)  The stanted or Stressed Plants (D1)  Structed or Stressed Plants (D1)  Geomorphic Position (D2)
<u> </u>	nt Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)  Muck Surface (C7) Shallow Aquitard (D3)
<u> </u>	(Explain in Remarks)  Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
	h (inches):
Water Table Present? Yes No x Dept	
Saturation Present? Yes No x Dept	
(includes capillary fringe)	
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 p	Absolute	Dominan	Indicator	Sampling Point: SP4W	
Tree Stratum (Plot size: 15 )	% Cover	t	Status	Dominance Test worksheet:	
1. Ulmus americana	5	No	FACW	Number of Dominant Species That Are OBL, FACW, or	
2. Fraxinus pennsylvanica	30	Yes	FACW	FAC: 3 (A)	)
3. Acer rubrum	10	Yes	FAC	Total Number of Dominant	
4				Species Across All Strata: 4 (B)	)
5.				Percent of Dominant Species That Are OBL, FACW, or	
6.				FAC: 75.0% (A/	/B)
7.				Prevalence Index worksheet:	
	45	=Total Cover		Total % Cover of: Multiply by:	
Sapling/Shrub Stratur (Plot size: 6 )				OBL species 1 x1 = 1	
1. Cornus racemosa	60	Yes	FAC	FACW specie: 55 x 2 = 110	
2. Viburnum dentatum	20	No	FAC	FAC species 92 x 3 = 276	
3. Cornus amomum	20	No	FACW	FACU species 67 x 4 = 268	
4. Frangula alnus	2	No	FAC	UPL species 0 x 5 = 0	
5.				Column Total: 215 (A) 655 (	(B)
6.				Prevalence Index = B/A = 3.05	
7.				Hydrophytic Vegetation Indicators:	
	102	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation	
Herb Stratum (Plot size: 6 )				X 2 - Dominance Test is >50%	
1. Solidago altissima	50	Yes	FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2. Fragaria virginiana	10	No	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide sup	por
3. Potentilla simplex	5	No	FACU	data in Remarks or on a separate sheet)	
4. Oxalis dillenii	1	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explai	in)
5. Juncus effusus	1	No	OBL	11-4:	
6. Anthoxanthum odoratum	1	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	C.
7.				Definitions of Vegetation Strata:	
8.				Tree – Woody plants 3 in. (7.6 cm) or more in	
9.				diameter at breast height (DBH), regardless of height.	
10.					
11.				Sapling/shrub – Woody plants less than 3 in. D and greater than or equal to 3.28 ft (1 m) tall.	BH
12.				Herb – All herbaceous (non-woody) plants,	
	68	=Total Cover		regardless of size, and woody plants less than 3 ft tall.	.28
Woody Vine Stratum (Plot size: )					
1.				<b>Woody vines</b> – All woody vines greater than 3.2 ft in height.	28
2.				-	
3.				Hydrophytic	
4.				Vegetation Present? Yes X No	
··		=Total Cover			
		- rotal Cover			_

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

<sup>•</sup>Trees <6 in diameter

<sup>•30%</sup> forest canopy, 80% shrub, 85% shrub cover

**SOIL** Sampling Point: SP4W

Profile D	escription: (Describ	e to the d	epth needed to doo	ument t	he indica	tor or co	onfirm the absence of ir	ndicators.)
Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	10YR 4/2	100					Loamy/Clayey	
4-10	10yr 4/2	80	10yr 4/6	20			Loamy/Clayey	
	·							
1 <sub>Type: C:</sub>	=Concentration, D=De	nlotion D	M-Paduaad Matrix		arad ar C	ootod Sc	and Crains <sup>2</sup> L agation	: PL=Pore Lining, M=Matrix.
	oil Indicators:	pietion, ix	ivi–Reduced iviatilix,	C3-C0V	ered or C	valeu Sa		blematic Hydric Soils <sup>3</sup> :
-	sol (A1)		Polyvalue Belov	v Surfac	e (S8) (L <b>i</b>	RR R.		10) (LRR K, L, MLRA 149B)
	Epipedon (A2)	•	MLRA 149B)		· () (	,		Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfa		(LRR R. I	MLRA 14		eat or Peat (S3) ( <b>LRR K, L, R</b> )
	ogen Sulfide (A4)		High Chroma S				· —	ow Surface (S8) ( <b>LRR K, L</b> )
	fied Layers (A5)		Loamy Mucky N			-		face (S9) (LRR K, L)
	eted Below Dark Surfa	ace (A11)	Loamy Gleyed			, ,		se Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	` ',	X Depleted Matrix		,			dplain Soils (F19) (MLRA 149B)
Sand	y Mucky Mineral (S1)	•	Redox Dark Su		6)			(TA6) ( <b>MLRA 144A, 145, 149B</b> )
	y Gleyed Matrix (S4)	•	Depleted Dark	Surface (	(F7)		Red Parent Ma	aterial (F21)
Sand	y Redox (S5)	•	Redox Depress	ions (F8)	)		Very Shallow [	Dark Surface (TF12)
Stripp	oed Matrix (S6)	•	Marl (F10) ( <b>LRF</b>	R K, L)			Other (Explain	in Remarks)
Dark	Surface (S7)	•					<u> </u>	
<sup>3</sup> Indicators	s of hydrophytic veget	ation and v	wetland hydrology m	ust be pr	esent, un	less distu	urbed or problematic.	
Restrictiv	ve Layer (if observed	i):						
Type:								
Depth (	inches):						Hydric Soil Present	? Yes X No
Remarks:								
		Northcentra	al and Northeast Reg	gional Su	pplement	Version	2.0 to reflect the NRCS F	Field Indicators of Hydric Soils
version 7.	0 March 2013 Errata.	(http://ww	w.nrcs.usda.gov/Inte	rnet/FSE		MENTS/r	nrcs142p2_051293.docx)	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

Project/Site: Rio	City/County: C	Central Square	Sampling Date: 6/7/24				
Applicant/Owner: The Wetlamd Trust		State:	NY Sampling Point: SP5U				
Investigator(s): KH, EF, HF, DJJ	Section, Town	iship, Range:					
Landform (hillside, terrace, etc.): flat	Local relief (con	cave, 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 class	ification: No				
Are climatic / hydrologic conditions on the site typical	•	X No (If no, explai					
Are Vegetation Y, Soil Y, or Hydrology	•		,				
Are Vegetation N, Soil N, or Hydrology	N naturally problematic?	(If needed, explain any answe	ers in Remarks.)				
SUMMARY OF FINDINGS – Attach site m	nap showing sampling	point locations, trans	ects, important features,				
Hydrophytic Vegetation Present? Yes	No X Is the Sai	mpled Area					
Hydric Soil Present? Yes	No X within a \	•	No X				
Wetland Hydrology Present? Yes	No X If yes, opt	ional Wetland Site ID:					
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Ind	licators (minimum of two required				
Primary Indicators (minimum of one is required; chec	ck all that apply)	Surface S	oil Cracks (B6)				
<del></del>	Water-Stained Leaves (B9)	· · · · · · · · · · · · · · · · · · ·					
_	Aquatic Fauna (B13)	<del>-</del>					
<del></del>	Marl Deposits (B15)	<u> </u>					
<u> </u>	Hydrogen Sulfide Odor (C1)		Burrows (C8)				
<del></del>	Oxidized Rhizospheres on Li	· · · · · · · · · · · · · · · · · · ·	Visible on Aerial Imagery (C9)				
— · · · · · · —	Presence of Reduced Iron (C Recent Iron Reduction in Tille	<i>'</i>	r Stressed Plants (D1)				
1 <del></del>	Thin Muck Surface (C7)	· / ·	nic Position (D2) quitard (D3)				
I <del></del> · · · · · ·	Other (Explain in Remarks)		graphic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	(=xp.a roao)		ral 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):	Wetland Hydrology Prese	nt? Yes No X				
(includes capillary fringe)							
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 Absolute Dominan Indicator 15 ) Tree Stratum (Plot size: Status **Dominance Test worksheet:** % Cover t Number of Dominant Species Prunus serotina 20 Yes FACU That Are OBL, FACW, or 15 FACW FAC: Fraxinus pennsylvanica No (A) Populus tremuloides 3 No FACU 3 Total Number of Dominant 5 Acer rubrum No FAC Species Across All Strata: (B) Percent of Dominant Species 5. Populus deltoides 35 FAC That Are OBL, FACW, or FAC: 6. (A/B) Prevalence Index worksheet: 7. 78 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 6 ) 0 x 1 = OBL species 0 x 2 = Rhus typhina 5 UPL FACW species 20 40 1. 42 Lonicera tatarica 20 Yes FACU FAC species x 3 = 126 3. Fraxinus americana 10 FACU FACU species 103 x 4 = 412 4. UPL species 10 x 5 = 50 5. Column Totals 175 628 (B) (A) 6. Prevalence Index = B/A = 3.59 **Hydrophytic Vegetation Indicators:** 35 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% Herb Stratum (Plot size: **FACW** 3 - Prevalence Index is ≤3.01 Carex scoparia 3 4 - Morphological Adaptations<sup>1</sup> (Provide support Anthoxanthum odoratum No FACU data in Remarks or on a separate sheet) Fragaria virginiana 15 FACU 3. Yes Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) 4. Solidago altissima 30 Yes FACU 5. Oxalis dillenii 1 FACU <sup>1</sup>Indicators of hydric soil and wetland hydrology Hieracium sp. must be present, unless disturbed or problematic. 5 UPL 7. Daucus carota **Definitions of Vegetation Strata:** Tree – Woody plants 3 in. (7.6 cm) or more in Ranunculus acris 1 FAC 8. No diameter at breast height (DBH), regardless of Phleum pratense 1 FACU 9. No height. 10. Vitis riparia FAC Sapling/shrub - Woody plants less than 3 in. DBH 11. Plantago lanceolata FACU 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 64 =Total Cover Woody Vine Stratum (Plot size: ) Woody vines - All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No x =Total Cover Remarks: (Include photo numbers here or on a separate sheet.) Tree Ash is dead

SP5U

Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Featur %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rer	marks
0-6	7.5yr 4/4	100							
6-10	7.5yr 6/6	100							
0-10	7.5yi 6/6	100							
	-						<del></del>		
<sup>1</sup> Type: C=	Concentration, D=D	epletion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sai	nd Grains. <sup>2</sup> Loc	ation: PL=Pore Li	ning, M=Matrix.
Hydric So	il Indicators:							r Problematic Hyd	
	sol (A1)		Polyvalue Belo		e (S8) ( <b>LF</b>	RR R,		ck (A10) ( <b>LRR K, L</b>	
	Epipedon (A2)		MLRA 149B)					airie Redox (A16) (I	•
	Histic (A3)		Thin Dark Surfa		•			cky Peat or Peat (S	
	gen Sulfide (A4) ied Layers (A5)		High Chroma S Loamy Mucky I			-		Below Surface (S Surface (S9) ( <b>LRI</b>	
	ted Below Dark Surf	face (Δ11)	Loamy Gleyed			K, L)		ganese Masses (F1	•
	Dark Surface (A12)	acc (A11)	Depleted Matrix		2)				F19) ( <b>MLRA 149B</b> )
	Mucky Mineral (S1)	)	Redox Dark Su		3)			odic (TA6) ( <b>MLRA</b>	
	Gleyed Matrix (S4)		Depleted Dark		•			ent Material (F21)	, ,
	Redox (S5)		Redox Depress					llow Dark Surface	(TF12)
Stripp	ed Matrix (S6)		Marl (F10) ( <b>LR</b>	R K, L)			Other (Ex	plain in Remarks)	
Dark \$	Surface (S7)								
			wetland hydrology m	iust be pi	resent, un	ess distu	rbed or problematio		
	e Layer (if observe	-							
Depth (i	nches):						Hydric Soil Pre	esent? Yes_	Nox
Remarks:									
No hydric	soils								
US Ar	my Corps of Engine	ers					Northcer	ntral and Northeast	Region – Version 2.

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	
Soil Map Unit Name RhA: Rhinebeck silt loam	NWI classification:
	r this time of year? Yes X No (If no, explain in Remarks.)
	significantly disturbed? Are "Normal Circumstances" present? Yes No _x
Are Vegetation, Soilx_, or Hydrology	_ naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing sampling point locations, transects, important features,
Hydrophytic Vegetation Present? Yes X	No Is the Sampled Area
	No within a Wetland? Yes X No
	No If yes, optional Wetland Site ID:
grown up trees. Sandy soil was scraped out and piled o	on higher ground. Mine was 50-60ft wide. Has been abandoned and growing vegetation.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check	
X Surface Water (A1) Water (A1)	ater-Stained Leaves (B9)
X High Water Table (A2) Aq	uatic Fauna (B13) Moss Trim Lines (B16)
Saturation (A3)	arl Deposits (B15) Dry-Season Water Table (C2)
· · · · · · · · · · · · · · · · · · ·	rdrogen Sulfide Odor (C1) Crayfish Burrows (C8)
	kidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
l <del></del> · · · · /	esence of Reduced Iron (C4)  Stunted or Stressed Plants (D1)
<u> </u>	ecent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
<del></del>	in Muck Surface (C7) Shallow Aquitard (D3) her (Explain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	A PAO-Neutral Test (BO)
	epth (inches): 3
	epth (inches): 3
	epth (inches): Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring week.)  Remarks: •Standing water present •12-16in below sample •Sand saturated at 12in •Water sits in pools	m, deliai proces, protesto inopositorio), il difendore.

Tree Stratum (Plot size: 10 )	Absolute % Cover	Dominan t	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	10	Yes	FAC	Number of Dominant Species
2. Salix sp.	10	Yes		That Are OBL, FACW, or FAC: 3 (A)
3.				``,
4.				Total Number of Dominant Species Across All Strata: 5 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 60.0% (A/B)
7.				Prevalence Index worksheet:
	20	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 10 )		,		OBL species 16 x1 = 16
1. Salix sp.	80	Yes		FACW specie: 91 x 2 = 182
2. Acer rubrum	10	No	FAC	FAC species 21 x 3 = 63
Fraxinus pennsylvanica	10	No	FACW	FACU species 5 x 4 = 20
Prunus pensylvanica  4. Prunus pensylvanica	5	No	FACU	UPL species 0 x 5 = 0
5.			17.00	Column Total: 133 (A) 281 (B)
6.				Prevalence Index = B/A = 2.11
7.				Hydrophytic Vegetation Indicators:
	105	=Total Cover		Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 10 )	100	- Total Gover		X 2 - Dominance Test is >50%
1. Onoclea sensibilis	40	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Lysimachia nummularia	40	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide suppor
3. Glyceria striata	15	No	OBL	data in Remarks or on a separate sheet)
4. Juncus effusus	1	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. Cornus amomum	1	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology
6. Acer rubrum	1	No	FAC	must be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
9				height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants,
	98	=Total Cover		regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: )				Weeds since All weeds since greater than 2.20
1.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
2.				
3.				Hydrophytic
4.				Vegetation
		=Total Cover		
Remarks: (Include photo numbers here or on a se	eparate she	eet.)		

<sup>•10</sup>ft radius for vegetation •Approximately10% shrub, 80% herb, 20% trees

**SOIL** Sampling Point: SP5W

Profile De Depth	scription: (Describe Matrix	to the d	-	<b>ument tl</b> x Feature		tor or co	nfirm the absend	ce of indicators.)
(inches)	Color (moist)	%	Color (moist)	% realure	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	Color (IIIOlot)	70	Color (IIIOlat)	/0	· ypc		I CALUI G	
0-1								Duff
1-12	7.5YR 4/4							
								·
								-
<sup>1</sup> Type: C=	Concentration, D=Dep	oletion, R	M=Reduced Matrix, 0	CS=Cove	ered or C	oated Sai	nd Grains. <sup>2</sup> Lo	ocation: PL=Pore Lining, M=Matrix.
Hydric So	il Indicators:						Indicators f	or Problematic Hydric Soils <sup>3</sup> :
Histos	ol (A1)		Polyvalue Below		e (S8) ( <b>LF</b>	RR R,		uck (A10) (LRR K, L, MLRA 149B)
Histic I	Epipedon (A2)		MLRA 149B)					Prairie Redox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfa					ucky Peat or Peat (S3) (LRR K, L, R)
	gen Sulfide (A4)		High Chroma Sa	-		-		ue Below Surface (S8) ( <b>LRR K, L</b> )
	ed Layers (A5)		Loamy Mucky M			<b>K</b> , <b>L</b> )		rk Surface (S9) ( <b>LRR K, L</b> )
	ed Below Dark Surfac	ce (A11)	Loamy Gleyed N		2)			nganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		Depleted Matrix					nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
	Mucky Mineral (S1)		Redox Dark Sur					Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4)		Depleted Dark S	,	•			rent Material (F21)
	Redox (S5)		Redox Depressi					nallow Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) ( <b>LRF</b>	( K, L)			Other (E	Explain in Remarks)
Dark S	Surface (S7)							
3, ,, ,								
	of hydrophytic vegeta		wetiand nydrology mi	ust be pre	esent, un	iess aistui	rbed or problemat	tic.
	e Layer (if observed)							
Depth (ir	nches):						Hydric Soil P	resent? Yes X No No
Remarks:								
Over 5 fee	t of surface soils remo	oved, sam	npling starts in C laye	r, assum	ing soils	are hydric	based on veg. ar	nd hydrology
110 4	my Corns of France	•					NI mustin -	central and Northeast Degice - Version C.C.
US Ari	my Corps of Engineer	5					INORTHC	entral and Northeast Region – Version 2.0

Project/Site: Rio	City/County: Ha	astings/Oswego	Sampling Date: 7/23/24
Applicant/Owner: The Wetland Trust inc.		State:	NY Sampling Point: SP6U
Investigator(s): EF,HF,KH	Section, Towns	ship, Range:	
Landform (hillside, terrace, etc.):	Local relief (cond	cave, 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			sification: none
· · · · · · · · · · · · · · · · · · ·	for this time of year? Vec		
Are climatic / hydrologic conditions on the site typical	-		
Are Vegetation, Soil, or Hydrology			
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	nap showing sampling	point locations, trans	ects, important features,
Lhydranhytia Vagatatian Procent?	No. v. lo the Com	anlad Araa	
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes x		npled Area <i>l</i> etland?	No X
Wetland Hydrology Present? Yes		onal Wetland Site ID:	
Remarks: (Explain alternative procedures here or in		onal Wetland Oile ID	
Ag field, relatively flat with minor slopes and deppres			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Inc	dicators (minimum of two required
Primary Indicators (minimum of one is required; chec	ck all that apply)	•	Soil Cracks (B6)
	Water-Stained Leaves (B9)		Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)		n Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Seas	on Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish E	Burrows (C8)
Sediment Deposits (B2) x	Oxidized Rhizospheres on Liv	ing Roots (C3)Saturation	n Visible on Aerial Imagery (C9)
	Presence of Reduced Iron (C-	<i></i>	or Stressed Plants (D1)
	Recent Iron Reduction in Tille		hic Position (D2)
<del>-</del> ' ' ' <del>-</del>	Thin Muck Surface (C7)		Aquitard (D3)
	Other (Explain in Remarks)	<del></del> ·	ographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neu	tral Test (D5)
Field Observations:	Danish (in the sale		
	Depth (inches):		
	Depth (inches):	Wetland Hydrology Prese	ent? Yes No x
(includes capillary fringe)	Dopur (mones).	Welland Hydrology 1 1030	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous i	nspections), if available:	
	, aoa. p	nopositorio), il avallabio.	
Remarks:			
no saturation some water in low portion of depression	n due to recent rain fall		
			!

