Micron Central New York Semiconductor Manufacturing Complex

Fish Creek Stream and Wetland Mitigation Plan

Oswego County, NY

PREPARED BY:

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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

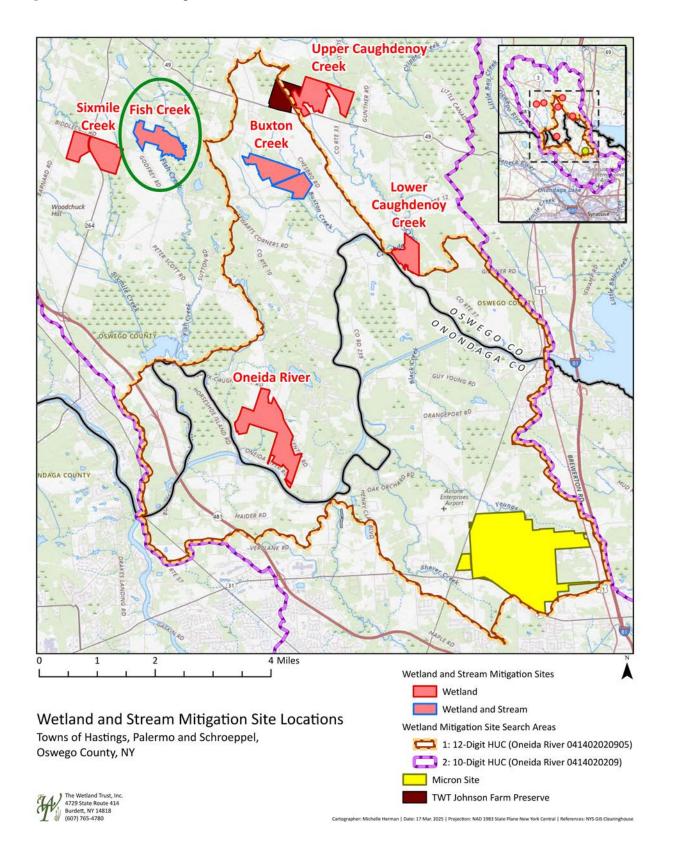
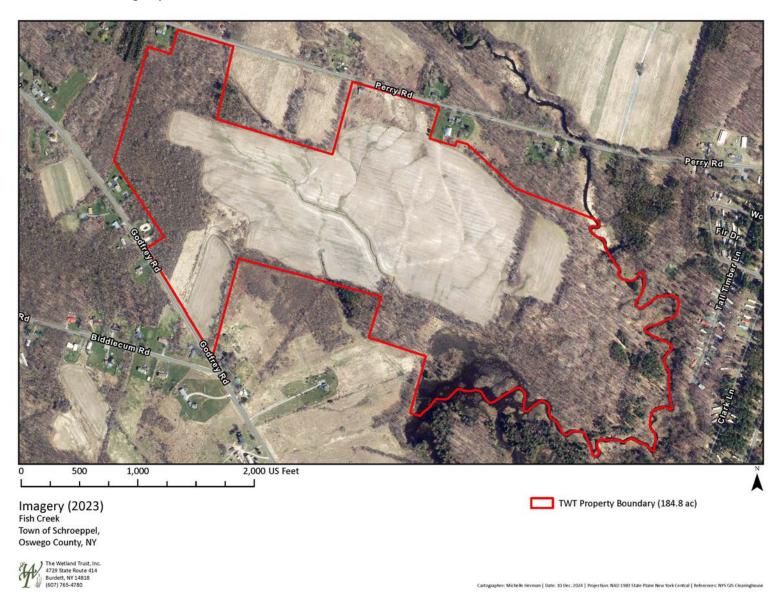


Figure 2-2. Fish Creek Property (2023)



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

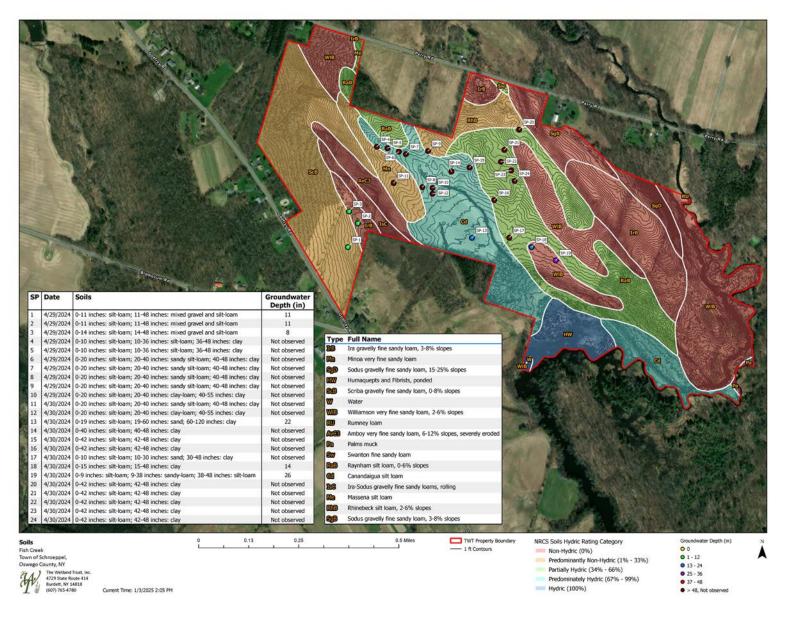


Figure 3-2. State and Federal Mapped Wetlands

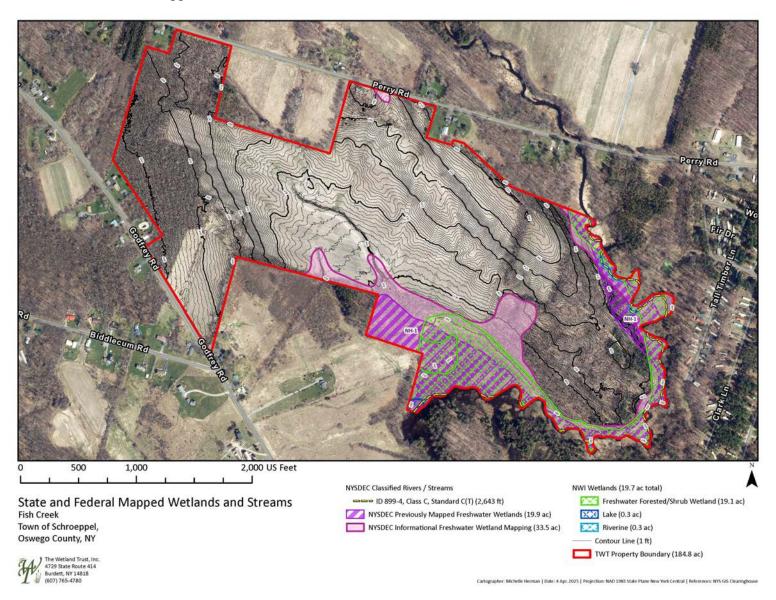
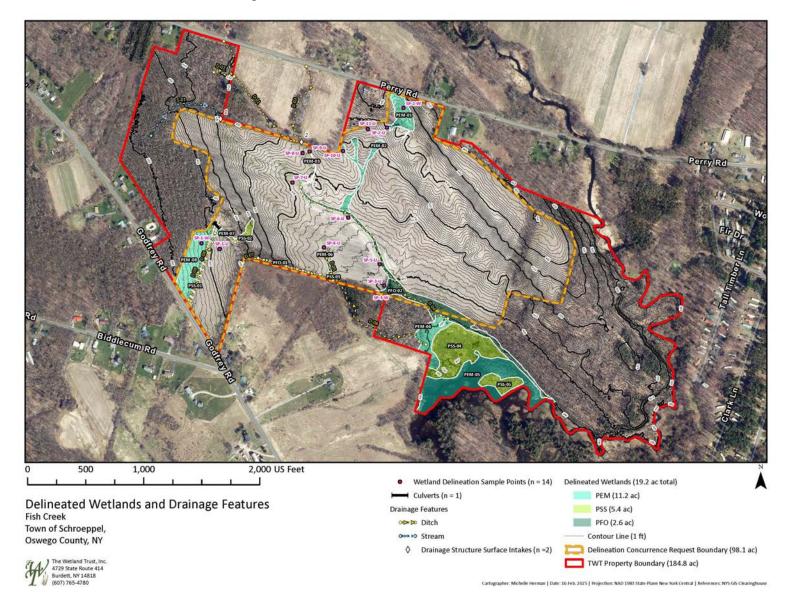


Figure 3-3. Delineated Wetlands and Drainage Features



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

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

Monitoring Wells

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

| Table | Table 3-3. Monitoring Well Location | | | | | | | |
|-------|-------------------------------------|-------------|--------------|--|--|--|--|--|
| 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 | | | | |

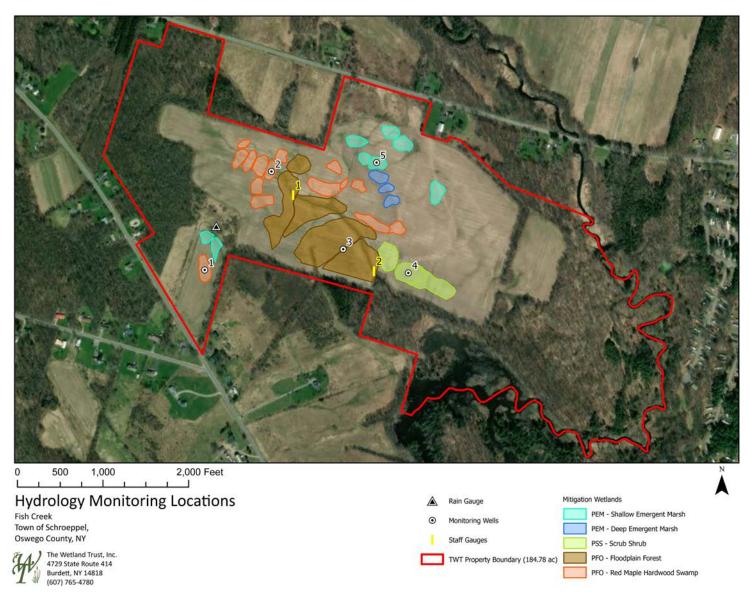
Rain Gauge

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 Creek 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.

| 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 | |
| | Challery amongont mouch | Restoration | 2.1 | Re-establishment | 1:1 | 2.1 | |
| PEM | Shallow emergent marsh | Enhancement | 0.1 | Rehabilitation | 3.5:1 | 0.028 | |
| PEM | D | Restoration | 0.7 | Re-establishment | 1:1 | 0.7 | |
| | Deep emergent marsh | Enhancement | - | Rehabilitation | 3.5:1 | - | |
| | Flor delete formed | Restoration | 9.2 | Re-establishment | 1:1 | 9.2 | |
| PFO | Floodplain forest | Enhancement | 0.8 | Rehabilitation | 3.5:1 | 0.23 | |
| PFO | D. J | Restoration | 4.5 | Re-establishment | 1:1 | 4.5 | |
| | Red maple- hardwood swamp | Enhancement | 0.1 | Rehabilitation | 3.5:1 | 0.028 | |
| DGG | C. 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 | | | | | | | |
| * total amou | nt 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 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.

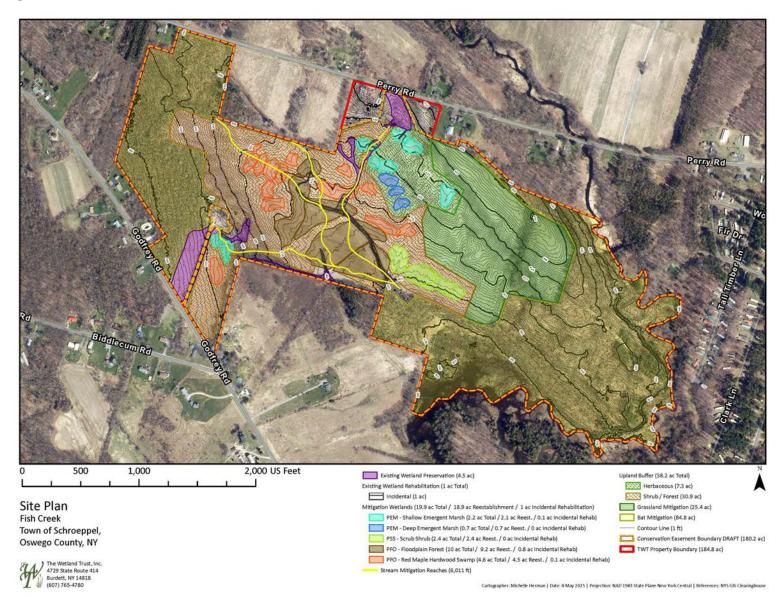
Floodplain Forest

- 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 1st.

5.1 Invasive Vegetation Control

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

5.2 Grading Plan: Re-establishment Wetlands

Basin and berm construction

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

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

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

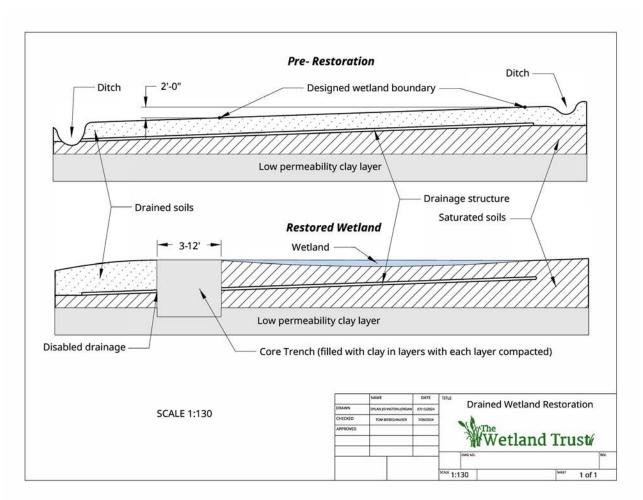
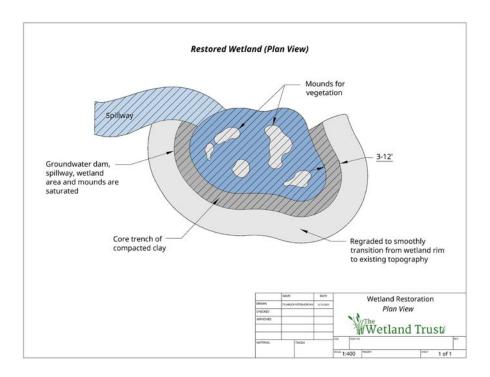


Figure 5-2. Restored Wetland Section View

Figure 5-2. Restored Wetland Plan View



Microtopography restoration

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

Table 5-1. Fish Creek Grading for Wetland Types **Wetland Type** Maximum Mound Mound Average Average wetland basin individual mound Spacing (ft) Density/acre mound diameter (in) depth (in) 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

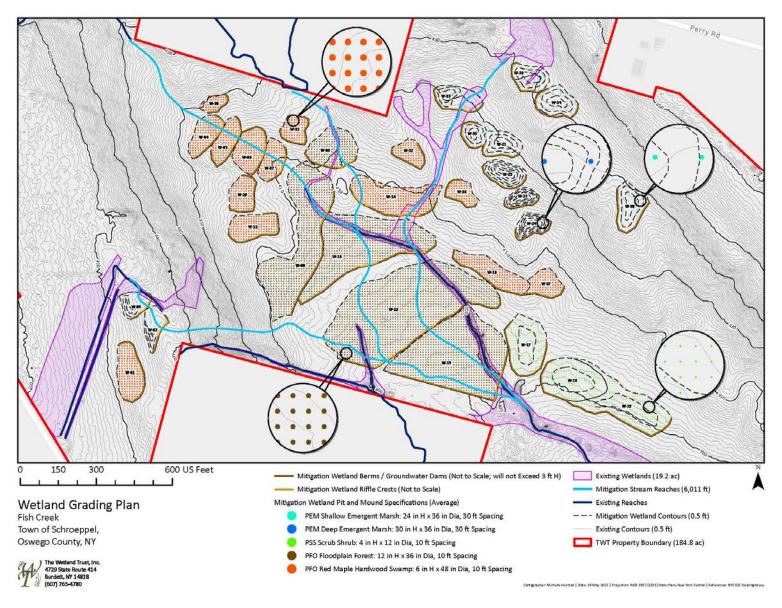


Figure 5-5. Restored Emergent Wetland

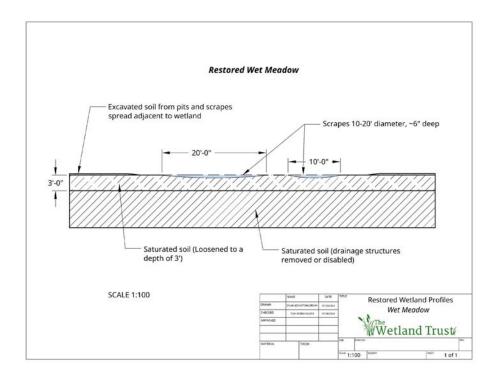
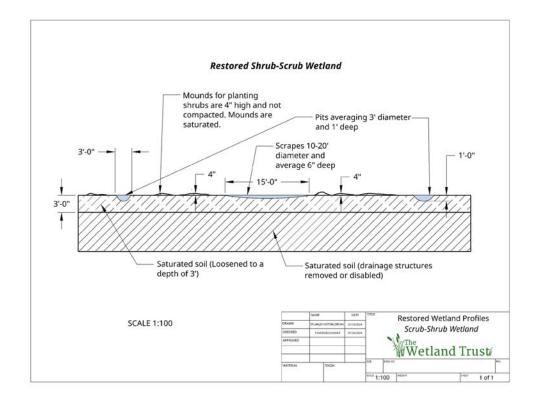


Figure 5-6. Restored Scrub-Shrub Wetland



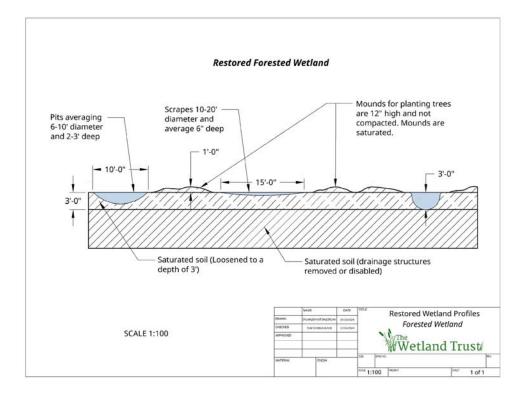


Figure 5-7. Restored Forested Wetland

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.

| Table 5-2a. PEM- Shallow E | mergent 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 | 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- 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 | Monitoring, maintenance, and adaptive management after construction for a 15-year period* after approved as-built (not to scale) | | | Permanent stewardship begins after monitoring period ends, pending agency approval | |
| Upper Caughdenoy Creek Wetlands | | | | Construction begins | | | | |
| Sixmile Creek Wetlands | | | | | Construction begins | | | |

The construction sequence at Fish Creek follows that shown in **Table 5-4**. The site will be constructed in approximately one year with the following spring dedicated to planting that will

initiate the monitoring and maintenance window to meet success criteria. Planting in the fall may occur if it is advantageous to plant establishment.

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

| Table 5-4. Fish Creek Construction Sequence | | | | | | |
|--|-------------------|---------------------------------|--|--|--|--|
| Activity | Timing | Phase | | | | |
| Invasive species management. | Spring Year 1* | Pre-construction | | | | |
| Work area layout and preparation, SWPPP implementation. | Spring Year 1 | Pre-construction | | | | |
| Groundwater dam installation, basin excavation, pond and | 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 12th year, and 9 ft by the 15th 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 ¹ | Year 3 | Year 5 | Year 7 | Year 10 ² | Year 12 | Year 15 ³ |
| Relative cover by native perennial hydrophytes (FAC or wetter) | 20% | 40% | 60% | 80% | 90% | | |
| Stem density in PSS areas (per acre, at least 280 must be shrub species) | 400 | 400 | 400 | 400 | 400 | | |
| Stem density in PFO areas (per acre, at least 280 must be tree species) | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| Tree height in PFO areas | 1 ft | 2 ft | 3 ft | 4 ft | 6.6 ft | 8ft | 9ft |

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

^{1.} First full growing season following planting

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

^{2.} Final herbaceous/PEM and PSS goals to be met at this time or additional monitoring years added

^{3.} Final PFO (tree height and density) goals to be met at this time

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

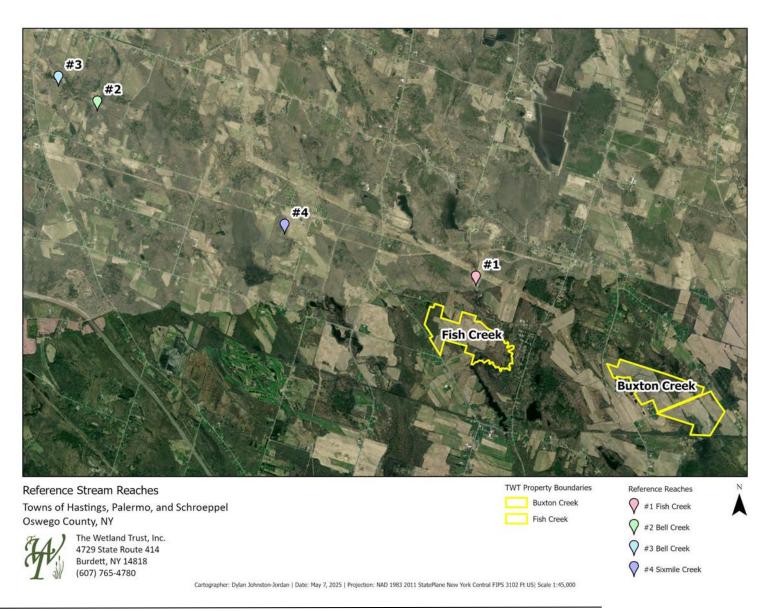
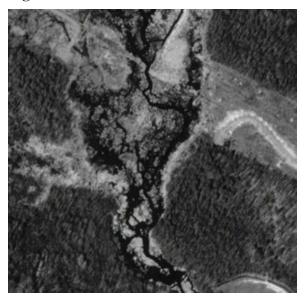


Figure 8-1b. Reference Reach #1 Fish Creek



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.

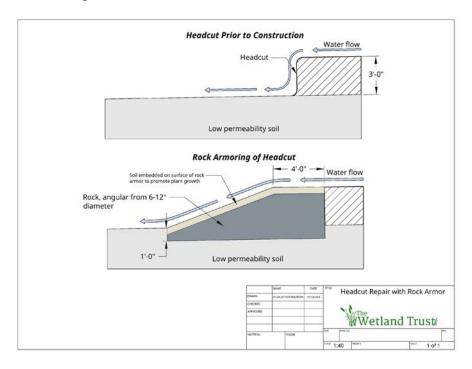
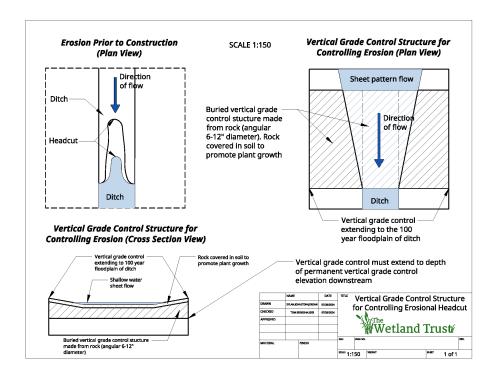


Figure 8-1. Head-cut Repair with Rock Armor

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

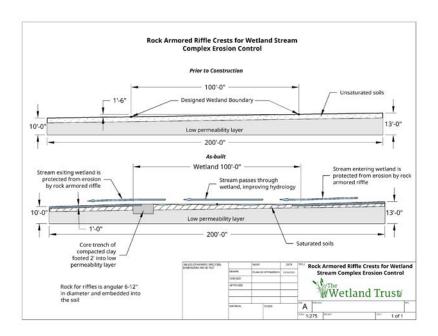
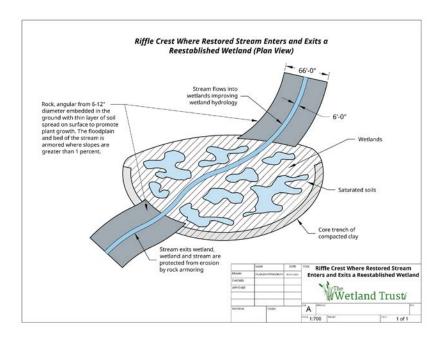


Figure 8-4. Riffle Crest Plan View



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.

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

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

| Activity | | | | | | | 7 | Zears | Post | Const | ruction | 1 | | | | |
|--|---|---|---|---|---|---|---|--------------|------|-------|---------|----|----|----|----|----|
| 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 | |
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| The Wetland Trust, Inc. | | Micron Fish Creek Mitigation Plan |
|---|---|---|
| Approval and Accept | ance by Holder: The Wetland Conso | ervancy, Inc. |
| Ву: | | |
| Title: Chair | | |
| | | |
| STATE OF NEW YORK) ss | : | |
| COUNTY OF Tompkins) | | |
| known to me or proved to subscribed to the within instr | me on the basis of satisfactory evument and acknowledged to me that | f The Wetland Conservancy, Inc. personally vidence to be the individual whose name is the executed the same in his capacity, and that on upon behalf of which the individual acted, |
| Notary Public | Date | |
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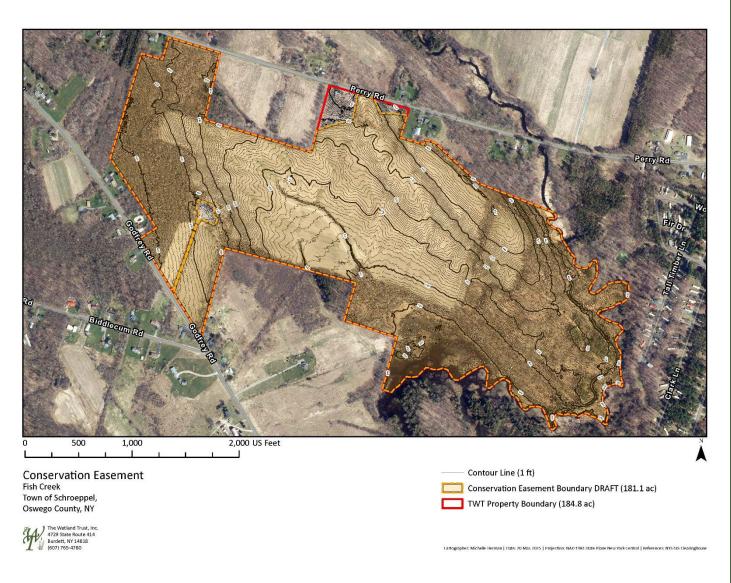
Schedule A. Legal description of parcel to be covered by this Conservation Easement.

Fish Creek, 184 Godfrey Road

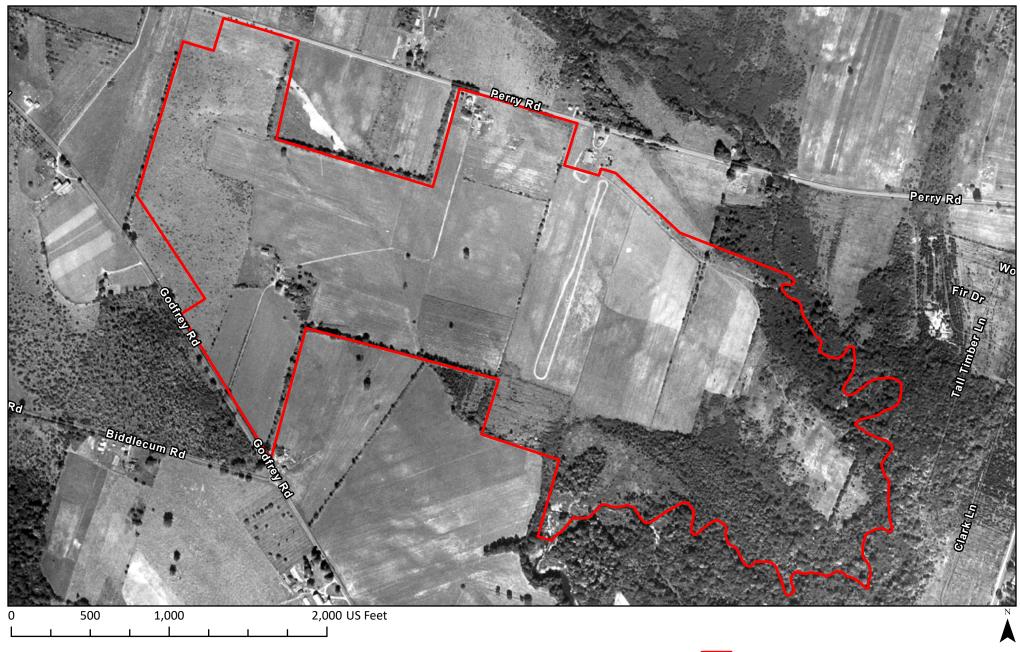
Town of Schroeppel, Oswego County, NY, covering a *181.1*-acre portion of Tax Parcels 256.00-4-14 and 256.00-4-14.01

ALL THAT TRACT OR PARCEL OF LAND,

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



Appendix B.



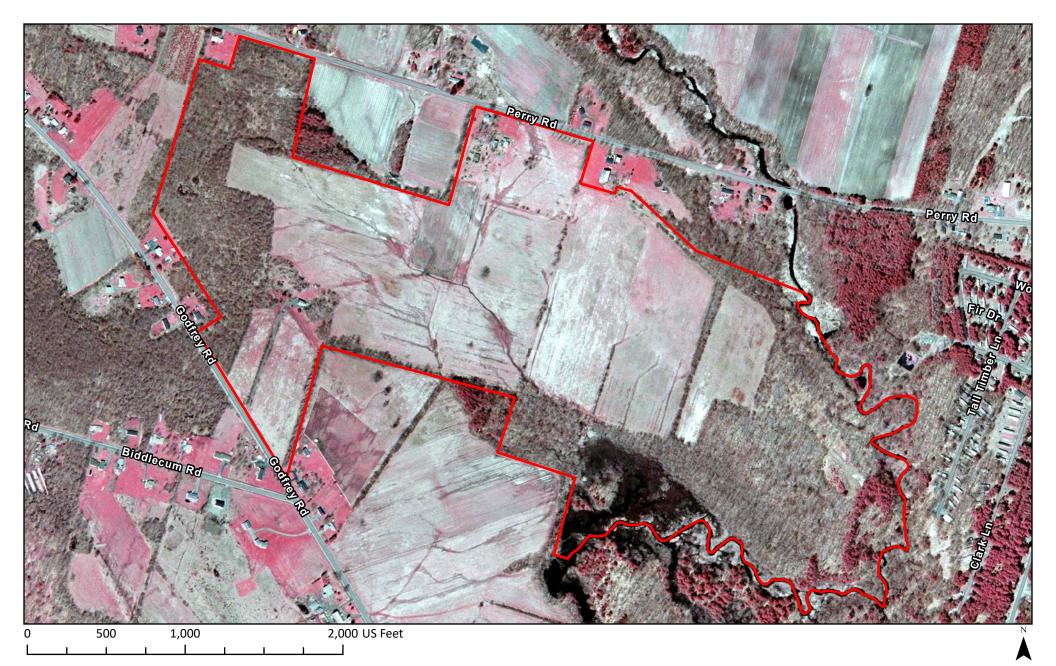
Imagery (1955) Fish Creek Town of Schroeppel, Oswego County, NY

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



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

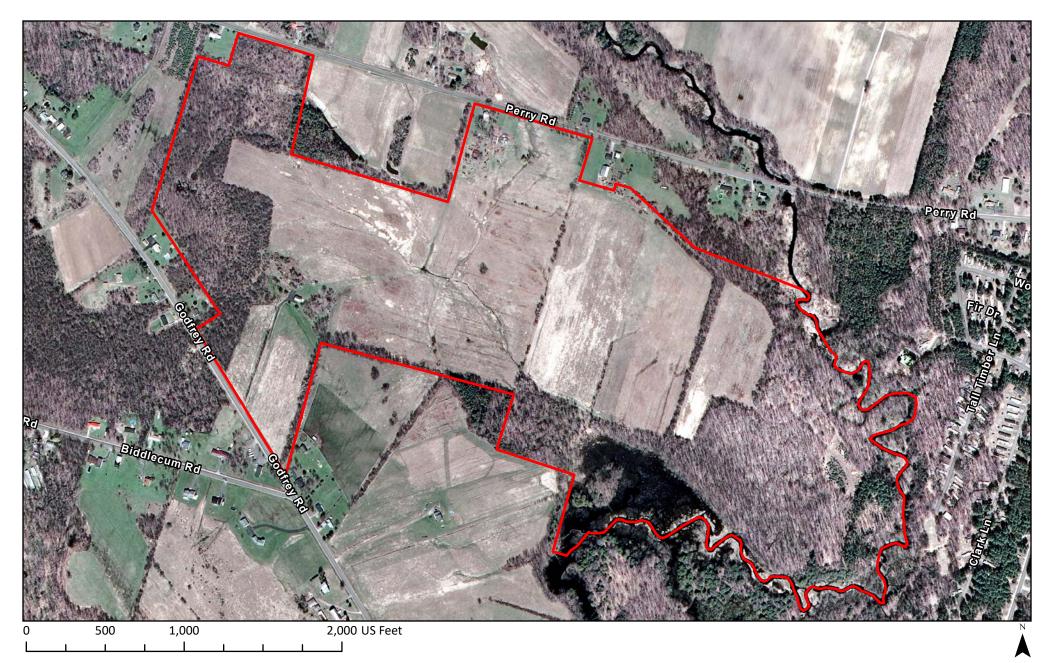
The Wetland Trust, Inc. 4729 State Route 414 Burdett, NY 14818 (607) 765-4780



Imagery (2003) Fish Creek Town of Schroeppel,

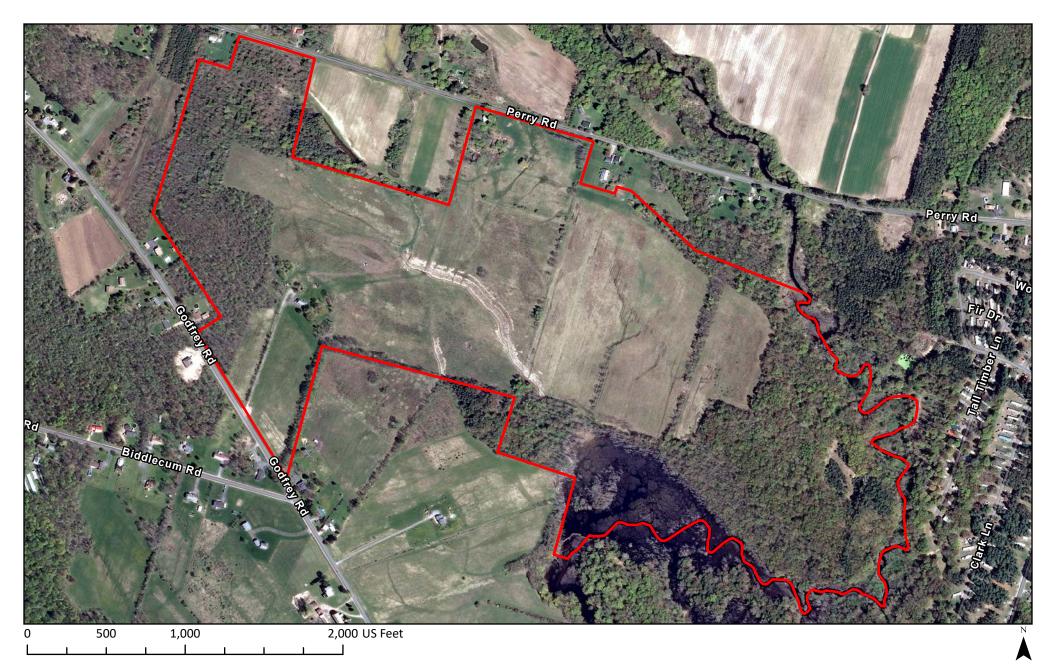
Oswego County, NY

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



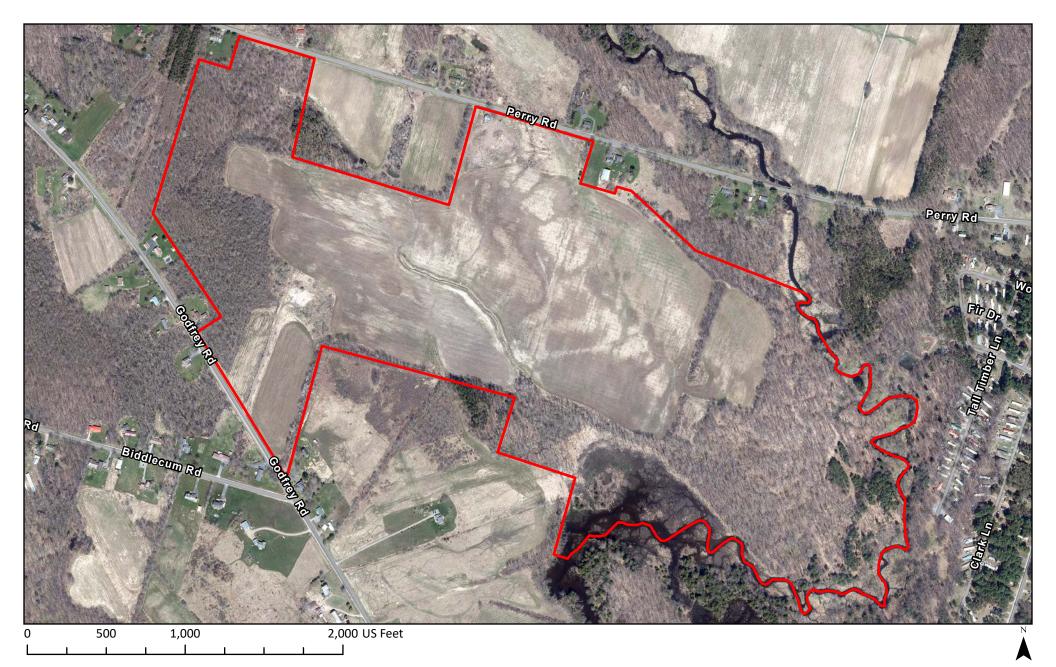
Imagery (2006) Fish Creek Town of Schroeppel, Oswego County, NY

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



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

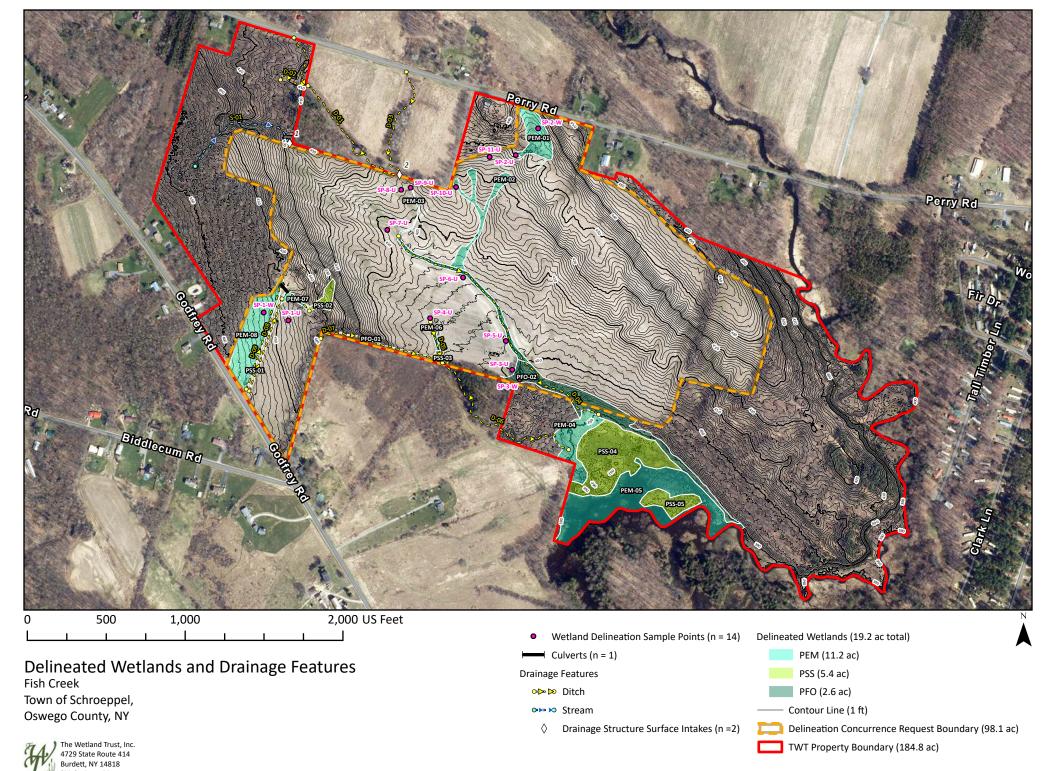
The Wetland Trust, Inc. 4729 State Route 414 Burdett, NY 14818 (607) 765-4780



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:I | NY Sampling Point: SP1-U |
| Investigator(s): MH, HF, KG | | Section, Township, Range: | <u> </u> | |
| Landform (hillside, terrace, etc. |): | Local relief (concave, convex, none): | | Slope (%): |
| Subregion (LRR or MLRA): LF | RR L Lat: 43.295163 | Long: -76.278 | | Datum: |
| Soil Map Unit Name: ScB: Scr | <u>-</u> | | NWI classific | |
| | ions on the site typical for this time of y | vear? Yes No No No | _ | |
| , , | •• | | | |
| | , or Hydrologysignifica | | · | |
| - | , or Hydrologynaturally | | - | • |
| SUMMARY OF FINDING | SS – Attach site map showing | sampling point locations, t | ransects, in | nportant features, etc. |
| Hydrophytic Vegetation Prese | nt? 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 II | | |
| Remarks: (Explain alternative | procedures here or in a separate repo | ort.) | | |
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| HYDROLOGY | | | | |
| Wetland Hydrology Indicato | | | | tors (minimum of two required) |
| | of one is required; check all that apply) | | Surface Soil (| , , |
| Surface Water (A1) | | ed Leaves (B9) | Drainage Pat | |
| High Water Table (A2) | Aquatic Faur | | Moss Trim Lii | |
| Saturation (A3) | Marl Deposit | | | Nater Table (C2) |
| Water Marks (B1) | | ulfide Odor (C1) | Crayfish Burn | |
| Sediment Deposits (B2) Drift Deposits (B3) | | zospheres on Living Roots (C3) Reduced Iron (C4) | _ | sible on Aerial Imagery (C9) ressed Plants (D1) |
| Algal Mat or Crust (B4) | | Reduction in Tilled Soils (C6) | Geomorphic | |
| Iron Deposits (B5) | Thin Muck S | | Shallow Aquit | |
| Inundation Visible on Aer | | in in Remarks) | _ | phic Relief (D4) |
| Sparsely Vegetated Cond | | | FAC-Neutral | , , |
| Field Observations: | | | _ | |
| Surface Water Present? | Yes No x Depth (incl | 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 Hydro | logy Present? | Yes No X |
| (includes capillary fringe) | | | | |
| Describe Recorded Data (stre | eam gauge, monitoring well, aerial pho | os, previous inspections), if available | : | |
| | | | | |
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| Remarks: | | | | |
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| | Absolute Dominant Indicator | | 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 ¹ | |
| | | | | 4 - Morphological Adaptations ¹ (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 ¹ (Ex | (plain) |
| Poa pratensis | 12 | No | FACU | ¹ 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 | | Herb – All herbaceous (non-woody) plants, r of size, and woody plants less than 3.28 ft tal | |
| /oody Vine Stratum (Plot size:) | | | | | |
| | | | | Woody vines – 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 | . | | x Feature | | . 2 | _ | _ | | | |
| (inches) | Color (moist) | <u></u> % | Color (moist) | % | Type ¹ | Loc ² | Texture | Re | marks | | |
| 0-9 | 10YR 2/2 | 100 | | | | | Loamy/Clayey | | | | |
| 9-10 | 10YR 2/2 | 87 | 10YR 5/6 | 5 | С | M | Loamy/Clayey | Prominent red | ox concentrations | | |
| | | | 7.5YR 4/6 | 8 | C | M | | Prominent red | ox concentrations | | |
| 10-12 | 10YR 5/6 | 100 | | | | | Loamy/Clayey | | | | |
| 12-16 | 7.5YR 4/6 | 100 | | | | | Sandy | | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| | Concentration, D=Dep | oletion, RM | =Reduced Matrix, CS | =Covere | ed or Coat | ed Sand | | ation: PL=Pore Lir r Problematic Hyd | | | |
| - | il Indicators: sol (A1) | | Polyvalue Below | Surface | (S8) (I RI | 2 R | | ck (A10) (LRR K, L | | | |
| | Epipedon (A2) | • | MLRA 149B) | Juliace | (30) (EIXI | νι, | | airie Redox (A16) (I | · | | |
| | | | • | e (S9) (I | RRR M | I RA 149 | | cky Peat or Peat (S | · | | |
| Black Histic (A3) Hydrogen Sulfide (A4) Thin Dark Surface (S9) (LRR R, MLRA 149 High Chroma Sands (S11) (LRR K, L) | | | | | · | Below Surface (S | | | | | |
| | ied Layers (A5) | • | Loamy Mucky Mi | | | | | Surface (S9) (LRF | | | |
| | ted Below Dark Surfac | · (Λ11) | | - | | , ∟) | | | • | | |
| | | Se (ATT) | Loamy Gleyed M | - | .) | | Iron-Manganese Masses (F12) (LRR K, L, R) | | | | |
| | Dark Surface (A12) | | Depleted Matrix (| | | | Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spedic (TA6) (MLRA 144A 145 149B) | | | | |
| | Mucky Mineral (S1) | | Redox Dark Surf | | | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | | |
| | Gleyed Matrix (S4) | • | Depleted Dark S | - | -7) | | Red Parent Material (F21) | | | | |
| | Redox (S5) | • | Redox Depression | | | | Very Shallow Dark Surface (TF12) | | | | |
| | ed Matrix (S6) | | Marl (F10) (LRR | K, L) | | | Other (Explain in Remarks) | | | | |
| Dark \$ | Surface (S7) | | | | | | | | | | |
| ³ Indicators | of hydrophytic vegeta | ition and w | etland hydrology mus | t be pres | ent, unles | s disturb | ed or problematic. | | | | |
| Restrictive | e Layer (if observed) | : | | | | | | | | | |
| Type: | | | | | | | | | | | |
| Depth (ii | nches): | | | | | | Hydric Soil Pres | sent? Yes_ | No <u>X</u> | | |
| Remarks: | | | | | | | | | | | |
| | orm is revised from N 2013 Errata. (http://w | | | | | | | S Field Indicators of | Hydric Soils version | | |
| 1.0 Maich | 2013 Errata. (IIIIp.//wi | ww.iiics.us | da.gov/internet/F3L_ | DOCON | LIN I S/IIIC | 5 142µ2_ | 031293.d0CX) | | | | |
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| 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: | |
| 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.) | | |
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| LIVERELLE | | | |
| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | | 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) | | Lines (B16) |
| X Saturation (A3) | Marl Deposits (B15) | | on Water Table (C2) |
| 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: | | | |
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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 Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 2 OBL 3. Lythrum salicaria No Rumex crispus 2 Problematic Hydrophytic Vegetation¹ (Explain) 4. No FAC 5. Lysimachia nummularia 8 No **FACW** ¹Indicators 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

| | escription: (Describe | to the dep | | | | or conf | irm the absence o | f indicators | s.) | |
|-------------------------|---------------------------|---------------|-------------------------|----------------|--------------------------|------------------|--|---------------|--------------------------------------|--------------|
| Depth (inches) | Matrix Color (moist) | % | Color (moist) | x Feature % | es _Type ¹ | Loc ² | Texture | | Remarks | |
| 0-14 | 10YR 2/2 | 98 | 10YR 5/8 | 2 | С | M | Loamy/Clayey | Promin | nent redox concen | trations |
| - | | 90 | | | | | | FIOIIII | ient redox concert | u auoris |
| 14-18 | 10YR 5/4 | 80 | 10YR 3/1 | 20 | C | <u>M</u> | Sandy | Distin | nct redox concentr | ations |
| | | | | | | | | | | |
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| | Concentration, D=Dep | letion, RM | =Reduced Matrix, CS | =Covere | ed or Coat | ed Sand | | | Pore Lining, M=M | |
| - | oil Indicators: | | Polyvalue Below | Surface | (CQ) (I DI | 9 B | | | atic Hydric Soils ³ | |
| | sol (A1) Epipedon (A2) | - | MLRA 149B) | Suriace | (30) (LKI | CK, | | | RR K, L, MLRA 14 (A16) (LRR K, L, | - |
| | Histic (A3) | | Thin Dark Surface | ce (S9) (I | LRR R. M | LRA 149 | | | Peat (S3) (LRR K | - |
| | ogen Sulfide (A4) | - | High Chroma Sa | | | | · - | - | face (S8) (LRR K | |
| | fied Layers (A5) | - | Loamy Mucky Mi | | | | | | 69) (LRR K, L) | , , |
| | eted Below Dark Surfac | e (A11) | Loamy Gleyed M | - | | . , | | - | sses (F12) (LRR I | K, L, R) |
| Thick | Dark Surface (A12) | | Depleted Matrix | (F3) | | | Piedmon | t Floodplain | Soils (F19) (MLR | A 149B) |
| Sandy | y Mucky Mineral (S1) | r | Redox Dark Surf | face (F6) |) | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | |
| Sandy | y Gleyed Matrix (S4) | | Depleted Dark S | - | - | | | ent Material | ` ' | |
| | y Redox (S5) | | Redox Depression | | | | | | Surface (TF12) | |
| | ped Matrix (S6) | | Marl (F10) (LRR | K, L) | | | Other (E | xplain in Re | marks) | |
| Dark | Surface (S7) | | | | | | | | | |
| ³ Indicators | s of hydrophytic vegeta | tion and w | etland hydrology mus | t he nres | sent unles | s disturb | ed or problematic | | | |
| | re Layer (if observed): | | Staria Hydrology Illus | t be pree | ont, unico | <u>o diotarb</u> | The problematic. | | | |
| Type: | | | | | | | | | | |
| Depth (i | | | | | | | Hydric Soil Pre | esent? | Yes M | No X |
| Remarks: | | | | | | | 1 | | | |
| | form is revised from No | orthcentral | and Northeast Regio | nal Supp | olement Ve | ersion 2.0 | to reflect the NRC | S Field Indic | cators of Hydric So | oils version |
| 7.0 March | 2013 Errata. (http://ww | vw.nrcs.us | da.gov/Internet/FSE_ | DOCUM | ENTS/nrc | s142p2_ | 051293.docx) | | - | |
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| 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 | | | 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 Undrology Proconf | 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 (5.1.5 | ani gaage, memering | | | , II availabio. | |
| Remarks: | | | | | |
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| roo Stratum (Diat size: | 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 ¹ | | |
| 2. Trifolium pratense | 4 | No | FACU | 4 - Morphological Adaptations ¹ (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 | ¹ 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 | | | | Herb – All herbaceous (non-woody) p | 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 ¹ | Loc ² | 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 |
| | | | | | | | | | | |
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| | Concentration, D=Dep | letion, RM | Reduced Matrix, CS | =Covere | ed or Coat | ed Sand | | | Pore Lining, M= | |
| - | oil Indicators: | | Polyvolue Relow | Surface | (CQ) /I D 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) (LRR | • |
| | ogen Sulfide (A4) | _ | High Chroma Sa | | | | | - | ace (S8) (LRR | · · |
| | fied Layers (A5) | _ | Loamy Mucky Mi | | | | | rk Surface (S9 | | . K, L) |
| | eted Below Dark Surfac | .e (A11) | Loamy Gleyed M | - | | , L) | | • | ses (F12) (LRI | 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 S | 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 | | | | | | | | |
| - · · - | | | | | | | Lindria Sail Dr | | Vaa | Na V |
| Depth (ii | - | | | | | | 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 |
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| Project/Site: Godfrey Rd | City/County: O | swego | Sampling Date: 5/17/24 |
|--|--|---------------------------------|--|
| Applicant/Owner: TWT | | State: | NY Sampling Point: SP2-W |
| Investigator(s): MH, HF, KG | Section, Towns | hip, Range: | |
| Landform (hillside, terrace, etc.): | Local relief (conca | ave, convex, none): | Slope (%): |
| Subregion (LRR or MLRA): LRR L | | Long: -76.272439 | Datum: |
| Soil Map Unit Name: | _ | NWI classi | |
| Are climatic / hydrologic conditions on the site typ | ical for this time of year? Ves | X No (If no, explair | |
| | - | Are "Normal Circumstances" pr | |
| Are Vegetation , Soil , or Hydrolo | | · | · · · · · · · · · · · · · · · · · · · |
| Are Vegetation, Soil, or Hydrolo | | (If needed, explain any answers | |
| SUMMARY OF FINDINGS – Attach sit | e map showing sampling poi | int locations, transects, | important features, etc. |
| Hydrophytic Vegetation Present? Yes | X No Is the Sam | noled Area | |
| Hydric Soil Present? Yes | No X within a W | | No X |
| · · | | onal Wetland Site ID: | - <u>- </u> |
| Remarks: (Explain alternative procedures here | or in a separate report.) | _ | |
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| HYDROLOGY | | | |
| Wetland Hydrology Indicators: | | Secondary Indi | cators (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) | | Lines (B16) |
| Saturation (A3) | Marl Deposits (B15) | | on Water Table (C2) |
| Water Marks (B1) | Hydrogen Sulfide Odor (C1) | | urrows (C8) |
| Sediment Deposits (B2) | Oxidized Rhizospheres on Livin | · · · — | 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) 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) | Outor (Explain in Nomano, | X FAC-Neutr | • |
| Field Observations: | | | a. 1961 (2.5) |
| Surface Water Present? Yes X No | Depth (inches): | | |
| Water Table Present? Yes X No | | | |
| Saturation Present? Yes X No | | Wetland Hydrology Present | t? Yes X No |
| (includes capillary fringe) | | | |
| Describe Recorded Data (stream gauge, monito | ring well, aerial photos, previous inspe | ctions), if available: | |
| | | | |
| | | | |
| Remarks: | | | |
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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 Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) OBL 3. Lythrum salicaria 6 No 7 Problematic Hydrophytic Vegetation¹ (Explain) 4. Juncus effusus No OBL 5. Lysimachia nummularia 2 No **FACW** ¹Indicators 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 ¹ | Loc ² | 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 | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| ¹ Type: C= | Concentration, D=Dep | letion, RM= | Reduced Matrix, CS | =Covere | ed or Coat | ed Sand 0 | Grains. ² Loo | cation: PL=Pore Lining, M=Matrix. | | |
| | il Indicators: | • | , | | | | | r Problematic Hydric Soils³: | | |
| Histos | sol (A1) | _ | Polyvalue Below | Surface | (S8) (LRF | RR, | 2 cm Mu | ck (A10) (LRR K, L, MLRA 149B) | | |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Pr | airie Redox (A16) (LRR K, L, R) | | |
| Black | Histic (A3) | | Thin Dark Surfac | e (S9) (I | LRR R, MI | LRA 149E | 5 cm Mu | cky Peat or Peat (S3) (LRR K, L, R) | | |
| — Hydro | gen Sulfide (A4) | · | High Chroma Sa | nds (S11 | 1) (LRR K | , L) | Polyvalue | e Below Surface (S8) (LRR K, L) | | |
| Stratif | ied Layers (A5) | _ | Loamy Mucky Mi | ineral (F | 1) (LRR K | , L) | Thin Dar | k Surface (S9) (LRR K, L) | | |
| Deple | ted Below Dark Surfac | e (A11) | Loamy Gleyed M | latrix (F2 | !) | | Iron-Man | iganese Masses (F12) (LRR K, L, R) | | |
| | Dark Surface (A12) | ` <i>-</i> | Depleted Matrix | | • | | Piedmont Floodplain Soils (F19) (MLRA 149B) | | | |
| | Mucky Mineral (S1) | _ | Redox Dark Surf | |) | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | |
| | Gleyed Matrix (S4) | _ | — Depleted Dark S | urface (F | - 7) | | | ent Material (F21) | | |
| | Redox (S5) | _ | Redox Depression | | , | | | allow Dark Surface (TF12) | | |
| | ed Matrix (S6) | _ | Marl (F10) (LRR | | | | | 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 | Jomont Va | 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) | | | |
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| 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 | · |
| | 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) |
| | ter-Stained Leaves (B9) Drainage Patterns (B10) |
| - | atic Fauna (B13) Moss Trim Lines (B16) |
| - | Dry-Season Water Table (C2) |
| | lrogen Sulfide Odor (C1) Crayfish Burrows (C8) |
| | 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 | cent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) |
| | 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: | |
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| | 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 ¹ |
| 1. Glycine max | | | | |
| 2 | | | | 4 - Morphological Adaptations ¹ (Provide supp data in Remarks or on a separate sheet) |
| 3 | | | | data in Nemarks of on a separate sheet) |
| 4 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5 | | | | ¹ 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 |
| , | | | | |
| , | - | | | 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 | - . | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| 0-6 | 5yr 5/1 | 100 | | | | | Loamy/Clayey | |
| 6-10 | 7.5yr 7/1 | 90 | 7.5yr 6/6 | 10 | | | Loamy/Clayey | |
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| 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 ³ : |
| - | sol (A1) | | Polyvalue Belov | v Surfac | e (S8) (LF | RR R, | | 10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | . , , | | | Redox (A16) (LRR K, L, R) |
| | 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) (LRR | K, L) | Polyvalue Belo | ow Surface (S8) (LRR K, L) |
| Strati | fied Layers (A5) | | Loamy Mucky N | /lineral (F | =1) (LRR | K, L) | Thin Dark Sur | face (S9) (LRR K, L) |
| | eted Below Dark Surfa | ice (A11) | | | | , | | se Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | , , | x Depleted Matrix | | , | | | odplain Soils (F19) (MLRA 149B) |
| | y Mucky Mineral (S1) | | Redox Dark Su | | 6) | | | (TA6) (MLRA 144A, 145, 149B) |
| | y Gleyed Matrix (S4) | | Depleted Dark | Surface | (F7) | | Red Parent M | |
| | y Redox (S5) | | Redox Depress | | | | | Dark Surface (TF12) |
| | ped Matrix (S6) | | ? Marl (F10) (LRF | | , | | Other (Explain | |
| | Surface (S7) | | | , , | | | | , |
| | . , | | | | | | | |
| ³ 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 March 2013 Errala. | (Hup.//wv | vw.nrcs.usua.gov/inte | illei/F3E | DOCO | /IEN I S/I | nrcs142p2_051293.docx) |) |
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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 | |
| | 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 | |
| | ned Leaves (B9) Drainage Patterns (B10) |
| High Water Table (A2) Aquatic Fau | <u>—</u> |
| Saturation (A3)Marl Depos | <u> </u> |
| - | Sulfide Odor (C1) Crayfish Burrows (C8) |
| | nizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) f Reduced Iron (C4) Stunted or Stressed Plants (D1) |
| l | Reduction in Tilled Soils (C6) Geomorphic Position (D2) |
| 1 | Surface (C7) Shallow Aquitard (D3) |
| | 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 | |
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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 ¹ | Loc ² | Texture | Remarks |
| 0-10 | 5yr 4/1 | 95 | 5yr 4/4 | 5 | | | Loamy/Clayey | |
| 10-16 | 7.5yr 5/2 | 65 | 7.5yr 4/1 | 15 | | | Loamy/Clayey | |
| | | | 7.5yr 5/6 | 20 | | | | |
| | | | 7.5yi 5/0 | | | | | |
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| | | | | | | | | _ |
| 1 _{Type: C} | =Concentration, D=De | nlotion D | M-Raduaad Matrix (| | arad or C | antod So | and Crains ² L coation: | PL=Pore Lining, M=Matrix. |
| | oil Indicators: | pietion, K | ivi-Reduced Matrix, C | J3-00VI | ered or C | oaleu Sa | | lematic Hydric Soils ³ : |
| - | sol (A1) | | Polyvalue Below | Surface | - (S8) (I | OR R | |) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | Ourrace | , (OO) (L I | XIX IX, | | edox (A16) (LRR K, L, R) |
| | | | , | 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 | | | K , L) | | ce (S9) (LRR K, L) |
| 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) (MLRA 149B) |
| 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 \ , ∟) | | | 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 | | | | | | | | |
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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 | x | |
| 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 Necestada Bata (cardain gaag | 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 | ≀ a, |
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| | 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 |
| ' | | | | 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 ¹ |
| 2. | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | | | data in Remarks or on a separate sheet) |
| | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| · - | | | | Troblematic riyuropriyite vegetation (Explain |
| | | | | ¹ 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 1 . | | | | 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: |) | | | |
| · · · · · · · · · · · · · · · · · · · | _' | | | Woody vines – 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.) | | |
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SOIL Sampling Point: SP4U

| | Matrix | | epth needed to doc Redo: | x Feature | es | | | |
|---|--|--------------|-----------------------------|------------|--------------------|------------------|----------------------------------|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-10 | 5yr 4/1 | 95 | 5yr 4/6 | 5 | | | Loamy/Clayey | |
| | | | | | | | | |
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| ¹ Type: C= | Concentration, D=De | epletion, RI | √=Reduced Matrix, (| CS=Cove | ered or C | oated Sai | nd Grains. ² Location | on: PL=Pore Lining, M=Matrix. |
| | oil Indicators: | | · · · · · · | | | | | roblematic Hydric Soils ³ : |
| - | sol (A1) | | Polyvalue Below | v Surface | e (S8) (LF | RR R, | | A10) (LRR K, L, MLRA 149B) |
| Histic | Epipedon (A2) | - | MLRA 149B) | | . , . | | | e Redox (A16) (LRR K, L, R) |
| | 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) (LRR K, L) |
| | fied Layers (A5) | - | Loamy Mucky M | | | | | urface (S9) (LRR K, L) |
| | 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) (MLRA 149B) |
| Sandy | y Mucky Mineral (S1) | _ | Redox Dark Sur | face (F6 |) | | Mesic Spodi | c (TA6) (MLRA 144A, 145, 149B) |
| 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) (LRF | 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. | |
| ³ Indicators | s of hydrophytic veget | | vetland hydrology mi | ust be pr | esent, un | | rbed or problematic. | |
| ³ Indicators | e Layer (if observed | d): | | ust be pr | esent, un | | bed or problematic. | |
| ³ Indicators Restrictiv Type: | e Layer (if observed | d): | | ust be pr | esent, um | | | nt? Yes X No |
| ³ Indicators Restrictiv Type: Depth (ii | re Layer (if observed | d): | | ust be pro | esent, un | | Hydric Soil Prese | nt? Yes <u>X</u> No |
| ³ Indicators Restrictiv Type: Depth (in | re Layer (if observed | d): | | | | | Hydric Soil Prese | |
| ³ 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 |
| ³ Indicators Restrictiv 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 |
| ³ Indicators Restrictiv 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 |
| ³ 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 |
| ³ Indicators Restrictiv 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 |
| ³ Indicators Restrictiv 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 |
| ³ Indicators Restrictiv 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 |
| ³ Indicators Restrictiv 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 |
| ³ Indicators Restrictiv 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 |
| ³ Indicators Restrictiv 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 |
| ³ Indicators Restrictiv 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 |
| ³ Indicators Restrictiv 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 | - |
| 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 | |
| | Sulfide Odor (C1) Crayfish Burrows (C8) |
| | thizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| l | of Reduced Iron (C4) Stunted or Stressed Plants (D1) |
| | 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 | |
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| 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 ¹ |
| - | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| - | | | | data in Remarks or on a separate sheet) |
| 3 | | | | , |
| 1 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5. | | | | ¹ 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. |
| | | | | Herb – 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 | | : ument 1 x Featur | | itor or co | onfirm the absence of in | dicators.) |
|-------------------------|--------------------------------|-----------|-------------------------------|--|--------------------|-----------------------|----------------------------------|--------------------------------------|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-10 | 5yr 4/1 | 95 | 5yr 4/6 | 5 | | | Loamy/Clayey | |
| | | | | | | | | |
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| | | | | | | | | |
| ¹ Type: C= | Concentration, D=Dep | oletion R | M=Reduced Matrix | CS=Cov | ered or C | oated Sa | nd Grains ² I ocation | PL=Pore Lining, M=Matrix. |
| | il Indicators: | , | , | | | | | plematic Hydric Soils ³ : |
| Histos | ol (A1) | | Polyvalue Belov | v Surfac | e (S8) (Ll | RR R, | 2 cm Muck (A1 | 0) (LRR K, L, MLRA 149B) |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Prairie R | edox (A16) (LRR K, L, R) |
| 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 | gen Sulfide (A4) | | High Chroma S | | | | Polyvalue Belov | w Surface (S8) (LRR K, L) |
| | ied Layers (A5) | | Loamy Mucky N | | | K , L) | | ace (S9) (LRR K, L) |
| | ted Below Dark Surfac | e (A11) | | | ⁻ 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 | | | | | ΓA6) (MLRA 144A, 145, 149B) |
| | 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 | 、 | | | Other (Explain) | ir remains) |
| | ourrace (07) | | | | | | | |
| ³ 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 | | | | | | |
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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 | |
| | 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 | |
| | ned Leaves (B9) Drainage Patterns (B10) |
| High Water Table (A2) Aquatic Fau | |
| Saturation (A3) Marl Depos | <u> </u> |
| - | Sulfide Odor (C1) Crayfish Burrows (C8) |
| | nizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| l | f Reduced Iron (C4) Stunted or Stressed Plants (D1) Reduction in Tilled Soils (C6) Geometric Position (D2) |
| 1 | n Reduction in Tilled Soils (C6) Geomorphic Position (D2) Surface (C7) Shallow Aquitard (D3) |
| | 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 | |
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| | |

