Public Notice

U.S. Army Corps
of Engineers
Buffalo District
CELRB-TD-R

Applicant:
The Wetland Trust
(Mohawk River Preserve ILF Site)

Published: October 8, 2020
Expires: November 9, 2020

Application No: LRB-2019-00486 & LRB-2010-00963
Section: NY

All written comments should reference the above Application No. and be addressed to:
Attn: Susan L. Baker
US Army Corps of Engineers, Buffalo District
1776 Niagara Street
Buffalo, NY 14207

INTERESTED PARTIES ARE HEREBY NOTIFIED THAT THE WETLAND TRUST HAS PROPOSED A MITIGATION SITE TO BE INCOPORATED INTO THEIR IN-LIEU FEE MITIGATION PROGRAM (ILFP). A MITIGATION PLAN HAS BEEN RECEIVED FOR THIS SITE PURSUANT TO 33 CFR 332 AND 40 CFR 230. THE PURPOSE OF THIS PUBLIC NOTICE IS TO SOLICIT COMMENTS FROM THE PUBLIC REGARDING THE ESTABLISHMENT OF THE PROPOSED MITIGATION SITE AND THE MITIGATION PLAN. AUTHORIZATION UNDER SECTION 404 OF THE CLEAN WATER ACT WOULD BE REQUIRED FOR THE DISCHARGE OF DREDGED AND/OR FILL MATERIAL IN WATERS OF THE U.S. RESULTING FROM CONSTRUCTION OF THE MITIGATION SITE. NO DECISION HAS BEEN MADE AS TO WHETHER OR NOT THIS MITIGATION SITE WILL BE APPROVED.

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

LOCATION: Near the Erie Canal, Lock 19 located off NY Route 5 South, Town of Schuyler, Herkimer County, New York (Sheet 1 of 5), Center: Latitude 43.071167, Longitude -75.117052

BACKGROUND: Under Section 404 of the Clean Water Act (CWA), applicants requesting Department of the Army permits to discharge dredged or fill material into waters of the United States, including wetlands, are often required to mitigate for permitted wetland losses by establishing, restoring, enhancing, or in exceptional circumstances, preserving wetlands. One method of fulfilling this obligation can be to purchase advance credits from an approved ILFP. The establishment and use of an ILFP mitigation site must be in accordance with the ILFP instrument signed by the Interagency Review Team (IRT). The IRT is comprised of the U.S. Army Corp of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the Natural Resources Conservation Service, the New York State Department of Environmental Conservation, the New York City Department of Environmental Protection, and

National Oceanic and Atmospheric Administration Fisheries. The Wetland Trust ILFP was approved in October 2014 and is authorized to provide wetland mitigation via sale of advance credits in thirteen service areas within the State of New York, including the Mohawk Service Area (USGS 8-digit HUC 02020004). The proposed Mohawk River Preserve Mitigation Site (Site) would be used to fulfill mitigation obligations assumed by The Wetland Trust through sale of advance wetland credits and to potentially generate additional wetland credits for sale in the Mohawk Service Area. To date, a total of 13.851 advance wetland credits have been sold in the Mohawk Service Area.

SITE DESCRIPTION: The Site is ~156.4 acres in size. The majority of the Site has been subject to agricultural use under a rotation of row crops (Sheet 3 of 5). Hydrologic modifications to the Site have occurred such as the construction of ditches. The Site contains 44 acres of existing wetlands, five drainage ditches, and Sterling Creek (Sheet 2 of 5).

PROJECT DESCRIPTION: The proposed activities on the Site would include re-establishing forested (PFO) wetlands; rehabilitating PFO wetlands; establishing upland buffer; preserving existing PFO wetlands; and preserving upland buffer. Preservation of the Site would be accomplished via the recordation of a conservation easement.

The proposed mitigation project would be accomplished in two phases. Phase 1 would include the hydrological restoration of the northwestern portion of the Site and the preservation of existing high-quality wetlands (Sheet 4 of 5). Phase 2 would include PFO wetland re-establishment and upland forested buffer establishment in the central and southeastern portion of the site (Sheet 5 of 5). Proposed work would include the installation of ditch plugs, the installation of one or more groundwater dams parallel to the Mohawk River, soil preparation, and management of invasive species. Additionally, the installation of streambank protection in the Sterling Creek stream channel would be performed.

Establishing the desired plant community would be achieved by active means. All re-established and rehabilitated wetland areas would be broadcast with a wetland seed mix containing species with variable shade tolerance. Shrub and tree plantings would occur in areas slated for forested wetland habitat. Upland buffer rehabilitation areas would be planted with trees.

