Wetland and Stream Delineation Report

Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy

Oneida County, New York

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1.0 INTRODUCTION

1.1 PROJECT SITE LOCATION AND DESCRIPTION

At the request of Mohawk Valley EDGE (the Applicant), Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) investigated an approximately 40-acre site in the Town of Marcy, Oneida County New York (Figure 1), hereafter referred to as the Project Site. The Project Site contains two parcels, one of which is bisected by County Route 34 (Marcy-SUNY IT Parkway) and owned by the Applicant, while the second is currently privately-owned but under purchase option by the Applicant. The proposed development of the Project Site is intended to compliment and support new development at the nearby Marcy Nanocenter and SUNY Polytechnic Institute. The Project Site is located approximately 0.3 mile north of Interstate 90 and is roughly bounded by Edic Road to the west, River Road to the south, and Technology Drive (formerly known as Campus Loop Road) to the north (Figure 2). The Project Site generally consists of maintained lawn and deciduous wooded areas as well as some paved areas and a mowed pedestrian walkway.

1.2 PURPOSE

The purpose of this study was to delineate and describe on-site wetlands and streams that occur within the Project Site that could potentially fall under state or federal jurisdiction. Specific tasks performed for this study included: 1) review of background resource data/mapping, 2) field delineation and flagging of potential state and federal jurisdictional wetlands and streams, 3) Global Positioning System (GPS) survey of delineated wetland and stream boundaries, 4) quantification of the area of on-site wetlands and streams, 5) description of characteristics based on hydrology, vegetation, and soils data collected in the field, and 6) a discussion of potential jurisdiction.

This report describes the results of the wetland and stream delineations conducted by EDR. It is intended to provide the information necessary to identify jurisdictional areas and support any required permit applications to the United States Army Corps of Engineers (USACE) and the New York State Department of Environmental Conservation (NYSDEC), as well as other impact evaluations conducted in support of site development (e.g., State Environmental Quality Review Act).

1.3 DATA SOURCES

Materials and data supporting this investigation have been derived from a number of sources including United States Geological Survey (USGS) topographic mapping (South Trenton 7.5 minute quadrangle), United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping, NYSDEC Freshwater Wetlands mapping, the Natural Resources Conservation Service (NRCS) Web Soil Survey (Soil Survey Staff, 2020), the NRCS List of Hydric

Soils of the State of New York (NRCS, 2018), the National Land Cover Dataset (NLCD) land cover and vegetation classes (Yang et al., 2018), and recent aerial photography.

Vascular plant names follow nomenclature found in the New York Flora Atlas (Weldy et al., 2019), and wetland indicator status for plant species was determined by reference to the National Wetland Plant List (Lichvar et al., 2016). Jurisdictional areas were characterized according to the wetlands and deepwater habitats classification system used in NWI mapping (Cowardin, 1979).

2.0 REGULATORY AUTHORITIES AND PERMITS

2.1 WATERS OF THE UNITED STATES

In accordance with Section 404 of the Clean Water Act (CWA), the USACE has regulatory jurisdiction over Waters of the Unites States (WOTUS). As defined by the USACE, WOTUS include lakes, ponds, streams (intermittent and perennial), tidal waters, and wetlands. Wetlands are defined as "*those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions*" (USEPA, 2001). Such areas are indicated by the presence of three conditions: 1) a dominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) evidence of wetland hydrology during the growing season (Environmental Laboratory, 1987).

On April 21, 2020, the U.S. Environmental Protection Agency (USEPA) and USACE published The Navigable Waters Protection Rule: Definition of "Waters of the United States". As of June 22, 2020, the effective date of the Navigable Waters Protection Rule, the agencies define four categories of waters that the USACE will consider to be WOTUS. Waters and features that do not meet the characteristics of one of these four categories will not be considered jurisdictional (USACE and USEPA, 2020). The WOTUS categories defined in The Navigable Waters Protection Rule are summarized below.

The USACE will assert jurisdiction over the following waters:

- Territorial seas and traditional navigable waters,
- Perennial and intermittent tributaries that contribute surface water flow to such waters,
- Certain lakes ponds and impoundments of traditional navigable waters, and
- Wetlands adjacent to other jurisdictional waters.

Any water that does not meet the characteristics of one of the four categories listed above is not considered a WOTUS. Additionally, the final rule has specifically clarified that WOTUS will not include any of the following eleven features:

- Groundwater, including groundwater drained through subsurface drainage systems;

- Ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- Diffuse stormwater runoff and directional sheet flow over upland;
- Ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations;
- Prior converted cropland;
- Artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- Artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
- Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;
- Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- Waste treatment systems.

A Section 404 permit from the USACE is required for activities that result in the placement of dredged or fill materials in WOTUS. In addition to Section 404 of the CWA, Section 10 of the Rivers and Harbor Act requires a permit from the USACE to construct any structure in or over any traditional navigable waters of the United States, as well as any proposed action that would alter or disturb these waters (such as excavation/dredging or deposition of materials). The Project Site does not include any navigable waters; therefore, Section 10 is not applicable to the proposed Project Site.

2.2 NEW YORK STATE FRESHWATER WETLANDS AND PROTECTED STREAMS

The Freshwater Wetlands Act (Article 24 and Title 23 of Article 71 of the Environmental Conservation Law [ECL]) gives the NYSDEC jurisdiction over state-protected wetlands and adjacent areas. The Freshwater Wetlands Act requires the NYSDEC to map all state-protected wetlands to allow landowners and other interested parties a means of determining where state-jurisdictional wetlands exist. To implement the policy established by this Act, regulations were promulgated by the state under 6 NYCRR Parts 663 and 664. Part 664 of the regulations designates wetlands into four class ratings, with Class I being the highest or best quality wetland, and Class IV being the lowest. In general, wetlands regulated by the state are those 12.4 acres in size or larger. Smaller wetlands can also be regulated if they are considered of unusual local importance. A 100-foot adjacent area around the delineated boundary of any state

regulated wetland is also under NYSDEC jurisdiction. An Article 24 permit is required from the NYSDEC for any disturbance to a state-protected wetland or adjacent area.

Under Article 15 of the ECL (Protection of Waters), the NYSDEC has regulatory jurisdiction over any activity that disturbs the bed or banks of protected streams or other watercourse. In addition, small lakes and ponds with a surface area of 10 acres or less, located within the course of a stream, are considered to be part of a stream and are subject to regulation under the stream protection category of Article 15. According to 6 NYCRR Part 608.1(aa), protected streams include any stream, or particular portion of a stream, that has been assigned by the NYSDEC any of the following classifications or standards: AA, A, B, or C(T) or C(TS). A classification of AA or A indicates that the best use of the stream is as a source of water supply for drinking, culinary or food processing purposes, primary and secondary contact recreation, and fishing. The best usages of Class B waters are primary and secondary contact recreation and fishing. The best usage of Class C waters is fishing. Streams designated (T) indicate that they support trout, while those designated (TS) support trout spawning. An Article 15 permit is required from the NYSDEC for any disturbance to the bed and banks of protected streams, with special requirements applied to streams designated as supporting trout or trout spawning. Where banks are not clearly defined, the NYSDEC may extend permitting jurisdiction to 50 feet beyond the stream.

In addition to the protection of waters permit required to change, modify, or disturb protected streams, Article 15 also requires a permit from the NYSDEC to construct any structure in or above any navigable waters of the state, as well as any proposed action that would alter or disturb these waters (such as excavation/dredging or deposition of materials). As mentioned previously the Project Site does not include any navigable waters; therefore, Article 15 is not applicable.

3.0 REVIEW OF BACKGROUND DATA AND MAPPING

3.1 PHYSIOGRAPHY AND SOILS

The Project Site is located within the Hudson-Mohawk Lowlands physiographic province of New York State. The geography in this province consists of soils formed from glacial till derived from shale and some sandstone where relief is moderate (USDA, 2008). Soils are mainly formed from alluvial outwash deposits derived from rocks upstream, in the southern part of the county soils were formed from weathered sandstone, shale and limestone. Elevations within the Project Site range from approximately 420 feet to approximately 475 feet above mean sea level (Figure 2).

The Web Soil Survey of Oneida County (Soil Survey Staff, 2020) indicates the occurrence of seven soil series on the Project Site (Figure 3). Udorthents and Herkimer channery silt loam are the predominant series occurring on the

Project Site, with Udorthents soils being a result of previous construction activities, and Herkimer channery silt loam generally occurring in areas that are dominated by dark calcareous shale. Table 1 lists all the soil series found in the Project Site and their characteristics. These soils range from somewhat poorly drained to somewhat excessively drained, none are designated as hydric soils, and two (udorthents and phelps silt loam) are considered potentially hydric. "Hydric" and "Potentially Hydric" designations are based on information obtained on the NRCS Web Soil Survey (Soil Survey Staff, 2020). Although a given soil series may be generally classified as hydric or potentially hydric in the online databases, this is for general use and does not supersede specific conditions documented in the field.

Table 1. Project Site Soils

Mapping Unit Symbol	Series	Slope (%)	Drainage[1]	Hydric[2]	Potentially Hydric[3]
4	Wakeville silt loam	0-3	SPD	No	No
10	Otego loam	0-3	MWD	No	No
12B	Herkimer channery silt loam	3-8	MWD	No	No
22	Udorthents	0-15	MWD	No	Yes
28A	Phelps silt loam	0-3	MWD	No	Yes
111E	Lansing silt loam	25-45	WD	No	No
350A	Alton gravelly loam	0-3	SED	No	No

[1] Soil drainage is represented by the following abbreviation: "SPD" = somewhat poorly drained, "MWD" = moderately well drained, "WD" = well drained, and "SED" = somewhat excessively drained
[2] "Yes" indicates this soil is listed as containing 66% or more hydric components within the map unit as listed on the USDA Web Soil Survey.
[3] "Yes" indicates this soil is listed as containing 1% to 65% hydric components within the map unit as listed on the USDA Web Soil Survey.

3.2 HYDROLOGY

The Project Site is located entirely within the Mohawk River Watershed (Hydrologic Unit Code [HUC] 02020004). Most of the surface hydrology within the Project Site is generated by precipitation and surface water run-off from adjacent land or built facilities (e.g., County Route 34/Marcy-SUNY IT Parkway). In areas associated with mapped watercourses, such as Gridley Creek, surface hydrology is also influenced by periodic flooding during heavy precipitation or seasonal runoff events. Total annual precipitation (from 2007 to 2020) averages 46.50 inches at nearby Rome Griffiss Airfield weather station (NOAA, 2020). The initial on-site wetland delineation took place at the end of the growing season (early November 2020). Precipitation for the previous month of October 2020 was low (3.08 inches) compared to the long-term monthly average for October 2007 - 2020 (5.30 inches). A subsequent delineation of the remaining portion of the Project Site took place in April 2021. Precipitation for the previous month of March 2021 was low (1.61 inches) compared to the long-term monthly average for March 2008 - 2021 (2.75 inches).