| | 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 |
| B | | | | 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 ¹ (Provide supp data in Remarks or on a separate sheet) |
| 3. | | | | data in Nemarks of on a separate sheet) |
| 4 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5 | | | | ¹ 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. Herb – 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 |
| • |) | | | Woody vines – 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 ¹ | Loc ² | Texture | Remarks |
| 0-10 | 5yr 4/1 | 95 | 5yr 4/6 | 5 | | | Loamy/Clayey | |
| <u> </u> | <u> </u> | | 3yl 4/0 | | | | Loamy/Olaycy | |
| | | | | | | | | |
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| | | | | | | | | |
| ¹ Type: C: | Concentration, D=De | pletion, RM | =Reduced Matrix, | CS=Cov | ered or C | oated Sa | nd Grains. ² Location: | PL=Pore Lining, M=Matrix. |
| Hydric So | oil Indicators: | | | | | | Indicators for Pro | blematic Hydric Soils ³ : |
| Histo | sol (A1) | _ | Polyvalue Belov | v Surface | e (S8) (LF | RR R, | 2 cm Muck (A1 | 0) (LRR K, L, MLRA 149B) |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Prairie R | Redox (A16) (LRR K, L, R) |
| 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) (LRR | K, L) | | w Surface (S8) (LRR K, L) |
| | fied Layers (A5) | _ | Loamy Mucky N | | | | | ace (S9) (LRR K, L) |
| | eted Below Dark Surfa | ce (A11) | Loamy Gleyed I | | | , , | | e 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) (MLRA 144A, 145, 149B) |
| | y Gleyed Matrix (S4) | _ | Depleted Dark | | • | | | |
| | | _ | | | | | Red Parent Ma | |
| | y Redox (S5) | _ | Redox Depress | | 1 | | | Dark Surface (TF12) |
| | ped Matrix (S6) | _ | Marl (F10) (LRF | 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 | | _ | | ' = / | |
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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/(C0) |
| 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 | | | | | |
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| 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 |
| 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 ¹ |
| | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | | | data in Remarks or on a separate sheet) |
| 3 | | | | , , |
| 4 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5 | | | | ¹ 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. |
| | | | | Herb – 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 ¹ | Loc ² | Texture | Remarks |
| 0-10 | 5yr 4/1 | 95 | 5yr 4/6 | 5 | | | Loamy/Clayey | |
| 0-10 | | | | | | | Loamy/Olaycy | |
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| 1 _{Type:} C- | | nlotion DM- | Poduced Matrix | | orod or C | ootod So | nd Crains ² I apation | n: PL=Pore Lining, M=Matrix. |
| | oil Indicators: | pielion, Kivi- | Reduced Matrix, | C3-C0V | ered or C | oateu Sai | | oblematic Hydric Soils ³ : |
| _ | sol (A1) | | Polyvalue Belov | w Surface | = (S8) (I F | R R | | (10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | _ | MLRA 149B) | | 3 (00) (L i | ara ra, | | Redox (A16) (LRR K, L, R) |
| | 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) (MLRA 149B) |
| | y Mucky Mineral (S1) | | Redox Dark Su | | 5) | | | (TA6) (MLRA 144A, 145, 149B) |
| | y Gleyed Matrix (S4) | _ | Depleted Dark | • | • | | Red Parent M | |
| | y Redox (S5) | _ | Redox Depress | | | | | Dark Surface (TF12) |
| l —— | ped Matrix (S6) | | Marl (F10) (LRI | ` ' | ' | | Other (Explain | ` ' |
| I — · · | Surface (S7) | | | , _/ | | | | · ···································· |
| | curiuss (ST) | | | | | | | |
| ³ 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 |
| | | | | | | | 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 | · / |
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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 - | Attach site map showing | sampling point locations, | transects, important features | |
| Hydrophytic Vegetation Present? | Yes No x | Is the Sampled Area | | |
| Hydric Soil Present? | Yes No x | · | res No _X | |
| Wetland Hydrology Present? | Yes No x | If yes, optional Wetland Site ID: | | |
| | | | | |
| 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 | | | | |
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| | 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 | |
| 1. Glycine max | | Yes | UPL | 3 - Prevalence Index is ≤3.0 ¹ |
| 2 | | | | 4 - Morphological Adaptations ¹ (Provide supp data in Remarks or on a separate sheet) |
| 3 | | | | uata ili Nemarks or on a separate sheet) |
| 4 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5 | | | | 16. 6. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. |
| • | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic |
| | | | | Definitions of Vegetation Strata: |
| | | | | Tree – Woody plants 3 in. (7.6 cm) or more in |
| 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 ¹ | Loc ² | Texture | Remarks |
| | | | | 10 | | | L comy/Clayey | |
| 0-10 | 10yr 4/1 | 90 | 5yr 4/6 | 10 | | | Loamy/Clayey | |
| | | | | | | | | |
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| | | | | | | | | |
| ¹ Type: C=0 | Concentration, D=Dep | oletion, R | RM=Reduced Matrix, 0 | CS=Cove | ered or C | oated Sa | ınd Grains. ² Lo | ocation: PL=Pore Lining, M=Matrix. |
| Hydric Soi | I Indicators: | | | | | | Indicators f | or Problematic Hydric Soils ³ : |
| Histoso | ol (A1) | | Polyvalue Below | Surface | (S8) (LF | RR R, | 2 cm Mu | uck (A10) (LRR K, L, MLRA 149B) |
| Histic E | Epipedon (A2) | | MLRA 149B) | | | | | rairie Redox (A16) (LRR K, L, R) |
| | Histic (A3) | | Thin Dark Surface | | | | | ucky Peat or Peat (S3) (LRR K, L, R) |
| | gen Sulfide (A4) | | High Chroma Sa | | | | | ue Below Surface (S8) (LRR K, L) |
| | ed Layers (A5) | | Loamy Mucky M | | | K , L) | | rk Surface (S9) (LRR K, L) |
| | 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) (MLRA 144A, 145, 149B) |
| | 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 κ , ∟) | | | Other (E | zypiain in itemarks) |
| Daik S | dilace (37) | | | | | | | |
| ³ 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 | | | | | |
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| 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 | |
| · · | 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 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) |
| - | auna (B13) Moss Trim Lines (B16) |
| Saturation (A3)Marl Depo | |
| | Sulfide Odor (C1) Crayfish Burrows (C8) |
| <u> </u> | Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| l | of Reduced Iron (C4) Stunted or Stressed Plants (D1) |
| | on Reduction in Tilled Soils (C6) Geomorphic Position (D2) |
| | 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 | |
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| | 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 |
| 7 | | | | 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 ¹ |
| 2 | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| 3. | | | | data in Remarks or on a separate sheet) |
| 4. | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5. | | | | |
| • | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | | | | Definitions of Vegetation Strata: |
| | | | | Tree – Woody plants 3 in. (7.6 cm) or more in |
| 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 | | | | Herb – All herbaceous (non-woody) plants, 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 3.29 |
| 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.) | | |
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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 ¹ | Loc ² | Texture | Remarks |
| 0-10 | 5yr 4/1 | 95 | 5yr 4/6 | 5 | | | Loamy/Clayey | |
| | | | Oy1 4/0 | | | | Loamyolayey | |
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| | =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 ³ : |
| Histos | sol (A1) | | Polyvalue Belov | | e (S8) (Li | RR R, | | A10) (LRR K, L, MLRA 149B) |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Prairie | Redox (A16) (LRR K, L, R) |
| Black | Histic (A3) | | Thin Dark Surfa | ce (S9) | (LRR R, I | MLRA 14 | 9B)5 cm Mucky F | Peat or Peat (S3) (LRR K, L, R) |
| Hydro | ogen Sulfide (A4) | | High Chroma S | ands (S´ | 11) (LRR | K, L) | Polyvalue Be | low Surface (S8) (LRR K, L) |
| Strati | fied Layers (A5) | | Loamy Mucky N | /lineral (l | F1) (LRR | K , L) | Thin Dark Su | rface (S9) (LRR K, L) |
| 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) (MLRA 149B) |
| Sand | y Mucky Mineral (S1) | | Redox Dark Su | | 3) | | | (TA6) (MLRA 144A, 145, 149B) |
| | 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: | | | | | | | | |
| 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 | () |
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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 ^Ω | 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 | | | | ' |
| 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 ¹ |
| | | | | |
| 2 | | | | 4 - Morphological Adaptations ¹ (Provide supp data in Remarks or on a separate sheet) |
| 3 | | | | data in Normanie di dina doparate directy |
| 4 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5 | | | | ¹ 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. |
| | _ | | | Herb – 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 ¹ | Loc ² | Texture | Remarks |
| 0-9 | 5yr 4/1 | 95 | 5yr 4/6 | 5 | | | Loamy/Clayey | |
| | | | | | | | | |
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| ¹ Type: C: | =Concentration, D=De | pletion RM | =Reduced Matrix. | CS=Cov | ered or C | oated Sa | nd Grains. ² Location: | : PL=Pore Lining, M=Matrix. |
| | oil Indicators: | p. c. | | 00 00. | <u></u> | | | blematic Hydric Soils ³ : |
| _ | sol (A1) | | Polyvalue Belov | v Surface | e (S8) (LF | RR R. | | (0) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | _ | MLRA 149B) | | - () (| , | | Redox (A16) (LRR K, L, R) |
| | 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) (LRR K, L) |
| | 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) (MLRA 144A, 145, 149B) |
| | y Gleyed Matrix (S4) | _ | Depleted Dark | | | | Red Parent Ma | |
| | y Redox (S5) | _ | Redox Depress | | | | | Dark Surface (TF12) |
| | ped Matrix (S6) | _ | Marl (F10) (LRF | K K, L) | | | Other (Explain | in Remarks) |
| Dark | Surface (S7) | | | | | | | |
| 2 | | | | | | | | |
| ³ 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 |
| | | | _ | | _ | | , – | |
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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 | 43.2979922350227 | Long: -76.273595919586 | 4 Datum: WGS 84 |
| Soil Map Unit Name RhB: Rhinebeck silt loam, 2-6% s | | | 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 | | | |
| 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) |
| - | Aquatic Fauna (B13) | Moss Trim | Lines (B16) |
| | Marl Deposits (B15) | | n Water Table (C2) |
| | Hydrogen Sulfide Odor (C1) | · | urrows (C8) |
| <u> </u> | Oxidized Rhizospheres on Liv | · · · · · · · · · · · · · · · · · · · | Visible on Aerial Imagery (C9) |
| | Presence of Reduced Iron (C | | Stressed Plants (D1) |
| | 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 | | | |
| | | | |
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| <u>Tree Stratum</u> (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 ¹ |
| 2. | | | | 4 - Morphological Adaptations ¹ (Provide sup |
| 3 | | | | data in Remarks or on a separate sheet) |
| 4. | | | | Problematic Hydrophytic Vegetation ¹ (Explai |
| 5. | | | | |
| 6 | | | | ¹ 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: | _) | =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 ¹ | Loc ² | 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 | |
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| 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 ³ : |
| | sol (A1) | _ | Polyvalue Belov | | e (So) (Lr | KK K, | | 10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | (I DD D I | | | Redox (A16) (LRR K, L, R) |
| | (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) (MLRA 144A, 145, 149B) |
| | y Gleyed Matrix (S4) | _ | Depleted Dark | | ` ' | | Red Parent Ma | |
| | y Redox (S5) | _ | Redox Depress | |) | | | Dark Surface (TF12) |
| | oed Matrix (S6) | _ | Marl (F10) (LRI | R K, L) | | | Other (Explain | in Remarks) |
| Dark | Surface (S7) | | | | | | | |
| | | | | | | | | |
| ³ 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) | |
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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 | ✓ | ✓ | 1 | ✓ | ✓ | |
| 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 | | 1 | 1 | 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 | | ✓ | ✓ | 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 | | | | ✓ | | 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 | ✓ | 1 | 1 | | | |
| 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 | | | * | | | |
| 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 | | | √ | | ✓ | 1 |
| 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 CE: coours (broading) in NVC 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 | | | ✓ | ✓ | | |
| Bird | eastern bluebird | Sialia sialis | S5B G5: secure (breeding) in NYS and globally | - | Yes | | | 4 | | | |
| Bird | American goldfinch | Spinus tristis | S5 G5: secure in NYS and globally | - | Yes | | ✓ | ✓ | ✓ | | |
| Bird | European starling | Sturnus vulgaris | SNA G5: not applicable in NYS and secure globally | - | No | | | | 4 | | |
| Bird | solitary sandpiper | Tringa solitaria | Least concern | - | Yes | | | ✓ | | | |
| Bird | American robin | Turdus migratorius | S5B G5: secure (breeding) in NYS and globally | - | Yes | | ✓ | ✓ | ✓ | | |
| Bird | eastern kingbird | Tyrannus tyrannus | S5B G5: secure (breeding) in NYS and globally | - | Yes | | | 1 | | | |
| Bird | warbling vireo | Vireo gilvus | 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 | | ✓ | | | | |
| Frank | | Manakatta aasataaba | | | | | ✓ | | | | |
| Fungi | morel | Morchella esculenta | • | - | Yes | | • | | | | |
| Mammal | coyote | Canis latrans | Least concern | - | Yes | | ✓, | | ✓ | | |
| Mammal | North American beaver | Castor canadensis | Least concern | - | Yes | | ✓ | | | | , |
| Mammal | North American porcupine | Erethizon dorsatum | Least concern | - | Yes | | | | | | 🟏 |
| Mammal | white-tailed deer | Odocoileus virginianus | Least concern | - | Yes | √ | 1 | 1 | \ \ \ | y | |
| Mammal Mammal | eastern cottontail | Procyon lotor Sylvilagus floridanus | Least concern | | Yes Yes | | • | 1 | ✓ | • | |
| Plant | box elder | Acer negundo | | FAC | Yes | | | | | | 1 |
| Plant | red maple | Acer rubrum | | FAC | Yes | | ✓ | 1 | 1 | ✓ | ' |
| Plant | silver maple | Acer saccharinum | | FACW | Yes | | → | <i>'</i> | | • | |
| Plant | sugar maple | Acer saccharum | | FACU | Yes | | • | · | 1 | | |
| Plant | common yarrow | Achillea millefolium | | FACU | Yes | | ✓ | | | | |
| Plant | sweet flag | Acorus calamus | | OBL | No | | ✓ | 1 | | | |
| 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 | it - | FAC | Yes | | | 1 | | | |
| Plant | common ragweed | Ambrosia artemisiifolia | - | FACU | Yes | | | ✓ | | ✓ | |
| Plant | downy serviceberry | Amelanchier arborea | | | | | ✓ | | | | |
| | | | | FACU | Yes | | | | | | |
| Plant | hog peanut | Amphicarpaea bracteata | | FAC | Yes | | ✓ | | | | |
| Plant | hog peanut Canada anemone | Amphicarpaea bracteata Anemone canadensis | : | FAC FACW | Yes Yes | | √ | | | | |
| Plant Plant | hog peanut Canada anemone sweet vernal grass | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum | - | FACW FACU | Yes Yes No | ✓ | ✓ | √ | | 4 | |
| Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum | - - - - | FACW FACU FAC | Yes Yes No Yes | ✓ | √ | 1 | | √ | |
| Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata | - | FAC FACU FAC OBL | Yes Yes No Yes Yes | √ | ✓ ✓ ✓ | √ | | | |
| Plant Plant Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca | - - - - | FAC FACU FAC OBL UPL | Yes Yes No Yes Yes Yes | ✓ | √ | 1 | | | ✓ |
| Plant Plant Plant Plant Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis | - - - - | FAC FACU FAC OBL UPL FAC | Yes Yes No Yes Yes Yes Yes Yes Yes | ✓ | ✓ ✓ ✓ | √ | ✓ | √ | · · |
| Plant Plant Plant Plant Plant Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia | - | FAC FACW FACU FAC OBL UPL FAC FAC | Yes Yes No Yes Yes Yes Yes Yes Yes Yes | ✓ | ✓ ✓ ✓ | √ | ✓ | | ✓ · |
| Plant Plant Plant Plant Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis | - | FAC FACU FAC OBL UPL FAC | Yes Yes No Yes Yes Yes Yes Yes Yes | Y | ✓ ✓ ✓ | √ | ✓ | √ | ✓ |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua | · · · · · · · · · · · · · · · · · · · | FAC FACU FACU FAC OBL UPL FAC FAC OBL OBL | Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes | ✓ ———————————————————————————————————— | ✓ ✓ ✓ | √ √ √ | ✓ | ✓ ✓ ✓ | V |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa | · · · · · · · · · · · · · · · · · · · | FAC FACW FACU FAC OBL UPL FAC FAC OBL FACW | Yes Yes No Yes | ✓ ———————————————————————————————————— | ✓ ✓ ✓ | ✓ ✓ ✓ | ✓ · | ✓ ✓ ✓ | ✓ · |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus | - - - - - - - - - - | FAC FACU FACU FAC OBL UPL FAC FAC OBL FAC OBL FAC OBL | Yes Yes No Yes Yes Yes Yes Yes Yes Yes No | V | <i>* * * * *</i> | ✓ ✓ ✓ ✓ ✓ | · / | ✓ ✓ ✓ | <i>✓</i> |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis | · · · · · · · · · · · · · · · · · · · | FAC FACW FACU FAC OBL UPL FAC FAC OBL FAC FAC OBL FAC OBL FAC OBL | Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes No No | Y | <i>Y Y Y Y Y Y Y Y</i> | * * * * * * * * * * * * * * * * * * * | <i>V</i> | ✓ ✓ ✓ | <i>✓</i> |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch devil's beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda | | FAC FACW FACU FAC OBL UPL FAC FAC OBL FAC FAC OBL FAC FAC OBL FACW - FACW - FAC | Yes Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes | Y | <i>* * * * * * * * * *</i> | \(\frac{1}{2} \) | · · | ✓ ✓ ✓ | ✓ |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens cemua Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL OBL OBL OBL OBL OBL OBL OBL OBL | Yes Yes No Yes Yes Yes Yes Yes Yes No No Yes Yes Yes Yes Yes Yes | Y | <i>Y Y Y Y Y Y Y Y</i> | / / / / / / / | V | ✓ ✓ ✓ | ✓ |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch devil's beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FAC OBL FAC OBL FACW | Yes Yes No Yes | Y | <i>Y Y Y Y Y Y Y Y</i> | \(\frac{1}{2} \) | ✓ ✓ | ✓ ✓ ✓ | |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracitlima Carex lacustris | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL OBL OBL OBL | Yes Yes No Yes | Y | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | ✓ ✓ | · · · · · · · · · · · · · · · · · · · | ✓ |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata 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 tacustris Carex intumescens | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL FACW FAC OBL OBL FACW OBL | Yes Yes No Yes | Y | \frac{1}{4} | \(\frac{1}{2} \) | ✓ ✓ | ✓ ✓ ✓ | |
| Plant | hog peanut Canada anemone 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 targe yellow sedge graceful sedge lake sedge bladder sedge hop sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata 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 lupulina | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FACW OBL FACW OBL GAC OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL | Yes Yes No Yes | Y | \frac{1}{\sqrt{1}} | \(\frac{1}{2} \) | ✓ | · · · · · · · · · · · · · · · · · · · | |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Betula apoulifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex flava Carex flacustris Carex lacustris Carex intumescens Carex lupulina Carex lupulina Carex lupulina Carex lurida | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL | Yes Yes No Yes | Y | \frac{1}{4} | \(\frac{1}{2} \) | ✓ | · · · · · · · · · · · · · · · · · · · | |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis 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 Care | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL OBL FACW OBL OBL OBL OBL OBL FACW OBL | Yes Yes No Yes | Y | \frac{1}{4} | \(\frac{1}{2} \) | ✓ | ✓ ✓ ✓ | |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch modding 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 sallow sedge stroublesome sedge cyperus-like sedge | Amphicarpaea bracteata Anemone canadensis 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 flava Carex intumescens Carex lupulina Carex lurida Carex notesta Carex notesta Carex pseudocyperus | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL | Yes Yes No Yes | | \frac{1}{4} | \(\frac{1}{2} \) | ✓ — — — — — — — — — — — — — — — — — — — | · · · · · · · · · · · · · · · · · · · | |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis 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 Care | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL OBL FACW OBL OBL OBL OBL OBL FACW OBL | Yes Yes No Yes | | / / / / / / / | / / / / / / / / / / / / / / / / / / / | ✓ — — — — — — — — — — — — — — — — — — — | ✓ ✓ ✓ | ✓ |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch modding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata 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 triumescens Carex lupulina Carex lurida Carex rurida Carex rurida Carex rurida Carex nolesta Carex scoparia | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL OBL OBL OBL OBL OBL OBL FACW OBL FACW OBL OBL FACW OBL | Yes Yes No Yes | | / / / / / / / | \frac{1}{1} | <i>\</i> | V V V V V V V V V V V V V V V V V V V | ✓ |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch gray birch smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge troublesome sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias incamata Asclepias syriaca Betula alleghaniensis Betula populifolia Biidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex lacustris Carex luqulina Carex luqulina Carex molesta Carex pseudocyperus Carex scoparia Carex stipata | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL OBL OBL OBL FACU OBL FACU OBL FACW OBL FACW OBL FACW OBL | Yes Yes No Yes | | / / / / / / / | \frac{1}{1} | | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · |
| Plant | hog peanut Canada anemone 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 sallow sedge sallow sedge cyperus-like sedge broom sedge awi-fruited sedge ussock sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula aleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex intumescens Carex lupulina Carex nurida Carex nurida Carex pseudocyperus Carex stipata Carex stopata | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW GAC OBL OBL FACW OBL OBL FACU OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL | Yes 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 | hog peanut Canada anemone 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 tringed sedge large yellow sedge graceful sedge lake sedge bladder sedge sallow sedge troublesome sedge troublesome sedge proom sedge awl-fruited sedge lussock sedge tussock sedge tussock sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata 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 facustris Carex intumescens Carex tupulina Carex tupulina Carex molesta Carex seudocyperus Carex stipata Carex vulplinoidea | | FAC FACW FACU FAC OBL UPL FAC OBL FACW FAC OBL OBL OBL OBL FACW OBL FACW OBL FACW OBL FACW OBL OBL FACW OBL OBL FACW OBL OBL FACW OBL OBL OBL FACW OBL OBL OBL OBL | Yes 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 | hog peanut Canada anemone 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 targe yellow sedge graceful sedge lake sedge bladder sedge bladder sedge troub sedge troubersome sedge cyperus-like sedge troubersome sedge awt-fruited sedge tussock sedge tussock sedge fox sedge fox sedge ironwood | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris Carex lurida Carex lurida Carex pseudocyperus Carex scoparia Carex stricta Carex candiniana | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL | Yes Yes 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 | hog peanut Canada anemone 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 toublesome sedge troublesome sedge troublesome sedge awt-truited sedge tussock sedge fox sedge ironwood bitternut hickory | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex finita Carex finita Carex finita Carex finitumescens Carex lurida Carex lurida Carex servinita Carex pseudocyperus Carex scoparia Carex stricta Carex stricta Carex stricta Carex stricta Carex upuliniad Carex stricta Carex stricta Carex stricta Carex cardiniana Carya cordiformis | | FAC FACW FACU FACC OBL UPL FAC OBL FACC OBL FACW FAC OBL | Yes Yes 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 | hog peanut Canada anemone 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 bladder sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head | Amphicarpaea bracteata Anemone canadensis 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 funda Carex tupulina Carex tupulina Carex tupulina Carex supulina Carex stipata Carex stipata Carex stipata Carex stipata Carex stricta Carex pulina Carex stipata Carex stipata Carex stricta Carex pulina Carex carex flava Carex stipata Carex caroliniana Carya cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL FACW OBL OBL OBL FACW OBL OBL OBL FACW OBL OBL FACW OBL | Yes Yes 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 | hog peanut Canada anemone 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 sallow sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge frox sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head lamb's quarters | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bildens cernua Bildens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex gracillima Carex turida Carex intumescens Carex turida Carex molesta Carex supulina Carex supulina Carex stipata Carex stipata Carex stipata Carex stricta Carex stricta Carex vulpinoidea Carya cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra Chenopodium album | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW | Yes Yes 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 | hog peanut Canada anemone 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 bladder sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head | Amphicarpaea bracteata Anemone canadensis 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 funda Carex tupulina Carex tupulina Carex tupulina Carex supulina Carex stipata Carex stipata Carex stipata Carex stipata Carex stricta Carex pulina Carex stipata Carex stipata Carex stricta Carex pulina Carex carex flava Carex stipata Carex caroliniana Carya cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL FACW OBL OBL OBL FACW OBL OBL OBL FACW OBL OBL FACW OBL | Yes Yes No Yes | | / / / / / / / / / / / / / / / / / / / | \(\frac{1}{4} \) | | V V V V V V V V V V V V V V V V V V V | <i>*</i> |

| | | | | | | 1 , 1 | | | | | |
|---|---|--|--|---|---|---------------------------------------|-----------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Plant | silky dogwood | Cornus amomum | - | FACW | Yes | ✓ | <u> </u> | √ | √ | ✓ | V |
| Plant | gray dogwood | Cornus racemosa | - | FAC | Yes | | ✓ | ✓ | ✓ | | V |
| Plant | red-osier dogwood | Cornus sericea | - | FACW | Yes | | | | | | √ |
| Plant | hawthorn | Crataegus sp. | - | - | - | | ✓ | | | | ✓ |
| Plank | common yellow nut sedge | Cyperus esculentus | - | FACW | Yes | | | ✓ | | ✓ | |
| Plant | false yellow nut sedge | Cyperus strigosus | - | FACW | Yes | | | ✓ | | ✓ | |
| Plant | orchard grass | Dactylis glomerata | - | FACU | No | ✓ | | | | ✓ | |
| Plant | wild carrot | Daucus carota | - | UPL | No | | ✓ | | | | |
| Plant | water willow | Decodon verticillatus | - | OBL | Yes | | | ✓ | | | ✓ |
| Plant | tufted hair grass | Deschampsia cespitosa | - | - | Yes | | | | | ✓ | |
| Plant | digit grass | Digitaria eriantha | - | - | No | | ✓ | | | | |
| Plant | smooth crab grass | Digitaria ischaemum | - | FACU | No | | | ✓ | | | |
| Plant | tall flat-topped white aster | Doellingeria umbellata | - | FACW | Yes | | | | | ✓ | |
| Plant | common wood fern | Dryopteris intermedia | - | FAC | Yes | | ✓ | | | | ✓ |
| Plant | autumn olive | Elaeagnus umbellata | - | = | No | | ✓ | | | | |
| Plant | blunt spike rush | Eleocharis obtusa | - | OBL | Yes | | ✓ | | | ✓ | 1 |
| Plant | fringed wilowherb | Epilobium ciliatum | - | FACW | Yes | | | | | √ | |
| Plant | purpleleaf willowherb | Epilobium coloratum | | OBL | Yes | | 1 | ✓ | | 1 | |
| Plant | field horsestail | Equisetum arvense | | FAC | Yes | | | | √ | √ | / |
| Plant | scouringrush horsetail | Equisetum hyemale | | FAC | Yes | ✓ | | | · / | • | |
| | | | | FACU | | • | | 1 | | | |
| Plant | annual daisy fleabane small daisy fleabane | Erigeron annuus | | FACU | Yes | | | V | | | |
| Plant | | Erigeron strigosus Erythronium americanum | | | | | ✓ | | ✓ | | |
| Plant | yellow trout lily | | - | - EACW | Yes | | • | 1 | - | ✓ | 1 |
| Plant | boneset | Eupatorium perfoliatum | - | FACW | Yes | | | · · | | ✓ | , |
| Plant | common flat-topped goldenrod | - | - | FAC | Yes | ✓ | | | | V | |
| Plant | spotted Joe Pye weed | Eutrochium maculatum | - | OBL | Yes | V | | | | | |
| Plant | American beech | Fagus grandifolia | - | FACU | Yes | | | | ✓ | √ | |
| Plant | common wild strawberry | Fragaria virginiana | - | FACU | Yes | | <u>√</u> | | | ✓ | ✓ |
| Plant | glossy buckthorn | Frangula alnus | - | FAC | No | | ✓ | | | | |
| Plant | white ash | Fraxinus americana | - | FACU | Yes | | ✓ | | | | ✓ |
| Plant | green ash | Fraxinus pennsylvanica | - | FACW | Yes | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Plant | hedge bedstraw | Galium album | - | FACU | Yes | ✓ | | ✓ | | ✓ | |
| Plant | common marsh bedstraw | Galium palustre | - | OBL | Yes | | ✓ | | | ✓ | |
| Plant | yellow avens | Geum aleppicum | - | FAC | Yes | | ✓ | ✓ | | | |
| Plant | white avens | Geum canadense | - | FAC | Yes | | | ✓ | | | ✓ |
| Plant | town avens | Geum urbanum | - | - | No | | ✓ | ✓ | | | |
| | | | | | | | | | | | |
| Plant | American manna grass | Glyceria maxima | - | OBL | No | | | ✓ | | ✓ | |
| Plant Plant | American manna grass fowl manna grass | Glyceria maxima Glyceria striata | - | OBL OBL | No Yes | | ✓ | √ | | √ | - |
| | | | - - - | | | ✓ | √ | · · | ✓ | | - |
| Plant | fowl manna grass | Glyceria striata | - - - | OBL | Yes | ✓ | | ✓ | √ | √ | ✓ |
| Plant Plant | fowl manna grass soybean | Glyceria striata Glycine max | - | OBL - | Yes - | ✓ ✓ | | √ ✓ | ✓ | √ | ✓ |
| Plant Plant Plant | fowl manna grass soybean marsh cubweed | Glyceria striata Glycine max Gnaphalium uliginosum | - | OBL - FAC | Yes - No | | | √ ✓ | √ | √ | ✓ |
| Plant Plant Plant Plant | fowl manna grass soybean marsh cubweed dame's rocket | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis | - | OBL - FAC FACU | Yes - No No | | | ✓ ✓ ✓ | ✓ ✓ | √ | √ |
| 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 | | | ✓ ✓ ✓ | | √ | · · |
| 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 | | | ✓ ✓ ✓ | | √ | |
| 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 | ✓ · | √ | ✓ ✓ ✓ | | √ | |
| 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</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 | Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus | - - - - - - - | OBL - FAC FACU OBL - FACW OBL OBL OBL | Yes - No No No No No Yes Yes Yes | ✓ · | √ | * * * * * * * * * * * * * * * * * * * | | √ | · · |
| 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 | 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 FAC | Yes - No No No No Yes Yes Yes Yes | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ | <i>y y y y y y y</i> | ✓ | ✓ ✓ | <i>y</i> |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewetweed blue flag soft rush path rush rice cut grass | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides | | OBL - FAC FACU OBL FACW OBL OBL OBL OBL | Yes - No No No No Yes Yes Yes Yes Yes Yes | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>*</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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum ps. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin | - - - - - - - - - - | OBL - FAC OBL - FACW OBL OBL OBL FACW OBL FACC OBL FACCW OBL | Yes - No No No No No - Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | <i>V V V V</i> | <i>y</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 | 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 - FAC OBL - FACW OBL OBL OBL OBL FACW OBL FACC OBL FACC OBL FACC OBL FACW FACW | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>*</i> | · · · · · · · · · · · · · · · · · · · | ✓ | ✓ ✓ | <i>y</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 | Glyceria striata Glycine max Gnaphalium 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 | | OBL - FAC FACU OBL - FACW OBL OBL FACW OBL FACC OBL FACC FACW FACU FACU | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ | <i>*</i> | \frac{1}{\sqrt{1}} | ✓ | <i>V V V V</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 fusus Lincus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata | | OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FACC OBL FACC FACW FACU FACW FACU FACW | Yes - No No No No Yes | ✓ ✓ | <i>*</i> | \frac{1}{\sqrt{1}} | ✓ | <i>V V V V</i> | <i>y</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 capensis Iris versicotor Juncus effusus Juncus effusus Juncus effusus Luncus effusus Lineara benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace | | OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FAC OBL FAC OBL FACW FACU FACU FACU FACU | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes No | ✓ ✓ | / / / | · · · · · · · · · · · · · · · · · · · | ✓ | <i>V V V V</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 Hydrotelephium telephium Hypericum sp. Impatiens capensis Iris versicotor Juncus effusus Juncus tefusus Luncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica | | OBL - FACU OBL - FACW OBL OBL FACW OBL FACW OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes No No No No No No Yes | <i>y</i> | <i>V V V</i> | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Lucus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. | | OBL - FACU OBL - FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | ✓ ✓ | / / / / | V V V V V V V V V V V V V V V V V V V | ✓ | <i>V V V V</i> | * * * * * * * * * * * * * * * * * * * |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewetweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue tobelia tall rye grass Japanese honeysuckle honeysuckle | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Loilum arundinace Lonicera japonica Lonicera spp. Lonicera tatarica | | OBL - FACU OBL FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No - Yes Yes Yes Yes Yes Yes Yes No No No No No No No No No | \frac{1}{4} | <i>V V V</i> | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Lucus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. | | OBL - FACU OBL - FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | <i>y</i> | / / / / | * * * * * * * * * * * * * * * * * * * | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewetweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue tobelia tall rye grass Japanese honeysuckle honeysuckle | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Loilum arundinace Lonicera japonica Lonicera spp. Lonicera tatarica | | OBL - FACU OBL FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No - Yes Yes Yes Yes Yes Yes Yes No No No No No No No No No | \frac{1}{4} | \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 | 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 isiphilitica 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 Yes Yes No | * * * * * * * * * * * * * * * * * * * | ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | V V V V V V V V V V V V V V V V V V V | * * * * * * * * * * * * * * * * * * * |
| 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 siphilitica Lolium arundinace Lonicera spp. Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus | | OBL - FACU OBL FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No Yes | \frac{1}{4} | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Ilmos scapensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin Liriodandron tulipifera 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 | * * * * * * * * * * * * * * * * * * * | ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | V V V V V V V V V V V V V V V V V V V | * * * * * * * * * * * * * * * * * * * |
| 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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria | | OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU | 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 | 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 | 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 Lonicera sp. Lunicera tarica Ludwigia palustris Lycpus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense | | OBL - FACU OBL - FACW OBL - FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | 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 | 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 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 tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris | | OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | * * * * * * * * * * * * * * * * * * * | ✓ ✓ ✓ ✓ | \frac{1}{\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}} |
| 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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus teffusus 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 | | 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}} |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jeweltweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue tobelia talt rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple toosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum pp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia inflata Loulium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lystrum 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}} |
| 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. 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 | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | <i>y y y y y y y y</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 blackgum sensitive fern royal fern | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lunicera ssp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Malteuccia struthiopteris 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 | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | <i>y y y y y y y y</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 blackgum sensitive fern royal fern cinnamon fern | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lunicera spp. 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 | | OBL - FACU OBL - FACW OBL - FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | V V V V V V V V V V V V V V V V V V V | <i>y y y y y y y y</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 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 striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. 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 Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmunda regalis Osmundastrum cinnamomei Oxalis dillenii | | OBL - FACU OBL - FACW OBL - FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU OBL FACU OBL OBL FACU FACU FACU FACU OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW FACU FACW FACU FACW FACU FACW FACU FACW FACW FACW FACW FACW FACW FACW FACW | Yes | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | V V V V V V V V V V V V V V V V V V V | <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 cinnamon fern yellow wood sorrel fall panic grass | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, 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 cinnamomei Oxalis dillenii Panicum dichotomiflorum | | 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 cionamon fern yellow wood sorrel fall panic grass Virginia creeper | 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 siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmundastrum cinnamomei 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}} | \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 cinnamon fern yellow wood sorrel fall panic grass | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, 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 cinnamomei Oxalis dillenii Panicum dichotomiflorum | | 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}} | \frac{1}{\sqrt{1}} |

| Part | | | | | | | | | | | | |
|---|---|--|--|------------------|---|---|---|---------------------------------------|---------------------------------------|---------------------------------------|---|--|
| | Plant | lady's thumb | Persicaria maculosa | - | FAC | No | | | ✓ | | | |
| Process | Plant | arrow-leaved tearthumb | - | - | | Yes | | | | | | |
| Description Property and Service 1602 71 | Plant | jumpseed | Persicaria virginiana | - | | | | | | | | |
| | Plant | reed canary grass | Phalaris arundinacea | - | FACW | No | ✓ | | ✓ | ✓ | | ✓ |
| Selection | Plant | common Timothy | Phleum pratense | = | FACU | No | | | | | ✓ | |
| Part Property Pr | Plant | common reed | Phragmites australis | - | FACW | No | ✓ | ✓ | ✓ | | | |
| Part Marchane | Plant | pokeweed | Phytolacca americana | - | FACU | Yes | | | ✓ | | | |
| Section | Plant | Norway spruce | Picea abies | - | - | No | | ✓ | ✓ | ✓ | | |
| Part | Plant | red spruce | Picea rubens | - | FACU | Yes | | ✓ | | | | |
| Common parietation of the Pichago meagle 1902 100 | Plant | white pine | Pinus strobus | - | FACU | Yes | | ✓ | | ✓ | | |
| Part | Plant | English plantain | Plantago lanceolata | = | FACU | No | ✓ | ✓ | | ✓ | ✓ | |
| Part | Plant | common plantain | Plantago major | - | FACU | No | ✓ | | | ✓ | ✓ | ✓ |
| Description | Plant | northern tubercled orchid | Platanthera flava | - | FACW | Yes | | | ✓ | | | |
| | Plant | annual blue grass | Poa annua | - | FACU | No | | | | ✓ | | |
| Part | Plant | wood bluegrass | Poa nemoralias | = | FACU | No | | | ✓ | | | |
| March Contract Appendix demander FACL Veril | Plant | common Kentucky blue grass | Poa pratensis | = | FACU | No | | ✓ | | | ✓ | 1 |
| Sect Control Control Physics Schiolobs FACE Yes Y Y Y Y Y Y Y Y Y | Plant | mavapple | Podophyllum peltatum | _ | FACU | Yes | | | ✓ | ✓ | | |
| Part Common Common Paper | | | | - | | | | √ | | √ | | |
| Design Comment of Processing Support 1900 190 | | | | - | | | / | 1 | 1 | √ | √ | - |
| Part Printer | | | | | | | • | | • | | <u> </u> | <u> </u> |
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| Part | | | | - | | | | | , | | | - |
| Part | | | | - | | | | | Y | | | |
| Part Carset convinced Resourcement Resource | | | Kanunculus acris | | | | V | ٧ | | | | - |
| Part | | | | - | | | | | | | → | |
| Past | | cursed crowfoot | Ranunculus sceleratus | - | | | ✓ | | | | | |
| Past | | | Reynoutria japonica | - | | | | | | ✓ | | |
| Public Stagleon survice Piblic | Plant | alder buckthorn | Rhamnus alnifolia | - | OBL | Yes | | | | | | |
| Public mutilificar coop | Plant | buckthorn | Rhamnus cathartica | = | FAC | No | | | ✓ | | ✓ | ✓ |
| Past | Plant | staghorn sumac | Rhus typhina | = | = | Yes | | <u> </u> | | | | |
| Putt | Plant | multiflora rose | Rosa multiflora | - | FACU | No | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Paint | Plant | swamp rose | Rosa palustris | - | OBL | Yes | | | | ✓ | | ✓ |
| Part | | | | | | | | | | | | |
| Paint diverging Rubus publishering FACV Yes | Plant | common blackberry | Rubus allegheniensis | - | FACU | Yes | | ✓ | ✓ | | | |
| Paint | | | | <u>-</u> - | | | | ✓ | | | | |
| Paint | Plant | swamp dewberry | Rubus hispidus | - | FACW | Yes | | • | ✓ | | | |
| Flant broad-leaved dock Rumer collustrations FAC No Ves V V V V V V V V V V V V V V V V V V | Plant Plant | swamp dewberry red raspberry | Rubus hispidus Rubus ideaus | - - - | FACW FACU | Yes No | | • | ✓ | | | |
| Paint | Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry | Rubus hispidus Rubus ideaus Rubus pubescens | - | FACW FACU FACW | Yes No Yes | | • | ✓ ✓ ✓ | | | |
| Pant | Plant Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella | - | FACW FACU FACW | Yes No Yes No | ✓ | ✓ | √ √ √ | | → | <i>*</i> |
| Plant Dussy willow Salik discolor FACW Yes | Plant Plant Plant Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus | - | FACW FACU FACU FACU FACU | Yes No Yes No | ✓ | √ | √ √ √ | | · · | · |
| Paint | Plant Plant Plant Plant Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius | - | FACU FACU FACU FACU FACC FAC | Yes No Yes No No No | ✓ | √ | \frac{1}{4} | | · · | · · |
| Paint Diack willlow Salik nigra OBL Yes | Plant Plant Plant Plant Plant Plant Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus | - - - - | FACW FACU FACW FACU FAC FAC OBL | Yes No Yes No No No No No Yes | ✓ | √ | * * * * * * * * * * * * * * * * * * * | | · · | ✓ · |
| Plant | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana | | FACW FACU FACW FACU FAC FAC FAC FAC FAC | Yes No Yes No No No Yes Yes Yes | ✓ · | √ √ √ | * * * * * * * * * * * * * * * * * * * | | · · | 1 |
| Plant common elderberry Samburus nigra - FACW Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor | | FACW FACU FACW FACU FAC FAC FAC FAC OBL FACW FACW | Yes No Yes No No No Yes Yes Yes Yes | ✓ · | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | - | · · | ✓ · |
| Plant Lizard's fall Saurras cernius OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra | | FACW FACU FACU FACU FAC FAC FAC FAC OBL FACW FACW OBL | Yes No Yes No No No Yes Yes Yes Yes | ✓ · | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | - | · · | ✓ · |
| Plant soft-stemmed bulrush Schoenoplectus tabernaemc - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex ericilitatus Salix debbiana Salix discolor Salix nigra Salix purpurea | | FACW FACU FACU FACU FACU FAC FAC FAC OBL FACW FACW OBL FACW | Yes No Yes No No No Yes Yes Yes Yes No | <i>✓</i> | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | <i>\</i> | · · | <i>'</i> |
| Plant dank-green butrush Scirpus strovivens - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex ericillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra | | FACW FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW FACW OBL | Yes No Yes No No No Yes Yes Yes Yes Yes No Yes | <i>'</i> | <i>V</i> | * * * * * * * * * * * * * * * * * * * | | · · | <i>'</i> |
| Plant wodgrass Scirpus cyperinus - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cemuus | | FACW FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW OBL FACW OBL FACW OBL | Yes No Yes No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ | <i>V</i> | · · · · · · · · · · · · · · · · · · · | ✓ ✓ | · · | <i>'</i> |
| Plant mad dog skultcap Scutellaria lateriflora - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willtow basket willow common elderberry lizard's tail soft-stemmed bulrush | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc | | FACW FACU FACU FACU FACU FAC FAC FAC OBL FACW FACW OBL FACW OBL FACW OBL OBL | Yes No Yes No No No No Yes | ✓ | √ √ √ √ | * * * * * * * * * * * * * * * * * * * | ✓ ✓ | · · | <i>y</i> |
| Plant horse nettle Solanum carolinense - FACU Yes ✓ Plant bitter-sweet nightshade Solaum dulcamara - FAC No ✓ ✓ Plant tall goldenrod Solidago altissima - FACU Yes ✓ ✓ ✓ Plant Canada goldenrod Solidago altissima - FACU Yes ✓ <t< td=""><td>Plant Plant /td><td>swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush</td><td>Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemx Scirpus atrovirens</td><td></td><td>FACW FACU FACU FACU FAC FAC OBL FACW FACW FACW OBL FACW OBL OBL OBL</td><td>Yes No Yes No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes</td><td>✓</td><td>√ √ √ √</td><td>* * * * * * * * * * * * * * * * * * *</td><td></td><td>√</td><td></td></t<> | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemx Scirpus atrovirens | | FACW FACU FACU FACU FAC FAC OBL FACW FACW FACW OBL FACW OBL OBL OBL | Yes No Yes No No No No Yes | ✓ | √ √ √ √ | * * * * * * * * * * * * * * * * * * * | | √ | |
| Plant bitter-sweet nightshade Solanum dulcamara - FAC No | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus | | FACW FACU FACU FACU FACU FAC FAC OBL FACW FACW FACW OBL OBL OBL OBL | Yes No Yes No No No No Yes | ✓ — — — — — — — — — — — — — — — — — — — | √ √ √ √ | * * * * * * * * * * * * * * * * * * * | | √ | |
| Plant tall goldenrod Solidago altissima - FACU Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora | | FACW FACU FACU FACU FACU FAC FAC OBL FACW FACW FACW OBL FACW OBL OBL OBL OBL | Yes No Yes No No No No Yes | <i>'</i> | √ √ √ √ | * * * * * * * * * * * * * * * * * * * | | ✓ ———————————————————————————————————— | |
| Plant Canada goldenrod Solidago canadensis - FACU Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex eritifultatus Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus cyperinus Scutellaria lateriflora Solanum carolinense | | FACW FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL OBL OBL OBL OBL OBL OBL | Yes No Yes No No No No Yes | V | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ———————————————————————————————————— | |
| Plant swamp goldenrod Solidago gigantea - FACW Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skultcap horse nettle bitter-sweet nightshade | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusiloilus Rumex obtusiloilus Rumex obtusiloilus Rumex verticillatus Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemx Scirpus atrovirens Scirpus cryperinus Scutellaria lateriflora Solanum carolinense Solanum carolinense | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW OBL | Yes No Yes No No No No Yes | V | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ———————————————————————————————————— | <i>'</i> |
| Plant common wrinkle-leaved golden Solidago rugosa - FAC Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Sauruus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense Solanum carolinense Solanum dulcamara Solidago altissima | | FACW FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No Yes No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ✓ | <i>'</i> |
| 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 lvy Toxicodendron radicans - FACU No Plant red clover Trifolium pratense - FACU No PACU | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod Canada goldenrod | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex erticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saurrus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Sculellaria lateriflora Solanum carolinense Solanum dulcamara Solidago altissima Solidago canadensis | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW OBL | Yes No Yes No No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ✓ ✓ | <i>✓</i> |
| Plant green-fruited bur-reed Sparganium chlorocarpum - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed butrush dark-green butrush woolgrass mad dog skullcap horse nettte bitter-sweet nightshade tall goldenrod Canada goldenrod | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Sciepus carolinense Solanum carolinense Solanum dulcamara Solidago altissima Solidago canadensis Solidago gigantea | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW OBL | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | | ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant grass-leaved stitchwort Stellaria graminea - UPL No Plant white panicle aster Symphyotrichum lateriflorun - FACW Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed butrush dark-green butrush woolgrass mad dog skullcap horse nettte bitter-sweet nightshade tall goldenrod Canada goldenrod | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Sciepus carolinense Solanum carolinense Solanum dulcamara Solidago altissima Solidago canadensis Solidago gigantea | | FACW FACU FACU FACU FACU FACU FACC OBL FACCW OBL FACW OBL | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ | ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant white panicle aster Symphyotrichum laterillorun - FACW Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willtow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skultcap horse nettle bitter-sweet nightshade talt goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticiltatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Scutellaria lateriflora Solanum carolinense Solanum dulcamara Solidago attissima Solidago canadensis Solidago gigantea | | FACW FACU FACU FACU FACU FACU FACC FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ | ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant calico aster Symphyotrichum laterillorun 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 FACU No Plant marsh fern Thelypteris palustris FACW Yes Plant American basswood Tilia americana FACU Yes Plant poison ivy Toxicodendron radicans FACU Yes Plant red clover Trifolium pratense FACU No Plant white clover Trifolium repens FACU No PACU No PACU No PACU Yes PACU No PACU Yes PACU No PACU Yes PACU No PAC | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willtow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skultcap horse nettle bitter-sweet nightshade talt goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Sambucus nigra Samurus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scutellaria lateriflora Solanum carolinense Solanum carolinense Solanum duicamara Solidago attissima Solidago attissima Solidago gigantea (Solidago rugosa Sonchus asper | | FACW FACU FACU FACU FACU FACU FACC FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ | ✓ ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant new england aster Symphyotrichum novae-angl - FACW Yes OBL YES - OBL YES - OBL Y | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry tizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skultcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Sanurus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense Solanum dulcamara Solidago canadensis Solidago gigantea Solidago rugosa Sonchus asper | | FACW FACU FACU FACU FACU FACU FACC FAC OBL FACW FACW OBL OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | ✓ ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes ✓ < | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod Canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex verticillatus Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense Solanum carolinense Solidago canadensis Solidago canadensis Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | ✓ ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes ✓ ✓ ✓ Plant skunk cabbage Symplocarpus foetidus - OBL Yes ✓ ✓ ✓ Plant common dandelion Taraxacum officinate - FACU No ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dwark-green bulrush dwark-green bulrush dark-green bulrush dark-green bulrush dark-green bulrush colgrass mad dog skullcap horse nettle bitter-sweet nightshade talt goldenrod Canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cryperinus Scutellaria lateriflora Solanum carolinense Solanum dulcamara Solidago attissima Solidago oanadensis Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus | | FACW FACU FACU FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | ✓ ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant skunk cabbage Symplocarpus foetidus - OBL Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistte green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster | Rubus hispidus Rubus ideaus Rubus qubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Saruuus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scultalaria lateriflora Solanum carolinense Solidago atlissima Solidago atlissima Solidago gigantea Solidago gigantea Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | ✓ ✓ ✓ ✓ | <i>'</i> |
| 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 ✓ <td>Plant Plant /td> <td>swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster</td> <td>Rubus hispidus Rubus ideaus Rubus quescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus quescentifora Solanum carolinense Solanum carolinense Solanum dulcamara Solidago anadensis Solidago gigantea Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatu Symphyotrichum lanceolatu Symphyotrichum lanceolatu</td> <td></td> <td>FACW FACU FACU FACU FACU FACU FACU FAC FAC GBL FACW GBL FACW GBL GBL GBL GBL GBL GBL GBL GBL GBL GBL</td> <td>Yes No Yes No No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes</td> <td><i>\</i></td> <td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td> <td>\frac{1}{\sqrt{1}}</td> <td>✓</td> <td>V V V V V V V V V V V V V V V V V V V</td> <td><i>'</i></td> | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster | Rubus hispidus Rubus ideaus Rubus quescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus quescentifora Solanum carolinense Solanum carolinense Solanum dulcamara Solidago anadensis Solidago gigantea Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatu Symphyotrichum lanceolatu Symphyotrichum lanceolatu | | FACW FACU FACU FACU FACU FACU FACU FAC FAC GBL FACW GBL FACW GBL | Yes No Yes No No No No No Yes | <i>\</i> | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ | V V V V V V V V V V V V V V V V V V V | <i>'</i> |
| Plant marsh fern Thelypteris palustris - FACW Yes ✓ Plant American basswood Tilia americana - FACU Yes ✓ ✓ Plant poison ky Toxicodendron radicans - FAC Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock bebb's willow pussy willow black willow common elderberry tizard's tail soft-stemmed bulrush dwolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed greas-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scullaria lateriflora Solanum carolinense Solanum dulcamara Solidago atlissima Solidago gigantea Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lateriflorun Symphyotrichum lateriflorun Symphyotrichum novae-angl Symphyotrichum novae-angl Symphyotrichum puniceum | | FACW FACU FACU FACU FACU FACU FACU FAC FAC FAC | Yes No Yes No No No No No Yes | <i>\</i> | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ | V V V V V V V V V V V V V V V V V V V | <i>*</i> |
| Plant American basswood Tilia americana - FACU Yes ✓ ✓ Plant poison ivy Toxicodendron radicans - FAC Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster skunk cabbage | Rubus hispidus Rubus ideaus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus qureirinas Scirpus queirinas Sciladago attissima Solidago attissima Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus Symphyotrichum lanceilatus Symphyotrichum lanceilatus Symphyotrichum lanceilatus Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum | | FACW FACU FACU FACU FACU FACU FACU FAC FAC | Yes No Yes No No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | |
| Plant poison ivy Toxicodendron radicans - FAC Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod Canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster skunk cabbage common dandelion | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticiltatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Scirpus atrovirens Solidago atlissima Solidago atlissima Solidago gigantea Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus Symphyotrichum lanceolatus Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphotrichum puniceum | | FACW FACU FACU FACU FACU FACU FACC FAC FAC | Yes No Yes No No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | |
| Plant red clover Trifolium pratense FACU No ✓ ✓ ✓ Plant white clover Trifolium repens - FACU No ✓ ✓ ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster skunk cabbage common dandelion marsh fern | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticiltatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Scutellaria lateriflora Solanum carolinense Solanum dulcamara Solidago atlissima Solidago atlissima Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus Symphyotrichum lateriflorun Symphyotrichum novae-angl Symphyotrichum puniceum Symplocarpus foetidus Taraxacum officinale Thelypteris palustris | | FACW FACU FACU FACU FACU FACU FACC FACC OBL FACCW OBL FACCW OBL | Yes No Yes No No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | |
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| Plant red trillium Trillium erectum - FACU Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade talt goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster skunk cabbage common dandelion marsh fern American basswood poison lvy red clover | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex optusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Scirpus atrovirens Solidago atlissima Solidago canadensis Solidago gigantea Solidago gigantea Solidago gigantea Solidago gigantea Solidago pigantea Stolidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus Symphyotrichum lanceolatus Symphyotrichum puriceum Symphyotrichum prateinse Thelypteris palustris Tilia americana Toxicodendron radicans Trifolium pratense | | FACW FACU FACU FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No Yes No No No No No Yes | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} |

| 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: https://www.google.com/maps/@43.29530445,-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: https://www.google.com/maps/@43.29530445,-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 Fisheries¹, 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: https://ecos.fws.gov/ecp/species/9743

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8023

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.
- 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 31st each year to USACE and NYSDEC.

8. Maps and Figures

Figure 8-1. Purple Loosestrife Percent Cover

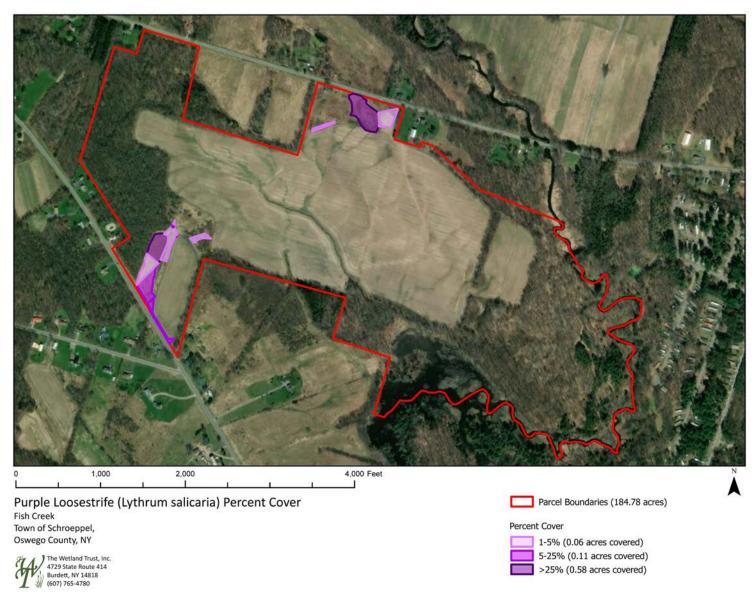


Figure 8-2. Reed Canary Grass Percent Cover

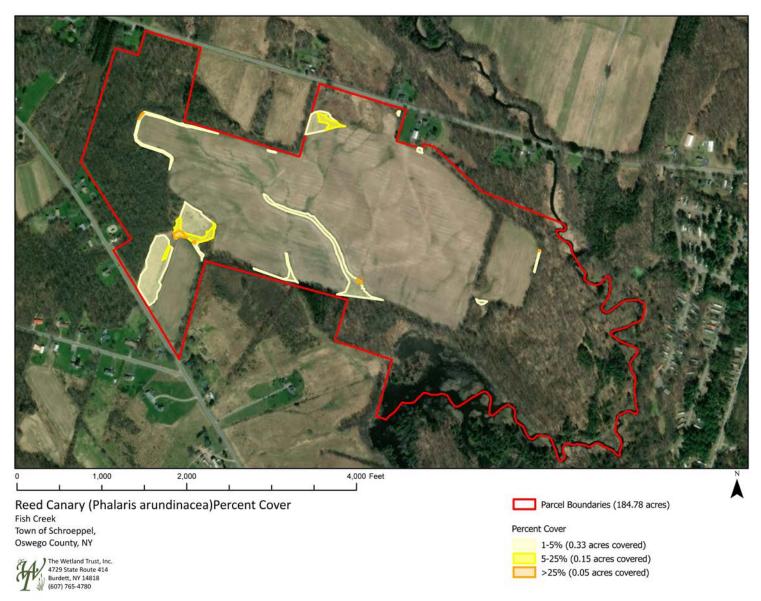


Figure 8-3. Phragmites Percent Cover

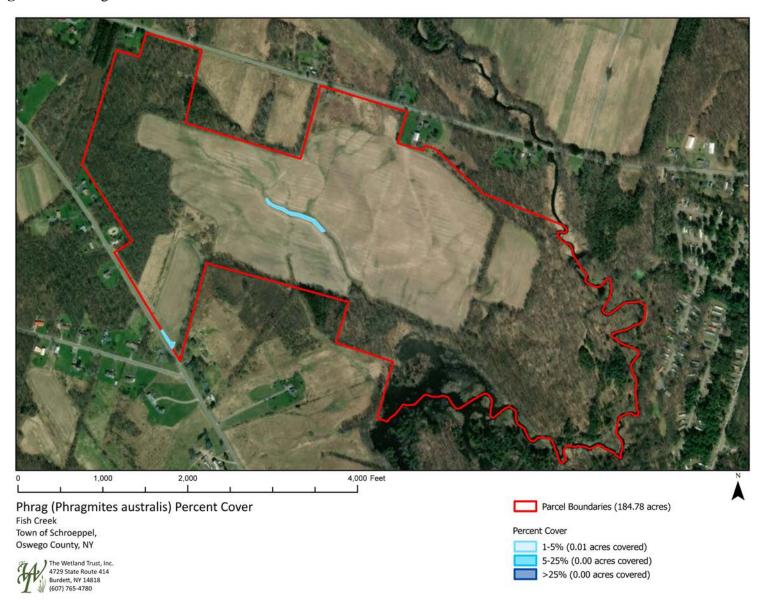
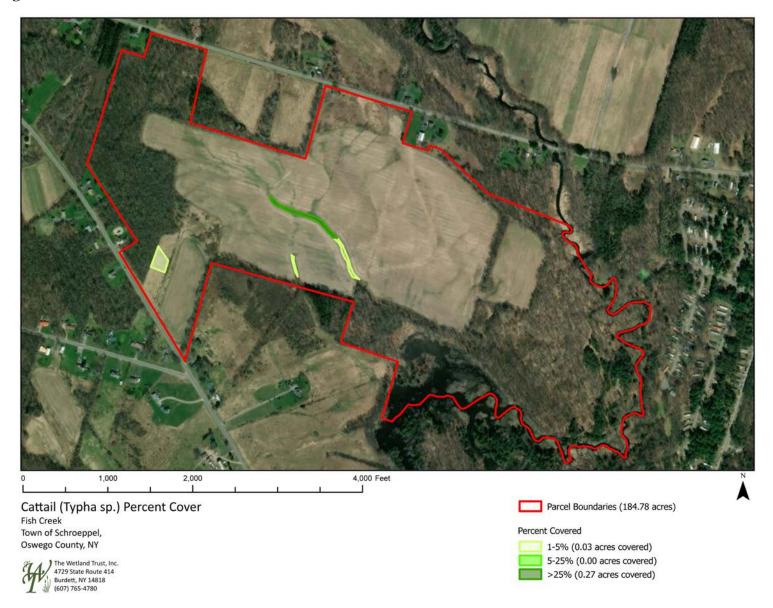


Figure 8-4. Cattail Percent Cover



| Table 8-1: Invasive Species at Fish Creek | | | | |
|---|--------------------------------|---------------------------------|--------------------------------|--------------------------------|
| Invasive Species | 1-5% Cover (Affected Acres) | 5-25% Cover (Affected Acres) | >25% Cover (Affected Acres) | Total Area (Affected Acres) |
| Common Reed (Phragmites australis) | 0.25 | 0.00 | 0.00 | 0.26 |
| Reed Canary Grass (<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. | | |
| Fuidamen of historic durings on filling. A disable the poster of the planned western and disable along the adeq of | | | |

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:

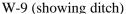
Inlet: 12-feet wide x 50-feet long x 1.0-feet deep = $600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 22 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 33 \text{ tons}$ Outlet: 12-feet wide x 75-feet long x 1.0-feet deep = $900 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 33 \text{ yards}^3 \text{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

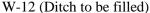
Inlet: 26-feet wide x 100-feet long x 1.0-feet deep = $2,600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 96 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 144 \text{ tons}$ Outlet: 26-feet wide x 100-feet long x 1.0-feet deep = $2,600 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 96 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 144 \text{ tons}$ 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 | Site Description: An agricultural field that will be planted with | |
| forested/shrub-scrub wetland and a stream | soybeans. The field is highly erodible due to the silt loam texture soil | |
| for mitigation. | 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 = $2,080 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 77 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 115 \text{ tons}$ Buried vertical grade control at outlet: (70-feet wide x 80-feet long x 11-feet deep) x (0.5) = $30,800 \text{ feet}^3/27 \text{ feet}^3/\text{yard}^3 = 1,141 \text{ yards}^3 \text{ x 1.5 tons/yard}^3 = 1,140 \text{ tons}$

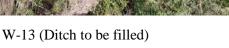
Total = 1,255 tons/24 tons/dump truck = 52- dump truck loads of rock needed

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 (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. Thomas K. Biebignauser | | | | | |
| 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 emergent, forested/shrub-scrub wetland for 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.