T 01 1 (DI 1 :-	Absolute	Dominan	Indicator	
Tree Stratum (Plot size: )	% Cover	Dominan t	Status	Dominance Test worksheet:
				Number of Dominant Species
·				That Are OBL, FACW, or
2				FAC:(A)
B				Total Number of Dominant
1.				Species Across All Strata: 1 (B)
5.				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 0.0% (A/I
· ·				
<b>7</b>				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratur (Plot size:	_)			OBL species 0 x 1 = 0
I				FACW specie: 0 x 2 = 0
2.				FAC species 0 x 3 = 0
				FACU species 0 x 4 = 0
				UPL species 100 x 5 = 500
				· — —
5				Column Totals 100 (A) 500 (B
S				Prevalence Index = B/A = 5.00
7				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supp
				data in Remarks or on a separate sheet)
3				, ,
1				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
5				must be present, unless disturbed or problematic
7				Definitions of Vegetation Strata:
3.				Tree – Woody plants 3 in. (7.6 cm) or more in
				diameter at breast height (DBH), regardless of height.
·				neight.
10				Sapling/shrub – Woody plants less than 3 in. Di
1				and greater than or equal to 3.28 ft (1 m) tall.
				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.
2	400	=Total Cover		ft tall.
2	100			it tail.
	)			
Noody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.2
Noody Vine Stratum (Plot size:	_)			
Noody Vine Stratum (Plot size:  . 2.	_)			Woody vines – All woody vines greater than 3.26 ft in height.
	_)	<u> </u>		Woody vines – All woody vines greater than 3.28 ft in height.  Hydrophytic Vegetation
Noody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.26 ft in height.  Hydrophytic

**SOIL** Sampling Point: SP6U

Profile De Depth	escription: (Describe Matrix	to the c	-	ument t x Featur		tor or co	onfirm the absence of inc	dicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	
		,						
	<u> </u>							
	Concentration, D=Dep	letion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sa		PL=Pore Lining, M=Matrix.  lematic Hydric Soils <sup>3</sup> :
-	oil Indicators: sol (A1)		Polyvalue Belov	v Surfac	e (S8) (L <b>i</b>	RR R.		(LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)		o (00) ( <b>-</b> .	,		edox (A16) ( <b>LRR K, L, R</b> )
	Histic (A3)		Thin Dark Surfa		(LRR R, I	MLRA 14		at or Peat (S3) (LRR K, L, R)
Hydro	gen Sulfide (A4)		High Chroma S	ands (S1	11) ( <b>LRR</b>	K, L)	Polyvalue Belov	v Surface (S8) (LRR K, L)
	ied Layers (A5)		Loamy Mucky N	/lineral (F	-1) ( <b>LRR</b>	<b>K</b> , <b>L</b> )	Thin Dark Surfa	ce (S9) ( <b>LRR K, L</b> )
	ted Below Dark Surfac	e (A11)			2)			e Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		x Depleted Matrix					plain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		Redox Dark Su		-			(A6) (MLRA 144A, 145, 149B)
	Gleyed Matrix (S4)		Depleted Dark				Red Parent Mat	erial (F21) ark Surface (TF12)
	/ Redox (S5) ed Matrix (S6)		Redox Depress Marl (F10) (LRI		)		Other (Explain i	, ,
	Surface (S7)		Warr (i 10) (ER	· · · · · · · ·			Other (Explain)	Tromanaj
	January (3.)							
<sup>3</sup> Indicators	of hydrophytic vegetat	tion and	wetland hydrology m	ust be pr	esent, un	less distu	urbed or problematic.	
	e Layer (if observed)	•						
Type:								
Depth (ir	nches):						Hydric Soil Present?	Yes X No
Remarks:								
							2.0 to reflect the NRCS Fi arcs142p2_051293.docx)	eld Indicators of Hydric Soils
	,a. e 20 10 2a.a. (.		55.4544.95 .,5					

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

Project/Site: Rio	City/County: Ha	astings/Oswego	Sampling Date: 7/23/24
Applicant/Owner: The Wetland Trust inc.		State:	NY Sampling Point: SP6U
Investigator(s): EF,HF,KH	Section, Towns	ship, Range:	
Landform (hillside, terrace, etc.):	Local relief (cond	cave, 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			sification: none
· · · · · · · · · · · · · · · · · · ·	for this time of year? Vec		
Are climatic / hydrologic conditions on the site typical	-		
Are Vegetation, Soil, or Hydrology			
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	nap showing sampling	point locations, trans	ects, important features,
Lhydranhytia Vagatatian Procent?	No. v. lo the Com	anlad Araa	
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes x		npled Area <i>l</i> etland?	No X
Wetland Hydrology Present? Yes		onal Wetland Site ID:	
Remarks: (Explain alternative procedures here or in		onal Wetland Oile ID	
Ag field, relatively flat with minor slopes and deppres			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Inc	dicators (minimum of two required
Primary Indicators (minimum of one is required; chec	ck all that apply)	•	Soil Cracks (B6)
	Water-Stained Leaves (B9)		Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)		n Lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Seas	on Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish E	Burrows (C8)
Sediment Deposits (B2) x	Oxidized Rhizospheres on Liv	ing Roots (C3)Saturation	n Visible on Aerial Imagery (C9)
	Presence of Reduced Iron (C-	<i></i>	or Stressed Plants (D1)
	Recent Iron Reduction in Tille		hic Position (D2)
<del>-</del> ' ' ' <del>-</del>	Thin Muck Surface (C7)		Aquitard (D3)
	Other (Explain in Remarks)	<del></del> ·	ographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neu	tral Test (D5)
Field Observations:	Danish (in the sale		
	Depth (inches):		
	Depth (inches):	Wetland Hydrology Prese	ent? Yes No x
(includes capillary fringe)	Dopur (mones).	Welland Hydrology 1 1030	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous i	nspections), if available:	
	, aoa. p	nopositorio), il avallabio.	
Remarks:			
no saturation some water in low portion of depression	n due to recent rain fall		
			!

T 01 1 (DI 1 :-	Absolute	Dominan	Indicator	
Tree Stratum (Plot size: )	% Cover	Dominan t	Status	Dominance Test worksheet:
				Number of Dominant Species
·				That Are OBL, FACW, or
2				FAC:(A)
B				Total Number of Dominant
1.				Species Across All Strata: 1 (B)
5.				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 0.0% (A/I
· ·				
<b>7</b>				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratur (Plot size:	_)			OBL species 0 x 1 = 0
I				FACW specie: 0 x 2 = 0
2.				FAC species 0 x 3 = 0
				FACU species 0 x 4 = 0
				UPL species 100 x 5 = 500
				· — —
5				Column Totals 100 (A) 500 (B
S				Prevalence Index = B/A = 5.00
7				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>
				4 - Morphological Adaptations <sup>1</sup> (Provide supp
				data in Remarks or on a separate sheet)
3				, ,
1				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
5				must be present, unless disturbed or problematic
7				Definitions of Vegetation Strata:
3.				Tree – Woody plants 3 in. (7.6 cm) or more in
				diameter at breast height (DBH), regardless of height.
·				neight.
10				Sapling/shrub – Woody plants less than 3 in. Di
1				and greater than or equal to 3.28 ft (1 m) tall.
				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.
2	400	=Total Cover		ft tall.
2	100			it tail.
	)			
Noody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.2
Noody Vine Stratum (Plot size:	_)			
Noody Vine Stratum (Plot size:  . 2.	_)			Woody vines – All woody vines greater than 3.26 ft in height.
	_)	<u> </u>		Woody vines – All woody vines greater than 3.28 ft in height.  Hydrophytic Vegetation
Noody Vine Stratum (Plot size:	_)			Woody vines – All woody vines greater than 3.26 ft in height.  Hydrophytic

**SOIL** Sampling Point: SP6U

Profile D	escription: (Describe	e to the c	lepth needed to doo	ument t	he indica	tor or co	onfirm the absence of ind	icators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	
								_
			_					
<sup>1</sup> Type: C:	=Concentration, D=De	nletion R	M=Reduced Matrix	CS=Cov	ered or C	nated Sa	and Grains <sup>2</sup> Location	PL=Pore Lining, M=Matrix.
	oil Indicators:	piotion, i	Troddod Matix,	00 001	0.04 0. 0	outou ot		ematic Hydric Soils <sup>3</sup> :
-	sol (A1)		Polyvalue Belov	v Surface	e (S8) ( <b>LF</b>	RR R,		) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)					dox (A16) ( <b>LRR K, L, R</b> )
Black	Histic (A3)		Thin Dark Surfa	ce (S9) (	LRR R, N	VILRA 14	19B) 5 cm Mucky Pea	t or Peat (S3) ( <b>LRR K, L, R</b> )
Hydro	ogen Sulfide (A4)		High Chroma S	ands (S1	1) ( <b>LRR</b>	K, L)	Polyvalue Below	Surface (S8) (LRR K, L)
Strati	fied Layers (A5)		Loamy Mucky N	/lineral (F	1) ( <b>LRR</b>	<b>K</b> , <b>L</b> )	Thin Dark Surface	ce (S9) ( <b>LRR K, L</b> )
Deple	eted Below Dark Surfa	ce (A11)	Loamy Gleyed I	Matrix (F	2)		Iron-Manganese	Masses (F12) (LRR K, L, R)
Thick	Dark Surface (A12)		x Depleted Matrix	(F3)			Piedmont Flood	olain Soils (F19) ( <b>MLRA 149B</b> )
Sand	y Mucky Mineral (S1)		Redox Dark Su	rface (F6	5)		Mesic Spodic (T	A6) (MLRA 144A, 145, 149B)
Sand	y Gleyed Matrix (S4)		Depleted Dark S	Surface (	(F7)		Red Parent Mate	erial (F21)
Sand	y Redox (S5)		Redox Depress	ions (F8)			Very Shallow Da	rk Surface (TF12)
Stripp	oed Matrix (S6)		Marl (F10) ( <b>LRF</b>	R K, L)			Other (Explain in	Remarks)
Dark	Surface (S7)							
<sup>3</sup> Indicator	s of hydrophytic vegeta	ation and	wetland hydrology m	ust be pr	esent, un	ess distu	urbed or problematic.	
	ve Layer (if observed	):						
Type:								
Depth (	inches):						Hydric Soil Present?	Yes X No
Remarks:								
								eld Indicators of Hydric Soils
version 7.	0 March 2013 Errata.	(http://ww	w.nrcs.usda.gov/Inte	rnet/FSE	_DOCUN	//ENTS/r	nrcs142p2_051293.docx)	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

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
· · · · · · · · · · · · · · · · · · ·	
	this time of year? Yes x No (If no, explain in Remarks.)
	significantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation, Soiln_, or Hydrologyn_	naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point locations, transects, important features,
Lhudaanhutia Varatatian Daaanto Varanna A	In the Complet Asse
	lo Is the Sampled Area lo within a Wetland? Yes X No
	lo If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a s	eparate report.) , surrounded by AG field and forested shrub wetland to the south
	Tourisdinasa by No Hola and Torottoa official Worlding to the South
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two require
Primary Indicators (minimum of one is required; check a	Il that apply) Surface Soil Cracks (B6)
Surface Water (A1)	ter-Stained Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aqu	atic Fauna (B13) Moss Trim Lines (B16)
x Saturation (A3)Mar	Dry-Season Water Table (C2)
Water Marks (B1) Hyd	rogen Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) x Oxid	dized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	sence of Reduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	ent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
<del></del>	Muck Surface (C7) Shallow Aquitard (D3)
<del></del>	er (Explain in Remarks)Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x De	
Water Table Present? Yes No _x De	
	pth (inches): 0 Wetland Hydrology Present? Yes x No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring wel	, aerial photos, previous inspections), if available:
Domonto	
Remarks: soils are moist to the surface B horizon is very dense wit	h clay, recent heavy rains
	,

t		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         1         (B)           That Are OBL, FACW, or FAC:         100.0%         (A)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         7         x 1 = 7           FACW specie:         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           Prevalence Index = B/A =         1.93           Hydrophytic Vegetation Indicators:
=Total Cover		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)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         7         x 1 = 7           FACW specie:         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           Prevalence Index = B/A =         1.93
=Total Cover		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)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:         OBL species         7         x 1 = 7         TACW Species         92         x 2 = 184         TACW Species         0         x 3 = 0         TACU Species         0         x 4 = 0         TACU Species         0         x 4 = 0         TACU Species         0         x 5 = 0         TACU Species         0         A = 0         TACU Species         0         <
=Total Cover		Species Across All Strata:         1         (B)           Percent of Dominant Species         That Are OBL, FACW, or FAC:         100.0%         (A/I)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:         OBL species         7         x 1 = 7         7           FACW species         92         x 2 = 184         184         FAC species         0         x 3 = 0         0           FACU species         0         x 4 = 0         0         UPL species         0         x 5 = 0         0         Column Totals         99         (A)         191         (A/I)         0         0         Prevalence Index         B/A = 1.93         1.93
=Total Cover		Species Across All Strata:         1         (B)           Percent of Dominant Species         That Are OBL, FACW, or FAC:         100.0%         (A/I)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:         OBL species         7         x 1 = 7         7           FACW species         92         x 2 = 184         184         FAC species         0         x 3 = 0         0           FACU species         0         x 4 = 0         0         UPL species         0         x 5 = 0         0         Column Totals         99         (A)         191         (A/I)         0         0         Prevalence Index         B/A = 1.93         1.93
=Total Cover		That Are OBL, FACW, or FAC:         100.0% (A/I)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         7         x 1 = 7           FACW specie:         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           Prevalence Index         B/A = 1.93
=Total Cover		FAC:         100.0% (A/A)           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           Prevalence Index         B/A = 1.93
=Total Cover		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           Prevalence Index         = B/A = 1.93
=Total Cover		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           Prevalence Index         = B/A = 1.93
=Total Cover		OBL species       7       x 1 =       7         FACW specie:       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       (         Prevalence Index       = B/A =       1.93
=Total Cover		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       (         Prevalence Index       = B/A =       1.93
=Total Cover		FAC species       0       x 3 =       0         FACU species       0       x 4 =       0         UPL species       0       x 5 =       0         Column Totals       99       (A)       191       (         Prevalence Index = B/A =       1.93
=Total Cover		FACU species 0 x 4 = 0  UPL species 0 x 5 = 0  Column Totals 99 (A) 191 (  Prevalence Index = B/A = 1.93
=Total Cover		UPL species       0       x 5 =       0         Column Totals       99       (A)       191       (         Prevalence Index = B/A =       1.93
=Total Cover		Column Totals 99 (A) 191 (  Prevalence Index = B/A = 1.93
=Total Cover		Prevalence Index = B/A = 1.93
Yes		
Yes		Hydrophytic Vegetation Indicators:
Yes		
		1 - Rapid Test for Hydrophytic Vegetation
		X 2 - Dominance Test is >50%
No	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide sup
No	OBL	data in Remarks or on a separate sheet)
No	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explai
No	OBL	1
No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
		Definitions of Vegetation Strata:
		<b>Tree</b> – 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. D
		and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants.
		regardless of size, and woody plants less than 3
=Total Cover		ft tall.
		<b>Woody vines</b> – All woody vines greater than 3.2
		ft in height.
		Hydrophytic Vegetation
		Present? Yes X No No
=Total Cover		
		•
et.)		
et.)		
eet.)		
eet.)		
	=Total Cover eet.)	•