3.3 FEDERAL AND STATE MAPPED WETLANDS AND STREAMS

Review of NWI mapping indicates the presence of two freshwater ponds (PUBFx), a freshwater forested/shrub wetland (PFO1A) and a riverine system (R5UBH) within the Project Site (Figure 4).

NYSDEC Freshwater Wetlands maps indicate that there are no state-mapped wetlands within the Project Site (Figure 4). The closest mapped Freshwater Wetland (UE-1) is located approximately 1,900 feet southeast of the Project Site.

NYSDEC stream classification maps indicates that there is one mapped stream within the Project Site. Gridley Creek, a NYSDEC Class C stream, is located roughly in the southeastern portion of the Project Site (Figure 4). The Erie Canal is the closest traditional navigable waters, located approximately 1,750 feet south of the Project Site, south of Interstate 90.

3.4 MAPPED FLOODPLAINS

According to Federal Emergency Management Agency (FEMA) map services, no portion of the Project Site is located within a mapped floodplain.

3.5 VEGETATION

Land cover and vegetation occurring within the Project Site were evaluated using current NLCD mapping, which is compiled by the USGS (Yang et al., 2018), and further verified during the on-site field investigations. The Project Site primarily consists of deciduous forest, grassland/herbaceous land cover, and develop land/open space (Table 2).

Table 2. Vegetation/Land Cover Within the Project Site

Land Cover Class	Acres	Percent Cover (%)
Developed, Open Space	6.3	15.5
Grassland/Herbaceous	9.4	23.6
Developed, Low Intensity	2.8	7.0
Developed, Medium Intensity	2.3	5.8
Developed, High Intensity	1.0	2.6
Shrub/Scrub	1.4	3.5
Deciduous Forest	16.7	42.0
Total	39.9	100

Source: NLCD 2016 (Yang et al., 2018).

4.0 ON-SITE WETLAND AND STREAM DELINEATION

The initial field delineations of wetlands and streams at the Project Site occurred on November 11, 2020, and a subsequent delineation took place on April 27, 2021.

4.1 METHODOLOGY

The identification of wetland boundaries was based on the methodology described in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). Determination of wetland boundaries was also guided by the methodologies presented in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (USACE, 2012). Attention was given to the identification of potential hydrologic connections between wetlands and areas that could influence their jurisdictional status.

Wetland boundaries were defined in the field with sequentially numbered pink surveyor's flagging and mapped using a GPS unit with reported sub-meter accuracy. Data were collected from sample plots in representative wetland cover types and recorded on USACE Routine Wetland Determination forms (Appendix B). The data collected at each delineated wetland included dominant vegetation, hydrology indicators, and soil characteristics.

The Regional Supplement lists the following primary indicators of wetland hydrology: (A1) surface water, (A2) high water table, (A3) saturation, (B1) water marks, (B2) sediment deposits, (B3) drift deposits, (B4) algal mat or crust, (B5) iron deposits, (B7) inundation visible on aerial imagery, (B8) sparsely vegetated concave surface, (B9) water-stained leaves, (B13) aquatic fauna, (B15) marl deposits, (C1) hydrogen sulfide odor, (C3) oxidized rhizospheres on living roots, (C4) presence of reduced iron, (C6) recent iron reduction in tilled soils, and (C7) thick muck surface. Per the Regional Supplement, the presence of any one of these "primary" indicators is sufficient evidence that wetland hydrology is present. In addition, the Regional Supplement identifies the following secondary indicators which were also used by EDR personnel to determine wetland hydrology: (B6) surface soil cracks, (B10) drainage patterns, (B16) moss trim lines, (C2) dry-season water table, (C8) crayfish burrows, (C9) saturation visible on aerial imagery, (D1) stunted or stressed plants, (D2) geomorphic position, (D3) shallow aquitard, (D4) microtopographic relief, and (D5) FAC-neutral test. In accordance with the Regional Supplement, in the absence of a primary indicator, the presence of any two of these "secondary" indicators is considered a suitable indication of wetland hydrology.

Assessment of vegetation focused on the identification of dominant plant species in four categories: trees (greater than 3 inches diameter at breast height), saplings/shrubs (less than 3.0" inches diameter at breast height and greater than 3.2 feet tall), herbs (less than 3.2 feet tall), and woody vines. Dominance was determined by visually estimating those species having the greatest absolute percent cover within each stratum. Wetland indicator status for dominant plant

species was determined by reference to the National Wetland Plant List (Lichvar et al., 2016). Wetlands are indicated by a dominance of hydrophytic plant species.

Hydric soils are those that are poorly drained and are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil layer. The presence of hydric soils is indicative of the presence of wetlands (Environmental Laboratory, 1987). Hydric soil conditions were determined in the field through observation of soils composition, color, and morphology. Soils data were collected by using a Dutch auger and tiling spade to examine the soil profile. Soil colors were determined using Munsell Soil Charts (Munsell Color, 2009). Information concerning soil series, color, texture, and matrix and mottle color was recorded for each delineated wetland and used to determine whether the soils displayed hydric characteristics.

Streams were identified according to the Cowardin Classification System (1979), and stream boundaries were determined based on the presence of ordinary high water line characteristics, including a "*clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris*" (CFR, 1986). Stream boundaries were defined and mapped in the field using the same method as described above for wetlands. Stream flow regime (i.e., perennial, intermittent, or ephemeral) was determined through evaluation of hydrologic, geomorphic, and biological characteristics (NC DWQ, 2010). Data regarding stream gradient (gentle, moderate, or steep), stream bank and channel width, water depth, stream bed substrate, in-stream cover, and biological indicators were collected and recorded on stream inventory forms (Appendix B).

Photographs were taken of each wetland and stream delineated within the Project Site. Photographs of each delineated feature are included in Appendix C.

4.2 RESULTS

EDR identified seven wetlands and four streams within the Project Site (Figure 5, Table 3). In accordance with the Cowardin et al. (1979) classification system, the features delineated within the Project Site consist of the following community types: open water wetland (POW), palustrine emergent wetland (PEM), palustrine forested wetland (PFO), upper perennial stream (R3) and ephemeral stream (R6).

Table 3. Delineated Wetlands and Streams

Delineation ID[1]	Latitude of Centroid	Longitude of Centroid	Wetland Type[2]	Wetland Acreage Within Project Site	Stream Type[3]	Linear Feet of Stream Within Project Site	Federal Jurisdiction[4]	State Jurisdiction[5]
WL001	43.13410	-75.24047	POW	0.3	-	-	No	No
WL002	43.12951	-75.24383	POW	0.3	-	-	No	No
WL003	43.13149	-75.24250	PEM	0.8	-	-	No	No
WL004	43.1309	-75.2393	PFO	0.1	-	-	Yes	No
WL005	43.1313	-75.2393	PFO	1.1	-	-	Yes	No
WL005	43.1316	-75.2387	PEM	0.6	-	-	Yes	No
WL006	43.1318	-75.2415	PEM	0.2	-	-	No	No
WL007	43.1316	-75.2411	PFO	0.1	-	-	No	No
ST001	43.13292	-75.24217	-	-	R6	1,072	No	No
ST002	43.13221	-75.24173	-	-	R6	508	No	No
ST003	43.1309	-75.2391	-	-	R3	1,212	Yes	No
ST004	43.1305	-75.2401	-	-	R6	67.4	No	No

[1] Field ID assigned by EDR.
[2] Wetland community types are based upon the Cowardin et al. (1979) classification system: open water wetland (POW), palustrine emergent wetland (PEM), palustrine forested wetland (PFO).
[3] Stream type is based upon the Cowardin et al. (1979) classification system: ephemeral stream (R6) and upper perennial stream (R3).
[4] Based on visual observation of hydrologic connectivity in the field and review of available spatial data. Final jurisdictional determination to be made by the USACE.
[5] Based on existing NYSDEC mapping of freshwater wetlands and streams. See Sections 2.2 and 3.3 for additional information.

Descriptions of the delineated wetlands within the Project Site are provided below in Section 4.2.1, while Section 4.2.2 provides descriptions of the delineated streams within the Project Site.

4.2.1 Wetlands

4.2.1.1 Wetland Descriptions

Wetland 001 is an approximately 0.3-acre open water man-made pond. The dominant herbaceous plant species around the perimeter of the pond included common reed (*Phragmites australis*) and narrowleaf cattail (*Typha angustifolia*). Indicators of wetland hydrology included standing surface water (A1) and a high water table (A2). Soils in Wetland 001 were not accessible due to a shoreline riprap that restricted sampling. Photographs 1 and 2 in Appendix C illustrate Wetland 001. Wetland 001 is located in the northern section of the Project Site and appears to be an isolated stormwater control feature that has been constructed in an upland to convey, treat, infiltrate or store stormwater run-off. As a result, WL001 is not likely subject to USACE jurisdiction. The wetland-upland transition was relatively abrupt, and generally followed site topography. The adjacent upland occurs at the edge of the rip-rap and is herbaceous

grassland dominated by Kentucky bluegrass (*Poa pratensis*) and narrow leaved everlasting pea (*Lathyrus latifolius*). No indicators of hydric soil or wetland hydrology were observed in the upland.

Wetland 002 is an approximately 0.3-acre open man-made pond at the southern boundary of the Project Site. Woody vegetation around the perimeter of the pond was dominated by willow species (*Salix* sp), and the dominant species in the herbaceous layer was common reed. Indicators of wetland hydrology included a high water table (A2), surface water (A1), and a sparsely vegetated concave surface (B8). Soils in Wetland 002 were not accessible due to shoreline rip-rap that restricted sampling. Photographs 3 and 4 in Appendix C illustrate Wetland 002. Wetland 002 is located in the southern section of the Project Site and appears to be an isolated stormwater control feature that has been constructed in an upland to convey, treat, infiltrate or store stormwater run-off. As a result, Wetland 002 is not likely subject to USACE jurisdiction. The wetland-upland transition was relatively abrupt, and generally followed site topography. The adjacent upland is mainly a maintained lawn dominated by Kentucky bluegrass with planted white ash (*Fraxinus americana*) and Pine (*Pinaceae* sp.). No indicators of hydric soil or wetland hydrology were observed in the upland.

Wetland 003 is an approximately 0.8-acre emergent wetland located in a flat area where run-off from the surrounding land accumulates. The wetland was dominated by soft rush (*Juncus effuses*), Kentucky bluegrass and wrinkleleaf goldenrod (*Solidago rugosa*) with silver maple (*Acer saccharinum*) and European buckthorn (*Rhamnus cathartica*) occasionally present. Indicators of wetland hydrology included drainage patterns (B10) and FAC neutral test (D5). The soils within this wetland were very dark brown (7.5YR 2.5/2) sandy loam with 5% dark strong brown (7.5YR 4/6) redox concentrations in the matrix. Hydric soil indicators included sandy redox (S5). Wetland 003 appears to be an isolated depression that shows evidence of occasional inundation; therefore, this feature is not likely subject to USACE jurisdiction. Photographs 5 and 6 in Appendix C illustrate Wetland 003. The wetland-upland transition was abrupt along the mowed pedestrian walkway, while a gradual transition was present along the rest of the wetland. Adjacent upland is mainly herbaceous grassland dominated by Kentucky bluegrass. No indicators of hydric soil or wetland hydrology were observed in the upland.