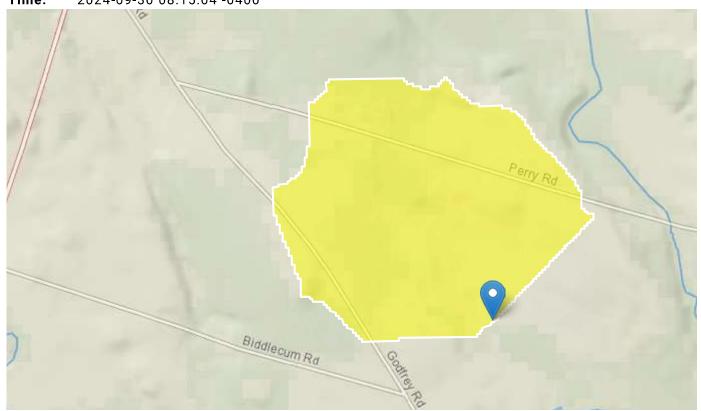
StreamStats Report - Perry Road Site

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

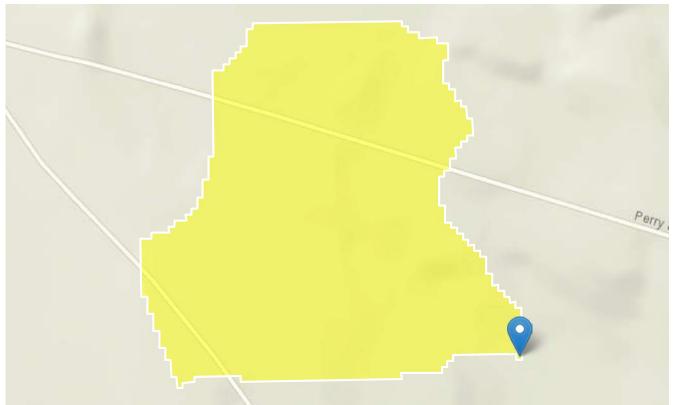
StreamStats Report - Perry Road Northwest Branch

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 |
|-----------|-------|------|
|-----------|-------|------|

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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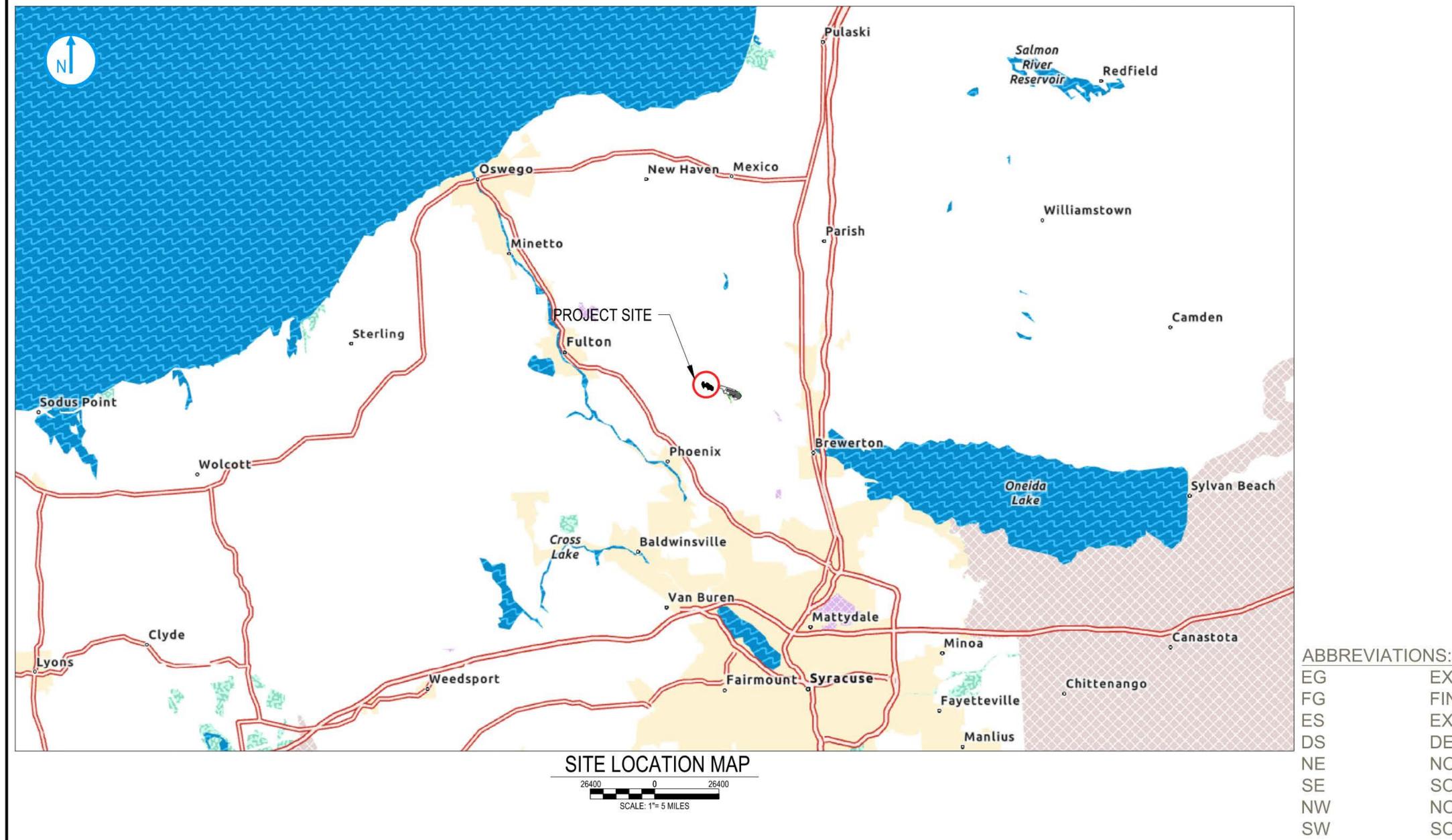
USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

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

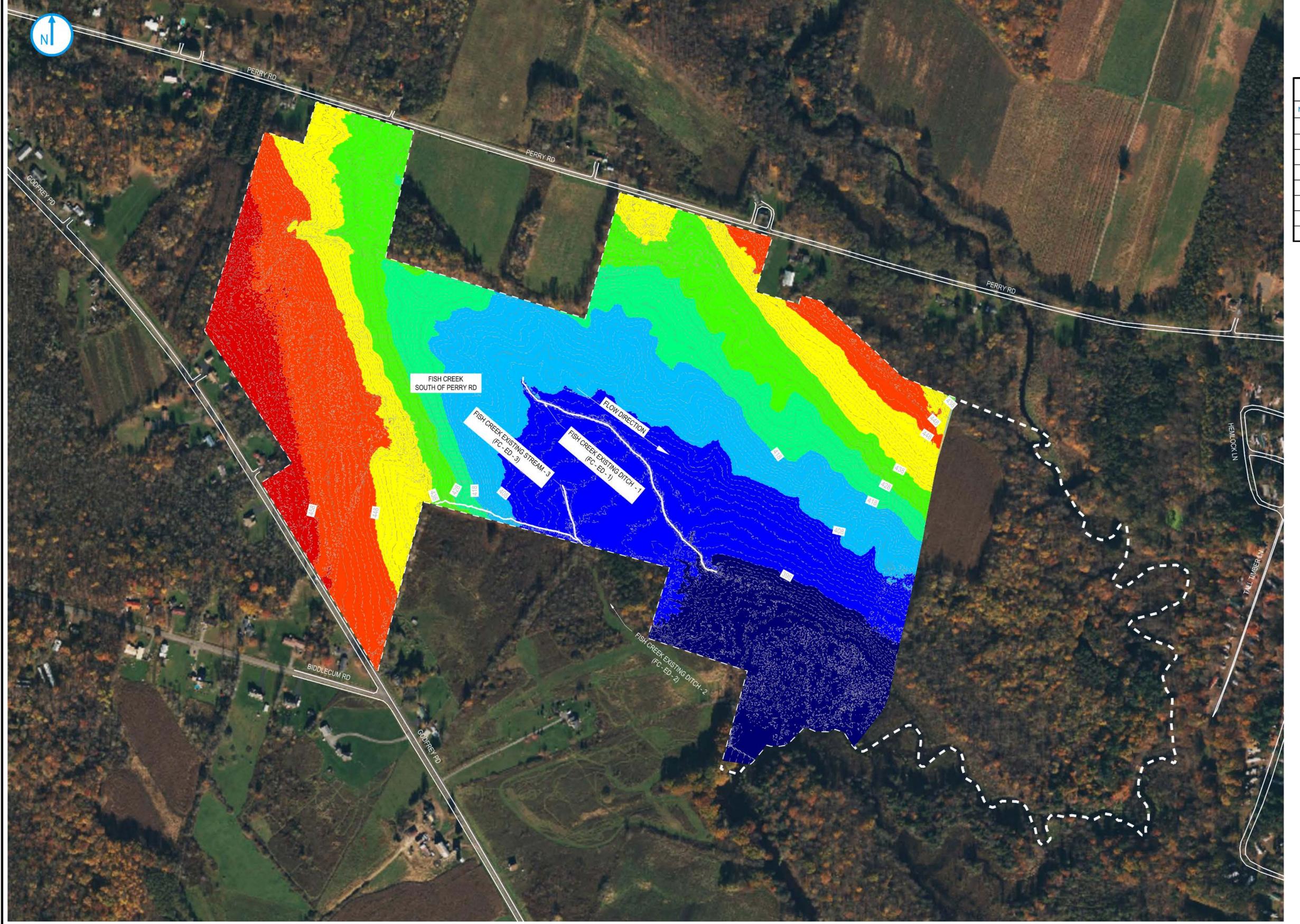
SOUTHWEST

AVERAGE

FEET

FINISH GROUND

| NO. | REV DATE | | REVISION | | | | INT. | |
|-----------------------|--|-----------------------------|---|---------------|-----------------|---------------------------------|-----------|----|
| 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 | Designer / Professional Engineer Responsible: | | #### | | | |
| Location: NEW YOR | RK | Designer / Profession | | | #### | | | |
| 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'



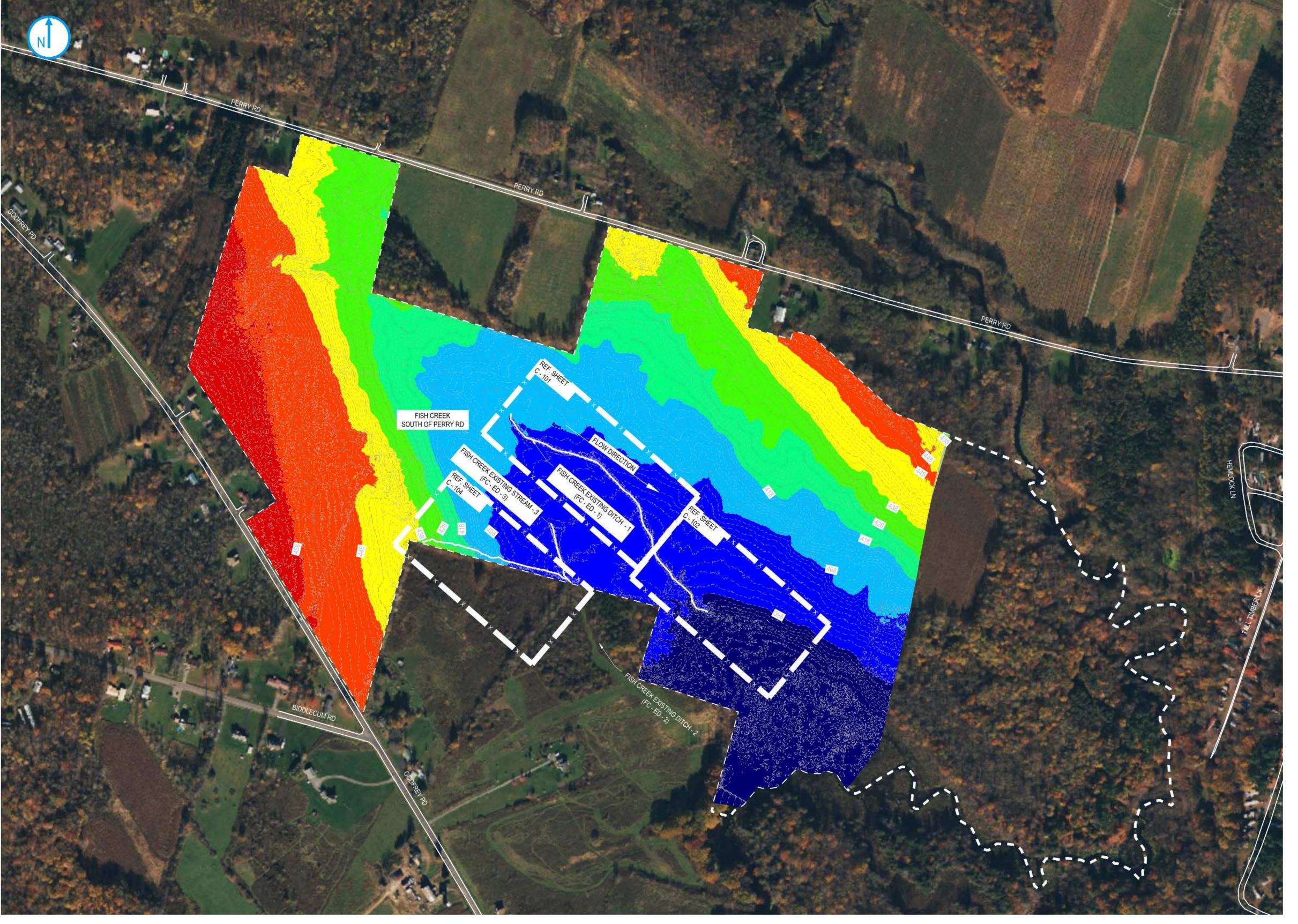
| Elevations Table | | | | | | | |
|------------------|------------------------|------------------------|-------------|-------|--|--|--|
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| 1 | 388.00 | 398.00 | 704956.77 | | | | |
| 2 | 398.00 | 408.00 | 1057721.25 | | | | |
| 3 | 408.00 | 418.00 | 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 |



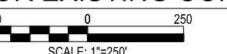
| Elevations Table | | | | | | |
|------------------|------------------------|------------------------|-------------|-------|--|--|
| NUMBER | MINIMUM ELEVATION (FT) | MAXIMUM ELEVATION (FT) | AREA (FT^2) | COLOR | | |
| 1 | 388.00 | 398.00 | 704956.77 | | | |
| 2 | 398.00 | 408.00 | 1057721.25 | | | |
| 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

PROPERTY BOUNDARY LINE

EXISTING STREAM ALIGNMENT

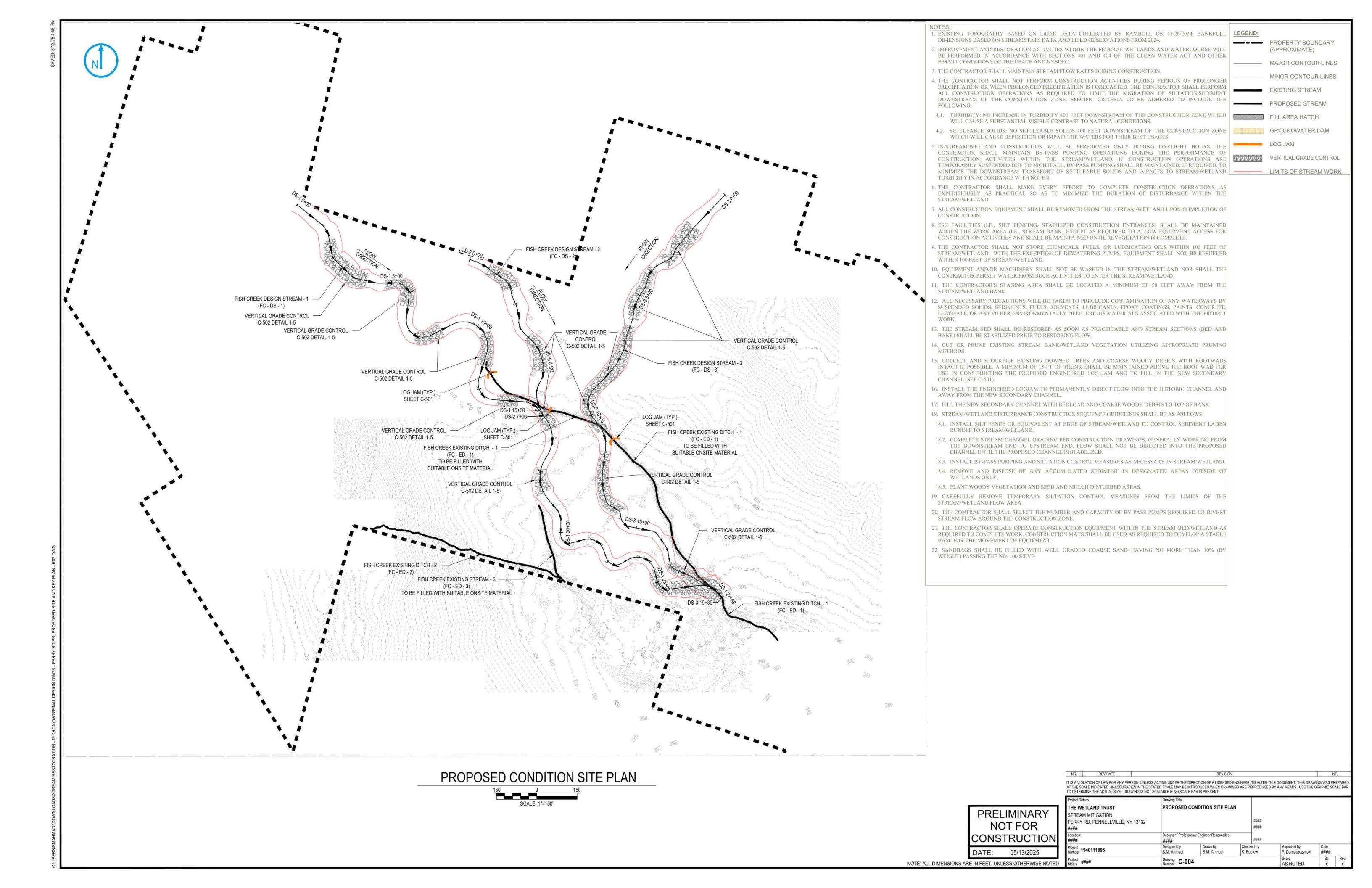
KEY PLAN FOR EXISTING CONDITIONS

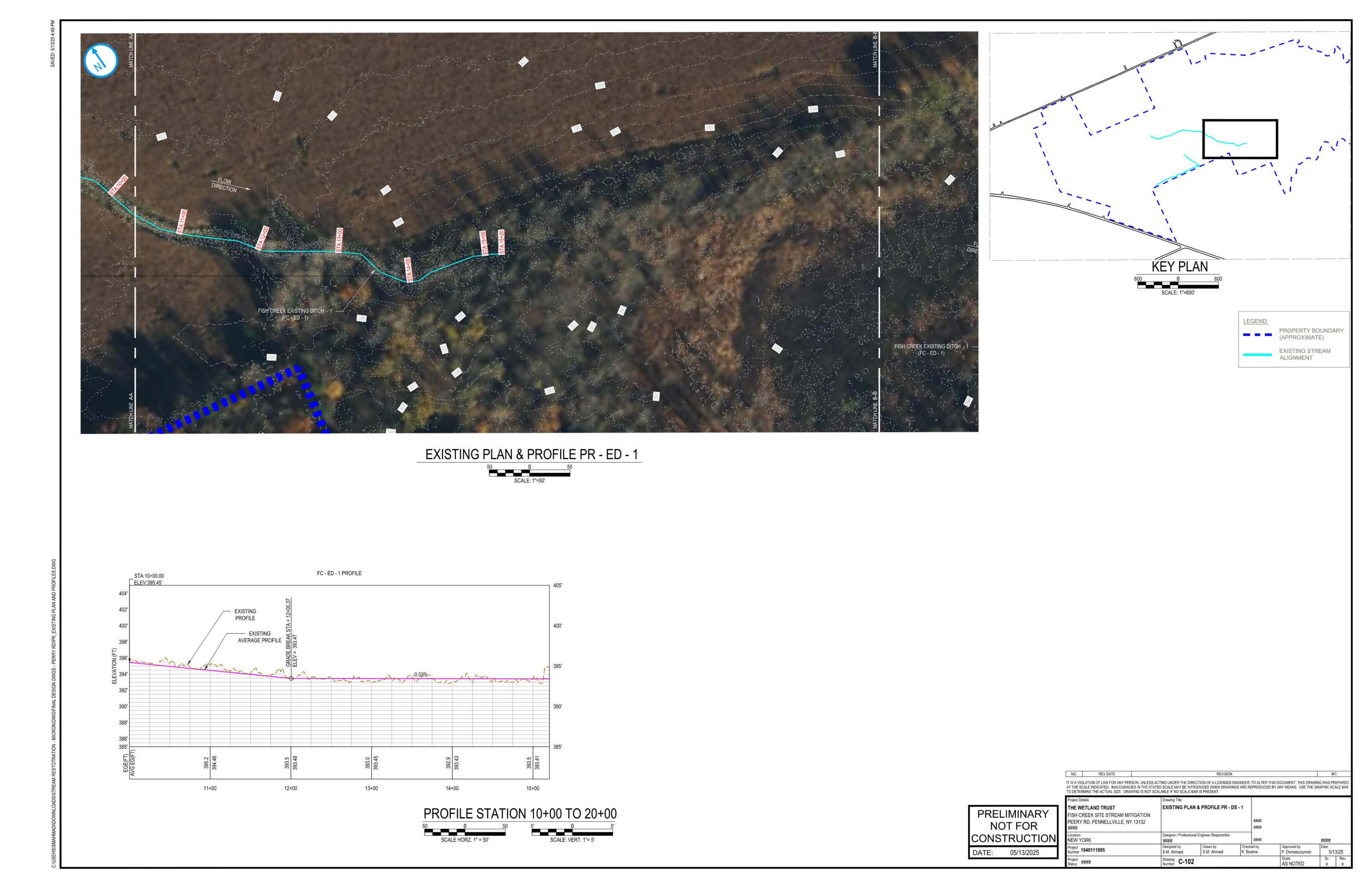


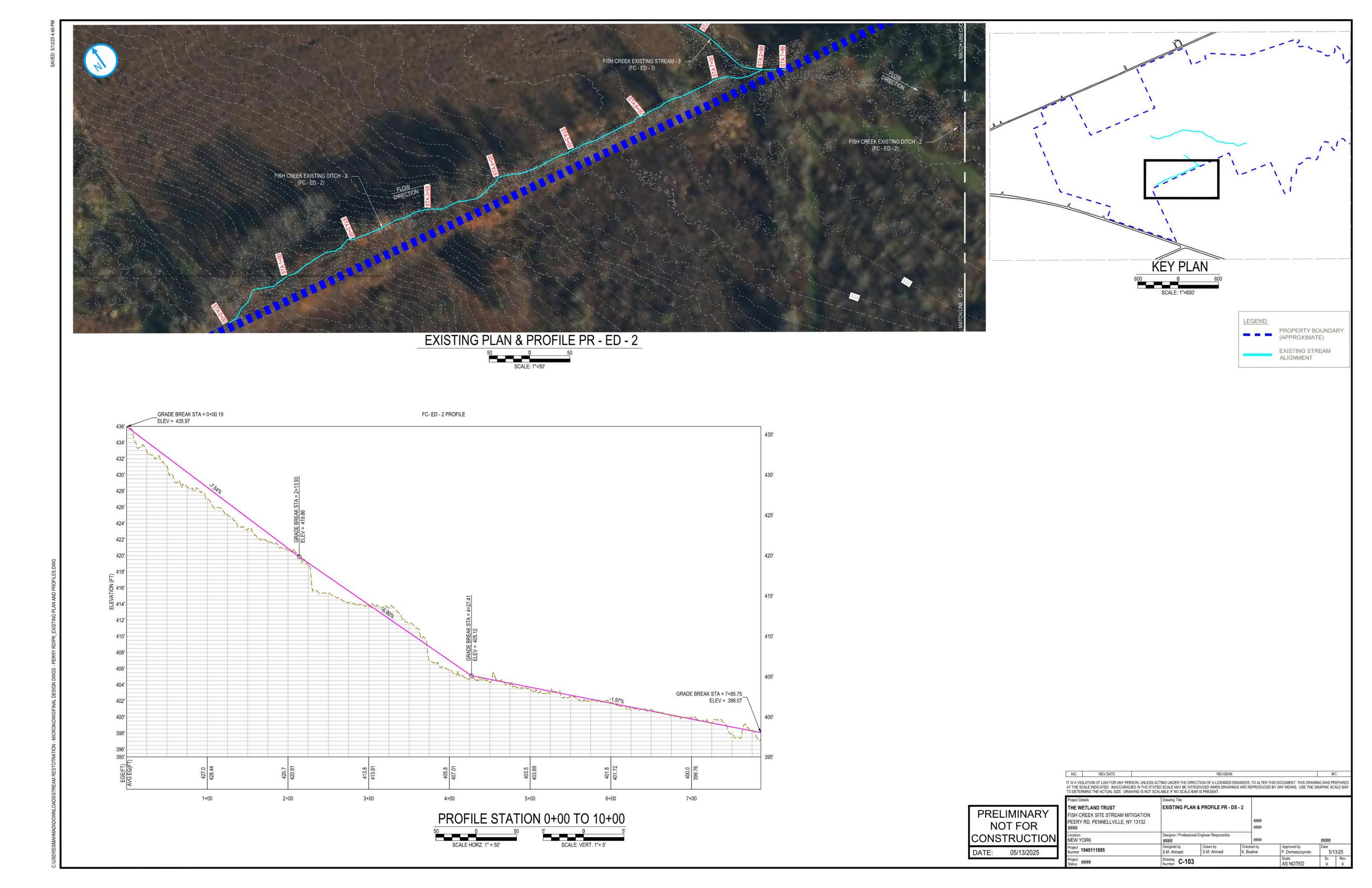
| PRE | LIMINARY |
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| NO | OT FOR |
| CONS | TRUCTION |
| DATE: | 05/13/2025 |

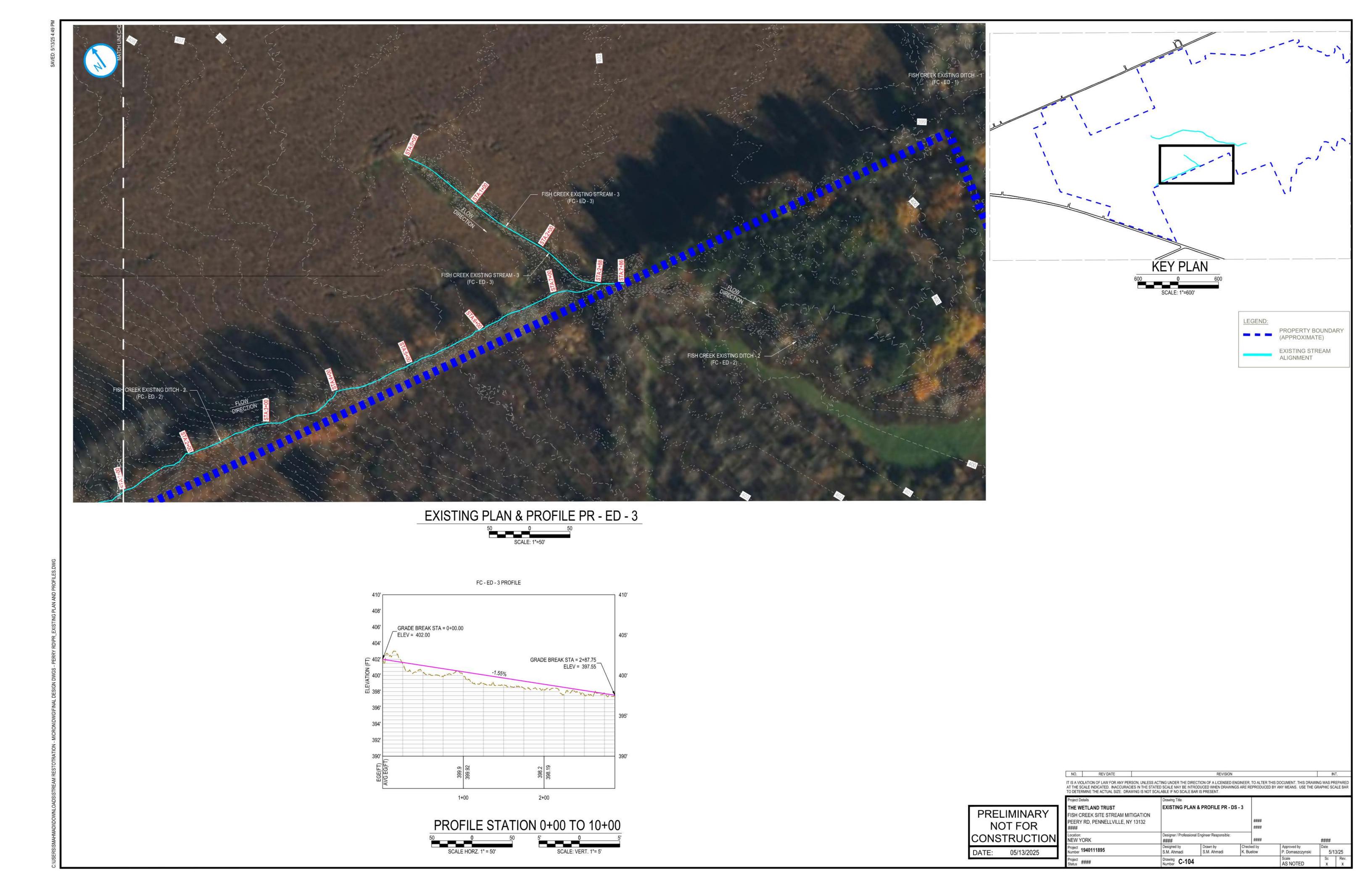
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| Project Detail | s | Drawing Title | · | | |
| THE WET | LAND TRUST | KEY PLAN FOR EXISTING CONDITION | s | | |
| FISH CRE | EK SITE STREAM MITIGA | TION | | | |
| | D, PENNELLVILLE, NY 13 | 132 | #### | | |
| #### | | ************************************** | #### | | |

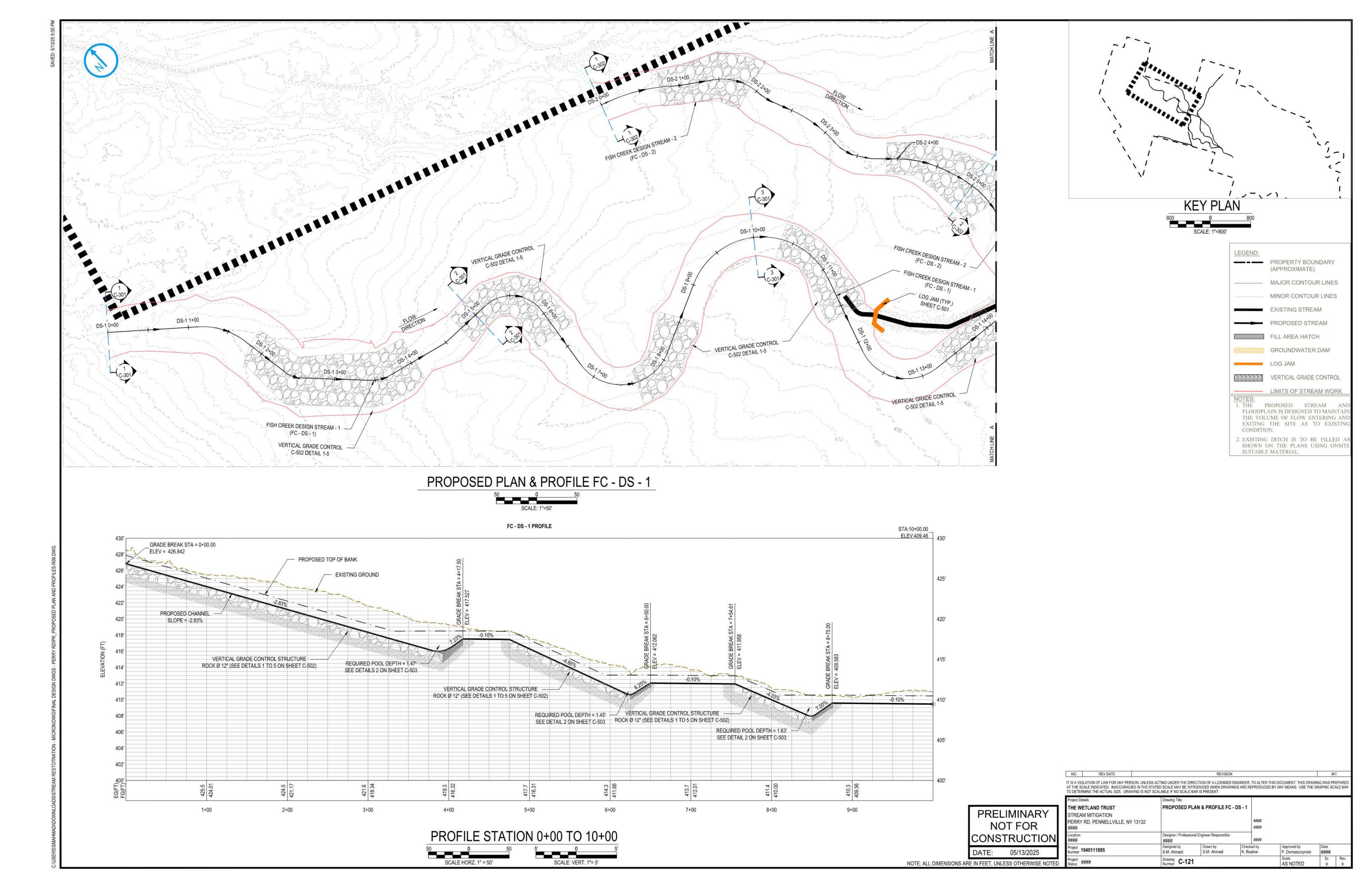
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|---|----------------------------|---|--|-------------------|---------------------------------|-----------|--|
| THE WETLAND TRUST | KEY PLAN FO | KEY PLAN FOR EXISTING CONDITIONS | | | | | |
| FISH CREEK SITE STREAM MITIGATION PERRY RD, PENNELLVILLE, 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 | |

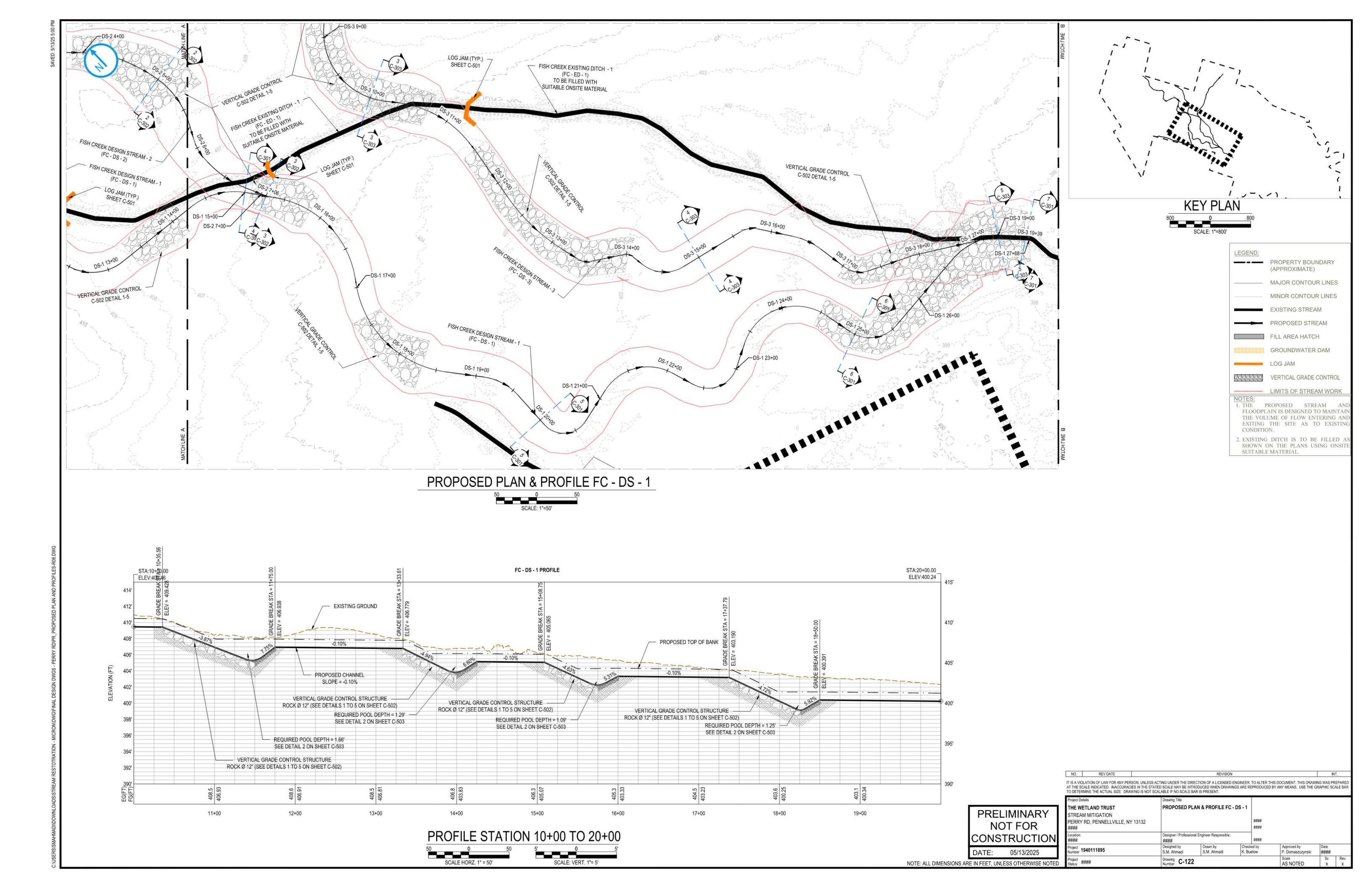


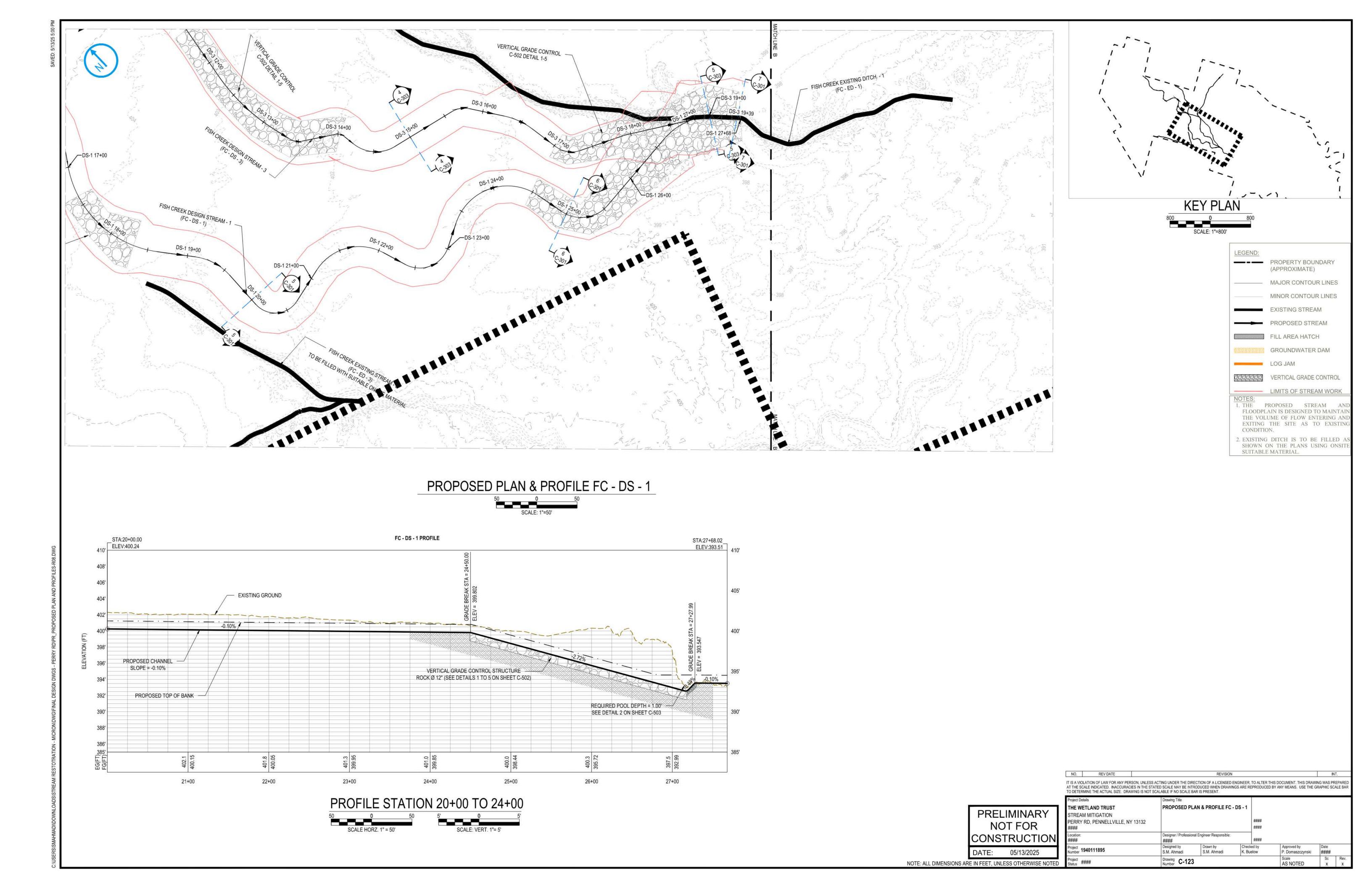


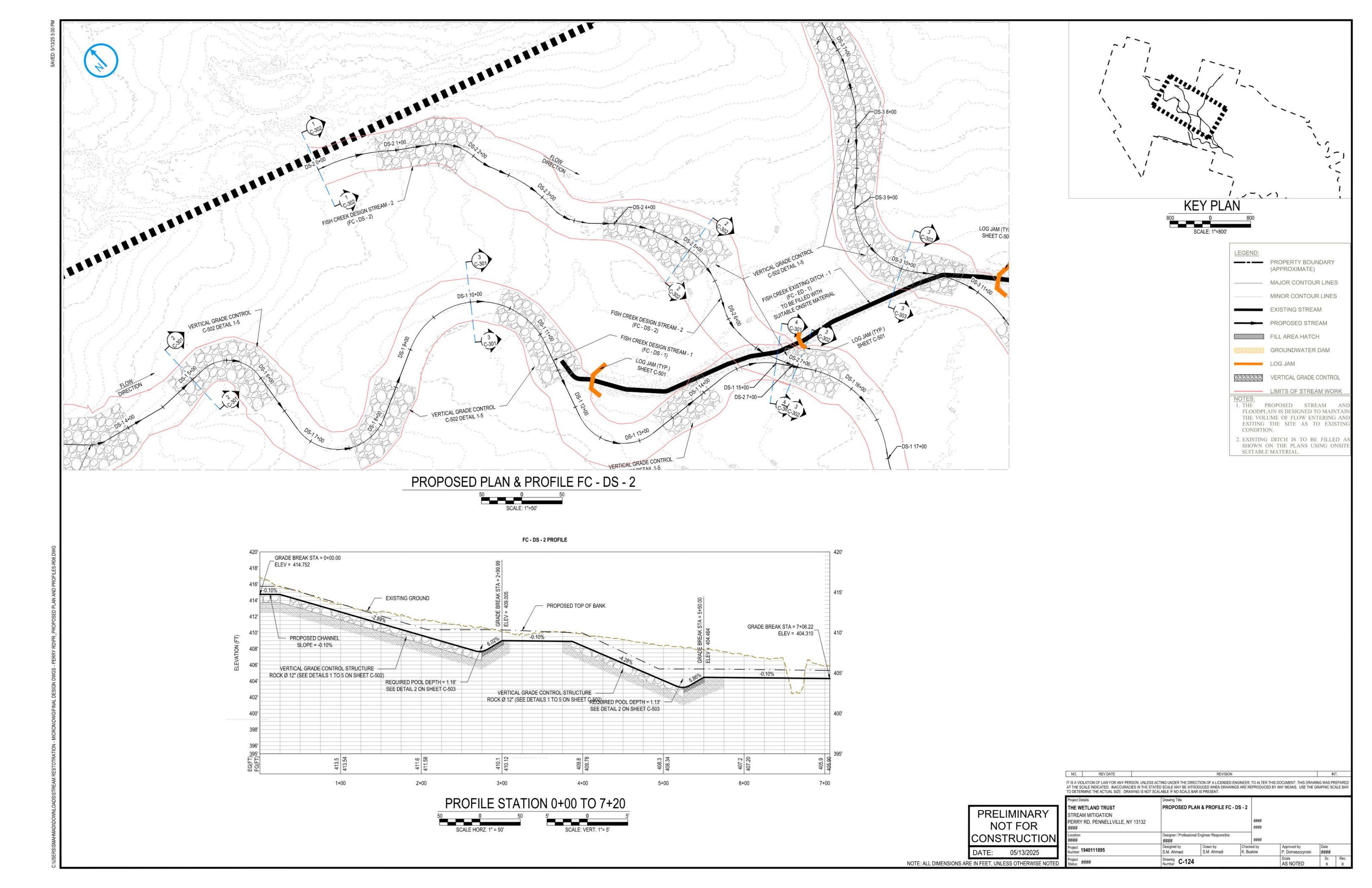


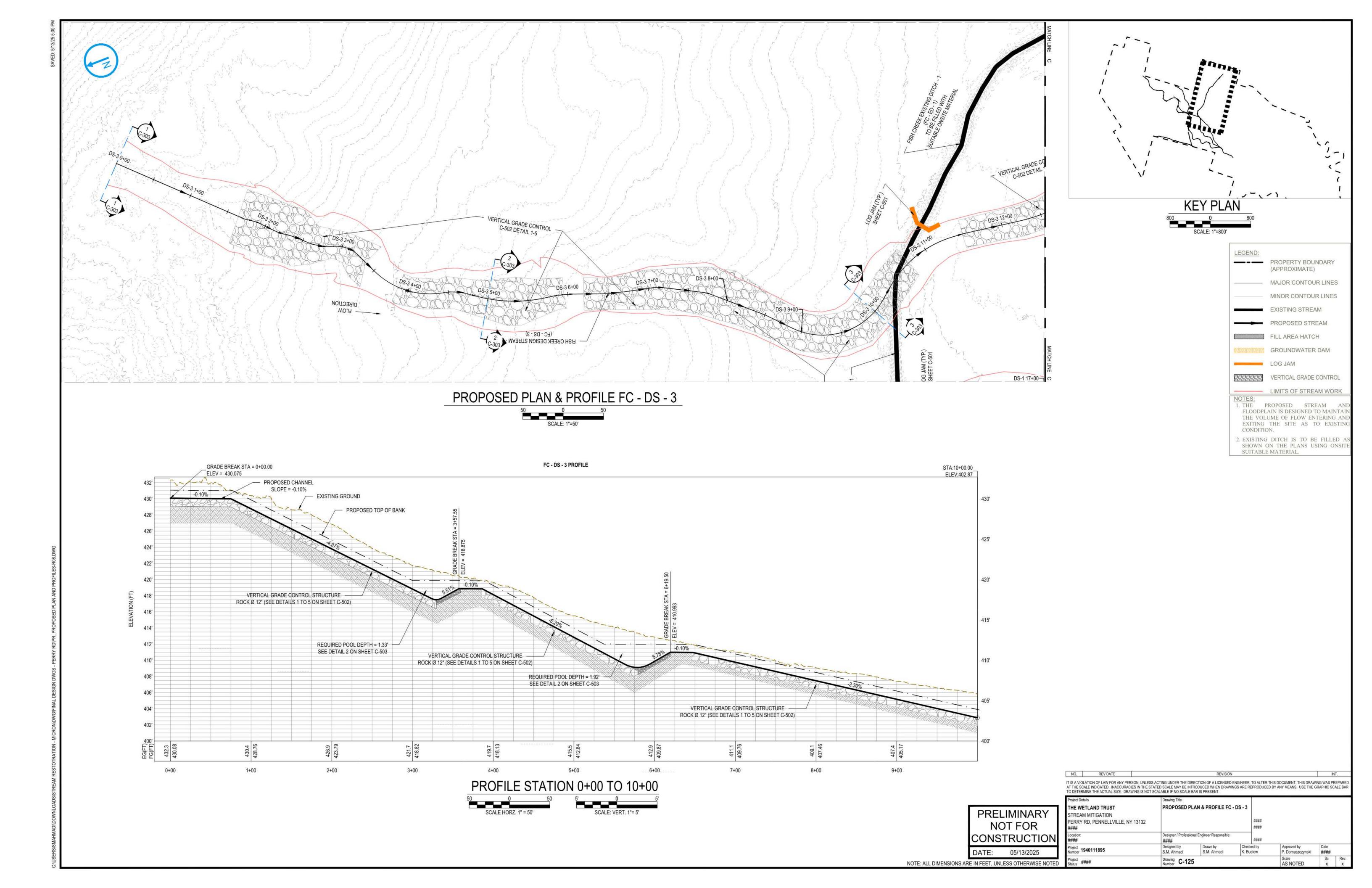


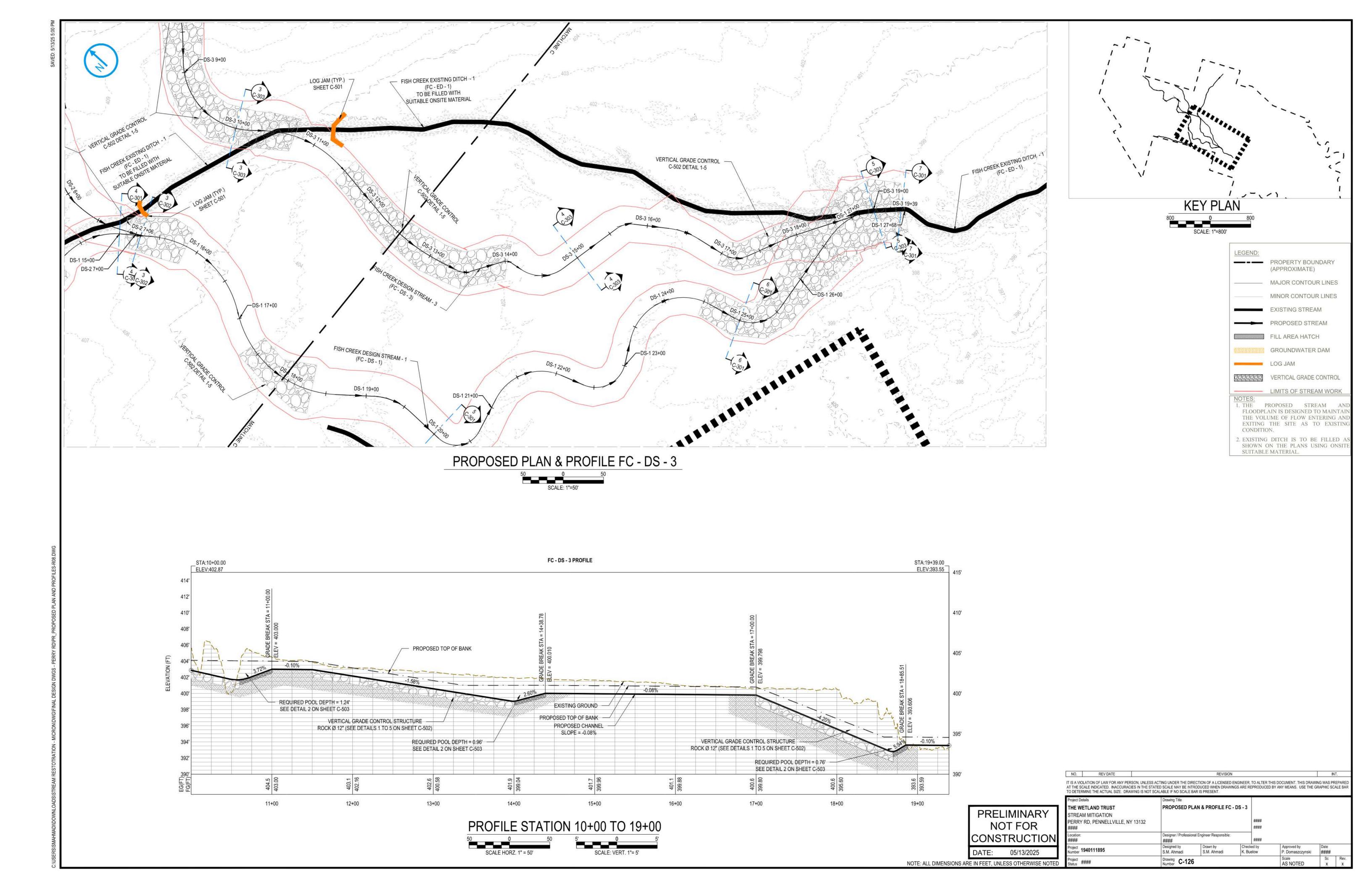


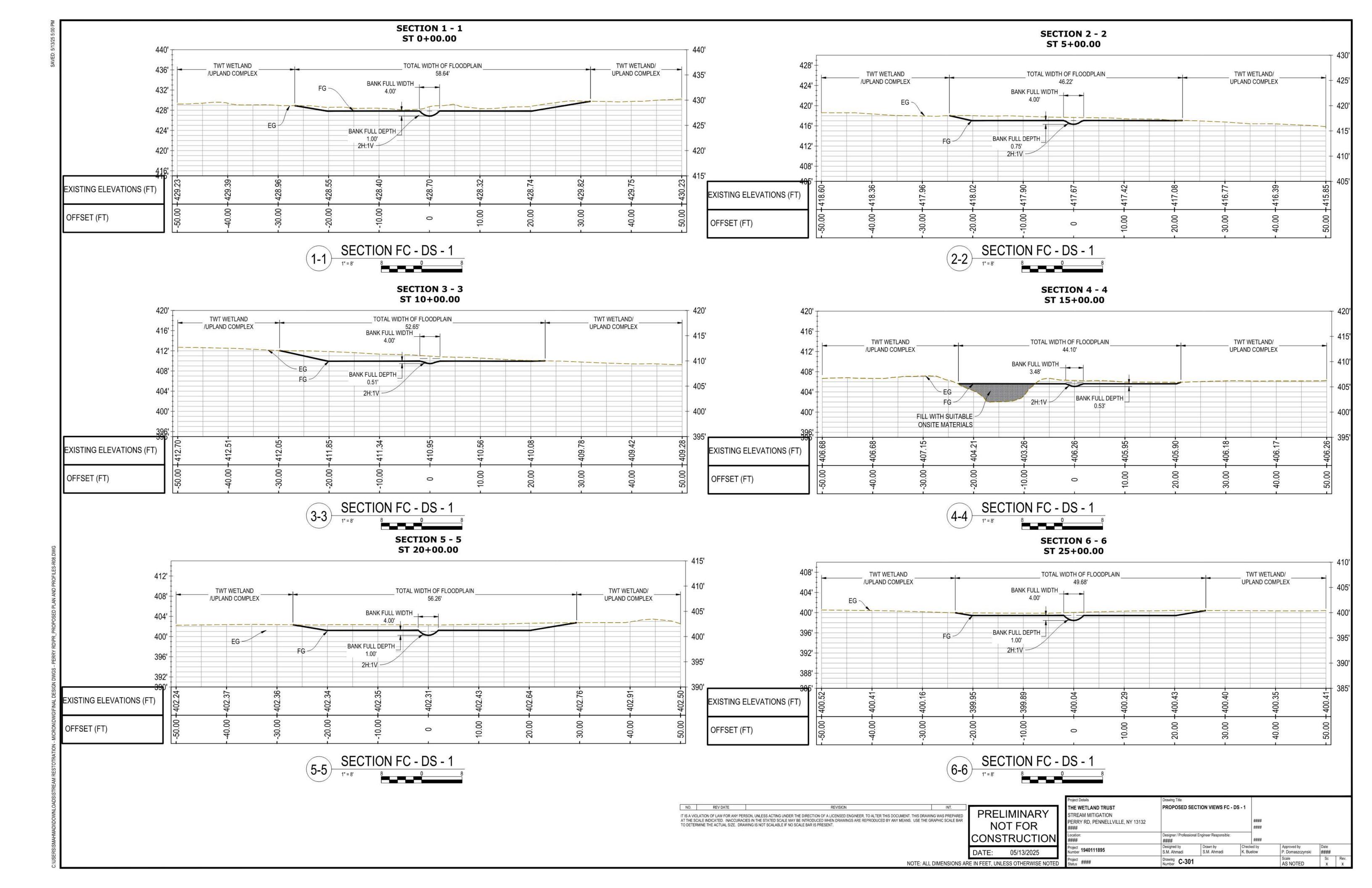


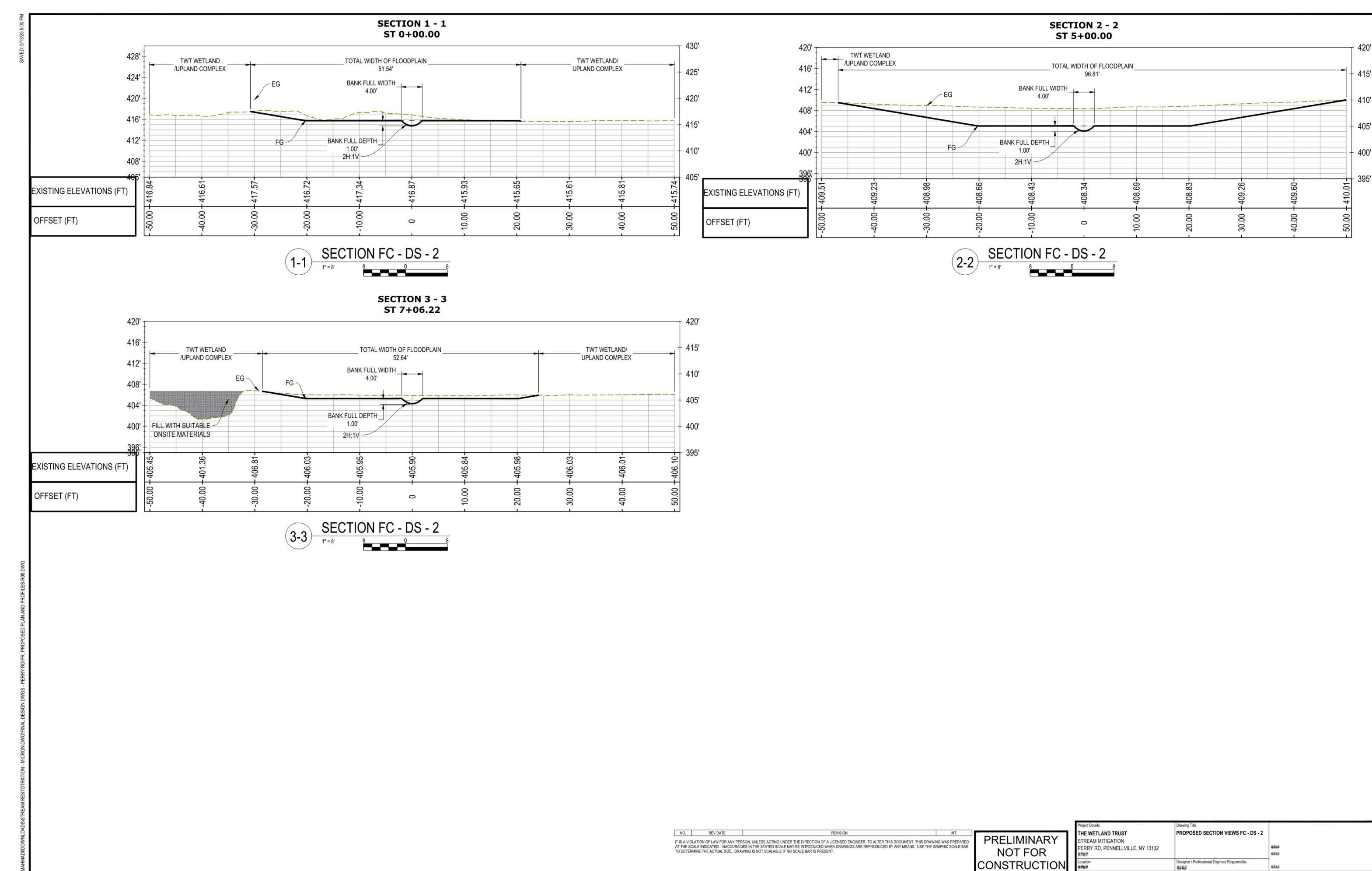






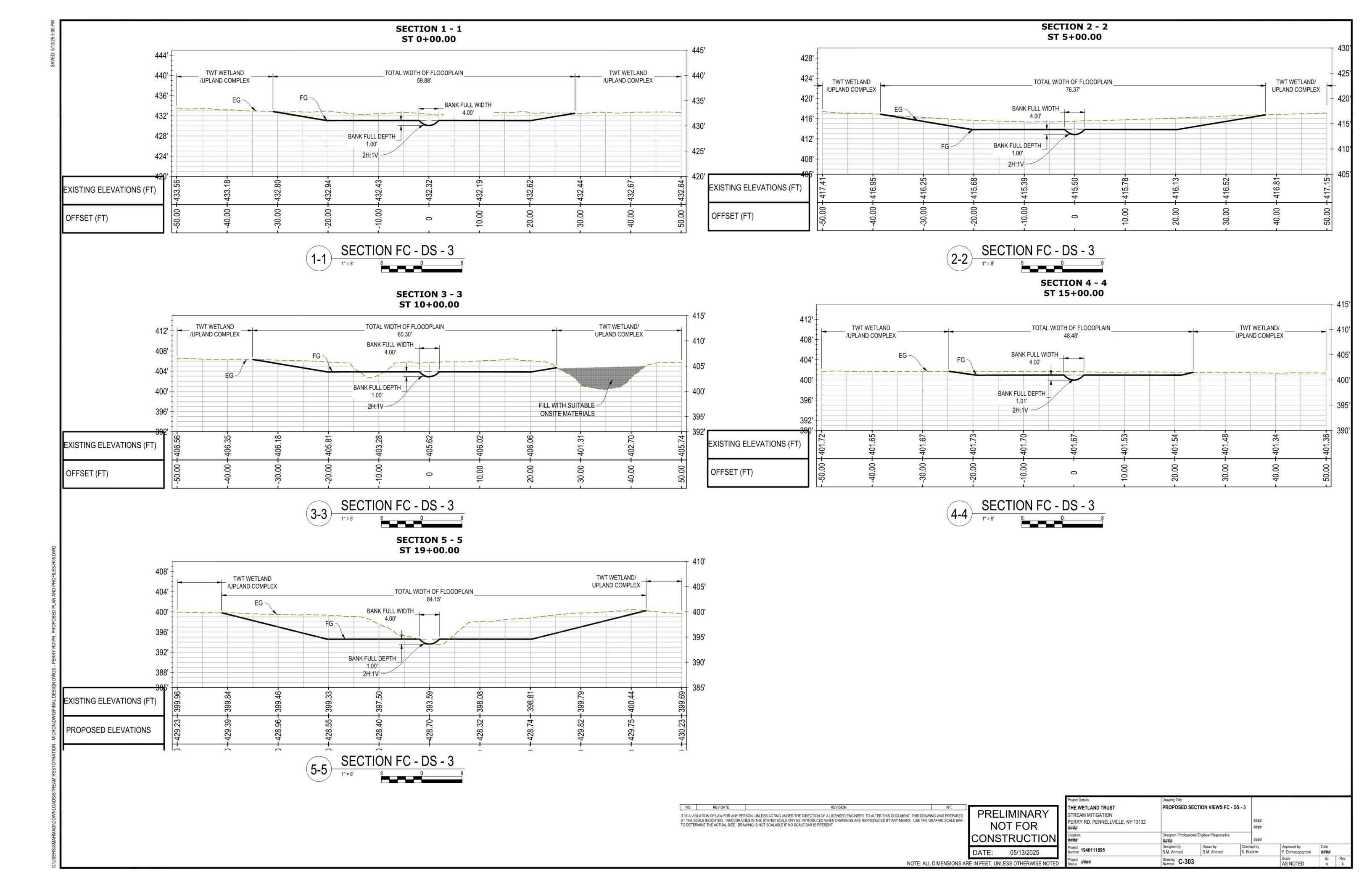


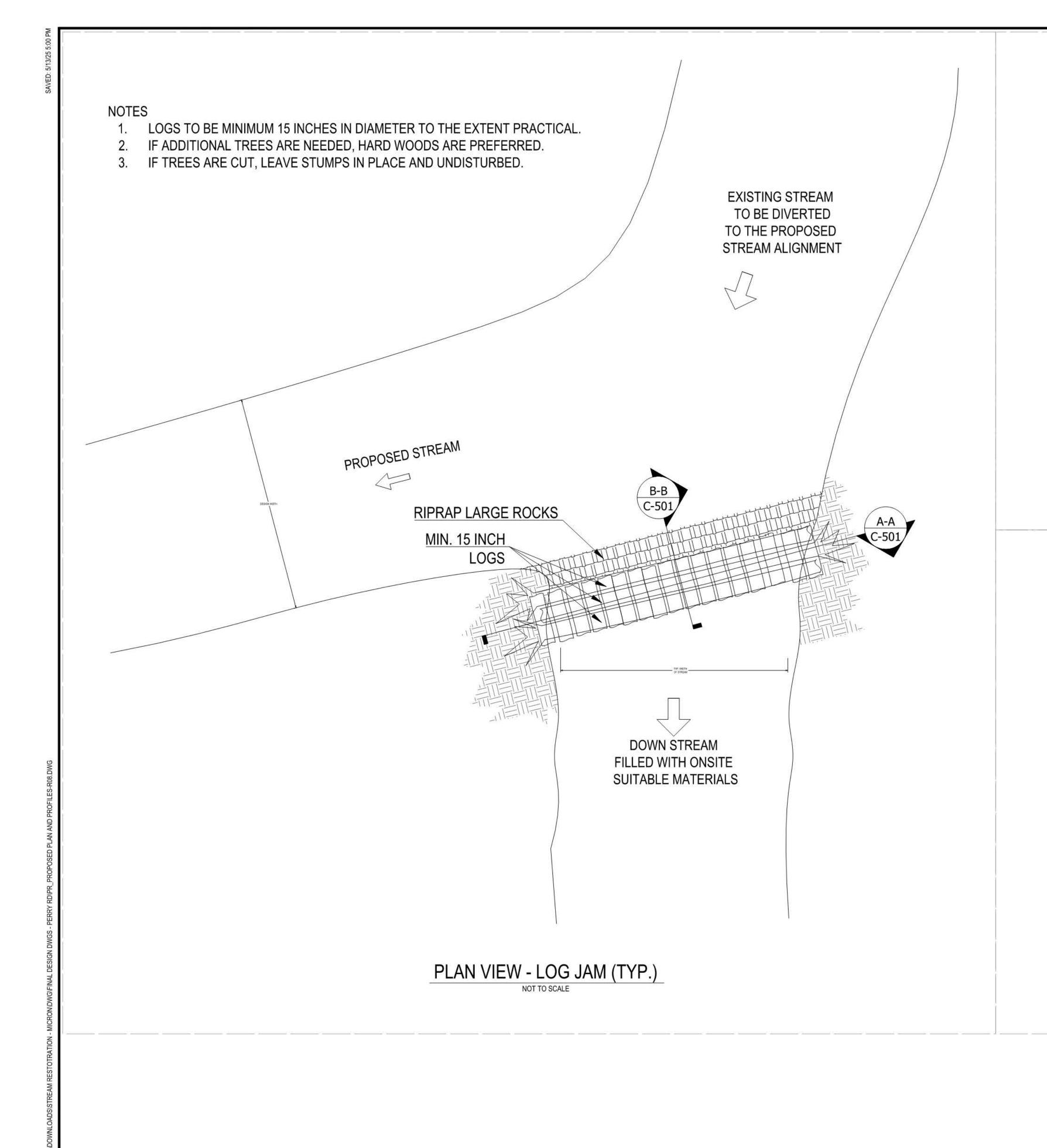


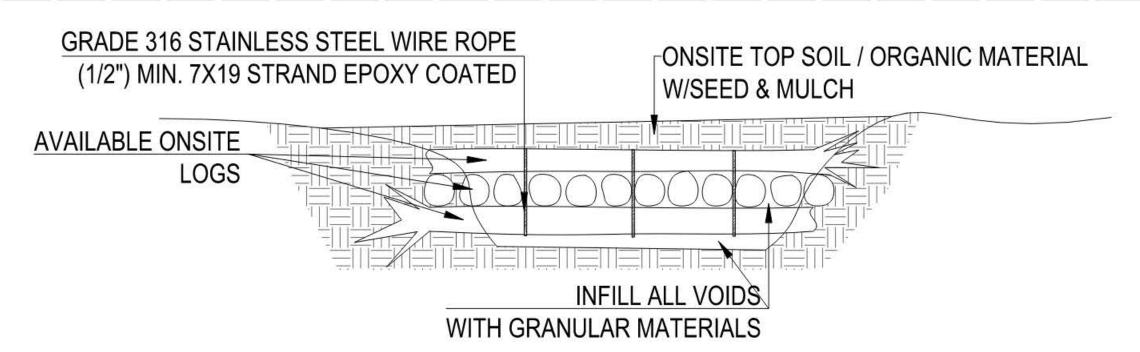


NOTE: ALL DIMENSIONS ARE IN FEET, UNLESS OTHERWISE NOTED

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



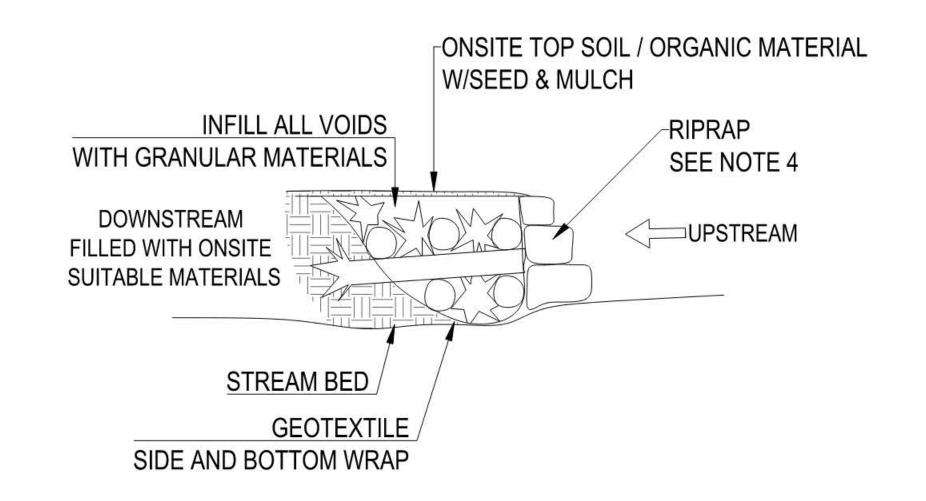




NOTES

- 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.