**SOIL** Sampling Point: SP8W

Profile D	escription: (Describe	e to the d	lepth needed to doc	ument t	he indica	tor or co	onfirm the absence of	indicators.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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		
									-
<sup>1</sup> Type: C:	=Concentration, D=De	nletion R	M=Reduced Matrix (	CS=Cov	ered or C	oated Sa	and Grains <sup>2</sup> I ocatio	on: PL=Pore Lining, M=N	1atrix
	oil Indicators:	p.o,	Houdou manny		<u> </u>			roblematic Hydric Soils	•
-	sol (A1)		Polyvalue Belov	v Surfac	e (S8) ( <b>LF</b>	RR R,		A10) ( <b>LRR K, L, MLRA 1</b>	
	Epipedon (A2)		MLRA 149B)		. , ,			Redox (A16) ( <b>LRR K, L</b>	
	(Histic (A3)		Thin Dark Surfa	ce (S9)	(LRR R, I	VILRA 14		Peat or Peat (S3) (LRR I	-
Hydro	ogen Sulfide (A4)		High Chroma S	ands (S1	11) ( <b>LRR</b> 1	K, L)	Polyvalue Be	elow Surface (S8) (LRR K	(, L)
Strati	fied Layers (A5)		Loamy Mucky N	/lineral (F	-1) ( <b>LRR</b>	<b>K</b> , <b>L</b> )	Thin Dark Su	ırface (S9) (LRR K, L)	
Deple	eted Below Dark Surfa	ce (A11)	Loamy Gleyed I	Matrix (F	2)		Iron-Mangan	ese Masses (F12) ( <b>LRR</b>	K, L, R)
Thick	Dark Surface (A12)		x Depleted Matrix	(F3)			Piedmont Flo	oodplain Soils (F19) ( <b>MLF</b>	RA 149B)
Sand	y Mucky Mineral (S1)		Redox Dark Su	rface (F6	6)		Mesic Spodie	c (TA6) (MLRA 144A, 14	5, 149B)
Sand	y Gleyed Matrix (S4)		Depleted Dark S	Surface	(F7)		Red Parent I	Material (F21)	
Sand	y Redox (S5)		Redox Depress	ions (F8)	)		Very Shallow	/ Dark Surface (TF12)	
Stripp	oed Matrix (S6)		? Marl (F10) ( <b>LRF</b>	R K, L)			Other (Expla	in in Remarks)	
Dark	Surface (S7)								
•									
	s of hydrophytic vegeta		wetland hydrology m	ust be pr	esent, un	ess distu	urbed or problematic.		
	ve Layer (if observed)	):							
Type:									
Depth (	inches):						Hydric Soil Prese	nt? Yes <u>X</u> N	lo
Remarks:									
								Field Indicators of Hydri	c Soils
version /.	0 March 2013 Errata. (	(http://ww	w.nrcs.usda.gov/inte	rnet/FSE	=_DOCUN	/IEN IS/r	nrcs142p2_051293.doc	x)	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

## 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 tin	
	icantly disturbed? Are "Normal Circumstances" present? Yes x No
Are Vegetation n , Soil n , or Hydrology n natura	
<u> </u>	wing 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:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required
Primary Indicators (minimum of one is required; check all that	apply) Surface Soil Cracks (B6)
Surface Water (A1) Water-Sta	ained Leaves (B9) Drainage Patterns (B10)
High Water Table (A2)	auna (B13) Moss Trim Lines (B16)
Saturation (A3) Marl Depo	osits (B15) Dry-Season Water Table (C2)
<del></del>	Sulfide Odor (C1) Crayfish Burrows (C8)
<del>-</del>	Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
	of Reduced Iron (C4) Stunted or Stressed Plants (D1)
<u> </u>	on Reduction in Tilled Soils (C6) Geomorphic Position (D2)
	Shallow Aquitard (D3)  Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Exposure Sparsely Vegetated Concave Surface (B8)	plain in Remarks) Microtopographic Relief (D4)  FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (in	ches).
Water Table Present? Yes No x Depth (in	
Saturation Present? Yes No x Depth (in	
(includes capillary fringe)	, <u> </u>
Describe Recorded Data (stream gauge, monitoring well, aeria	al photos, previous inspections), if available:
Remarks: No signs of wetland hydrology, No water and no saturation	
5::	

	Absolute	Dominan	Indicator	
Tree Stratum (Plot size:	% Cover	bominan t	Status	Dominance Test worksheet:
				Number of Dominant Species
-				That Are OBL, FACW, or
2				FAC:0(A)
B				Total Number of Dominant
i				Species Across All Strata:1 (B)
5.				Percent of Dominant Species
_				That Are OBL, FACW, or FAC: 0.0% (A/I
· ·				Prevalence Index worksheet:
7				
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:	_)			OBL species0 x 1 =0
l				FACW specie: 10 x 2 = 20
2				FAC species 5 x 3 = 15
3.				FACU species 0 x 4 = 0
				UPL species 50 x 5 = 250
+ -				' <del></del>
5. 5.				Column Totals 65 (A) 285 (B)  Prevalence Index = B/A = 4.38
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
· · · · · · · · · · · · · · · · · · ·	50	V	LIDI	
I. Glycine max		Yes	<u>UPL</u>	3 - Prevalence Index is ≤3.0¹
2. Cyperus esculentus	10	No	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supp data in Remarks or on a separate sheet)
3. Echinochloa crus-galli	5	No	FAC	data in Nomarks of on a separate sheet)
4				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology
6.				must be present, unless disturbed or problematic
_				Definitions of Vegetation Strata:
7				Tree – Woody plants 3 in. (7.6 cm) or more in
-				diameter at breast height (DBH), regardless of
9				height.
10				Sapling/shrub – Woody plants less than 3 in. Di
l1				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants,
	65	=Total Cover		regardless of size, and woody plants less than 3. ft tall.
Noody Vine Stratum (Plot size:	,			
	_'			<b>Woody vines</b> – All woody vines greater than 3.2
				ft in height.
2				Harland a Ca
3				Hydrophytic Vegetation
4.				Present? Yes No
	_	=Total Cover		
Daniel de la				<u> </u>
Remarks: (Include photo numbers here or on 100% vegatation	a separate she	et.)		

**SOIL** Sampling Point: SP9U

Profile D	escription: (Describ	e to the c	lepth needed to doo	ument t	he indica	tor or co	onfirm the absence of inc	dicators.)
Depth	Matrix			x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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				
								_
			·					
								_
	=Concentration, D=De	pletion, R	M=Reduced Matrix,	CS=Cov	ered or C	oated Sa		PL=Pore Lining, M=Matrix.
-	oil Indicators:							lematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Belov		e (S8) ( <b>LF</b>	RR R,		0) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)					edox (A16) ( <b>LRR K, L, R</b> )
	(Histic (A3)		Thin Dark Surfa		•		· —	at or Peat (S3) ( <b>LRR K, L, R</b> )
	ogen Sulfide (A4)		High Chroma S					v Surface (S8) ( <b>LRR K, L</b> )
	ified Layers (A5)		Loamy Mucky N			<b>K</b> , <b>L</b> )		ce (S9) ( <b>LRR K, L</b> )
	eted Below Dark Surfa	ice (A11)			2)			e Masses (F12) (LRR K, L, R)
	Dark Surface (A12)		x Depleted Matrix					plain Soils (F19) (MLRA 149B)
	ly Mucky Mineral (S1)		Redox Dark Su	•	•			TA6) ( <b>MLRA 144A, 145, 149B</b> )
	ly Gleyed Matrix (S4)		Depleted Dark S				Red Parent Mat	
	ly Redox (S5)		Redox Depress	, ,				ark Surface (TF12)
	ped Matrix (S6)		Marl (F10) ( <b>LRF</b>	R K, L)			Other (Explain i	n Remarks)
Dark	Surface (S7)							
2								
	s of hydrophytic vegeta		wetland hydrology m	ust be pr	esent, un	ess distu	urbed or problematic.	
	ve Layer (if observed	•						
Type: _								
Depth (	inches):						Hydric Soil Present?	Yes X No
Remarks	:							
								eld Indicators of Hydric Soils
version 7.	0 March 2013 Errata.	(http://ww	w.nrcs.usda.gov/Inte	rnet/FSE		/IENTS/r	nrcs142p2_051293.docx)	

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Rio/Meyer	City/County: Has	stings/Oswego	Sampling Date: 7/26/24
Applicant/Owner: The Wetland Trust inc.		State:	NY Sampling Point: SP10U
Investigator(s): EF,HF,KH,GD	Section, Townsh	ip, Range:	
Landform (hillside, terrace, etc.):	Local relief (conca	ve, convex, none): Concave	Slope (%): 0-1
Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.267	74077333	Long: -76.1876614477	Datum: WGS 84
Soil Map Unit Name: RhA: Rhinebeck silt loam		_	ication: none
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes	x No (If no, explain	
Are Vegetation n , Soil n , or Hydrology n sig		Are "Normal Circumstances" pre	
Are Vegetation n , Soil n , or Hydrology n na		If needed, explain any answers	
SUMMARY OF FINDINGS – Attach site map sho		•	,
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes x No		etland? Yes	NoX
Wetland Hydrology Present? Yes No	x If yes, option	nal Wetland Site ID:	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all tha			il Cracks (B6)
<del></del>	-Stained Leaves (B9)		atterns (B10)
— · · · · · · · · · · · · · · · · · ·	ic Fauna (B13)	Moss Trim	
<del></del>	Deposits (B15)		Water Table (C2)
<u> </u>	gen Sulfide Odor (C1)	Crayfish Bu	
<u> </u>	ed Rhizospheres on Living nce of Reduced Iron (C4)		Visible on Aerial Imagery (C9) Stressed Plants (D1)
1 <del></del>	nt Iron Reduction in Tilled S		c Position (D2)
l <del></del>	Nuck Surface (C7)	Shallow Aq	
<u> </u>	(Explain in Remarks)		raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	(=-μ·	FAC-Neutra	, ,
Field Observations:		<del></del>	
Surface Water Present? Yes No x Dept	th (inches):		
Water Table Present? Yes No _x Dept	th (inches):		
<u> </u>	th (inches):	Wetland Hydrology Present	? Yes No x
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aer	rai photos, previous inspe	otions), if available:	
Remarks: Surface water 10 feet away from SP due to recent rainfall, N	o water in the hole		
Surface water to feet away from St. due to feethir familian, N	o water in the note		

				Sampling Point:	SP10U
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1	_			Number of Dominant Species	
2				That Are OBL, FACW, or FAC:	0 (A)
3.				T ( I N and an ( B and and	
4.				Total Number of Dominant Species Across All Strata:	1 (B)
				<u> </u>	`` ′
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0% (A/E
7.				Prevalence Index worksheet:	
		=Total Cover		Total % Cover of: Mu	ıltiply by:
Sapling/Shrub Stratum (Plot size:	)	•		OBL species 0 x 1 =	
1					
1.					
2	_	·			0
3		·		FACU species0 x 4 = _	0
4.		<u> </u>		UPL species 50 x 5 =	250
5				Column Totals: 52 (A)	254 (I
6.	_			Prevalence Index = B/A =	4.88
7.	_			Hydrophytic Vegetation Indicators:	
		=Total Cover		1 - Rapid Test for Hydrophytic Ve	getation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%	
1. Glycine max	50	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2. Cyperus esculentus	2	No	FACW	4 - Morphological Adaptations <sup>1</sup> (P	
3				Problematic Hydrophytic Vegetati	,
5.				1	
6.				<sup>1</sup> Indicators of hydric soil and wetland he present, unless disturbed or proble	
7.				Definitions of Vegetation Strata:	
8.					
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of I	
10				Sapling/shrub – Woody plants less th	an 3 in DBH
11.				and greater than or equal to 3.28 ft (1	
12.				<b>Herb</b> – All herbaceous (non-woody) pl	ants regardles
	52	=Total Cover		of size, and woody plants less than 3.2	
Woody Vine Stratum (Plot size:	)			Woody vines All woody vines great	orthan 2 20 ft i
	_			<b>Woody vines</b> – All woody vines greate height.	er triari 3.20 it i
1.				· ·	
2.	_	·		Hydrophytic	
2. 3.	_			Vegetation	
2.	_	=Total Cover		Vegetation	<b>o</b> x

SOIL Sampling Point: SP10U

Profile De Depth	escription: (Describe Matrix	to the de	epth needed to docur	nent the Feature		r or con	firm the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	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	
<sup>1</sup> Type: C=	Concentration, D=Dep	oletion, RI	M=Reduced Matrix, CS	S=Cover	ed or Coa	ted Sand	d Grains. <sup>2</sup> Lo	cation: PL=Pore Lining, M=Matrix.
Hydric So	il Indicators:						Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
	sol (A1)		Polyvalue Below	Surface	e (S8) ( <b>LR</b>	R R,		uck (A10) ( <b>LRR K, L, MLRA 149B</b> )
	Epipedon (A2)		MLRA 149B)					rairie Redox (A16) (LRR K, L, R)
	Histic (A3)		Thin Dark Surfac					ucky Peat or Peat (S3) (LRR K, L, R)
	igen Sulfide (A4) fied Layers (A5)		High Chroma Sa Loamy Mucky Mi					rk Surface (S8) ( <b>LRR K, L</b> ) rk Surface (S9) ( <b>LRR K, L</b> )
	ted Below Dark Surfac	re (A11)	Loamy Gleyed M			K, L)		nganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	SC (A11)	x Depleted Matrix (	,	-)			nt Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		Redox Dark Surf	. ,	)			podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4)		Depleted Dark S					ent Material (F21)
Sandy	y Redox (S5)		Redox Depression	ns (F8)			Very Sha	allow Dark Surface (TF12)
Stripp	ed Matrix (S6)		Marl (F10) (LRR	<b>K</b> , <b>L</b> )			Other (E	xplain in Remarks)
Dark S	Surface (S7)							
2								
			wetland hydrology mus	t be pre	esent, unle	ess distur	bed or problematic	:
	e Layer (if observed)	:						
Type:								
Depth (i	nches):						Hydric Soil Pro	esent? Yes X No No
Remarks:								
			al and Northeast Regio w.nrcs.usda.gov/Intern					CS Field Indicators of Hydric Soils
VOI 51011 7.0	o Maron 2010 Errata. (	11ttp:// ** **	w.moo.aoaa.gov/mtom	CUI OL_	_DOOO!!!!	21410/1110	.5142p2_001200.d0	500,

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Lower Caugh	denoy Creek	c	city/County: Os	wego/ Hastings		Sampling Date:	4/25/25
Applicant/Owner: The Wetl	land Trust	_			State:	NY Sampling	Point: SP-15-U
Investigator(s): E. Frantz, k	C. Hastinhs	S	ection, Townsh	nip, Range:			
Landform (hillside, terrace, e		Loc	al relief (conca	ve, convex, none):	: None	Slo	pe (%): 0-2
Subregion (LRR or MLRA):	LRR L. MLRA 101 La	at: 43.268148	,	Long: 43.268			n: WSG81
Soil Map Unit Name: Rhineb						cation: None	
		for this time of veer		V No /			
Are climatic / hydrologic cond Are Vegetation Y, Soi	• •	•	_	<u>    Y        No             (</u> Are "Normal Circur	(If no, explain mstances" pre		Y No
Are Vegetation N, Soi	I N , or Hydrology	N naturally prol	blematic? (	If needed, explain	any answers	in Remarks.)	
SUMMARY OF FINDIN	<u> </u>	<u>_</u>		int locations,	transects,	important fea	tures, etc.
Hydrophytic Vegetation Pre	esent? Yes	No X	Is the Samp	oled Area			
Hydric Soil Present?	Yes X	No	within a We	etland?	Yes	No X	
Wetland Hydrology Present	t? Yes	No X	If yes, option	nal Wetland Site II	D:	_	
In the fall of 2024 the field vupland forested area. Agric		•	•		, ,		,
HYDROLOGY							
Wetland Hydrology Indica	tors:			<u>Se</u>	condary Indica	ators (minimum of	two required)
Primary Indicators (minimur	n of one is required; chec	k all that apply)			Surface Soil	l Cracks (B6)	
Surface Water (A1)	<u> </u>	Water-Stained Le				atterns (B10)	
High Water Table (A2)	<u> </u>	Aquatic Fauna (B					
Saturation (A3)	_	Marl Deposits (B					
Water Marks (B1)		Hydrogen Sulfide			_Crayfish Bu		
Sediment Deposits (B2	<u> </u>	_Oxidized Rhizosp		g Roots (C3)		/isible on Aerial Ima	
Drift Deposits (B3)	<u> </u>	Presence of Redu	` ,			Stressed Plants (D1	1)
Algal Mat or Crust (B4)	<del>_</del>	Recent Iron Redu		Soils (C6)	_	Position (D2)	
Iron Deposits (B5)	— (DZ)	Thin Muck Surface	, ,		Shallow Aqu		
Inundation Visible on A	• , · , <u> </u>	Other (Explain in	Remarks)			aphic Relief (D4)	
Sparsely Vegetated Co	ncave Surface (B8)		— Т		FAC-Neutra	l Test (D5)	
Field Observations:							
Surface Water Present?	Yes No	Depth (inches):					
Water Table Present?	Yes No	_ ' ' '					
Saturation Present?	Yes No	Depth (inches):		Wetland Hydrol	logy Present?	? Yes	No X
(includes capillary fringe)	troom govern manitoring	well periol photon	nrovious inone.	etions) if sysilable			
Describe Recorded Data (s	ileam gauge, monitoring	weii, aeriai priotos, j	previous irisped	ctions), ii avallable			
Remarks: No hydrology indicators. No	oxidized root channels, r	no saturation, no sig	<sub>i</sub> ns of drainage	patterns. Soil is cr	racked from tr	actor ruts	