Wetland 004 is an approximately 0.1-acre palustrine forested wetland located immediately adjacent to Stream 003 (Gridley Creek). The dominant overstory species included black willow (*Salix nigra*), eastern cottonwood (*Populus deltoides*), and green ash (*Fraxinus pennsylvanica*). The dominant shrub species was box elder (*Acer negundo*), while the dominant herbaceous species was garlic mustard (*Alliara petiolata*), with creeping jenny (*Lysimachia nummularia*) and rough avens (*Geum laciniatum*) also occasionally present in the herbaceous layer. Indicators of wetland hydrology included drainage patterns (B10), and geomorphic position (D2). The soils within this wetland were very dark brown (10YR 2/2) with 1% olive (5Y 5/6) redox concentrations in the matrix. The hydric soil indicator was histic epipedon

(A2). There were hydrologic connections observed between W004 and ST003; therefore, this wetland will likely be considered jurisdictional by the USACE. Photograph 7 in Appendix C illustrates Wetland 004. The wetland-upland transition was gradual and somewhat followed site topography. Adjacent upland is mainly deciduous forest dominated by black cherry (*Prunus serotina*), apple (*Malus sp.*), multiflora rose (*Rosa multiflora*) and Morrow's honeysuckle (*Lonicera morrowii*). No indicators of hydric soil or wetland hydrology were observed in the upland.

Wetland 005 contains both palustrine forested and palustrine emergent wetland communities and portions of this wetland are also immediately adjacent to Gridley Creek. The palustrine emergent portion of the wetland totals approximately 0.6-acre and the herbaceous understory of the wetland is dominated by broad-leaved cattail (*Typha latifolia*), and New England aster (*Symphyotrichum novae-angliae*). Throughout the shrub and sapling layer American hornbeam (*Carpinus caroliniana*), and multiflora rose are occasionally present, as is green ash in the overstory layer. Indicators of wetland hydrology included surface water (A1), high water table (A2), saturation (A3), hydrogen sulfide odors (C1) and FAC neutral test (D5). The soils within this wetland included a top layer that was black (10YR 2/1) and a secondary layer that was very dark grey (5YR 3/1). Hydric soil indicators included histosol (A1) and hydrogen sulfide (A4). There were hydrologic connections observed between W005 and ST003; therefore, this wetland will likely be considered jurisdictional by the USACE. Photograph 8 in Appendix C illustrates the palustrine emergent cover type of Wetland 005. The wetland-upland transition was abrupt and followed site topography. Adjacent upland is mainly deciduous forest dominated by American beech (*Fagus grandifolia*) and red maple (*Acer rubrum*). No indicators of hydric soil or wetland hydrology were observed in the upland.

The palustrine forested portion of Wetland 005 totals approximately 1.1 acres and the dominant overstory species include black willow and box elder, with green ash occasionally present. Sensitive fern (*Onoclea sensibilis*) and creeping jenny dominate the herbaceous understory, and Morrow's honeysuckle is occasionally present in the shrub and sapling layer. Indicators of wetland hydrology included oxidized rhizospheres on living roots (C3), drainage patterns (B10) and FAC neutral test (D5). The primary layer of soils within this wetland were 70% dark brown (7.5YR 3/2) and 25% pale brown (10YR 6/3) with 5% yellowish red (5YR 4/6) redox concentrations in the matrix and pore linings. The secondary layer of soil was dark brown (7.5YR 3/2) with 5% dark red (2.5YR 3/6) redox concentrations in the matrix. The hydric soil indicator was redox dark surface (F6). There were hydrologic connections observed between W005 and ST003; therefore, this wetland will likely be considered jurisdictional by the USACE. Photograph 9 in Appendix C illustrates the palustrine forested cover type of Wetland 005. The wetland-upland transition was abrupt and followed site topography. Adjacent upland is mainly deciduous forest dominated by eastern cottonwood, slippery elm (*Ulmus* rubra) and multiflora rose. No indicators of hydric soil or wetland hydrology were observed in the upland.

Wetland 006 was an approximately 0.2-acre palustrine emergent wetland located in a flat region in the center of the Project Site. Quaking aspen (*Populus tremuloides*) was both the dominant overstory species and the dominant sapling and shrub species, while the herbaceous understory included smooth scouring rush (*Equisetum laevigatum*) and sensitive fern, with woolgrass (*Scirpus cyperinus*) occasionally present. Indicators of wetland hydrology included oxidized rhizospheres on living roots (C3), stunted or stressed plants (D1) and microtopographic relief (D4). The primary soil layer within this wetland was very dark grayish brown (10YR 3/2) with a 5% strong brown (7.5YR 4/6) redox concentration in the pore lining and matrix. The secondary layer was brown (7.5YR 4/2) with a 5% brown (7.5YR 4/4) redox with concentrations in the matrix. The hydric soil indicators were sandy redox (S5) and redox dark surface (F6). Wetland 006 appears to be an isolated depression that shows evidence of occasional inundation; therefore, this feature is not likely subject to USACE jurisdiction. Photograph 10 in Appendix C illustrates Wetland 006. Adjacent upland is mainly deciduous forest dominated by quaking aspen and European buckthorn, with multiflora rose occasionally present. No indicators of hydric soil or wetland hydrology were observed in the upland.

Wetland 007 was an approximately 0.1-acre palustrine forested wetland located in a depression in the center of the Project Site. The dominant overstory species was eastern cottonwood. The dominant species in the shrub and sapling layer was nanny-berry (*Viburnum lentago*) with silky dogwood (*Cornus amomum*) occasionally present. Smooth scouring rush dominated the herbaceous understory with sensitive fern occasionally present. Indicators of wetland hydrology included sparsely vegetated concave surface (B8), stunted or stressed plants (D1) and FAC neutral test (D5). The primary soil layer within this wetland was dark grayish brown (10YR 4/2) with a 10% yellowish brown (10YR 5/8) redox concentration in the matrix. The secondary layer was 60% dark grayish brown (10YR 4/2) and 35% brown (10YR 5/3) with a 5% strong brown (7.5YR 5/8) redox concentration in the matrix. The hydric soil indicator was sandy redox (S5). Wetland 007 appears to be an isolated depression that shows evidence of occasional inundation; therefore, this feature is not likely subject to USACE jurisdiction. Photograph 11 in Appendix C illustrates Wetland 007. Adjacent upland is mainly deciduous forest largely dominated by quaking aspen, with some European buckthorn present. No indicators of hydric soil or wetland hydrology were observed in the upland.

4.2.2 Streams

Stream 001 is an unmapped roadside ditch that runs along the eastern side of the Marcy-SUNY IT Parkway. Stream 001 is an excavated channel/ditch, ranging from 2 to 4 feet in width, and was dry at the time of delineation. This feature has a gentle gradient, with channel material similar to the adjacent upland (see Photo 12 in Appendix C). This feature

appears to be stormwater control constructed in upland to convey stormwater run-off; therefore, it is not anticipated to be subject to USACE jurisdiction.

Stream 002 is an unmapped ephemeral swale that runs parallel to Stream 001 along the western side of the Marcy-SUNY IT Parkway. Stream 002 is an excavated channel/ditch ranging from 2 to 4 feet in width and was dry at the time of delineation. This feature was characterized by a gentle gradient, with channel material similar to the adjacent upland (see Photos 13, 14 and 15 in Appendix C). This feature appears to be stormwater control constructed in upland to convey stormwater run-off; therefore, it is not anticipated to be subject to USACE jurisdiction.

Stream 003 is a named (Gridley Creek) and mapped upper perennial stream that runs along the eastern side of the Project Site. Stream 003 had a well-developed channel with a continuous bed and bank containing flowing water at the time of delineation. Stream bank widths ranged from 10 feet (typically in riffles) to 30 feet (typically in pools), and was characterized by a gentle gradient. Substrate consisted of boulder, cobble, gravel, sand and silt/clay (see Photos 16 and 17 in Appendix C).

Stream 004 is an unmapped ephemeral stream that flows into Gridley Creek. Stream 004 had a weakly developed channel, ranging in width from 1 to 3 feet, and was dry at the time of delineation. This stream was characterized by a gentle gradient and overhanging vegetation. Substrate consisted of silt/clay (see Photo 18 in Appendix C). As this stream appears to be an ephemeral feature that only flows in direct response to precipitation, it will likely not be subject to USACE jurisdiction.

5.0 CONCLUSIONS

Within the Project Site, EDR identified seven wetlands totaling approximately 3.5 acres, three ephemeral streams (two of which are roadside ditches) totaling 1,647 linear feet, and one upper perennial stream totaling approximately 1,204 linear feet. Of the seven wetlands delineated on-site, two are man-made stormwater ponds and two are isolated depressions. Therefore, it appears that only Wetland 004 and Wetland 005 will be considered jurisdictional by the USACE under Section 404 of the Clean Water Act. With respect to the on-site streams, two are excavated roadside ditches and one is an ephemeral feature that only flows in direct response to precipitation. Therefore, it appears that only Stream 003 (Gridley Creek) will be considered jurisdictional by the USACE under Section 404 of the Clean Water Act. However, final determination of jurisdictional status of all features delineated within the Project Site will be made by the USACE.

The wetlands are not expected to fall under state jurisdiction pursuant to Article 24 of the ECL because they do not occur within, or have hydrologic connection to, wetlands included on the NYSDEC Freshwater Wetlands Maps. The

streams in the Project Site are not mapped as protected streams, and therefore are not jurisdictional under Article 15 of the ECL.