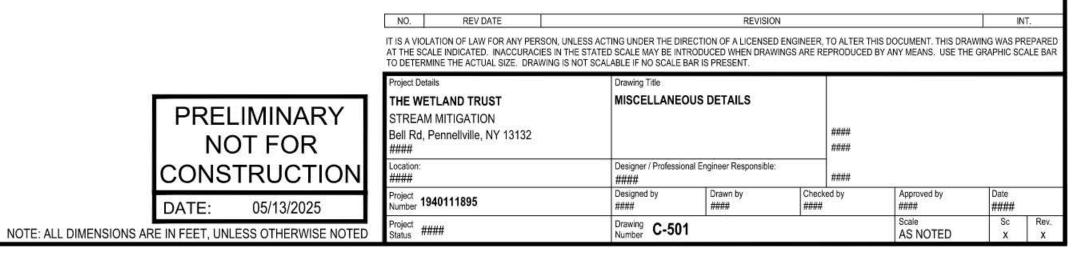


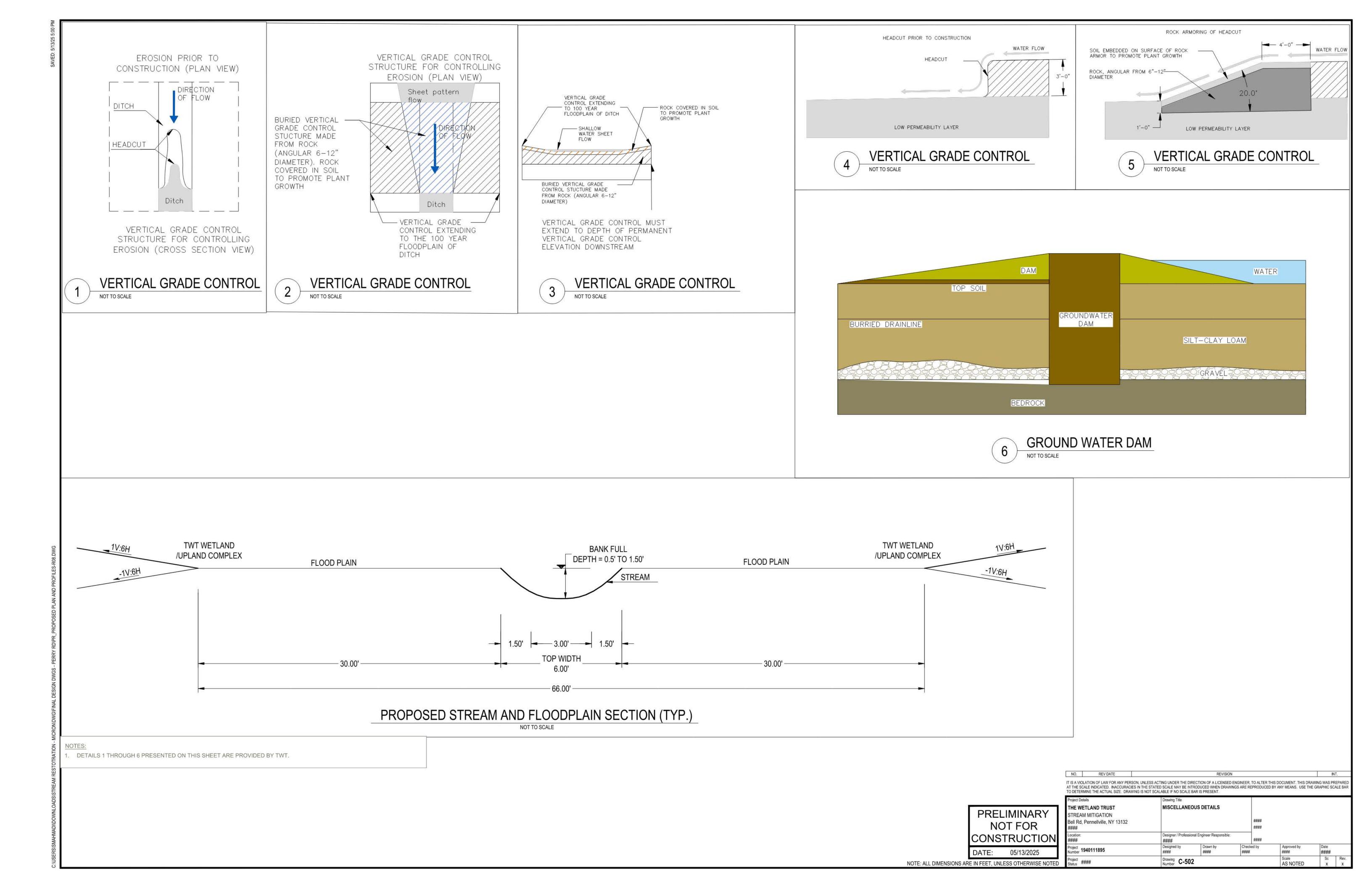


NOTES

- . 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 Drawn by Checke #### ##### | | 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 | Adaptive Management Replanting | | \$1,800 | \$7466 | | |
| | Reshaping terrain | 5 | \$600 | \$2489 | | |
| | Invasive species removal | 2 | \$2,100 | \$21777 | | |
| Maintenance Site manipulation | | 10 | \$1500 | \$3111 | | |
| | Boundary posting | 10 | \$600 | \$6244 | | |
| | Other practices | 3 | \$1,320 | \$9,126 | | |
| Long-Term Management | Other corrective adaptive management actions to ensure natural stability of site | 5 | \$4,800 | \$19,910 | | |
| Monitoring | To determine implementation tasks 1 \$18 | | \$25,398 | | | |
| Administration | For all tasks above including tax exempt status 1 \$600 | | \$12,444 | | | |
| Total annual budget* | 102,500 | | | | | |
| Total Stewardship investm | \$4,100,000 | | | | | |
| Total Section Medical Processing in Control of the | | | | | | |

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 F.** SHPO Correspondence
- Appendix G. Wetland Design Forms
- **Appendix H.** SWPPP (to be added in future submittals)
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List of Related Documents

Overview of Stream/Wetland Compensation on Six Mitigation Sites Buxton Creek- Stream and Wetland Mitigation Plan Fish Creek- Stream and Wetland Mitigation Plan Lower Caughdenoy Creek Wetland Mitigation Plan Sixmile Creek Wetland Mitigation Plan Oneida River Wetland Mitigation Plan

1. Introduction and Objectives

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

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

- Re-establish wetlands to generate 49.1 USACE wetland credits equivalent to the creation of 49.1 NYSDEC wetland mitigation acres, including:
 - 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

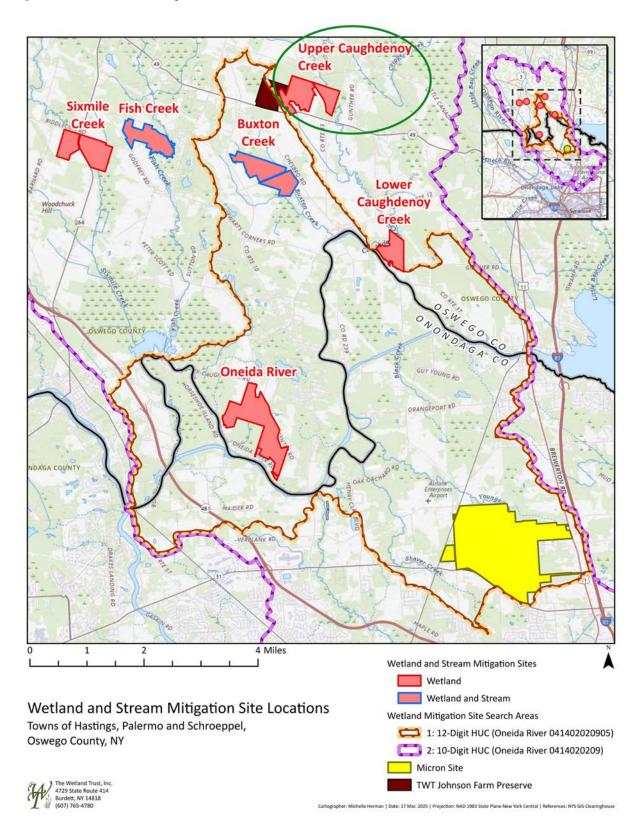


Figure 2-2. Upper Caughdenoy Creek Property (2023)



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 18th century or early 19th century. The first aerial imagery available in 1955 shows almost the entire parcel in agricultural use. Borders of fields and land directly adjacent to Caughdenoy Creek are forested, this remains largely unchanged to the modern day, with marginal increases in forested area. An apple orchard was established on the parcel east of Country Route 33 between 1955 and 1978 and expanded by 2003. By 2003, cattle are being raised on the land in the northern fields. By 2003 a small pond has also appeared near the barn adjacent to the field (likely for the cattle), which appears to either fill or dry gradually, disappearing entirely by 2019. Beginning in 2015 farming rows follow the contours of the land rather than the property boundary, which stops the natural drainage paths from being tilled and filled each year leading them to be more pronounced. The muck farm to the west of the property boundary was farmed until 2011 and has been allowed to go fallow.

Current Use

Current land use is primarily dedicated to commercial crop production, with fields planted in corn and soybeans and some areas used for cattle grazing. Grading and drainage infrastructure are actively maintained to optimize field conditions and enhance agricultural productivity. The forested and wettest portions of the property, mainly along Caughdenoy Creek, remain forested. The muck farm has been fallow since 2012 and is now extensively colonized by invasive hydrophytic species.

3.2 Soils

USDA Natural Resources Conservation Service (NRCS) soil mapping of the site is summarized in **Table 3-1** and **Figure 3-1** below. The Site contains a complex mosaic of soil types that reflect the area's glacial history and topographic variation. The most prevalent soils include Madalin silt loam, a moderately well-drained alluvial soil, which occurs extensively across the central lowlands. Rhinebeck silt loam and Hudson silt loam, both somewhat poorly to poorly drained soils, are also widespread. In contrast, Ira gravelly fine sandy loam, occurring in multiple slope classes (0–15%), dominates the upland areas and ridges, especially in the eastern and northern portions of the site. Carlisle muck and Palms muck, both highly organic hydric soils, are limited in extent but ecologically significant, although these areas have been highly impacted by invasive hydrophytes, they have potential for enhancement. Canandaigua silt loam, a poorly drained mineral soil, also contributes substantially to the site's wetland potential. Along the stream corridor and flood-prone areas, Fluvaquents and Udifluvents occur, reflecting frequent overbank flooding and sediment deposition.

| Table 3-1. Soil Series Mapped within the Mitigation Area | | | | | | | |
|--|--------|-------|--------------|-------------------------|--------------------------|--|--|
| Series | Symbol | Acres | % of Area | Drainage Class | Hydrologic Soil Group | | |
| Canandaigua silt loam | Cd | 6.45 | 2.70% | Moderately well drained | C/D | | |
| Carlisle muck | Ce | 7.41 | 3.10% | Moderately well drained | A/D | | |
| Fluvaquents and Udifluvents, frequently flooded | FA | 2.21 | 0.92% | Moderately well drained | B/D | | |
| Hudson silt loam, 2-6% slopes | HuB | 6.63 | 2.78% | Somewhat poorly drained | C/D | | |
| Ira-Sodus gravelly fine sandy loams, rolling | IsC | 0.02 | 0.01% | Somewhat poorly drained | D | | |
| Ira and Sodus very stony soils, moderately steep | IUD | 0.65 | 0.27% | Moderately well drained | D | | |
| Ira gravelly fine sandy loam, 0-3% slopes | IrA | 5.83 | 2.44% | Poorly drained | D | | |
| Ira gravelly fine sandy loam, 3-8% slopes | IrB | 34.62 | 14.49% | Very poorly drained | D | | |
| Ira gravelly fine sandy loam, 8-15% slopes | IrC | 2.31 | 0.97% | Poorly drained | D | | |
| Madalin silt loam, 0-3% slopes | Ma | 28.81 | 12.05% | Moderately well drained | C/D | | |
| Middlebury loam | Mf | 1.69 | 0.71% | Excessively drained | B/D | | |
| Minoa very fine sandy loam | Mn | 5.00 | 2.09% | Moderately well drained | B/D | | |
| Palms muck | Pa | 18.52 | 7.75% | Well drained | B/D | | |
| Rhinebeck silt loam, 0-2% slopes | RhA | 28.76 | 12.03% | Somewhat poorly drained | C/D | | |
| Rhinebeck silt loam, 2-6% slopes | RhB | 63.59 | 26.61% | Moderately well drained | C/D | | |
| Scriba gravelly fine sandy loam, 0-8% slopes | ScB | 20.41 | 8.54% | Somewhat poorly drained | C/D | | |
| Sodus gravelly fine sandy loam, 8-15% slopes | SgC | 5.69 | 2.38% | Very poorly drained | 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

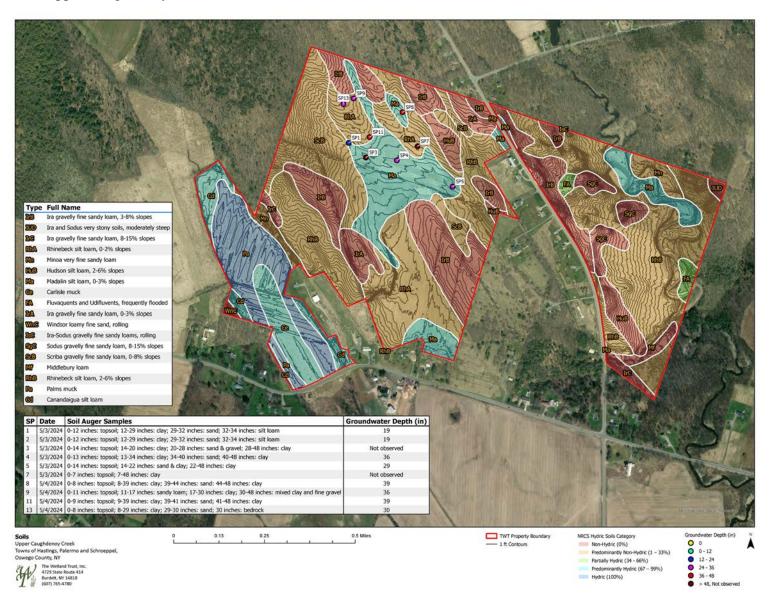


Figure 3-2. State and Federal Mapped Wetlands

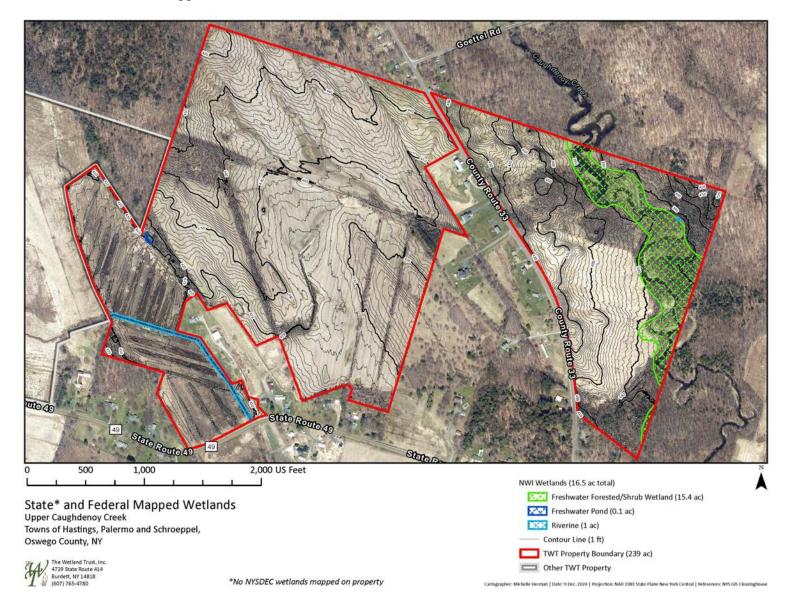
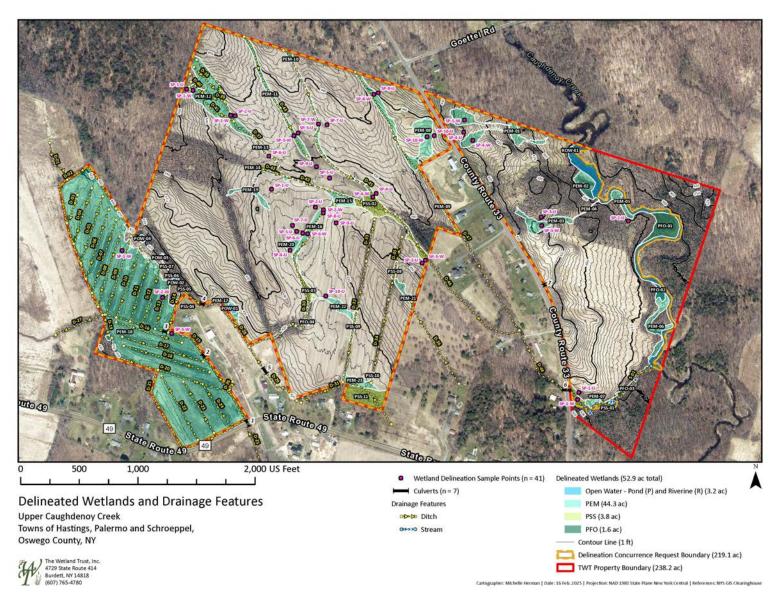


Figure 3-3. Delineated Wetlands and Drainage Features



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.

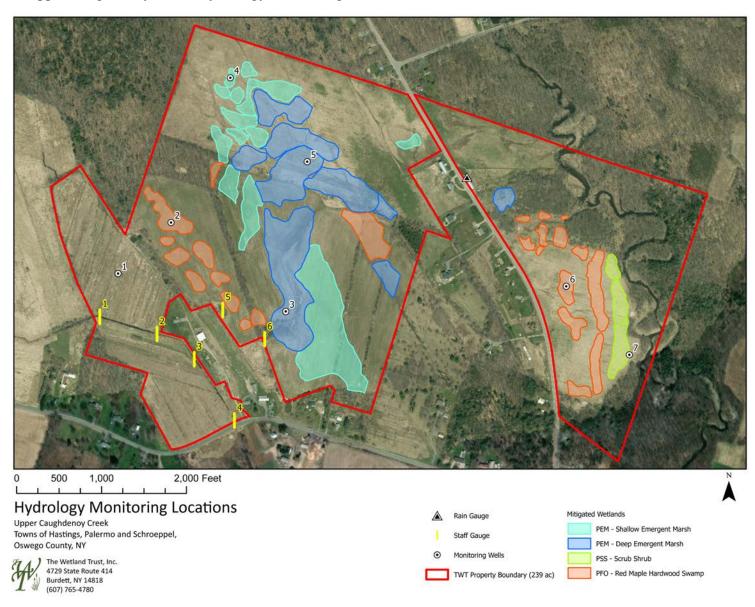
3.4 Existing Wildlife

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

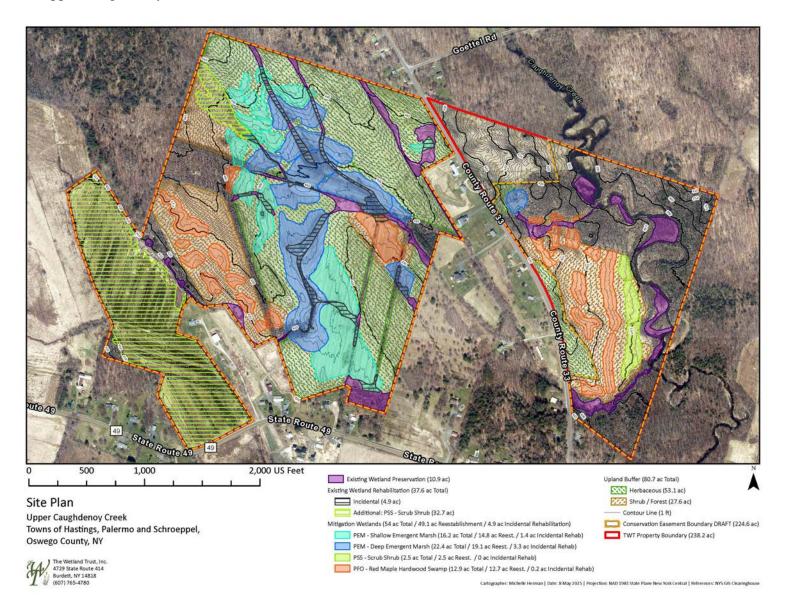
Deep Emergent Marsh

- 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 1st.

5.1 Invasive Vegetation Control

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

5.2 Grading Plan

Basin and berm construction

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

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

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

Figure 5-2. Restored Wetland Section View

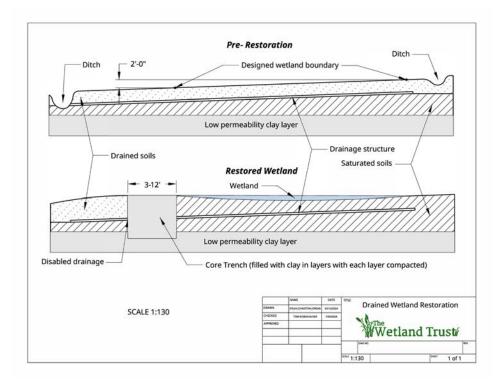


Figure 5-3. Restored Wetland Plan View

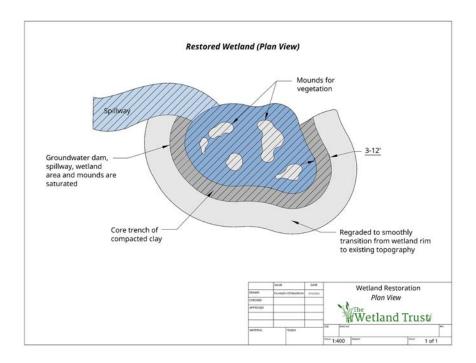


Figure 5-4. Wetland Grading Plan- East

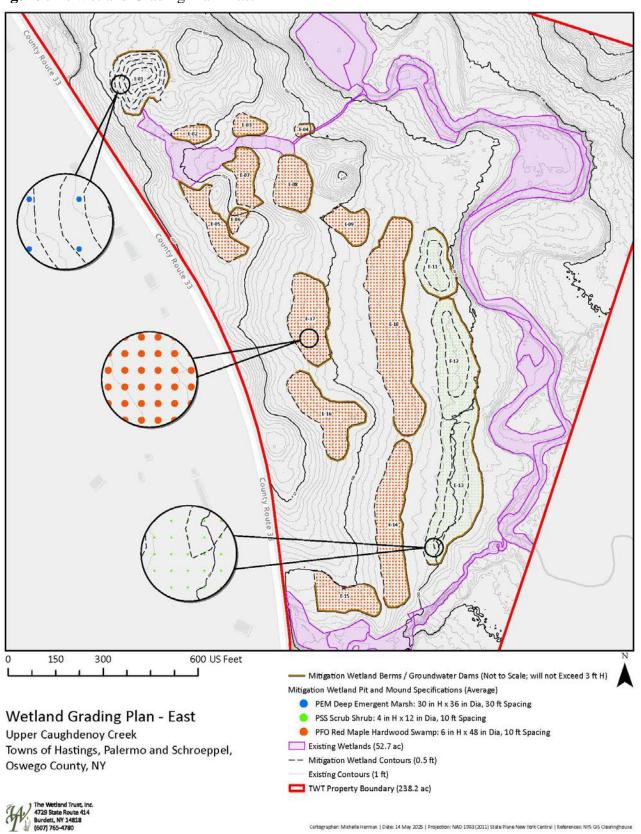
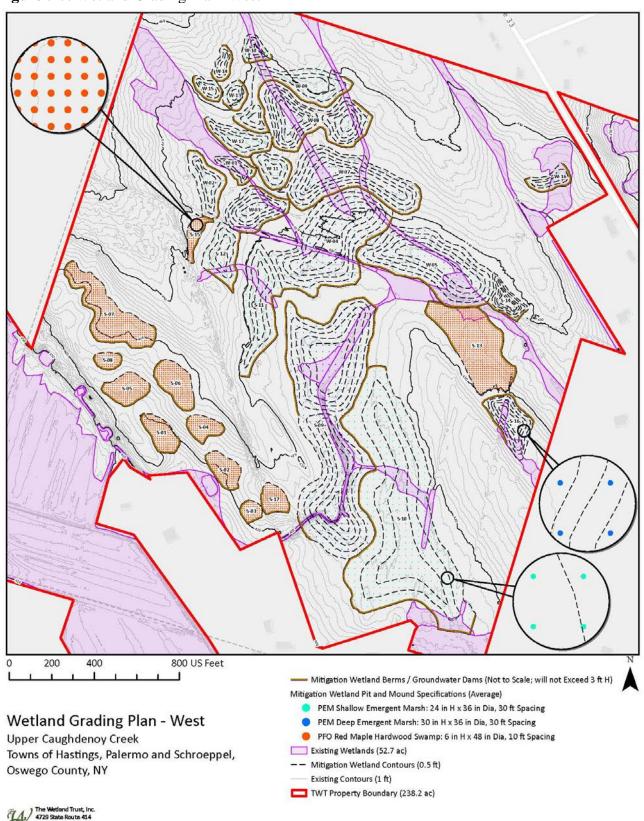


Figure 5-5. Wetland Grading Plan- West



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

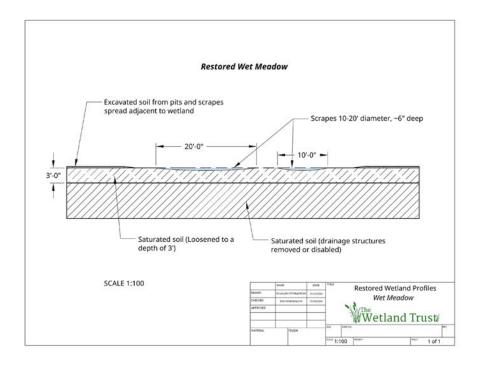


Figure 5-7. Restored Scrub-Shrub Wetland

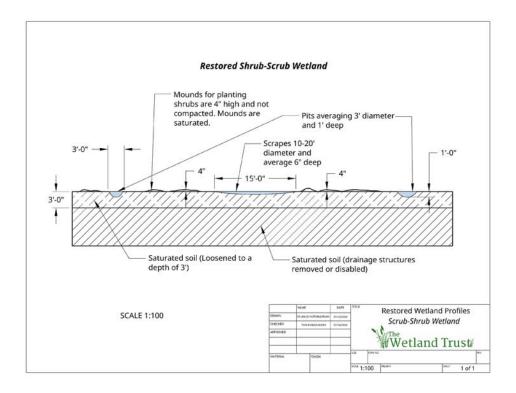
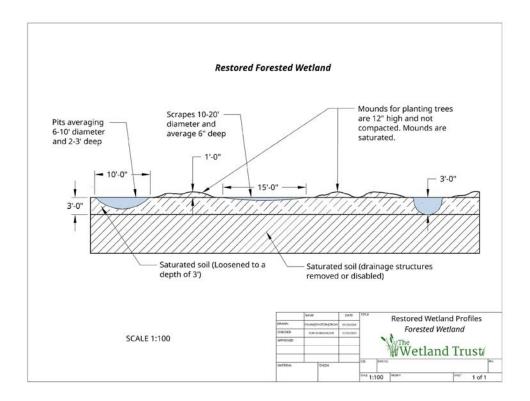


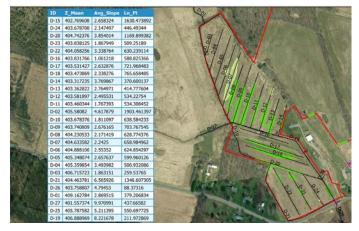
Figure 5-8. Restored Forested Wetland



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. Mitigation Site Sequence | | | | | | | | |
|--|------|----------------------------|----------------------------|------------------------|---------------------|---|--------|---|
| 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 struction for a 15-year per 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 12th year, and 9 ft by the 15th 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 ¹ | Year 3 | Year 5 | Year 7 | Year 10^2 | Year 12 | Year 15 ³ | | | | |
| Relative cover by native perennial hydrophytes (FAC or wetter) | 20% | 40% | 60% | 80% | 90% | | | | | | |
| Stem density in PSS areas (per acre, at least 280 must be shrub species) | 400 | 400 | 400 | 400 | 400 | | | | | | |
| Stem density in PFO areas (per acre, at least 280 must be tree species) | 400 | 400 | 400 | 400 | 400 | 400 | 400 | | | | |
| Tree height in PFO areas | 1 ft | 2 ft | 3 ft | 4 ft | 6.6 ft | 8ft | 9ft | | | | |
| Relative cover of all non-Typha invasive plant species in PEM, PSS, and PFO areas | 15% | 15% | 12.5% | 10% | 5% | | | | | | |
| Total relative cover of all invasive species, including Typha spp. in PEM, PSS, and PFO areas | 20% | 18.5% | 15% | 12.5% | 10% | | | | | | |
| VIBI-FQ score | ≥15 | ≥20 | ≥30 | ≥35 | ≥40 | | | | | | |

^{1.} First full growing season following planting

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.

^{2.} Final herbaceous/PEM and PSS goals to be met at this time or additional monitoring years added

^{3.} Final PFO (tree height and density) goals to be met at this time

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

| 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 Wetland Trust, Inc.

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 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 Accept | ance by Holder: The Wetland Con | nservancy, Inc. |
| Ву: | | |
| Title: Chair | | |
| | | |
| STATE OF NEW YORK) ss | : | |
| COUNTY OF Tompkins) | | |
| subscribed to the within instr | rument 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 | |
| | | |
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Schedule A. Legal description of parcel to be covered by this Conservation Easement.

Upper Caughdenoy Creek, 557 County Road 37

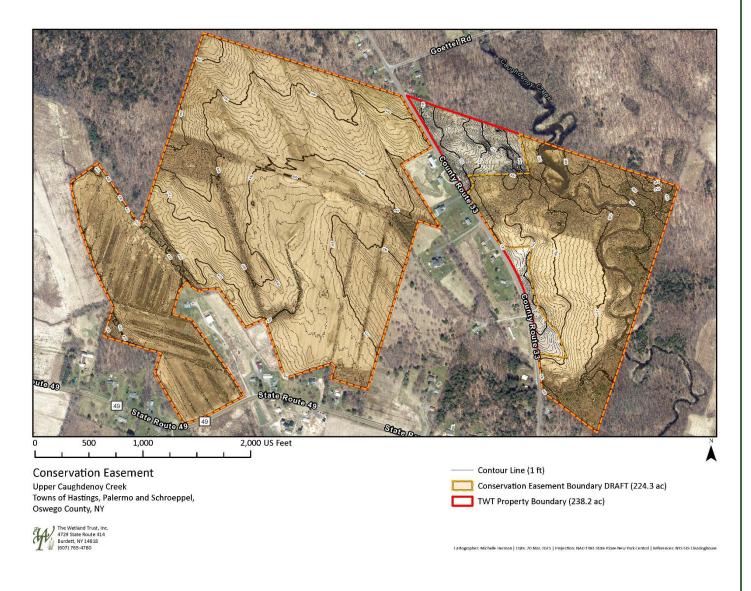
Town of Hastings, Palermo, and Schroeppel, Oswego County, NY

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,

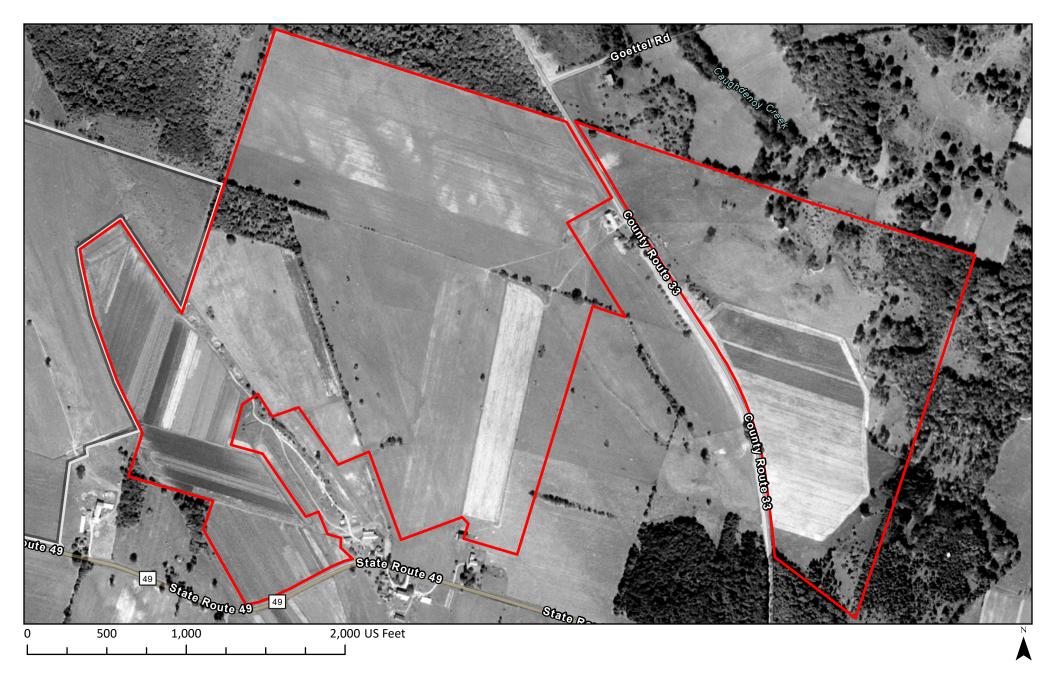
[Left intentionally blank- awaiting boundary survey with descriptions of metes and bounds]



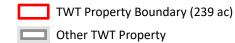
| Micron- Upper Caughdenoy Creek Stream and Wetland Mitigation Plan | |
|---|--|
| | |

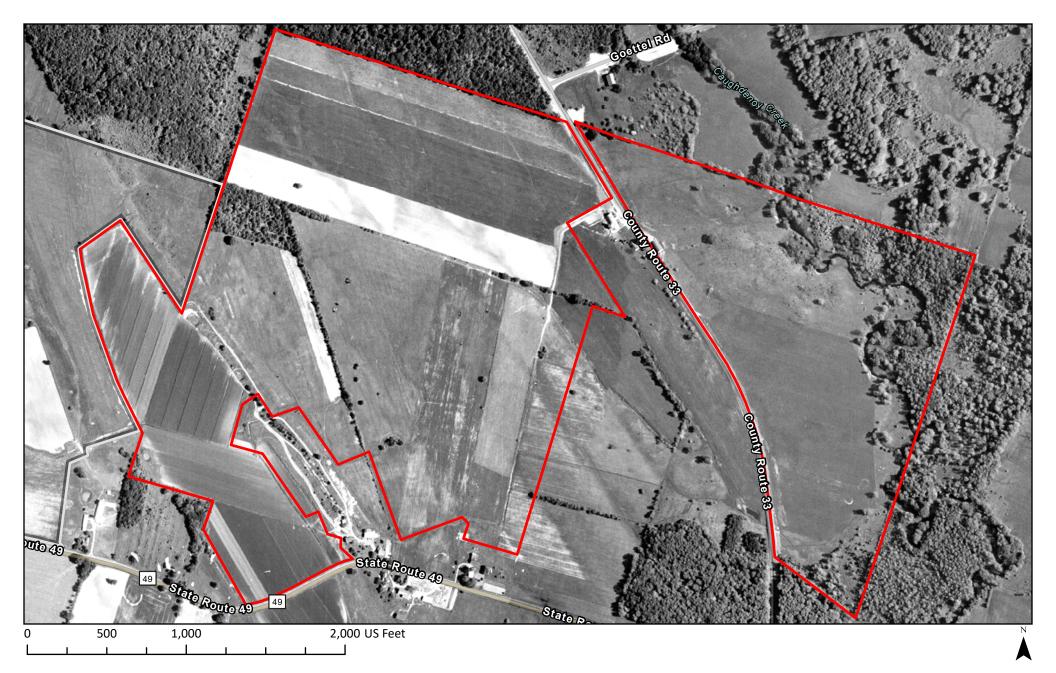
May 2025



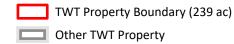


Imagery (1955)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY



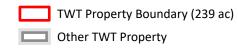


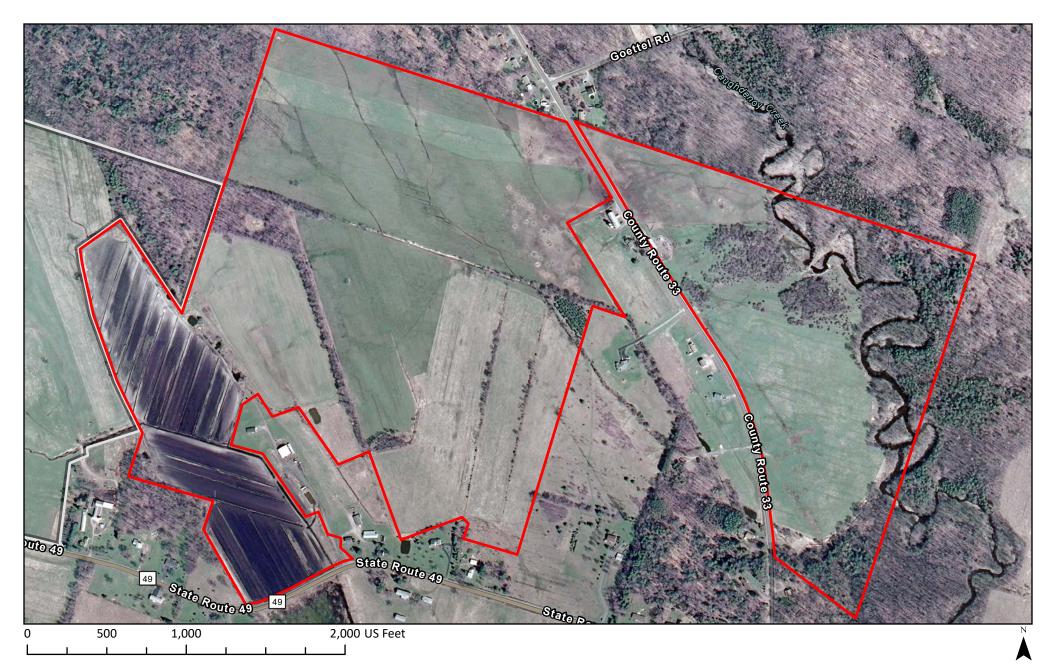
Imagery (1959)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY



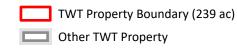


Imagery (1994)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY



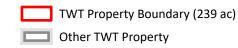


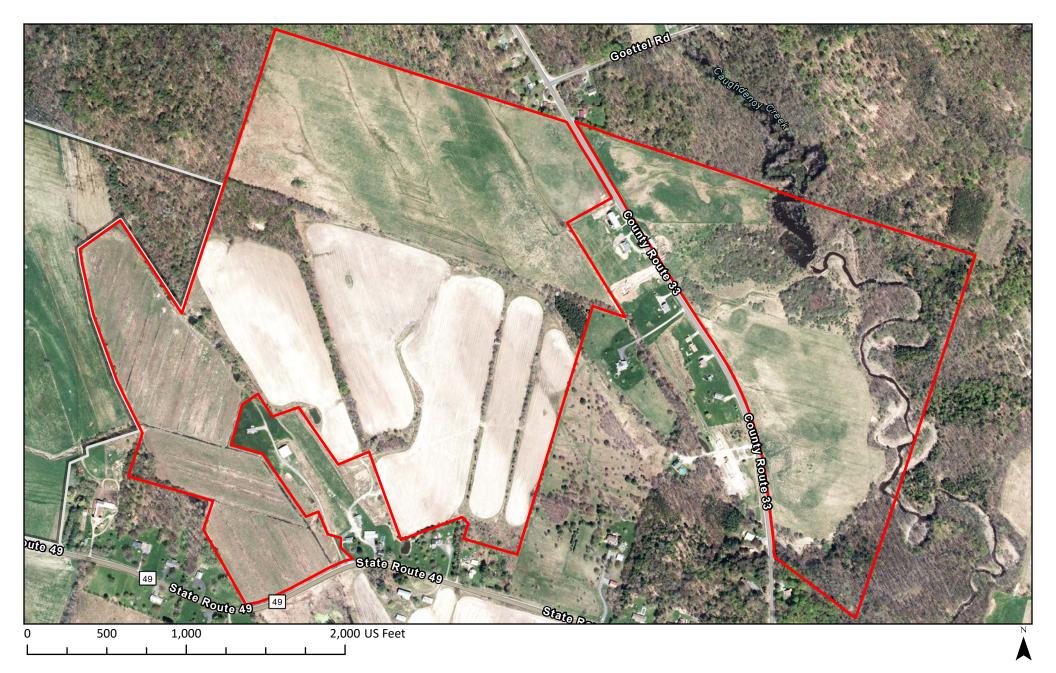
Imagery (2006)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY



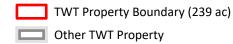


Imagery (2011)
Upper Caughdenoy Creek
Towns of Hastings, Palermo and Schroeppel,
Oswego County, NY





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

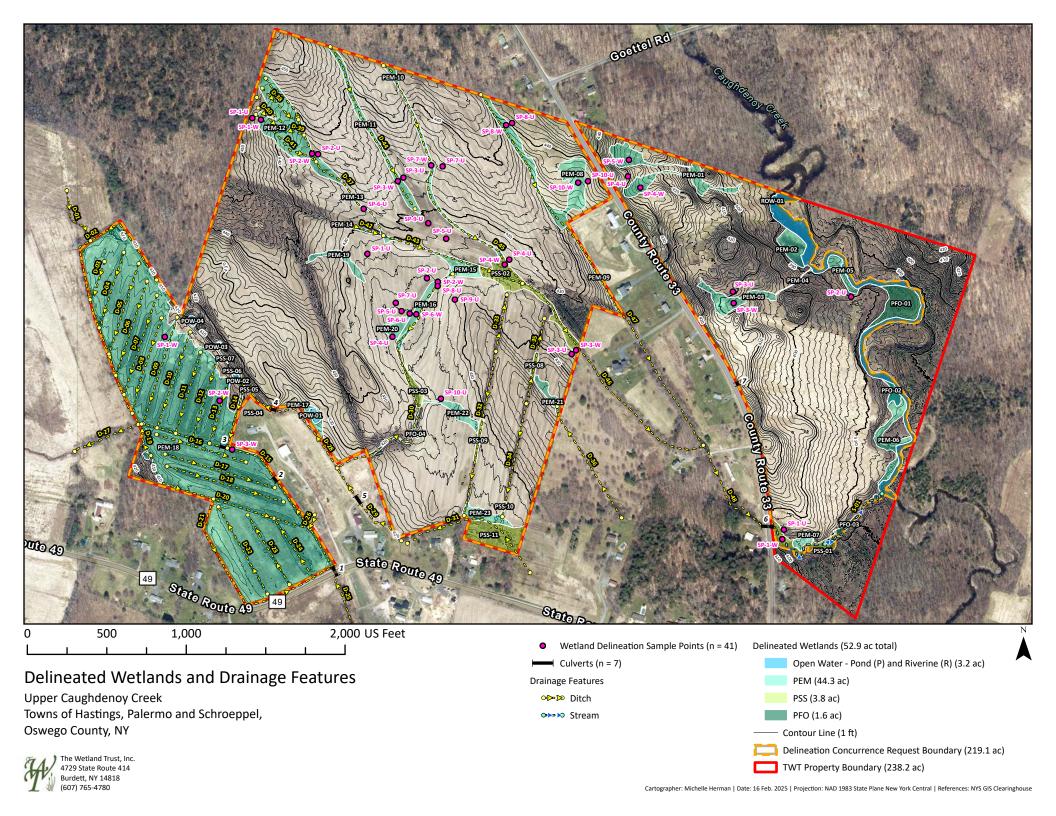


TWT Property Boundary (239 ac)
Other TWT Property

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

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) | | sible 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. | | | | |
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| VEGETATION – 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: |) | - | | 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 ¹ | |
| Persicaria virginiana | 1 | No | FAC | 4 - Morphological Adaptations ¹ (F | Provide supportir |
| Toxicodendron radicans | 5 | Yes | FAC | data in Remarks or on a separ | |
| Lysimachia nummularia | 10 | Yes | FACW | Problematic Hydrophytic Vegetat | tion ¹ (Explain) |
| 5. Fragaria vesca | 2 | No | UPL | | |
| Symphyotrichum lateriflorum | 5 | Yes | FAC | ¹ 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. | - | · | | height. | |
| 2. 3. | - | | | Hydrophytic | |
| 4. | - | | | Vegetation Present? Yes X | Jo. |
| | - | -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 ¹ | Loc ² | 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 |
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| | | | | | | | | | |
| | | 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) (LR | RR, | | uck (A10) (LRR K, L, I | |
| | Epipedon (A2) Histic (A3) | | MLRA 149B) Thin Dark Surfac | o (SO) (| IDDD M | I DA 140 | | rairie Redox (A16) (LF ucky Peat or Peat (S3) | * |
| | gen Sulfide (A4) | | High Chroma Sa | | | | · — | ue Below Surface (S8) | |
| | ied Layers (A5) | • | Loamy Mucky M | | | | | rk Surface (S9) (LRR | |
| | 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) (MLRA 144A, 145, 149B) | | |
| 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) (LRR | K , L) | | | Other (E | Explain in Remarks) | |
| Dark S | Surface (S7) | | | | | | | | |
| ³ 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: | (| , - | | | | | | | |
| Depth (ir | nches): | | | | | | Hydric Soil Pr | esent? Yes | No X |
| <u> </u> | , | | | | | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | <u> </u> | |
| 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 | | | | | | , |
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| 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) |
| | 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. |
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| | 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 ¹ | | | |
| 2. Euthamia graminifolia | 45 | Yes | FAC | 4 - Morphological Adaptations ¹ (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 | ¹ 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. і | |
| 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 | nent the c Feature | | r or con | firm the absence | of indicators.) |
|-------------------------|--------------------------------|-------------|----------------------------|------------------------------|-------------------|------------------|--------------------|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | 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> </u> | Candy Clay |
| | | | | | | | | |
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| | | 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 ³ : |
| | ol (A1) Epipedon (A2) | | Polyvalue Below MLRA 149B) | Suпасе | (S8) (LR | KK, | | uck (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R) |
| | 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) (LRR K, L) |
| Deplet | ted Below Dark Surfac | ce (A11) | Loamy Gleyed M | atrix (F2 | 2) | | Iron-Mar | nganese Masses (F12) (LRR K, L, R) |
| Thick I | Dark Surface (A12) | | X Depleted Matrix (| (F3) | | | Piedmor | nt Floodplain Soils (F19) (MLRA 149B) |
| Sandy | Mucky Mineral (S1) | | Redox Dark Surf | ace (F6) |) | | Mesic S | podic (TA6) (MLRA 144A, 145, 149B) |
| | Gleyed Matrix (S4) | | Depleted Dark S | • | F7) | | | rent Material (F21) |
| | Redox (S5) | | Redox Depression | | | | | allow Dark Surface (TF12) |
| | ed Matrix (S6) | | Marl (F10) (LRR | K, L) | | | Other (E | Explain in Remarks) |
| Dark S | Surface (S7) | | | | | | | |
| ³ Indicators | of hydrophytic vegeta | ition and | wetland hydrology mus | st be pre | esent unle | ess distur | bed or problematic | , |
| | 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) |
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| 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 | onal 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) m Lines (B16) | | |
| | Marl Deposits (B15) | Dry-Season Water Table (C2) | | | |
| | Hydrogen Sulfide Odor (C1) | | Crayfish Burrows (C8) | | |
| | Oxidized Rhizospheres on Livir | · | Saturation Visible on Aerial Imagery (C9) | | |
| | Presence of Reduced Iron (C4) | • | 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) | | ographic 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 (illolles). | 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 | | | | | |
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| 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 = | | — (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 ¹ | | |
| Toxicodendron radicans | 2 | No | FAC | 4 - Morphological Adaptations ¹ (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 ¹ (Evola | uin) |
| 5. Fraxinus pennsylvanica | 3 | No | FACW | Troblematic Hydrophytic vegetal | IIOII (Explai | 111) |
| 6. Euthamia graminifolia | 7 | No | FAC | ¹ Indicators of hydric soil and wetland be present, unless disturbed or proble | | must |
| 7. Ranunculus repens | 5 | No | FAC | Definitions of Vegetation Strata: | manc. | |
| | 1 | No | FACW | Definitions of Vegetation Strata. | | |
| Carex intumescens Plantago lanceolata | 60 | Yes | FACU | Tree – 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 Chreture (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 | | 1 | | |
| Remarks: (Include photo numbers here or on a sepa 100% Herbaceous coverage. Scattered beyond samp | | | Eutrochium n | nurnureum (Ioe Pve) and Eunatorium ne | rfoliatum | |
| (Boneset) at 3% coverage. Adjacent to sample point | | | | | Hollatum | |
| | | | | | | |
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SOIL Sampling Point: SP-2-U

| Profile De Depth | scription: (Describe Matrix | to the de | | ment the | | or or con | firm the absence | of indicators.) | |
|-------------------------|--------------------------------|-------------|---------------------------------------|-----------------------|-------------------|------------------|---------------------------|---|----------|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | 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 | | | | | |
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| | | | | | | | | | |
| ¹ Type: C= | Concentration, D=De | pletion, RN | ————————————————————————————————————— | S=Cover | ed or Coa | ited Sand | d Grains. ² Lo | ocation: PL=Pore Lining, M=Matrix. | |
| | il Indicators: | · · · · · | · | | | | | or Problematic Hydric Soils ³ : | |
| Histos | sol (A1) | | Polyvalue Below | Surface | (S8) (LR | RR, | 2 cm Mu | uck (A10) (LRR K, L, MLRA 149B) | |
| 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) (LRR K, L, R | 2) |
| | gen Sulfide (A4) | • | —— High Chroma Sa | | | | | ue Below Surface (S8) (LRR K, L) | , |
| | fied Layers (A5) | • | Loamy Mucky M | | | | | rk Surface (S9) (LRR K, L) | |
| | ted Below Dark Surfa | ce (A11) | Loamy Gleyed M | | | _) | | nganese Masses (F12) (LRR K, L, F | ٥١ |
| | | Ce (ATT) | | , | .) | | | • | , |
| | Dark Surface (A12) | • | Depleted Matrix | . , | | | | nt Floodplain Soils (F19) (MLRA 149 | |
| | y Mucky Mineral (S1) | | Redox Dark Surf | | | | | podic (TA6) (MLRA 144A, 145, 149 | B) |
| | y Gleyed Matrix (S4) | • | Depleted Dark S | | - 7) | | | rent Material (F21) | |
| | y Redox (S5) | | Redox Depression | | | | | allow Dark Surface (TF12) | |
| Stripp | ed Matrix (S6) | • | Marl (F10) (LRR | K , L) | | | Other (E | Explain in Remarks) | |
| Dark S | Surface (S7) | | | | | | | | |
| ³ 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. | | | | | | | | |
| | | | - | | | | . – | , | |
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| Project/Site: Route 3 | 3 East | | | City/County: Os | swego | | Sampling Date: | 09/05/2024 | |
|-------------------------------------|---------------------------------|--------------------|-------------------------------------|-------------------|--------------------|-------------------|--|----------------|--|
| Applicant/Owner: The | Wetland Trust | | | | | State: | NY Sampling | Point: SP-3- | |
| Investigator(s): E. Fra | ıntz, H. Frantz, D | Johnston-Jorda | n, K. Hastings S | ection, Townsl | nip, Range: P | ennellville | | | |
| Landform (hillside, terr | ace, etc.): Gentle | e slope | Loc | cal relief (conca | ive, convex, no | ne): Flat | Slo | ope (%): 5 | |
| Subregion (LRR or ML | RA): LRR L, MLR | A 101 Lat: | 43.306500 | | Long: 76.2 | 211706 | Datu | ım: WGS84 | |
| Soil Map Unit Name: F | | | | | _ | | cation: None | | |
| Are climatic / hydrologi | | | | r? Yes | No N | (If no, explain i | | | |
| | | • • | • | - | | • | , | No. N | |
| Are Vegetation Y | | · · - | N significantly | | | rcumstances" pre | - | No N | |
| Are Vegetation N | , Soil N , or | Hydrology | N naturally pro | blematic? | (If needed, exp | lain any answers | in Remarks.) | | |
| SUMMARY OF FI | NDINGS – Atta | ch site ma | p showing sa | mpling poin | t locations, | transects, im | portant featu | res, etc. | |
| Hydrophytic Vegetation | on Present? | Yes | No X | Is the Sam | pled Area | | | | |
| Hydric Soil Present? | | Yes | No X | within a We | | Yes | No X | | |
| Wetland Hydrology P | resent? | Yes | No X | If yes, optio | nal Wetland Si | | | | |
| for the entire month o | f August. | | | | | | | | |
| HYDROLOGY | | | | | | | | | |
| Wetland Hydrology I | ndicators: | | | | | Secondary Indica | ators (minimum o | f two required | |
| Primary Indicators (m | inimum of one is re | equired; check | all that apply) | | | Surface Soil | ` ' | | |
| Surface Water (A | • | | Water-Stained Le | , , | | Drainage Pa | | | |
| High Water Table | : (A2) | | Aquatic Fauna (E | • | | | Moss Trim Lines (B16) | | |
| Saturation (A3) | | | Marl Deposits (B | • | | | y-Season Water Table (C2) | | |
| Water Marks (B1 | | | Hydrogen Sulfide | ` ' | D (00) | | yfish Burrows (C8) uration Visible on Aerial Imagery (C9) | | |
| Sediment Deposi | ` , | | Oxidized Rhizosp | | g Roots (C3) | | | , | |
| Drift Deposits (B3 | , | | Presence of Red Recent Iron Redu | ` ' | Soile (CG) | | tressed Plants (D | , i) | |
| Algal Mat or Crus Iron Deposits (B5 | | _ | Thin Muck Surface | | Solis (CO) | Shallow Aqu | Position (D2) | | |
| | <i>י)</i> e on Aerial Imager | | Other (Explain in | ` ' | | | aphic Relief (D4) | | |
| | ed Concave Surfa | · · · · · — | Otrici (Explain in | rtemarks) | | FAC-Neutral | | | |
| Field Observations: | - Consulto Curia | 50 (50) | | | | | 1001 (20) | | |
| Surface Water Preser | nt? Yes | No X | Depth (inches): | | | | | | |
| Water Table Present? | | No X | | | | | | | |
| Saturation Present? | Yes | No X | | | Wetland Hyd | drology Present? | Yes | No X | |
| (includes capillary frin | ige) | | , | | • | | | | |
| Describe Recorded D | ata (stream gauge | , monitoring w | ell, aerial photos, | previous inspe | ections), if avail | able: | | | |
| Remarks: No signs of hydrology | , | | | | | | | | |
| | | | | | | | | | |
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| | 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. | _ | | | 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 ¹ | | |
| Phleum pratense . | | | FACU | 4 - Morphological Adaptations ¹ (P | | portino |
| 4. | | | | Problematic Hydrophytic Vegetati | on¹ (Explai | in) |
| 5 6. | | | | ¹ Indicators of hydric soil and wetland l be present, unless disturbed or proble | | nust |
| 7 | | · | | Definitions of Vegetation Strata: | mauo. | |
| 8. | | | | | | |
| 9. | | | | Tree – 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 ¹ | Loc ² | 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 |
| | | | | | | | | | |
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| | | | | | | | | | |
| | 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) (LRR K, L, rairie Redox (A16) (L 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) (LRR | |
| | 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) (MLRA 149B) |
| 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) (LRR | (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 of | f Hydric Soils |
| | 0 March 2013 Errata. (| | | | | | | | , |
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| 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 | |
| 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) |
| | resence of Reduced Iron (C4) | | Stressed Plants (D1) |
| | ecent Iron Reduction in Tilled Soils | · / · | ic Position (D2) |
| | nin Muck Surface (C7) | <u> </u> | 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. | | |
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| | 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 ¹ | |
| Lysimachia nummularia Ivnous efficius | | | | | ovido ovopostin |
| 2. Juncus effusus | 15 | No No | OBL | 4 - Morphological Adaptations ¹ (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 | ¹ 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 | | | | Hydrophytio | |
| | | | | 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 ¹ | Loc ² | Texture | Remarks |
| <u> </u> | 10YR 3/1 | 95 | 10YR 3/6 | 5 | | | Loamy/Clayov | Clay Loam |
| 0-14 | 10113/1 | 95 | 10113/0 | | | | Loamy/Clayey | Clay Loam |
| | | | | | | | | |
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| | 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 ³ : |
| | sol (A1) | | Polyvalue Below | Surface | e (S8) (LR | 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 | | | | | rk Surface (S8) (LRR K, L) |
| | 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 (| | -) | | | nt Floodplain Soils (F19) (MLRA 149B) |
| | / Mucky Mineral (S1) | | Redox Dark Surf | ' ' |) | | | podic (TA6) (MLRA 144A, 145, 149B) |
| | / Gleyed Matrix (S4) | | Depleted Dark S | | | | | ent Material (F21) |
| | / Redox (S5) | | Redox Depression | | , | | | allow Dark Surface (TF12) |
| | ed Matrix (S6) | | Marl (F10) (LRR | | | | | explain in Remarks) |
| | Surface (S7) | | | | | | | |
| | | | | | | | | |
| ³ 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://www | w.nrcs.usda.gov/Intern | et/FSE_ | _DOCUME | ENTS/nrc | s142p2_051293.dd | ocx) |
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| Project/Site: Route 33 East | City/County: Oswego | Sampling Date: 09/06/2024 |
|--|--|---|
| Applicant/Owner: The Wetland Trust | | State: NY Sampling Point: SP-4-U |
| Investigator(s): DJJ | Section, Township, Range: Penne | ellville |
| Landform (hillside, terrace, etc.): Hillside | Local relief (concave, convex, none): | Convex Slope (%): 5 |
| <u> </u> | at: 43.308498°N Long: 76.2141 | |
| Soil Map Unit Name: Ira gravelly fine sandy loam, 3-8 | | NWI classification: None |
| | <u> </u> | |
| Are climatic / hydrologic conditions on the site typical | | f no, explain in Remarks.) |
| Are Vegetation N, Soil N, or Hydrology | | · — — |
| Are Vegetation N, Soil N, or Hydrology | | any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site m | ap showing sampling point locations, tra | nsects, important features, etc. |
| Hydrophytic Vegetation Present? Yes X | No Is the Sampled Area | |
| Hydric Soil Present? Yes | No X within a Wetland? | Yes No _ X |
| Wetland Hydrology Present? Yes | No X If yes, optional Wetland Site ID |): |
| is meeting criteria on one FAC species | · | |
| HYDROLOGY | | |
| Wetland Hydrology Indicators: | <u>Sec</u> | condary Indicators (minimum of two required) |
| Primary Indicators (minimum of one is required; che | | _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) Water Marks (B1) | Marl Deposits (B15) Hydrogen Sulfide Odor (C1) | _Dry-Season Water Table (C2) Crayfish Burrows (C8) |
| Sediment Deposits (B2) | Oxidized Rhizospheres on Living Roots (C3) | Saturation Visible on Aerial Imagery (C9) |
| Drift Deposits (B3) | Presence of Reduced Iron (C4) | Stunted or Stressed Plants (D1) |
| Algal Mat or Crust (B4) | Recent Iron Reduction in Tilled Soils (C6) | Geomorphic Position (D2) |
| Iron Deposits (B5) | Thin Muck Surface (C7) | Shallow Aquitard (D3) |
| Inundation Visible on Aerial Imagery (B7) | Other (Explain in Remarks) | Microtopographic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | <u> </u> | FAC-Neutral Test (D5) |
| Field Observations: | | |
| Surface Water Present? Yes No X | _ · · · / | |
| Water Table Present? Yes NoX | _ · · · · | |
| Saturation Present? Yes No X | Depth (inches): Wetland Hydrolo | ogy Present? Yes No X |
| (includes capillary fringe) | well, aerial photos, previous inspections), if available | |
| Describe Recorded Data (Stream gauge, monitoring | well, aeriai priotos, previous irispections), ii avaliable | • |
| Remarks: | | |
| No hydrology was observed | | |
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| | | | 1 11 1 | Sampling Point: | SP-4-l | |
|-------------------------------------|------------------|-------------------|---------------------|---|-------------|----------|
| <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 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 | | | |
| Dactylis glomerata | 90 | Yes | FACU | 3 - Prevalence Index is ≤3.0 ¹ | | |
| 2. Ranunculus repens | 40 | Yes | FAC | 4 - Morphological Adaptations ¹ (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 | ¹ 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 | nent th cFeatur | | r or conf | irm the absence of | indicato | rs.) | |
|--------------------------|--------------------------------|-------------|--------------------------|---------------------------|--------------------|---|---|--------------------|------------------------|-------------|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | 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 |
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| ¹ Type: C= | Concentration, D=De | pletion, RN | M=Reduced Matrix, CS | S=Cove | red or Coa | ted Sand | Grains. ² 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) (LR | R R, | 2 cm Muc | k (A10) (L | 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)5 cm Muc | ky Peat o | r Peat (S3) (L | RR K, L, R) |
| Hydro | gen Sulfide (A4) | | High Chroma Sa | nds (S1 | 1) (LRR K | (, L) | Polyvalue | Below Su | urface (S8) (L | RR K, L) |
| Stratif | ied Layers (A5) | | Loamy Mucky M | neral (F | 1) (LRR K | (, L) | Thin Dark | Surface (| (S9) (LRR K, 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 S | | | Red Pare | | | | |
| Sandy Redox (S5) | | | Redox Depressions (F8) | | | | Very Shallow Dark Surface (TF12) | | | |
| Stripped Matrix (S6) | | | Marl (F10) (LRR | | | Other (Ex | plain in Re | emarks) | | |
| 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. | | | | | | | | | |
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| 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:(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 species39 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:) | | - Total Cover | | X 2 - Dominance Test is >50% | | | |
| Juncus effusus | 35 | Yes | OBL | X 3 - Prevalence Index is ≤3.0 ¹ | | | |
| 2. Ranunculus repens | 20 | No | FAC | 4 - Morphological Adaptations ¹ (Provide supporting | | | |
| 3. Agrostis gigantea | 80 | Yes | FACW | data in Remarks or on a separate sheet) | | | |
| 4. <u>Mimulus ringens</u> | 1 | No | OBL | Problematic Hydrophytic Vegetation ¹ (Explain) | | | |
| 5. Epilobium coloratum | 1 | No | OBL | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | |
| 6. Solidago gigantea | 1 | No | FACW | | | | |
| 7. Epilobium ciliatum | 1 | No | FACW | Definitions of Vegetation Strata: | | | |
| 8. | | | | | | | |
| 9. Cyperus strigosus | 1 | No | FACW | Tree – Woody plants 3 in. (7.6 cm) or more in diameter 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 | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. | | | |
| Woody Vine Stratum (Plot size:) | | | | Woody vines – All woody vines greater than 3.28 ft in | | | |
| 1 | | | | height. | | | |
| 2 | | | | | | | |
| 3 | | | | Hydrophytic Vegetation | | | |
| 4. | | | | Present? Yes X No | | | |
| | | =Total Cover | | | | | |
| Remarks: (Include photo numbers here or on a sepa 100% herbaceous cover. Cattle have been grazing the | | cation. | | | | | |
| | | | | | | | |

Sampling Point: SP-4-W

Northcentral and Northeast Region – Version 2.0

VEGETATION – Use scientific names of plants.