<b>VEGETATION</b> – Use scientific names of pl	lants.			Sampling Point	t: SP-15-U	
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1 2				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A	A)
3. 4.				Total Number of Dominant Species Across All Strata:		В)
5.				Percent of Dominant Species That Are OBL, FACW, or FAC:		•
				Prevalence Index worksheet:	0.0% (F	A/B)
<i>7.</i>		=Total Cover			Multiply by:	
Capling/Shrub Stratum /Dlot aiza:		- Total Cover			Multiply by:	-
Sapling/Shrub Stratum (Plot size:)				<u> </u>	= 0	-
1				· —	= 0	-
2					= 0	_
3.	-			· —	=0	_
4				· —	= 500	-
5				Column Totals: 100 (A)	500	_(B)
6				Prevalence Index = B/A =	5.00	_
7	-			Hydrophytic Vegetation Indicator	s:	
		=Total Cover		1 - Rapid Test for Hydrophytic	Vegetation	
Herb Stratum (Plot size:)				2 - Dominance Test is >50%		
1. Glycine max	100	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
2.				4 - Morphological Adaptations <sup>1</sup>	(Provide suppo	orting
3.				data in Remarks or on a sep	arate sheet)	
4.				Problematic Hydrophytic Veget	tation <sup>1</sup> (Explain)	)
5				<sup>1</sup> Indicators of hydric soil and wetlan	d hydrology mus	
6.				present, unless disturbed or probler	natic.	
7.	-			Definitions of Vegetation Strata:		
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) at breast height (DBH), regardless of		neter
10				Sapling/shrub – Woody plants less	s than 3 in DBH	l and
11				greater than or equal to 3.28 ft (1 m		
12				<b>Herb</b> – All herbaceous (non-woody)	) plante regardl	locc
	100	=Total Cover		of size, and woody plants less than		033
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines gre	ater than 3.28 f	ft in
1				height.		
2				Hadron badio		
3.				Hydrophytic Vegetation		
4				Present? Yes	No X	
		=Total Cover				
Remarks: (Include photo numbers here or on a sepa No vegetation on 4/25/25. In 2024 soy beans were the	,	ata is included o	on this data sh	neet		
1 10 10gotation on 1,20,20. In 2021 00, 50ano word to	inving, and de	ita io moladoa (	on uno data of			

SOIL Sampling Point: SP-15-U

	escription: (Describe	to the de	-			or confi	irm the absence of	f indicators.	.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	k Feature %	es Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-8	10yr 5/3	100	Color (Inoist)		Туре		Loamy/Clayey		Clay	<u>'</u>
8-12	10yr 7/2	60	10yr 6/8	40			Loamy/Clayey		Clay	
<sup>1</sup> Type: C=	Concentration, D=Dep	letion RM	M=Reduced Matrix CS	S=Covere	ed or Coat	ted Sand	Grains <sup>2</sup> l o	cation: PI =F	Pore Lining, N	 ∕I=Matrix
	oil Indicators:	700011, 11	ii rtoudou Matix, oc	001011	<u> </u>	iou ounu			tic Hydric Sc	
Histos	sol (A1)		Polyvalue Below	Surface	(S8) ( <b>LR</b> I	R R,	2 cm Mu	ck (A10) ( <b>LR</b>	RR K, L, MLR	A 149B)
Histic	Epipedon (A2)		MLRA 149B)				Coast Pr	airie Redox	(A16) (LRR K	(, L, R)
	Histic (A3)		Thin Dark Surface					-	Peat (S3) ( <b>LR</b>	•
	ogen Sulfide (A4)		High Chroma Sa						face (S8) ( <b>LR</b>	*
	fied Layers (A5) eted Below Dark Surfac	· (Δ11)	Loamy Mucky Mi			., L)			69) ( <b>LRR K, L</b> sses (F12) ( <b>L</b> l	-
	Dark Surface (A12)	æ (ATT)	X Depleted Matrix		-)			_	Soils (F19) ( <b>L</b> i	-
	y Mucky Mineral (S1)		Redox Dark Surf		)				(MLRA 144A,	•
	y Gleyed Matrix (S4)		Depleted Dark S					ent Material		
Sand	y Redox (S5)		Redox Depression	ons (F8)			Very Sha	allow Dark S	urface (TF12)	)
Stripp	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	<b>K</b> , <b>L</b> )			Other (E	xplain in Rer	marks)	
Dark	Surface (S7)									
31		<b></b>		4 1						
	of hydrophytic vegeta re Layer (if observed):		vetiand nydrology mus	t be pres	sent, unies	ss disturb	ed or problematic.			
Type:	c Layer (ii observea).									
_	nches):						Hydric Soil Pre	esent?	Yes X	No
Remarks:							•			
Clay to 48	inches. Carbon layer a	at 8 inche	S							

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

City/County: Oswego/ Hastings Sampling Date: 4/25/25
State: NY Sampling Point: SP-15-W
Section, Township, Range:
ocal relief (concave, convex, none): None Slope (%): 0-2
Long: 43.268202 Datum: WSG81
NWI classification: None
ar? Yes Y No (If no, explain in Remarks.)  ly disturbed? Are "Normal Circumstances" present? Yes Y No
oroblematic? (If needed, explain any answers in Remarks.)
sampling point locations, transects, important features, etc.
Is the Sampled Area
within a Wetland? Yes X No
If yes, optional Wetland Site ID:
t.)  Inds. No understory of growth. Adjacent to upland forested area. Agriculture field a disturbed vegetation, soil and hydrology
Secondary Indicators (minimum of two required)
Surface Soil Cracks (B6)
Leaves (B9) Drainage Patterns (B10)
(B13) Moss Trim Lines (B16)
(B15) Dry-Season Water Table (C2)
ide Odor (C1) Crayfish Burrows (C8)
ospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
educed Iron (C4) Stunted or Stressed Plants (D1)
eduction in Tilled Soils (C6) Geomorphic Position (D2)
face (C7) Shallow Aquitard (D3)
in Remarks) Microtopographic Relief (D4)
FAC-Neutral Test (D5)
s): <u>&lt;4in</u>
s):
s): 0-4 Wetland Hydrology Present? Yes X No
s, previous inspections), if available:
ars to be separate from the actual water table.

	Absolute	Dominant	Indicator		
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:	
I				Named an of Barrels and On a day	
				Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
					(, ,)
· ·				Total Number of Dominant	4 (D)
l				Species Across All Strata:	1 (B)
i				Percent of Dominant Species	
i				That Are OBL, FACW, or FAC: 0	0.0% (A/B)
·				Prevalence Index worksheet:	
		=Total Cover		Total % Cover of: Mult	tiply by:
Sapling/Shrub Stratum (Plot size:	)			OBL species 0 x 1 =	0
				FACW species 0 x 2 =	
-		·		FAC species 0 x 3 =	
·				FACU species 0 x 4 =	
				UPL species 40 x 5 =	200
·				Column Totals: 40 (A)	200 (B)
i				Prevalence Index = B/A =	5.00
		·		Hydrophytic Vegetation Indicators:	<u> </u>
		=Total Cover		1 - Rapid Test for Hydrophytic Vege	etation
Herb Stratum (Plot size:)		rotal Gover		2 - Dominance Test is >50%	, and the
<u></u>		.,			
. Glycine max	40	Yes	UPL	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2 3				4 - Morphological Adaptations <sup>1</sup> (Prodata in Remarks or on a separate	
4.				Problematic Hydrophytic Vegetation	n <sup>1</sup> (Explain)
5. 5.				<sup>1</sup> Indicators of hydric soil and wetland hydric soil and wetland hydric present, unless disturbed or problematic	
7.				Definitions of Vegetation Strata:	
3.				_	
·				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or m at breast height (DBH), regardless of he	
0.				Sapling/shrub – Woody plants less tha	n 2 in DPU on
1.				greater than or equal to 3.28 ft (1 m) tall	
2				Herb – All herbaceous (non-woody) plai	nte regardless
	40	=Total Cover		of size, and woody plants less than 3.28	
Voody Vine Stratum (Plot size:					
	<del></del>			<b>Woody vines</b> – All woody vines greater height.	than 3.28 ft in
				neight.	
i	_			Hydrophytic	
				Vegetation	
i				Present? Yes No	Χ
3. 4.					

**VEGETATION** – Use scientific names of plants.

SOIL Sampling Point: SP-15-W

	escription: (Describe	to the de				or confi	irm the absence o	of indicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature %	es Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	/e
0-6	10yr 5/2	10	Color (Holst)		Туре	LUC	Loamy/Clayey	Clay	72
6-14	10yr 5/2	40	10yr 6/3	20			Loamy/Clayey	Clay	
0-14	10yl 3/2	40					Loanly/Clayey	Clay	
			10yr 5/8	20				Carbon fragments were	the remaining 20%
			<u> </u>						
			<u></u> .						
<sup>1</sup> Type: C=	Concentration, D=Dep	letion, RI	M=Reduced Matrix, CS	S=Covere	ed or Coa	ted Sand	Grains. <sup>2</sup> Lo	ocation: PL=Pore Lining,	M=Matrix.
	il Indicators:							or Problematic Hydric S	•
	sol (A1)		Polyvalue Below	Surface	(S8) ( <b>LRI</b>	R R,		uck (A10) ( <b>LRR K, L, ML</b>	•
	Epipedon (A2)		MLRA 149B)					rairie Redox (A16) ( <b>LRR</b>	•
	Histic (A3)		Thin Dark Surface				-	ucky Peat or Peat (S3) (L	=
	ogen Sulfide (A4)		High Chroma Sa					ue Below Surface (S8) (L	•
	fied Layers (A5) eted Below Dark Surfac	· (Δ11)	Loamy Mucky Mi			., L)		rk Surface (S9) ( <b>LRR K,</b> nganese Masses (F12) (	•
	Dark Surface (A12)	c (ATT)	X Depleted Matrix		,			nt Floodplain Soils (F19)	*
	y Mucky Mineral (S1)		Redox Dark Surf					podic (TA6) ( <b>MLRA 144</b>	
	y Gleyed Matrix (S4)		Depleted Dark S					rent Material (F21)	,
Sandy	y Redox (S5)		Redox Depression	ons (F8)			Very Sh	allow Dark Surface (TF1	2)
Stripp	ed Matrix (S6)		Marl (F10) ( <b>LRR</b>	<b>K</b> , <b>L</b> )			Other (E	Explain in Remarks)	
Dark	Surface (S7)								
3									
	of hydrophytic vegetare Layer (if observed):		vetland hydrology mus	t be pres	ent, unles	ss disturb	ed or problematic.		
Type:	e Layer (II observed):								
Depth (i	nches):						Hydric Soil Pr	esent? Yes X	No
Remarks:									
This data t								CS Field Indicators of Hy	dric Soils version
7.0 March	2013 Errata. (http://ww	w.nrcs.u	sda.gov/Internet/FSE_	DOCUM	ENTS/nrc	s142p2_	051293.docx)		

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May 2025

# Appendix D.

Category	Common Name	Scientific Name	Conservation Status	Indicator Status	Native	Buxton Creek	Lower Caughdenoy Creek	Oneida River	Fish Creek	Upper Caughdenoy Creek	Sixmile Creek
Amphibian	American toad	Anaxyrus americanus	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓	✓	✓	
Amphibian	gray treefrog	Dryophytes versicolor	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Amphibian	northern green frog	Lithobates clamitans melan	c S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓	✓	
Amphibian	northern leopard frog	Lithobates pipiens	S5 G5: secure in NYS and globally	-	Yes		✓		✓	✓	
Amphibian	wood frog	Lithobates sylvaticus	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	red-winged blackbird	Agelaius phoeniceus	S5B G5: secure (breeding) in NYS and	-	Yes		<b>√</b>	✓	1		
Bird	wood duck	Aix sponsa	globally S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	mallard	Anas platyrhynchos	S5 G5: secure in NYS and globally	-	Yes			<b>√</b>			1
Bird	American pipit	Anthus rubescens	Least concern	-	Yes			✓		✓	✓
Bird	sandhill crane	Antigone canadensis	S1B G5: critically imperiled (breeding) in NYS and secure globally	-	Yes			✓			
Bird	great blue heron	Ardea herodias	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	tufted titmouse	Baeolophus bicolor	S5 G5: secure in NYS and globally	-	Yes			✓		✓	
Bird	Canada goose	Branta canadensis	S5 G5: secure in NYS and globally	-	Yes		✓	✓		✓	✓
Bird	red-tailed hawk	Buteo jamaicensis	S5 G5: secure in NYS and globally	-	Yes			✓			✓
Bird	green heron	Butorides virescens	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	northern cardinal	Cardinalis cardinalis	S5 G5: secure in NYS and globally	-	Yes		✓	✓	1		
Bird	turkey vulture	Cathartes aura	S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			✓
Bird	killdeer	Charadrius vociferus	S5 G5: secure in NYS and globally	-	Yes	✓	✓	✓		✓	
Bird	northern harrier	Circus hudsonius	(NYS Threatened Species) S3B, S3N G5: vulnerable (breeding/non- breeding) in NYS and secure globally	-	Yes				<b>✓</b>		1
Bird	northern flicker	Colaptes auratus	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	American crow	Corvus brachyrhynchos	S5 G5: secure in NYS and globally	-	Yes			✓	✓		
Bird	blue jay	Cyanocitta cristata	S5 G5: secure in NYS and globally	-	Yes		✓	✓			
Bird	pileated woodpecker	Dryocopus pileatus	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	gray catbird	Dumetella carolinensis	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓	✓	✓			
Bird	willow flycatcher	Empidonax traillii	S5B G5: secure (breeding) in NYS and globally	-	Yes	1					
Bird	rusty blackbird	Euphagus carolinus	(NYS High Priority Species of Greatest Conservation Need) S2B G4: imperited (breeding) in NYS and apparently secure globally	-	Yes			<b>√</b>			
Bird	common yellowthroat	Geothlypis trichas	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	bald eagle	Haliaeetus leucocephalus	(NYS Threatened Species) S2S3B, S2N G5: imperited/vulnerable (breeding) and imperited (non- breeding) in NYS, secure globally	-	Yes			<b>4</b>		✓	<b>*</b>
Bird	barn swallow	Hirundo rustica	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
Bird	wood thrush	Hylocichla mustelina	S5B G4: secure (breeding) in NYS and apparently secure globally	-	Yes			✓	✓		
Bird	Baltimore oriole	Icterus galbula	S5B G5: secure (breeding) in NYS and globally	-	Yes	✓		✓			
Bird	belted kingfisher	Megaceryle alcyon	S5 G5: secure in NYS and globally	-	Yes		✓				
Bird	red-bellied woodpecker	Melanerpes carolinus	S5 G5: secure in NYS and globally	-	Yes			✓			
Bird	wild turkey	Meleagris gallopavo	S5 G5: secure in NYS and globally	-	Yes		✓	✓	✓		
Bird	song sparrow	Melospiza melodia	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	great crested flycatcher	Myiarchus crinitus	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓	✓	✓		
Bird	osprey	Pandion haliaetus	(NYS Species of Special Concern) S4B G5: apparently secure (breeding) in NYS and secure globally	-	Yes			✓			
Bird	rose-breasted grosbeak	Pheucticus ludovicianus	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓	✓		
Bird	eastern towhee	Pipilo erythrophthalmus	S5B G5: secure (breeding) in NYS and globally	-	Yes		✓				