Several invasive plant species persist on the Site including, but not limited to, common reed (*Phragmites australis),* narrowleaf cattail (*Typha angustifolia*), reed canary grass (*Phalaris arundinacea)*, purple loosestrife (*Lythrum salicaria*), and non-native honeysuckle species (*Lonicera* spp).

The Site is proposed to generate 63.964 wetland credits as shown in the table below.

Cover type	Mitigation type	Ratio	Phase 1 acres (credits)	Phase 2 acres (credits)	Total Credits
Palustrine Forest Wetland	Re-establishment	1:1	16.79 (16.79)	36.16 (36.16)	52.95
Palustrine Forest in 150-ft. railroad zone	Re-establishment	4:1	2.49 (0.62)		0.62
Palustrine Forest Wetland	Rehabilitation of drained wetland areas	3:1		0.48 (0.16)	0.16
Palustrine Forest Wetland	Rehabilitation of drained active agricultural areas	1:1	3.43 (3.43)		3.43
Palustrine Forest Wetland in 150-ft. railroad zone	Rehabilitation	5:1	0.02 (0.004)		0.004
Upland Forest Buffer	Establishment	10:1		41.29 (4.13)	4.13
Wetland	Preservation	20:1	43.80* (2.19)		2.19
Upland Forest Buffer	Preservation	25:1	12.17 (0.49)		0.49
Permanent Fill	Impact	1:1	-0.01		-0.01
Total Credits			**23.514**	**40.45**	**63.964**

The entire Mohawk River Preserve Mitigation Site Plan, including site photographs, may be found on the Buffalo District's website along with this Public Notice: https://www.lrb.usace.army.mil/Missions/Regulatory/Public-Notices/ The plan includes the proposed mitigation work plan as well as other required mitigation plan elements. All portions of the plan are subject to review and approval by the IRT and Corps of Engineers.

WATER QUALITY CERTIFICATION: A Section 401 Water Quality Certification may be required from the NYSDEC in conjunction with the proposed establishment of this mitigation site.

HISTORIC AND CULTURAL RESOURCES: The New York State Office of Parks, Recreation & Historic Preservation (NYSOPRHP) Cultural Resource Information System (CRIS) was reviewed for National Register listed properties at or near the proposed ILFP sites. No known eligible or listed federal historic properties or cultural resources were identified within the limits of the site as per the CRIS however, the site is located within an archeologically sensitive area. No structures exist on the property. Based on the information from the CRIS and previous coordination between The Wetland Trust and NYSOPRHP, the Corps has determined

that the proposed activity would have no effect on any eligible or listed federal historic/cultural resources. Additional information concerning historic properties should be submitted to the Corps before the end of the comment period of this notice. The Corps will forward the submitted information to the NYSOPRHP for their review.

THREATENED & ENDANGERED SPECIES: Pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the Corps of Engineers will consult with the USFWS to evaluate any potential impacts federally listed threatened and endangered species, and to ensure that the proposed activity is not likely to jeopardize their continued existence or result in the destruction or adverse modification of critical habitat. Based on a search of the iPAC system, no federally listed species were identified as being expected to occur at this site therefore, it has been determined that the project will have no effect on any federally listed species.

COMMENT PERIOD: Written statements received in this office within 30 days from the date of this notice will become a part of the record and will be considered in the determination. Comments or questions pertaining to the work described in this notice should reference the Application Number and be directed to the attention of Susan Baker, who can be contacted at the above address, by calling (716) 879-4474, or by email at Susan.L.Baker@usace.army.mil. A lack of response will be interpreted as meaning that there is no objection to the work as proposed.

EVALUATION: After the end of the comment period, the district engineer will review all comments received and make an initial determination as to the potential of the proposed project to provide compensatory mitigation for activities authorized by Department of the Army permits.

USACE is soliciting comments from the public; Federal, State, and local agencies and officials; American Indian Tribes; and other interested parties in order to consider and evaluate the proposed activity. All comments received will be considered by USACE during the formulation of the initial determination of potential for the proposed activity.

REQUEST FOR PUBLIC HEARING: Any person may request a public hearing. The request must be submitted in writing to the District Engineer within the designated comment period of the notice and must state the specific reasons for requesting the public hearing.