US Army Corps of Engineers

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 ¹ | Loc ² | Texture | Remarks |
| 0-9 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | Clay Loam |
| 9-12 | 10YR 5/2 | 40 | 10YR 4/6 | 30 | | | | _ |
| | | | 10YR 3/2 | 30 | | | | |
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| | | | | | | | | |
| | 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 ³ : |
| | sol (A1) | | Polyvalue Below | Surface | e (S8) (LR | R R, | | (A10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | | | | ie Redox (A16) (LRR K, L, R) |
| Black | Histic (A3) | | Thin Dark Surface | ce (S9) (| LRR R, M | LRA 149 | B)5 cm Mucky | y Peat or Peat (S3) (LRR K, L, R) |
| Hydro | gen Sulfide (A4) | | High Chroma Sa | inds (S1 | 1) (LRR K | , L) | Polyvalue B | Below Surface (S8) (LRR K, L) |
| 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) (LRR K, L, R) |
| | Dark Surface (A12) | | X Depleted Matrix | | | | | loodplain Soils (F19) (MLRA 149B) |
| | y Mucky Mineral (S1) | | Redox Dark Surf | | ١ | | | lic (TA6) (MLRA 144A, 145, 149B) |
| | | | | | | | | |
| | y Gleyed Matrix (S4) | | Depleted Dark S | | F7) | | | Material (F21) |
| | y Redox (S5) | | Redox Depression | ` ' | | | | w Dark Surface (TF12) |
| | ed Matrix (S6) | | Marl (F10) (LRR | 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. (| | | | | | | |
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| Project/Site: Route 33 East | City/County: Oswego County | s | Sampling Date: <u>09/06/2024</u> |
|--|--|------------------------|----------------------------------|
| Applicant/Owner: The Wetland Trust | | State: N | Y Sampling Point: SP-5-W |
| Investigator(s): Dylan Johnston-Jordan, EHF, HEF | Section, Township, Range: Po | ennellville | |
| Landform (hillside, terrace, etc.): Hillside | Local relief (concave, convex, no | | Slope (%): 5 |
| | 43.308784°N Long: 76.2 | • | Datum: WGS84 |
| Soil Map Unit Name: Rhinebeck silt loam 2-6% slopes | | NWI classificat | |
| · | William of war No. Von No. V | | |
| Are climatic / hydrologic conditions on the site typical fo | | (If no, explain in | |
| Are Vegetation N, Soil N, or Hydrology | | rcumstances" prese | |
| Are Vegetation N, Soil N, or Hydrology | | lain any answers in | • |
| SUMMARY OF FINDINGS – Attach site map | showing sampling point locations, | transects, imp | ortant features, etc. |
| Hydrophytic Vegetation Present? Yes X | No Is the Sampled Area | | |
| Hydric Soil Present? Yes X | No within a Wetland? | Yes | No_X_ |
| Wetland Hydrology Present? Yes X | No If yes, optional Wetland Si | ie ID: | |
| Remarks: (Explain alternative procedures here or in a Sample point is 150 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: | | - | ors (minimum of two required) |
| Primary Indicators (minimum of one is required; check | | Surface Soil C | ` ' |
| | Water-Stained Leaves (B9) | Drainage Patte | , |
| | Aquatic Fauna (B13) | Moss Trim Line | ` ′ |
| | Marl Deposits (B15) | | /ater Table (C2) |
| | Hydrogen Sulfide Odor (C1) | Crayfish Burro | |
| <u> </u> | Oxidized Rhizospheres on Living Roots (C3) | | ible on Aerial Imagery (C9) |
| l · · · · · · | Presence of Reduced Iron (C4) | | essed Plants (D1) |
| — · · · · · — | Recent Iron Reduction in Tilled Soils (C6) | Geomorphic P | ` ' |
| <u> </u> | Thin Muck Surface (C7) | Shallow Aquita | ` ' |
| I | Other (Explain in Remarks) | | phic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | | X FAC-Neutral T | est (D5) |
| Field Observations: | | | |
| Surface Water Present? Yes No X | Depth (inches): | | |
| Water Table Present? Yes No X | | | y y Na |
| Saturation Present? Yes X No | Depth (inches): 0 Wetland Hyd | Irology Present? | Yes X No |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring we | | ahla: | |
| Describe Recorded Data (Stream gauge, monitoring we | яі, аенаі рпошь, ргечіоць інъресціонь), іі ачаіі | able. | |
| Remarks: | | | |
| Standing water was not present. The water table was r | not observed at the depths reached for the soil | testing, but the soils | s were somewhat saturated. |
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| | A L | D | Land's of | Sampling Point: | | <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: | 2 | (A) |
| 3. | | | | | | |
| 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 | | | ultiply by: | |
| Sapling/Shrub Stratum (Plot size:) | | | | OBL species 65 x 1 = | 65 | |
| 1 | | | | FACW species 117 x 2 = | 234 | |
| 2. | | | | | 15 | |
| | | | | | | |
| 3 | | | | FACU species 0 x 4 = | 0 | |
| 4 | | | | UPL species 0 x 5 = | 0 | — |
| 5 | | | | 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 ¹ | | |
| 2. Lysimachia nummularia | 80 | Yes | FACW | 4 - Morphological Adaptations ¹ (P | | portin |
| 3. Solidago gigantea | 5 | No | FACW | data in Remarks or on a separa | ite sheet) | |
| 4. Symphyotrichum lanceolatum | 6 | No | FACW | Problematic Hydrophytic Vegetati | on¹ (Expla | ain) |
| 5. Agrostis gigantea | 25 | No | FACW | ¹ Indicators of hydric soil and wetland h | avdrology i | muet |
| 6. Ranunculus repens | 3 | No | FAC | be present, unless disturbed or proble | | must |
| 7. Euthamia graminifolia | 1 | No | FAC | Definitions of Vegetation Strata: | | |
| 8. Cyperus strigosus | 1 | No | FACW | T W | | : 4 _ |
| 9. Lythrum salicaria | 2 | No | OBL | Tree – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of l | | iamete |
| 10. Rumex crispus | 1 | No | FAC | | | |
| 11. Galium palustre | 2 | No | OBL | Sapling/shrub – Woody plants less the and greater than or equal to 3.28 ft (1 | | вн |
| 12. Carex stricta | 1 | No | OBL | | • | |
| | | =Total Cover | | Herb – All herbaceous (non-woody) p of size, and woody plants less than 3. | | ardless |
| Woody Vine Stratum (Plot size:) | 101 | . Total Cover | | or olze, and weedy plante less than on | LOTT tall. | |
| 1. | | | | Woody vines – All woody vines great height. | er than 3.2 | 28 ft in |
| | | | | neight. | | |
| 2 | | | | Hydrophytic | | |
| 3 | | | | Vegetation | | |
| 4. | | · | | Present? Yes X N | ° | |
| · - | | =Total Cover | | | | |

US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point: SP-5-W

| Profile De Depth | escription: (Describe Matrix | to the de | epth needed to docum | nent the c Feature | | r or con | firm the absence | of indicators.) | | |
|-----------------------|---------------------------------|---|--|------------------------------|-------------------|------------------|--------------------|-----------------------------|----------|------------|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | 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 | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| ¹ 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) (LR | R R, | | ıck (A10) (LRR K, | | |
| 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) (Ll | | , |
| | 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) (MLR | | |
| | | | | | | | | | | 143, 1430) |
| | Gleyed Matrix (S4) | | Depleted Dark Si | | -7) | | | ent Material (F21) | | |
| | / Redox (S5) | | Redox Depressio | | | | | allow Dark Surface | | |
| | ed Matrix (S6) | | Marl (F10) (LRR | K , 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 D. | | 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 | | | | |
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| 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 | er-Stained Leaves (B9) | | atterns (B10) |
| 1 | atic Fauna (B13) | Moss Trim L | , , |
| | Deposits (B15) rogen Sulfide Odor (C1) | Crayfish Bu | Water Table (C2) |
| — · · · · · · · · · · · · · · · · · · | ized Rhizospheres on Living Roots (C3) | | /isible on Aerial Imagery (C9) |
| l | 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. | |
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| | nts. | | | Sampling Point: _ | SP-1-W | |
|-------------------------------------|---------------------|----------------------|---------------------|--|---------------------------|------|
| Tree Stratum (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/ | | | |
| Bidens frondosa | - | No | FACW | X 3 - Prevalence Index is ≤3.0¹ | | 4: |
| 2. Impatiens capensis | 40 | Yes | FACW | 4 - Morphological Adaptations ¹ (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 | ¹ 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 | No | 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 | · | |

Northcentral and Northeast Region – Version 2.0

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 |
| |
| |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| |
| Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : |
| 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) |
| ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| Restrictive Layer (if observed): |
| Type: |
| Depth (inches): Hydric Soil Present? Yes X No |
| Remarks: |
| This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils |
| version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) |
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| 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) |
| \ | 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 dite | ches in some places but in the areas bet | ween the ditches. |
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| | 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 species 0 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 ¹ | |
| Impatiens capensis | 2 | · —— | FACW | 4 - Morphological Adaptations ¹ (Pro | ovide supportin |
| Scirpus cyperinus | | | OBL | data in Remarks or on a separat | |
| | 1 | 110 | OBL | Problematic Hydrophytic Vegetatio | n ¹ (Evoloin) |
| 4. | | | | Problematic hydrophytic vegetatio | n (⊏xpiain) |
| 5. | | | | ¹ 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) nie | unto romandicos |
| | 93 | =Total Cover | | Herb – 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. | , | | | Woody vines – 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 |
| |
| |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. |
| |
| Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : |
| 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) |
| ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| Restrictive Layer (if observed): |
| Type: |
| Depth (inches): Hydric Soil Present? Yes X No |
| Remarks: |
| This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils |
| version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx) |
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| 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 | · | | 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 | _ | | 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. |
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| 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) | | on 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 | | | |
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| VEGETATION – 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 ¹ | | |
| 2. Leersia oryzoides | 20 | Yes | OBL | 4 - Morphological Adaptations ¹ (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 ¹ (Expla | ain) |
| 5. Sparganium americanum | 5 | No | OBL | 1 | | |
| 6. Persicaria pensylvanica | 3 | No | FACW | ¹ Indicators of hydric soil and wetland be present, unless disturbed or proble | | must |
| 7. | | | | Definitions of Vegetation Strata: | | |
| 8. | | | | | | |
| 9. | | | | Tree – 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. | | | | Woody vines – 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.) | | | | | |
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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 ¹ | Loc ² | Texture | Remarks |
| | | | | | | | | |
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| 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 ³ : |
| Histosol (A1) | | - | Polyvalue Below | Surface | (S8) (LR | RR, | | A10) (LRR K, L, MLRA 149B) |
| Histic Epipedon (A2) MLRA 149B) | | | | | | | Redox (A16) (LRR K, L, R) | |
| 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) (LRR K, L, R) |
| | Surface (A12) | | Depleted Matrix | ` ' | | | | odplain Soils (F19) (MLRA 149B) |
| | y Mineral (S1) | | Redox Dark Surf | | | | | (TA6) (MLRA 144A, 145, 149B) |
| | ed Matrix (S4) | | Depleted Dark S | , | F7) | | Red Parent M | |
| Sandy Redo | . , | | Redox Depression | | | | | Dark Surface (TF12) |
| Stripped Mat | | | Marl (F10) (LRR | 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 | |
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| 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 | , , |
| - | thizospheres on Living Roots (C3) | _ | sible on Aerial Imagery (C9) |
| | of Reduced Iron (C4) | | tressed Plants (D1) |
| | n Reduction in Tilled Soils (C6) | _ | Position (D2) |
| | Surface (C7) | _ Shallow Aqui | nard (D3) ophic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | lain in Remarks) | FAC-Neutral | |
| Field Observations: | | _ 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 | | |
| | | 100 | 0. 2 | | rovide sun | nortino |
| | | | | data in Remarks or on a separa | ate sheet) | porting |
| | | | | Problematic Hydrophytic Vegetati | on ¹ (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_ | |

Northcentral and Northeast Region - Version 2.0

SOIL Sampling Point: SP-1-U

| Profile Des Depth | scription: (Describe Matrix | to the de | - | nent the | | or or con | firm the absence of in | dicators.) | |
|-------------------------|--------------------------------|-------------|-----------------------------|-----------------------|-------------------|------------------|------------------------|--|----------|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | |
| 0-7 | 10yr 3/1 | 100 | , , | | | | Loamy/Clayey | | |
| 7-12 | 10yr 3/1 | 95 | 7.5yr 6/4 | 5 | | | Loamy/Clayey | | |
| 12-15 | 7.5yr 5/2 | 60 | 7.5yr 5/6 | 40 | | | Sandy | Sandy/ loam | |
| | | | | | | | | | |
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| | | 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 ³ | |
| | ol (A1) Epipedon (A2) | | Polyvalue Below MLRA 149B) | Surrace | (S6) (LR | κκ, | | A10) (LRR K, L, MLRA 1 Redox (A16) (LRR K, L, | |
| | 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) (LRR K | |
| | 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) (LRR | K, L, R) |
| Thick I | Dark Surface (A12) | | X Depleted Matrix | (F3) | | | Piedmont Flo | oodplain Soils (F19) (MLF | RA 149B) |
| Sandy | Mucky Mineral (S1) | | Redox Dark Surf | ace (F6) |) | | Mesic Spodi | c (TA6) (MLRA 144A, 14 | 5, 149B) |
| Sandy | Gleyed Matrix (S4) | | Depleted Dark S | urface (F | - 7) | | Red Parent I | Material (F21) | |
| | Redox (S5) | | Redox Depression | | | | | v Dark Surface (TF12) | |
| | ed Matrix (S6) | | Marl (F10) (LRR | K , L) | | | Other (Expla | iin in Remarks) | |
| Dark S | Surface (S7) | | | | | | | | |
| ³ 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. | | | | | | |
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| 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 | | | |
| Wetland Hydrology Indicators: | | - | cators (minimum of two required) |
| Primary Indicators (minimum of one is required; check all that | | | oil Cracks (B6) |
| | -Stained Leaves (B9) ic Fauna (B13) | | Patterns (B10) Lines (B16) |
| | Deposits (B15) | | n Water Table (C2) |
| | gen Sulfide Odor (C1) | | urrows (C8) |
| | 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 |
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| VEGETATION – 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 | | | | | | _ |
| | | | | · | | _ |
| | | | | | 500 | — (B) |
| | | | | ` ' | | — ^(B) |
| | | | | | | |
| 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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Northcentral and Northeast Region - Version 2.0

SOIL Sampling Point: SP-2-U

| Profile Des Depth | | to the de | | nent the c Feature | | r or con | firm the absence of in | dicators.) |
|-------------------------|-----------------------|-------------|-------------------------|------------------------------|-------------------|------------------|------------------------|---|
| (inches) | Matrix Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | 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 | |
| | | | | | | | | |
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| 17 | | | A-D-dud Matrix Of | | | 4 | 21 + i - | 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 ³ : |
| - | ol (A1) | | Polyvalue Below | Surface | (S8) (LR | R R, | | A10) (LRR K, L, MLRA 149B) |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | | e Redox (A16) (LRR K, L, R) |
| Black | Histic (A3) | | Thin Dark Surfac | e (S9) (I | LRR R, M | LRA 149 | 5 cm Mucky | Peat or Peat (S3) (LRR K, L, R) |
| Hydro | gen Sulfide (A4) | | High Chroma Sa | nds (S1 | 1) (LRR K | (, L) | Polyvalue Be | elow Surface (S8) (LRR K, L) |
| Stratif | ied Layers (A5) | | Loamy Mucky Mi | ineral (F | 1) (LRR k | (, L) | Thin Dark Su | urface (S9) (LRR K, L) |
| ? Deplet | ted Below Dark Surfa | ce (A11) | Loamy Gleyed M | latrix (F2 | 2) | | Iron-Mangan | nese Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | | X Depleted Matrix | ` ' | | | | oodplain Soils (F19) (MLRA 149B) |
| Sandy | Mucky Mineral (S1) | | Redox Dark Surf | ace (F6) |) | | Mesic Spodio | c (TA6) (MLRA 144A, 145, 149B) |
| | Gleyed Matrix (S4) | | Depleted Dark S | | - 7) | | | Material (F21) |
| | Redox (S5) | | Redox Depression | | | | | v Dark Surface (TF12) |
| | ed Matrix (S6) | | Marl (F10) (LRR | K , L) | | | Other (Explain | in in Remarks) |
| Dark S | Surface (S7) | | | | | | | |
| ³ 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 | | | | | | | |
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| 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 | | (If needed, explain any answer | |
| 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 | 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) | · | n Water Table (C2) |
| | Hydrogen Sulfide Odor (C1) | ' | 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) |
| | Thin Muck Surface (C7) | • • • | quitard (D3) |
| | 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 | 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 |
| | | | |
| | | | |

| VEGETATION – 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 | | | | | |
| | _ | | | | 0 | |
| | | | | | 0 | _ |
| 2 | | | | | | _ |
| | | | | <u> </u> | | _ |
| | | | | | 500 | — (B) |
| - | | | | | | — ^(b) |
| | _ | · | | <u> </u> | | |
| 1. | | | | | | |
| | | = Iotal Cover | | | 'egetation | |
| | | | | | | |
| | 100 | Yes | UPL | | | |
| _ | | | | 4 - Morphological Adaptations data in Remarks or on a sepa | Provide sup rate sheet) | porting |
| | | · | | Problematic Hydrophytic Vegeta | ation ¹ (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 | | | | iiuiess |
| Woody Vine Stratum (Plot size: | _) | | | Woody vines – All woody vines grea | 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 | |

Northcentral and Northeast Region - Version 2.0

SOIL Sampling Point: SP-3-U

| Profile De Depth | scription: (Describe Matrix | e to the de | | m ent th x Featur | | or or con | firm the absence o | f indicato | ers.) | |
|-------------------------|--------------------------------|-------------|-----------------------------------|-----------------------------|---------------------|------------------|--------------------------------|------------------------------|------------------------|---------------|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | 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 | | | |
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| 1 | | | | | | | | | | |
| | Concentration, D=De | pletion, RM | 1=Reduced Matrix, C | S=Cover | red or Coa | ited Sand | d Grains. Loc Indicators fo | | =Pore Lining, | |
| - | il Indicators: sol (A1) | | Polyvalue Below | Surface | - (S8) (I R | RR | | | RR K, L, ML | |
| | Epipedon (A2) | • | MLRA 149B) | Ouriace | 3 (00) (LI | ix ix, | | | x (A16) (LRR | |
| | Histic (A3) | | Thin Dark Surface | ce (S9) (| LRR R, M | LRA 149 | | | r Peat (S3) (L | |
| | gen Sulfide (A4) | • | High Chroma Sa | | | | | | urface (S8) (L | |
| Stratif | ied Layers (A5) | • | Loamy Mucky M | ineral (F | 1) (LRR k | (, L) | Thin Dark | κ Surface (| (S9) (LRR K, l | L) |
| Deple | ted Below Dark Surfa | ice (A11) | Loamy Gleyed M | 1atrix (F | 2) | | Iron-Man | ganese Ma | asses (F12) (I | 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) (LKK | κ, ∟) | | | Other (EX | piaiii iii Ne | elliaiks) | |
| Bank 0 | Surrace (61) | | | | | | | | | |
| ³ 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 | | | | | | | | | |
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| 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 | |
| _ | | 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) |
| <u> </u> | ydrogen Sulfide Odor (C1) | · | 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 | |
| | | | |
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| VEGETATION – 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 ¹ | |
| 2. <u>Leersia oryzoides</u> | 2 | No No | OBL | 4 - Morphological Adaptations ¹ (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 | ¹ 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. | | | | Tree – 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: | · | | | Woody vines – 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 ¹ | Loc ² | Texture | | Remarks | |
| 0-8 | 10yr 3/1 | 95 | 10yr 5/6 | 5 | | | Loamy/Clayey | | | |
| 8-12 | 10yr 4/1 | 90 | 7.5yr 5/2 | 5 | | | Loamy/Clayey | | | |
| | | | 10yr 6/3 | 5 | | | | | | |
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| | | | | | | | | <u>,</u> | | |
| ¹ Type: C= | Concentration, D=Dep | oletion, RI | —————————————————————————————————————— | 3=Cover | ed or Coa | ted Sand | d Grains. ² Loo | cation: PL=Pore | Lining, M | =Matrix. |
| | il Indicators: | * | , | | | | | or Problematic F | | |
| Histos | sol (A1) | | Polyvalue Below | Surface | (S8) (LR | RR, | 2 cm Mu | ick (A10) (LRR K | 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) (I | | , =/ |
| | | oo (A11) | | | | (, L) | | | | 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) (MLF | 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) | | | , , | | | | | , | |
| ³ 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 | | | | | | | | | |
| | , | | | | | | | | | |
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| 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 ¹ (Provide supporting data in Remarks or on a separate sheet) |
| Problematic Hydrophytic Vegetation ¹ (Explain) |
| ¹ Indicators of hydric soil and wetland hydrology must |
| be present, unless disturbed or problematic. Definitions of Vegetation Strata: |
| Definitions of Vegetation Strata. |
| Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. |
| Sapling/shrub – Woody plants less than 3 in. DBH |
| and greater than or equal to 3.28 ft (1 m) tall. |
| Herb – All herbaceous (non-woody) plants, regardless |
| of size, and woody plants less than 3.28 ft tall. |
| Woody vines – All woody vines greater than 3.28 ft in |
| height. |
| Hydrophytic |
| |
| Vegetation |
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Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point: SP-4-U

| Profile De Depth | | to the de | pth needed to docur | nent the Feature | | r or con | firm the absence of | indicators.) |
|-------------------------|------------------------------|-------------|-----------------------------|----------------------------|-------------------|---------------------------|---------------------|---|
| (inches) | Matrix Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | 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 |
| | | | | | | | | |
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| ¹ 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 D | | | Problematic Hydric Soils ³ : |
| | 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 Ρ Δ 1 <i>Α</i> 0 | | rie Redox (A16) (LRR K, L, R) ky 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 | | | | | 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) (MLRA 144A, 145, 149B) |
| | 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 | K , L) | | | Other (Exp | olain in Remarks) |
| Dark S | Surface (S7) | | | | | | | |
| ³ 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 X No |
| Remarks: | | | | | | | • | |
| Dense clay | y below 6 inches | | | | | | | |
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| 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 | |
| Are Vegetation Y, Soil Y, or Hydrology I | | If needed, explain any answer | |
| SUMMARY OF FINDINGS – Attach site map | snowing sampling point | iocations, transects, ii | 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 Sc | oil Cracks (B6) |
| Surface Water (A1) | Water-Stained Leaves (B9) | Drainage F | Patterns (B10) |
| | Aquatic Fauna (B13) | | Lines (B16) |
| <u> </u> | Marl Deposits (B15) | · | n Water Table (C2) |
| | 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. |
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| | 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 ¹ | | |
| 2. 3. | | | | 4 - Morphological Adaptations ¹ (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. | | | | ¹ Indicators of hydric soil and wetland l 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. | | | | | | |
| 11. | ' | | | Sapling/shrub – Woody plants less the 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. | | 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 |

Northcentral and Northeast Region - Version 2.0

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 ¹ | Loc ² | Texture | Remarks |
| 0-6 | 10yr 3/1 | 100 | | | | | Loamy/Clayey | |
| 6-9 | 10yr 4/1 | 90 | 7.5yr 5/6 | 10 | | | Loamy/Clayey | |
| 9-12 | 7.5yr 5/2 | 60 | 7.5yr 5/6 | 40 | | | Loamy/Clayey | |
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| ¹ Type: C= | Concentration, D=De | pletion, R | M=Reduced Matrix, C | S=Cover | ed or Coa | ted Sand | d Grains. ² Locat | tion: PL=Pore Lining, M=Matrix. |
| | il Indicators: | | | | | | | Problematic Hydric Soils ³ : |
| | ol (A1) | | Polyvalue Below | / Surface | e (S8) (LR | RR, | | (A10) (LRR K, L, MLRA 149B) |
| | 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) (LRR K, L, R) Below Surface (S8) (LRR K, L) |
| | ied Layers (A5) | | Loamy Mucky M | | | | | Surface (S9) (LRR K, L) |
| | 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) (MLRA 144A, 145, 149B) |
| 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) (LRR | (K , L) | | | Other (Expl | lain in Remarks) |
| Dark S | Surface (S7) | | | | | | | |
| ³ 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: | · | | | | | | 1 | |
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| 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) |
| | Aquatic Fauna (B13) | | Lines (B16) |
| <u> </u> | Marl Deposits (B15) | | n Water Table (C2) |
| <u> </u> | Hydrogen Sulfide Odor (C1) | · | 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) |
| | 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. |
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| | 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 ¹ | | |
| 2. 3. | | | | 4 - Morphological Adaptations ¹ (F | rovide sup ate sheet) | porting |
| 4 | | | | Problematic Hydrophytic Vegetat | ion ¹ (Explai | in) |
| 5. | | | | 1 Indicators of hydric coil and watland | hydrology r | munt |
| 6. | | | | ¹ 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. | | | | | | |
| 11. | | | | Sapling/shrub – Woody plants less the 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. | | 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 |

Northcentral and Northeast Region - Version 2.0

SOIL Sampling Point: SP-6-U

| Profile Des Depth | | to the de | pth needed to docur | nent the Feature | | r or con | firm the absence of | of indicators.) |
|-------------------------|---------------------------------|-------------|----------------------------------|----------------------------|-------------------|------------------|----------------------------|--|
| (inches) | Matrix Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-6 | 10yr 3/1 | 100 | Color (molocy | | 1,700 | | 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 | |
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| ¹ Type: C=0 | Concentration, D=Deյ | oletion, RI | M=Reduced Matrix, CS | S=Cover | ed or Coa | ted Sand | d Grains. ² Loc | cation: PL=Pore Lining, M=Matrix. |
| Hydric Soi | I Indicators: | | | | | | | or Problematic Hydric Soils ³ : |
| | ol (A1) | | Polyvalue Below | Surface | (S8) (LR | 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) (LRR K, L, R) e Below Surface (S8) (LRR K, L) |
| | ed Layers (A5) | | Loamy Mucky Mi | | | | | k Surface (S9) (LRR K , L) |
| | ed Below Dark Surfa | ce (A11) | Loamy Gleyed M | | | -, -, | | nganese Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | ` , | X Depleted Matrix | • | • | | | t Floodplain Soils (F19) (MLRA 149B) |
| Sandy | Mucky Mineral (S1) | | Redox Dark Surf | ace (F6) | | | Mesic Sp | podic (TA6) (MLRA 144A, 145, 149B) |
| Sandy | Gleyed Matrix (S4) | | Depleted Dark S | urface (F | - 7) | | Red Pare | ent Material (F21) |
| | Redox (S5) | | Redox Depression | | | | | allow Dark Surface (TF12) |
| | ed Matrix (S6) | | Marl (F10) (LRR | K, L) | | | Other (Ex | xplain in Remarks) |
| Dark S | Surface (S7) | | | | | | | |
| ³ 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) |
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| 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? Ves. 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 | - | o drainage pattern. Steady | rainfall throughout the night and |
| morning. Standing surface water in areas where there v | as no disturbance from tractor. | | |
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| | olants. | Dominant | Indicator | Sampling Point: | |
|----------------------------------|---------------------|-------------------|---------------------|--|--------------------------|
| Tree Stratum (Plot size:) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
| I | | | | North and Branch Oracle | |
| 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 |
| | _ | | | FACW species 0 x 2 = | |
| | | | | FAC species 0 x 3 = | |
| | _ | | | | |
| · | _ | | | FACU species0 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 | | |
| . Glycine max | 100 | Yes | UPL | 3 - Prevalence Index is ≤3.0 ¹ | |
| 2 3 | | | | 4 - Morphological Adaptations ¹ (Production of the data in Remarks or on a separate | |
| 4. | | | | Problematic Hydrophytic Vegetation | n ¹ (Explain) |
| 5. 5. | | | | ¹ Indicators of hydric soil and wetland hy be present, unless disturbed or problem | |
| | | | | Definitions of Vegetation Strata: | iduo. |
| 3. | | | | | |
| | | | | Tree – 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 constitución de la constitución | |
| | 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. | | | | | |

Northcentral and Northeast Region – Version 2.0

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 ¹ | Loc ² | Texture | Remarks |
| 0-6 | 10yr 3/1 | 100 | | | | | Loamy/Clayey | |
| 6-9 | 10yr 4/1 | 95 | 7.5yr 5/6 | 5 | | | Loamy/Clayey | |
| 9-12 | 7.5yr 5/2 | 55 | 7.5yr 5/6 | 45 | | | Loamy/Clayey | _ |
| | | | | | | | | |
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| | | | | | | | | |
| ¹ 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 ³ : |
| | sol (A1) | | Polyvalue Below | Surface | e (S8) (LR | R R, | | 10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | (0.0) | | | | Redox (A16) (LRR K, L, R) |
| | Histic (A3) | | Thin Dark Surface | | | | | eat or Peat (S3) (LRR K, L, R) |
| | gen Sulfide (A4) | | High Chroma Sa | | | | | ow Surface (S8) (LRR K, L) |
| Stratif | ied Layers (A5) | | Loamy Mucky M | ineral (F | 1) (LRR K | K, L) | Thin Dark Surf | face (S9) (LRR K, L) |
| Deplet | ted Below Dark Surfac | e (A11) | X Loamy Gleyed M | 1atrix (F2 | 2) | | Iron-Manganes | se Masses (F12) (LRR K, L, R) |
| Thick | Dark Surface (A12) | | Depleted Matrix | (F3) | | | Piedmont Floo | odplain Soils (F19) (MLRA 149B) |
| 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) (LRR | , , | | | 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) | |
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| 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) | | | | | |
| | Marl Deposits (B15) | | | | | | | |
| <u>—</u> | Hydrogen Sulfide Odor (C1) | | Burrows (C8) | | | | | |
| | Oxidized Rhizospheres on Living | | Visible on Aerial Imagery (C9) | | | | | |
| | 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 ¹ | | |
| 2. | | | | 4 - Morphological Adaptations ¹ (F | Provide sup | porting |
| 3 | | | | data in Remarks or on a separ | ate sheet) | |
| 4. | | | | Problematic Hydrophytic Vegetal | tion¹ (Expla | in) |
| 5. | | | | 1 | | |
| 6. | | | | ¹ 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 ¹ | Loc ² | Texture | Remarks | |
| 0-6 | 10yr 3/3 | 97 | 7.5yr 4/4 | 3 | | | Loamy/Clayey | | |
| 6-12 | 10yr 3/1 | 90 | 7.5yr 4/5 | 10 | | | Loamy/Clayey | Clay | _ |
| | | | | | ' <u></u> | | | | |
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| | | | | | | | | | |
| ¹ 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 ³ : | |
| | sol (A1) | - | Polyvalue Below | Surface | e (S8) (LR | 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) (LRR K, L, F Peat or Peat (S3) (LRR K, | |
| | 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) (MLR | 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) (LRR | K, L) | | | Other (Expla | in in Remarks) | |
| Dark | Surface (S7) | | | | | | | | |
| ³ 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 | | | | | | | |
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| 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) | | | | | |
| | rogen Sulfide Odor (C1) | | urrows (C8) | | | |
| <u> </u> | lized Rhizospheres on Living | ' | 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 well, 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 | | | | | |
| | | | | | | |
| | | | | | | |

| VEGETATION – 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) |
| | | | | Prevalence Index = B/A = | | _(D) |
| 6. | | · | | | | |
| 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 ¹ | | |
| 2. 3. | | | | 4 - Morphological Adaptations ¹ (F | Provide suppo ate sheet) | orting |
| 4. | | | | Problematic Hydrophytic Vegeta | tion¹ (Explain) |) |
| 5 | | | | ¹ 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 ¹ | Loc ² | Texture | Remarks |
| 0-6 | 7.5yr 3/1 | 100 | | | | | Loamy/Clayey | |
| 6-12 | 7.5yr 4/1 | 95 | 7.5yr 4/4 | 5 | | | Loamy/Clayey | |
| 12-15 | 7.5yr 6/1 | 85 | 7.5yr 5/6 | 15 | | | Loamy/Clayey | Clay |
| | | | | | | | | |
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| | | | | | | | | |
| ¹ Type: C= | Concentration, D=Dep | letion RI | —————————————————————————————————————— | S=Covere | ed or Coa | ted Sand | d Grains ² Location | PL=Pore Lining, M=Matrix. |
| | oil Indicators: | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | vi rtoddodd Wdanx, Ot | 3 001011 | 54 01 000 | ttou ouric | | lematic Hydric Soils ³ : |
| _ | sol (A1) | | Polyvalue Below | Surface | (S8) (LR | RR. | | 0) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | ` | • | | edox (A16) (LRR K, L, R) |
| | Histic (A3) | | Thin Dark Surfac | e (S9) (I | 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) (LRR K, L) |
| | eted Below Dark Surface | ce (A11) | Loamy Gleyed M | | | -, -, | | e Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | , (, t) | X Depleted Matrix | | , | | | Iplain Soils (F19) (MLRA 149B) |
| | 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) (LRR | K, L) | | | Other (Explain i | n Remarks) |
| Dark | Surface (S7) | | | | | | | |
| ³ 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 | | | | | | | | |
| No water i | iii iiolo | | | | | | | |
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| 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) | | | | | |
| | Deposits (B15) | | n Water Table (C2) | | | |
| | rogen Sulfide Odor (C1) | | urrows (C8) | | | |
| | lized Rhizospheres on Living Roots (C | - | Visible on Aerial Imagery (C9) | | | |
| | sence of Reduced Iron (C4) | | Stressed Plants (D1) ic Position (D2) | | | |
| | 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 | Hydrology Present | ? 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 | | | | | | |
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| VEGETATION – 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 = | | — ^(B) |
| 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 ¹ | | |
| 2. 3. | | | | 4 - Morphological Adaptations ¹ (F | rovide sup ate sheet) | porting |
| 4. | | | | Problematic Hydrophytic Vegetat | tion¹ (Explai | in) |
| 5. | | | | ¹ Indicators of hydric soil and wetland | hydrology r | munt |
| 6. | | | | 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 | | 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 ¹ | Loc ² | Texture | Remarks |
| | | | 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 | |
| | | | | | | | | _ |
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| 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 ³ : |
| _ | sol (A1) | | Polyvalue Below | Surface | e (S8) (L R | R R. | | .10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | Ouridoo |) (00) (= 10 | , | | Redox (A16) (LRR K, L, R) |
| | 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 F | (, L) | Thin Dark Sui | face (S9) (LRR K, L) |
| Deple | ted Below Dark Surfa | ce (A11) | Loamy Gleyed M | 1atrix (F2 | 2) | | Iron-Mangane | ese Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | | X Depleted Matrix | | | | | odplain Soils (F19) (MLRA 149B) |
| | y Mucky Mineral (S1) | | Redox Dark Surf | | | | | (TA6) (MLRA 144A, 145, 149B) |
| | 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) (LKK | . K, L) | | | Other (Explain | i iii Keliiaiks) |
| Bank \ | ouridos (or) | | | | | | | |
| ³ 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 | | | | | | | |
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| 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 ruts 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) |
| | 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, mornioring 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. | | | |
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| | | | | 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 ¹ | | | |
| | | | | 4 - Morphological Adaptations ¹ (P | | portin | |
| 4. | | | | Problematic Hydrophytic Vegetati | on¹ (Expla | iin) | |
| 5 | | | | ¹ Indicators of hydric soil and wetland he be present, unless disturbed or proble | | must | |
| 7. | | | | Definitions of Vegetation Strata: | | | |
| 8. | | | | | | | |
| 9. | | | | Tree – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of I | | 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 | | Herb – 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 | |

Northcentral and Northeast Region – Version 2.0

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 ¹ | Loc ² | Texture | Remarks | |
| 0-6 | 7.5yr 4/1 | | _ | | | | Loamy/Clayey | | |
| 6-12 | 7.5yr 3/1 | 95 | 5yr 4/4 | 5 | | | Loamy/Clayey | | |
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| ¹Type: C= | Concentration, D=Dep | letion, RN | //=Reduced Matrix, C | S=Cove | red or Coa | ted Sand | I Grains. ² Location: | : PL=Pore Lining, M=Matrix. | |
| | oil Indicators: | | | | | | | blematic Hydric Soils ³ : | |
| Histos | sol (A1) | | Polyvalue Below | / Surface | e (S8) (LR | R R, | 2 cm Muck (A1 | 0) (LRR K, L, MLRA 149B) | |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Prairie R | Redox (A16) (LRR K, L, R) | |
| Black | Histic (A3) | | Thin Dark Surfa | ce (S9) (| LRR R, M | LRA 149 | B)5 cm Mucky Pe | eat or Peat (S3) (LRR K, L, R) | |
| —— Hydro | ogen Sulfide (A4) | | High Chroma Sa | ands (S1 | 1) (LRR K | (, L) | Polyvalue Belo | w Surface (S8) (LRR K, L) | |
| Stratif | fied Layers (A5) | | Loamy Mucky M | lineral (F | 1) (LRR k | (, L) | Thin Dark Surfa | ace (S9) (LRR K, L) | |
| | eted Below Dark Surfac | e (A11) | Loamy Gleyed N | | | • | Iron-Manganese Masses (F12) (LRR K, L, R) | | |
| | Dark Surface (A12) | () | X Depleted Matrix | | , | | | dplain Soils (F19) (MLRA 149B) | |
| | y Mucky Mineral (S1) | | Redox Dark Sur | |) | | | (TA6) (MLRA 144A, 145, 149B) | |
| | | | | | | | | | |
| | y Gleyed Matrix (S4) | | Depleted Dark S Redox Depressi | | | | Red Parent Ma | Dark Surface (TF12) | |
| | y Redox (S5) | | | ` ' | | | | , , | |
| | ped Matrix (S6) | | Marl (F10) (LRF | (K, L) | | | Other (Explain | in Remarks) | |
| Dark | Surface (S7) | | | | | | | | |
| ³ 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 | -NTS/nrc | s142p2_051293.docx) | | |
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| 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 | • • | • | | - | 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) | | | n Water Table (C2) | | |
| Water Marks (B1) | | Hydrogen Sulfide Od | | | urrows (C8) | | |
| 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 ≤3.0¹ FAC 1. Anthoxanthum odoratum **FACU** 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 10 Onoclea sensibilis **FACW** 3 Nο 4. Juncus effusus No OBL Problematic Hydrophytic Vegetation¹ (Explain) FAC 5 Acer rubrum 1 Nο ¹Indicators 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 Des | cription: (Describe t | o the dep | th needed to docume | nt the inc | licator or | confirm th | he absence of indicat | tors.) | |
|---|-------------------------|------------------------------------|--|------------|-------------------|---|---|--|--|
| Depth | Matrix | | Redo | x Feature | s | | | | |
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | |
| 0-6 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | | |
| 6-12 | 10YR 3/3 | 85 | 10YR 4/4 | 15 | | | | | |
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| | | etion, RM= | Reduced Matrix, CS=C | covered or | r Coated S | and Grains | | ion: PL=Pore Lining, M=Matrix. | |
| • | Indicators: | | Daharahaa Dalaaa | 0 | 00) // DD | _ | | roblematic Hydric Soils ³ : | |
| Histoso | | | Polyvalue Below | Surrace (| 58) (LRR | к, | | (A10) (LRR K, L, MLRA 149B) | |
| | Epipedon (A2) | | MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) | | | | Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) | | |
| Black Histic (A3) Hydrogen Sulfide (A4) | | High Chroma Sands (S11) (LRR K, L) | | | | Polyvalue Below Surface (S8) (LRR K, L) | | | |
| | ed Layers (A5) | | Loamy Mucky Mineral (F1) (LRR K, L) | | | | Thin Dark Surface (S9) (LRR K, L) | | |
| | ed Below Dark Surface | (A11) | Loamy Gleyed Matrix (F2) | | | | Iron-Manganese Masses (F12) (LRR K, L, R) | | |
| | Dark Surface (A12) | , (, (, 1, 1, | Depleted Matrix (F3) | | | | Piedmont Floodplain Soils (F19) (MLRA 149B) | | |
| | Mucky Mineral (S1) | | Redox Dark Surfa | - | | | | ic (TA6) (MLRA 144A, 145, 149B) | |
| | Gleyed Matrix (S4) | | Depleted Dark Su | | 7) | | | Material (F21) | |
| | Redox (S5) | | Redox Depressio | • | , | | | w Dark Surface (TF12) | |
| Strippe | d Matrix (S6) | | Marl (F10) (LRR | K, L) | | | | ain in Remarks) | |
| Dark S | urface (S7) | | | | | | | | |
| | | | | | | | | | |
| ³ Indicators of | of hydrophytic vegetati | on and we | tland hydrology must be | e present, | unless di | sturbed or | problematic. | | |
| Restrictive | Layer (if observed): | | | | | | | | |
| Type: Ac | quitard | | | | | | | | |
| Depth (inc | ches): | 12 | | | | | Hydric Soil Prese | nt? Yes No_X | |
| Remarks: | | | | | | | | | |
| | | | | | | | | 3 (70%) 5YR 5/4 (30%). | |
| | | | and Nortneast Regional ov/Internet/FSE_DOCU | | | | | ndicators of Hydric Soils version 7.0 | |
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| 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. | |
| _ | |
| 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) | |
| 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) | ٥١ |
| Sediment Deposits (B2) X Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C4) Styntad or Stressed Plants (C4) |)) |
| 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 ¹ | | |
| 2. Solidago rugosa | 35 | Yes | FAC | 4 - Morphological Adaptations ¹ (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 ¹ (Expla | iin) |
| 5. Ranunculus | 3 | No | | ¹ 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 | Tree – 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 | | Herb – 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 | to the dept | th needed to documer | nt the inc | dicator or | confirm | the absence of indi | icators.) | | |
|--------------------------|---|--------------|-------------------------|-----------------------|-------------------|------------------|----------------------------------|---|--|--|
| Depth | Matrix | | | x Feature | es . | | | | | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | |
| 0-1 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | Surface soil; organic | | |
| 1-10 | 10YR 3/2 | 100 | | | | | Loamy/Clayey | | | |
| 10-14 | 10YR 5/2 | 80 | 7.5YR 5/8 | 20 | <u>D</u> | M | Loamy/Clayey | | | |
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| ¹Tvne: C=C | Concentration. D=Deple | etion. RM= | Reduced Matrix, CS=C | `overed o | r Coated S | and Grain | ns ² Lor | cation: PL=Pore Lining, M=Matrix. | | |
| | I Indicators: | 20011, 1 | toddood mann, oc z | 010100 | | una C.a | | r Problematic Hydric Soils ³ : | | |
| Histoso | | | Polyvalue Below S | Surface (| S8) (LRR | R, | | ick (A10) (LRR K, L, MLRA 149B) | | |
| | Epipedon (A2) | • | MLRA 149B) | - | , , | • | | rairie Redox (A16) (LRR K, L, R) | | |
| _ | Histic (A3) | | Thin Dark Surface | e (S9) (L | RR R, ML | RA 149B | | | | |
| | gen Sulfide (A4) | • | High Chroma Sar | | | | | e Below Surface (S8) (LRR K, L) | | |
| | ed Layers (A5) | • | Loamy Mucky Mir | | | - | | k Surface (S9) (LRR K, L) | | |
| _ | ed Below Dark Surface | - (Δ11) | Loamy Gleyed Ma | | | _, | | nganese Masses (F12) (LRR K, L, R) | | |
| | ed Below Bark Surface Dark Surface (A12) | ; (A11) | X Depleted Matrix (I | | | | | Piedmont Floodplain Soils (F19) (MLRA 149B) | | |
| _ | | | | | | | | Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | |
| | Mucky Mineral (S1) | | Redox Dark Surfa | | _, | | | | | |
| | Gleyed Matrix (S4) | | Depleted Dark Su | • | 7) | | Red Parent Material (F21) | | | |
| | Redox (S5) | | Redox Depression | | | | Very Shallow Dark Surface (TF12) | | | |
| | ed Matrix (S6) | | Marl (F10) (LRR | K , L) | | | Other (Explain in Remarks) | | | |
| Dark S | Surface (S7) | | | | | | | | | |
| | | | land hydrology must be | e present | , unless di | sturbed o | r problematic. | | | |
| | Layer (if observed): | | | | | | | | | |
| Type: Ac | | | | | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil Pre | esent? Yes X No | | |
| Remarks: This data fo | orm is revised from Nor | rthcentral a | and Northeast Regional | Supplem | ent Versic | n 2.0 to r | eflect the NRCS Fiel | ld Indicators of Hydric Soils version 7.0 | | |
| | | | ov/Internet/FSE_DOCU | | | | | a maiotable of rigano conditions. | | |
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| 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 conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for this time of your conditions on the site typical for the site typical for the site typical for this time of your conditions on the site typical for the site t | |
| 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.) |
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| LIVEROLOGY | |
| HYDROLOGY Western Underland Indicates | 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) |
| | 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: |
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| | |
| Remarks: | |
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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 ≤3.0¹ Anthoxanthum odoratum FACU 1. 2. Solidago canadensis Yes FACU 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 8 3 Ranunculus Nο 4. Dactylis glomerata No **FACU** Problematic Hydrophytic Vegetation¹ (Explain) 5 Taraxacum officinale 2 No **FACU** ¹Indicators 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 ¹ | Loc ² | 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 | | | | |
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| ¹ Type: C= | Concentration, D=Dep | oletion, RM | =Reduced Matrix, CS | 3=Cover | ed or Coa | ted Sand | Grains. ² Locat | tion: PL=Pore Lining, M=Matrix. |
| Hydric So | il Indicators: | | | | | | Indicators for I | Problematic Hydric Soils ³ : |
| Histos | ol (A1) | _ | Polyvalue Below | Surface | (S8) (LR | R R, | 2 cm Muck | (A10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | | | Coast Prair | rie Redox (A16) (LRR K, L, R) |
| Black | Histic (A3) | = | Thin Dark Surfac | e (S9) (I | LRR R, M | LRA 149E | 3)5 cm Muck | sy Peat or Peat (S3) (LRR K, L, R) |
| Hydro | 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) |
| | ted Below Dark Surfac | ce (A11) | Loamy Gleyed M | • | 2) | | | anese Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | - | Depleted Matrix | . , | | | | Floodplain Soils (F19) (MLRA 149B) |
| | Mucky Mineral (S1) | - | Redox Dark Surf | | | | | dic (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) | | | | | | | |
| ³ 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 | () |
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| 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 | · · · · · · · · · · · · · · · · · · · |
| | ospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| <u> </u> | educed Iron (C4) Stunted or Stressed Plants (D1) |
| | 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: | |
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| | | | | 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 ¹ | |
| 2. Solidago gigantea | 50 | Yes | FACW | 4 - Morphological Adaptations (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 | ¹ 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 am) 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 | | Herb – 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 | |
| | | =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 | - . | 5 | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks | |
| 0-15 | 10YR 3/2 | 90 | 7.5YR 5/8 | 10 | | | | _ | |
| 15-18 | 10YR 3/1 | 98 | 10R 4/6 | 2 | | | | | |
| 18-20 | 10YR 5/1 | 50 | 10YR 3/6 | 50 | | | | _ | |
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| 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 D | D D | | Problematic Hydric Soils ³ : (A10) (LRR K, L, MLRA 149B) | |
| | Epipedon (A2) | • | MLRA 149B) | Surface | (30) (LK | K K, | | ie Redox (A16) (LRR K, L, R) | |
| | | | , | 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 |) | | Iron-Manganese Masses (F12) (LRR K, L, R) | | |
| Thick | Dark Surface (A12) | , | X Depleted Matrix (| (F3) | | | | Floodplain Soils (F19) (MLRA 149B) | |
| Sandy | / Mucky Mineral (S1) | | Redox Dark Surfa | ace (F6) | | | Mesic Spoo | dic (TA6) (MLRA 144A, 145, 149B) | |
| 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 | K , L) | | | Other (Expl | ain in Remarks) | |
| Dark S | Surface (S7) | ' | | | | | <u> </u> | | |
| ³ 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 |) | |
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| Project/Site: Wisner | City/County: Ha | stings/Oswego | Sampling Date: 7/23/24 | | |
|--|--|---------------------------------|--|--|--|
| Applicant/Owner: The Wetland Trust inc. | | State: | NY Sampling Point: SP3U | | |
| Investigator(s): EF,HF,KH | Section, Townsh | nip, Range: | | | |
| Landform (hillside, terrace, etc.): | Local relief (conca | ive, convex, none): none | Slope (%): 0-1 | | |
| Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.30 | | Long: -76.2194849133 | Datum: WGS 84 | | |
| Soil Map Unit Name: Ma: Madalin silt loam | | | ication: none | | |
| Are climatic / hydrologic conditions on the site typical for this t | time of year? Yes | x No (If no, explain | | | |
| Are Vegetation n , Soil n , or Hydrology n si | | 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? Hydric Soil Present? Yes No Yes X No Wetland Hydrology Present? Yes No | | | NoX | | |
| Remarks: (Explain alternative procedures here or in a separ Rolling topography, 20 feet away from drainage swale | ate report.) | | | | |
| HYDROLOGY | | | | | |
| Wetland Hydrology Indicators: | | Secondary Indic | cators (minimum of two required) | | |
| Primary Indicators (minimum of one is required; check all that | | | il Cracks (B6) | | |
| | r-Stained Leaves (B9) | | atterns (B10) | | |
| <u> </u> | tic Fauna (B13) | | Moss Trim Lines (B16) | | |
| | Deposits (B15) | | Water Table (C2) | | |
| <u> </u> | ogen Sulfide Odor (C1) | Crayfish Bu | | | |
| <u> </u> | zed Rhizospheres on Livino nce of Reduced Iron (C4) | | Visible on Aerial Imagery (C9) Stressed Plants (D1) | | |
| <u> </u> | nt Iron Reduction in Tilled | | c Position (D2) | | |
| <u> </u> | Muck Surface (C7) | Shallow Aq | | | |
| <u> </u> | (Explain in Remarks) | | raphic Relief (D4) | | |
| Sparsely Vegetated Concave Surface (B8) | (Explain in Romano) | FAC-Neutra | | | |
| Field Observations: | | | | | |
| Surface Water Present? Yes No x Dept | th (inches): | | | | |
| Water Table Present? Yes No _x Dept | th (inches): | | | | |
| Saturation Present? Yes No _x Dept | th (inches): | Wetland Hydrology Present | ? Yes No x | | |
| (includes capillary fringe) | | | | | |
| Describe Recorded Data (stream gauge, monitoring well, ae | rial photos, previous inspe | ctions), if available: | | | |
| Remarks: | | | | | |
| No signs of wetland hydrology | | | | | |
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| | 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 = | |
| | _ | | | 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 ¹ | |
| 2 | | | | 4 - Morphological Adaptations ¹ (Production of the data in Remarks or on a separate | |
| 3. 4. | | | | Problematic Hydrophytic Vegetation | , |
| _ | | | | <u> </u> | |
| - | | | | ¹ Indicators of hydric soil and wetland hybe present, unless disturbed or problen | ydrology must natic. |
| 7 | | | | Definitions of Vegetation Strata: | |
| 3. | | | | | |
|). | | | | Tree – Woody plants 3 in. (7.6 cm) or r at breast height (DBH), regardless of he | |
| 10. | | | | Continue to have be a thought a long 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 | | Herb – 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 ¹ | Loc ² | Texture | Remarks |
| 0-12 | 7.5yr 3/1 | 90 | 7.5yr 4/4 | 10 | | | Loamy/Clayey | |
| 12-14 | 7.5yr 5/2 | 90 | 7.5yr 4/6 | 10 | | | | |
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| | | | | | | | | |
| ¹ Type: C= | -Concentration, D=Dep | oletion. RN | M=Reduced Matrix. C | S=Cover | ed or Coa | ted Sand | I Grains. ² Loca | ation: PL=Pore Lining, M=Matrix. |
| | oil Indicators: | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | <u> </u> | | | Problematic Hydric Soils ³ : |
| - | sol (A1) | | Polyvalue Below | Surface | e (S8) (LR | R R, | | k (A10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | , , , | , | | nirie Redox (A16) (LRR K, L, R) |
| | Histic (A3) | | Thin Dark Surfac | ce (S9) (| LRR R, M | LRA 149 | | ky Peat or Peat (S3) (LRR K, L, R) |
| | 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) (MLRA 144A, 145, 149B) |
| | 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!!!! | -1410/1110 | 5142P2_001200.d00 | by Bolow to mones we are |
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| 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) |
| | ed Leaves (B9) | | Patterns (B10) |
| High Water Table (A2) Saturation (A3) Aquatic Faul | | | Lines (B16) n Water Table (C2) |
| | fulfide Odor (C1) | Crayfish Bu | |
| | 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, Dragge | 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 | | | |
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| 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. | | · —— | | _ | | _` ′ |
| 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 = | | — (^D) |
| 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 ¹ | | |
| Solidago gigantea | 40 | Yes | FACW | 4 - Morphological Adaptations ¹ (| 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 | ¹ 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. | | | | Tree – 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 | | Herb – All herbaceous (non-woody) of size, and woody plants less than 3 | | ardless |
| Woody Vine Stratum (Plot size:) | | | | | | 00 ti :- |
| 1. | | | | Woody vines – 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.) | | | | | |
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Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point: SP3W

| Profile De Depth | escription: (Describe Matrix | to the de | | nent the Feature | | r or conf | firm the absence o | of indicators.) |
|--------------------------|---------------------------------|-------------|-------------------------|----------------------------|-------------------|------------------|----------------------|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-17 | 7.5yr 3/1 | 90 | 7.5yr 4/6 | 10 | .,,,, | | Loamy/Clayey | |
| 17-24 | 7.5yr 6/1 | 80 | 7.5yr 5/6 | 20 | | | | |
| 17 24 | 7.0yl 0/1 | | 7.0y1 0/0 | | | | | |
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| | | | | | | | | |
| | 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 ³ : |
| | sol (A1) | | Polyvalue Below | Suпасе | (58) (LR | 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) (LRR K, L) |
| | ted Below Dark Surfac | ce (A11) | Loamy Gleyed M | , | 2) | | | iganese Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | | x Depleted Matrix | . , | | | | t Floodplain Soils (F19) (MLRA 149B) |
| Sandy | y Mucky Mineral (S1) | | Redox Dark Surf | ace (F6) |) | | Mesic Sp | podic (TA6) (MLRA 144A, 145, 149B) |
| 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) (LRR | K , L) | | | Other (Ex | xplain in Remarks) |
| Dark | Surface (S7) | | | | | | | |
| ³ 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 hydrology 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 |
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| 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 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) | | | | |
| | Stained Leaves (B9) | | Drainage Patterns (B10) | | | | |
| — · · · · · · · · · · · · · · · · · · | Fauna (B13) | | Moss Trim Lines (B16) | | | | |
| | 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 | 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 | | | | | | | |
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| 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 ¹ | | |
| 2. | | | | 4 - Morphological Adaptations ¹ | (Provide sur | portino |
| 3. | | | | data in Remarks or on a sepa | | |
| 4. | | | | Problematic Hydrophytic Veget | ation ¹ (Expla | ain) |
| 5 | | | | ¹ 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) 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 | | Herb – 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 (| 09 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 ¹ | Loc ² | 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) | | | | | | | | | |
| 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, 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 | | | | | | | | | |
| 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, 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, 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 | ¹ Type: C= | Concentration. D=Dep | letion. RN | ————————————————————————————————————— | S=Cover | ed or Coa | ted Sand | Grains. ² 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) (LR | R R, | 2 cm Muck | (A10) (LRR K, L, MLRA 149B) |
| Hydrogen Sulfide (A4) | Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Prair | rie Redox (A16) (LRR K, L, R) |
| 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) (LRR K, L, R) |
| Stratified Layers (A5) | Hydro | gen Sulfide (A4) | | High Chroma Sa | inds (S1 | 1) (LRR K | , 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) (LRR | K , 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 | ³ 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 | | | | | | | | |
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| 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 | | • | |
| Are Vegetation, Soiln_, or Hydrologyr | | 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 | | | |
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| 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) | | atterns (B10) |
| <u> </u> | Aquatic Fauna (B13) | | Lines (B16) |
| <u> </u> | Marl Deposits (B15) | | 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: | | | |
| | | | |
| 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 | |
| | | | |
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| VEGETATION – 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:) | | - | | 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 | | · | | Column Totals: 108 (A) | | (B) |
| 6 | | · | | 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 ¹ | | |
| 2. Symphyotrichum lanceolatum | 40 | Yes | FACW | 4 - Morphological Adaptations ¹ (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 | ¹ 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 | | | | Herb – 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.) | | | • | | |
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Northcentral and Northeast Region – Version 2.0

SOIL Sampling Point: SP4W

| Profile De Depth | escription: (Describe Matrix | to the de | | nent the Feature | | r or con | firm the absence | of indicators.) |
|---------------------|---------------------------------|------------|-------------------------|----------------------------|--------------------|---|---------------------|--|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | 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 | |
| | | | | | | | | |
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| 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 ³ : |
| - | oil Indicators: sol (A1) | | Polyvalue Below | Surface | (S8) (I R | R R | | uck (A10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | Ouriacc | , (00) (LI | 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) (LRR K, L, R) |
| | ogen Sulfide (A4) | | High Chroma Sa | | | | | ue Below Surface (S8) (LRR K, L) |
| | fied Layers (A5) | | Loamy Mucky Mi | | | | | rk Surface (S9) (LRR K, L) |
| Deple | ted Below Dark Surfac | ce (A11) | Loamy Gleyed M | atrix (F2 | 2) | | Iron-Ma | nganese Masses (F12) (LRR K, L, R) |
| Thick | Dark Surface (A12) | | x Depleted Matrix (| (F3) | | | Piedmo | nt Floodplain Soils (F19) (MLRA 149B) |
| Sand | y Mucky Mineral (S1) | | Redox Dark Surf | ace (F6) |) | | Mesic S | podic (TA6) (MLRA 144A, 145, 149B) |
| 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) (LRR | K , L) | | | 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 Coile |
| | 0 March 2013 Errata. (| | | | | | | CS Field Indicators of Hydric Soils ocx) |
| | , | • | 5 | _ | - | | | , |
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| 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 | (Ciriai Ka) | | ral Test (D5) | | |
| Field Observations: | avo curidos (Bo) | | | 1710 11001 | 141 1001 (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 ¹ | | |
| 2. | | | 4 - Morphological Adaptations ¹ (| Provide sup | porting |
| 3. | | | data in Remarks or on a sepa | rate sheet) | |
| 4. | | | Problematic Hydrophytic Vegeta | ation ¹ (Expla | ain) |
| 5 | | | ¹ 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 | | | Herb – 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 ¹ | Loc ² | Texture | Remarks |
| 0-9 | 7.5yr 4/1 | 90 | 7.5yr 4/6 | 10 | | | Loamy/Clayey | |
| 9-14 | 2.5y 6/3 | 80 | 5yr 4/6 | 20 | | | Loamy/Clayey | |
| | | | | | | | | |
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| | | | | | | | | _ |
| 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 ³ : |
| • | sol (A1) | | Polyvalue Below | Surface | (S8) (LR | R R. | | A10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | (- / (| , | | Redox (A16) (LRR K, L, R) |
| | Histic (A3) | | Thin Dark Surfac | ce (S9) (| LRR R, M | LRA 149 | | Peat or Peat (S3) (LRR K, L, R) |
| | 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) (MLRA 149B) |
| | y Mucky Mineral (S1) | | Redox Dark Surf | | ١ | | | c (TA6) (MLRA 144A, 145, 149B) |
| | | | | | | | Red Parent N | |
| | y Gleyed Matrix (S4) | | Depleted Dark S Redox Depression | | -7) | | | Dark Surface (TF12) |
| | y Redox (S5) | | | ` ' | | | | , , |
| | ped Matrix (S6) | | Marl (F10) (LRR | K, L) | | | Other (Explai | n in Remarks) |
| Dark | Surface (S7) | | | | | | | |
| ³ 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., | |
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| 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) | - | 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 | | | | | | |
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| 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 Cayor | | | 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 | IIDI | | | |
| - | 163 | <u> </u> | I— | rovido ounn | ortin |
| | | | data in Remarks or on a separa | te sheet) | orunç |
| | | | Problematic Hydrophytic Vegetation | on ¹ (Explain | 1) |
| | | | | | ust |
| | | | Definitions of Vegetation Strata: | | |
| | | | | | mete |
| | | | Sapling/shrub – Woody plants less th | an 3 in. DBI | Н |
| | | | Herb – All herbaceous (non-woody) pl | ants, regard | dless |
| 80 | =Total Cover | | of size, and woody plants less than 3.2 | 28 ft tall. | |
| | | | Woody vines – 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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US Army Corps of Engineers

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 ¹ | Loc ² | Texture | Remarks |
| 0-8 | 7.5yr 3/1 | 80 | 7.5yr 4/4 | 20 | | | Loamy/Clayey | |
| 8-11 | 2.5y 6/1 | 70 | 7.5yr 5/6 | 30 | | | Loamy/Clayey | |
| 11-16 | 2.5y 6/1 | 90 | 5yr 4/6 | 10 | | | Sandy | |
| | | | | | | | | |
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| | | | | | | | | |
| 1 _{Type:} 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 ³ : |
| Histoso | | | Polyvalue Below | Surface | (S8) (LR | RR, | | ck (A10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | (- / (| , | | airie Redox (A16) (LRR K, L, R) |
| | Histic (A3) | | Thin Dark Surfac | e (S9) (I | RR R. M | LRA 149 | | cky Peat or Peat (S3) (LRR K, L, R) |
| | gen Sulfide (A4) | | High Chroma Sa | | | | | e Below Surface (S8) (LRR K, L) |
| | ed Layers (A5) | | Loamy Mucky Mi | | | | | k Surface (S9) (LRR K, L) |
| | 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, Δ) | | | Other (EX | Chair in Remarks) |
| Dark S | unace (S7) | | | | | | | |
| ³ 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 | | | | | | | |
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| 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: | | | | | | |
| 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 | | | | | | |
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| <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 ¹ | | |
| 2. | | | | 4 - Morphological Adaptations ¹ (F | | porting |
| 3. | | . <u> </u> | | data in Remarks or on a separ | ate sheet) | |
| 4 | | | | Problematic Hydrophytic Vegetat | ion¹ (Expla | in) |
| 5. | | | | ¹ Indicators of hydric soil and wetland | hydrology i | muet |
| 6. | | | | be present, unless disturbed or proble | | must |
| 7 | | | | Definitions of Vegetation Strata: | | |
| 8. | | | | Trace (Manada and 2 in (7 C and) as | | 4 |
| 9. | | | | Tree – 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 tall. | |
| (1 lot size. | | | | Woody vines – 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 | |

Northcentral and Northeast Region – Version 2.0

US Army Corps of Engineers

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 ¹ | Loc ² | Texture | Remarks |
| 0-7 | 10yr 4/2 | 90 | 7.5yr 4/6 | 10 | | | Loamy/Clayey | |
| 7-15 | 7.5yr 4/3 | 70 | 7.5yr 4/6 | 30 | | | Loamy/Clayey | |
| 15-18 | 7.5yr 6/1 | 80 | 7.5yr 5/6 | 20 | | | Sandy | |
| | | | | | | | | |
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| | | | | | | | | |
| | 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 ³ : |
| | sol (A1) | | Polyvalue Below | Surface | (S8) (LR | RR, | | 10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | (00) (| | | | Redox (A16) (LRR K, L, R) |
| | Histic (A3) | | Thin Dark Surface | | | | | eat or Peat (S3) (LRR K, L, R) |
| Hydro | ogen Sulfide (A4) | | High Chroma Sa | ands (S1 | 1) (LRR K | (, L) | Polyvalue Belo | ow Surface (S8) (LRR K, L) |
| Stratif | fied Layers (A5) | | Loamy Mucky M | ineral (F | 1) (LRR K | (, L) | Thin Dark Surf | ace (S9) (LRR K, L) |
| Deple | eted Below Dark Surfac | e (A11) | Loamy Gleyed N | /latrix (F2 | 2) | | Iron-Manganes | se Masses (F12) (LRR K, L, R) |
| Thick | Dark Surface (A12) | | x Depleted Matrix | (F3) | | | Piedmont Floo | dplain Soils (F19) (MLRA 149B) |
| 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 | - 7) | | Red Parent Ma | aterial (F21) |
| | y Redox (S5) | | Redox Depression | • | , | | Verv Shallow [| Dark Surface (TF12) |
| | ped Matrix (S6) | | Marl (F10) (LRR | | | | 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 Regio | onal Sup | plement \ | ersion 2. | 0 to reflect the NRCS Fie | eld Indicators of Hydric Soils |
| | 0 March 2013 Errata. (I | | | | | | | · |
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| 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) |
| | 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 | 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 | \$ |
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| 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 ¹ |
| 3 | No | OBL | 4 - Morphological Adaptations ¹ (Provide sup |
| 15 | No | FACW | data in Remarks or on a separate sheet) |
| | No | | Problematic Hydrophytic Vegetation ¹ (Expla |
| | No | | |
| | | | ¹ 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. Herb – 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 | • | ument t x Feature | | itor or co | onfirm the absence | e of indicat | tors.) | | |
|-------------------------|---|-------------|----------------------------|-----------------------------|--------------------|------------------|-----------------------|------------------------------------|-------------|---------------------------------|-------------|
| (inches) | Color (moist) | % | Color (moist) | <u>%</u> | Type ¹ | Loc ² | 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 | | | | |
| | | | _ | | | | | | | | |
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| ¹ 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) (Li | KK K, | | ск (А10) (L 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 | 9B) |
| 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) (LRF | R K, L) | | | Other (Ex | xplain in Re | marks) | | |
| Dark S | Surface (S7) | | | | | | | | | | |
| ³ Indicators | of hydrophytic veget | ation and v | wetland hydrology mu | ust be pr | esent, un | less distu | urbed or problemation | D . | | | |
| 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) |
| | ned Leaves (B9) Drainage Patterns (B10) |
| High Water Table (A2) Aquatic Fa | <u>—</u> |
| Saturation (A3)Marl Depos | <u> </u> |
| - | Sulfide Odor (C1) Crayfish Burrows (C8) |
| | hizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| l | of Reduced Iron (C4) Stunted or Stressed Plants (D1) Reduction in Tilled Soils (C6) Geomorphic Position (D2) |
| 1 | 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 | 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 | , |
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| 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 ¹ |
| 2. Carex vulpinoidea | | 15 | No | OBL | 4 - Morphological Adaptations ¹ (Provide sup |
| 3. Juncus effusus | | 3 | No | OBL | data in Remarks or on a separate sheet) |
| Agrostis stolonifera | | 70 | Yes | FACW | Problematic Hydrophytic Vegetation ¹ (Explai |
| | | | | | Problematic Hydrophytic Vegetation (Expla |
| 5. Lonicera tatarica | | 1 | No | FACU | ¹ 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. |
| | | | | | Herb – 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: | | | | | Woody vines – 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 doo | 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 ¹ | Loc ² | Texture | Remarks |
| 0-9 | 7.5yr 4/2 | 90 | 7.5yr 4/6 | 10 | | | Loamy/Clayey | |
| 9-15 | 7.5yr 6/1 | 75 | 7.5yr 5/4 | 25 | | | Loamy/Clayey | |
| | | | | | | | <u> </u> | |
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| ¹ Type: C: | =Concentration, D=De | epletion, R | M=Reduced Matrix, | CS=Cov | ered or C | oated Sa | and Grains. ² Location | n: PL=Pore Lining, M=Matrix. |
| Hydric So | oil Indicators: | | | | | | Indicators for Pro | oblematic Hydric Soils ³ : |
| Histo: | sol (A1) | | Polyvalue Belov | w Surfac | e (S8) (LF | RR R, | | 10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | | | | Redox (A16) (LRR K, L, R) |
| | (Histic (A3) | | Thin Dark Surfa | | | | 19B) 5 cm Mucky P | 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 | | | K , L) | | face (S9) (LRR K, L) |
| | 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) (MLRA 149B) |
| | y Mucky Mineral (S1) | | Redox Dark Su | • | • | | | (TA6) (MLRA 144A, 145, 149B) |
| | y Gleyed Matrix (S4) | | Depleted Dark | | | | Red Parent M | |
| | y Redox (S5) | | Redox Depress | |) | | | Dark Surface (TF12) |
| | ped Matrix (S6) | | Marl (F10) (LRF | ₹ 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 | | 3 | | _ | | , _ , , , , , , , , , , , , , , , , , , | , , , |
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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 | · / | 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) |
| | 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 | | | |
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| 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 ¹ |
| | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | | | data in Remarks or on a separate sheet) |
| 3. | | | | , , |
| 1 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5 | | | | ¹ 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. |
| | | | | Herb – 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 ¹ | Loc ² | Texture | Remarks |
| 0-9 | 7.5yr 4/1 | 80 | 7.5yr 4/6 | 20 | | | Loamy/Clayey | _ |
| 9-14 | 2.5y 6/3 | 80 | 5yr 4/6 | 20 | | | Loamy/Clayey | |
| | | | | | | | | _ |
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| | | | | | | | | |
| | =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 ³ : |
| | sol (A1) | | Polyvalue Belov | | e (S8) (Ll | RR R, | |) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | | | | dox (A16) (LRR K, L, R) |
| | K Histic (A3) | | Thin Dark Surfa | | | | · | t or Peat (S3) (LRR K, L, R) |
| | ogen Sulfide (A4) | | High Chroma Sa | | | | | Surface (S8) (LRR K, L) |
| | ified Layers (A5) | | Loamy Mucky M | | | K , L) | | ce (S9) (LRR K, L) |
| | eted Below Dark Surfa | ice (A11) | | | 2) | | | Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | | x Depleted Matrix | | | | | plain Soils (F19) (MLRA 149B) |
| | ly Mucky Mineral (S1) | | Redox Dark Sur | | - | | | A6) (MLRA 144A, 145, 149B) |
| | ly Gleyed Matrix (S4) | | Depleted Dark S | | | | Red Parent Mate | |
| | ly Redox (S5) | | Redox Depressi | |) | | | rk Surface (TF12) |
| | ped Matrix (S6) | | Marl (F10) (LRF | 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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US Army Corps of Engineers