The content of the				CER CE: accure (broading) in NVC and						1		1
Big	Bird	American woodcock	Scolopax minor	S5B G5: secure (breeding) in NYS and globally	-	Yes			✓			
March   Marc	Bird	yellow warbler	Setophaga petechia		-	Yes			1	1		
Section	Bird	eastern bluebird	Sialia sialis		-	Yes			✓			
Big	Bird	American goldfinch	Spinus tristis		-	Yes		✓	✓	✓		
Dec   Autonomotion   September   Septemb	Bird	European starling	Sturnus vulgaris		-	No				✓		
March   Marc	Bird	solitary sandpiper	Tringa solitaria		-	Yes			✓			
	Bird	American robin	Turdus migratorius		-	Yes		✓	✓	✓		
Mail	Bird	eastern kingbird	Tyrannus tyrannus	S5B G5: secure (breeding) in NYS and	-	Yes			1			
Bill	Bird	warbling vireo	Vireo gilvus	S5B G5: secure (breeding) in NYS and	-	Yes			1	✓		
Manufact	Bird	mourning dove	Zenaida macroura		-	Yes			1			
Marcell   Models   Copy   Co	Fish	brown bullhead	Ameiurus nebulosus	Least concern		Yes		✓				
Part	Even ed		Manakalla					-/				
Morning American Space   Color Congestion   Visit	Fungi	morel	Morchella esculenta	·		Yes		•				
Month American Sprongland   Septiment Content   Septiment Conten	Mammal			Least concern	-					✓		
Martenal   Control of the   Martenal   Case Control   Yes   Y	Mammal				-			✓				,
Marchard					-		.,					🐈
Manual					-		٧	<b>*</b>	, v	×		
Marco	Mammal				-			•	1	l '.	*	
Marco	Plant	hox elder	Acernegundo		FAC	Vac						
								_	/	/	<b>√</b>	<del>                                     </del>
Rest										<b>-</b> -		-
Rest		·						•		/		
Part								<b>√</b>		<u> </u>		
Filed   Common agrinory									1			
Filed									1		<b>√</b>	
Pace   Consequence	Plant				FAC	No					✓	
Reset special ander Allers authoritisment - ORL Yes	Plant	redtop	Agrostis gigantea		FACW	No	✓	✓			✓	✓
Pict	Plant	creeping bent	Agrostis stolonifera		FACW	No	✓				✓	
Paint   New York From	Plant	American water plantain			OBL	Yes		✓				
Paint   Common regreed	Plant	speckled alder	Alnus incana		FACW	Yes			✓			
Plant   Commy service-betry	Plant	New York fern	Amauropelta noveboracensi	-	FAC	Yes						
Plant to passurul Amphicaspiese directedas FAC Yes	Plant	common ragweed	Ambrosia artemisiifolia		FACU	Yes			✓		✓	
Plant Canada anemone Anemone Canadensils - FACW Yes   Canada anemone Anemone Canadensils - FACW Yes   Anthonomic Canadensils - FACW No   Anthonomic Canadensils yellace   UPIL Yes   Anthonomic Canadensils yellace   UPIL Yes   Anthonomic Canadensils yellace   UPIL Yes   Anthonomic Canadensils yellace   Anthonomic Canadensils yellace   Anthonomic Canadensils yellace   Anthonomic Canadensils yellace   UPIL Yes   Anthonomic Canadensils yellace   Ant	Plant	downy serviceberry										
Plant   severt vernal grass   Anthoxamithum odioratum   FACU   No												
Plant   Indian hemp												
Plant   Swamp millowed							•	•			· ·	
Plant   Common militioneed											· ·	
Plant   yellow birch   Betula alleghaniensis   FAC   Yes								1	,			
Plant   Betula populifolia   FAC   Yes								•				
Plant   Odding beggar ticks   Bidens cemua   OBL   Yes			-							<u> </u>		
Plant	n	18 1 1 1 1	0.1			.,					· /	
Plant   Nairy brome   Bramus commutatus   - No   ✓ ✓									1		·	
Plant   Common woodland sedge   Carex blanda   - FAC   Yes   -									1			
Plant bristly sedge	Plant							✓				
Plant   Dristly sedge   Carex crinta   - OBL   Yes   ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	Plant				FAC			✓				
Plant   targe yellow sedge   Carex flava   - OBL   Yes	Plant		Carex comosa		OBL	Yes			✓			
Plant         graceful sedge         Carex gracillma         -         FACU         Yes         ✓         ✓           Plant         Lake sedge         Carex lacustris         -         OBL         Yes         ✓         ✓         ✓           Plant         bladder sedge         Carex lurulina         -         OBL         Yes         ✓         ✓         ✓           Plant         hop sedge         Carex lurulina         -         OBL         Yes         ✓         ✓         ✓           Plant         sallow sedge         Carex lurulina         -         OBL         Yes         ✓ <td< td=""><td>Plant</td><td>fringed sedge</td><td>Carex crinita</td><td></td><td>OBL</td><td>Yes</td><td></td><td>✓</td><td>✓</td><td></td><td></td><td></td></td<>	Plant	fringed sedge	Carex crinita		OBL	Yes		✓	✓			
Plant   lake sedge   Carex intumescens   -   FACW   Yes	Plant	large yellow sedge	Carex flava		OBL	Yes						
Plant bladder sedge	Plant	graceful sedge				Yes			✓			[]
Plant hop sedge	Plant											<b>✓</b>
Plant sallow sedge	Plant										<b>✓</b>	
Plant troublesome sedge	Plant							✓				
Plant         cyperus-like sedge         Carex pseudocyperus         -         OBL         Yes         ✓ </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>}</td> <td></td> <td></td>										}		
Plant         broom sedge         Carex scoparia         -         FACW         Yes         ✓         ✓           Plant         awi-fruited sedge         Carex stipata         -         OBL         Yes         ✓         ✓         ✓           Plant         tussock sedge         Carex stricta         -         OBL         Yes         ✓         ✓         ✓         ✓           Plant         fox sedge         Carex stricta         -         OBL         Yes         ✓									· ·	<b> </b>		
Plant         awl-fruited sedge         Carex stipata         -         OBL         Yes         ✓								_	/	1	V	$\vdash$
Plant         tussock sedge         Carex stricta         -         OBL         Yes         ✓								,			<b>1</b>	
Plant         fox sedge         Carex vulpinoidea         -         OBL         Yes         ✓										<b>✓</b>		<b>—</b>
Plant         ironwood         Carpinus caroliniana         -         FAC         Yes         ✓	Plant							<b>✓</b>	1			
Plant         bitternut hickory         Carya cordiformis         -         FAC         Yes         ✓         ✓         ✓           Plant         shagbark hickory         Carya ovata         -         FACU         Yes         ✓         ✓         ✓         ✓           Plant         buttonbush         Cephalanthus occidentalis         -         OBL         Yes         ✓         ✓         ✓           Plant         white turtle head         Chelone glabra         -         OBL         Yes         ✓         ✓         ✓           Plant         tamb's quarters         Chenopodium album         -         FACU         No         ✓         ✓         ✓           Plant         enchanter's nightshade         Circaea canadensis         -         FACU         Yes         ✓         ✓         ✓										<b>✓</b>		
Plant butonbush Cephalanthus occidentalis - OBL Yes   Plant white turtle head Chelone glabra - OBL Yes   Plant tamb's quarters Chenopodium album - FACU No  Plant enchanter's nightshade Circaea canadensis - FACU Yes    ✓	Plant	bitternut hickory			FAC	Yes		✓			✓	
Plant         white turtle head         Chelone glabra         -         OBL         Yes         ✓         ✓           Plant         Lamb's quarters         Chenopodium album         -         FACU         No         ✓         ✓           Plant         enchanter's nightshade         Circaea canadensis         -         FACU         Yes         ✓         ✓	Plant	shagbark hickory	Carya ovata	-	FACU	Yes		✓	✓	✓	✓	
Plant lamb's quarters Chenopodium album - FACU No   Plant enchanter's nightshade Circaea canadensis - FACU Yes    ✓	Plant	buttonbush	Cephalanthus occidentalis	•	OBL	Yes		✓				
Plant enchanter's nightshade Circaea canadensis - FACU Yes	Plant	white turtle head	Chelone glabra		OBL	Yes			1			
	Plant	lamb's quarters	Chenopodium album	-	FACU	No					✓	
Plant bull thistle Cirsium vulgare - FACU No ✓						Yes			✓			
	Plant	bull thistle	Cirsium vulgare		FACU	No		✓				

Color							1					
March   Marc	Plant	silky dogwood	Cornus amomum	-	FACW	Yes	✓	✓	✓	✓	✓	✓
Note   Notice   Not	Plant	gray dogwood	Cornus racemosa	-	FAC	Yes		✓	✓	✓		✓
Part	Plant	red-osier dogwood	Cornus sericea	-	FACW	Yes						1
Property	Plant	hawthorn	Crataegus sp.	-	-	-		<b>√</b>				1
Marchester Langle	Plank	common vallow nut sadda		_	FACW	Voc			1			
Color   Colo												
Section   Sect												
Process		orcnard grass	Dactylis glomerata	-			<b>V</b>				<u> </u>	
Part	Plant	wild carrot	Daucus carota	-	UPL	No		✓				
Part	Plant	water willow	Decodon verticillatus	-	OBL	Yes			✓			<b>✓</b>
Section   Company   Comp	Plant	tufted hair grass	Deschampsia cespitosa	-	-	Yes					✓	
Proc.	Plant	digit grass	Digitaria eriantha	-	-	No		✓				
March			-		FACU				1			
March   Section of the   Department   Depa												
Fig.											•	
Part												-
Part	Plant	autumn olive	Elaeagnus umbellata	-		No						
Description of Section	Plant	blunt spike rush	Eleocharis obtusa	-	OBL	Yes		✓				✓
Part	Plant	fringed wilowherb	Epilobium ciliatum	-	FACW	Yes					✓	
Part	Plant	purpleleaf willowherb	Epilobium coloratum	-	OBL	Yes		<b>√</b>	<b>✓</b>		<b>√</b>	
Part	Plant	field horsestail	Equisetum arvense	-	FAC	Yes				✓	✓	1
Medical   Security Production   Security Secur				_	FAC		/			_		
Test   Secret   Sec									1			
Part				-								
				-	FACU				V			
Part	Plant	yellow trout lily	Erythronium americanum	-	-	Yes		✓		✓		
Part	Plant	boneset	Eupatorium perfoliatum	-	FACW	Yes			✓			✓
Part	Plant	common flat-topped goldenrod	Euthamia graminifolia		FAC	Yes					✓	
Part	Plant	spotted Joe Pye weed	Eutrochium maculatum	-	OBL	Yes	✓					
Part   Common wild strainworthy   Frageth arginates   PACU   Yes	Plant	American beech	Fagus grandifolia		FACU	Yes				<b>✓</b>	1	
Part								_				/
PACE   great subtracted   PACE   Yes				-							·	
Part				<u>-</u>								
Parel   Design prefetters							<b>,</b>		<b>_</b>		,	<b>Y</b>
Part	Plant	green ash	Fraxinus pennsylvanica	-		Yes		✓		✓	•	✓
Pack   yellow avers   Geum alappicum   FAC   Yes	Plant	hedge bedstraw	Galium album	-	FACU	Yes	✓		✓		✓	
Part   Stand Series   Seum canaderse   FAC   Yes	Plant	common marsh bedstraw	Galium palustre	-	OBL	Yes		✓			✓	
Part	Plant	yellow avens	Geum aleppicum	-	FAC	Yes		✓	✓			
Design   D	Plant	white avens			FAC	Yes			<b>√</b>			1
Part												
Pacif   Description   Descri	rtant											
Past	Diant			-				•	-/		-/	
Paint marish cultivated Grigophalum oliginissum		American manna grass	Glyceria maxima		OBL	No						
Paint   dame's sockat	Plant	American manna grass fowl manna grass	Glyceria maxima Glyceria striata		OBL OBL	No Yes		✓	✓		✓	
Paint   Common tropical   Psychocharis moresus-variable   OBL   No	Plant	American manna grass fowl manna grass	Glyceria maxima Glyceria striata	-	OBL OBL	No Yes	<b>√</b>	✓	<b>√</b>	<b>✓</b>	✓	<b>1</b>
Paint   St. John's wort	Plant Plant	American manna grass fowl manna grass soybean	Glyceria maxima Glyceria striata Glycine max	-	OBL OBL	No Yes	<b>✓</b>	✓	<b>√</b>	<b>√</b>	✓	<b>√</b>
Paint   St. Dohn's wort   Appericum sp.	Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum	-	OBL OBL - FAC	No Yes - No		✓	<b>√</b>	<b>✓</b>	✓	<b>✓</b>
Paint   St. Dohn's wort   Appericum sp.	Plant Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis	-	OBL OBL - FAC FACU	No Yes - No No		✓	√ √ √	<b>√</b>	✓	<b>✓</b>
Paint   Spotted provided   Impatients Caperals   FACW   Yes	Plant Plant Plant Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae	-	OBL OBL FAC FACU OBL	No Yes - No No No		✓	√ √ √		✓	<b>✓</b>
Plant   Diue flag   Iris versicolor   OBL   Yes	Plant Plant Plant Plant Plant Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever	Glyceria maxima  Glyceria striata  Glycine max  Gnaphalium uliginosum  Hesperis matronalis  Hydrocharis morsus-ranae  Hylotelephium telephium		OBL OBL FAC FACU OBL -	No Yes - No No No No		✓	√ √ √		✓	
Plant	Plant Plant Plant Plant Plant Plant Plant Plant Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp.		OBL OBL FAC FACU OBL -	No Yes - No No No No	<b>√</b>	<b>√</b>	<i>* * * *</i>		<b>√</b>	
Plant path rush Juncus terruls - FAC Yes - Service of Security of Service Serv	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis	- - - - - - -	OBL OBL FAC FACU OBL - FACW	No Yes - No No No No Yes - Yes	<b>√</b>	<b>√ √</b>	<i>* * * *</i>		<b>√</b>	
Plant   rice cut grass   Leersia onyzoides   OBL   Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis	- - - - - - -	OBL OBL FAC FACU OBL - FACW	No Yes - No No No No Yes - Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	<i>y y y y y y y y y y</i>	<b>✓</b>	<b>√ √</b>	<b>√</b>
Plant spicebush Lindera berzoin - FACW Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor	- - - - - - -	OBL OBL - FAC FACU OBL - FACW OBL	No Yes - No No No No Yes - Yes Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	\frac{1}{4}	<b>✓</b>	<b>√ √</b>	· ·
Plant   Lindera benzoin   FACW   Yes   ✓ ✓ ✓ ✓ ✓   Plant   Utilip popular   Lindera denzoin   Lindera denzoin   FACU   Yes   ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian tive forever St. John's wort spotted jewelweed blue flag soft rush	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus	- - - - - - -	OBL OBL - FAC FACU OBL - FACW OBL OBL OBL	No Yes - No No No No Yes - Yes Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	\frac{1}{4}	<b>✓</b>	<b>√ √</b>	· ·
Plant         tulip poplar         Lindendron tulipilera         -         FACU         Yes         ✓         ✓           Plant         Indian tobacco         Lobelia inflata         -         FACU         Yes         ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis	- - - - - - -	OBL OBL - FAC FACU OBL FACW OBL OBL FACW	No Yes - No No No No Yes Yes Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	\frac{1}{4}	<b>✓</b>	<b>√ √</b>	· ·
Plant         Indian tobacco         Lobelia inflata         -         FACU         Yes         ✓         ✓           Plant         great blue lobella         Lobela is sphillica         -         FACW         Yes         ✓ <td>Plant Plant /td> <td>American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass</td> <td>Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum p. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides</td> <td></td> <td>OBL OBL - FAC FACU OBL FACW OBL OBL OBL FAC OBL</td> <td>No Yes  - No No No No - Yes Yes Yes Yes Yes</td> <td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td> <td><i>V V V V V</i></td> <td>\frac{1}{\sqrt{1}}</td> <td><b>✓</b></td> <td><b>√ √</b></td> <td>· ·</td>	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum p. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides		OBL OBL - FAC FACU OBL FACW OBL OBL OBL FAC OBL	No Yes  - No No No No - Yes Yes Yes Yes Yes	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	<i>V V V V V</i>	\frac{1}{\sqrt{1}}	<b>✓</b>	<b>√ √</b>	· ·
Plant great blue lobelia Lobelia sphilitica - FACW Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin		OBL OBL - FACU OBL - FACW OBL OBL OBL FACW OBL FACCO OBL FACCO OBL	No Yes - No No No No Yes Yes Yes Yes Yes Yes Yes	· · · · · · · · · · · · · · · · · · ·	<i>V V V V V</i>	\frac{1}{\sqrt{1}}	<b>✓</b>	<i>*</i>	· ·
Plant tall rye grass Lolium arundinace - FACU No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW OBL FACCOBL FACCOBL FACCOBL	No Yes  No No No No Yes Yes Yes Yes Yes Yes Yes Yes	· · · · · · · · · · · · · · · · · · ·	<i>V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>*</i>	· ·
Plant Japanese honeysuckle Lonicera japonica - FACU No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iriis versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW OBL FACC OBL FACC FACW FACW FACW FACU	No Yes No No No No Yes	· · · · · · · · · · · · · · · · · · ·	<i>V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>*</i>	<i>'</i>
Plant honeysuckle Lonicera spp No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicotor Juncus effusus Juncus effusus Juncus etnuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata		OBL OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FACC OBL FACW FACW FACW FACW FACW FACW	No Yes  No No No No Yes  Yes Yes Yes Yes Yes Yes Yes Yes Ye	· · · · · · · · · · · · · · · · · · ·	<i>V V V V V</i>	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>*</i>	<i>'</i>
Plant Tatarian honeysuckle Lonicera tatarica - FACU No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus telusis Lieersia oryzoides Lindera benzoin Liriodendron tulipilera Lobelia siphilitica Lolium arundinace		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACW FACW FACW FACW FACU FACW FACU	No Yes  - No No No No - Yes	· · · · · · · · · · · · · · · · · · ·	✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	<b>✓</b>	<i>*</i>	<i>'</i>
Plant water purslane Ludwigla palustris - OBL Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus telusis Lieersia oryzoides Lindera benzoin Liriodendron tulipilera Lobelia siphilitica Lolium arundinace		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACW FACW FACW FACW FACU FACW FACU	No Yes  - No No No No - Yes	<i>1</i>	<i>*</i> **  **  **  **  **  **  **  **  **	* * * * * * * * * * * * * * * * * * *	✓ ✓	<i>Y Y Y Y</i>	<i>'</i>
Plant water purslane	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian tive forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica		OBL OBL - FACU OBL - FACW OBL OBL FACC OBL FACW FACW FACW FACU FACU FACU FACU FACU FACU	No Yes  - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes Yes No	<i>1</i>	<i>*</i> **  **  **  **  **  **  **  **  **	* * * * * * * * * * * * * * * * * * *	✓ ✓	<i>Y Y Y Y</i>	<i>'</i>
Plant water whorehound Lycopus americanus - OBL Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp.		OBL OBL - FACU OBL - FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No Yes  - No No No No No - Yes Yes Yes Yes Yes Yes Yes Yes No	<i>1</i>	✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓	<i>Y Y Y Y</i>	<i>y y y y y y y</i>
Plant moneywort Lysimachia nummularia - FACW No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipitera Lobelia siphilitica Lobium arundinace Lonicera japonica Lonicera spp. Lonicera tatarica		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU	No Yes  - No No No No No - Yes Yes Yes Yes Yes Yes Yes No	<i>✓ ✓ ✓ ✓ ✓ ✓</i>	✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓	\frac{1}{1}	<i>y y y y y y y</i>
Plant purple loosestrife Lythrum salicaria - OBL No	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum Juncus effusus Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia siphilitica Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris		OBL OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU	No Yes  - No No No No No - Yes Yes Yes Yes Yes Yes Yes No	<i>✓ ✓ ✓ ✓ ✓ ✓</i>	✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓	<i>* * * * * * * *</i>	<i>y y y y y y y</i>
Plant Canada mayflower Maianthemum canadense - FACU Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia japonica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus		OBL OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACW FACU FACU FACU FACU FACU OBL	No Yes  No No No No No Yes	\frac{1}{1}	V V V V V V V V V V V V V V V V V V V	* * * * * * * * * * * * * * * * * * *	<i>✓</i>	\frac{1}{\sqrt{1}}	<i>y y y y y y y</i>
Plant ostrich fem Matteuccia struthiopteris - FAC Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lonicera japonica Lunicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia		OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU	No Yes  No No No No No Yes	\(  \)	✓ ✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	<i>*</i>	\frac{1}{\sqrt{1}}	<i>y y y y y y y</i>
Plant white sweet clover Melilotus albus - FACU No Plant Allegheny monkey flower Mimulus ringens - OBL Yes Plant blackgum Nyssa sylvatica - FAC Yes Plant sensitive fern Onoclea sensibilis - FACW Yes Plant royal fern Osmunda regalis - OBL Yes Plant cinnamon fern Osmunda regalis - OBL Yes Plant pullow wood sorrel Oxalis dillenii - FACW Yes Plant talt panic grass Panicum dichotomiflorum - FACW Yes Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes Plant green arrow arum Petandra wirginica - OBL Yes Plant Yes Plant green arrow arum Petandra wirginica - OBL Yes Plant Yes Plant Yes Plant green arrow arum Petandra wirginica - OBL Yes Plant Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalls Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipiflera Lobelia inflata Lobelia inflata Lonicera spp. Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria		OBL OBL OBL - FACU OBL - FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   -	\(  \)	✓ ✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>y y y y y y y</i>
Plant Allegheny monkey flower Mimulus ringens - OBL Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalls Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipiflera Lobelia inflata Lobelia inflata Lonicera spp. Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria		OBL OBL OBL - FACU OBL - FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   -	\(  \)	✓ ✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>y y y y y y y</i>
Plant blackgum Nyssa sylvatica - FAC Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water whorehound moneywort purple loosestrife Canada mayflower	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hydrocharis morsus-ranae Hydrocharis morsus-ranae Hypterium selephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus effusus Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. Lonicera statarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense		OBL OBL OBL - FACU OBL - FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No	\(  \)	✓ ✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>'</i>
Plant blackgum Nyssa sylvatica - FAC Yes	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobilia rundinace Lonicera japonica Lonicera spp. Lonicera atarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris		OBL OBL OBL FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   No   No   No   No   Yes   No   No   No   No   Yes   Y	\(  \)	✓ ✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>*</i> **  **  **  **  **  **  **  **  **
Plant sensitive fern Onoclea sensibilis - FACW Yes V V V V Plant royal fern Osmunda regalis - OBL Yes V V V V V Plant cinnamon fern Osmundastrum cinnamomei - FACW Yes V V V V V V V V V V V V V V V V V V V	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water whorehound moneywort purple loosestrife Canada mayflower ostrich fern	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus		OBL OBL OBL FACU OBL FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   No   No   No   No   Yes   No   No   Yes   Yes   No   No   Yes   Yes   Yes   No   No   Yes	\(  \)	✓ ✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>*</i> **  **  **  **  **  **  **  **  **
Plant royal fern Osmunda regalis - OBL Yes   Plant cinnamon fern Osmundastrum cinnamomei - FACW Yes   Plant yellow wood sorrel Oxalis dillenii - FACU Yes   Plant fall panic grass Panicum dichotomiflorum - FACW Yes   Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes   Plant green arrow arum Peltandra virginica - OBL Yes   V	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower	Glyceria maxima Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hylotelephium telephium Hylotelephium sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipitera Lobelia inflata Lobelia inflata Lobelia siphilitica Lonicera japonica Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens		OBL OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes	\(  \)	✓ ✓ ✓ ✓ ✓	* * * * * * * * * * * * * * * * * * *	✓ ✓ ✓ ✓	\frac{1}{\sqrt{1}}	<i>*</i> **  **  **  **  **  **  **  **  **
Plant cinnamon fern Osmundastrum cinnamome - FACW Yes   Plant yellow wood sorrel Oxalis dillenii - FACU Yes   Plant fall panic grass Panicum dichotomiflorum - FACW Yes   Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes   Plant green arrow arum Pettandra wirginica - OBL Yes   V	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Loulium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica		OBL OBL - FACU OBL - FACU OBL	No   Yes	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	<i>Y Y Y Y Y Y Y Y Y Y</i>
Plant yellow wood sorrel Oxalis dillenii - FACU Yes   Plant fall panic grass Panicum dichotomiflorum - FACW Yes  Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes  Plant green arrow arum Peltandra virginica - OBL Yes  ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia siphilitica Lolium arundinace Lonicera Japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis		OBL OBL OBL - FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No Yes  - No No No No No - Yes Yes Yes Yes Yes Yes Yes Yes No	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	· · · · · · · · · · · · · · · · · · ·
Plant fall panic grass Panicum dichotomiflorum - FACW Yes   Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes   ✓  Plant green arrow arum Peltandra virginica - OBL Yes   ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern	Glyceria maxima Glyceria striata Glycine max Glycine max Cnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lystimachia nummularia Lythrum salicaria Malanthemum canadense Maleucia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis		OBL OBL - FACU OBL - FACU OBL FACW OBL OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU OBL FACU OBL FACU FACU OBL FACU OBL FACU OBL FACU OBL FACU OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL	No Yes  No No No No No No Yes	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	· · · · · · · · · · · · · · · · · · ·
Plant Virginia creeper Parthenocissus quinquefolia - FACU Yes   ✓   Plant green arrow arum Peltandra virginica - OBL Yes   ✓   ✓   ✓   ✓   ✓   ✓   ✓   ✓   ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern	Glyceria maxima Glyceria striata Glycine max Glycine max Cnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lystimachia nummularia Lythrum salicaria Malanthemum canadense Maleucia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis		OBL OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACW FACU FACU FACU FACU FACU OBL OBL FACCU FACU FACU OBL OBL FACU OBL OBL FACU OBL OBL FACW OBL	No   Yes   Yes   Yes   Yes   No   No   No   No   No   No   No   Yes   No   No   Yes   Yes   No   Yes   Yes	\( \sqrt{1} \)	V V V V V V V V V V V V V V V V V V V	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	· · · · · · · · · · · · · · · · · · ·
Plant green arrow arum Peltandra virginica - OBL Yes ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern cinnamon fern	Glyceria maxima Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia japhilitica Lolium arundinace Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Meliotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmundastrum cinnamome		OBL OBL OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACW FACU FACU FACU FACU FACU OBL OBL FACCU FACU FACU OBL OBL FACU OBL OBL FACU OBL OBL FACW OBL	No   Yes   Yes   Yes   Yes   No   No   No   No   No   No   No   Yes   No   No   Yes   Yes   No   Yes   Yes	\( \sqrt{1} \)	V V V V V V V V V V V V V V V V V V V	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	<i>Y Y Y Y Y Y Y Y Y Y</i>
Plant green arrow arum Peltandra virginica OBL Yes ✓	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern royal fern cinnamon fern yellow wood sorrel	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilous albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmunda regalis Osmunda regalis Osmunda regalis Osmundastrum cinnamomei		OBL OBL OBL FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No	\( \sqrt{1} \)	V V V V V V V V V V V V V V V V V V V	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *
	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern cinnamon fern yellow wood sorrel fall panic grass	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Malanthemum canadense Matteuccia struthiopteris Melilous albus Himulus ringens Nyssa sylvatica Onnoclea sensibilis Osmunda regalis Osmundastrum cinnamome Oxalis dillenii Panicum dichotomiflorum		OBL OBL OBL FACU OBL FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   Yes   Yes   Yes   No   Yes   Yes   No   Yes   Y	\( \sqrt{1} \)	* * * * * * * * * * * * * * * * * * *	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	* * * * * * * * * * * * * * * * * * *
	Plant	American manna grass fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jewelweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue lobelia tall rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple loosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower blackgum sensitive fern cionamon fern yellow wood sorrel fall panic grass Virginia creeper	Glyceria maxima Glyceria striata Glycine max Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflatica Lolium arundinace Lonicera japonica Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmundastrum cinnamome Oxalis dillenii Panicum dichotomiflorum Parthenocissus quinquefolia		OBL OBL OBL FACU OBL FACW OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU	No   Yes   Yes   Yes   Yes   No   Yes	\( \sqrt{1} \)	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	\frac{1}{\sqrt{1}}	<i>Y Y Y Y Y Y Y Y</i>