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APPENDIX A

Figures

Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy, Oneida County, New York

County Boundary

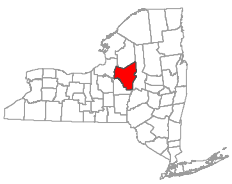

Figure1: Regional Project Location

Notes: 1. Basemap: ESRI ArcGIS Online "World Street Map" map service. **2.** This map was generated in ArcMap on May 21, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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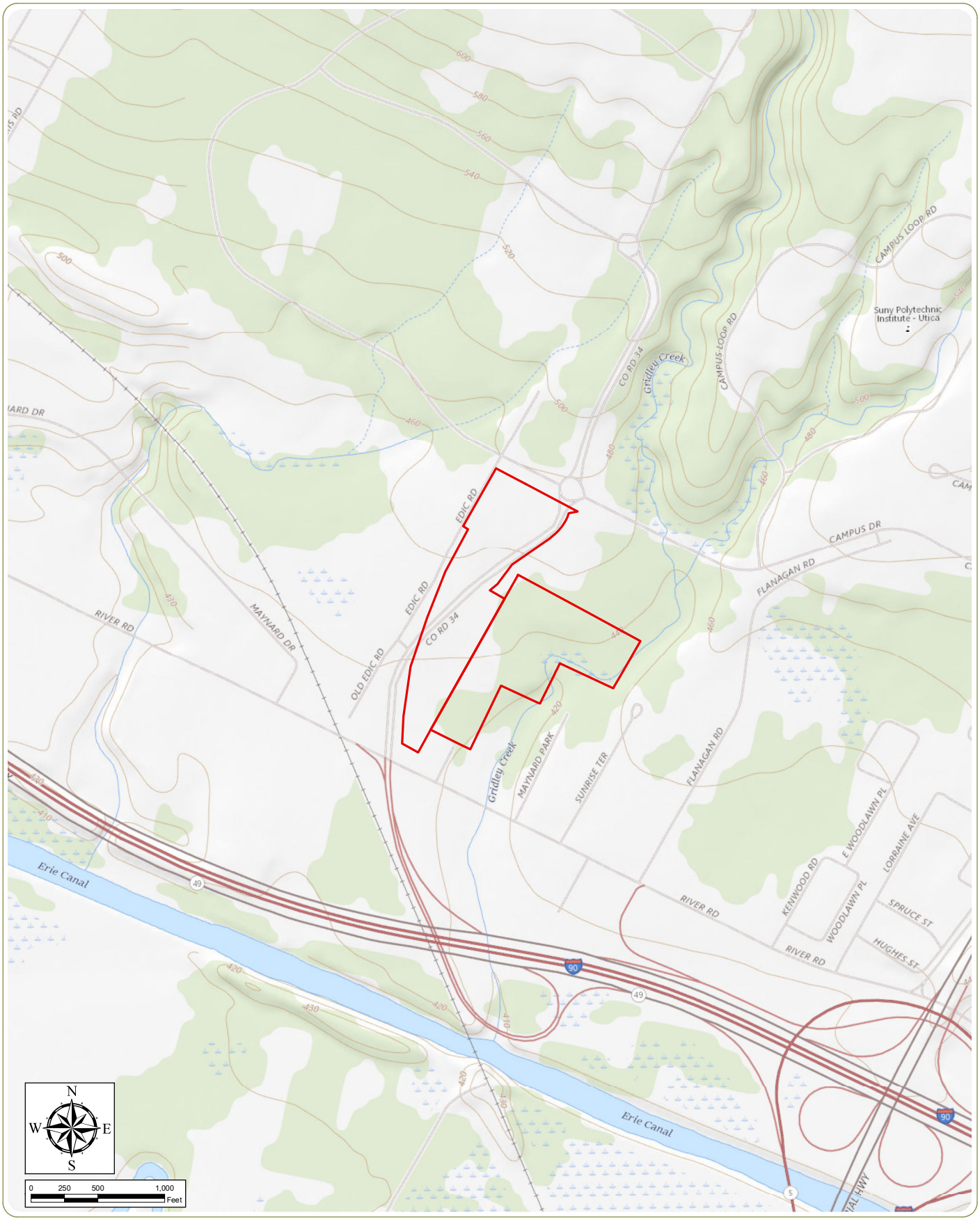

Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy, Oneida County, New York

Figure 2: Topographic Mapping

Project Site

Notes: 1. Basemap: ESRI ArcGIS Online "USGS Topo Maps" map service. **2.** This map was generated in ArcMap on May 10, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy, Oneida County, New York

Figure 3: Project Site Soils

Potentially Hydric Soil

Not Hydric Soil

Project Site

Notes: 1. Basemap: USDA NAIP "2017 New York 60cm" orthoimagery map service. **2.** This map was generated in ArcMap on May 18, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy, Oneida County, New York

Figure 4: Mapped Wetlands and Streams

Notes: 1. Basemap: USDA NAIP "2017 New York 60cm" orthoimagery map service. **2.** This map was generated in ArcMap on May 10, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Class A, B, C(TS), or C(T) Stream
- Class C or D Stream
- Project Site
- NWI Mapped Wetland
- NWI Mapped Water Feature
- NYSDEC Mapped Wetland

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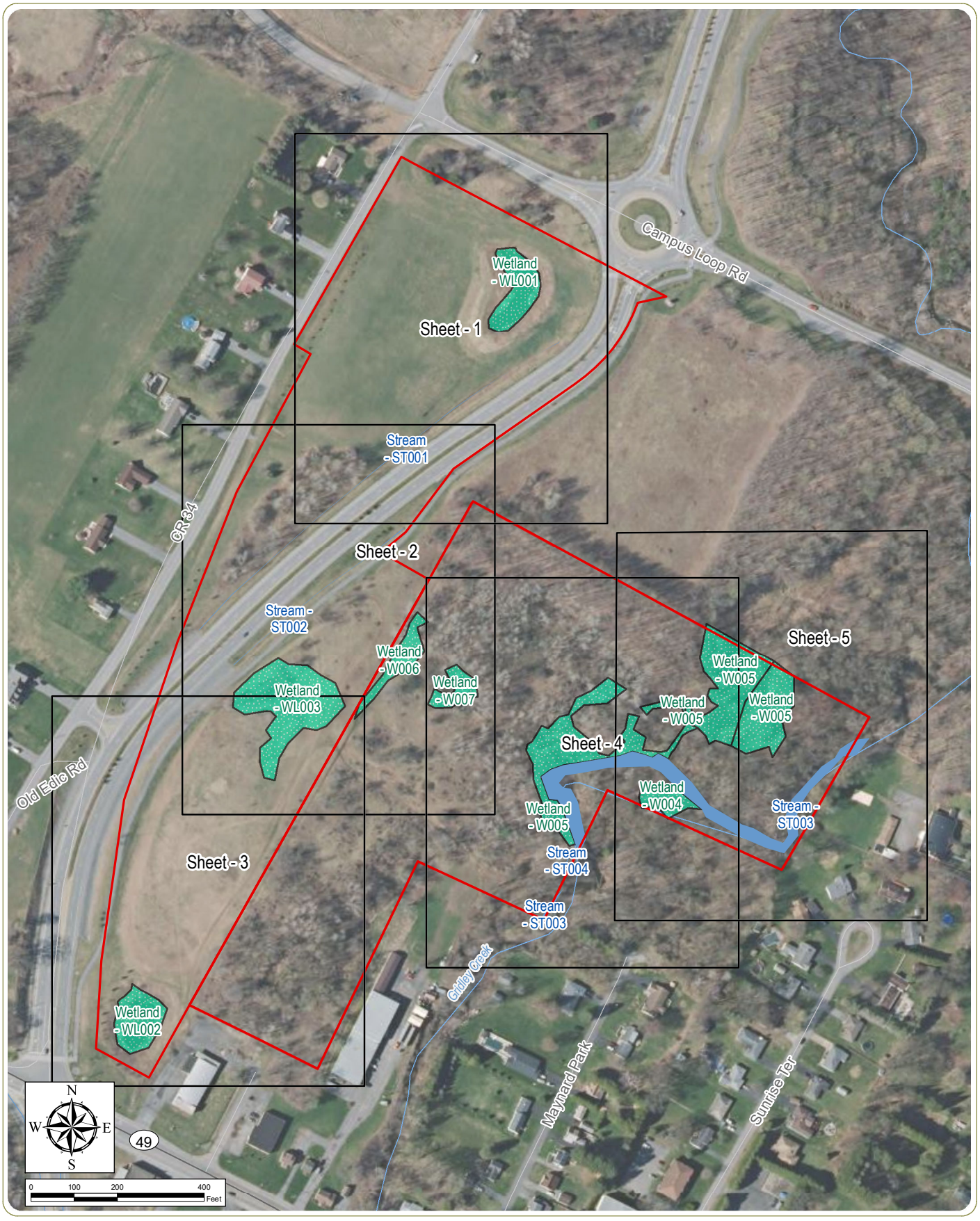

Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy, Oneida County, New York

Figure 5: Delineated Wetlands and Streams Sheet Index

Delineated Stream
Delineated Wetland
Project Site

Notes: 1. Basemap: NYSDOP "2017" orthoimagery map service. **2.** This map was generated in ArcMap on May 11, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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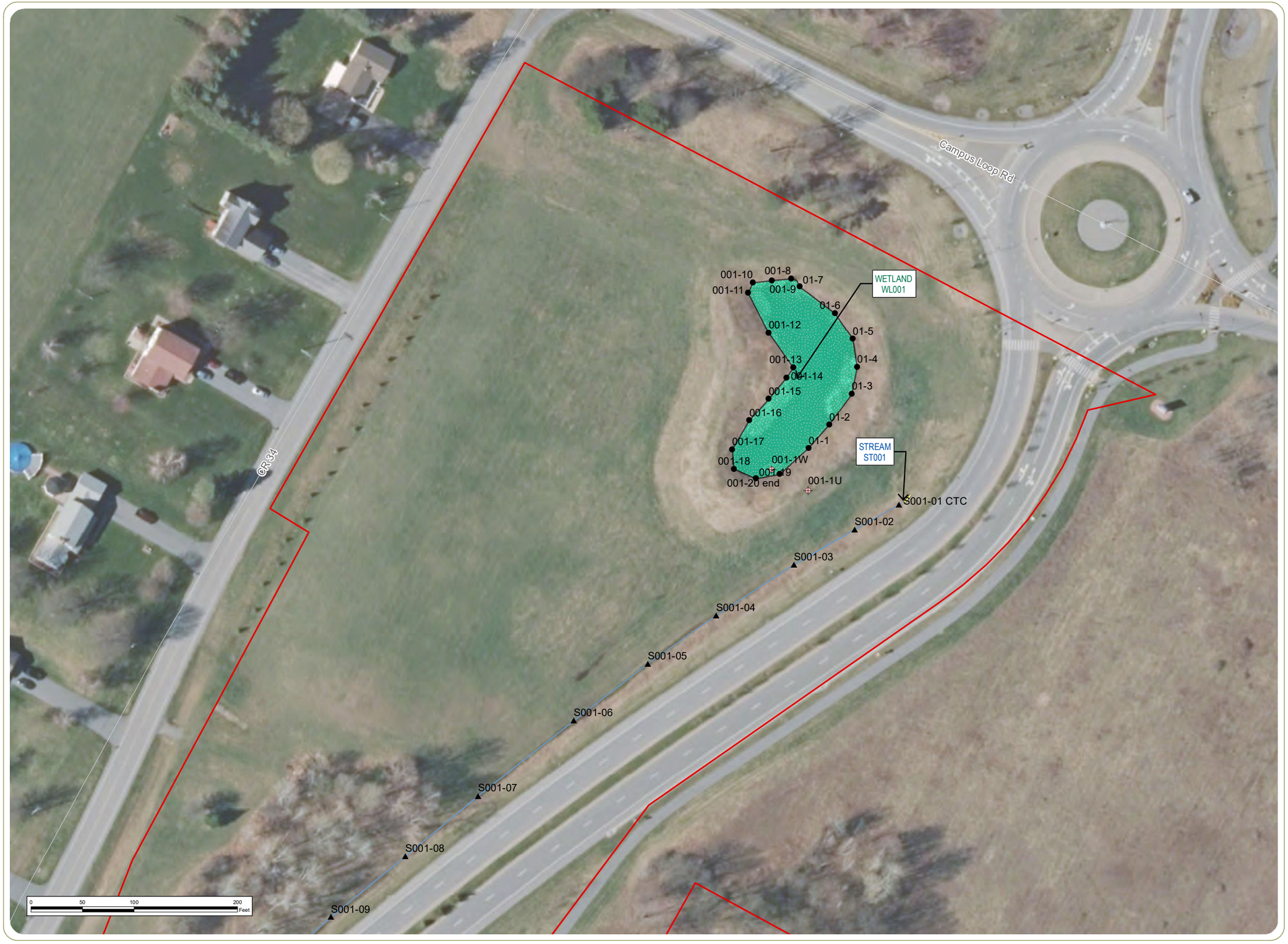
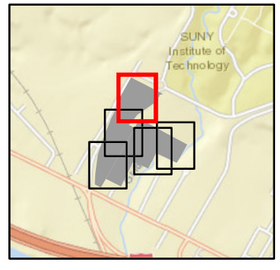
Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy, Oneida County, New York