Northcentral and Northeast Region – Version 2.0

| Micron- Upper Caughdenoy Creek Stream and Wetland Mitigation Plan | May 2025 |
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| Appendix D. | |
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| 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 | ✓ | ✓ | 1 | ✓ | ✓ | |
| 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 | | 1 | 1 | 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 | | · | √ | | | ✓ |
| 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 | | | | ✓ | | 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 | ✓ | 1 | 1 | | | |
| 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 | | | * | | | |
| 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 | | | √ | | √ | 1 |
| 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 CE: coours (broading) in NVC 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 | | | ✓ | ✓ | | |
| Bird | eastern bluebird | Sialia sialis | S5B G5: secure (breeding) in NYS and globally | - | Yes | | | 4 | | | |
| Bird | American goldfinch | Spinus tristis | S5 G5: secure in NYS and globally | - | Yes | | ✓ | ✓ | ✓ | | |
| Bird | European starling | Sturnus vulgaris | SNA G5: not applicable in NYS and secure globally | - | No | | | | 4 | | |
| Bird | solitary sandpiper | Tringa solitaria | Least concern | - | Yes | | | ✓ | | | |
| Bird | American robin | Turdus migratorius | S5B G5: secure (breeding) in NYS and globally | - | Yes | | ✓ | ✓ | ✓ | | |
| Bird | eastern kingbird | Tyrannus tyrannus | S5B G5: secure (breeding) in NYS and globally | - | Yes | | | 1 | | | |
| Bird | warbling vireo | Vireo gilvus | 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 | | ✓ | | | | |
| Frank | | Manakatta aasataaba | | | | | ✓ | | | | |
| Fungi | morel | Morchella esculenta | • | - | Yes | | • | | | | |
| Mammal | coyote | Canis latrans | Least concern | - | Yes | | ✓, | | ✓ | | |
| Mammal | North American beaver | Castor canadensis | Least concern | - | Yes | | ✓ | | | | , |
| Mammal | North American porcupine | Erethizon dorsatum | Least concern | - | Yes | | | | | | 🟏 |
| Mammal | white-tailed deer | Odocoileus virginianus | Least concern | - | Yes | √ | 1 | 1 | \ \ \ | y | |
| Mammal Mammal | eastern cottontail | Procyon lotor Sylvilagus floridanus | Least concern | | Yes Yes | | • | 1 | ✓ | • | |
| Plant | box elder | Acer negundo | | FAC | Yes | | | | | | 1 |
| Plant | red maple | Acer rubrum | | FAC | Yes | | ✓ | 1 | 1 | ✓ | ' |
| Plant | silver maple | Acer saccharinum | | FACW | Yes | | → | <i>'</i> | | • | |
| Plant | sugar maple | Acer saccharum | | FACU | Yes | | • | · | ✓ | | |
| Plant | common yarrow | Achillea millefolium | | FACU | Yes | | ✓ | | | | |
| Plant | sweet flag | Acorus calamus | | OBL | No | | ✓ | 1 | | | |
| 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 | it - | FAC | Yes | | | 1 | | | |
| Plant | common ragweed | Ambrosia artemisiifolia | - | FACU | Yes | | | ✓ | | ✓ | |
| Plant | downy serviceberry | Amelanchier arborea | | | | | ✓ | | | | |
| | | | | FACU | Yes | | | | | | |
| Plant | hog peanut | Amphicarpaea bracteata | | FAC | Yes | | ✓ | | | | |
| Plant | hog peanut Canada anemone | Amphicarpaea bracteata Anemone canadensis | : | FAC FACW | Yes Yes | | √ | | | | |
| Plant Plant | hog peanut Canada anemone sweet vernal grass | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum | - | FACW FACU | Yes Yes No | ✓ | ✓ | √ | | V | |
| Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum | - - - - | FACW FACU FAC | Yes Yes No Yes | ✓ | √ | 1 | | √ | |
| Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata | - | FAC FACU FAC OBL | Yes Yes No Yes Yes | √ | ✓ ✓ ✓ | √ | | | |
| Plant Plant Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca | - - - - | FAC FACU FAC OBL UPL | Yes Yes No Yes Yes Yes | ✓ | √ | 1 | | | ✓ |
| Plant Plant Plant Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis | - - - - | FAC FACU FAC OBL UPL FAC | Yes Yes No Yes Yes Yes Yes Yes Yes | ✓ | ✓ ✓ ✓ | √ | ✓ | √ | · · |
| Plant Plant Plant Plant Plant Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia | - | FAC FACW FACU FAC OBL UPL FAC FAC | Yes Yes No Yes Yes Yes Yes Yes Yes Yes | ✓ | ✓ ✓ ✓ | √ | ✓ | | ✓ · |
| Plant Plant Plant Plant Plant Plant Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis | - | FAC FACU FAC OBL UPL FAC | Yes Yes No Yes Yes Yes Yes Yes Yes | Y | ✓ ✓ ✓ | √ | ✓ | √ | ✓ |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua | · · · · · · · · · · · · · · · · · · · | FAC FACU FACU FAC OBL UPL FAC FAC OBL OBL | Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes | ✓ ———————————————————————————————————— | ✓ ✓ ✓ | √ √ √ | ✓ | ✓ ✓ ✓ | V |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa | · · · · · · · · · · · · · · · · · · · | FAC FACW FACU FAC OBL UPL FAC FAC OBL FACW | Yes Yes No Yes | ✓ ———————————————————————————————————— | ✓ ✓ ✓ | ✓ ✓ ✓ | ✓ · | ✓ ✓ ✓ | ✓ · |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus | - - - - - - - - - | FAC FACU FACU FAC OBL UPL FAC FAC OBL FAC OBL FAC OBL | Yes Yes No Yes Yes Yes Yes Yes Yes Yes No | V | <i>* * * * *</i> | ✓ ✓ ✓ ✓ ✓ | · / | ✓ ✓ ✓ | <i>✓</i> |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis | · · · · · · · · · · · · · · · · · · · | FAC FACW FACU FAC OBL UPL FAC FAC OBL FAC FAC OBL FAC OBL FAC OBL | Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes No No | Y | <i>' ' ' ' ' ' ' ' ' '</i> | * * * * * * * * * * * * * * * * * * * | <i>V</i> | ✓ ✓ ✓ | <i>✓</i> |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch devil's beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda | | FAC FACW FACU FAC OBL UPL FAC FAC OBL FAC FAC OBL FAC FAC OBL FACW - FACW - FAC | Yes Yes No Yes Yes Yes Yes Yes Yes Yes No No Yes | Y | <i>* * * * * * * * * *</i> | \(\frac{1}{2} \) | · · | ✓ ✓ ✓ | ✓ |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens rondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL OBL OBL OBL OBL OBL OBL OBL OBL | Yes Yes No Yes Yes Yes Yes Yes Yes No No Yes Yes Yes Yes Yes Yes | Y | <i>' ' ' ' ' ' ' ' ' '</i> | * * * * * * * * * * * * * * * * * * * | V | ✓ ✓ ✓ | ✓ |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch devil's beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cemua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FAC OBL FAC OBL FACW | Yes Yes No Yes | Y | <i>' ' ' ' ' ' ' ' ' '</i> | \(\frac{1}{2} \) | ✓ ✓ | ✓ ✓ ✓ | |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracitlima Carex lacustris | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL OBL OBL OBL | Yes Yes No Yes | Y | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | ✓ ✓ | · · · · · · · · · · · · · · · · · · · | ✓ |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata 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 tacustris Carex intumescens | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL FACW FAC OBL OBL FACW OBL | Yes Yes No Yes | Y | \frac{1}{4} | \frac{1}{\sqrt{1}} | ✓ ✓ | ✓ ✓ ✓ | |
| Plant | hog peanut Canada anemone 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 targe yellow sedge graceful sedge lake sedge bladder sedge hop sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata 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 lupulina | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FAC OBL FACW OBL FACW OBL GAC OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL | Yes Yes No Yes | Y | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | ✓ | · · · · · · · · · · · · · · · · · · · | |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Betula apoulifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex flava Carex flacustris Carex lacustris Carex lacustris Carex intumescens Carex lupulina Carex lupulina Carex lurida | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL | Yes Yes No Yes | Y | \frac{1}{4} | \(\frac{1}{2} \) | ✓ | · · · · · · · · · · · · · · · · · · · | |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis 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 Care | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL OBL FACW OBL OBL OBL OBL OBL FACW OBL | Yes Yes No Yes | Y | \frac{1}{4} | \frac{1}{\sqrt{1}} | ✓ | ✓ ✓ ✓ | |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch modding 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 sallow sedge stroublesome sedge cyperus-like sedge | Amphicarpaea bracteata Anemone canadensis 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 flava Carex intumescens Carex lupulina Carex lurida Carex notesta Carex pseudocyperus | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL | Yes Yes No Yes | | \frac{1}{4} | \(\frac{1}{2} \) | ✓ — — — — — — — — — — — — — — — — — — — | · · · · · · · · · · · · · · · · · · · | |
| Plant | hog peanut Canada anemone 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 | Amphicarpaea bracteata Anemone canadensis 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 Care | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL OBL FACW OBL OBL OBL OBL OBL FACW OBL | Yes Yes No Yes | | / / / / / / / | / / / / / / / / / / / / / / / / / / / | ✓ — — — — — — — — — — — — — — — — — — — | ✓ ✓ ✓ | ✓ |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch modding beggar ticks devil's beggar ticks hairy brome smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata 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 triumescens Carex lupulina Carex lurida Carex rurida Carex rurida Carex rurida Carex nolesta Carex scoparia | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL OBL OBL OBL OBL OBL OBL FACW OBL FACW OBL OBL FACW OBL | Yes Yes No Yes | | / / / / / / / | / / / / / / / / / / / / / / / / / / / | <i>\</i> | V V V V V V V V V V V V V V V V V V V | ✓ |
| Plant | hog peanut Canada anemone sweet vernal grass Indian hemp swamp milkweed common milkweed yellow birch gray birch gray birch gray birch smooth brome common woodland sedge bristly sedge fringed sedge large yellow sedge graceful sedge lake sedge bladder sedge troublesome sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incamata Asclepias incamata Asclepias syriaca Betula alleghaniensis Betula populifolia Biidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex lacustris Carex luqulina Carex luqulina Carex molesta Carex pseudocyperus Carex scoparia Carex stipata | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL OBL FACW OBL OBL OBL OBL FACU OBL FACU OBL FACW OBL FACW OBL OBL | Yes Yes No Yes | | / / / / / / / | / / / / / / / / / / / / / / / / / / / | | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · |
| Plant | hog peanut Canada anemone 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 sallow sedge sallow sedge cyperus-like sedge broom sedge awi-fruited sedge ussock sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula aleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex intumescens Carex lupulina Carex nurida Carex nurida Carex pseudocyperus Carex stipata Carex stopata | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW GAC OBL OBL FACW OBL OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL | Yes 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 | hog peanut Canada anemone 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 tringed sedge large yellow sedge graceful sedge lake sedge bladder sedge sallow sedge troublesome sedge troublesome sedge proom sedge awl-fruited sedge lussock sedge tussock sedge tussock sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata 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 facustris Carex intumescens Carex tupulina Carex tupulina Carex molesta Carex seudocyperus Carex stipata Carex vulplinoidea | | FAC FACW FACU FAC OBL UPL FAC OBL FACW FAC OBL OBL OBL OBL FACW OBL FACW OBL FACW OBL FACW OBL OBL FACW OBL OBL FACW OBL OBL FACW OBL OBL OBL FACW OBL OBL OBL OBL | Yes 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 | hog peanut Canada anemone 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 targe yellow sedge graceful sedge lake sedge bladder sedge bladder sedge troublesome sedge troublesome sedge troublesome sedge troublesome sedge awt-fruited sedge tussock sedge fox sedge fox sedge fox sedge fox sedge | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex lacustris Carex lurida Carex lurida Carex pseudocyperus Carex scoparia Carex stricta Carex candiniana | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL | Yes Yes 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 | hog peanut Canada anemone 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 toublesome sedge troublesome sedge troublesome sedge awt-truited sedge tussock sedge fox sedge ironwood bitternut hickory | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex finita Carex finita Carex finita Carex fixumescens Carex lurida Carex lurida Carex pseudocyperus Carex scoparia Carex stricta Carex stricta Carex stricta Carex stricta Carex stricta Carex vulpinoidea Carya cordiformis | | FAC FACU FACU FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL | Yes Yes 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 | hog peanut Canada anemone 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 bladder sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head | Amphicarpaea bracteata Anemone canadensis 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 funda Carex crinita Carex funda Carex crinita Carex flava Carex gracillima Carex turida Carex syracillima Carex syracillima Carex turida Carex supulina Carex stricta Carex stipata Carex stipata Carex stricta Carex upulinoidea Carpinus caroliniana Carya cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL FACW OBL OBL OBL FACW OBL OBL OBL FACW OBL OBL FACW OBL | Yes Yes 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 | hog peanut Canada anemone 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 sallow sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge frox sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head lamb's quarters | Amphicarpaea bracteata Anemone canadensis Anthoxanthum odoratum Apocynum cannabinum Asclepias incarnata Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bildens cernua Bildens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex gracillima Carex turida Carex intumescens Carex turida Carex molesta Carex supulina Carex supulina Carex stipata Carex stipata Carex stricta Carex stricta Carex vulpinoidea Carpinus caroliniana Carya covata Cephalanthus occidentalis Chelone glabra Chenopodium album | | FAC FACW FACU FACU FAC OBL UPL FAC FAC OBL FACW | Yes Yes 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 | hog peanut Canada anemone 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 bladder sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge tussock sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head | Amphicarpaea bracteata Anemone canadensis 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 funda Carex crinita Carex funda Carex crinita Carex flava Carex gracillima Carex turida Carex syracillima Carex syracillima Carex turida Carex supulina Carex stricta Carex stipata Carex stipata Carex stricta Carex upulinoidea Carpinus caroliniana Carya cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra | | FAC FACW FACU FAC OBL UPL FAC OBL FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL FACW OBL OBL OBL FACW OBL OBL OBL FACW OBL OBL FACW OBL | Yes Yes No Yes | | / / / / / / / | \(\frac{1}{4} \) | | V V V V V V V V V V V V V V V V V V V | <i>*</i> |

| | | | | | | 1 , 1 | | | | | |
|---|---|--|--|---|---|---------------------------------------|-----------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Plant | silky dogwood | Cornus amomum | - | FACW | Yes | ✓ | <u> </u> | √ | √ | ✓ | V |
| Plant | gray dogwood | Cornus racemosa | - | FAC | Yes | | ✓ | ✓ | ✓ | | V |
| Plant | red-osier dogwood | Cornus sericea | - | FACW | Yes | | | | | | √ |
| Plant | hawthorn | Crataegus sp. | - | - | - | | ✓ | | | _ | ✓ |
| Plank | common yellow nut sedge | Cyperus esculentus | - | FACW | Yes | | | ✓ | | ✓ | |
| Plant | false yellow nut sedge | Cyperus strigosus | - | FACW | Yes | | | ✓ | | ✓ | |
| Plant | orchard grass | Dactylis glomerata | - | FACU | No | ✓ | | | | ✓ | |
| Plant | wild carrot | Daucus carota | - | UPL | No | | ✓ | | | | |
| Plant | water willow | Decodon verticillatus | - | OBL | Yes | | | ✓ | | | ✓ |
| Plant | tufted hair grass | Deschampsia cespitosa | - | - | Yes | | | | | ✓ | |
| Plant | digit grass | Digitaria eriantha | - | - | No | | ✓ | | | | |
| Plant | smooth crab grass | Digitaria ischaemum | - | FACU | No | | | ✓ | | | |
| Plant | tall flat-topped white aster | Doellingeria umbellata | - | FACW | Yes | | | | | ✓ | |
| Plant | common wood fern | Dryopteris intermedia | - | FAC | Yes | | ✓ | | | | ✓ |
| Plant | autumn olive | Elaeagnus umbellata | - | = | No | | ✓ | | | | |
| Plant | blunt spike rush | Eleocharis obtusa | - | OBL | Yes | | ✓ | | | √ | 1 |
| Plant | fringed wilowherb | Epilobium ciliatum | - | FACW | Yes | | | | | √ | |
| Plant | purpleleaf willowherb | Epilobium coloratum | | OBL | Yes | | 1 | ✓ | | 1 | |
| Plant | field horsestail | Equisetum arvense | | FAC | Yes | | | | √ | √ | / |
| Plant | scouringrush horsetail | Equisetum hyemale | | FAC | Yes | ✓ | | | · / | • | |
| | | | | FACU | | • | | 1 | | | |
| Plant | annual daisy fleabane small daisy fleabane | Erigeron annuus | | FACU | Yes | | | V | | | |
| Plant | | Erigeron strigosus Erythronium americanum | | | | | ✓ | | ✓ | | |
| Plant | yellow trout lily | | - | - EACW | Yes | | • | 1 | _ | ✓ | 1 |
| Plant | boneset | Eupatorium perfoliatum | - | FACW | Yes | | | · · | | ✓ | , |
| Plant | common flat-topped goldenrod | - | - | FAC | Yes | ✓ | | | | V | |
| Plant | spotted Joe Pye weed | Eutrochium maculatum | - | OBL | Yes | V | | | | | |
| Plant | American beech | Fagus grandifolia | - | FACU | Yes | | | | ✓ | √ | |
| Plant | common wild strawberry | Fragaria virginiana | - | FACU | Yes | | <u>√</u> | | | ✓ | ✓ |
| Plant | glossy buckthorn | Frangula alnus | - | FAC | No | | ✓ | | | | |
| Plant | white ash | Fraxinus americana | - | FACU | Yes | | ✓ | | | | ✓ |
| Plant | green ash | Fraxinus pennsylvanica | - | FACW | Yes | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Plant | hedge bedstraw | Galium album | - | FACU | Yes | ✓ | | ✓ | | ✓ | |
| Plant | common marsh bedstraw | Galium palustre | - | OBL | Yes | | ✓ | | | ✓ | |
| Plant | yellow avens | Geum aleppicum | - | FAC | Yes | | ✓ | ✓ | | | |
| Plant | white avens | Geum canadense | - | FAC | Yes | | | ✓ | | | ✓ |
| Plant | town avens | Geum urbanum | - | - | No | | ✓ | ✓ | | | |
| | | | | | | | | | | | |
| Plant | American manna grass | Glyceria maxima | - | OBL | No | | | ✓ | | ✓ | |
| Plant Plant | American manna grass fowl manna grass | Glyceria maxima Glyceria striata | - | OBL OBL | No Yes | | ✓ | √ | | √ | - |
| | | | - - - | | | ✓ | √ | · · | ✓ | | - |
| Plant | fowl manna grass | Glyceria striata | - - - | OBL | Yes | ✓ | | ✓ | √ | √ | ✓ |
| Plant Plant | fowl manna grass soybean | Glyceria striata Glycine max | - | OBL - | Yes - | ✓ ✓ | | √ ✓ | ✓ | √ | ✓ |
| Plant Plant Plant | fowl manna grass soybean marsh cubweed | Glyceria striata Glycine max Gnaphalium uliginosum | - | OBL - FAC | Yes - No | | | √ ✓ | √ | √ | ✓ |
| Plant Plant Plant Plant | fowl manna grass soybean marsh cubweed dame's rocket | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis | - | OBL - FAC FACU | Yes - No No | | | ✓ ✓ ✓ | ✓ ✓ | √ | √ |
| 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 | | | ✓ ✓ ✓ | | √ | · · |
| 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 | | | ✓ ✓ ✓ | | √ | |
| 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 | ✓ · | √ | ✓ ✓ ✓ | | √ | |
| 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</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 | Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus | - - - - - - - | OBL - FAC FACU OBL - FACW OBL OBL OBL | Yes - No No No No No Yes Yes Yes | ✓ · | √ | * * * * * * * * * * * * * * * * * * * | | √ | · · |
| 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 | 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 FAC | Yes - No No No No Yes Yes Yes Yes | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ | <i>y y y y y y</i> | ✓ | ✓ ✓ | <i>y</i> |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewetweed blue flag soft rush path rush rice cut grass | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides | | OBL - FAC FACU OBL FACW OBL OBL OBL OBL | Yes - No No No No Yes Yes Yes Yes Yes Yes | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>*</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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum ps. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin | - - - - - - - - - - - | OBL - FAC OBL - FACW OBL OBL OBL FACW OBL FACC OBL FACCW OBL | Yes - No No No No No - Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | ✓ ✓ ✓ | <i>y</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 | 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 - FAC OBL - FACW OBL OBL OBL OBL FACW OBL FACC OBL FACC OBL FACC OBL FACW FACW | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>*</i> | · · · · · · · · · · · · · · · · · · · | ✓ | ✓ ✓ | <i>y</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 | Glyceria striata Glycine max Gnaphalium 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 | | OBL - FAC FACU OBL - FACW OBL OBL FACC OBL FACC OBL FACC FACW FACU FACU | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ | <i>*</i> | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus fusus Lincus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata | | OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FACC OBL FACC FACW FACU FACW FACU FACW | Yes - No No No No No Yes | ✓ ✓ | <i>*</i> | \frac{1}{\sqrt{1}} | ✓ | ✓ ✓ ✓ | <i>y</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 capensis Iris versicotor Juncus effusus Juncus effusus Juncus effusus Luncus effusus Lincus effusus Lincus effusus Lincus effusus Lincus effusus Lobelia inflata Lobelia siphilitica Lolium arundinace | | OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FAC OBL FAC OBL FACW FACU FACU FACU FACU | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes No | ✓ ✓ | / / / | · · · · · · · · · · · · · · · · · · · | ✓ | ✓ ✓ ✓ | <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 Hydrotelephium telephium Hypericum sp. Impatiens capensis Iris versicotor Juncus effusus Juncus tefusus Luncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica | | OBL - FACU OBL - FACW OBL OBL - FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes No No No No No No Yes | <i>y</i> | <i>V V V</i> | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Lucus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. | | OBL - FACU OBL - FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | ✓ ✓ | / / / / | V V V V V V V V V V V V V V V V V V V | ✓ | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewetweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue tobelia tall rye grass Japanese honeysuckle honeysuckle | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Loilum arundinace Lonicera japonica Lonicera spp. Lonicera tatarica | | OBL - FACU OBL FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No - Yes Yes Yes Yes Yes Yes Yes No | \frac{1}{4} | <i>V V V</i> | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Lucus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. | | OBL - FACU OBL - FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | <i>y</i> | / / / / | * * * * * * * * * * * * * * * * * * * | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewetweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue tobelia tall rye grass Japanese honeysuckle honeysuckle | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Loilum arundinace Lonicera japonica Lonicera spp. Lonicera tatarica | | OBL - FACU OBL FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No - Yes Yes Yes Yes Yes Yes Yes No | \frac{1}{4} | \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 | 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 isiphilitica 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 Yes Yes No | * * * * * * * * * * * * * * * * * * * | ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | V V V V V V V V V V V V V V V V V V V | * * * * * * * * * * * * * * * * * * * |
| 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 siphilitica Lolium arundinace Lonicera spp. Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus | | OBL - FACU OBL FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No Yes | \frac{1}{4} | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Ilmos scapensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin Liriodandron tulipifera 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 | * * * * * * * * * * * * * * * * * * * | ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | V V V V V V V V V V V V V V V V V V V | * * * * * * * * * * * * * * * * * * * |
| 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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria | | OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU | 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 | 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 | 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 Lonicera sp. Lunicera tarica Ludwigia palustris Lycpus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense | | OBL - FACU OBL - FACW OBL - FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | 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 | 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 striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, 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 Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris | | OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | * * * * * * * * * * * * * * * * * * * | ✓ ✓ ✓ ✓ | \frac{1}{\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}} |
| 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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus teffusus 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 | | 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}} |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jeweltweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue tobelia talt rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple toosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum pp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lobelia inflata Loulium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lystrum 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}} |
| 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. 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 | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | <i>y y y y y y y y</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 blackgum sensitive fern royal fern | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lunicera ssp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Malteuccia struthiopteris 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 | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | <i>y y y y y y y y</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 blackgum sensitive fern royal fern cinnamon fern | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lunicera spp. 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 | | OBL - FACU OBL - FACW OBL - FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | <i>y y y y y y y y</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 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 striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. 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 Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmunda regalis Osmundastrum cinnamomei Oxalis dillenii | | OBL - FACU OBL - FACW OBL - FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU OBL FACU OBL OBL FACU FACU FACU FACU OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW FACU FACW FACU FACW FACU FACW FACU FACW FACW FACW FACW FACW FACW FACW FACW | 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}} | \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 Hypericums, 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 cinnamomei Oxalis dillenii Panicum dichotomiflorum | | 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 cionamon fern yellow wood sorrel fall panic grass Virginia creeper | 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 siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmundastrum cinnamomei 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}} | \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 cinnamon fern yellow wood sorrel fall panic grass | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, 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 cinnamomei Oxalis dillenii Panicum dichotomiflorum | | 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}} | \frac{1}{\sqrt{1}} |

| Plant | | | | | | 1 | | 1 | | | 1 |
|---|---|--|---------------------------------|--|--|---------------------------------------|--|---------------------------------------|---------------------------------------|---|---------------------------------------|
| | lady's thumb | Persicaria maculosa | - | FAC | No | | | √ | | | |
| Plant | arrow-leaved tearthumb | Persicaria sagittata | - | OBL | Yes | | | ✓ | | | |
| Plant | jumpseed | Persicaria virginiana | - | FAC | Yes | | ✓ | ✓ | | √ | |
| Plant | reed canary grass | Phalaris arundinacea | - | FACW | No | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Plant | common Timothy | Phleum pratense | - | FACU | No | | ✓ | | | ✓ | |
| Plant | common reed | Phragmites australis | - | FACW | No | ✓ | ✓ | ✓ | | | |
| Plant | pokeweed | Phytolacca americana | - | FACU | Yes | | | ✓ | | | |
| Plant | Norway spruce | Picea abies | - | - | No | | ✓ | ✓ | ✓ | | |
| Plant | red spruce | Picea rubens | - | FACU | Yes | | ✓ | | | | |
| Plant | white pine | Pinus strobus | - | FACU | Yes | | ✓ | | ✓ | | |
| Plant | English plantain | Plantago lanceolata | - | FACU | No | ✓ | √ | | ✓ | ✓ | |
| Plant | common plantain | Plantago major | - | FACU | No | ✓ | | | ✓ | ✓ | ✓ |
| Plant | northern tubercled orchid | Platanthera flava | - | FACW | Yes | | | ✓ | | | |
| Plant | annual blue grass | Poa annua | - | FACU | No | | | | ✓ | | |
| Plant | wood bluegrass | Poa nemoralias | - | FACU | No | | | 1 | | | |
| Plant | common Kentucky blue grass | Poa pratensis | - | FACU | No | | √ | | | √ | 1 |
| Plant | mayapple | Podophyllum peltatum | - | FACU | Yes | | | 1 | ✓ | | |
| Plant | eastern cottonwood | Populus deltoides | | FAC | Yes | | 1 | • | · / | | |
| Plant | quaking aspen | Populus tremuloides | | FACU | Yes | 1 | · / | 1 | · / | ✓ | / |
| | | | <u> </u> | | | _ | · · | _ | | • | <u> </u> |
| Plant | oldfield cinquefoil | Potentilla simplex | | FACU | Yes | | • | | | √ | |
| Plant | Eurasian selfheal | Prunula vulgaris | - | FAC | No Voc | | ✓ | | | | |
| Plant | pin cherry | Prunus pensylvanica | - | FACU | Yes | | → | ./ | ✓ | ./ | - |
| Plant | black cherry | Prunus serotina | * | FACU | Yes | | ₩ | 1 | _ | ✓ | - |
| Plant | bracken fern | Pteridium aquilinum | - | FACU | Yes | | , | ✓ | | | |
| Plant | white oak | Quercus alba | - | FACU | Yes | | ✓ | — | | | |
| Plant | red oak | Quercus rubra | - | FACU | Yes | | ✓ | ✓ | | , | <u> </u> |
| Plant | tall buttercup | Ranunculus acris | - | FAC | No | ✓ | ✓ | | | √ | |
| Plant | creeping buttercup | Ranunculus repens | - | FAC | No | | | | | ✓ | |
| Plant | cursed crowfoot | Ranunculus sceleratus | - | OBL | Yes | ✓ | | | ✓ | | |
| Plant | Japanese knotweed | Reynoutria japonica | - | FACU | No | | | | ✓ | | |
| Plant | alder buckthorn | Rhamnus alnifolia | - | OBL | Yes | | ✓ | | | | |
| Plant | buckthorn | Rhamnus cathartica | - | FAC | No | | ✓ | ✓ | | ✓ | ✓ |
| Plant | staghorn sumac | Rhus typhina | - | - | Yes | | ✓ | | | | |
| Plant | multiflora rose | Rosa multiflora | - | FACU | No | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Plant | swamp rose | Rosa palustris | - | OBL | Yes | | | | ✓ | | 1 |
| Plant | common blackberry | Rubus allegheniensis | - | FACU | Yes | | √ | ✓ | | | |
| Plant | swamp dewberry | Rubus hispidus | - | FACW | Yes | | | ✓ | | | |
| | | Rubus ideaus | | | | | | | | | |
| Plant | red raspberry | Rubus lueaus | - | FACU | No | | ✓ | ✓ | | | |
| Plant Plant | dwarf raspberry | Rubus pubescens | - | FACU | No Yes | | * | ✓ | | | |
| | | | - - | | | | • | ✓ ✓ | | | |
| Plant | dwarf raspberry sheep sorrel | Rubus pubescens Rumex acetosella | - | FACW | Yes | ✓ | → | 1 | | → | V |
| Plant Plant Plant | dwarf raspberry sheep sorrel curly dock | Rubus pubescens | - | FACW FACU FAC | Yes No No | ✓ | | √ √ | | ✓ | ✓ |
| Plant Plant Plant Plant Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius | - | FACU FAC FAC | Yes No No | ✓ | √ | √ √ | | · · | / |
| Plant Plant Plant Plant Plant Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus | | FACU FAC FAC OBL | Yes No No No Yes | ✓ | √ | √ ✓ | | · · | ✓ |
| Plant Plant Plant Plant Plant Plant Plant Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana | - - - - - | FACU FAC FAC OBL FACW | Yes No No No Yes Yes | ✓ | √ | <i>y y y y y y</i> | | · · | ✓ |
| Plant Plant Plant Plant Plant Plant Plant Plant Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor | - | FACU FAC FAC OBL FACW FACW | Yes No No No Yes Yes Yes | * | ✓ ✓ | √ √ √ | ✓ | · · | ✓ · |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willtow | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra | - - - - - | FACW FACU FAC FAC OBL FACW FACW OBL | Yes No No No Yes Yes Yes Yes | ✓ · | √ | \frac{1}{4} | - | · · | ✓ |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea | - - - - - - - | FACW FACU FAC FAC OBL FACW OBL FACW OBL | Yes No No No Yes Yes Yes Yes No | ✓ · | ✓ ✓ | <i>y y y y y y</i> | ✓ | · · | ✓ |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix debbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra | - | FACW FACU FAC FAC OBL FACW OBL FACW OBL FACW OBL | Yes No No No Yes Yes Yes Yes Yes Yes Yes Yes | ✓ · | <i>Y Y Y</i> | \frac{1}{4} | ✓ ✓ | · · | <i>V</i> |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail | Rubus pubescens Rumex acetosetla Rumex crispus Rumex obtustiolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus | | FACW FACU FAC FAC OBL FACW FACW OBL FACW OBL FACW OBL FACW OBL | Yes No No No Yes | Y | ✓ ✓ | · · · · · · · · · · · · · · · · · · · | ✓ ✓ | · · | <i>V</i> |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush | Rubus pubescens Rumex acetosetla Rumex crispus Rumex obtusifolius Rumex verticiliatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc | | FACW FACU FAC FAC OBL FACW FACW OBL FACW OBL FACW OBL OBL | Yes No No No Yes | ✓ | √ √ √ | * * * * * * * * * * * * * * * * * * * | ✓ ✓ | · · | ✓ · |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplesctus tabernaemx Scirpus atrovirens | | FACW FACU FAC FAC OBL FACW OBL FACW OBL OBL OBL | Yes No No No No Yes | V | ✓ ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · | | ✓ ———————————————————————————————————— | |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus | | FACW FACU FAC FAC OBL FACW OBL FACW OBL FACW OBL OBL OBL | Yes No No No Yes | <i>y</i> | √ √ √ | * * * * * * * * * * * * * * * * * * * | ✓ ✓ | · · | · · · · · · · · · · · · · · · · · · · |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green butrush woolgrass mad dog skullcap | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix puruea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora | | FACW FACU FAC FAC OBL FACW OBL FACW OBL OBL OBL OBL | Yes No No No Yes | <i>y</i> | ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | <i>y</i> | |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed butrush dark-green butrush woolgrass mad dog skullcap horse nettle | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex erticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Sanurus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense | | FACW FACU FAC FAC OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL OBL | Yes No No No Yes | <i>y</i> | ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ———————————————————————————————————— | |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green butrush woolgrass mad dog skullcap | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix puruea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora | | FACW FACU FAC FAC OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No Yes | V | ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | <i>y</i> | · · · · · · · · · · · · · · · · · · · |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed butrush dark-green butrush woolgrass mad dog skullcap horse nettle | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex erticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Sanurus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense | | FACW FACU FAC FAC OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL OBL | Yes No No No Yes | | ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ✓ | |
| Plant | dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dark-green butrush woolgrass mad dog skullcap horse nettle | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix obebbiana Salix nigra Salix purpurea Sambucus nigra Sanurus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense Solanum carolinense | | FACW FACU FAC FAC OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dark-green butrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod | Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discotor Salix nigra Salix nigra Sambucus nigra Sambucus nigra Samurus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense Solanum dulcamara Solidago altissima | | FACW FACU FAC FAC OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU | Yes No No No Yes | | ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dark-green butrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod Canada goldenrod | Rubus pubescens Rumex acetosetla Rumex crispus Rumex obtusifolius Rumex verticiliatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Sarurrus cernuus Schoenopiectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria tateriflora Solanum carolinense Solanum dulcamara Solidago attissima Solidago canadensis Solidago gigantea | | FACW FACU FAC FAC OBL FACW OBL FACW OBL OBL OBL OBL OBL FACU OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No Yes Yes Yes No Yes Yes No Yes Yes No Yes | | * * * * * * * * * * * * * * * * * * * | * * * * * * * * * * * * * * * * * * * | | ✓ ✓ ✓ | ✓ ✓ ✓ |
| Plant | dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod | Rubus pubescens Rumex acetosetla Rumex crispus Rumex obtusifolius Rumex verticiliatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Sarurrus cernuus Schoenopiectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria tateriflora Solanum carolinense Solanum dulcamara Solidago attissima Solidago canadensis Solidago gigantea | | FACW FACU FAC FAC FAC OBL FACW FACW OBL FACW OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No Yes Yes Yes No Yes Yes No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{4} | | ✓ ✓ ✓ ✓ | ✓ ✓ |
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| 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

Project code: 2025-0082147

04/11/2025 15:39:33 UTC

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: https://www.google.com/maps/@43.29530445,-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

04/11/2025 15:39:33 UTC

Project code: 2025-0082147

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: https://www.google.com/maps/@43.29530445,-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 Fisheries¹, 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: https://ecos.fws.gov/ecp/species/9743

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8023

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.
 - 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.
 - 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:
 - 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.

6.3 Pesticide Selection and Application Guidelines

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

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

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

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

7.0 Reporting

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

8. Maps and Figures

Figure 8-1. Purple Loosestrife Percent Cover

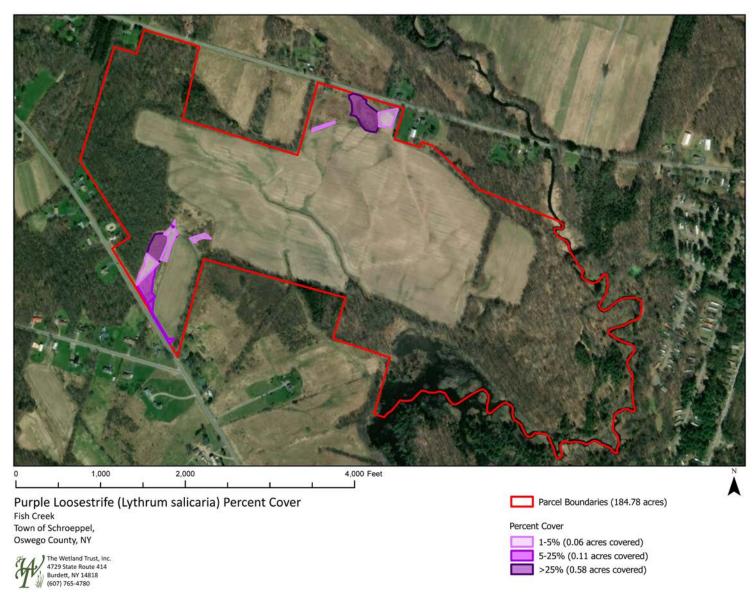


Figure 8-2. Reed Canary Grass Percent Cover

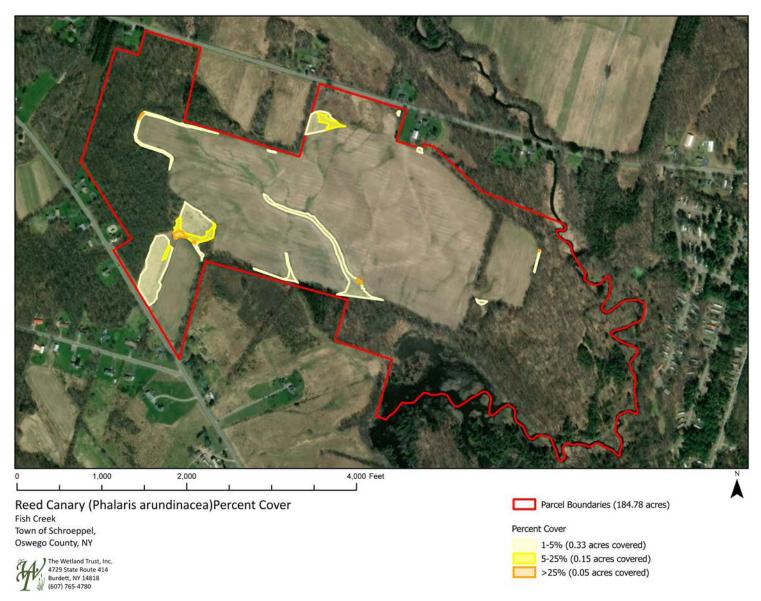


Figure 8-3. Phragmites Percent Cover

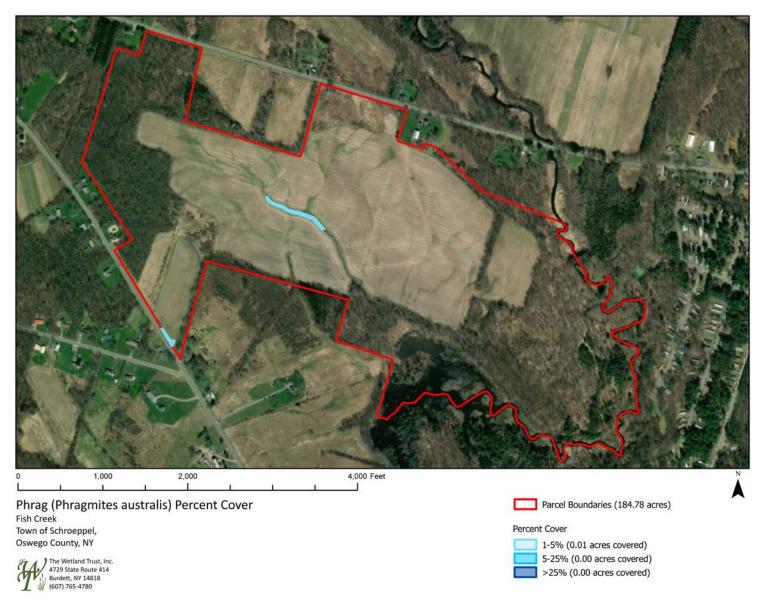
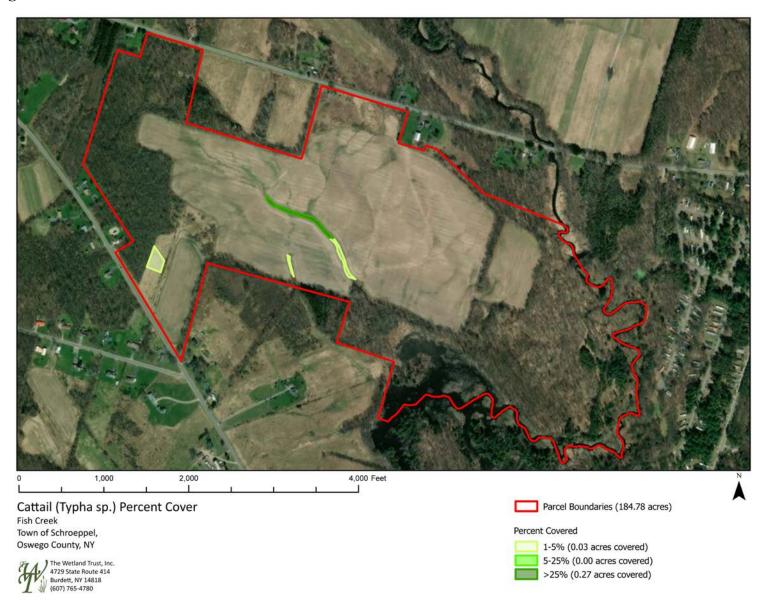


Figure 8-4. Cattail Percent Cover



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

| | Micron- | Upper | Caughdenov | Creek Stream | and Wetland | Mitigation Plan |
|--|---------|-------|------------|--------------|-------------|-----------------|
|--|---------|-------|------------|--------------|-------------|-----------------|

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 |
|--|---------|-------|------------|--------------|-------------|-----------------|
|--|---------|-------|------------|--------------|-------------|-----------------|

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. |
| 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: 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. 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: White wire flags |
| Plant species: Bare ground that is now | _ |
| Plant species: Bare ground that is now 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 feet³/27 feet³/yard³ = 33 yards³ x 1.5 tons/yard³ = 50 tons

Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet³/27 feet³/yard³ = 33 yards³ x 1.5 tons/yard³ = 50 tons

Total = 100 tons

Head-cuts located uphill or downhill of the planned wetland. 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

| Site 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 feet³/27 feet³/yard³ = 33 yards³ x 1.5 tons/yard³ = 50 tons
Outlet = 12-feet wide x 50-feet long x 1.5-feet thick = 900 feet³/27 feet³/yard³ = 33 yards³ x 1.5 tons/yard³ = 50 tons

Total = 100 tons

Head-cuts located uphill or downhill of the planned wetland. 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

| Date: 05-04-2024 | | | | | |
|--|--|--|--|--|--|
| andowner: The Wetland Trust Designer Name: Thomas R. Biebighauser | | | | | |
| lle Herman (The Wetland Trust), Gabby Deyo (The Wetland Trust) | | | | | |
| Site Description: An agricultural field planted to soybeans. | | | | | |
| nes are present in each drainage and along the south edge of the or buried drainage systems and drain historic natural wetland basins. | | | | | |
| How the planned wetland is marked on the ground: Orange and pink wire flags | | | | | |
| Groundwater elevation in test hole? 39-inches below surface. | | | | | |
| Elevation-change upper to lower edge of designed wetland: 2.0-fee | | | | | |
| °W s = 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

| Site 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

| te 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 |
|--|---------|-------|------------|--------------|-------------|-----------------|
|--|---------|-------|------------|--------------|-------------|-----------------|

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 | 5 | \$1,800 | \$7466 |
| | Reshaping terrain | 5 | \$600 | \$2489 |
| | Invasive species removal | 2 | \$2,100 | \$21777 |
| Maintenance | Site manipulation | 10 | \$1500 | \$3111 |
| | Boundary posting | 10 | \$600 | \$6244 |
| | Other practices 3 \$1,320 | | \$9,126 | |
| Long-Term Management | Other corrective adaptive management actions to ensure natural stability of site | 5 | \$4,800 | \$19,910 |
| Monitoring | To determine implementation tasks | 1 | \$18 | \$25,398 |
| Administration For all tasks above including tax exempt status 1 \$600 | | | | \$12,444 |
| Total annual budget* | | | | 102,500 |
| Total Stewardship investment** | | | | \$4,100,000 |
| 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 B. Historical Aerial Imagery

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

Appendix D. Species Lists

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Appendix F. SHPO Correspondence

Appendix G. Wetland Design 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

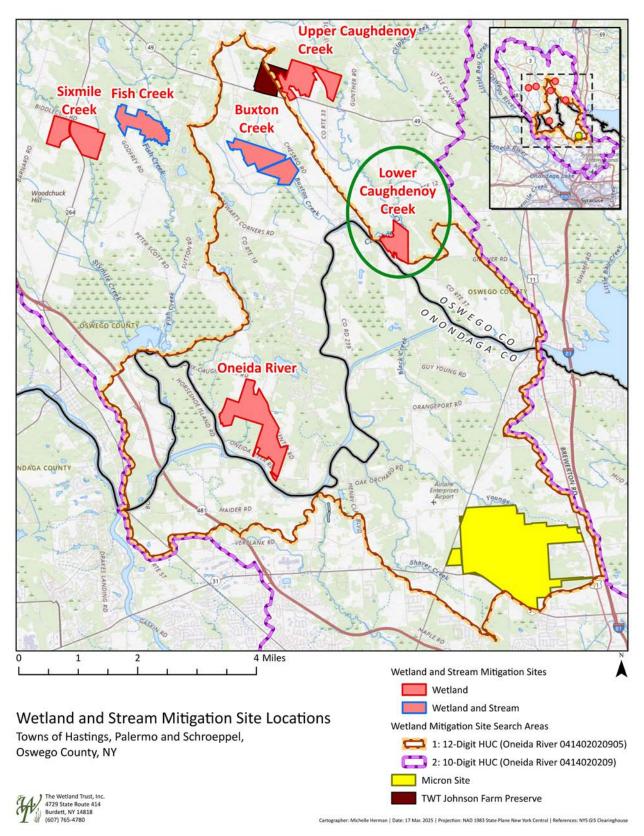


Figure 2-2. Lower Caughdenoy Creek Property (2023)



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

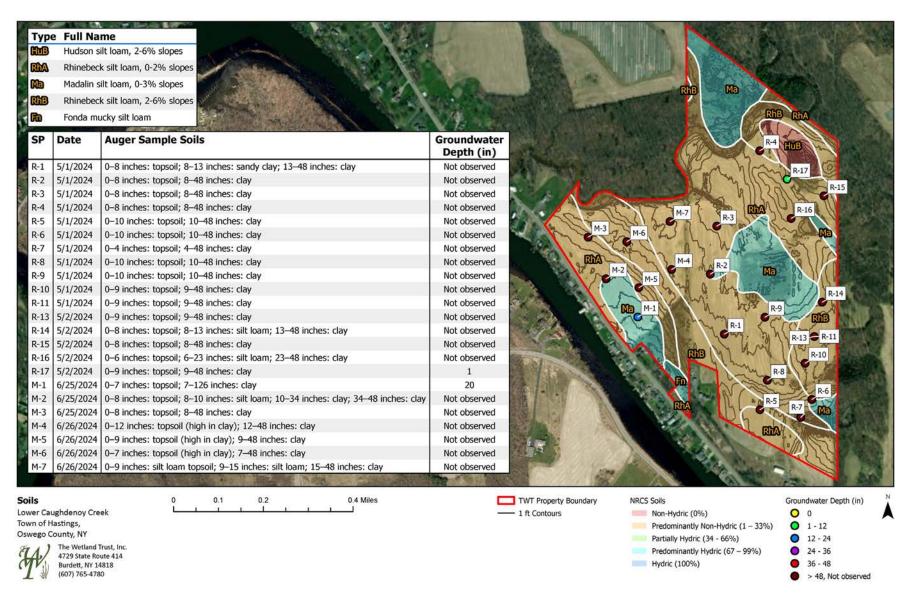


Figure 3-2. State and Federal Mapped Wetlands

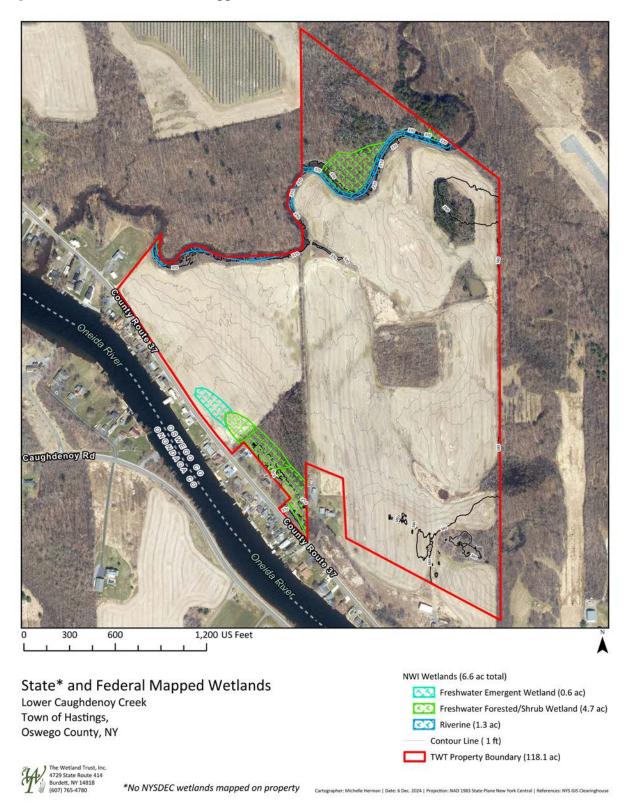
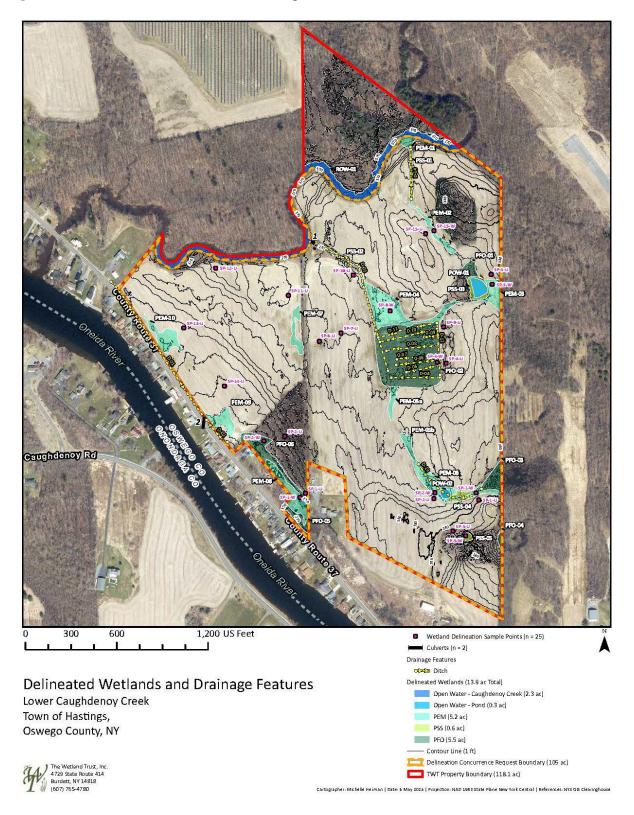


Figure 3-3. Delineated Wetlands and Drainage Features



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 | 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 | |

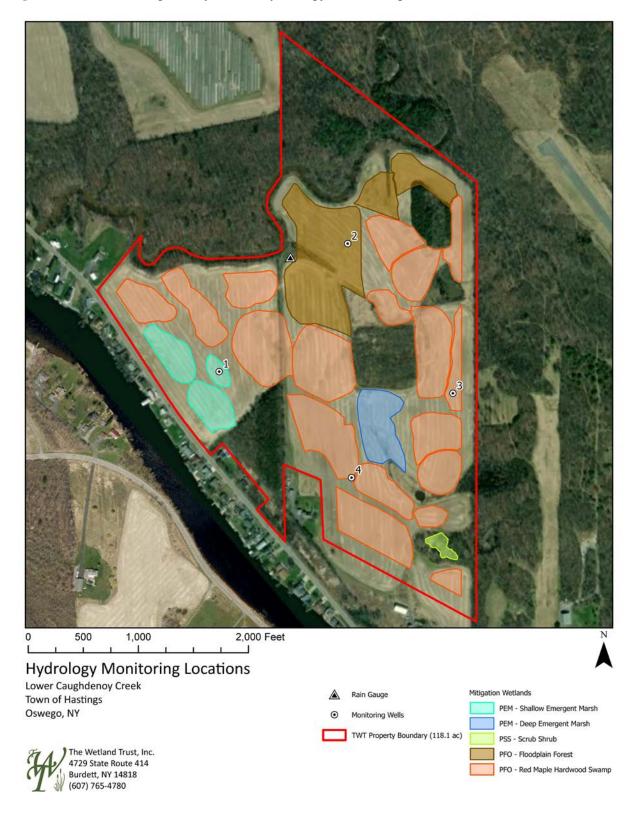
Rain Gauge

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 8th, 2025 (**Appendix F**) with Phase 1B field work completed on May 1st, 2025. No sites were identified.

4. Wetland Credit Accounting

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

| Figure 4-1. USACE Wetland Credit Generation and NYSDEC Mitigation Acreage | | | | | | | |
|---|---------------------------|------------------------------|-------|-----------------------------|---------------------------------|---------|--|
| Wetland type Cowardin | Cover type Edinger | Mitigation Type NYSDEC | Acres | Mitigation type USACE | USACE Ratio (Acre:Credit) | Credits | |
| PEM | Shallow emergent marsh | Restoration | 3.3 | Re-establishment | 1:1 | 3.3 | |
| | | Enhancement | 0.3 | Rehabilitation | 3.5:1 | 0.09 | |
| | Deep emergent marsh | Restoration | 2.4 | Re-establishment | 1:1 | 2.4 | |
| | | Enhancement | 0.3 | Rehabilitation | 3.5:1 | 0.09 | |
| PFO | Floodplain forest | Restoration | 11.2 | Re-establishment | 1:1 | 11.2 | |
| | 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 | Scrub shrub | Restoration | 0.35 | Re-establishment | 1:1 | 0.35 |
| 155 | SCrub snrub | 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.

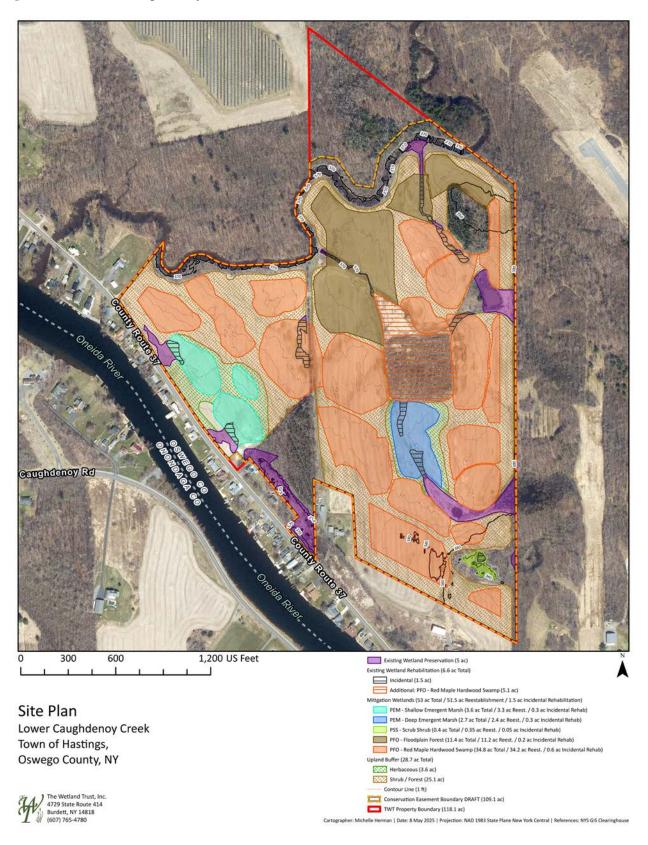
Wetlands were designed at the site in May and June 2024 by TWT staff. Field design forms were filled out for each wetland polygon (**Appendix G**). Determination of the types of wetlands to be re-established for each area within the Lower Caughdenoy Creek Site is based on the cover types outlined in 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 1st.

5.1 Invasive Vegetation Control

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

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

5.2 Grading Plan: Re-establishment Wetlands

Basin and berm construction

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

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

Figure 5-1. Restored Wetland Section View

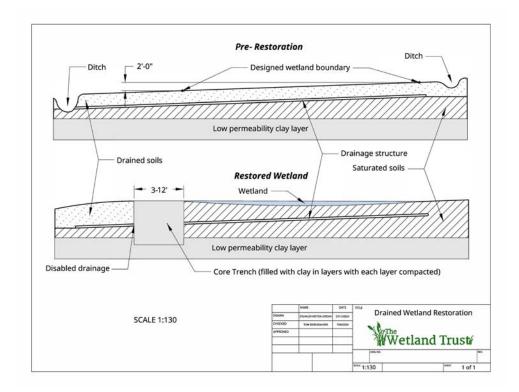
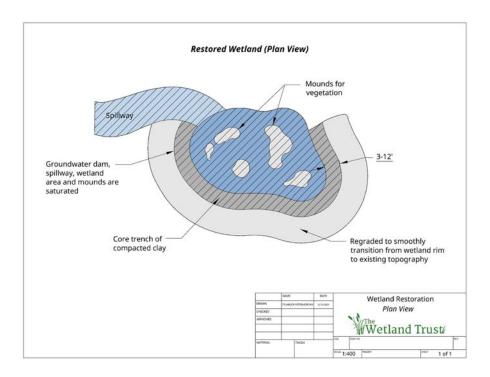


Figure 5-2. Restored Wetland Plan View



Microtopography restoration

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

Table 5-1. Lower Caughdenoy Creek Grading for Wetland Types **Wetland Type** Maximum 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

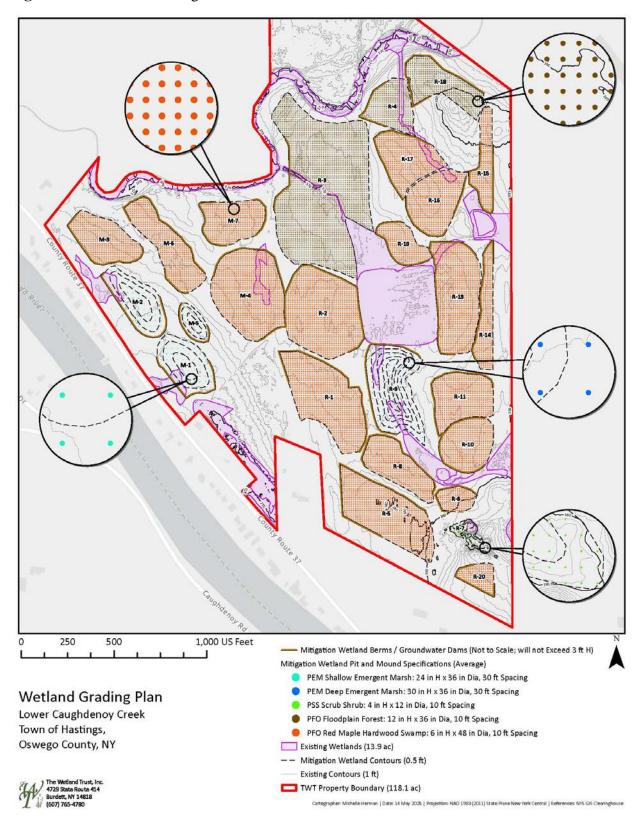


Figure 5-6. Restored Emergent Wetland

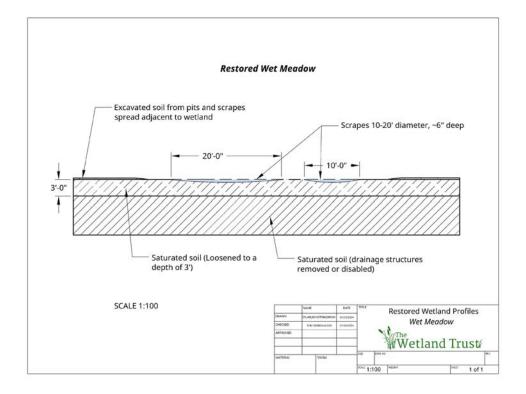
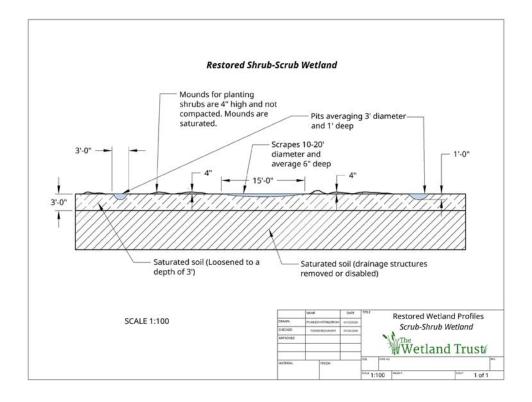


Figure 5-7. Restored Scrub-Shrub Wetland



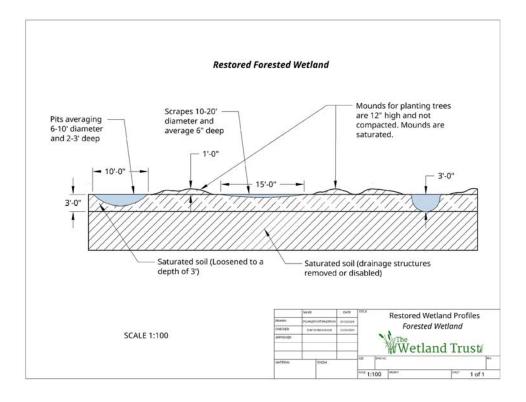


Figure 5-8. Restored Forested Wetland

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

^{1.} First full growing season following planting

^{2.} Final herbaceous/PEM and PSS goals to be met at this time or additional monitoring years added

^{3.} Final PFO (tree height and density) goals to be met at this time

7. Monitoring Requirements

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

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

Each monitoring report will include:

• 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.
- 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.
- 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

List of wildlife observed and other salient biological occurrences.

• Invasive species reporting

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

• Corrective actions proposed/implemented

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

Other

Photographs at permanent photo points.

7.1 Reporting schedule

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

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

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

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

8. Maintenance Plan

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

8.1 Hydrology Maintenance

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

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

8.2 Vegetation Maintenance

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

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

- Supplemental planting/seeding of native trees, shrubs, or herbaceous vegetation,
- Managing invasive species as needed through mechanical or chemical control using aquatic-safe herbicides by a licensed applicator.

8.3 General Site Maintenance

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

9. Long Term Management Plan

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

9.1 Responsible Party

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

9.2 Long-Term Monitoring and Management Activities

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

9.3 Long-Term Funding Mechanism

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

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

10. Adaptive Management Plan

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

- <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.

12. References

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| Micron- Lower Caughdenoy Creek Wetland Mitigation Plan | May 2025 |
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| The Wetland Trust, Inc. | 34 |

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 D | ECLARATION OF CONSERVATION EASEMENT is made as of theday 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 | ceptance by Holder: The Wetland Co | onservancy, Inc. |
| By: | | |
| Title: Chair | | |
| | | |
| STATE OF NEW YORK | C) ss: | |
| COUNTY OF Tompkins |) | |
| state, personally appeare known to me or proved subscribed to the within i | ed the Holder Aaron Ristow , Chain to me on the basis of satisfactory nstrument and acknowledged to me t | the undersigned, a notary public in and for said r of The Wetland Conservancy, Inc. personally v 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 | |
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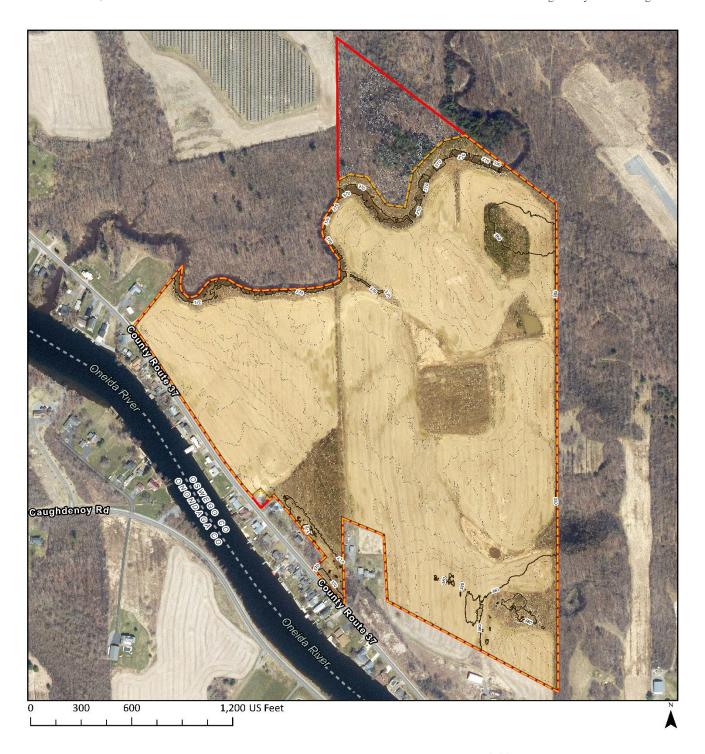
Schedule A. Legal description of parcel to be covered by this Conservation Easement.