Column												
Processor	Plant	lady's thumb	Persicaria maculosa	<del>-</del>	FAC	No			1			-
Proc.   Contemporary   Proc.   Proc			-	-				1			1	
Proc.			-	-			_					
Prof.   Options   Prof.   No.   No									•	•		
Transcriptor   Tran							1		1		,	
Profest   Selection   Professor   Profes				-					1			
Professor   Processor   Proc	Plant			-	-			✓	1	✓		
Profit	Plant		Picea rubens	-	FACU	Yes		✓				
Proceedings	Plant			-	FACU	Yes		✓		✓		
Part	Plant	English plantain	Plantago lanceolata	-	FACU	No	✓	✓		✓	<b>√</b>	
Process   Proc	Plant	common plantain	Plantago major	-	FACU	No	✓			✓	✓	✓
Page   Common   Page    Plant	northern tubercled orchid	Platanthera flava	=	FACW	Yes			✓				
Proc.	Plant	annual blue grass	Poa annua	ē	FACU	No				✓		
Page	Plant	wood bluegrass	Poa nemoralias	-	FACU	No			✓			
Page   Control   Page   Page	Plant	common Kentucky blue grass	Poa pratensis	-	FACU	No		✓			✓	✓
Page     Page	Plant	mayapple	Podophyllum peltatum	-	FACU	Yes			✓			
Rest	Plant	eastern cottonwood	Populus deltoides	-								
Fig.		quaking aspen	Populus tremuloides	-			✓		✓	✓	✓	<b>✓</b>
Page   Secret   Page			-				<b>→</b>					
Rest				-							✓	
Part				-							./	
Part   Control   Control   Part   Part   Control   Part			-				*		<b>*</b>	*		
Part   Medical   Control public   Part   Part   Medical   Medica				-				./	-			-
Part   Statemore   Part   Pa				-					./			<del>                                     </del>
Part   Desprint Suttercom				·			1		7		1	<del>                                     </del>
Pieze   Curand comment				-			_	· ·				
Read							1			_	•	
Read												
Rest								1		·		
Plant   Stagleren sumsc				-					1		<b>√</b>	<b>/</b>
Place				-								
Part				-	FACU		<b>√</b>	✓	1	✓	✓	1
Plant				-						✓		✓
Plant	Plant	common blackberry	Rubus allegheniensis	-	FACU	Yes		1	✓			
Paint   divert raspberry   Rubus publisherins   FACM   Yes	Plant	swamp dewberry	Rubus hispidus	-	FACW	Yes			✓			
Paint	Plant	red raspberry	Rubus ideaus	-	FACU	No		✓	✓			
Filent	Plant	dwarf raspberry	Rubus pubescens	-	FACW	Yes			1			
Flant broad-feared dock Rumer obtasifolities - FAC No	Plant	sheep sorrel	Rumex acetosella	=	FACU	No			✓			
Plant	Plant	curly dock	Rumex crispus	ē	FAC	No	✓	<b>✓</b>	✓		<b>✓</b>	✓
Paint   Debú's willow   Saliz Debúlaina   FACW   Yes	Plant	broad-leaved dock	Rumex obtusifolius	-	FAC	No		<b>✓</b>			<b>\</b>	
Paint   Dussy willow   Salir discolor   FACW   Yes	Plant	swamp dock	Rumex verticillatus	-	OBL	Yes						
Plant   Dack willow   Salix nigra   OBL   Yes	Plant	Bebb's willow	Salix bebbiana	-	FACW	Yes			·			
Plant   Dasket willow   Salis purpurea   FACW   No	Plant	pussy willow	Salix discolor	÷	FACW	Yes			✓	✓		
Plant   Lord Stall   Samurus cernus   OBL   Yes	Plant	black willlow	Salix nigra	-	OBL	Yes		✓				
Plant   Izard's fall   Sauruus cernuus   OBL   Yes	Plant	basket willow	Salix purpurea	÷	FACW	No			✓			
Plant dark-green-buturush Schoenopiectus tabernaemc - OBL Yes				-				,		✓		
Plant dark-green butrush Scirpus atroviens - OBL Yes				-				✓	,			
Plant woolgrass Scripus cyperinus - OBL Yes								<del></del>				
Plant mad dog skullcap Scutellaria laterillora - OBL Yes				-					<b>*</b>	$\vdash$	,	<b> </b>
Plant horse nettie Solanum carolinense - FACU Yes				-				<b>*</b>	./	<b>*</b>	*	*
Plant bitter-sweet nightshade Solanum dulcamara - FAC No									-		./	
Plant tall goldenrod Solidago atissima - FACU Yes									1		•	
Plant Canada goldenrod Solidago canadensis - FACU Yes									•			
Plant swamp goldenrod Solidago gigantea - FACW Yes			-				/	<b>—</b>	/		1	•
Plant common wrinkle-leaved goldenr Solidago rugosa - FAC Yes V V V V V Plant spiny-leaved sow thistle Sonchus asper - FACU No V V V V V V V V V V V V V V V V V V							•		•			
Plant spiny-leaved sow thistle Sonchus asper - FACU No							1		1			
Plant green-fruited bur-reed Sparganium chlorocarpum - OBL Yes				-			,			<b>—</b>	•	<del>-                                    </del>
Plant grass-leaved stitchwort Stellaria graminea - UPL No			·	-								
Plant white panicle aster Symphyotrichum lanceolatur - FACW Yes											✓	
Plant calico aster Symphyotrichum lateriflorun - FAC Yes									1			<b>✓</b>
Plant new england aster Symphyotrichum novae-angl - FACW Yes				-				✓				
Plant         purple-stemmed aster         Symphyotrichum puniceum         -         OBL         Yes         ✓         ✓         ✓           Plant         skunk cabbage         Symplocarpus foetidus         -         OBL         Yes         ✓         ✓         ✓           Plant         common dandelion         Taraxacum officinale         -         FACU         No         ✓				-								<b>✓</b>
Plant skunk cabbage Symplocarpus foetidus - OBL Yes				-			✓		✓		✓	✓
Plant         common dandelion         Taraxacum officinale         -         FACU         No         ✓ <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td>				-						✓		
Plant         marsh fern         Thelypteris palustris         -         FACW         Yes         ✓         ✓           Plant         American basswood         Tilia americana         -         FACU         Yes         ✓         ✓         ✓           Plant         poison ivy         Toxicodendron radicans         -         FAC         Yes         ✓	Plant			-	FACU	No	✓	✓	✓	✓	✓	✓
Plant         poison ivy         Toxicodendron radicans         -         FAC         Yes         ✓	Plant		Thelypteris palustris	-	FACW	Yes		✓				
Plant         red clover         Trifolium pratense         -         FACU         No         ✓         ✓         ✓         ✓           Plant         white clover         Trifolium repens         -         FACU         No         ✓         ✓         ✓         ✓	Plant	American basswood		-	FACU	Yes			✓			
Plant white clover Trifolium repens - FACU No 🗸 🗸	Plant	poison ivy	Toxicodendron radicans	-	FAC	Yes	✓	✓	✓	✓	✓	✓
	Plant	red clover	Trifolium pratense	-	FACU	No				✓		
Plant red trillium Trillium erectum - FACU Yes	Plant	white clover	Trifolium repens	-	FACU	No	1	✓			✓	✓
	Plant	red trillium	Trillium erectum	-	FACU	Yes				✓		

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



## United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9385 Phone: (607) 753-9334 Fax: (607) 753-9699

Email Address: <u>fw5es\_nyfo@fws.gov</u>

In Reply Refer To: 04/11/2025 15:39:33 UTC

Project code: 2025-0082147

Project Name: Micron Stream and Wetland Mitigation

Federal Nexus: yes

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

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

Dear Kirsten Gerhardt:

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

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

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

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

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

SpeciesListing StatusDeterminationIndiana Bat (Myotis sodalis)EndangeredMay affect

<u>Consultation with the Service is not complete.</u> Further consultation or coordination with the Service is necessary for those species or designated critical habitats with a determination of "May Affect". Please contact our New York Ecological Services Field Office to discuss methods to avoid or minimize potential adverse effects to those species or designated critical habitats.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Bog Buck Moth *Hemileuca maia menyanthevora (=H. iroquois)* Endangered
- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat Perimyotis subflavus Proposed Endangered

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference the Project Code associated with this Project.

#### **Action Description**

You provided to IPaC the following name and description for the subject Action.

#### 1. Name

Micron Stream and Wetland Mitigation

#### 2. Description

The following description was provided for the project 'Micron Stream and Wetland Mitigation':

This is a stream and wetland mitigation project in which restoration will occur across six sites. On average, one site will be constructed per year, making the construction period a total of six years approximately. All six sites are located in Hastings or Schroeppel in Oswego County, NY. Two of the sites will undergo stream restoration, one for a degraded portion of Buxton Creek, the other for a degraded portion of Fish Creek. Here, the stream restoration will be integrated with wetland restoration to create a functioning stream/wetland complex. The remaining four sites will be for wetland restoration only.

The approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@43.29530445">https://www.google.com/maps/@43.29530445</a>,-76.2730783955508,14z



## **QUALIFICATION INTERVIEW**

Project code: 2025-0082147

- As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?
   Yes
- 2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

**Note:** This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

- 4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project?

  No
- 5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

**Note:** If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

No

- 8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)? *No*
- 9. Is the lead federal action agency the Natural Resources Conservation Service?
- 10. Will the proposed project involve the use of herbicide where listed species are present? *Yes*

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11. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

No

12. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

13. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

**Note:** For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.). *No* 

14. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

No

15. Will the proposed project affect wetlands where listed species are present?

This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

Yes

16. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

Yes

17. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?

Yes

18. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

No

19. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

No

20. Will the proposed project involve the removal of excess sediment or debris, dredging or instream gravel mining where listed species may be present?