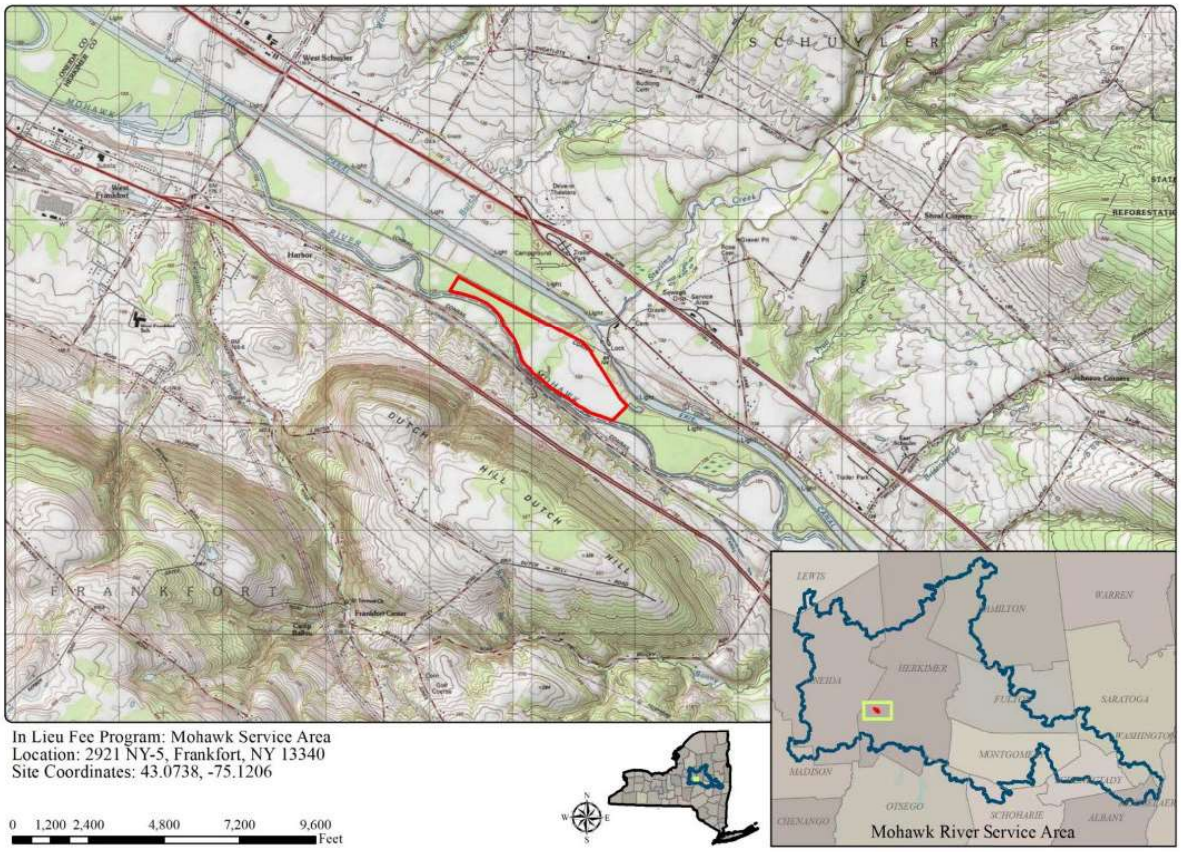
SIGNED

Diane C. Kozlowski
Chief, Regulatory Branch

NOTICE TO POSTMASTER: It is requested that this notice be posted continuously and conspicuously for **30** days from the date of issuance.

The Wetland Trust- Mohawk River Preserve ILF Site
D/A Processing No. LRB-2019-00486
Herkimer County, NY
Quad: Ilion
Sheet 1 of 5

Figure 1. TWT Mohawk River Preserve Location.