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

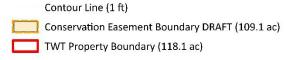
ALL THAT TRACT OR PARCEL OF LAND,

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



Conservation Easement

Lower Caughdenoy Creek Town of Hastings, Oswego County, NY



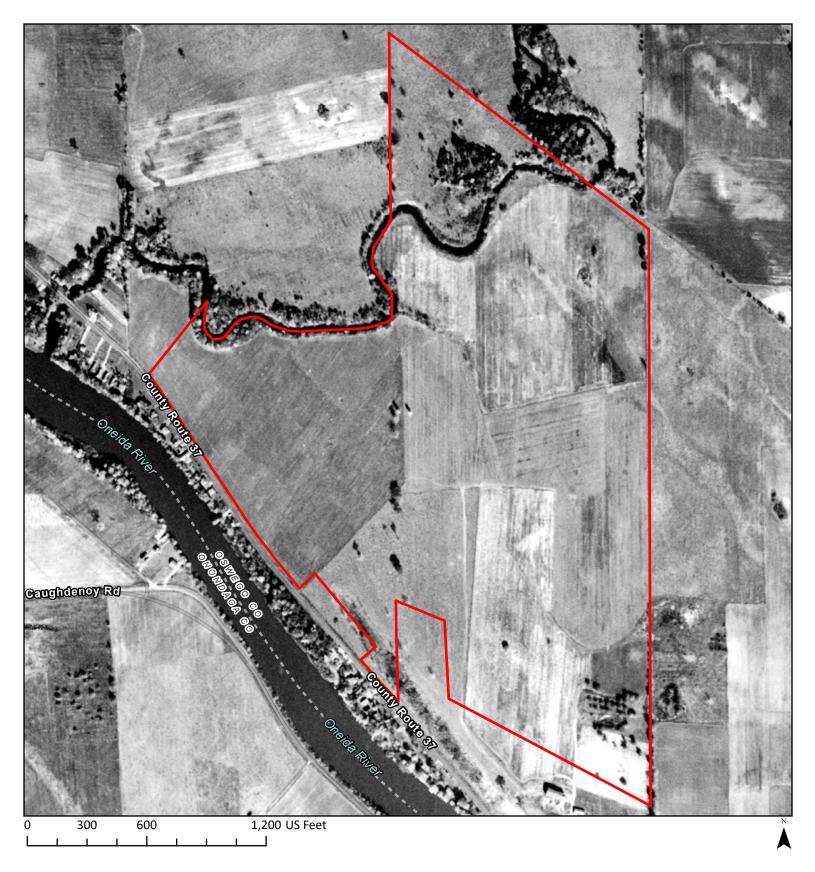


Cartographer: Michelle Herman | Date: 20 Mar. 2025 | Projection: NAD 1983 State Plane New York Central | References: NYS GIS Clearinghouse

| Micron- Lowe | er Caughdenov | Creek Stream | and Wetland | Mitigation Plan |
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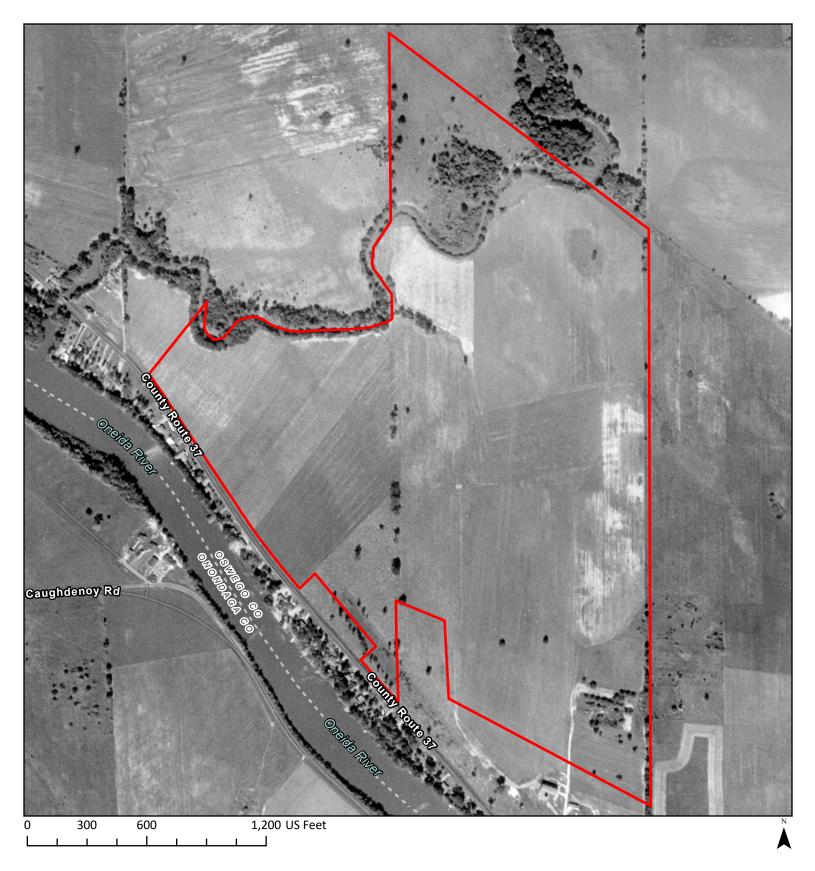
May 2025

Appendix B.



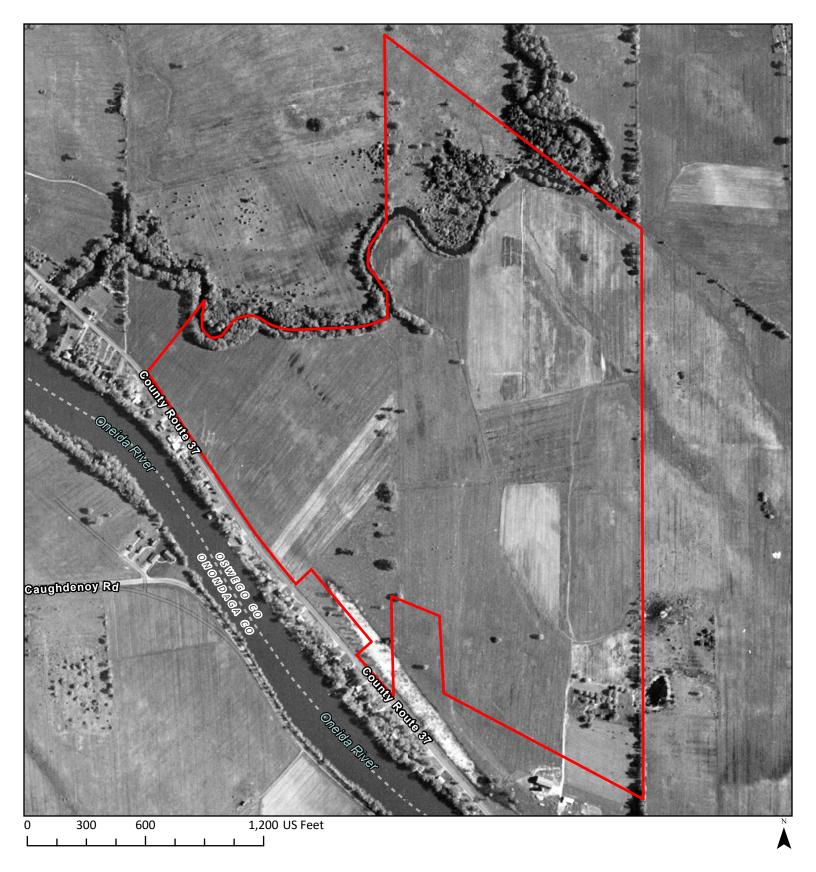
Imagery (1951) Lower Caughdenoy Creek Town of Hastings, Oswego County, NY





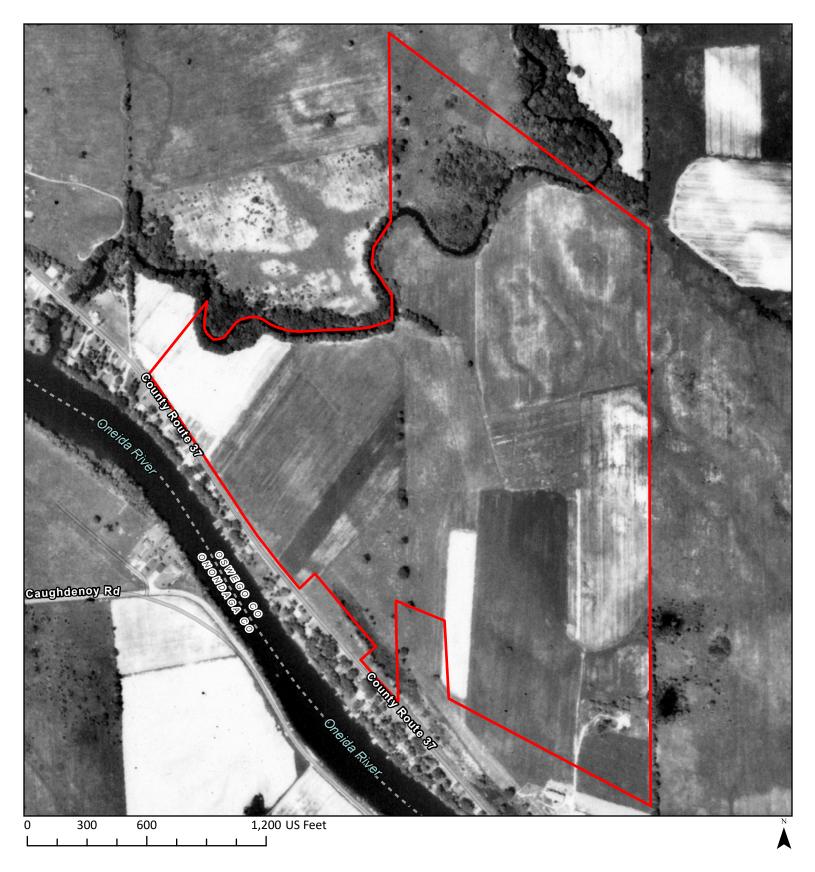
Imagery (1955)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY





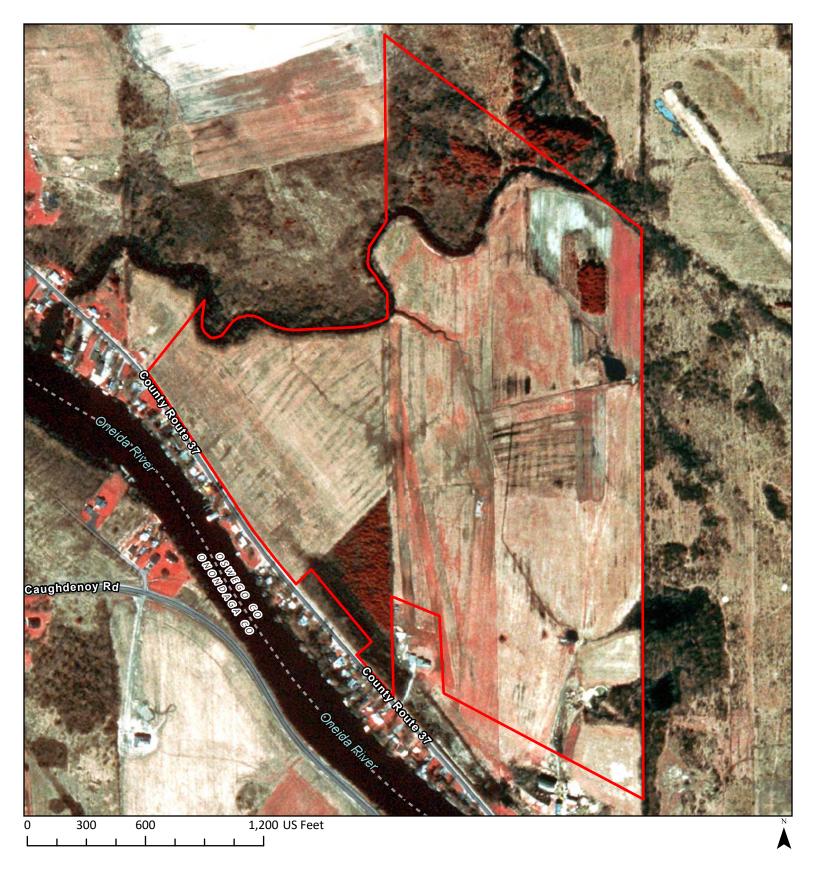
Imagery (1959)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY





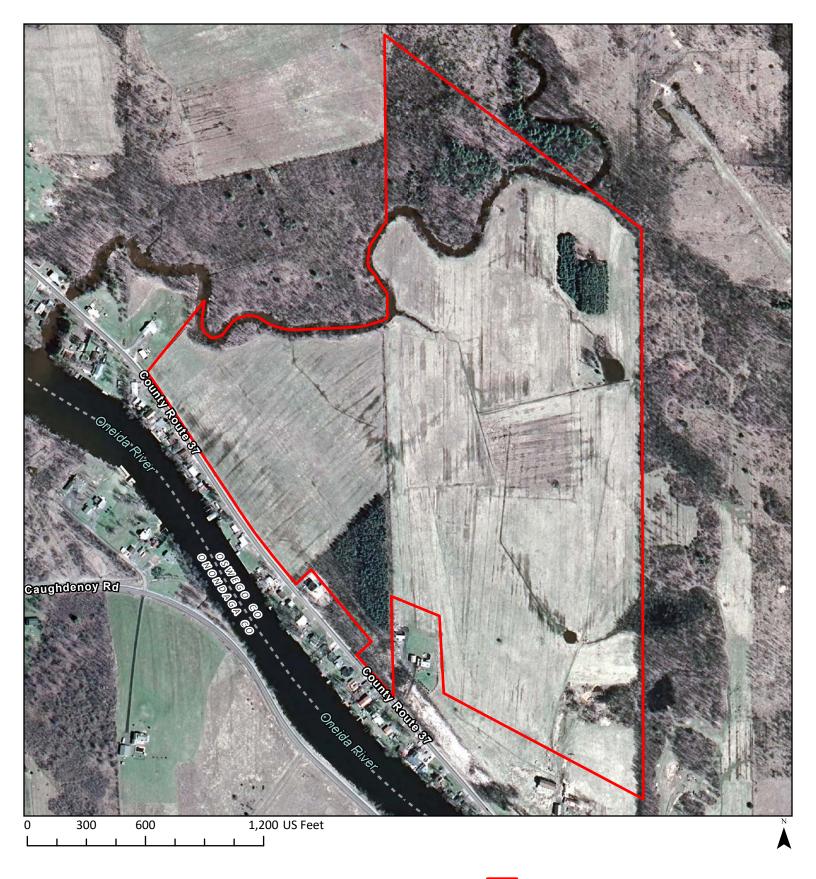
Imagery (1966)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY





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



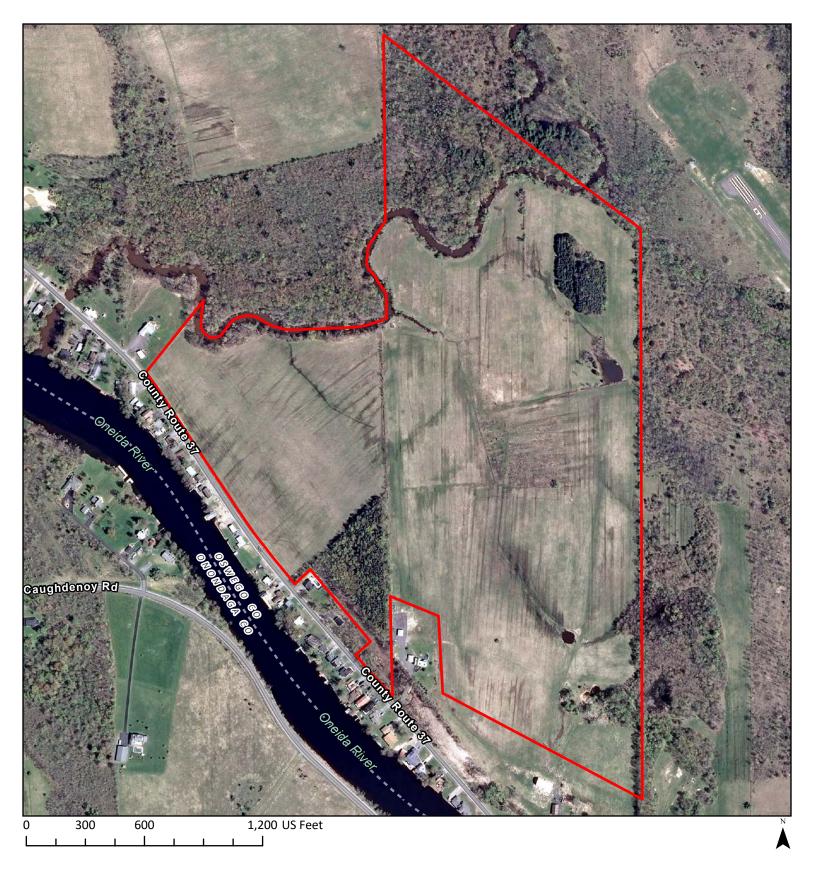


Figure: Imagery (2011)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY



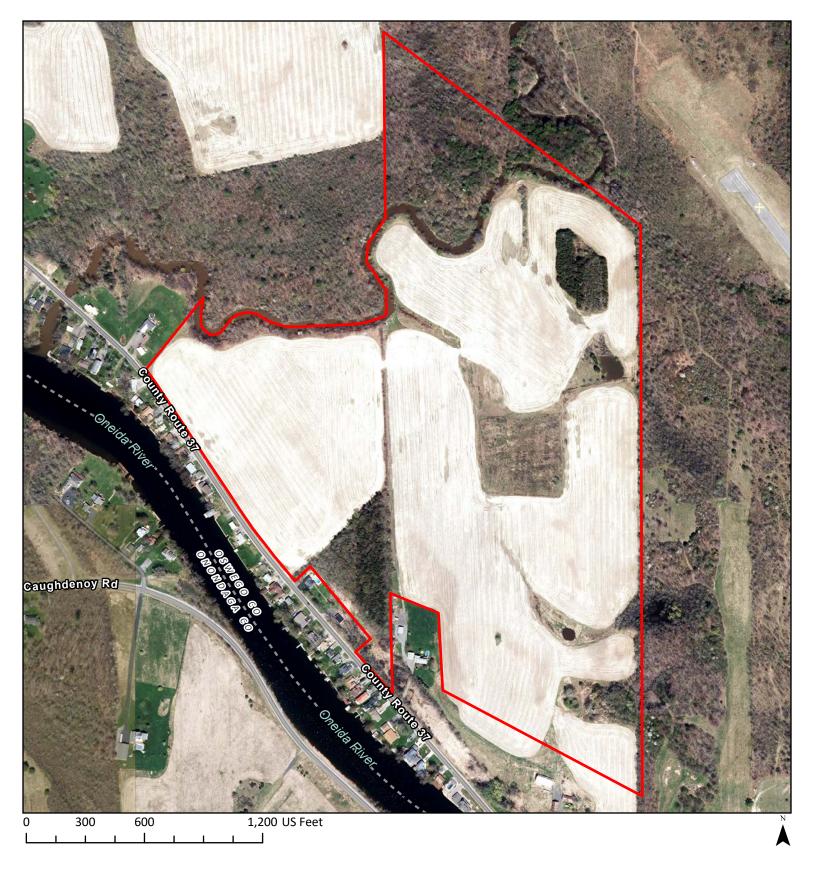


Figure: Imagery (2015)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY



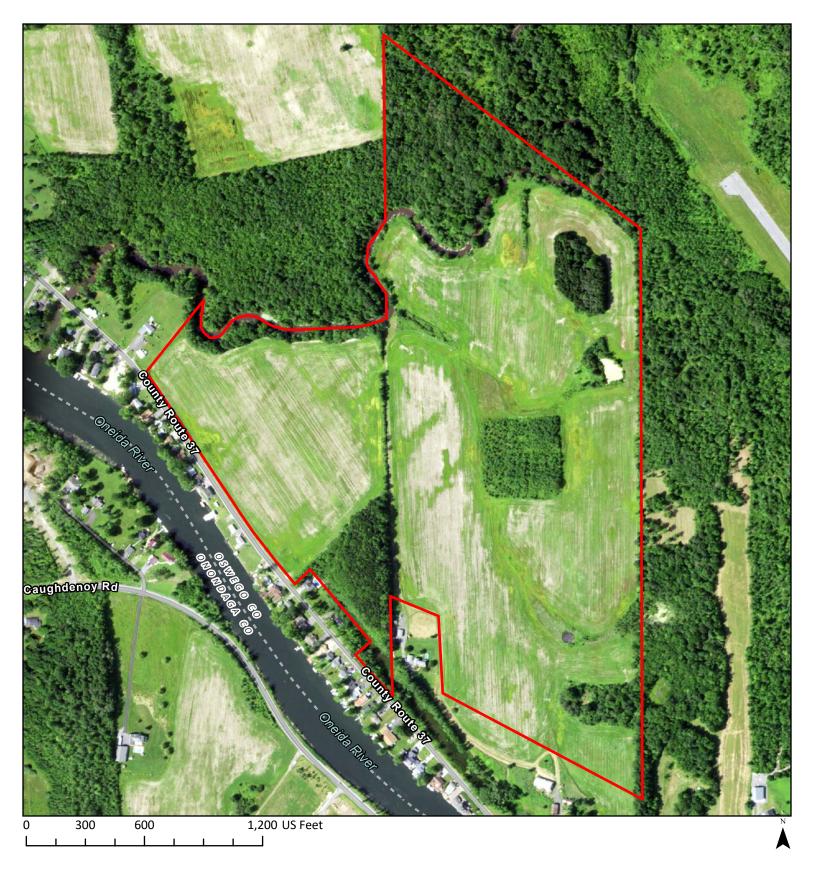


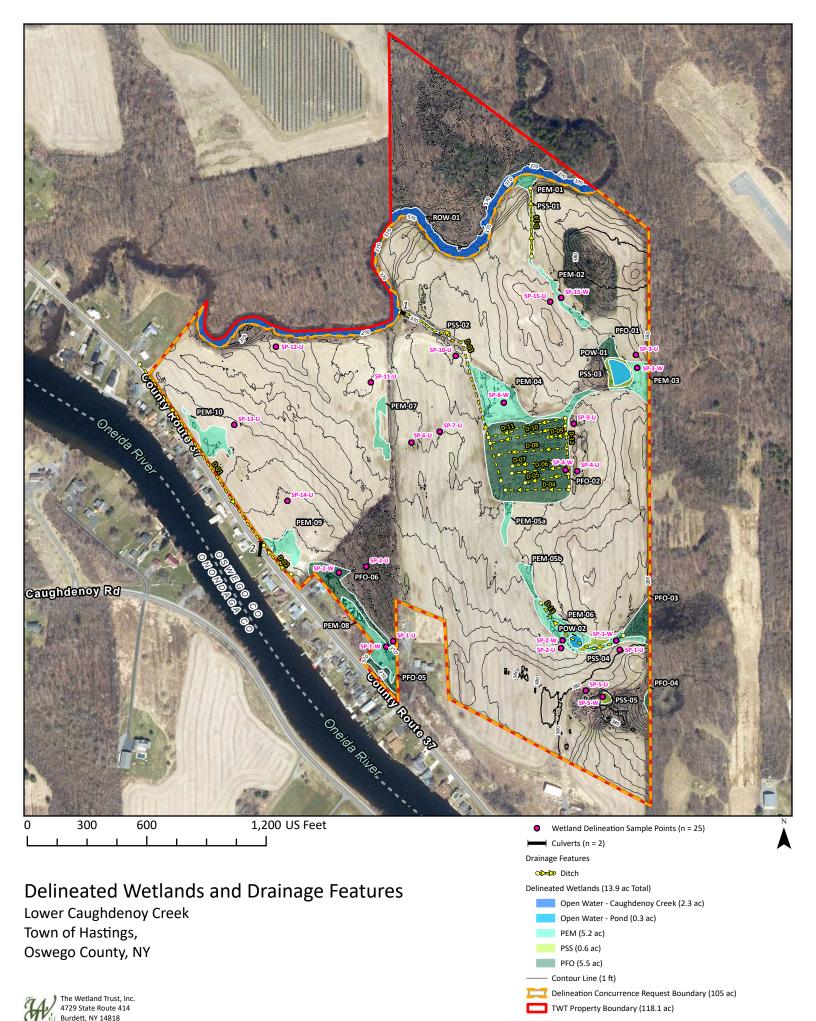
Figure: Imagery (2019)
Lower Caughdenoy Creek
Town of Hastings,
Oswego County, NY



| Micron- Lowe | er Caughdenov | Creek Stream | and Wetland | Mitigation Plan |
|----------------|-----------------|---------------|----------------|---------------------|
| TITLETOIL FORM | or caugination, | CICCI Directi | alla ii challa | Trifficacion I fair |

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 | | | | |
| 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) | | 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 | · | 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 | | | | | | |
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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 Adaptations¹ (Provide support 2. data in Remarks or on a separate sheet) 2 Yes FAC 3. Toxicodendron radicans Problematic Hydrophytic Vegetation¹ (Explain) 4. Symphyotrichum lateriflorum 1 No FAC 5. Taraxacum officinale 1 FACU ¹Indicators 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.)

[•]Dominated by red spruce

[·]Sparsely vegetated

[•]Pine needles littered the ground

^{•75%} tree cover, 1% shrub, 25% herb cover

SP1U

| Profile De Depth | scription: (Describe Matrix | e to the d | • | :ument t x Featur | | tor or co | onfirm the absenc | e of indicato | rs.) | |
|---------------------|---|------------|-------------------------|-----------------------------|---------------------|------------------|--------------------|-------------------------|----------------------|------------------|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | 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 | | | | | | |
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| 1 _T , 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 F | RR. | | ick (A10) (LR 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) (LRR | 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) (L | 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) (LRI | 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 | | | | | | | | | |
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| 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 ¹ |
| 2. Thelypteris palustris | 8 | No | FACW | 4 - Morphological Adaptations ¹ (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 ¹ (Explain) |
| 5. Typha X glauca | 5 | No | OBL | ¹ 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?

^{•10%} tree cover, 50% shrub, 100% herb

[•]Invasive species are not dominate but present; cattail

[•]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 ¹ | Loc ² | 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 | | | | |
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| 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) (LR | 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) (LR | · | | |
| 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) (LRR K | (, 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) (MLRA 144A, 145, 149B) | | | | |
| | Gleyed Matrix (S4) | | Depleted Dark St | • | - 7) | | Red Parent Material (F21) | | | | |
| | Redox (S5) | - | Redox Depressio | , , | | | | ow Dark Surface (TF12) |) | | |
| | ed Matrix (S6) | • | Marl (F10) (LRR | K, L) | | | Other (Exp | olain in Remarks) | | | |
| Dark S | Surface (S7) | | | | | | | | | | |
| ³ 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: | | | • | | | | _ | • | | | |
| High in clay | y content. | | | | | | | | | | |
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| 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: | | |
| 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) | — ' | • | 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): | | Wetland Hydr | rology Proco | n+2 V | es No X |
| (includes capillary fringe) | 165100 | Deptil (illiches). | | 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 | | | | | |
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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 Adaptations¹ (Provide support 2. data in Remarks or on a separate sheet) 1 3. Solidago sp. No 2 Yes Problematic Hydrophytic Vegetation¹ (Explain) Cornus racemosa FAC 5. Prunus serotina FACU ¹Indicators 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.)

^{•75%} tree, 20% vegetation, 30% tree debris

^{•40%} dead ash, standing and fallen over

[•]Sparsely vegetated due to leaf/needle litter and fallen trees/ branches

SOIL SP2U Sampling Point:

| Profile De | scription: (Describe Matrix | e to the o | depth needed to doc Redo | ument tl x Feature | | tor or co | nfirm the absence | e of indicators.) | | |
|--------------|--------------------------------|------------|-----------------------------|------------------------------|--------------------|-----------------------|-----------------------------|--|--|--|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | |
| 0-5 | 10yr 2/2 | 100 | | | | | | | | |
| 5-14 | 10yr 2/2 | 50 | 10yr 5/6 | 30 | | | | | | |
| | | | 10yr 4/6 | 20 | | | | | | |
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| | | | | | | | | | | |
| ¹Type: C= | Concentration, D=De | pletion, F | RM=Reduced Matrix, 0 | CS=Cove | ered or C | oated Sa | nd Grains. ² Loc | cation: PL=Pore Lining, M=Matrix. | | |
| | il Indicators: | | , | | | | | r Problematic Hydric Soils ³ : | | |
| Histose | | | Polyvalue Below | / Surface | e (S8) (LF | RR R, | | ck (A10) (LRR K, L, MLRA 149B) | | |
| Histic I | Epipedon (A2) | | MLRA 149B) | | | | | airie Redox (A16) (LRR K, L, R) | | |
| | Histic (A3) | | Thin Dark Surfa | | | | | cky Peat or Peat (S3) (LRR K, L, R) | | |
| | gen Sulfide (A4) | | High Chroma Sa | | | - | | e Below Surface (S8) (LRR K, L) | | |
| | ed Layers (A5) | | Loamy Mucky M | | | K , L) | | 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) (LRR | ι ι , ι) | | | 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 | | |
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| 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. | | | | |
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| 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 ¹ | | |
| . 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 | | | | |
| | | | | Woody vines – 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 | - . | 5 |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| 1-5 | 10yr 2/2 | 100 | | | | | Loamy/Clayey | |
| 5-12 | 10yr 2/2 | 50 | 10yr 6/8 | 40 | | | Loamy/Clayey | |
| | | | 10yr 6/2 | 10 | | | | |
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| | | | | | | | | |
| ¹ Type: C= | | nletion F | M=Reduced Matrix (| CS=Cov | ered or C | nated Sa | and Grains ² Loca | ation: PL=Pore Lining, M=Matrix. |
| | oil Indicators: | piction, r | tivi rteadoca iviatiix, t | 000 | crea or o | outou ot | | Problematic Hydric Soils ³ : |
| - | sol (A1) | | Polyvalue Belov | v Surface | e (S8) (LF | RR R, | | k (A10) (LRR K, L, MLRA 149B) |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Pra | irie Redox (A16) (LRR K, L, R) |
| Black | Histic (A3) | | Thin Dark Surfa | ce (S9) | (LRR R, I | ILRA 14 | 19B) 5 cm Mucl | ky Peat or Peat (S3) (LRR K, L, R) |
| — 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) (LRR | K , 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) (MLRA 144A, 145, 149B) |
| | 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> | |
| ³ 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 | | | | | | |
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| 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 | |
| | 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) |
| - | 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 | Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) |
| 1 | ick Surface (C7) Shallow Aquitard (D3) |
| | 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 | |
| | |
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| 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 ¹ | |
| | | | | 4 - Morphological Adaptations ¹ (Provide | 1112 |
| | | | | data in Remarks or on a separate she | |
| | | | | 1 | |
| · | | | | Problematic Hydrophytic Vegetation ¹ (E | xpla |
| · | | | | ¹ 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 Herb – 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 Herb – 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 Herb – 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 ¹ | Loc ² | Texture | Remarks |
| 0-6 | 10yr 4/2 | 95 | 7.5yr 6/8 | 5 | | | Loamy/Clayey | |
| 6-12 | 10yr 5/1 | 85 | 7.5yr 5/8 | 15 | | | Loamy/Clayey | |
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| ¹ Type: C: | =Concentration, D=De | epletion, R | M=Reduced Matrix, | CS=Cov | ered or C | oated Sa | and Grains. ² Location | : PL=Pore Lining, M=Matrix. |
| Hydric So | oil Indicators: | | | | | | Indicators for Pro | blematic Hydric Soils ³ : |
| Histo: | sol (A1) | | Polyvalue Belov | v Surfac | e (S8) (Ll | RR R, | 2 cm Muck (A | 10) (LRR K, L, MLRA 149B) |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Prairie F | Redox (A16) (LRR K, L, R) |
| 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) (LRR | K, L) | Polyvalue Belo | ow Surface (S8) (LRR K, L) |
| Strati | fied Layers (A5) | | Loamy Mucky N | /lineral (F | -1) (LRR | K , L) | 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) (MLRA 149B) |
| Sand | y Mucky Mineral (S1) | | Redox Dark Su | rface (F6 | 3) | | Mesic Spodic (| (TA6) (MLRA 144A, 145, 149B) |
| 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) (LRF | R K, L) | | | Other (Explain | in Remarks) |
| Dark | Surface (S7) | | | | | | | |
| | | | | | | | | |
| ³ 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 |
| | | | | | | | | |
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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 | - |
| 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 | 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 | |
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| 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. | — ′ | | | 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 ¹ |
| | | | | 4 - Morphological Adaptations ¹ (Provide sup |
| | | | | data in Remarks or on a separate sheet) |
| 3. | | | | · · · · · · |
| 4 | | | | Problematic Hydrophytic Vegetation ¹ (Explai |
| 5 | | | | ¹ 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. 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. |
| - | | | | Herb – 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 ¹ | Loc ² | Texture | Remarks |
| 0-8 | 10yr 4/1 | 80 | 7.5yr 5/6 | 20 | | | Loamy/Clayey | |
| 8-14 | 10yr 6/1 | 65 | 7.5yr 5/8 | 35 | | | | |
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| | =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 ³ : |
| | sol (A1) | | Polyvalue Belov | | e (S8) (Li | 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 | | | K , L) | | rface (S9) (LRR K, L) |
| | eted Below Dark Surfa | ace (A11) | | | 2) | | | ese Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | | x Depleted Matrix | | | | | odplain Soils (F19) (MLRA 149B) |
| | y Mucky Mineral (S1) | | Redox Dark Su | rface (F6 | 6) | | Mesic Spodio | (TA6) (MLRA 144A, 145, 149B) |
| 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) (LRF | R K, L) | | | Other (Explain | n in Remarks) |
| Dark | Surface (S7) | | | | | | | |
| 31 | | - 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> | |
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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 | |
| 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 | |
| | 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 | |
| | |
| 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 | d Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| l | ce of Reduced Iron (C4) Stunted or Stressed Plants (D1) |
| 1 | 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) | · · · |
| Describe Recorded Data (stream gauge, monitoring well, as | rial photos, previous inspections), if available: |
| Remarks: | |
| No signs of wetland hydrology | |
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| | 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 | | |
| 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 ¹ |
| | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | | | data in Remarks or on a separate sheet) |
| 3. | | | | |
| 1 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5 | | | | ¹ 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. |
| 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: | | | | Woody vines – 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 ¹ | Loc ² | Texture | Remarks |
| 0-6 | 10yr 4/2 | 95 | 7.5yr 6/8 | 5 | | | Loamy/Clayey | |
| 6-12 | 10yr 5/1 | 85 | 7.5yr 5/8 | 15 | | | | |
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| ¹ Type: C= | Concentration, D=De | pletion, R | M=Reduced Matrix, | CS=Cov | ered or C | oated Sa | and Grains. ² Locatio | n: PL=Pore Lining, M=Matrix. |
| Hydric Sc | oil Indicators: | | | | | | Indicators for Pr | oblematic Hydric Soils ³ : |
| Histos | sol (A1) | | Polyvalue Belov | v Surfac | e (S8) (LF | RR R, | 2 cm Muck (A | A10) (LRR K, L, MLRA 149B) |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Prairie | Redox (A16) (LRR K, L, R) |
| 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) (LRR | K, L) | Polyvalue Be | low Surface (S8) (LRR K, L) |
| Stratif | fied Layers (A5) | | Loamy Mucky N | /lineral (F | -1) (LRR | 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) (MLRA 149B) |
| Sandy | y Mucky Mineral (S1) | | Redox Dark Su | rface (F6 | 3) | | Mesic Spodio | (TA6) (MLRA 144A, 145, 149B) |
| 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) (LRF | R K, L) | | | Other (Explain | n in Remarks) |
| Dark | Surface (S7) | | | | | | | |
| | | | | | | | | |
| ³ 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 | | | | | |
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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.) |
| SUMMARY OF FINDINGS – Attach site | 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 | | | |
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| | 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 ¹ |
| 2. | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | | | data in Remarks or on a separate sheet) |
| | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| · · | | | | |
| | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic |
| | | | | |
| 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 | | | | Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3. |
| | 75 | =Total Cover | | ft tall. |
| Noody Vine Stratum (Plot size: |) | | | Woody vines – 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.) | | |
| - | | | | |
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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 ¹ | Loc ² | Texture | Remarks |
| 0-6 | 10yr 4/2 | 95 | 7.5yr 6/8 | 5 | | | Loamy/Clayey | |
| 6-12 | 10yr 5/1 | 85 | 7.5yr 5/8 | 15 | | | | |
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| | | | | | | | | |
| ¹ Type: C: | =Concentration, D=De | epletion, R | M=Reduced Matrix, | CS=Cov | ered or C | oated Sa | and Grains. ² Locatio | n: PL=Pore Lining, M=Matrix. |
| Hydric So | oil Indicators: | | | | | | Indicators for Pr | oblematic Hydric Soils ³ : |
| Histo: | sol (A1) | | Polyvalue Belov | v Surfac | e (S8) (Ll | RR R, | 2 cm Muck (A | A10) (LRR K, L, MLRA 149B) |
| Histic | Epipedon (A2) | | MLRA 149B) | | | | Coast Prairie | Redox (A16) (LRR K, L, R) |
| Black | Histic (A3) | | Thin Dark Surfa | ice (S9) | (LRR R, I | MLRA 14 | 9B)5 cm Mucky F | Peat or Peat (S3) (LRR K, L, R) |
| Hydro | ogen Sulfide (A4) | | High Chroma S | ands (S1 | 11) (LRR | K, L) | Polyvalue Be | low Surface (S8) (LRR K, L) |
| Strati | fied Layers (A5) | | Loamy Mucky N | /lineral (F | -1) (LRR | K , L) | Thin Dark Su | rface (S9) (LRR K, L) |
| 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) (MLRA 149B) |
| Sand | y Mucky Mineral (S1) | | Redox Dark Su | rface (F6 | 3) | | Mesic Spodio | (TA6) (MLRA 144A, 145, 149B) |
| | 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) (LRF | | , | | | n in Remarks) |
| | Surface (S7) | | | , , | | | | , |
| | ` , | | | | | | | |
| ³ 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> | |
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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) |
| | /ater-Stained Leaves (B9) | | Patterns (B10) |
| | quatic Fauna (B13) | | Lines (B16) |
| — — | larl Deposits (B15) ydrogen Sulfide Odor (C1) | | n Water Table (C2) urrows (C8) |
| | xidized Rhizospheres on Livir | ' | Visible on Aerial Imagery (C9) |
| | resence of Reduced Iron (C4 | | Stressed Plants (D1) |
| | 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 | | | |
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| 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 ¹ |
| | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | data in Remarks or on a separate sheet) |
| | | Problematic Hydrophytic Vegetation ¹ (Explain |
| | | Problematic Hydrophytic Vegetation (Explain |
| | | ¹ Indicators of hydric soil and wetland hydrology |
| | | must be present, unless disturbed or problematic |
| | | Definitions of Vegetation Strata: |
| | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of |
| | | height. |
| | | |
| | | Sapling/shrub – Woody plants less than 3 in. 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 | deptin needed to doc Redo | x Featur | | itor or co | oniiriii tile absenc | e or maica | 1015.) | |
|-------------------------|---------------------------------|-------------|-------------------------------------|-----------|--------------------|---------------------------------------|-----------------------------|--|------------------------------|---------------------|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | | Remar | ·ks |
| 0-7 | 7.5yr 5/4 | 100 | | | | | | | | |
| 7-11 | 10yr 6/3 | 50 | 7.5yr 5/6 | 50 | | | Loamy/Clayey | | | |
| | | | | | | | | | | - |
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| | | | | | | | | | | |
| ¹ Type: C= | Concentration, D=De | epletion, F | RM=Reduced Matrix, | CS=Cov | ered or C | oated Sa | and Grains. ² Lo | cation: PL: | =Pore Linin | g, M=Matrix. |
| - | il Indicators: | | | | | | Indicators fo | | - | |
| | ol (A1) | | Polyvalue Belov | | e (S8) (Ll | RR R, | | | | ILRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | (I DD D) | W DA 44 | | | (A16) (LR | · · |
| | 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) (LRR K | |
| | 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) (LRF | R K, L) | | | Other (E | xplain in Re | emarks) | |
| Dark S | Surface (S7) | | | | | | | | | |
| ³ 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 | | | | | | | | |
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| 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 | | | | |
| | - | | | | |
| 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> | | | | |
| | Sulfide Odor (C1) Crayfish Burrows (C8) | | | | |
| | 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) | | | | |
| | 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 | | | | | |
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| 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% |
| | ^ | | | |
| Phalaris arundinacea | 90 | Yes | FACW | X 3 - Prevalence Index is ≤3.0 ¹ |
| Carex crinita | 2 | No | OBL | 4 - Morphological Adaptations ¹ (Provide s |
| . Impatiens capensis | 2 | No | FACW | data in Remarks or on a separate sheet |
| . Iris versicolor | 1 | No | OBL | Problematic Hydrophytic Vegetation ¹ (Exp |
| . Typha latifolia | 5 | No | OBL | 1 |
| - | | | | ¹ Indicators of hydric soil and wetland hydrolog must be present, unless disturbed or problema |
| | | | | Definitions of Vegetation Strata: |
| - | | | | Tree – 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 ¹ | Loc ² | Texture | Remarks |
| 0-2 | · · · · · | | | | | | | Organic |
| 0-2 | | | | | | | | Organic |
| 2-10 | 10yr 5/2 | 95 | 7.5yr 5/6 | 5 | | | Loamy/Clayey | |
| | | | | | | | | |
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| 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 ³ : |
| - | sol (A1) | | Polyvalue Belov | v Surface | e (S8) (I F | 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) (LRR K, L, R) |
| | 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) (LRR K, L) |
| Deple | ted Below Dark Surfa | ce (A11) | Loamy Gleyed | Matrix (F | 2) | | Iron-Mai | nganese Masses (F12) (LRR K, L, R) |
| Thick | Dark Surface (A12) | | x Depleted Matrix | (F3) | | | Piedmoi | nt Floodplain Soils (F19) (MLRA 149B) |
| Sandy | / Mucky Mineral (S1) | | Redox Dark Su | rface (F6 | 5) | | Mesic S | podic (TA6) (MLRA 144A, 145, 149B) |
| Sandy | Gleyed Matrix (S4) | | Depleted Dark | Surface (| (F7) | | | rent Material (F21) |
| | / Redox (S5) | | Redox Depress | , , | | | | allow Dark Surface (TF12) |
| | ed Matrix (S6) | | ? Marl (F10) (LRI | R K, L) | | | Other (E | Explain in Remarks) |
| Dark S | Surface (S7) | | | | | | | |
| 31 | . | 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 |) - | | | | | | |
| | 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. |
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| 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 | | | | | | |
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| | 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 | | |
| |) | | | 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 ¹ |
| | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | | | data in Remarks or on a separate sheet) |
| | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| - | | | | Problematic Hydrophytic Vegetation (Explain |
| | | | | ¹ 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 | | | | |
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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 ¹ | Loc ² | 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> | | |
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| | | | | | | | | | |
| | 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) (Li | 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) (LRR | |
| | gen Sulfide (A4) | _ | High Chroma S | | | | · — | at or Peat (S3) (I v Surface (S8) (L | • |
| | ied Layers (A5) | _ | Loamy Mucky N | | | | | ice (S9) (LRR K , | - |
| | 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) (MLRA 144 | |
| 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) (LRI | 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 | - | | | | | | | |
| | | | | | | | | | |
| Depth (ir | nches): | | | | | | Hydric Soil Present? | Yes | No x |
| Remarks: | | | | | | | | | |
| no signs of | f hydric soil indicators | ; | | | | | | | |
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| 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 | |
| Are Vegetation N , Soil N , or Hydrology N naturally pr | - |
| | 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 | spheres on Living Roots (C3) x Saturation Visible on Aerial Imagery (C9) |
| | 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: | |
| Saturated: water is sitting on surface by clay is lower so it's not per Man made pond 25ft away, 1ft lower than sample point | etrating |
| - Mail made pond 25it away, 1it lower than sample point | |
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| | 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 ¹ |
| 3 | No | FACW | 4 - Morphological Adaptations ¹ (Provide supp |
| | No | | data in Remarks or on a separate sheet) |
| <u> </u> | 110 | 171011 | Problematic Hydrophytic Vegetation ¹ (Explai |
| | | | Problematic Trydrophytic Vegetation (Explai |
| | | | ¹ Indicators of hydric soil and wetland hydrology |
| | | | must be present, unless disturbed or problematic |
| | | | Definitions of Vegetation Strata: |
| | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of |
| | | | height. |
| | | | |
| | | | Sapling/shrub – Woody plants less than 3 in. 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 ¹ | Loc ² | Texture | Remarks |
| 0-5 | 7.5yr 5/1 | 60 | 7.5yr 4/6 | 40 | | | | |
| 5-10 | 7.5yr 5/1 | 90 | 7.5yr 4/6 | 10 | | | | |
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| ¹ Type: C=0 | Concentration, D=De | epletion, R | M=Reduced Matrix, | CS=Cov | ered or C | oated Sa | nd Grains. ² Loc | cation: PL=Pore Lining, M=Matrix. |
| • | I Indicators: | | | | | | | r Problematic Hydric Soils ³ : |
| Histoso | | | Polyvalue Belov | | e (S8) (LF | RR R, | | ck (A10) (LRR K, L, MLRA 149B) |
| | 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) (MLRA 149B) |
| | Mucky Mineral (S1) | | Redox Dark Su | | 6) | | | podic (TA6) (MLRA 144A, 145, 149B) |
| 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) (LRF | R K, L) | | | Other (Ex | xplain in Remarks) |
| Dark S | urface (S7) | | | | | | | |
| ³ 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 | เธออ นเอเน | rbed of problematic | υ. |
| Type: | | - | | | | | | |
| Depth (in | | | | | | | Hydric Soil Pre | esent? Yes X No |
| Remarks: | | | | | | | 1 | |
| 12in gleyed | | | | | | | | |
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| 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.) | |
| | 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) | |
| | er-Stained Leaves (B9) Drainage Patterns (B10) | |
| | ttic Fauna (B13) Moss Trim Lines (B16) | |
| | Deposits (B15) Dry-Season Water Table (C2) | |
| | ogen Sulfide Odor (C1) Crayfish Burrows (C8) | (0.0) |
| 1 | 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 | | |
| | | |
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| 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 |
| | | | |
| | | | ' |
| | | | 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 ¹ |
| | | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | | data in Remarks or on a separate sheet) |
| | | | |
| | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| | | | ¹ Indicators of hydric soil and wetland hydrology |
| | | | must be present, unless disturbed or problematic |
| | | | Definitions of Vegetation Strata: |
| | | | Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of |
| | | | height. |
| | | | |
| | | | Sapling/shrub – Woody plants less than 3 in. 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.) | | |
| | | | |
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| | | | |
| | | =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 ¹ | Loc ² | Texture | Remarks | | | |
| 0-6 | 10yr 6/3 | 80 | 10yr 4/6 | 20 | | | | | | | |
| 6-10 | 10yr 4/2 | 80 | 10yr 4/6 | 20 | | | | | | | |
| 10-12 | 10yr 5/3 | 70 | 10yr 4/6 | 30 | | | Sandy | | | | |
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| 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 ³ : | | | |
| _ | Epipedon (A2) | | MLRA 149B) | Suriace | 5 (30) (L r | ın n, | 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) | | | | |
| _ | 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) | | | | (, ∟) | | | | | |
| | 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) (LRR | . 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 | | | | | | | | | | |
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| 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 | 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) |
| | f Reduced Iron (C4) Stunted or Stressed Plants (D1) |
| | n Reduction in Tilled Soils (C6) Geomorphic Position (D2) |
| 1 <u> </u> | Surface (C7) Shallow Aguitard (D3) |
| l | 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 |
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| | 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 ¹ |
| 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 ¹ (Explain |
| 5. Agrostis gigantea | 2 | No | FACW | ¹ 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. Herb – 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: | _) | | | Woody vines – 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 |
| | | | | |
| | | | | |
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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 ¹ | Loc ² | 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 | |
| | | | | | | | | |
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| ¹ Type: C= | Concentration, D=De | nletion R | M=Reduced Matrix (| CS=Cove | red or Co | nated Sa | nd Grains ² 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 ³ : |
| Histos | | | Polyvalue Belov | v Surface | (S8) (LF | RR R, | | ck (A10) (LRR K, L, MLRA 149B) |
| Histic I | Epipedon (A2) | | MLRA 149B) | | | | Coast Pra | airie Redox (A16) (LRR K, L, R) |
| Black | Histic (A3) | | Thin Dark Surfa | ce (S9) (I | LRR R, N | /ILRA 14 | 9B)5 cm Mud | cky Peat or Peat (S3) (LRR K, L, R) |
| Hydro | gen Sulfide (A4) | | High Chroma S | ands (S1 | 1) (LRR I | K, L) | Polyvalue | Below Surface (S8) (LRR K, L) |
| | ed Layers (A5) | | Loamy Mucky N | | | K, L) | | Surface (S9) (LRR K, L) |
| | 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) (MLRA 149B) |
| | Mucky Mineral (S1) | | Redox Dark Sui | | | | | odic (TA6) (MLRA 144A, 145, 149B) |
| | 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) (LRF | (K, L) | | | Other (Ex | φlain in Remarks) |
| Daik S | duriace (S7) | | | | | | | |
| ³ 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 | | | | | | | |
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| 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 | |
| | 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) |
| | ogen Sulfide Odor (C1) Crayfish Burrows (C8) |
| | zed Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) |
| | ence of Reduced Iron (C4) Stunted or Stressed Plants (D1) |
| 1 | nt Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) |
| | 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 | |
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| 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 ¹ |
| 2. | | | | 4 - Morphological Adaptations ¹ (Provide support |
| 3. | | | | data in Remarks or on a separate sheet) |
| 4. | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 5 | | | | ¹ 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. | _ | | | Woody vines – 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 | • | , | | |
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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 ¹ | Loc ² | Texture | Remarks |
| 0-4 | 10yr 4/2 | 90 | 10yr 4/6 | 10 | | | Loamy/Clayey | |
| 4-10 | 10yr 4/1 | 80 | 10yr 4/6 | 20 | | | Loamy/Clayey | |
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| 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 ³ : |
| • | ol (A1) | | Polyvalue Below | / Surface | e (S8) (LF | 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) (LRR | K, L) | Polyvalue | e Below Surface (S8) (LRR K, L) |
| Stratifi | ed Layers (A5) | | Loamy Mucky M | 1ineral (F | 1) (LRR | K , L) | Thin Darl | k Surface (S9) (LRR K, L) |
| | 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) (MLRA 144A, 145, 149B) |
| | 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.) | | | | | | | |
| ³ 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 | | | | | | | |
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| 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) |
| | r-Stained Leaves (B9) Drainage Patterns (B10) |
| | tic Fauna (B13) Moss Trim Lines (B16) |
| | Deposits (B15) Dry-Season Water Table (C2) |
| | 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, | |
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| 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 ¹ | |
| 2. Fragaria virginiana | 10 | No | FACU | 4 - Morphological Adaptations ¹ (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 ¹ (Explai | in) |
| 5. Juncus effusus | 1 | No | OBL | 11-4: | |
| 6. Anthoxanthum odoratum | 1 | No | FACU | ¹ 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. | | | | Woody vines – 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.)

[•]Trees <6 in diameter

^{•30%} 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 ¹ | Loc ² | Texture | Remarks |
| 0-4 | 10YR 4/2 | 100 | | | | | Loamy/Clayey | |
| 4-10 | 10yr 4/2 | 80 | 10yr 4/6 | 20 | | | Loamy/Clayey | |
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| 1 _{Type: C:} | =Concentration, D=De | nlotion D | M-Paduaad Matrix | | arad ar C | ootod Sc | and Crains ² L agation | : PL=Pore Lining, M=Matrix. |
| | oil Indicators: | pietion, ix | ivi–Reduced iviatilix, | C3-C0V | ered or C | valeu Sa | | blematic Hydric Soils ³ : |
| - | sol (A1) | | Polyvalue Belov | v Surfac | e (S8) (L i | RR R. | | 10) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | • | MLRA 149B) | | · () (| , | | Redox (A16) (LRR K, L, R) |
| | Histic (A3) | | Thin Dark Surfa | | (LRR R. I | MLRA 14 | | 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 | | | - | | 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) (MLRA 144A, 145, 149B) |
| | 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) (LRF | R K, L) | | | Other (Explain | in Remarks) |
| Dark | Surface (S7) | • | | | | | <u> </u> | |
| | | | | | | | | |
| ³ 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) | |
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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) | | | | |
| | Water-Stained Leaves (B9) | · · · · · · · · · · · · · · · · · · · | | | | | |
| _ | Aquatic Fauna (B13) | - | | | | | |
| | Marl Deposits (B15) | <u> </u> | | | | | |
| <u> </u> | Hydrogen Sulfide Odor (C1) | | Burrows (C8) | | | | |
| | 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 | Thin Muck Surface (C7) | · / · | nic Position (D2) quitard (D3) | | | | |
| I · · · · · · | 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 | | | | | | | |
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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 Adaptations¹ (Provide support Anthoxanthum odoratum No FACU data in Remarks or on a separate sheet) Fragaria virginiana 15 FACU 3. Yes Problematic Hydrophytic Vegetation¹ (Explain) 4. Solidago altissima 30 Yes FACU 5. Oxalis dillenii 1 FACU ¹Indicators 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 ¹ | Loc ² | Texture | Rer | marks |
|-----------------------|-------------------------------------|-------------|-----------------------------|----------------|--------------------|------------------|-----------------------------|---|---------------------------|
| 0-6 | 7.5yr 4/4 | 100 | | | | | | | |
| 6-10 | 7.5yr 6/6 | 100 | | | | | | | |
| 0-10 | 7.5yi 6/6 | 100 | | | | | | | |
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| ¹ Type: C= | Concentration, D=D | epletion, R | M=Reduced Matrix, | CS=Cov | ered or C | oated Sai | nd Grains. ² Loc | ation: PL=Pore Li | ning, M=Matrix. |
| Hydric So | il Indicators: | | | | | | | r Problematic Hyd | |
| | sol (A1) | | Polyvalue Belo | | e (S8) (LF | RR R, | | ck (A10) (LRR K, L | |
| | 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) (LRI | |
| | ted Below Dark Surf | face (Δ11) | Loamy Gleyed | | | K, L) | | ganese Masses (F1 | • |
| | Dark Surface (A12) | acc (A11) | Depleted Matrix | | 2) | | | | F19) (MLRA 149B) |
| | Mucky Mineral (S1) |) | Redox Dark Su | | 3) | | | odic (TA6) (MLRA | |
| | Gleyed Matrix (S4) | | Depleted Dark | | • | | | ent Material (F21) | , , |
| | Redox (S5) | | Redox Depress | | | | | llow Dark Surface | (TF12) |
| Stripp | ed Matrix (S6) | | Marl (F10) (LR | 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 | | | | | | | | |
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| 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 · · · · / | esence of Reduced Iron (C4) Stunted or Stressed Plants (D1) |
| <u> </u> | ecent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) |
| | 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 ¹ |
| 2. Lysimachia nummularia | 40 | Yes | FACW | 4 - Morphological Adaptations ¹ (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 ¹ (Explain) |
| 5. Cornus amomum | 1 | No | FACW | ¹ 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 | | | | 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, |
| | 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. | | | | Woody vines – 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.) | | |

^{•10}ft radius for vegetation •Approximately10% shrub, 80% herb, 20% trees

SOIL Sampling Point: SP5W

| Profile De Depth | scription: (Describe Matrix | to the d | - | ument tl x Feature | | tor or co | nfirm the absend | ce of indicators.) |
|-----------------------|--------------------------------|------------|-------------------------|------------------------------|--------------------|-----------------------|----------------------------|--|
| (inches) | Color (moist) | % | Color (moist) | % realure | Type ¹ | Loc ² | Texture | Remarks |
| | Color (IIIOlot) | 70 | Color (IIIOlat) | /0 | · ypc | | I CALUI G | |
| 0-1 | | | | | | | | Duff |
| 1-12 | 7.5YR 4/4 | | | | | | | |
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| | | | | | | | | |
| ¹ Type: C= | Concentration, D=Dep | oletion, R | M=Reduced Matrix, 0 | CS=Cove | ered or C | oated Sai | nd Grains. ² Lo | ocation: PL=Pore Lining, M=Matrix. |
| Hydric So | il Indicators: | | | | | | Indicators f | or Problematic Hydric Soils ³ : |
| Histos | ol (A1) | | Polyvalue Below | | e (S8) (LF | RR R, | | uck (A10) (LRR K, L, MLRA 149B) |
| Histic I | Epipedon (A2) | | MLRA 149B) | | | | | Prairie Redox (A16) (LRR K, L, R) |
| | Histic (A3) | | Thin Dark Surfa | | | | | ucky Peat or Peat (S3) (LRR K, L, R) |
| | gen Sulfide (A4) | | High Chroma Sa | - | | - | | ue Below Surface (S8) (LRR K, L) |
| | ed Layers (A5) | | Loamy Mucky M | | | K , L) | | rk Surface (S9) (LRR K, L) |
| | 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) (MLRA 149B) |
| | Mucky Mineral (S1) | | Redox Dark Sur | | | | | Spodic (TA6) (MLRA 144A, 145, 149B) |
| | Gleyed Matrix (S4) | | Depleted Dark S | , | • | | | rent Material (F21) |
| | Redox (S5) | | Redox Depressi | | | | | nallow Dark Surface (TF12) |
| | ed Matrix (S6) | | Marl (F10) (LRF | (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 |
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| 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) |
| - ' ' ' - | Thin Muck Surface (C7) | | Aquitard (D3) |
| | Other (Explain in Remarks) | · | 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 | | |
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| 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 |
| · · | | | | |
| 7 | | | | 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 ¹ |
| | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | | | data in Remarks or on a separate sheet) |
| 3 | | | | , , |
| 1 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5 | | | | ¹ 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. |
| | | | | Herb – 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 ¹ | Loc ² | Texture | Remarks |
| 0-12 | 10yr 3/2 | 70 | 7.5yr 4/6 | 30 | | | Loamy/Clayey | |
| 12-16 | 2.5yr 5/1 | 80 | 7.5yr 5/8 | 20 | | | Loamy/Clayey | |
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| | | | | | | | | |
| | Concentration, D=Dep | letion, R | M=Reduced Matrix, | CS=Cov | ered or C | oated Sa | | PL=Pore Lining, M=Matrix. lematic Hydric Soils ³ : |
| - | oil Indicators: sol (A1) | | Polyvalue Belov | v Surfac | e (S8) (L i | RR R. | | (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | o (00) (- . | , | | edox (A16) (LRR K, L, R) |
| | 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) (LRR | K, L) | Polyvalue Belov | v Surface (S8) (LRR K, L) |
| | ied Layers (A5) | | Loamy Mucky N | /lineral (F | -1) (LRR | K , L) | Thin Dark Surfa | ce (S9) (LRR K, L) |
| | 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.) | | | | | | | |
| ³ 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 | | | | | |
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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) |
| - ' ' ' - | Thin Muck Surface (C7) | | Aquitard (D3) |
| | Other (Explain in Remarks) | · | 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 | | |
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| 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 |
| · · | | | | |
| 7 | | | | 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 ¹ |
| | | | | 4 - Morphological Adaptations ¹ (Provide supp |
| | | | | data in Remarks or on a separate sheet) |
| 3 | | | | , , |
| 1 | | | | Problematic Hydrophytic Vegetation ¹ (Explain |
| 5 | | | | ¹ 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. |
| | | | | Herb – 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 ¹ | Loc ² | Texture | Remarks |
| 0-10 | 10yr 3/2 | 90 | 7.5yr 4/6 | 10 | | | Loamy/Clayey | |
| 10-16 | 2.5yr 5/1 | 80 | 7.5yr 5/8 | 20 | | | Loamy/Clayey | |
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| ¹ Type: C: | =Concentration, D=De | nletion R | M=Reduced Matrix | CS=Cov | ered or C | nated Sa | and Grains ² Location | PL=Pore Lining, M=Matrix. |
| | oil Indicators: | piotion, i | Troddod Matix, | 00 001 | 0.04 0. 0 | outou ot | | ematic Hydric Soils ³ : |
| - | sol (A1) | | Polyvalue Belov | v Surface | e (S8) (LF | RR R, | |) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | | | | dox (A16) (LRR K, L, R) |
| Black | Histic (A3) | | Thin Dark Surfa | ce (S9) (| LRR R, N | VILRA 14 | 19B) 5 cm Mucky Pea | t or Peat (S3) (LRR K, L, R) |
| Hydro | ogen Sulfide (A4) | | High Chroma S | ands (S1 | 1) (LRR | K, L) | Polyvalue Below | Surface (S8) (LRR K, L) |
| Strati | fied Layers (A5) | | Loamy Mucky N | /lineral (F | 1) (LRR | K , L) | Thin Dark Surface | ce (S9) (LRR K, L) |
| 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) (MLRA 149B) |
| 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) (LRF | R K, L) | | | Other (Explain in | Remarks) |
| Dark | Surface (S7) | | | | | | | |
| | | | | | | | | |
| ³ 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) | |
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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 |
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| | |
| 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) |
| | Muck Surface (C7) Shallow Aquitard (D3) |
| | 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 |
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| 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 |
| =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 |
| =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 ¹ |
| | OBL | 4 - Morphological Adaptations ¹ (Provide sup |
| No | OBL | data in Remarks or on a separate sheet) |
| No | FACW | Problematic Hydrophytic Vegetation ¹ (Explai |
| No | OBL | 1 |
| No | OBL | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic |
| | | Definitions of Vegetation Strata: |
| | | Tree – Woody plants 3 in. (7.6 cm) or more in |
| | | diameter at breast height (DBH), regardless of |
| | | height. |
| | | Sapling/shrub – Woody plants less than 3 in. D |
| | | 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 |
| =Total Cover | | ft tall. |
| | | Woody vines – All woody vines greater than 3.2 |
| | | ft in height. |
| | | |
| | | Hydrophytic Vegetation |
| | | Present? Yes X No No |
| =Total Cover | | |
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| 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 ¹ | Loc ² | Texture | Remarks | |
| 0-9 | 5yr 5/1 | 80 | 5yr 5/6 | 20 | | | Loamy/Clayey | | |
| 9-13 | 2.5y 6/1 | 70 | 7.5yr 5/6 | 30 | | | Loamy/Clayey | | |
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| ¹ Type: C: | =Concentration, D=De | nletion R | M=Reduced Matrix (| CS=Cov | ered or C | oated Sa | and Grains ² 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) (LF | RR R, | | A10) (LRR K, L, MLRA 1 | |
| | Epipedon (A2) | | MLRA 149B) | | ` /\ | | | Redox (A16) (LRR K, L | |
| | (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) (LRR 1 | K, L) | Polyvalue Be | elow Surface (S8) (LRR K | (, L) |
| Strati | fied Layers (A5) | | Loamy Mucky N | /lineral (F | -1) (LRR | K , L) | 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) (LRR | K, L, R) |
| Thick | Dark Surface (A12) | | x Depleted Matrix | (F3) | | | Piedmont Flo | oodplain Soils (F19) (MLF | 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) (LRF | 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) | |
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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) |
| | Sulfide Odor (C1) Crayfish Burrows (C8) |
| | 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:: | |
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| | 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 |
| I | | | | 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 |
| + - | | | | ' |
| 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 ¹ (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 ¹ (Explain |
| 5 | | | | ¹ 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: | , | | | |
| | _' | | | Woody vines – 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.) | | |
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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 ¹ | Loc ² | Texture | Remarks |
| 0-9 | 10yr 4/1 | 90 | 7.5yr 4/6 | 10 | | | Loamy/Clayey | |
| 9-16 | 7.5yr 5/2 | 65 | 7.5yr 5/6 | 35 | | | | |
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| | =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 ³ : |
| | sol (A1) | | Polyvalue Belov | | e (S8) (LF | RR R, | | 0) (LRR K, L, MLRA 149B) |
| | Epipedon (A2) | | MLRA 149B) | | | | | edox (A16) (LRR K, L, R) |
| | (Histic (A3) | | Thin Dark Surfa | | | | · — | at or Peat (S3) (LRR K, L, R) |
| | ogen Sulfide (A4) | | High Chroma S | | | | | v Surface (S8) (LRR K, L) |
| | ified Layers (A5) | | Loamy Mucky N | | | K , L) | | ce (S9) (LRR K, L) |
| | 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) (MLRA 144A, 145, 149B) |
| | ly Gleyed Matrix (S4) | | Depleted Dark S | | | | Red Parent Mat | |
| | ly Redox (S5) | | Redox Depress | , , | | | | ark Surface (TF12) |
| | ped Matrix (S6) | | Marl (F10) (LRF | 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) | |
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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 sign | | 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) |
| | -Stained Leaves (B9) | | atterns (B10) |
| — · · · · · · · · · · · · · · · · · · | ic Fauna (B13) | Moss Trim | |
| | 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 | nt Iron Reduction in Tilled S | | c Position (D2) |
| l | Nuck Surface (C7) | Shallow Aq | |
| <u> </u> | (Explain in Remarks) | | raphic Relief (D4) |
| Sparsely Vegetated Concave Surface (B8) | (=-μ· | FAC-Neutra | , , |
| Field Observations: | | | |
| 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 | | |
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| | | | | 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 ¹ | |
| 2. Cyperus esculentus | 2 | No | FACW | 4 - Morphological Adaptations ¹ (P | |
| 3 | | | | Problematic Hydrophytic Vegetati | , |
| 5. | | | | 1 | |
| 6. | | | | ¹ Indicators of hydric soil and wetland he present, unless disturbed or proble | |
| 7. | | | | Definitions of Vegetation Strata: | |
| 8. | | | | | |
| 9. | | | | Tree – Woody plants 3 in. (7.6 cm) or at breast height (DBH), regardless of the strength of | |
| 10 | | | | Sapling/shrub – Woody plants less th | an 3 in DBH |
| 11. | | | | and greater than or equal to 3.28 ft (1 | |
| 12. | | | | Herb – 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 |
| | _ | | | Woody vines – All woody vines greate height. | er triari 3.20 it i |
| 1. | | | | · · | |
| | | | | | |
| 2. | _ | · | | Hydrophytic | |
| 2. 3. | _ | | | Vegetation | |
| 2. | _ | =Total Cover | | Vegetation | o 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 ¹ | Loc ² | Texture | Remarks |
| 0-7 | 10yr 4/2 | 95 | 7.5yr 6/8 | 5 | .,,,, | | Loamy/Clayey | |
| | | | | | | | | |
| 7-14 | 10yr 5/1 | 60 | 7.5yr 5/8 | 40 | | | Loamy/Clayey | |
| | | | | | | | | |
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| | | | | | | | | |
| ¹ Type: C= | Concentration, D=Dep | oletion, RI | M=Reduced Matrix, CS | S=Cover | ed or Coa | ted Sand | d Grains. ² Lo | cation: PL=Pore Lining, M=Matrix. |
| Hydric So | il Indicators: | | | | | | Indicators fo | or Problematic Hydric Soils ³ : |
| | sol (A1) | | Polyvalue Below | Surface | e (S8) (LR | R R, | | uck (A10) (LRR K, L, MLRA 149B) |
| | 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) (LRR K, L) rk Surface (S9) (LRR K, L) |
| | ted Below Dark Surfac | re (A11) | Loamy Gleyed M | | | K, L) | | nganese Masses (F12) (LRR K, L, R) |
| | Dark Surface (A12) | JC (A11) | x Depleted Matrix (| , | -) | | | nt Floodplain Soils (F19) (MLRA 149B) |
| | Mucky Mineral (S1) | | Redox Dark Surf | . , |) | | | podic (TA6) (MLRA 144A, 145, 149B) |
| | 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 | K , L) | | | 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, |
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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) | _ | 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 | _i ns of drainage | patterns. Soil is cr | racked from tr | actor ruts | |
| | | | | | | | |