No

21. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

**Note** New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

No

22. Will the proposed project involve perennial stream loss, in a stream of tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

No

- 23. Will the proposed project involve blasting where listed species may be present? *No*
- 24. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

No

25. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

**Note**: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream. *Yes* 

26. Will the proposed project impact streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography?

Yes

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27. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

No

28. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

Yes

29. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

No

30. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?

#### Automatically answered

No

31. [Semantic] Does the project intersect the Indiana bat AOI?

#### Automatically answered

Yes

32. Is the action area within 0.5 mile radius of any known hibernacula (caves or mines) openings or underground features?

**Note:** If you are unsure, contact the appropriate Ecological Services Field Office before continuing through the key.

No

33. Are trees present within the action area?

**Note:** If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter), answer "Yes". If you are unsure, answer "Yes." Or refer to Appendix A of the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines for definitions and an assessment form that will assist you in determining if suitable habitat is present within your project's action area. Suitable summer habitat for Indiana bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥5 inches dbh (12.7 centimeter) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat

Yes

34. Is the action area within known occupied Indiana bat habitat? Known occupied Indiana bat habitat includes established conservation buffers (10-mile buffer around Phase 1 or Phase 2 hibernacula, 5-mile buffer around Phase 3 or Phase 4 hibernacula; 5-mile buffer around Indiana bat captures or detections; 2.5-mile buffer around known roosts).

Yes

35. [Semantic] Does the project intersect the Indiana bat critical habitat?

#### Automatically answered

No

36. [Semantic] Does the project intersect the candy darter critical habitat?

#### Automatically answered

No

37. [Semantic] Does the project intersect the diamond darter critical habitat?

#### Automatically answered

No

38. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?

#### **Automatically answered**

No

39. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

#### Automatically answered

No

40. Do you have any other documents that you want to include with this submission? *No* 

## **PROJECT QUESTIONNAIRE**

- 1. Approximately how many acres of trees would the proposed project remove? .1
- 2. Approximately how many total acres of disturbance are within the disturbance/ construction limits of the proposed project? 500
- 3. Briefly describe the habitat within the construction/disturbance limits of the project site. Active soybean fields and man-made agricultural drainages. Some existing wetlands of degraded quality that will ultimately be rehabilitated.

## **IPAC USER CONTACT INFORMATION**

Agency: The Wetland Trust, Inc.

Name: Kirsten Gerhardt Address: 4729 State Route 414

City: Burdett State: NY Zip: 14818

Email kirsten.gerhardt@gmail.com

Phone: 3028242336

## LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers



## United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9385 Phone: (607) 753-9334 Fax: (607) 753-9699

Email Address: <u>fw5es\_nyfo@fws.gov</u>

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.

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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 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: <a href="https://www.google.com/maps/@43.29530445">https://www.google.com/maps/@43.29530445</a>,-76.2730783955508,14z



Counties: Oswego County, New York

## **ENDANGERED SPECIES ACT SPECIES**

Project code: 2025-0082147

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<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Project code: 2025-0082147 04/11/2025 15:07:39 UTC

#### **MAMMALS**

**NAME STATUS** Indiana Bat Myotis sodalis Endangered 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 Northern Long-eared Bat Myotis septentrionalis Endangered No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 Tricolored Bat Perimyotis subflavus **Proposed** No critical habitat has been designated for this species. Endangered Species profile: https://ecos.fws.gov/ecp/species/10515 **INSECTS NAME STATUS** Bog Buck Moth Hemileuca maia menyanthevora (=H. iroquois) Endangered

Monarch Butterfly *Danaus plexippus* 

Proposed

There is **proposed** critical habitat for this species. Your location does not overlap the critical

Threatened

habitat.

Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8023">https://ecos.fws.gov/ecp/species/8023</a>

## **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.

Project code: 2025-0082147 04/11/2025 15:07:39 UTC

## **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

Micron- Lowe	er Caughdenov	Creek Stream	and Wetland	Mitigation Plan
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May 2025



# Lower Caughdenoy Creek Invasive Species Management Plan (ISMP)

Oswego County, New York

PREPARED BY:

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

www.thewetlandtrust.org

May 2025

# 1. Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Mitigation (PRM) package on behalf of Micron NY Semiconductor Manufacturing, LLC, is proposing to develop stream and wetland mitigation acres/credits at their Lower Caughdenoy Creek Site in the Town of Hastings, Oswego County, New York. The Mitigation Plan (Plan) at Lower Caughdenoy Creek will contribute toward the fulfillment of required wetland mitigation for impacts associated with the Micron Semiconductor Fabrication Campus project (Proposed Development) in the town of Clay, Onondaga County, New York. This Plan will incorporate wetland Reestablishment, 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:
  - o Thorough baseline information data collection,
  - o Avoiding and/or treating existing invasive species populations,
  - o Incorporating construction techniques into the Plan that minimize conditions that are favorable for invasive species colonization, and
  - o Implementing thorough monitoring and maintenance practices throughout the life of the Project and beyond.
- Long-Term Ecological Success: The presence of invasive plant species can degrade wetland function by outcompeting native vegetation, altering soil and water chemistry, and reducing habitat quality for wildlife. This ISMP aims to restore and sustain native plant communities using minimal environmental disturbance construction techniques per the Mitigation Plan.
- The goal of this ISMP is to minimize presence and prevent expansion of invasive species within the Mitigation Site not only during the monitoring period, but in perpetuity, as TWT is the long-term owner and steward. Invasive species control will be considered successful only if invasive species are kept at or below the threshold outlined in Section 6 of the Mitigation Plan for the work areas and 0% net increase in invasive species found elsewhere at the Site is realized. Annual monitoring will help determine whether goals are being met. If it is determined the Site is not on track with its goals, TWT will submit

a revised Management Plan and implement Adaptive Management strategies that are approved by USACE and NYSDEC.

# 1.2 Regulatory Compliance

This ISMP seeks to meet specific performance standards set by the USACE and NYSDEC as a condition of permit approval. These include thresholds for native plant diversity, invasive species control, and hydrological function.

Invasive species targeted by this ISMP are based on those regulated by NYS Regulation 6 NYCRR Part 575 List of Prohibited and Regulated Invasive Plants, developed by the New York Invasive Species Council and New York Department of Environmental Conservation (NYSDEC) and any others identified by NYSDEC or USACE.

# 2. Identification

Five key invasive plant species regulated by NYCRR Part 575 were identified at the Site during baseline data collection. Key invasive plants include purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), cattail (*Typha* spp.), and glossy buckthorn (*Frangula alnus*). These species are highly competitive, forming dense monocultures that outcompete native vegetation, diminish biodiversity, and disrupt wetland functionality. These species are found in most wetland areas on-site and adjacent on wetlands, affecting over 13 acres at the Lower Caughdenoy Creek Site at the time of data collection. In addition to these dominant species, other invasive plants present in the area include smooth brome (*Bromus inermis*), bull thistle (*Cirsium vulgare*), autumn olive (*Elaeagnus umbellata*), honeysuckle (*Lonicera spp.*), creeping jenny (*Lysimachia nummularia*), common Timothy (*Phleum pratense*), common Kentucky bluegrass (*Poa pratensis*), buckthorn (*Rhamnus cathartica*), multiflora rose (*Rosa multiflora*), bittersweet nightshade (Solanum dulcamara).

These species, their common characteristics and their typical locations are provided in Table 2-1 below. Additional invasive plant species have the potential of occurring at the site, particularly in the post-construction and long-term monitoring phase of this plan. These additional species may require treatment if they meet action thresholds outlined in **Section 6-1**, in which case they will be included in future versions of this plan and treated.

Table 2-1. Invasiv	e Species at the Lower Caughd	enoy Creek Site 2024	
Species	Common Characteristics	Photo ID	Typical Location
Glossy Buckthorn (Frangula alnus)	A deciduous shrub or small tree up to 20 feet tall with smooth gray-brown bark and glossy, oval leaves. It produces small greenish-yellow flowers and red to black berries. Leafing out early and holding foliage late into fall gives it a competitive edge. Spreads aggressively via seeds dispersed by birds and mammals.		Found along wetland edges, in damp forests, streambanks, ditches, and other moist, disturbed areas. It often forms dense thickets that crowd out native plants and slow forest regeneration.

Purple Loosestrife (Lythrum salicaria)	An erect, branching perennial native to Europe, Asia, and northern Africa, characterized by dense, woody rootstocks that can produce multiple stems, lance-shaped leaves arranged oppositely or alternately, and showy purple flowers with 5-7 petals clustered on tall spikes. This invasive species thrives in wetlands and moist soils, rapidly displacing native vegetation and disrupting local ecosystems.	Wetland habitats, including marshes, pond and lakeshores, stream and riverbanks, and ditches. Also spreads in upland soils, allowing it to spread into meadows and pastures.
Reed Canary Grass (Phalaris arundinacea)	A tall, perennial grass that grows 2 to 6 feet high, with rough, flat leaves and dense flower clusters that turn beige as they mature. It thrives in wetlands and spreads aggressively through seeds and rhizomes, forming dense stands that outcompete native vegetation.	Wet habitats such as wetlands, moist meadows, and riparian areas
Common Reed (Phragmites australis)	A perennial grass that can grow over 15 feet tall, forming dense stands with hollow stems and blue-green leaves up to 20 inches long. It spreads through seeds, rhizomes, and stolons, often outcompeting native vegetation in wetlands.	Tidal and non-tidal marshes, lakes, swales, and backwater areas of rivers, and streams
Cattail (Typha spp.)	Tall, perennial wetland plants characterized by their long, narrow, sword-like leaves and distinctive brown, cylindrical flower spikes. They thrive in shallow waters of marshes, ponds, and lakes, spreading through both wind-dispersed seeds and extensive rhizome networks, often forming dense stands that can outcompete other vegetation.	Wetland habitats, including marshes, river and stream banks, pond edges, lakes, ditches, and reservoirs

# 3. Pre-Construction Phase

#### 3.1 Baseline Data Collection

Baseline data collection will identify existing invasive species communities within the mitigation site. This process will involve field surveys using GIS mapping, orthoimagery using drones, and photographic documentation to establish the extent and density of invasive species populations. Baseline surveys will include mapping of invasive species distribution with percentage cover estimates. The data collected will be used to inform the site preparation and treatment strategies outlined in later sections of this ISMP. See **Figures 8-1 through 8-5** in **Section 8** for baseline invasive species maps.

# 3.2 Site Preparation & Prevention Measures

Prior to construction, invasive species control measures will be implemented to prevent the spread and establishment of problematic species. These measures will include:

- **Pre-Treatment of Invasives**: Identified invasive species populations will be treated before ground disturbance begins. This may include manual removal, herbicide application, or smothering techniques depending on the species and infestation severity.
- **Equipment Cleaning Protocols:** Any construction equipment arriving on-site will be inspected and cleaned to remove soil, plant material, or seeds that may introduce invasive species.

# 4. Construction Phase

To minimize the introduction and spread of invasive species during construction activities, the following best practices will be implemented:

- **Minimize Disturbance**: Clearing and grading activities will be restricted to designated project areas, reducing soil disturbance that can facilitate invasive species establishment.
- Erosion and Sediment Control: Use of weed-free erosion control materials, such as straw mulch, biodegradable mats, and hydroseeding with native plant mixes, will prevent soil erosion while avoiding the introduction of invasive species.
- Construction Site Hygiene: All machinery and equipment will be cleaned before entering and leaving the site, particularly when working in or near known invasive species populations.
- **Hydrology Management**: The project aims to restore natural hydrological conditions where feasible, as proper hydrology can prevent the establishment of invasive wetland species.
- **Native Plant Seeding**: Following ground disturbance, native plants will be seeded and planted in treated areas to prevent re-colonization by invasive species.

# 5. Post-Construction Phase

# **5.1 Monitoring for Early Detection**

To ensure invasive species control measures remain effective, post-construction monitoring will be conducted. Monitoring efforts will include:

- **GPS Mapping and Photo Documentation**: Recording any changes in invasive species distribution.
- **Upstream and Adjacent Area Inspections**: Identifying potential new sources of invasive species propagules.
- **Disturbance Event Tracking**: Observing site conditions after events like flooding or drought, which may encourage invasive species spread.

# 5.2 Long-Term Monitoring & Adaptive Management

- Yearly Assessments: Evaluate treatment effectiveness and native vegetation recovery.
- Implement additional treatment as needed.
- Adjust Control Strategies: Based on monitoring results, refine methods to reduce reliance on chemical treatments.

# 6. Treatment Thresholds and Control Strategies

#### **6.1 Treatment Thresholds**

Control measures will be implemented when specific action thresholds are met, ensuring timely intervention to prevent invasive species from undermining mitigation success. The following triggers initiate management actions:

# 1. Invasive Species Coverage Threshold

o 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- <i>Typha</i> Invasive Species (e.g., purple loosestrife, common reed, reed canarygrass)	≤ 15%	≤ 15%	≤ 12.5%	≤ 10%	< 5% cover
All Invasive Species including <i>Typha</i> 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

- o If native plant cover falls below required thresholds (typically **85% native cover** or a minimum diversity standard set in the mitigation permit), corrective action is necessary.
- o This includes replanting, selective herbicide application, or modifying site conditions to support native species.

# 3. Encroachment of Invasives into Priority Habitat Areas

o 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

o 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

o 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. Tr	eatment Timing	g & Methods Sun	nmary 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:

- o Cutting & Flooding: Cutting stems at water level during late summer combined with water level manipulation can drown rhizomes.
- Smothering: Small patches can be covered with black plastic or heavy mulch to prevent regrowth.
- 2. Chemical Control: (Only if necessary, as a last resort in sensitive areas)
  - o 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.
  - o Follow-up with mechanical removal of dead stalks in the winter.
- 3. Cultural & Biological Control:
  - o Promote competition by seeding native sedges, rushes, and forbs.
  - o 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:
  - o Mowing in early spring and late summer to deplete energy reserves.
  - o Hand-pulling small infestations before seed set.
  - o Covering with tarps or thick mulch to shade out new shoots.
- 2. Chemical Control: (Selective use in dense monocultures if needed)
  - o Glyphosate application in fall when nutrients are moving into rhizomes.
  - o 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:
  - o 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)
  - o Glyphosate-based pesticide applied to standing plants in late summer.
  - o Follow-up by removing dead biomass to prevent thick mats from suppressing native growth.
- 3. Cultural & Biological Control:
  - o Encourage muskrat or waterfowl activity in natural systems to suppress regrowth.

### **6.2.4** *Lythrum salicaria* (Purple Loosestrife)

# Control Approach:

Best Time for Treatment: Mid-to-late summer before seed dispersal.

- 1. Mechanical Control:
  - Hand-pull small infestations, removing all roots.
  - Cut flower heads before seed drop to prevent spread.
- 2. Biological Control (Preferred Method):
  - o Galerucella beetles (Loosestrife Leaf Beetles) are effective at suppressing populations.
  - o Releases should be monitored over multiple years to assess impact.
- 3. Chemical Control: (For large stands if necessary)
  - Spot treat with glyphosate-based pesticide in late summer.
  - o Follow-up by seeding native competitors.

# 6.2.5 Frangula alnus (Glossy Buckthorn)

#### Control Approach:

Best Time for Treatment: Late summer to fall when nutrients are translocating to roots.

- 1. Mechanical Control:
  - o Hand-pulling for small plants, ensuring complete root removal to prevent resprouting.