Figure 5: Delineated Wetlands and Streams



- Wetland Flag
- Stream Flag
- Datapoint Wetland
- Culvert
- Delineated Stream
- Delineated Wetland
- Project Site



Sheet 1 of 5

Notes: 1. Basemap: NYSDOP "2017" orthoimagery map service.]. **2.** This map was generated in ArcMap on May 11, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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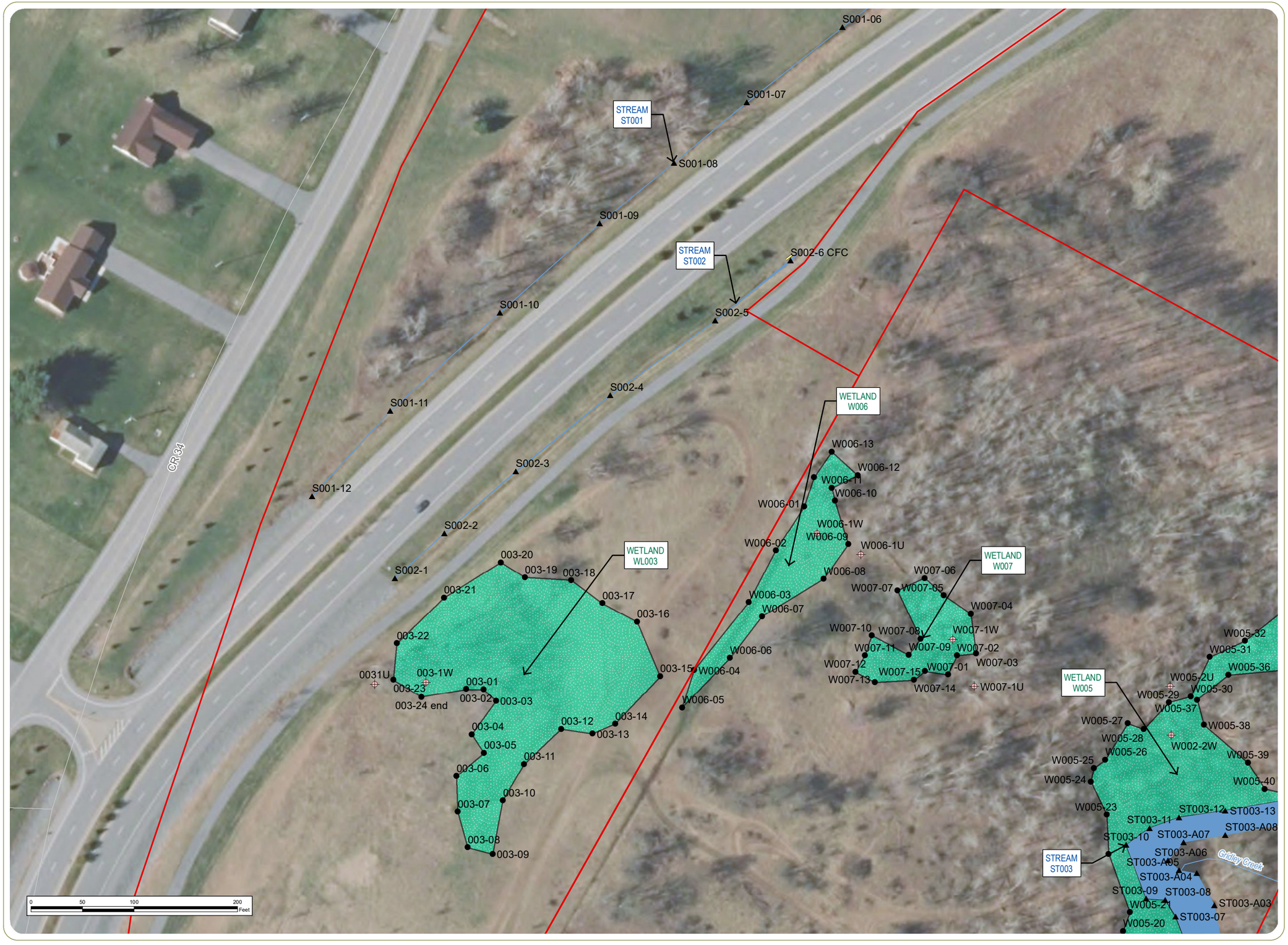
Marcy Nanocenter Parkway Mixed-Use Master Plan

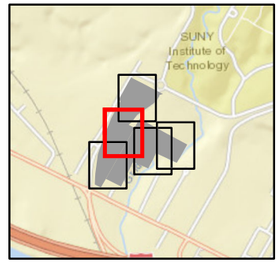
Town of Marcy, Oneida County, New York

Figure 5: Delineated Wetlands and Streams



Legend

- Wetland Flag
- Stream Flag
- Datapoint Wetland
- Culvert
- Delineated Stream
- Delineated Wetland
- Project Site



Sheet 2 of 5

Notes: 1. Basemap: NYSDOP "2017" orthoimagery map service.]. **2.** This map was generated in ArcMap on May 11, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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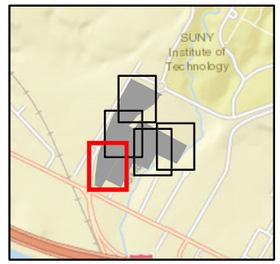
Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy, Oneida County, New York

Figure 5: Delineated Wetlands and Streams

Wetland Flag
Datapoint Wetland
Culvert
Delineated Wetland
Project Site



Sheet 3 of 3

Notes: **1.** Basemap: NYSDOP "2017" orthoimagery map service.]. **2.** This map was generated in ArcMap on May 11, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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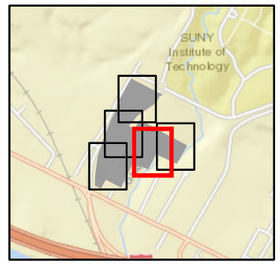
Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy, Oneida County, New York

Figure 5: Delineated Wetlands and Streams

- Wetland Flag
- Stream Flag
- Datapoint Wetland
- Wetland Continues
- Delineated Stream
- Delineated Wetland
- Project Site



Sheet 4 of 5

Notes: 1. Basemap: NYSDOP "2017" orthoimagery map service.]. **2.** This map was generated in ArcMap on May 11, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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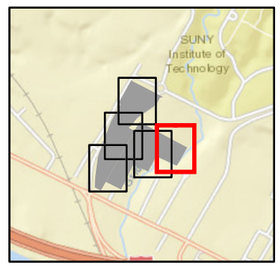
Marcy Nanocenter Parkway Mixed-Use Master Plan

Town of Marcy, Oneida County, New York

Figure 5: Delineated Wetlands and Streams

- Wetland Flag
- Stream Flag
- Datapoint Wetland
- Wetland Continues
- Delineated Stream
- Delineated Wetland
- Project Site



Sheet 5 of 5

Notes: 1. Basemap: NYSDOP "2017" orthoimagery map service.]. **2.** This map was generated in ArcMap on May 11, 2021. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.

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APPENDIX B

Routine Wetland Determination Data Sheets and Stream Inventory Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Marcy Nanocenter Parkway Mixed-Use Master Plan City/County: Oneida County Sampling Date: 11/05/2020

Applicant/Owner: Mohawk Valley EDGE State: NY Sampling Point: 001-1U

Investigator(s): Rachael Miller, Courtney Scoles, and Samuel Gordon Section, Township, Range: Town of Marcy

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope %: 0-5

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.133807 Long: -75.240443 Datum: WGS84

Soil Map Unit Name: Herkimer channery silt loam NWI classification: N/A

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 001-1U

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. *Lathyrus latifolius*	50	Yes	UPL
2. *Poa pratensis*	50	Yes	FACU
3. *Cirsium arvense*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105	=Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	55	x 4 =	220
UPL species	50	x 5 =	250
Column Totals:	105 (A)		470 (B)

Prevalence Index = B/A = 4.48

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 001-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: N/A

Depth (inches): ___

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Marcy Nanocenter Parkway Mixed-Use Master Plan City/County: Oneida County Sampling Date: 11/05/2020

Applicant/Owner: Mohawk Valley EDGE State: NY Sampling Point: 001-1W

Investigator(s): Rachael Miller, Courtney Scoles, and Samuel Gordon Section, Township, Range: Town of Marcy

Landform (hillside, terrace, etc.): Bowl-Shaped Depression Local relief (concave, convex, none): Concave Slope %: 0-5

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.133864 Long: -75.240574 Datum: WGS84

Soil Map Unit Name: Herkimer channery silt loam NWI classification: N/A

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: 001

Remarks: (Explain alternative procedures here or in a separate report.)
rock restriction at 0" prevented soils samples from being collected

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes X	No ____	Depth (inches): 0.1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0.1

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 001-1W

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5-foot radius)			
1. *Phragmites australis*	30	Yes	FACW
2. *Typha angustifolia*	30	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60 =Total Cover		
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	60 (A)		90 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 001-1W

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 0

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Marcy Nanocenter Parkway Mixed-Use Master Plan City/County: Oneida County Sampling Date: 11/05/2020

Applicant/Owner: Mohawk Valley EDGE State: NY Sampling Point: 002-1U

Investigator(s): Rachael Miller, Courtney Scoles, and Samuel Gordon Section, Township, Range: Town of Marcy