| VEGETATION – 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 /Dlat 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 ¹ | | |
| 2. | | | | 4 - Morphological Adaptations ¹ | (Provide suppo | orting |
| 3. | | | | data in Remarks or on a sep | arate sheet) | |
| 4. | | | | Problematic Hydrophytic Veget | tation ¹ (Explain) |) |
| 5 | | | | ¹ Indicators of hydric soil and wetlan | d hydrology mus | |
| 6. | | | | present, unless disturbed or probler | natic. | |
| 7. | - | | | Definitions of Vegetation Strata: | | |
| 9. | | | | Tree – 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 | | | | Herb – 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, 20and word to | inving, and de | ita io moladoa (| on uno data of | | | |
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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 ¹ | Loc ² | Texture | | Remarks | |
| 0-8 | 10yr 5/3 | 100 | Color (Inolst) | 70 | Туре | | Loamy/Clayey | | Clay | <u>'</u> |
| | | | | | | | | | | |
| 8-12 | 10yr 7/2 | 60 | 10yr 6/8 | 40 | | | Loamy/Clayey | | Clay | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| ¹ Type: C= | Concentration, D=Dep | letion RM | M=Reduced Matrix CS | S=Cover | ed or Coat | ted Sand | Grains ² 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) (LR I | R R, | 2 cm Mu | ck (A10) (LR | 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) (LR | • |
| | ogen Sulfide (A4) | | High Chroma Sa | | | | | | face (S8) (LR | * |
| | fied Layers (A5) eted Below Dark Surfac | · (Δ11) | Loamy Mucky Mi | | | ., L) | | | 69) (LRR K, L sses (F12) (L l | - |
| | Dark Surface (A12) | æ (ATT) | X Depleted Matrix | | -) | | | _ | Soils (F19) (L 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) (LRR | K , L) | | | Other (E | xplain in Rer | marks) | |
| Dark | Surface (S7) | | | | | | | | | |
| 31 | | | | 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 | | | | | | | |
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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><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 | | | | News Law 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 |
| | | ., | | | |
| . Glycine max | 40 | Yes | UPL | 3 - Prevalence Index is ≤3.0 ¹ | |
| 2 3 | | | | 4 - Morphological Adaptations ¹ (Prodata in Remarks or on a separate | |
| 4. | | | | Problematic Hydrophytic Vegetation | n ¹ (Explain) |
| 5. 5. | | | | ¹ Indicators of hydric soil and wetland hydric soil and wetland hydric present, unless disturbed or problematic | |
| 7. | | | | Definitions of Vegetation Strata: | |
| 3. | | | | _ | |
| · | | | | Tree – 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: | | | | | |
| | | | | Woody vines – 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 ¹ | Loc ² | 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> | | | | | | |
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| | | | | | | | | | |
| | | | | | | | | | |
| ¹ Type: C= | Concentration, D=Dep | letion, RI | M=Reduced Matrix, CS | S=Covere | ed or Coa | ted Sand | Grains. ² Lo | ocation: PL=Pore Lining, | M=Matrix. |
| | il Indicators: | | | | | | | or Problematic Hydric S | • |
| | sol (A1) | | Polyvalue Below | Surface | (S8) (LRI | R R, | | uck (A10) (LRR K, L, ML | • |
| | Epipedon (A2) | | MLRA 149B) | | | | | rairie Redox (A16) (LRR | • |
| | 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) (LRR K, nganese Masses (F12) (| • |
| | Dark Surface (A12) | c (ATT) | X Depleted Matrix | | , | | | nt Floodplain Soils (F19) | * |
| | y Mucky Mineral (S1) | | Redox Dark Surf | | | | | podic (TA6) (MLRA 144 | |
| | 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) (LRR | K , L) | | | 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 | | √ | ✓ | 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 | | · | √ | | | √ |
| 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 | | | | ✓ | | 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 | | | * | | | |
| 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 | | | 4 | | ✓ | 1 |
| 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 CE, acquire (broading) in NVC and | | | | | | 1 | | 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 | | | ✓ | ✓ | | |
| Bird | eastern bluebird | Sialia sialis | S5B G5: secure (breeding) in NYS and globally | - | Yes | | | ✓ | | | |
| Bird | American goldfinch | Spinus tristis | S5 G5: secure in NYS and globally | - | Yes | | ✓ | ✓ | ✓ | | |
| Bird | European starling | Sturnus vulgaris | SNA G5: not applicable in NYS and secure globally | - | No | | | | 4 | | |
| Bird | solitary sandpiper | Tringa solitaria | Least concern | - | Yes | | | ✓ | | | |
| Bird | American robin | Turdus migratorius | S5B G5: secure (breeding) in NYS and globally | - | Yes | | ✓ | ✓ | ✓ | | |
| Bird | eastern kingbird | Tyrannus tyrannus | S5B G5: secure (breeding) in NYS and globally | - | Yes | | | 1 | | | |
| Bird | warbling vireo | Vireo gilvus | 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 | | ✓ | | | | |
| From etc. | | Manakalla assulanta | | | | | ✓ | | | | |
| Fungi | morel | Morchella esculenta | · | - | Yes | | • | | | | |
| Mammal | coyote | Canis latrans | Least concern | - | Yes | | ✓, | | ✓ | | |
| Mammal | North American beaver | Castor canadensis | Least concern | - | Yes | | ✓ | | | | |
| Mammal | North American porcupine | Erethizon dorsatum | Least concern | - | Yes | | | | | | 🐈 |
| Mammal | white-tailed deer | Odocoileus virginianus | Least concern | | Yes | √ | 1 | 1 | \ \ \ | , , | " |
| Mammal Mammal | raccoon eastern cottontail | Procyon lotor Sylvilagus floridanus | Least concern | - | Yes Yes | | • | 1 | ∀ | | |
| Plant | box elder | Acer negundo | | FAC | Yes | | | | | | 1 |
| Plant | red maple | Acer rubrum | | FAC | Yes | | ✓ | 1 | 1 | √ | <u>'</u> |
| Plant | silver maple | Acer saccharinum | | FACW | Yes | | → | <i>'</i> | | | |
| Plant | sugar maple | Acer saccharum | | FACU | Yes | | , | · | 1 | | |
| Plant | common yarrow | Achillea millefolium | | FACU | Yes | | ✓ | | | | |
| Plant | sweet flag | Acorus calamus | | OBL | No | | ✓ | 1 | | | |
| 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 | i - | FAC | Yes | | | 1 | | | |
| Plant | common ragweed | Ambrosia artemisiifolia | | FACU | Yes | | | ✓ | | ✓ | |
| Plant | downy serviceberry | Amelanchier arborea | · . | FACU | Yes | | √ | | | | |
| Plant | hog peanut | Amphicarpaea bracteata | | FAC | Yes | | √ | | | | |
| Plant | Canada anemone | Anemone canadensis | | FACU | Yes | √ | ✓ | 1 | | √ | |
| Plant Plant | sweet vernal grass | Anthoxanthum odoratum | - | | No | • | • | V | | • | |
| | | Anagement connobinem | | | Voc | | | _/ | | -/ | |
| | Indian hemp | Apocynum cannabinum | | FAC | Yes | | | 1 | | ✓ | |
| Plant | swamp milkweed | Asclepias incarnata | | FAC OBL | Yes | | | 1 | | √ | |
| Plant | swamp milkweed common milkweed | Asclepias incarnata Asclepias syriaca | | FAC OBL UPL | Yes Yes | | ✓ | | - | √ | ✓ |
| Plant Plant | swamp milkweed common milkweed yellow birch | Asclepias incarnata Asclepias syriaca Betula alleghaniensis | | FAC OBL UPL FAC | Yes Yes Yes | | ✓ | 1 | ✓ | | ✓ |
| Plant | swamp milkweed common milkweed yellow birch gray birch | Asclepias incarnata Asclepias syriaca | : : | FAC OBL UPL | Yes Yes | | ✓ | 1 | ✓ | ✓ ✓ ✓ | 4 |
| Plant Plant Plant | swamp milkweed common milkweed yellow birch | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia | - - - | FAC OBL UPL FAC FAC | Yes Yes Yes | | ✓ | 1 | ✓ | | √ |
| Plant Plant Plant Plant | swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks | Asclepias incamata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua | | FAC OBL UPL FAC FAC OBL | Yes Yes Yes Yes Yes Yes | | ✓ | √ | √ | → | ✓ |
| Plant Plant Plant Plant Plant Plant | swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devit's beggar ticks | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa | | FAC OBL UPL FAC FAC OBL FACW | Yes Yes Yes Yes Yes Yes Yes | | ✓ | ✓ ✓ | ✓ | → | <i>✓</i> |
| Plant Plant Plant Plant Plant Plant Plant Plant | swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus | | FAC OBL UPL FAC FAC OBL FACW | Yes Yes Yes Yes Yes Yes Your No | | | √ √ √ √ | √ | → | ✓ · |
| Plant Plant Plant Plant Plant Plant Plant Plant Plant | swamp milkweed common milkweed yellow birch gray birch nodding beggar ticks devil's beggar ticks hairy brome smooth brome | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis | · · · · · · · · · · · · · · · · · · · | FAC OBL UPL FAC FAC OBL FACW - FAC OBL FACC OBL | Yes Yes Yes Yes Yes Yes Yes No | | · · · · · · · · · · · · · · · · · · · | √ √ √ √ | ✓ · | → | ✓ · |
| Plant | 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 | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita | | FAC OBL UPL FAC OBL FAC OBL FACW - FAC OBL OBL OBL | Yes Yes Yes Yes Yes No No Yes Yes Yes | | ✓ | · · · · · · · · · · · · · · · · · · · | ✓ | → | <i>'</i> |
| Plant | 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 | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava | | FAC OBL UPL FAC OBL FACW - FAC OBL OBL OBL OBL | Yes Yes Yes Yes Yes Yes No No Yes Yes Yes Yes Yes | | · · · · · · · · · · · · · · · · · · · | * * * * * * * * * * * * * * * * * * * | 1 | → | <i>'</i> |
| Plant | 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 | 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 | | FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL OBL | Yes Yes Yes Yes Yes Yes No No Yes Yes Yes Yes Yes Yes Yes Yes Yes | | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | <i>Y</i> | → | |
| Plant | 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 | 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 | | FAC OBL UPL FAC OBL FACW FAC OBL OBL OBL OBL OBL OBL OBL OBL OBL | Yes Yes Yes Yes Yes Yes No No Yes | | <i>'</i> | \(\frac{1}{2} \) | <i>y</i> | * * * * * * * * * * * * * * * * * * * | <i>y</i> |
| Plant | 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 | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inemis Carex blanda Carex comosa Carex crinita Carex flava Carex flava Carex facultima Carex lacustris Carex intumescens | | FAC OBL UPL FAC OBL FACW FAC OBL OBL OBL OBL OBL FACU OBL FACU OBL | Yes Yes Yes Yes Yes Yes No No Yes | | <i>'</i> | \(\frac{1}{2} \) | <i>y</i> | → | |
| Plant | 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 | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bitlens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava | | FAC OBL UPL FAC OBL FACW OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL FACU OBL OBL FACW OBL | Yes Yes Yes Yes Yes Yes No No Yes | | <i>'</i> | \(\frac{1}{2} \) | <i>y</i> | * * * * * * * * * * * * * * * * * * * | |
| Plant | 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 | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex lupulina Carex lurida | | FAC OBL UPL FAC OBL FAC OBL - GAC OBL OBL OBL FACW OBL | Yes Yes Yes Yes Yes Yes No No Yes | | <i>'</i> | \(\frac{1}{2} \) | <i>y</i> | * * * * * * * * * * * * * * * * * * * | |
| Plant | 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 | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens rondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava | | FAC OBL UPL FAC OBL FACW OBL FACW OBL FACW OBL FACW OBL OBL OBL OBL FACU OBL OBL FACW OBL | Yes Yes Yes Yes Yes Yes No No Yes | | <i>'</i> | \(\frac{1}{2} \) | <i>y</i> | * * * * * * * * * * * * * * * * * * * | |
| Plant | 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 | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex lupulina Carex lurida | | FAC OBL UPL FAC OBL FAC OBL FAC OBL OBL OBL OBL OBL OBL FACW OBL FACW OBL | Yes Yes Yes Yes Yes Yes No No Yes | | <i>'</i> | \(\frac{1}{2} \) | <i>y</i> | * * * * * * * * * * * * * * * * * * * | |
| Plant | 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 | 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 lutida Carex utida Carex notesta Carex pseudocyperus | | FAC OBL UPL FAC OBL FAC OBL FAC OBL FAC OBL OBL OBL OBL FACU OBL FACU OBL OBL FACU OBL | Yes Yes Yes Yes Yes Yes Yes No No Yes | | <i>V V V V V V V V V V</i> | / / / / / / / / / / / / / | <i>y</i> | * * * * * * * * * * * * * * * * * * * | ✓ · |
| Plant | 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 toublesome sedge cyperus-like sedge broom sedge | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Biromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex luqulina Carex luqulina Carex molesta Carex pseudocyperus Carex scoparia | | FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL OBL OBL FACU OBL FACU OBL FACU OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL | Yes Yes Yes Yes Yes Yes Yes No No Yes | | <i>V V V V V V V V V V</i> | / / / / / / / / / / / / / / / / | <i>✓</i> | · · · · · · · · · · · · · · · · · · · | ✓ · |
| Plant | 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 sallow sedge troublesome sedge cyperus-like sedge broom sedge awl-fruited sedge | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracillima Carex lacustris Carex inturnescens Carex lupulina Carex notesta Carex pseudocyperus Carex scoparia Carex stipata | | FAC OBL UPL FAC OBL FACW FAC OBL OBL OBL OBL OBL FACU OBL OBL FACU OBL FACW OBL FACW OBL FACW OBL | Yes Yes Yes Yes Yes Yes Yes No No Yes | | <i>V V V V V V V V V V</i> | / / / / / / / / / / / / / / / / | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>'</i> |
| Plant | 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 awl-fruited sedge tussock sedge | 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 inturnescens Carex luyulina Carex tupulina Carex notesta Carex pseudocyperus Carex scoparia Carex stipata Carex stipata Carex stipata | | FAC OBL UPL FAC OBL FACW FAC OBL OBL OBL OBL OBL FACW OBL OBL FACW OBL OBL FACW OBL | Yes Yes Yes Yes Yes Yes Yes No No Yes | | \frac{1}{\sqrt{1}} | \(\frac{1}{2} \) | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>*</i> |
| Plant | 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 cyperus-like sedge broom sedge awi-fruited sedge tussock sedge tussock sedge fox sedge | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bromus commutatus Bromus incernis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex facustris Carex intumescens Carex lupulina Carex lupulina Carex pseudocyperus Carex soparia Carex stipata Carex stipata Carex stipata Carex stipata Carex stricta Carex vulpinoidea | | FAC OBL UPL FAC OBL FACW FAC OBL OBL OBL OBL OBL FACW OBL | Yes Yes Yes Yes Yes Yes Yes No No No Yes | | <i>Y Y Y Y Y Y Y Y</i> | \(\frac{1}{2} \) | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>*</i> |
| Plant | 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 hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge awt-fruited sedge tussock sedge fox sedge ironwood bitternut hickory shagbark hickory | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens remua Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex comosa Carex crinita Carex flava Carex gracillima Carex flava Carex gracillima Carex luturida Carex notesta Carex pseudocyperus Carex scoparia Carex stipata Carex stipata Carex stipata Carex vulpinoidea Carey urbinoidea Carpinus caroliniana Carya cordiformis Carya cordiformis Carya ovata | | FAC OBL UPL FAC OBL FAC OBL FAC OBL OBL OBL OBL FACW OBL OBL FACW OBL OBL FACW OBL OBL FACW OBL | Yes Yes Yes Yes Yes Yes Yes No No Yes | | \frac{1}{\sqrt{1}} | \(\frac{1}{2} \) | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>*</i> |
| Plant | 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 hop sedge sallow sedge troublesome sedge cyperus-like sedge broom sedge awl-truited sedge tussedge toss kedge itoss kedge itoss kedge ironwood bitternut hickory shagbark hickory buttonbush | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populfolia Bidens cernua Bidens frondosa Bromus commutatus Bromus commutatus Bromus cimentis Carex blanda Carex crinita Carex flava Carex gracillima Carex flava Carex triuta Carex tlavaturis Carex inturescens Carex tupulina Carex tupulina Carex sooparia Carex stipata Carex stipata Carex stipata Carex stipita Carex stipita Carex stipita Carex carevinioidea Carpinus caroliniana Carya cordiformis Carya ovata Cephalanthus occidentalis | | FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL OBL FACU OBL OBL OBL OBL FACW OBL OBL OBL OBL OBL | Yes Yes Yes Yes Yes Yes No No Yes | | <i>Y Y Y Y Y Y Y Y</i> | / / / / / / / / / / / / / / / / / | | | <i>*</i> |
| Plant | 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 lake sedge bladder sedge troublesome sedge cyperus-like sedge broom sedge awt-fruited sedge tussock sedge tussock sedge tox sedge itox sedge broom sedge broom sedge dittsrout begge tussock sedge troublesome sedge broom sedge brown sedge tussock sedge tironwood bitternut hickory shagbark hickory buttonbush white turtle head | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracillima Carex flava Carex flava Carex flava Carex turida Carex turida Carex notesta Carex supulinia Carex supulinia Carex supulinia Carex supulinia Carex vupilinia Carex vupilinia Carex supulinia Carex supulinia Carex vupilinia Carex supulinia Carex supulinia Carex supulinia Carex carex carex turida Carex supulinia Carex caroliniana Careya covidiormis Carya ovata Cephalanthus occidentalis Chelone glabra | | FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL FACU OBL FACU OBL OBL FACU OBL FACW OBL FACW OBL FACW OBL OBL OBL FACW OBL | Yes Yes Yes Yes Yes Yes Yes No No Yes | | \frac{1}{\sqrt{1}} | \(\frac{1}{2} \) | | ************************************** | <i>*</i> |
| Plant | 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 awt-fruited sedge tussock sedge ironwood bitternut hickory shagbark hickory buttonbush white turtle head lamb's quarters | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Biromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracillima Carex lacustris Carex intumescens Carex luqulina Carex tacustria Carex syracitia Carex syracitia Carex syracitia Carex tacustris Carex intumescens Carex upulina Carex stipata Carex stipata Carex stricta Carex vulpinoidea Carpinus caroliniana Carya cordiformis Carya ovata Cephalanthus occidentalis Chelone glabra Chenopodium album | | FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL OBL OBL FACU OBL OBL OBL FACU OBL OBL FACU OBL OBL FACW OBL | Yes Yes Yes Yes Yes Yes Yes No No Yes | | / / / / / / | \(\frac{1}{4} \) | | | <i>*</i> |
| Plant | 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 lake sedge bladder sedge troublesome sedge cyperus-like sedge broom sedge awt-fruited sedge tussock sedge tussock sedge tox sedge itox sedge broom sedge broom sedge dittsrout begge tussock sedge troublesome sedge broom sedge brown sedge tussock sedge tironwood bitternut hickory shagbark hickory buttonbush white turtle head | Asclepias incarnata Asclepias syriaca Betula alleghaniensis Betula populifolia Bidens cernua Bidens frondosa Bidens frondosa Bromus commutatus Bromus inermis Carex blanda Carex crinita Carex flava Carex gracillima Carex flava Carex flava Carex flava Carex turida Carex turida Carex notesta Carex supulinia Carex supulinia Carex supulinia Carex supulinia Carex vupilinia Carex vupilinia Carex supulinia Carex supulinia Carex vupilinia Carex supulinia Carex supulinia Carex supulinia Carex carex carex turida Carex supulinia Carex caroliniana Careya covidiormis Carya ovata Cephalanthus occidentalis Chelone glabra | | FAC OBL UPL FAC OBL FAC OBL FACW FAC OBL OBL OBL FACU OBL FACU OBL OBL FACU OBL FACW OBL FACW OBL FACW OBL OBL OBL FACW OBL | Yes Yes Yes Yes Yes Yes Yes No No Yes | | \frac{1}{\sqrt{1}} | / / / / / / / / / / / / / / / / / | | ************************************** | <i>*</i> |

| | | | | | | 1 , 1 | | | | | |
|---|---|--|--|--|---|---------------------------------------|-----------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Plant | silky dogwood | Cornus amomum | - | FACW | Yes | ✓ | <u> </u> | √ | √ | ✓ | V |
| Plant | gray dogwood | Cornus racemosa | - | FAC | Yes | | ✓ | ✓ | ✓ | | V |
| Plant | red-osier dogwood | Cornus sericea | - | FACW | Yes | | | | | | √ |
| Plant | hawthorn | Crataegus sp. | - | - | - | | ✓ | | | | ✓ |
| Plank | common yellow nut sedge | Cyperus esculentus | - | FACW | Yes | | | ✓ | | ✓ | |
| Plant | false yellow nut sedge | Cyperus strigosus | - | FACW | Yes | | | ✓ | | ✓ | |
| Plant | orchard grass | Dactylis glomerata | - | FACU | No | ✓ | | | | ✓ | |
| Plant | wild carrot | Daucus carota | - | UPL | No | | ✓ | | | | |
| Plant | water willow | Decodon verticillatus | - | OBL | Yes | | | ✓ | | | ✓ |
| Plant | tufted hair grass | Deschampsia cespitosa | - | - | Yes | | | | | ✓ | |
| Plant | digit grass | Digitaria eriantha | - | - | No | | ✓ | | | | |
| Plant | smooth crab grass | Digitaria ischaemum | - | FACU | No | | | ✓ | | | |
| Plant | tall flat-topped white aster | Doellingeria umbellata | - | FACW | Yes | | | | | ✓ | |
| Plant | common wood fern | Dryopteris intermedia | - | FAC | Yes | | ✓ | | | | ✓ |
| Plant | autumn olive | Elaeagnus umbellata | - | = | No | | ✓ | | | | |
| Plant | blunt spike rush | Eleocharis obtusa | - | OBL | Yes | | ✓ | | | ✓ | 1 |
| Plant | fringed wilowherb | Epilobium ciliatum | - | FACW | Yes | | | | | √ | |
| Plant | purpleleaf willowherb | Epilobium coloratum | | OBL | Yes | | 1 | ✓ | | 1 | |
| Plant | field horsestail | Equisetum arvense | | FAC | Yes | | | | √ | √ | / |
| Plant | scouringrush horsetail | Equisetum hyemale | | FAC | Yes | ✓ | | | · / | • | |
| | | | | FACU | | • | | 1 | | | |
| Plant | annual daisy fleabane small daisy fleabane | Erigeron annuus | | FACU | Yes | | | V | | | |
| Plant | | Erigeron strigosus Erythronium americanum | | | | | ✓ | | ✓ | | |
| Plant | yellow trout lily | | - | - EACW | Yes | | • | 1 | _ | ✓ | 1 |
| Plant | boneset | Eupatorium perfoliatum | - | FACW | Yes | | | · · | | ✓ | , |
| Plant | common flat-topped goldenrod | - | - | FAC | Yes | ✓ | | | | V | |
| Plant | spotted Joe Pye weed | Eutrochium maculatum | - | OBL | Yes | V | | | | | |
| Plant | American beech | Fagus grandifolia | - | FACU | Yes | | | | ✓ | √ | |
| Plant | common wild strawberry | Fragaria virginiana | - | FACU | Yes | | <u>√</u> | | | ✓ | ✓ |
| Plant | glossy buckthorn | Frangula alnus | - | FAC | No | | ✓ | | | | |
| Plant | white ash | Fraxinus americana | - | FACU | Yes | | ✓ | | | | ✓ |
| Plant | green ash | Fraxinus pennsylvanica | - | FACW | Yes | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Plant | hedge bedstraw | Galium album | - | FACU | Yes | ✓ | | ✓ | | ✓ | |
| Plant | common marsh bedstraw | Galium palustre | - | OBL | Yes | | ✓ | | | ✓ | |
| Plant | yellow avens | Geum aleppicum | - | FAC | Yes | | ✓ | ✓ | | | |
| Plant | white avens | Geum canadense | - | FAC | Yes | | | ✓ | | | ✓ |
| Plant | town avens | Geum urbanum | - | - | No | | ✓ | ✓ | | | |
| | | | | | | | | | | | |
| Plant | American manna grass | Glyceria maxima | - | OBL | No | | | ✓ | | ✓ | |
| Plant Plant | American manna grass fowl manna grass | Glyceria maxima Glyceria striata | - | OBL OBL | No Yes | | ✓ | √ | | √ | - |
| | | | - - - | | | ✓ | √ | · · | ✓ | | - |
| Plant | fowl manna grass | Glyceria striata | - - - | OBL | Yes | ✓ | | ✓ | √ | √ | ✓ |
| Plant Plant | fowl manna grass soybean | Glyceria striata Glycine max | - | OBL - | Yes - | ✓ ✓ | | √ ✓ | ✓ | √ | ✓ |
| Plant Plant Plant | fowl manna grass soybean marsh cubweed | Glyceria striata Glycine max Gnaphalium uliginosum | - | OBL - FAC | Yes - No | | | √ ✓ | √ | √ | ✓ |
| Plant Plant Plant Plant | fowl manna grass soybean marsh cubweed dame's rocket | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis | - | OBL - FAC FACU | Yes - No No | | | ✓ ✓ ✓ | ✓ ✓ | √ | √ |
| 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 | | | ✓ ✓ ✓ | | √ | · · |
| 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 | | | ✓ ✓ ✓ | | √ | |
| 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 | ✓ · | √ | ✓ ✓ ✓ | | √ | |
| 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</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 | Glyceria striata Glycine max Gnaphallum uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus | - - - - - - - | OBL - FAC FACU OBL - FACW OBL OBL OBL | Yes - No No No No No Yes Yes Yes | ✓ · | √ | * * * * * * * * * * * * * * * * * * * | | √ | · · |
| 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 | 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 FAC | Yes - No No No No Yes Yes Yes Yes | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ | <i>y y y y y y</i> | ✓ | ✓ ✓ | <i>y</i> |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewetweed blue flag soft rush path rush rice cut grass | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides | | OBL - FAC FACU OBL FACW OBL OBL OBL OBL | Yes - No No No No Yes Yes Yes Yes Yes Yes | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>*</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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum ps. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin | - - - - - - - - - - - | OBL - FAC OBL - FACW OBL OBL OBL FACW OBL FACC OBL FACCW OBL | Yes - No No No No No - Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | <i>V V V V</i> | <i>y</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 | 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 - FAC OBL - FACW OBL OBL OBL OBL FACW OBL FACC OBL FACC OBL FACC OBL FACW FACW | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | <i>*</i> | · · · · · · · · · · · · · · · · · · · | ✓ | ✓ ✓ | <i>y</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 | Glyceria striata Glycine max Gnaphalium 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 | | OBL - FAC FACU OBL - FACW OBL OBL FACW OBL FACC OBL FACC FACW FACU FACU | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ | <i>*</i> | \frac{1}{\sqrt{1}} | ✓ | <i>V V V V</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 fusus Lincus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata | | OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FACC OBL FACC FACW FACU FACW FACU FACW | Yes - No No No No Yes | ✓ ✓ | <i>*</i> | \frac{1}{\sqrt{1}} | ✓ | <i>V V V</i> | <i>y</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 capensis Iris versicotor Juncus effusus Juncus effusus Juncus effusus Luncus effusus Lincus effusus Lincus effusus Lincus effusus Lincus effusus Lobelia inflata Lobelia siphilitica Lolium arundinace | | OBL - FACU OBL - FACW OBL OBL - FACW OBL OBL FAC OBL FAC OBL FACW FACU FACU FACU FACU | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes No | ✓ ✓ | / / / | · · · · · · · · · · · · · · · · · · · | ✓ | <i>V V V</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 Hydrotelephium telephium Hypericum sp. Impatiens capensis Iris versicotor Juncus effusus Juncus tefusus Luncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica | | OBL - FACU OBL - FACW OBL OBL - FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU | Yes - No No No No - Yes Yes Yes Yes Yes Yes Yes Yes No No No No No No Yes | <i>y</i> | <i>V V V</i> | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Lucus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. | | OBL - FACU OBL - FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | ✓ ✓ | / / / / | V V V V V V V V V V V V V V V V V V V | ✓ | <i>V V V</i> | * * * * * * * * * * * * * * * * * * * |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewetweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue tobelia tall rye grass Japanese honeysuckle honeysuckle | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Loilum arundinace Lonicera japonica Lonicera spp. Lonicera tatarica | | OBL - FACU OBL FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No - Yes Yes Yes Yes Yes Yes Yes No No No No No No No No No | \frac{1}{4} | <i>V V V</i> | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus effusus Lucus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lonicera spp. | | OBL - FACU OBL - FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | <i>y</i> | / / / / | * * * * * * * * * * * * * * * * * * * | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's word spotted jewetweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue tobelia tall rye grass Japanese honeysuckle honeysuckle | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Loilum arundinace Lonicera japonica Lonicera spp. Lonicera tatarica | | OBL - FACU OBL FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No - Yes Yes Yes Yes Yes Yes Yes No No No No No No No No No | \frac{1}{4} | \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 | 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 isiphilitica 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 Yes Yes No | * * * * * * * * * * * * * * * * * * * | ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | V V V V V V V V V V V V V V V V V V V | * * * * * * * * * * * * * * * * * * * |
| 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 siphilitica Lolium arundinace Lonicera spp. Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus | | OBL - FACU OBL FACW OBL OBL FAC OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No Yes | \frac{1}{4} | \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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Ilmos scapensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin Liriodandron tulipifera 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 | * * * * * * * * * * * * * * * * * * * | ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | V V V V V V V V V V V V V V V V V V V | * * * * * * * * * * * * * * * * * * * |
| 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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Iris versicolor Juncus effusus Juncus tenuis Leersia oryzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia inflata Lonicera japonica Lonicera spp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria | | OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU FACU FACU | 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 | 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 | 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 Lonicera sp. Lunicera tarica Ludwigia palustris Lycpus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense | | OBL - FACU OBL - FACW OBL - FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | 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 | 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 striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, 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 Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris | | OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | * * * * * * * * * * * * * * * * * * * | ✓ ✓ ✓ ✓ | \frac{1}{\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}} |
| 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 | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus teffusus 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 | | 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}} |
| Plant | fowl manna grass soybean marsh cubweed dame's rocket common frogbit Eurasian live forever St. John's wort spotted jeweltweed blue flag soft rush path rush rice cut grass spicebush tulip poplar Indian tobacco great blue tobelia talt rye grass Japanese honeysuckle honeysuckle Tatarian honeysuckle water purslane water whorehound moneywort purple toosestrife Canada mayflower ostrich fern white sweet clover Allegheny monkey flower | 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 tulipifera Lobelia inflata Lobelia inflata Lobelia inflata Loulium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lystrum 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}} |
| 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. 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 | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | <i>y y y y y y y y</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 blackgum sensitive fern royal fern | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lunicera ssp. Lonicera tatarica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Malteuccia struthiopteris 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 | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | <i>y y y y y y y y</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 blackgum sensitive fern royal fern cinnamon fern | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Impatiens capensis Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides Lindera benzoin Liriodendron tulipifera Lobelia inflata Lobelia siphilitica Lolium arundinace Lonicera japonica Lunicera spp. 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 | | 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}} | V V V V V V V V V V V V V V V V V V V | <i>y y y y y y y y</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 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 striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericum sp. Iris versicolor Juncus effusus Juncus tenuis Leersia onyzoides 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 Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmunda regalis Osmundastrum cinnamomei Oxalis dillenii | | OBL - FACU OBL - FACW OBL - FACW OBL FACW FACU FACW FACU FACU FACU FACU FACU FACU OBL FACU OBL OBL FACU FACU FACU FACU OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW OBL FACW FACU FACW FACU FACU FACW FACU FACW FACU FACW FACU FACW FACW FACW FACW FACW FACW FACW FACW | Yes | \(\frac{1}{4} \) | \frac{1}{\sqrt{1}} | V V V V V V V V V V V V V V V V V V V | <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 cinnamon fern yellow wood sorrel fall panic grass | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, 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 cinnamomei Oxalis dillenii Panicum dichotomiflorum | | OBL - FACU OBL - FACW OBL OBL FACW OBL FACW FACU FACU FACU FACU FACU FACU FACU FACU | Yes | \(\frac{1}{4} \) | / / / / / | V V V V V V V V V V V V V V V V V V V | <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 cionamon fern yellow wood sorrel fall panic grass Virginia creeper | 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 siphilitica Lolium arundinace Lonicera japonica Ludwigia palustris Lycopus americanus Lysimachia nummularia Lythrum salicaria Maianthemum canadense Matteuccia struthiopteris Melilotus albus Mimulus ringens Nyssa sylvatica Onoclea sensibilis Osmunda regalis Osmundastrum cinnamomei 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}} | \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 cinnamon fern yellow wood sorrel fall panic grass | Glyceria striata Glycine max Gnaphalium uliginosum Hesperis matronalis Hydrocharis morsus-ranae Hylotelephium telephium Hypericums, 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 cinnamomei Oxalis dillenii Panicum dichotomiflorum | | 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}} | \frac{1}{\sqrt{1}} |

| Part | | | | | | | | | | | | |
|--|---|--|--|------------------|---|---|---|---------------------------------------|---------------------------------------|---------------------------------------|---|--|
| | Plant | lady's thumb | Persicaria maculosa | - | FAC | No | | | ✓ | | | |
| Process | Plant | arrow-leaved tearthumb | - | - | | Yes | | | | | | |
| Description Property and Service 1602 71 | Plant | jumpseed | Persicaria virginiana | - | | | | | | | | |
| | Plant | reed canary grass | Phalaris arundinacea | - | FACW | No | ✓ | | ✓ | ✓ | | ✓ |
| Selection | Plant | common Timothy | Phleum pratense | = | FACU | No | | | | | ✓ | |
| Part Property Pr | Plant | common reed | Phragmites australis | - | FACW | No | ✓ | ✓ | ✓ | | | |
| Part Marchane | Plant | pokeweed | Phytolacca americana | - | FACU | Yes | | | ✓ | | | |
| Section | Plant | Norway spruce | Picea abies | - | - | No | | ✓ | ✓ | ✓ | | |
| Part | Plant | red spruce | Picea rubens | - | FACU | Yes | | ✓ | | | | |
| Common parietation of the Pichago meagle 1902 100 | Plant | white pine | Pinus strobus | - | FACU | Yes | | ✓ | | ✓ | | |
| Part | Plant | English plantain | Plantago lanceolata | = | FACU | No | ✓ | ✓ | | ✓ | ✓ | |
| Part | Plant | common plantain | Plantago major | - | FACU | No | ✓ | | | ✓ | ✓ | ✓ |
| Description | Plant | northern tubercled orchid | Platanthera flava | - | FACW | Yes | | | ✓ | | | |
| | Plant | annual blue grass | Poa annua | - | FACU | No | | | | ✓ | | |
| Part | Plant | wood bluegrass | Poa nemoralias | = | FACU | No | | | ✓ | | | |
| March Contract Appendix demander FACL Veril | Plant | common Kentucky blue grass | Poa pratensis | = | FACU | No | | ✓ | | | ✓ | 1 |
| Sect Control Control Physics Schiolobs FACE Yes Y Y Y Y Y Y Y Y Y | Plant | mavapple | Podophyllum peltatum | _ | FACU | Yes | | | ✓ | ✓ | | |
| Part Common Common Paper | | | | - | | | | | | √ | | |
| Design Comment of Processing Support 1900 190 | | | | _ | | | / | 1 | 1 | √ | √ | - |
| Part Printer | | | | | | | • | | • | | <u> </u> | <u> </u> |
| Part Desire Person programmer Front Vel Ve | | | · | | | | | • | | | | + |
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| Part | | | | - | | | | | * | | | |
| Part Carset convinced Resourcement Resource | | | Kanunculus acris | | | | v | ٧ | | | | - |
| Part | | | | - | | | | | | | → | |
| Past | | cursed crowfoot | Ranunculus sceleratus | - | | | ✓ | | | | | |
| Past | | | Reynoutria japonica | - | | | | | | ✓ | | |
| Public Stagleon survice Piblic | Plant | alder buckthorn | Rhamnus alnifolia | - | OBL | Yes | | | | | | |
| Public mutilificar coop | Plant | buckthorn | Rhamnus cathartica | = | FAC | No | | | ✓ | | ✓ | ✓ |
| Past | Plant | staghorn sumac | Rhus typhina | = | = | Yes | | <u> </u> | | | | |
| Putt | Plant | multiflora rose | Rosa multiflora | - | FACU | No | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Paint | Plant | swamp rose | Rosa palustris | - | OBL | Yes | | | | ✓ | | ✓ |
| Part | | | | | | | | | | | | |
| Paint diverging Rubus publishering FACV Yes | Plant | common blackberry | Rubus allegheniensis | - | FACU | Yes | | ✓ | ✓ | | | |
| Paint | | | | <u>-</u> - | | | | ✓ | | | | |
| Paint | Plant | swamp dewberry | Rubus hispidus | - | FACW | Yes | | • | ✓ | | | |
| Flant broad-leaved dock Rumer collustrations FAC No Ves V V V V V V V V V V V V V V V V V V | Plant Plant | swamp dewberry red raspberry | Rubus hispidus Rubus ideaus | - - - | FACW FACU | Yes No | | • | ✓ | | | |
| Paint | Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry | Rubus hispidus Rubus ideaus Rubus pubescens | - | FACW FACU FACW | Yes No Yes | | • | ✓ ✓ ✓ | | | |
| Pant | Plant Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella | - | FACW FACU FACW | Yes No Yes No | ✓ | ✓ | √ √ √ | | → | <i>*</i> |
| Plant Dussy willow Salik discolor FACW Yes | Plant Plant Plant Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus | - | FACW FACU FACU FACU FACU | Yes No Yes No | ✓ | √ | √ √ √ | | · · | · |
| Paint | Plant Plant Plant Plant Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius | - | FACU FACU FACU FACU FACC FAC | Yes No Yes No No No | ✓ | √ | \frac{1}{4} | | · · | · · |
| Paint Diack willlow Salik nigra OBL Yes | Plant Plant Plant Plant Plant Plant Plant Plant Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus | - - - - | FACW FACU FACW FACU FAC FAC FAC OBL | Yes No Yes No No No No No Yes | ✓ | √ | * * * * * * * * * * * * * * * * * * * | | · · | ✓ · |
| Plant | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana | | FACW FACU FACW FACU FAC FAC FAC FAC FAC | Yes No Yes No No No Yes Yes Yes | ✓ · | √ √ √ | * * * * * * * * * * * * * * * * * * * | | · · | 1 |
| Plant common elderberry Samburus nigra - FACW Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor | | FACW FACU FACW FACU FAC FAC FAC FAC OBL FACW FACW | Yes No Yes No No No Yes Yes Yes Yes | ✓ · | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | - | · · | ✓ · |
| Plant Lizard's fall Saurras cernius OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra | | FACW FACU FACU FACU FAC FAC FAC FAC OBL FACW FACW OBL | Yes No Yes No No No Yes Yes Yes Yes | ✓ · | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | - | · · | ✓ · |
| Plant soft-stemmed bulrush Schoenoplectus tabernaemc - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex ericilitatus Salix debbiana Salix discolor Salix nigra Salix purpurea | | FACW FACU FACU FACU FACU FAC FAC FAC OBL FACW FACW OBL FACW | Yes No Yes No No No Yes Yes Yes Yes No | Y | ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | <i>\</i> | · · | <i>'</i> |
| Plant dank-green butrush Scirpus strovivens - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex erticillatus Salix debbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra | | FACW FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW OBL FACW | Yes No Yes No No No Yes Yes Yes Yes Yes No Yes | <i>'</i> | <i>V</i> | * * * * * * * * * * * * * * * * * * * | <i>✓</i> | · · | <i>'</i> |
| Plant wodgrass Scirpus cyperinus - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cemuus | | FACW FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW OBL FACW OBL FACW OBL | Yes No Yes No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes | ✓ ✓ | <i>V</i> | · · · · · · · · · · · · · · · · · · · | ✓ ✓ | · · | <i>'</i> |
| Plant mad dog skultcap Scutellaria lateriflora - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willtow basket willow common elderberry lizard's tail soft-stemmed bulrush | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc | | FACW FACU FACU FACU FACU FAC FAC FAC OBL FACW FACW OBL FACW OBL FACW OBL OBL | Yes No Yes No No No No Yes | ✓ | √ √ √ √ | * * * * * * * * * * * * * * * * * * * | ✓ ✓ | · · | <i>y</i> |
| Plant horse nettle Solanum carolinense - FACU Yes ✓ Plant bitter-sweet nightshade Solaum dulcamara - FAC No ✓ ✓ Plant tall goldenrod Solidago altissima - FACU Yes ✓ ✓ ✓ Plant Canada goldenrod Solidago altissima - FACU Yes ✓ <t< td=""><td>Plant Plant /td><td>swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush</td><td>Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemx Scirpus atrovirens</td><td></td><td>FACW FACU FACU FACU FAC FAC OBL FACW FACW FACW OBL FACW OBL OBL OBL</td><td>Yes No Yes No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes</td><td>✓ — — — — — — — — — — — — — — — — — — —</td><td>√ √ √ √</td><td>* * * * * * * * * * * * * * * * * * *</td><td></td><td>√</td><td></td></t<> | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemx Scirpus atrovirens | | FACW FACU FACU FACU FAC FAC OBL FACW FACW FACW OBL FACW OBL OBL OBL | Yes No Yes No No No No Yes | ✓ — — — — — — — — — — — — — — — — — — — | √ √ √ √ | * * * * * * * * * * * * * * * * * * * | | √ | |
| Plant bitter-sweet nightshade Solanum dulcamara - FAC No | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus | | FACW FACU FACU FACU FACU FAC FAC OBL FACW FACW FACW OBL OBL OBL OBL | Yes No Yes No No No No Yes | ✓ — — — — — — — — — — — — — — — — — — — | √ √ √ √ | * * * * * * * * * * * * * * * * * * * | | √ | |
| Plant tall goldenrod Solidago altissima - FACU Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Sanbucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora | | FACW FACU FACU FACU FACU FAC FAC OBL FACW FACW FACW OBL FACW OBL OBL OBL OBL | Yes No Yes No No No No Yes | <i>'</i> | √ √ √ √ | * * * * * * * * * * * * * * * * * * * | | ✓ ———————————————————————————————————— | |
| Plant Canada goldenrod Solidago canadensis - FACU Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex eritifultatus Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus cyperinus Scutellaria lateriflora Solanum carolinense | | FACW FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL OBL OBL OBL OBL OBL OBL | Yes No Yes No No No No Yes | <i>y</i> | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ———————————————————————————————————— | |
| Plant swamp goldenrod Solidago gigantea - FACW Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skultcap horse nettle bitter-sweet nightshade | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusiloilus Rumex obtusiloilus Rumex obtusiloilus Rumex verticillatus Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemx Scirpus atrovirens Scirpus cryperinus Scutellaria lateriflora Solanum carolinense Solanum carolinense | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW OBL | Yes No Yes No No No No Yes | V | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ———————————————————————————————————— | <i>'</i> |
| Plant common wrinkle-leaved golden Solidago rugosa - FAC Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Sauruus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense Solanum carolinense Solanum dulcamara Solidago altissima | | FACW FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No Yes No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ✓ | <i>'</i> |
| Plant spiny-leaved sow thistle Sonchus asper - FACU No Plant green-fruited bur-reed Sparganium chlorocarpum - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod Canada goldenrod | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex erticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saurrus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Sculellaria lateriflora Solanum carolinense Solanum dulcamara Solidago altissima Solidago canadensis | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW OBL | Yes No Yes No No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | | ✓ ✓ ✓ | <i>✓</i> |
| Plant green-fruited bur-reed Sparganium chlorocarpum - OBL Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed butrush dark-green butrush woolgrass mad dog skullcap horse nettte bitter-sweet nightshade tall goldenrod Canada goldenrod | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Sciepus carolinense Solanum carolinense Solanum dulcamara Solidago altissima Solidago canadensis Solidago gigantea | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW FACW OBL FACW OBL | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | | ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant grass-leaved stitchwort Stellaria graminea - UPL No Plant white panicle aster Symphyotrichum lateriflorun - FACW Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed butrush dark-green butrush woolgrass mad dog skullcap horse nettte bitter-sweet nightshade tall goldenrod Canada goldenrod | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Sciepus carolinense Solanum carolinense Solanum dulcamara Solidago altissima Solidago canadensis Solidago gigantea | | FACW FACU FACU FACU FACU FACU FACC OBL FACCW OBL FACW OBL | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ | ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant white panicle aster Symphyotrichum laterillorun - FACW Yes | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willtow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skultcap horse nettle bitter-sweet nightshade talt goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticiltatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Scutellaria lateriflora Solanum carolinense Solanum dulcamara Solidago attissima Solidago canadensis Solidago gigantea | | FACW FACU FACU FACU FACU FACU FACC FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ | ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant calico aster Symphyotrichum laterillorun 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 FACU No Plant marsh fern Thelypteris palustris FACW Yes Plant American basswood Tilia americana FACU Yes Plant poison ivy Toxicodendron radicans FACU Yes Plant red clover Trifolium pratense FACU No Plant white clover Trifolium repens FACU No PACU No PACU No PACU Yes PLACU No PLACU Yes PLACU No PLACU Yes PLACU No PLACU N | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willtow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skultcap horse nettle bitter-sweet nightshade talt goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Sambucus nigra Samurus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scutellaria lateriflora Solanum carolinense Solanum carolinense Solanum duicamara Solidago attissima Solidago attissima Solidago gigantea (Solidago rugosa Sonchus asper | | FACW FACU FACU FACU FACU FACU FACC FAC OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ | ✓ ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant new england aster Symphyotrichum novae-angl - FACW Yes OBL YES O | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry tizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skultcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Sanurus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense Solanum dulcamara Solidago canadensis Solidago gigantea Solidago rugosa Sonchus asper | | FACW FACU FACU FACU FACU FACU FACC FAC OBL FACW FACW OBL OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | ✓ ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes ✓ < | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod Canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex eritipus Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense Solanum carolinense Solidago canadensis Solidago canadensis Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | ✓ ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant purple-stemmed aster Symphyotrichum puniceum - OBL Yes ✓ ✓ ✓ Plant skunk cabbage Symplocarpus foetidus - OBL Yes ✓ ✓ ✓ Plant common dandelion Taraxacum officinate - FACU No ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dwark-green bulrush dwark-green bulrush dark-green bulrush dark-green bulrush dark-green bulrush colgrass mad dog skullcap horse nettle bitter-sweet nightshade talt goldenrod Canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cryperinus Scutellaria lateriflora Solanum carolinense Solanum dulcamara Solidago attissima Solidago attissima Solidago canadensis Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus | | FACW FACU FACU FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | ✓ ✓ ✓ ✓ | · · · · · · · · · · · · · · · · · · · |
| Plant skunk cabbage Symplocarpus foetidus - OBL Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistte green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster | Rubus hispidus Rubus ideaus Rubus qubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Saruus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Scirpus cyperinus Solidago atlissima Solidago canadensis Solidago gigantea Solidago gigantea Solidago gigantea Solidago gigantea Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus | | FACW FACU FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No Yes No No No No No Yes | ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | * * * * * * * * * * * * * * * * * * * | ✓ | ✓ ✓ ✓ ✓ | <i>'</i> |
| 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 ✓ <td>Plant Plant /td> <td>swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster</td> <td>Rubus hispidus Rubus ideaus Rubus quescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discotor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus quescenteriorius Sculalaria lateriflora Solanum carolinense Solanum carolinense Solanum dulcamara Solidago atlissima Solidago gigantea Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatu Symphyotrichum lanceolatu Symphyotrichum lanceolatu</td> <td></td> <td>FACW FACU FACU FACU FACU FACU FACU FAC FAC GBL FACW GBL FACW GBL GBL GBL GBL GBL GBL GBL GBL GBL GBL</td> <td>Yes No Yes No No No No No Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes</td> <td><i>\</i></td> <td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td> <td>\frac{1}{\sqrt{1}}</td> <td>✓</td> <td>V V V V V V V V V V V V V V V V V V V</td> <td><i>'</i></td> | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster | Rubus hispidus Rubus ideaus Rubus quescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Salix discotor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus quescenteriorius Sculalaria lateriflora Solanum carolinense Solanum carolinense Solanum dulcamara Solidago atlissima Solidago gigantea Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatu Symphyotrichum lanceolatu Symphyotrichum lanceolatu | | FACW FACU FACU FACU FACU FACU FACU FAC FAC GBL FACW GBL FACW GBL | Yes No Yes No No No No No Yes | <i>\</i> | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ | V V V V V V V V V V V V V V V V V V V | <i>'</i> |
| Plant marsh fern Thelypteris palustris - FACW Yes ✓ Plant American basswood Tilia americana - FACU Yes ✓ ✓ Plant poison ky Toxicodendron radicans - FAC Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock bebb's willow pussy willow black willow common elderberry tizard's tail soft-stemmed bulrush dwolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed greas-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scullaria lateriflora Solanum carolinense Solanum dulcamara Solidago atlissima Solidago gigantea Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lateriflorun Symphyotrichum lateriflorun Symphyotrichum novae-angl Symphyotrichum novae-angl Symphyotrichum puniceum | | FACW FACU FACU FACU FACU FACU FACU FAC FAC FAC | Yes No Yes No No No No No Yes | <i>\</i> | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ | V V V V V V V V V V V V V V V V V V V | <i>*</i> |
| Plant American basswood Tilia americana - FACU Yes ✓ ✓ Plant poison ivy Toxicodendron radicans - FAC Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock bebb's willow pussy willow black willlow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster skunk cabbage | Rubus hispidus Rubus ideaus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticillatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus qureirinas Scirpus queirinas Sciladago attissima Solidago attissima Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus Symphyotrichum lanceilatus Symphyotrichum lanceilatus Symphyotrichum lanceilatus Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum | | FACW FACU FACU FACU FACU FACU FACU FAC FAC | Yes No Yes No No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | |
| Plant poison ivy Toxicodendron radicans - FAC Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod Canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster skunk cabbage common dandelion | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticiltatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Scirpus atrovirens Solidago atlissima Solidago atlissima Solidago gigantea Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus Symphyotrichum lanceolatus Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphotrichum puniceum | | FACW FACU FACU FACU FACU FACU FACC FAC BL FACW OBL FACW OBL | Yes No Yes No No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | |
| Plant red clover Trifolium pratense - FACU No ✓ ✓ ✓ Plant white clover Trifolium repens - FACU No ✓ ✓ ✓ ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorrel curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod canada goldenrod swamp goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster skunk cabbage common dandelion marsh fern | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex verticiltatus Salix bebbiana Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Scutellaria lateriflora Solanum carolinense Solanum dulcamara Solidago atlissima Solidago atlissima Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatu Symphyotrichum lateriflorun Symphyotrichum novae-angl Symphyotrichum puniceum Symplocarpus foetidus Taraxacum officinale Thelypteris palustris | | FACW FACU FACU FACU FACU FACU FACC FACC OBL FACCW OBL FACCW OBL | Yes No Yes No No No No No Yes | | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} | ✓ ✓ | ✓ ✓ ✓ ✓ ✓ | |
| Plant white clover Trifolium repens FACU No ✓ ✓ ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow basket willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade tall goldenrod Canada goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster skunk cabbage common dandelion marsh fern American basswood | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex eritipus Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus cyperinus Scutellaria lateriflora Solanum carolinense Solidago canadensis Solidago canadensis Solidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lateriflorun Symphyotrichum lateriflorun Symphyotrichum lateriflorum Symphyotrichum lateriflorun Symphyotrichum lateriflorun Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum lateriflorun Symphyotrichum puniceum | | FACW FACU FACU FACU FACU FACU FACU FACC FAC OBL FACW OBL FACW OBL OBL OBL OBL OBL OBL OBL OBL OBL FACU FACU FACU FACU FACU FACU FACU FACU | Yes No No No No No No Yes | | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} |
| | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush dark-green bulrush dark-green bulrush dark-green bulrush dark-green bulrush green bulrush dark-green bulrush dark-green bulrush dark-green bulrush dark-green bulrush dark-green bulrush green fould bulrush dark-green bulru | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex crispus Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cernuus Schoenoplectus tabernaems Scirpus atrovirens Scirpus atrovirens Scirpus atrovirens Solidago attissima Solidago canadensis Solidago gigantea Solidago rugosa Sonchus asper Sparganium chiorocarpum Stellaria graminea Symphyotrichum lanceolatu Symphyotrichum lanceolatu Symphyotrichum touraus Taraxacum officinate Thelypteris palustris Tilia americana Toxicodendron radicans | | FACW FACU FACU FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No Yes No No No No No Yes | | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} |
| Plant red trillium Trillium erectum - FACU Yes ✓ | Plant | swamp dewberry red raspberry dwarf raspberry sheep sorret curly dock broad-leaved dock swamp dock Bebb's willow pussy willow black willlow common elderberry lizard's tail soft-stemmed bulrush dark-green bulrush woolgrass mad dog skullcap horse nettle bitter-sweet nightshade talt goldenrod common wrinkle-leaved golden spiny-leaved sow thistle green-fruited bur-reed grass-leaved stitchwort white panicle aster calico aster new england aster purple-stemmed aster skunk cabbage common dandelion marsh fern American basswood poison lvy red clover | Rubus hispidus Rubus ideaus Rubus pubescens Rumex acetosella Rumex crispus Rumex obtusifolius Rumex obtusifolius Rumex obtusifolius Rumex optusifolius Salix discolor Salix nigra Salix purpurea Sambucus nigra Saururus cermuus Schoenoplectus tabernaemc Scirpus atrovirens Scirpus atrovirens Scirpus atrovirens Solidago atlissima Solidago canadensis Solidago gigantea Solidago gigantea Solidago gigantea Solidago gigantea Solidago pigantea Stolidago rugosa Sonchus asper Sparganium chlorocarpum Stellaria graminea Symphyotrichum lanceolatus Symphyotrichum lanceolatus Symphyotrichum puniceum Symphyotrichum puniceum Symphyotrichum puniceum Symphyotricham puniceum Thetypteris palustris Tilia americana Toxicodendron radicans Trifolium pratense | | FACW FACU FACU FACU FACU FACU FACU FAC FAC OBL FACW OBL FACW OBL | Yes No Yes No No No No No Yes | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | \frac{1}{\sqrt{1}} | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓ ✓ ✓ ✓ | \frac{1}{\sqrt{1}} |

| 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: https://www.google.com/maps/@43.29530445,-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: https://www.google.com/maps/@43.29530445,-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 Fisheries¹, 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: https://ecos.fws.gov/ecp/species/9743

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8023

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. Tro | eatment Timing | & 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.
 - 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:
 - 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)
 - o Spot treat with glyphosate-based pesticide in late summer.
 - Follow-up by seeding native competitors.

6.2.5 Frangula alnus (Glossy Buckthorn)

Control Approach:

Best Time for Treatment: Late summer to fall when nutrients are translocating to roots.

- 1. Mechanical Control:
 - 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)

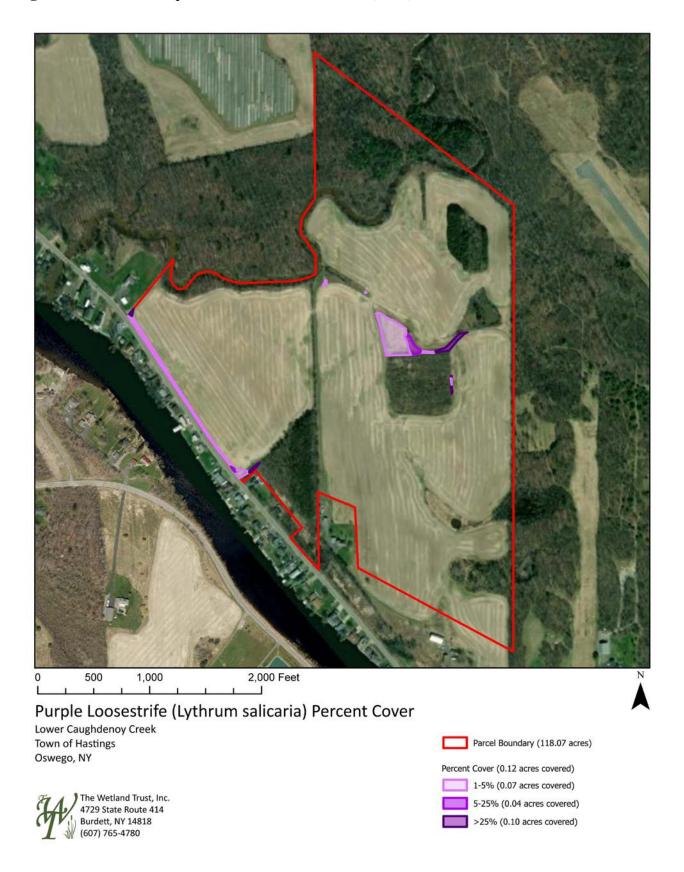


Figure 8-2. Baseline Reed Canary Grass Percent Cover (2024)



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



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

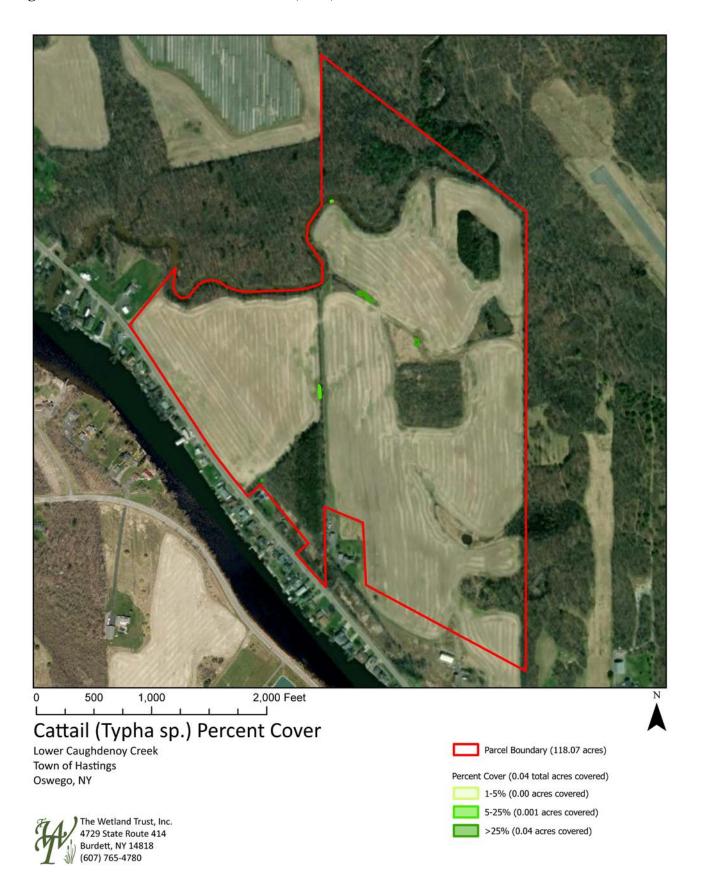
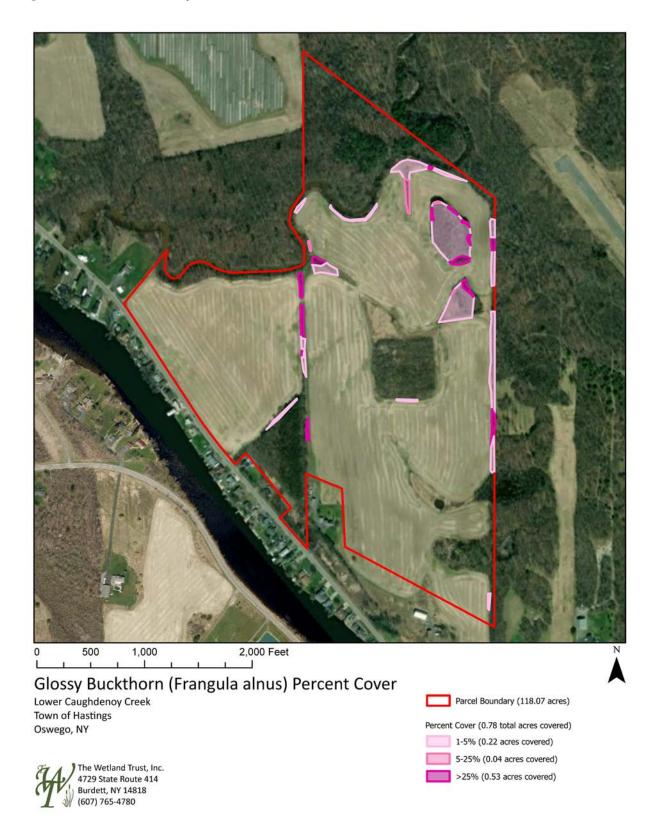


Figure 8-4 Baseline Glossy Buckthorn Percent Cover (2024)



| Invasive Species | 1-5% Cover (Affected | 5-25% Cover (Affected | >25% Cover (Affected | Total Area (Affected |
|---|-------------------------|--------------------------|----------------------|----------------------|
| Glossy Buckthorn (Frangula alnus) | 4.29 | 0.17 | 0.73 | 5.19 |
| Common Reed (Phragmites australis) | 0.48 | 0.02 | 0.10 | 0.60 |
| Reed Canary Grass (Phalaris arundinacea) | 4.37 | 0.17 | 1.46 | 6.00 |
| Purple Loosestrife (<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- |
|--|------------|------------|------------|-------|------------|-------|---------|
|--|------------|------------|------------|-------|------------|-------|---------|

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 christina.rieth@nysed.gov. Section 233 permits are not required for projects on private land.

If you have any questions concerning archaeology, please contact Bradley Russell at Bradley.Russell@parks.ny.gov



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 Caughden | ov Creek Stream a | and Wetland Miti | gation Plan |
|--|-----------------------|-------------------|------------------|-------------|
|--|-----------------------|-------------------|------------------|-------------|

May 2025

Appendix G.

| Date: 06-25-2024 | | | | | |
|--|--|--|--|--|--|
| Landowner: 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. | | | | | |
| es are located along the side of County Route 37 and the south edge of rainage 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

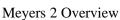
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

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 Jol | 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 | 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 | |

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. | | | | | |
| Fyidence 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

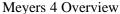
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

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

| Site Name: Meyers 5 | 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. |
| Evidence of historic drainage or filling: It is ve located along Highway 37. | ry possible that buried drainage structures are present. A ditch is |
| Plant species: Soybeans | How the planned wetland is marked on the ground: Yellow wire flags |
| Invasive species: | Groundwater elevation in test hole? Not found. |
| Hydric soil present near the surface? No | Elevation-change from upper to lower edge of designed wetland: 2.0-feet |
| | |

Test Hole location: 43.265703°N 76.190420°W

Soil texture: 0-9-inches = topsoil high in clay, 9-48-inches = clay

Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

Head-cuts located uphill or downhill of the planned wetland. A head-cut located along Youngs Creek will be controlled as part of this project.

Woody debris source: Not available on site. Would need to be brought in by truck.

Construction notes: Avoid building a dam or raising elevations that could flood neighboring property. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. Level the surface of the ground, add scrapes, pits and mounds that vary from 6-24-inches high. Plant trees and shrubs on the mounds. Leave gaps between areas of spread soil so water will drain and not back up onto neighbors' land.





Meyers 5 Overview

Meyers 5 Ground cover

| 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 velocated 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

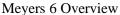
Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

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 |
|---|
| Designer Name: Thomas R. Biebighauser |
| nson Jordan (The Wetland Trust), Kendall Hastings (The Wetland |
| Site Description: An agricultural field planted to soybeans. Located near the primary outlet ditch. |
| y possible that buried drainage structures are present. A drainage |
| 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: 2.0 |
| |

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

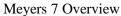
Rock armoring is needed along the length of the spillway (16-feet wide x 50-feet long x 1.5-feet deep)

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 Hame. O Meyers freda cut 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 si cuts 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 feet³/27 feet³/y ard³ = 193 yards³ x 1.5-tons/yard³ = 289 tons.



The white wire flags show where rock would be buried to control the head-cut



The head-cut will destroy the planned wetlands unless it is controlled.

| 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 Michelle Herman (The Wetland Trust) | Franz (The Wetland Trust), Kirsten Gerhart (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) | Franz (The Wetland Trust), Kirsten Gerhart (The Wetland Trust), |
| Objectives: Build a naturally appearing and functioning wetland for mitigation. | Site Description: An agricultural field that will be planted to soybeans. |

Evidence of historic drainage or filling: Deep ditches in the fields drain water into Youngs Creek along the Northern edge of the property. Buried drainage structures carry water into these ditches. Deep ruts in the field are not holding water, indicating that buried drainage structures are present.

| Plant species: Soybeans | How the planned wetland is marked on the ground: Pink wire flags |
|---|---|
| Invasive species: none | Groundwater elevation in test hole? Not found. |
| Hydric soil present near the surface? Yes, but not during the growing season. | Elevation-change from upper to lower edge of designed wetland: 1.3-feet |

Soil test hole location: 43.266021°N 76.188117°W

Soil texture: 0-8-inches = topsoil, 8-48-inches-clay (7-inch-long thin ribbon formed)

Rock armoring or vertical grade control needed at the inlet or outlet. Not needed

Head-cuts located uphill or downhill of the planned wetland. No

Woody debris source: Not available on site. Would need to be transported to the site.

Construction notes: Access the area from the Meyers site to avoid damaging Bruce Rio's driveway. Apply gravel to the access road bordering the west edge of the property. Build a groundwater dam along the lower 2/3-edge of the marked perimeter. There is very little room for spreading soil so it will be necessary to level the area and keep most soil within the marked perimeter. Level the surface of the ground, add scrapes, pits and mounds (10-foot spacing). Plant native trees on the mounds and higher ground.





| 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 Michelle Herman (The Wetland Trust) | Franz (The Wetland Trust), Kirsten Gerhart (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 feet³/27feet³/yard³ = 88 yards³ x 1.5-tons/yard³ = 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 Michelle Herman (The Wetland Trust) | Franz (The Wetland Trust), Kirsten Gerhart (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 feet³/27feet³/yard³ = 44 yards³ x 1.5-tons/yard³ = 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 r structures are present. | uts in the field are not holding water, indicating that buried drainage | |
| 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- |
|--|------------|------------|------------|-------|------------|-------|---------|
|--|------------|------------|------------|-------|------------|-------|---------|

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.

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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.

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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.