- o Cut-stump method for larger shrubs with follow-up treatments to prevent regrowth.
- 2. Chemical Control: (For dense infestations if needed)
  - o Cut-stump herbicide application: Apply glyphosate (20-25%) or triclopyr (15-20%) directly to the freshly cut stump in late summer or fall.
  - o 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

# **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)

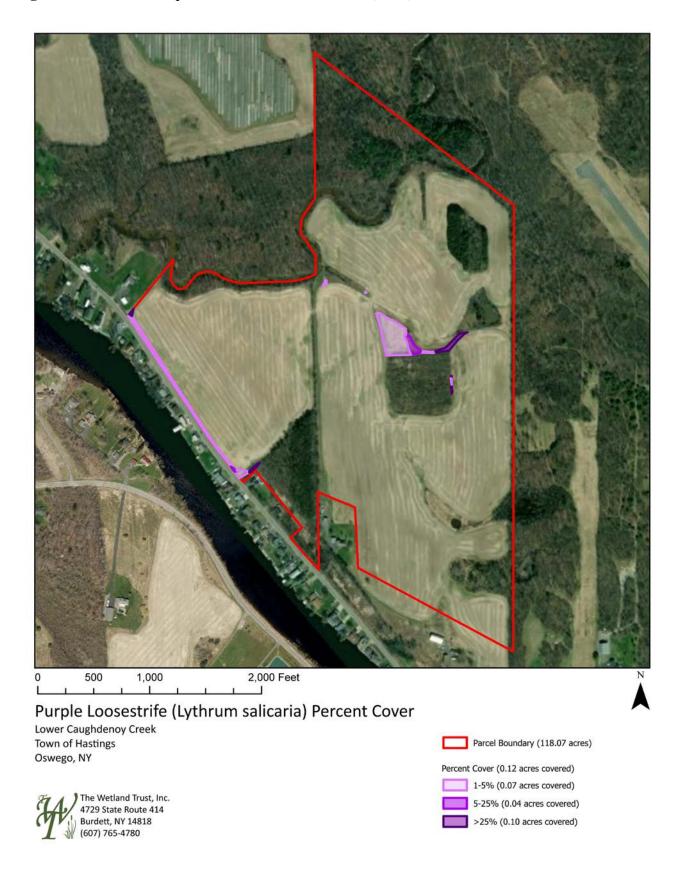


Figure 8-2. Baseline Reed Canary Grass Percent Cover (2024)



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

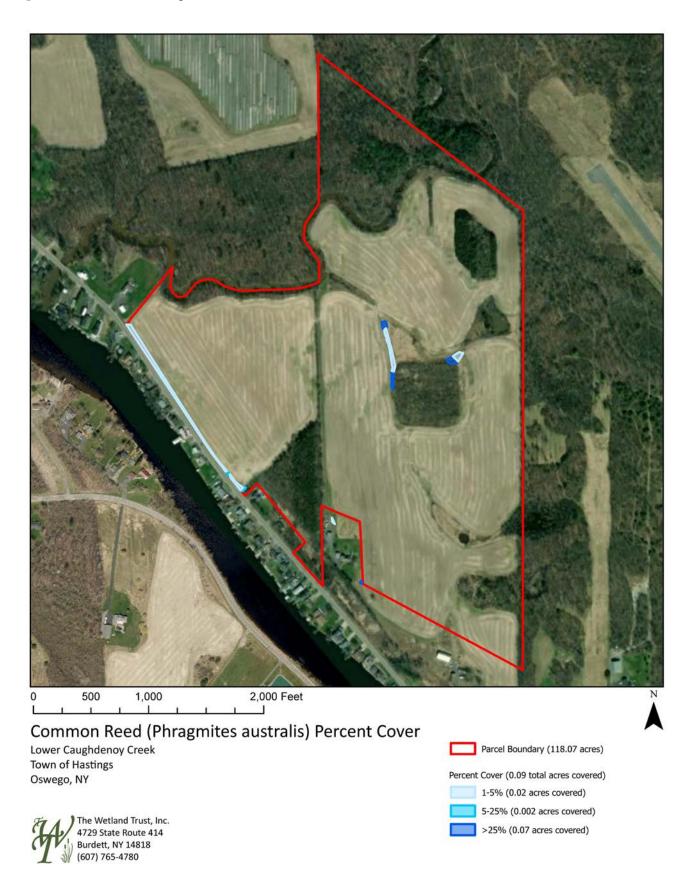


Figure 8-4. Baseline Cattail Percent Cover (2024)

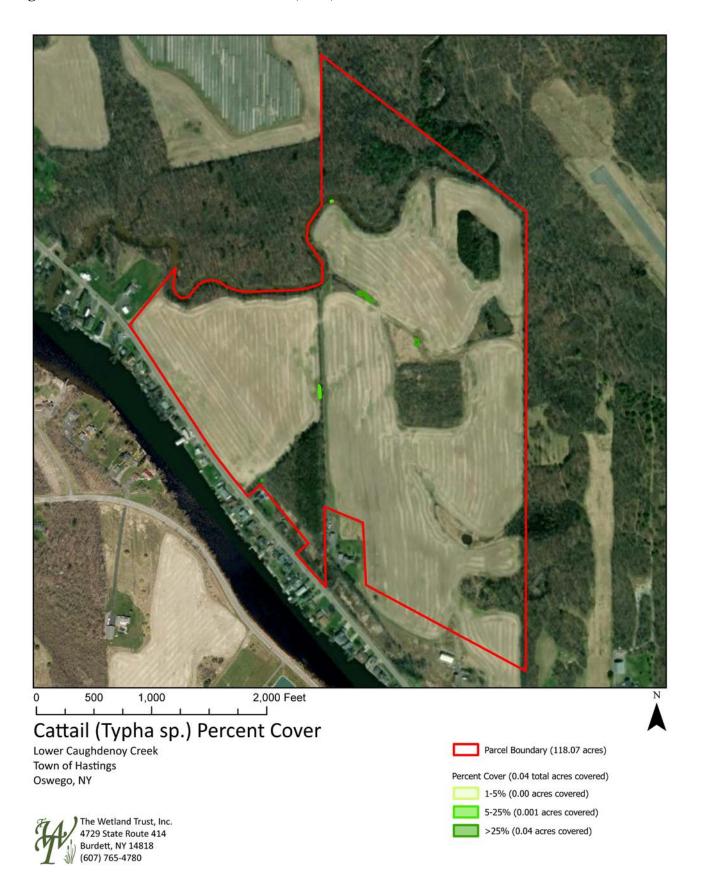
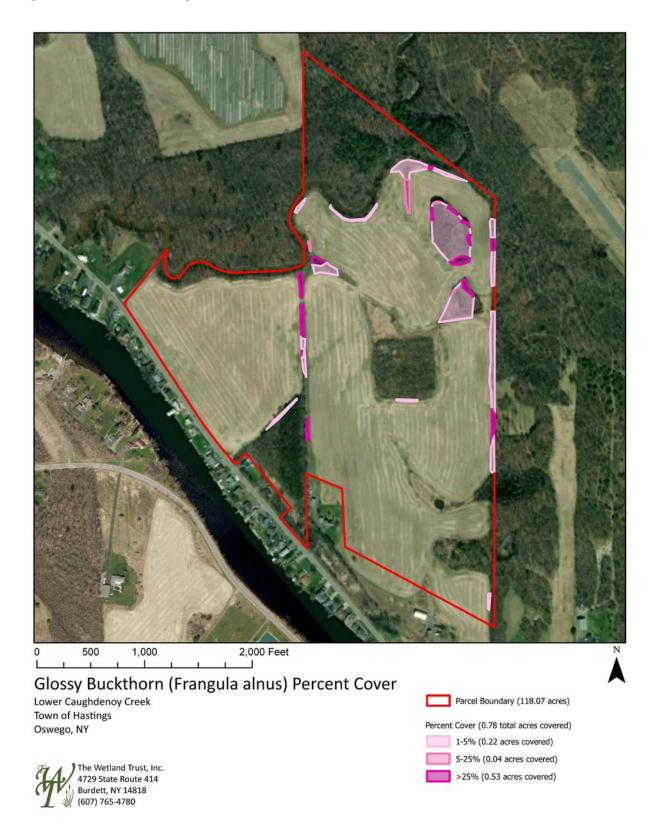


Figure 8-4 Baseline Glossy Buckthorn Percent Cover (2024)



<b>Invasive Species</b>	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 ( <i>Lythrum salicaria</i> )	1.32	0.15	0.15	1.62
Cattail (Typha sp.)	0.00	0.01	0.06	0.07

Micron- Lower Caughdenoy Creek Stream and Wetland Mitigation Pla	ation Plan	Wetland Mi	Stream and	Creek	Caughdenov	Lower	Micron-
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May 2025





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 <a href="mailto:christina.rieth@nysed.gov">christina.rieth@nysed.gov</a>. Section 233 permits are not required for projects on private land.

If you have any questions concerning archaeology, please contact Bradley Russell at <a href="mailto:Bradley.Russell@parks.ny.gov">Bradley.Russell@parks.ny.gov</a>



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 Schreyer

Archaeology Unit Program Coordinator

Jessica E. Schreyen

Micron- Lower Caughdenoy Creek Stream and Wetland Mitigation Pla	Micron-Lower Caughder	ov Creek Stream a	and Wetland Miti	gation Plan
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May 2025

# Appendix G.

Date: 06-25-2024				
andowner: The Wetland Trust Designer Name: Thomas R. Biebighauser				
nnson-Jordan (The Wetland Trust), Kendall Hastings (The Wetland				
Site Description: An agricultural field planted to soybeans.				
s are located along the side of County Route 37 and the south edge of ainage structures are present.				
How the planned wetland is marked on the ground: Orange wire				
Groundwater elevation in test hole? 20-inches (the test hole was left open overnight)				

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

Designer Name: Thomas R. Righighauser					
Landowner: The Wetland Trust Designer Name: Thomas R. Biebighauser					
Individuals assisting with the design: Dylan Johnson-Jordan (The Wetland Trust), Kendall Hastings (The Wetland					
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.					
How the planned wetland is marked on the ground: Pink wire flags					
Groundwater elevation in test hole? Not found					
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

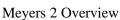
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

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 Ground cover

Site Name: Meyers 3	Date: 06-25-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Dylan Jo	hnson 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 the property. It is very possible that buried dra	s are located along the side of County Route 37 and the south edge of ainage 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	V

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

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 hisects the designed wetland. The ditch will be disabled by this					

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

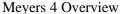
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

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 Ground cover

Date: 06-26-2024
Designer Name: Thomas R. Biebighauser
hnson Jordan (The Wetland Trust), Kendall Hastings (The Wetland
Site Description: An agricultural field planted to soybeans.
ry possible that buried drainage structures are present. A ditch is
How the planned wetland is marked on the ground: Yellow wire flags
Groundwater elevation in test hole? Not found.
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

Site Name: Meyers 6	Date: 06-26-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Dylan Jo	ohnson 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 volocated along Highway 37.	ery possible that buried drainage structures are present. A ditch is
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

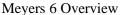
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

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 Ground cover

-	Date: 06-26-2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Dylan Jo	hnson 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 veroutlet ditch is located along Youngs Creek near this planned wetland.	ry possible that buried drainage structures are present. A drainage
	How the plant of water dispersion and another provide Biological State
Plant species: Soybeans	How the planned wetland is marked on the ground: Pink wire flags
Plant species: Soybeans Invasive species:	Groundwater elevation in test hole? Not found.

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

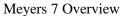
Rock armoring is needed along the length of the spillway (16-feet wide x 50-feet long x 1.5-feet deep)

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 Ground cover

Date: 06-26-2024

Site Name: O Meyers fiedd cat control	Date: 00 20 2024
Landowner: The Wetland Trust	Designer Name: Thomas R. Biebighauser
Individuals assisting with the design: Dylan Jo	ohnson 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 siccuts will advance into the field and construct	te is an outlet ditch for a buried drainage system that is eroding. Headed 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.

Site Name: 8-Mevers Head-cut Control

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 = 5,208 feet<sup>3</sup>/27 feet<sup>3</sup>/y ard<sup>3</sup> = 193 yards<sup>3</sup> x 1.5-tons/yard<sup>3</sup> = 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.

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

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 Michelle Herman (The Wetland Trust)	n Franz (The Wetland Trust), Kirsten Gerhart (The Wetland Trust),

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.





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<sup>3</sup>/27feet<sup>3</sup>/yard<sup>3</sup> = 88 yards<sup>3</sup> x 1.5-tons/yard<sup>3</sup> = 132 tons.





R-3

R-3 (showing the culvert to remove and ditch to fill)

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<sup>3</sup>/27feet<sup>3</sup>/yard<sup>3</sup> = 44 yards<sup>3</sup> x 1.5-tons/yard<sup>3</sup> = 66 tons.





R-4 (showing the ditch to fill)

R-4

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	Site Description: An agricultural field to be planted to soybeans.	
functioning wetland for mitigation.	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		
Traine species. Soybeans	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 76.186 Soil texture: 0-10-inches = topsoil, 10-48-inc		
Pock armoring or vertical grade central needs	al at the felat an author No.	

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)

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 tost hala losation: 42 262097°N 76 19494	 	

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

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	Site Description: A dug basin, old farm pond, and sand borrow pit	
functioning wetland for mitigation.	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 pro	operty. 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

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 drain This ditch would not be filled by the project.	age ditch is located along the lower edge of the designed wetland.			
Plant species: Soybeans	How the planned wetland is marked on the ground: Pink wire fla			
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 76.18628	0°W			

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

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 G	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.





Cita Nama, D. 10 (Druga Dia Farm)	Date: 05-01-2024			
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 G	Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)			
Objectives: Build a naturally appearing and	Site Description: An agricultural field to be planted to soybeans.			
functioning Emergent wetland for mitigation.	Adjacent to an old farm pond.			
Evidence of historic drainage or filling: A shallo	ow 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 76.18506	6°W			
Soil texture: 0-9-inches = topsoil, 9-48-inches-o	clay			
Rock armoring or vertical grade control needed at the inlet or outlet. No				
Head-cuts located uphill or downhill of the pla	nned wetland. No			

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.

Woody debris source: Not available on the property. Would need to be transported to the site.





R-10

R-10

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: Kirster	n Gerhart (The Wetland Trust), Michelle Herman (The Wetland Trust)		
Objectives: Build a naturally appearing and	Site Description: An agricultural field to be planted to soybeans.		
functioning wetland for mitigation.			
Evidence of historic drainage or filling: A sha	allow drainage ditch is located along the uphill edge of the designed		
wetland along the edge of the woods. This o	litch 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 76.184	768°W		
Soil texture: 0-9-inches = topsoil, 9-48-inche	es-clay		
Rock armoring or vertical grade control needs	ed at the inlet or outlet. No		
Head-cuts located uphill or downhill of the p	planned wetland. No		
Woody debris source: Not available on the p	property. Would need to be transported to the site.		
Construction notes: Build a groundwater da	m along the lower 2/3-edge of the marked perimeter. Spread soil tha		
	ive trees and shrubs on the mounds and higher ground.		





R-11 R-11

Site Name: R-13 (Bruce Rio Farm)	Date: 05-02-2024  Designer Name: Thomas R. Biebighauser		
Landowner: The Wetland Trust			
Individuals assisting with the design: Kirster	n 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 dite	ch 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	<u> </u>		
mvasive species. Hone	Groundwater elevation in test hole? Not found.		
Hydric soil present near the surface? No	Groundwater elevation in test hole? Not found.  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 Showing ditch in the Spring.

R-13

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: Ditch present.	es have been dug to drain the field. Buried drainage structures may be		
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		
Call tast bala la satiana 42 2052029N 70 4045	-44004		

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

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: Kirster	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.		
	nes have been dug to drain the field. Buried drainage structures may be a sloped so it will drain. Shallow ditches are located along the edge of		
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 76.184 Soil texture: 0-8-inches = topsoil, 8-48-inche			
Rock armoring or vertical grade control needs			

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

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.			
	s have been dug to drain the field. Buried drainage structures may be sloped so it will drain. Shallow ditches are located along the edge of			
Plant species: Soybeans	ns How the planned wetland is marked on the ground: Pink wire fla			
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 76.18552 Soil texture: 0-8-inches = topsoil, 8-48-inches				
Rock armoring or vertical grade control needed	at the inlet or outlet. No			
Head-cuts located uphill or downhill of the pl	anned wetland. No			

Woody debris source: Woody debris source: Obtain by removing the planted Norway Spruce trees gro

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

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.		
	es have been dug to drain the field. Buried drainage structures may be sloped so it will drain. Shallow ditches are located along the edge of		
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

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.		
	es have been dug to drain the field. Buried drainage structures may be sloped so it will drain. Shallow ditches are located along the edge of		
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

Micron- Lower Caughdenoy Creek Stream and Wetland Mitigation Pla	ation Plan	Wetland Mi	Stream and	Creek	Caughdenov	Lower	Micron-
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May 2025

## Appendix H.

Micron- Lower	Caughdenov	Creek Stream a	and Wetland I	Mitigation Plan

May 2025



# Lower Caughdenoy Creek Long Term Management Plan (LTMP)

Oswego County, New York

PREPARED BY:

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

www.thewetlandtrust.org

May 2025

### 1.0 Introduction

The Wetland Trust, Inc. (TWT), as part of the Permittee Responsible Offsite Compensatory Mitigation Project (Project) on behalf of Micron NY Semiconductor Manufacturing, LLC (Micron), has developed a mitigation plan at the Lower Caughdenoy Creek Site, town of Hastings, Oswego County, New York (Mitigation Site) to develop wetland acreage that will contribute to the total compensation needs for the construction of a semiconductor fabrication complex in the town of Clay, Onondaga County, NY. This Long-Term Management Plan (LTMP) has been developed based on anticipated monitoring and management activities for the Mitigation Site. Additional details are to be provided, if necessary, throughout the monitoring period and amended or revised as needed and approved by the USACE and NYSDEC. The purpose of the Long-Term Management Plan (LTMP) is to ensure the long-term sustainability of the protected and restored resources after mitigation performance standards have been achieved.

## 2.0 Responsible Party and Long-Term Steward

Micron is the Responsible Party for all phases of this Permittee Responsible mitigation through monitoring and final acceptance when a Certificate of Completion (or equivalent) will be provided by the agencies. Once the mitigation is complete Micron will transfer long-term management to TWT. As the fee simple owners of the Lower Caughdenoy Creek Site, TWT will be the long-term steward and responsible for long-term management of the wetland mitigation site including; identification of needs, development of recommendations, review with regulatory agencies as required, implementation, and efficacy measures. TWT shall implement this LTMP to preserve the habitat and conservation values in accordance with the approved Mitigation Plan, site protection instrument, and this LTMP. Long-term management tasks shall be funded through the Long-Term Management Fund.

## 3.0 Property Description

#### 3.1 Conservation Values

The Mitigation Site provides an opportunity for restoration of a large stream/wetland complex with approximately 51.5 acres of wetland re-establishment, and 1.5 acres of rehabilitation in a previously drained and cultivated landscape. The permanent restoration and subsequent protection of this property has several site-specific conservation values that can be enhanced and maintained.

- *Hydrologic Function* Restoring the wetlands will improve surface water retention, infiltration, and seasonal saturation of soils. Removal of artificial drainage and regrading will help reestablish groundwater-surface water interactions, essential for wetland hydrology.
- Water Quality- Conversion of cropland to wetlands and vegetated buffers will reduce nutrient runoff, sedimentation, and agrochemical inputs into Lower Caughdenoy Creek and downstream waters.

### 3.2 Site Improvements

Summary of site improvements including construction and restoration as per the Mitigation Plan. As-built report should be attached as an Appendix to this LTMP.

### 4.0 Baseline Conditions

Baseline conditions will be provided here with the as-built and final 10-year report referenced and attached. Conditions will be updated throughout the life of the project.

The Wetland Trust, Inc.

## 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.

The Wetland Trust, Inc.

**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		\$4,800	\$19,910
Monitoring	To determine implementation tasks	1	\$18	\$25,398
Administration	rinistration For all tasks above including tax exempt status		\$600	\$12,444
Total annual budget*	102,500			
Total Stewardship investm	\$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

The Wetland Trust, Inc.