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 0-5

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.129764 Long: -75.243973 Datum: WGS84

Soil Map Unit Name: Udorthents, smooth NWI classification: N/A

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 002-1U

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus americana*	3	Yes	FACU
2. *Pinaceae*	5	Yes	
3.			
4.			
5.			
6.			
7.			
	8	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. *Poa pratensis*	90	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90	=Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	93	x 4 =	372
UPL species	0	x 5 =	0
Column Totals:	93 (A)		372 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 002-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: N/A

Depth (inches): _____

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Marcy Nanocenter Parkway Mixed-Use Master Plan City/County: Oneida County Sampling Date: 11/05/2020

Applicant/Owner: Mohawk Valley EDGE State: NY Sampling Point: 002-1W

Investigator(s): Rachael Miller, Courtney Scoles, and Samuel Gordon Section, Township, Range: Town of Marcy

Landform (hillside, terrace, etc.): Bowl-shaped depression Local relief (concave, convex, none): concave Slope %: 0-5

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.129662 Long: -75.2439 Datum: WGS84

Soil Map Unit Name: Udorthents, smooth NWI classification: N/A

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: 002

Remarks: (Explain alternative procedures here or in a separate report.)
Rock restriction prevented soils from being sampled. Open water wetland

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes X	No ____	Depth (inches): 0.1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0.1

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 002-1W

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix sp.*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. *Phragmites australis*	80	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80	=Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		190 (B)

Prevalence Index = B/A = 2.11

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 002-1W

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 0

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Marcy Nanocenter Parkway Mixed-Use Master Plan City/County: Oneida County Sampling Date: 11/05/2020

Applicant/Owner: Mohawk Valley EDGE State: NY Sampling Point: 003-1U

Investigator(s): Rachael Miller, Courtney Scoles, and Samuel Gordon Section, Township, Range: Town of Marcy

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope %: 0-5

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.131478 Long: -75.243043 Datum: WGS84

Soil Map Unit Name: Alton gravelly loam NWI classification: N/A

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 003-1U

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. *Poa pratensis*	90	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90	=Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	90 (A)		360 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 003-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 2.5/3	100					Sandy	Sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: N/A

Depth (inches): ___

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Marcy Nanocenter Parkway Mixed-Use Master Plan City/County: Oneida County Sampling Date: 11/05/2020

Applicant/Owner: Mohawk Valley EDGE State: NY Sampling Point: 003-1U

Investigator(s): Rachael Miller, Courtney Scoles, and Samuel Gordon Section, Township, Range: Town of Marcy

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope %: 0-5

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 43.131481 Long: -75.242856 Datum: WGS84

Soil Map Unit Name: Udorthents, smooth NWI classification: N/A

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: 003

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 003-1U

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	15	Yes	FACW
2. *Rhamnus cathartica*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	25	=Total Cover	

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size: 5-foot radius)			
1. *Juncus effusus*	20	Yes	OBL
2. *Poa pratensis*	50	Yes	FACU
3. *Solidago rugosa*	30	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	

Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	15	x 2 =	30
FAC species	40	x 3 =	120
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	125 (A)		370 (B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point 003-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/2	95	7.5YR 4/6	5	C	M	Sandy	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ? Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: N/A

Depth (inches): 6

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

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter City/County: Oneida County Sampling Date: 04/27/2021
Applicant/Owner: MVEDGE State: New York Sampling Point: WL004-1U
Investigator(s): JK, KM Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Mound Local relief (concave, convex, none): Convex Slope (%): 3-8
Subregion (LRR or MLRA): LRR L MLRA 172 Lat: 43.13074783 Long: -75.23898233 Datum: WGS 1984
Soil Map Unit Name: Otego Loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL004-1U

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina* / Black cherry	30	Yes	FACU
2. *Malus* / Apple	15	Yes	
3. *Salix nigra* / Black willow	10	No	OBL
4. *Fraxinus pennsylvanica* / Green ash	5	No	FACW
5. *Acer rubrum* / Red maple	5	No	FAC
6.			
7.			
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rosa multiflora* / Multiflora rose, Multiflora rosa	15	Yes	FACU
2. *Lonicera morrowii* / Morrow's honeysuckle	15	Yes	FACU
3. *Fraxinus pennsylvanica* / Green ash	10	Yes	FACW
4. *Acer negundo* / Boxelder, Box elder	2	No	FAC
5.			
6.			
7.			
	42	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Alliaria petiolata* / Garlic-mustard	10	Yes	FACU
2. *Lysimachia nummularia* / Moneywort, Creeping-jenny	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	20	x 2 =	40
FAC species	7	x 3 =	21
FACU species	70	x 4 =	280
UPL species	15	x 5 =	75
Column Totals:	122 (A)		426 (B)

Prevalence Index = B/A = 3.49

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: WL004-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	7.5YR 3/2	100					Silt loam	
11-18	10YR 3/3	80	10YR 5/8	20	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter City/County: Oneida County Sampling Date: 04/27/2021
Applicant/Owner: MVEDGE State: New York Sampling Point: WL004-1W
Investigator(s): JK, KM Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-3
Subregion (LRR or MLRA): LRR L MLRA 172 Lat: 43.13086183 Long: -75.2393285 Datum: WGS 1984
Soil Map Unit Name: Otego Loam NWI classification: PFO1A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL004-1W

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra* / Black willow	30	Yes	OBL
2. *Populus deltoides* / Eastern cottonwood	20	Yes	FAC
3. *Fraxinus pennsylvanica* / Green ash	10	No	FACW
4.			
5.			
6.			
7.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Acer negundo* / Boxelder, Box elder	15	Yes	FAC
2. *Lonicera morrowii* / Morrow's honeysuckle	10	Yes	FACU
3. *Rhamnus cathartica* / European buckthorn	5	No	FAC
4.			
5.			
6.			
7.			
	30	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Alliaria petiolata* / Garlic-mustard	20	Yes	FACU
2. *Aster* / Aster	15	Yes	
3. *Lysimachia nummularia* / Moneywort, Creeping-jenny	10	Yes	FACW
4. *Geum laciniatum* / Rough avens	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	25	x 2 =	50
FAC species	40	x 3 =	120
FACU species	30	x 4 =	120
UPL species	15	x 5 =	75
Column Totals:	140 (A)		395 (B)

Prevalence Index = B/A = 2.82

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: WL004-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/2	99	5Y 5/6	1	C	M	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Verify soils

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter City/County: Oneida County Sampling Date: 04/27/2021
Applicant/Owner: MVEDGE State: New York Sampling Point: WL005-1U
Investigator(s): JK, KM Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Hillside Local relief (concave, convex, none): Convex Slope (%): 8-15
Subregion (LRR or MLRA): LRR L MLRA 172 Lat: 43.13161283 Long: -75.23889067 Datum: WGS 1984
Soil Map Unit Name: Wakeville silt loam, occasionally flooded NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL005-1U

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia* / American beech	40	Yes	FACU
2. *Acer rubrum* / Red maple	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	60	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Fagus grandifolia* / American beech	50	Yes	FACU
2. *Acer rubrum* / Red maple	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	70	= Total Cover	

Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	130 (A)		480 (B)

Prevalence Index = B/A = 3.69

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: WL005-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	100					Loamy sand	
5-18	7.5YR 4/6	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter | City/County: Oneida County | Sampling Date: 04/27/2021
Applicant/Owner: MVEDGE | State: New York | Sampling Point: WL005-1W
Investigator(s): JK, KM | Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Flat | Local relief (concave, convex, none): None | Slope (%): 0
Subregion (LRR or MLRA): LRR L MLRA 172 | Lat: 43.1317515 | Long: -75.238737 | Datum: WGS 1984
Soil Map Unit Name: Wakeville silt loam, occasionally flooded | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Is the Sampled Area within a Wetland? Yes X No ___
If yes, optional Wetland Site ID: W002 PEM

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes	X	No	Depth (inches):	1
Water Table Present?	Yes	X	No	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes	X	No	Depth (inches):	0

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL005-1W

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica* / Green ash	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Carpinus caroliniana* / American hornbeam	15	Yes	FAC
2. *Rosa multiflora* / Multiflora rose, Multiflora rosa	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Typha latifolia* / Broadleaf cattail, Broad-leaved cattail	40	Yes	OBL
2. *Symphyotrichum novae-angliae* / New england american-ast	30	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	40	x 2 =	80
FAC species	15	x 3 =	45
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	110 (A)		225 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No ___

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

SOIL

Sampling Point: WL005-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					Loamy muck	Hydrogen sulfide odor
5-20	5Y 3/1	100					Loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter City/County: Oneida County Sampling Date: 04/27/2021
Applicant/Owner: MVEDGE State: New York Sampling Point: WL005-2U
Investigator(s): JK, KM Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Mound Local relief (concave, convex, none): Convex Slope (%): 3-8
Subregion (LRR or MLRA): LRR L MLRA 172 Lat: 43.13144883 Long: -75.24016183 Datum: WGS 1984
Soil Map Unit Name: Udorthents, smoothed NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL005-2U

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides* / Eastern cottonwood	50	Yes	FAC
2. *Ulmus rubra* / Slippery elm	20	Yes	FAC
3. *Populus tremuloides* / Quaking aspen	10	No	FACU
4.			
5.			
6.			
7.			
	80	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Rosa multiflora* / Multiflora rose, Multiflora rosa	20	Yes	FACU
2. *Rhamnus cathartica* / European buckthorn	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	35	= Total Cover	

Herb Stratum (Plot size: 5)			
1. *Solidago* / Goldenrod	15	Yes	
2. *Equisetum arvense* / Common horsetail	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20	= Total Cover	

Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	90	x 3 =	270
FACU species	30	x 4 =	120
UPL species	15	x 5 =	75
Column Totals:	135 (A)		465 (B)

Prevalence Index = B/A = 3.44

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: WL005-2U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter | City/County: Oneida County | Sampling Date: 04/27/2021
Applicant/Owner: MVEDGE | State: New York | Sampling Point: WL005-2W
Investigator(s): JK, KM | Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Hill slope | Local relief (concave, convex, none): Concave | Slope (%): 3-8
Subregion (LRR or MLRA): LRR L MLRA 172 | Lat: 43.13132483 | Long: -75.24015883 | Datum: WGS 1984
Soil Map Unit Name: Udorthents, smoothed | NWI classification: PFO1A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Is the Sampled Area within a Wetland? Yes X No ___
If yes, optional Wetland Site ID: W001-2W PFO

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL005-2W

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo* / Boxelder, Box elder	30	Yes	FAC
2. *Fraxinus pennsylvanica* / Green ash	15	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Salix nigra* / Black willow	25	Yes	OBL
2. *Lonicera morrowii* / Morrow's honeysuckle	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	35	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Lysimachia nummularia* / Moneywort, Creeping-jenny	30	Yes	FACW
2. *Onoclea sensibilis* / Sensitive fern	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	65	x 2 =	130
FAC species	30	x 3 =	90
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	130 (A)		285 (B)