The Wetland Trust- Mohawk River Preserve ILF Site
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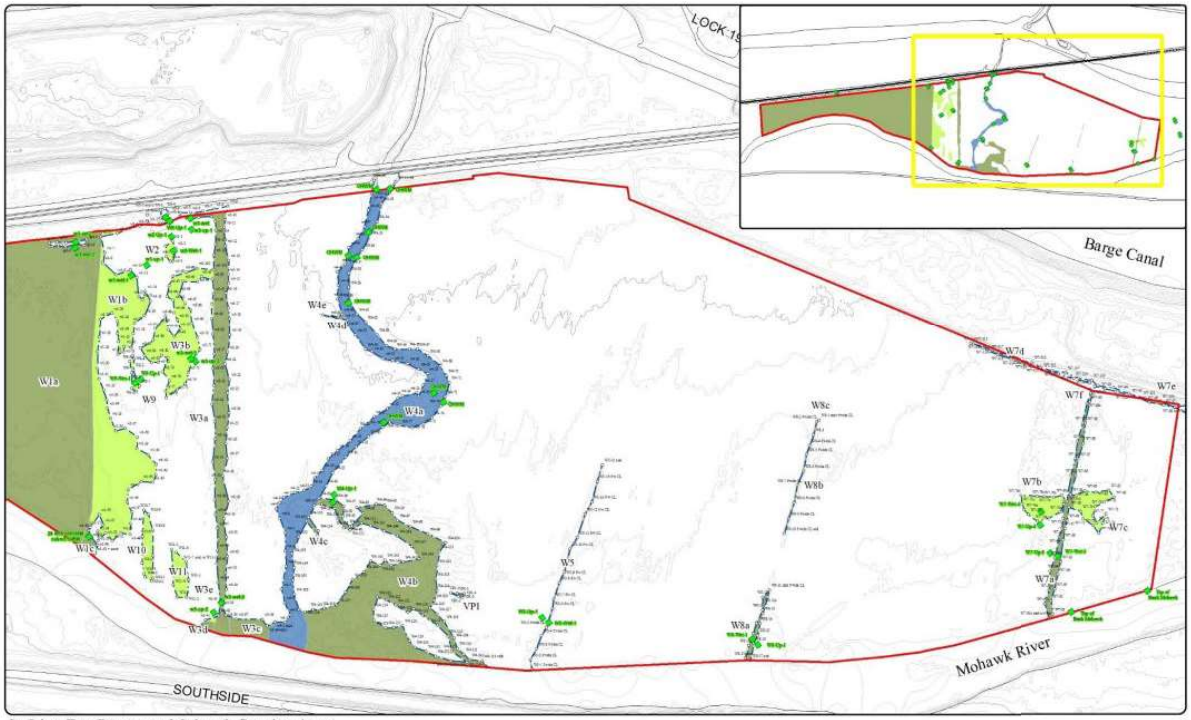
Herkimer County, NY
Quad: Ilion
Sheet 2 of 5

Figure 5: Mohawk Preserve Wetland Delineation Map.



In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206
2' Contours
1 in = 422 ft

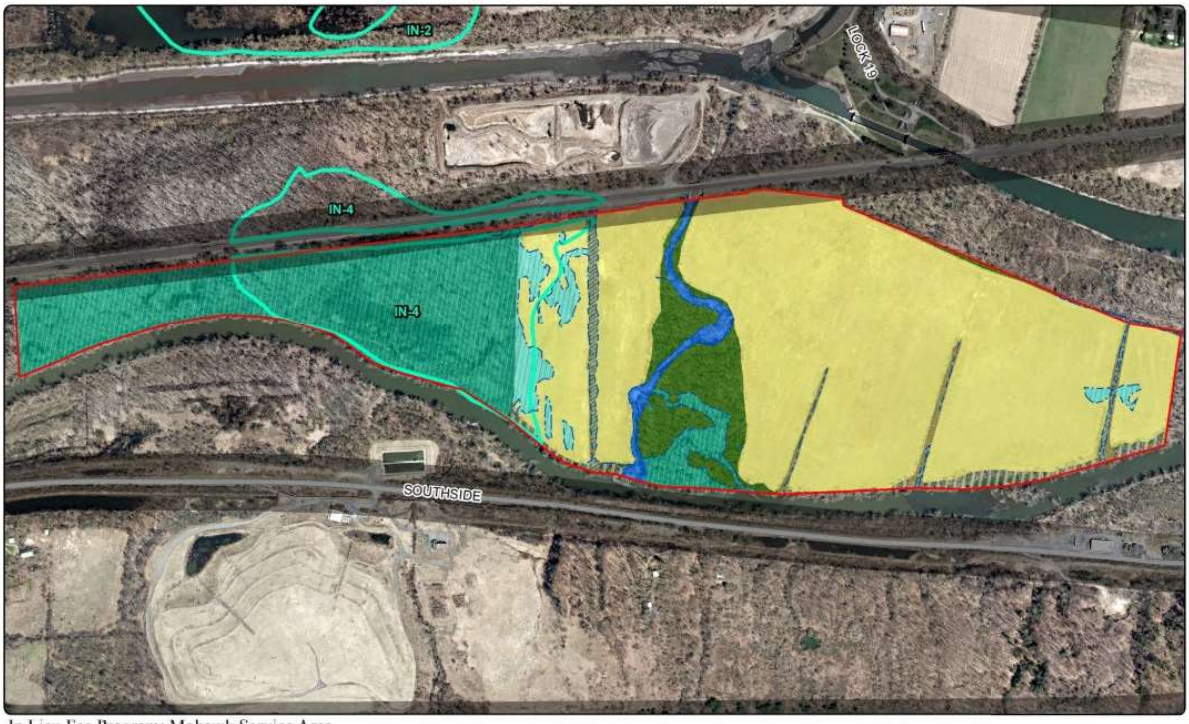
0 140 280 560 840 1,120 Feet

Legend
- Delineation Points
- Wetland Delineation
- Mohawk River Preserve Property Boundary
- Data Points