Prevalence Index = B/A = 2.19

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: WL005-2W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	7.5YR 3/2	70	5YR 4/6	5	C	PL,M	Clay loam	
0-9	10YR 6/3	25					Sand	
9-18	7.5YR 3/2	95	2.5YR 3/6	5	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter City/County: Oneida County Sampling Date: 04/28/2021
Applicant/Owner: MVEDGE State: New York Sampling Point: WL006-1U
Investigator(s): JK, KM Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): None Slope (%): O
Subregion (LRR or MLRA): LRR L MLRA 172 Lat: 43.1318103 Long: -75.2412727 Datum: WGS 1984
Soil Map Unit Name: Udorthents, smoothed NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ____ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL006-1U

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus tremuloides* / Quaking aspen	80	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhamnus cathartica* / European buckthorn	40	Yes	FAC
2. *Rosa multiflora* / Multiflora rose, Multiflora rosa	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	55	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Fragaria vesca ssp. vesca* / Woodland strawberry	5	Yes	
2. *Taraxacum officinale* / Red seeded dandelion, Common dan	2	Yes	FACU
3. *Rosa multiflora* / Multiflora rose, Multiflora rosa	2	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	9	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Vitis riparia* / River-bank grape	5	Yes	FAC
2.			
3.			
4.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	45	x 3 =	135
FACU species	99	x 4 =	396
UPL species	5	x 5 =	25
Column Totals:	149 (A)		556 (B)

Prevalence Index = B/A = 3.73

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: WL006-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5YR 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter | City/County: Oneida County | Sampling Date: 04/28/2021
Applicant/Owner: MVEDGE | State: New York | Sampling Point: WL006-1W
Investigator(s): JK, KM | Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Flat | Local relief (concave, convex, none): None | Slope (%): 0
Subregion (LRR or MLRA): LRR L MLRA 172 | Lat: 43.13186783 | Long: -75.24142717 | Datum: WGS 1984
Soil Map Unit Name: Undorthents, smoothed | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area within a Wetland?** Yes X No ___
Hydric Soil Present?	Yes X	No ___	If yes, optional Wetland Site ID: W003 PEM
Wetland Hydrology Present?	Yes X	No ___	

Remarks: (Explain alternative procedures here or in a separate report.)
Historically disturbed area, potential remnant fill

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL006-1W

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus tremuloides* / Quaking aspen	15	Yes	FACU
2. *Fraxinus americana* / White ash	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Populus tremuloides* / Quaking aspen	15	Yes	FACU
2. *Salix bebbiana* / Gray willow, Bebb's willow	10	Yes	FACW
3. *Viburnum lentago* / Nanny-berry	5	No	FAC
4.			
5.			
6.			
7.			
	30	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Equisetum laevigatum* / Smooth scouring rush	30	Yes	FACW
2. *Onoclea sensibilis* / Sensitive fern	30	Yes	FACW
3. *Aster* / Aster	15	No	
4. *Scirpus cyperinus* / Woolgrass	10	No	OBL
5. *Fragaria vesca ssp. vesca* / Woodland strawberry	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	70	x 2 =	140
FAC species	5	x 3 =	15
FACU species	40	x 4 =	160
UPL species	15	x 5 =	75
Column Totals:	140 (A)		400 (B)

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: WL006-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	95	7.5YR 4/6	5	C	PL,M	Sandy loam	
7-18	7.5YR 4/2	95	7.5YR 4/4	5	C	M	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter City/County: Oneida County Sampling Date: 04/28/2021
Applicant/Owner: MVEDGE State: New York Sampling Point: WL007-1U
Investigator(s): JK, KM Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): None Slope (%): 0
Subregion (LRR or MLRA): LRR L MLRA 172 Lat: 43.13143833 Long: -75.24083433 Datum: WGS 1984
Soil Map Unit Name: Udorthents, smoothed NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL007-1U

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus tremuloides* / Quaking aspen	70	Yes	FACU
2. *Acer rubrum* / Red maple	5	No	FAC
3.			
4.			
5.			
6.			
7.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhamnus cathartica* / European buckthorn	20	Yes	FAC
2. *Cornus amomum* / Silky dogwood	10	Yes	FACW
3. *Lonicera morrowii* / Morrow's honeysuckle	10	Yes	FACU
4. *Rosa multiflora* / Multiflora rose, Multiflora rosa	5	No	FACU
5.			
6.			
7.			
	45	= Total Cover	
Herb Stratum (Plot size: 8)			
1. *Fragaria vesca ssp. vesca* / Woodland strawberry	5	Yes	FACU
2. *Pastinaca sativa* / Wild parsnip	5	Yes	
3. *Onoclea sensibilis* / Sensitive fern	5	Yes	FACW
4. *Solidago* / Goldenrod	5	Yes	
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	25	x 3 =	75
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	140 (A)		515 (B)

Prevalence Index = B/A = 3.68

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes ___ No X

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

SOIL

Sampling Point: WL007-1U

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/3	100					Sandy silt loam	
12-18	10YR 4/3	100					Sandy silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: 20139 Marcy Nanocenter | City/County: Oneida County | Sampling Date: 04/28/2021
Applicant/Owner: MVEDGE | State: New York | Sampling Point: WL007-1W
Investigator(s): JK, KM | Section, Township, Range: Marcy
Landform (hillslope, terrace, etc): Bowl shaped depression | Local relief (concave, convex, none): Concave | Slope (%): 0-3
Subregion (LRR or MLRA): LRR L MLRA 172 | Lat: 43.131579 | Long: -75.24094633 | Datum: WGS 1984
Soil Map Unit Name: Udorthents, smoothed | NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Is the Sampled Area within a Wetland? Yes X No ____
If yes, optional Wetland Site ID: W004 PFO

Remarks: (Explain alternative procedures here or in a separate report.)
Historically disturbed, potential sand fill

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

Wetland Hydrology Present? Yes X No ____

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

Remarks:

VEGETATION - Use scientific names of plants. Sampling Point: WL007-1W

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides* / Eastern cottonwood	50	Yes	FAC
2. *Populus tremuloides* / Quaking aspen	10	No	FACU
3.			
4.			
5.			
6.			
7.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Viburnum lentago* / Nanny-berry	30	Yes	FAC
2. *Cornus amomum* / Silky dogwood	15	Yes	FACW
3. *Rhamnus cathartica* / European buckthorn	10	No	FAC
4.			
5.			
6.			
7.			
	55	= Total Cover	
Herb Stratum (Plot size: 5)			
1. *Equisetum laevigatum* / Smooth scouring rush	20	Yes	FACW
2. *Onoclea sensibilis* / Sensitive fern	15	Yes	FACW
3. *Carex* / Sedge	10	No	
4. *Cornus amomum* / Silky dogwood	8	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	53	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Vitis riparia* / River-bank grape	5	Yes	FAC
2.			
3.			
4.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	58	x 2 =	116
FAC species	95	x 3 =	285
FACU species	10	x 4 =	40
UPL species	10	x 5 =	50
Column Totals:	173 (A)		491 (B)

Prevalence Index = B/A = 2.84

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata

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

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

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

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

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: WL007-1W

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	90	10YR 5/8	10	C	M	Sandy clay loa	
5-18	10YR 4/2	60	7.5YR 5/8	5	C	M	Sand	
5-18	10YR 5/3	35					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

20139 Marcy Nanocenter Stream Scoring Form 1

Project	20139 Marcy Nanocenter Wetland Delineation
ID	146262
Survey Date	04/27/2021
User	Joseph Knight
Town/County/State	Town to Volney, Otsego County
Investigator(s)	JK, KM
Stream Delineation ID	ST004
Latitude, Longitude	43.13043867,-75.24015083
Latitude	43.13043867
Longitude	-75.24015083
Datum	NAD83/2011
Accuracy	0.0 m
Current Precipitation	None
Precipitation in Past 48 Hours	None

General Characteristics

NYSDEC Mapped Stream	No, but connects to mapped stream
NYSDEC mapped Classification	Connects to ST003, which is Class C
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	0
Stream Gradient	Gentle (0-5%)
Substrate	Silt/Clay (No grit)
OHWM width for stream reach (feet)	1-3

Geomorphology

Continuity of channel bed and bank	Weak (1)
Sinuosity of channel along thalweg	Absent (0)
In Channel Structures	Absent (0)
Particle Size of Stream Substrate	Weak (1)
Active/Relic Floodplain	Absent (0)

Depositional Bars or Benches	Absent (0)
Recent Alluvial Deposits	Absent (0)
Are Headcuts present	Absent (0)
Grade Control	Absent (0)
Natural Valley	Weak (0.5)
Second or Greater Order Channel	No (0)

Hydrology

Presence of Baseflow	Absent (0)
Iron Oxidizing Bacteria	Weak (1)
Leaf Litter	Strong (0)
Sediment on Plants or Debris	Absent (0)
Organic Debris Lines or Piles	Absent (0)
Soil-based evidence of high water table	No (0)

Biology

Fibrous Roots in Streambed	Moderate (1)
Rooted Upland Plants in Streambed	Weak (2)
Aquatic Macroinvertebrates	Absent (0)
Aquatic Mollusks	Absent (0)
Fish	Absent (0)
Crayfish	Absent (0)
Amphibians	Absent (0)
Algae	Absent (0)
Wetland Plants in Streambed	Other (0)

Stream Type Determination

Total Score	6.5
Stream Determination	Ephemeral (<19)

Photos and Notes

Notes

20139 Marcy Nanocenter Stream Scoring Form 1

Project	20139 Marcy Nanocenter Wetland Delineation
ID	146263
Survey Date	04/27/2021
User	Joseph Knight
Town/County/State	Town to Volney, Otsego County
Investigator(s)	JK, KM
Stream Delineation ID	ST003
Latitude, Longitude	43.13106400,-75.23919483
Latitude	43.131064
Longitude	-75.23919483
Datum	NAD83/2011
Accuracy	0.0 m
Current Precipitation	None
Precipitation in Past 48 Hours	None

General Characteristics

NYSDEC Mapped Stream	Yes
NYSDEC mapped Classification	Class C
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	14
Stream Gradient	Gentle (0-5%)
Substrate	Boulder, Cobble, Gravel, Sand (Gritty feel), Silt/Clay (No grit)
OHWM width for stream reach (feet)	10-30

Geomorphology

Continuity of channel bed and bank	Strong (3)
Sinuosity of channel along thalweg	Moderate (2)
In Channel Structures	Moderate (2)
Particle Size of Stream Substrate	Strong (3)
Active/Relic Floodplain	Strong (3)
Depositional Bars or Benches	Strong (3)
Recent Alluvial Deposits	Weak (1)
Are Headcuts present	Absent (0)
Grade Control	Strong (1.5)
Natural Valley	Weak (0.5)

Second or Greater Order Channel	Yes (3)

Hydrology

Presence of Baseflow	Strong (3)
Iron Oxidizing Bacteria	Strong (3)
Leaf Litter	Absent (1.5)
Sediment on Plants or Debris	Moderate (1)
Organic Debris Lines or Piles	Moderate (1)
Soil-based evidence of high water table	Yes (3)

Biology

Fibrous Roots in Streambed	Absent (3)
Rooted Upland Plants in Streambed	Absent (3)
Aquatic Macroinvertebrates	Moderate (2)
Aquatic Mollusks	Weak (1)
Fish	Weak (0.5)
Crayfish	Weak (0.5)
Amphibians	Weak (0.5)
Algae	Moderate (1)
Wetland Plants in Streambed	Other (0)

Stream Type Determination

Total Score	46
Stream Determination	Perennial (≥30)

Photos and Notes

Notes

20139 Marcy Nanocenter Stream Scoring Form 1

Project	20139 Marcy Nanocenter Wetland Delineation
ID	146262
Survey Date	04/27/2021
User	Joseph Knight
Town/County/State	Town to Volney, Otsego County
Investigator(s)	JK, KM
Stream Delineation ID	ST002
Latitude, Longitude	43.13043867,-75.24015083
Latitude	43.13043867
Longitude	-75.24015083
Datum	NAD83/2011
Accuracy	0.0 m
Current Precipitation	None
Precipitation in Past 48 Hours	None

General Characteristics

NYSDEC Mapped Stream	No, but connects to mapped stream
NYSDEC mapped Classification	Verify
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	0
Stream Gradient	Gentle (0-5%)
Substrate	Silt/Clay (No grit)
OHWM width for stream reach (feet)	1-3

Geomorphology

Continuity of channel bed and bank	Weak (1)
Sinuosity of channel along thalweg	Absent (0)
In Channel Structures	Absent (0)
Particle Size of Stream Substrate	Weak (1)
Active/Relic Floodplain	Absent (0)

Depositional Bars or Benches	Absent (0)
Recent Alluvial Deposits	Absent (0)
Are Headcuts present	Absent (0)
Grade Control	Absent (0)
Natural Valley	Weak (0.5)
Second or Greater Order Channel	No (0)

Hydrology

Presence of Baseflow	Absent (0)
Iron Oxidizing Bacteria	Weak (1)
Leaf Litter	Strong (0)
Sediment on Plants or Debris	Absent (0)
Organic Debris Lines or Piles	Absent (0)
Soil-based evidence of high water table	No (0)

Biology

Fibrous Roots in Streambed	Moderate (1)
Rooted Upland Plants in Streambed	Weak (2)
Aquatic Macroinvertebrates	Absent (0)
Aquatic Mollusks	Absent (0)
Fish	Absent (0)
Crayfish	Absent (0)
Amphibians	Absent (0)
Algae	Absent (0)
Wetland Plants in Streambed	Other (0)

Stream Type Determination

Total Score	6.5
Stream Determination	Ephemeral (<19)

Photos and Notes

Notes

20139 Marcy Nanocenter Stream Scoring Form 1

Project	20139 Marcy Nanocenter Wetland Delineation
ID	146263
Survey Date	04/27/2021
User	Joseph Knight
Town/County/State	Town to Volney, Otsego County
Investigator(s)	JK, KM
Stream Delineation ID	ST001
Latitude, Longitude	43.13106400,-75.23919483
Latitude	43.131064
Longitude	-75.23919483
Datum	NAD83/2011
Accuracy	0.0 m
Current Precipitation	None
Precipitation in Past 48 Hours	None

General Characteristics

NYSDEC Mapped Stream	Yes
NYSDEC mapped Classification	Verify
Drainage Ditch	No
Surface Water Depth at Thalweg (Inches)	14
Stream Gradient	Gentle (0-5%)
Substrate	Boulder, Cobble, Gravel, Sand (Gritty feel), Silt/Clay (No grit)
OHWM width for stream reach (feet)	10-30

Geomorphology

Continuity of channel bed and bank	Strong (3)
Sinuosity of channel along thalweg	Moderate (2)
In Channel Structures	Moderate (2)
Particle Size of Stream Substrate	Strong (3)
Active/Relic Floodplain	Strong (3)
Depositional Bars or Benches	Strong (3)
Recent Alluvial Deposits	Weak (1)
Are Headcuts present	Absent (0)
Grade Control	Strong (1.5)
Natural Valley	Weak (0.5)

Second or Greater Order Channel	Yes (3)

Hydrology

Presence of Baseflow	Strong (3)
Iron Oxidizing Bacteria	Strong (3)
Leaf Litter	Absent (1.5)
Sediment on Plants or Debris	Moderate (1)
Organic Debris Lines or Piles	Moderate (1)
Soil-based evidence of high water table	Yes (3)

Biology

Fibrous Roots in Streambed	Absent (3)
Rooted Upland Plants in Streambed	Absent (3)
Aquatic Macroinvertebrates	Moderate (2)
Aquatic Mollusks	Weak (1)
Fish	Weak (0.5)
Crayfish	Weak (0.5)
Amphibians	Weak (0.5)
Algae	Moderate (1)
Wetland Plants in Streambed	Other (0)

Stream Type Determination

Total Score	46
Stream Determination	Perennial (≥30)

Photos and Notes

Notes

EDR Stream Determination Data Form

Project Name: Marcy Nanocenter Parkway Mixed-Use Master Plan Project Number: 201369

Survey Date: November 5, 2020

Evaluators: Rachael Miller, Courtney Scoles, and Samuel Gordon

Stream ID: ST001 Data Point ID:

Town: Town of Marcy County: Oneida State: New York

Latitude: 43.13292 Longitude: -75.24217

NYSDEC Classification: Yes☐ No but Connects to Class _☐ Unclassified ☒

NYSDEC Stream ID: N/A

Previous Weather: Snow ☐ Heavy Rain ☐ Rain ☐ None ☒ Unknown ☐

Adjacent Landcover: maintained lawn

Ecological Communities: N/A

Hydrologic Characteristics

Perceptible Flow? Yes ☐ No ☒

Flow Regime: R1-Tidal ☐ R2-Lower Perennial ☐
R3-Upper Perennial ☐ R4-Intermittent ☐
R5-Unknown Perennial ☐ R6-Ephemeral ☒

Flow Direction: N/A

Surface Water Present: Yes ☐ No ☒

Surface Water Depth at Thalweg: N/A inches

Wetted (Stream) Width: N/A feet

Geomorphologic Characteristics

Gradient: Gentle (0-5 %) ☒ Moderate (6-11 %) ☐ Steep (>12 %) ☐

Substrate: Silt/Clay (<0.062 mm) ☒ Sand (0.062–2 mm) ☐ Gravel (2-64 mm) ☒
Cobble (64-256 mm) ☐ Boulder (256-4096 mm) ☐ Bedrock (>4096 mm) ☐

Bankful Width: approximately 2-4 feet

Bank Height: 0.5-2 feet

Stream Conditions

Undercut Banks: Yes☐ No☒ Description:

Overhanging Vegetation: Yes☒ No☐ Description: channel filled with vegetation

Deep Pools Present: Yes☐ No☒ Description:

Coarse Woody Debris: Yes☐ No☒ Description:

Channel Alteration: Channelization ☒ Channel Armoring ☐ Impoundment ☐ Other:

Is the stream a Drainage Ditch: Yes ☒ No ☐

Additional Notes

EDR Stream Determination Data Form

Project Name: Marcy Nanocenter Parkway Mixed-Use Master Plan Project Number: 201369

Survey Date: November 5, 2020

Evaluators: Rachael Miller, Courtney Scoles, and Samuel Gordon

Stream ID: ST002 Data Point ID:

Town: Town of Marcy County: Oneida State: New York

Latitude: 43.13221 Longitude: -75.24173

NYSDEC Classification: Yes☐ No but Connects to Class _☐ Unclassified ☒

NYSDEC Stream ID: N/A

Previous Weather: Snow ☐ Heavy Rain ☐ Rain ☐ None ☒ Unknown ☐

Adjacent Landcover: maintained lawn

Ecological Communities: N/A

Hydrologic Characteristics

Perceptible Flow? Yes ☐ No ☒

Flow Regime: R1-Tidal ☐ R2-Lower Perennial ☐
R3-Upper Perennial ☐ R4-Intermittent ☐
R5-Unknown Perennial ☐ R6-Ephemeral ☒

Flow Direction: N/A

Surface Water Present: Yes ☐ No ☒

Surface Water Depth at Thalweg: N/A inches

Wetted (Stream) Width: N/A feet

Geomorphologic Characteristics

Gradient: Gentle (0-5 %) ☒ Moderate (6-11 %) ☐ Steep (>12 %) ☐

Substrate: Silt/Clay (<0.062 mm) ☒ Sand (0.062–2 mm) ☐ Gravel (2-64 mm) ☒
Cobble (64-256 mm) ☐ Boulder (256-4096 mm) ☐ Bedrock (>4096 mm) ☐

Bankful Width: approximately 2-4 feet

Bank Height: 0.5-2 feet

Stream Conditions

Undercut Banks: Yes☐ No☒ Description:

Overhanging Vegetation: Yes☒ No☐ Description: channel filled with vegetation

Deep Pools Present: Yes☐ No☒ Description:

Coarse Woody Debris: Yes☐ No☒ Description:

Channel Alteration: Channelization ☒ Channel Armoring ☐ Impoundment ☐ Other:

Is the stream a Drainage Ditch: Yes ☒ No ☐

Additional Notes

APPENDIX C

Photo Documentation

Viewpoint 1

Wetland 001 Open Water
Wetland

Viewpoint 2

Wetland 001 Open Water
Wetland

Viewpoint 3

Wetland 002 Open Water
Wetland

Viewpoint 4

Wetland 002 Open Water
Wetland

Viewpoint 5

Wetland 003 Palustrine Emergent Wetland with Trees along Wetland Boundary

Viewpoint 6

Wetland 003 Palustrine Emergent Wetland

Viewpoint 7

Wetland 004 Palustrine
Forested Wetland

Viewpoint 8

Wetland 005 Palustrine
Emergent Wetland

Viewpoint 9

Wetland 005 Palustrine
Forested Wetland

Viewpoint 10

Wetland 006 Palustrine
Emergent Wetland

Viewpoint 11

Wetland 007 Palustrine
Forested Wetland

Viewpoint 12

Ephemeral Stream 001

Viewpoint 13

Ephemeral Stream 002

Viewpoint 14

Ephemeral Stream 002

Viewpoint 15

Ephemeral Stream 002 and Conveyance Pipe

Viewpoint 16

Upper Perennial Stream 003

Viewpoint 17

Upper Perennial Stream 003

Viewpoint 18

Ephemeral Stream 004

Viewpoint 19

Representative Forested Upland

Viewpoint 20

Representative Grassland Upland