Wetland Cover
- PEM
- PFO
- R4SBC

The Wetland Trust- Mohawk River Preserve ILF Site
D/A Processing No. LRB-2019-00486
Herkimer County, NY
Quad: Ilion
Sheet 3 of 5

Figure 4: Mohawk River Preserve Land Use.



In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 687 ft

0 230 460 920 1,380 1,840 Feet

Legend
- Mohawk River Preserve Boundary
- Wetland Delineation
- DEC Regulated Wetland
- 150' Buffer

Landuse
- Agricultural Fields - 93.05 acres
- Fencerow - 1.81 acres
- Agricultural Fields, Wetland - 4.22 acres
- Upland Forest - 10.59 acres
- Forested Wetland - 39.34 acres
- Forested Wetland, Fencerow - 2.09 acres
- Riparian Buffer - 2.80 acres
- Stream Channel - 2.67 acres

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The Wetland Trust- Mohawk River Preserve ILF Site
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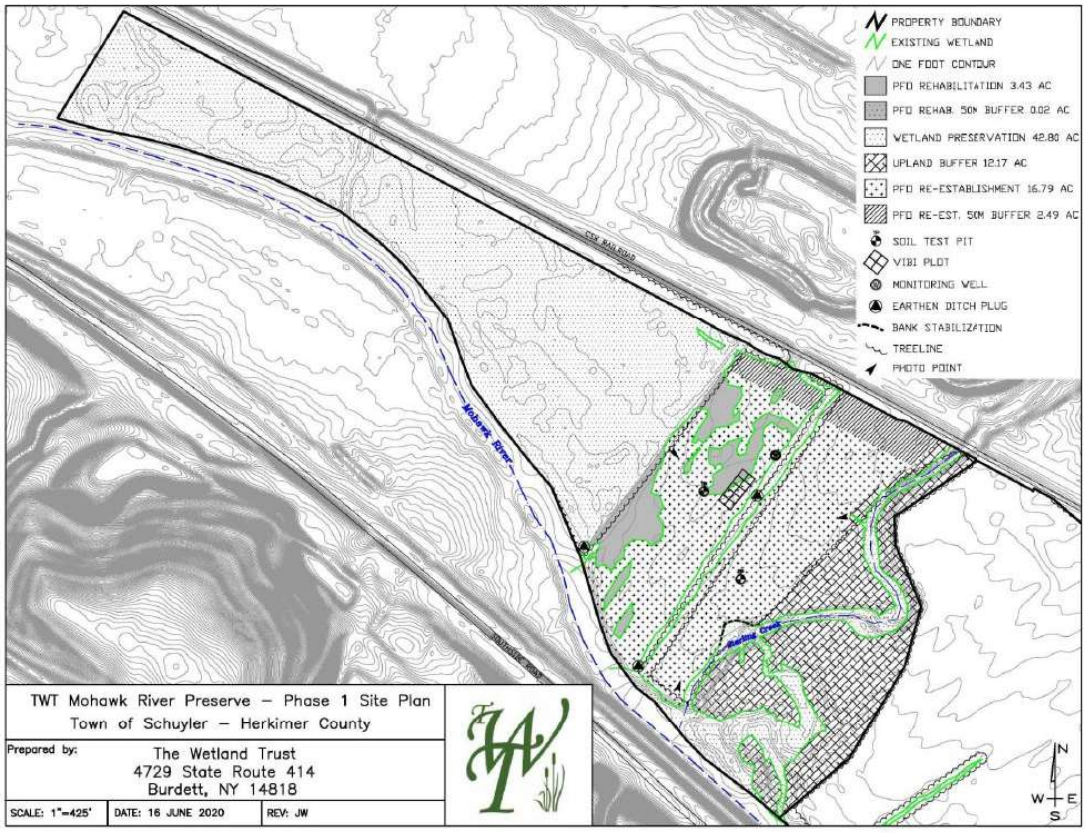
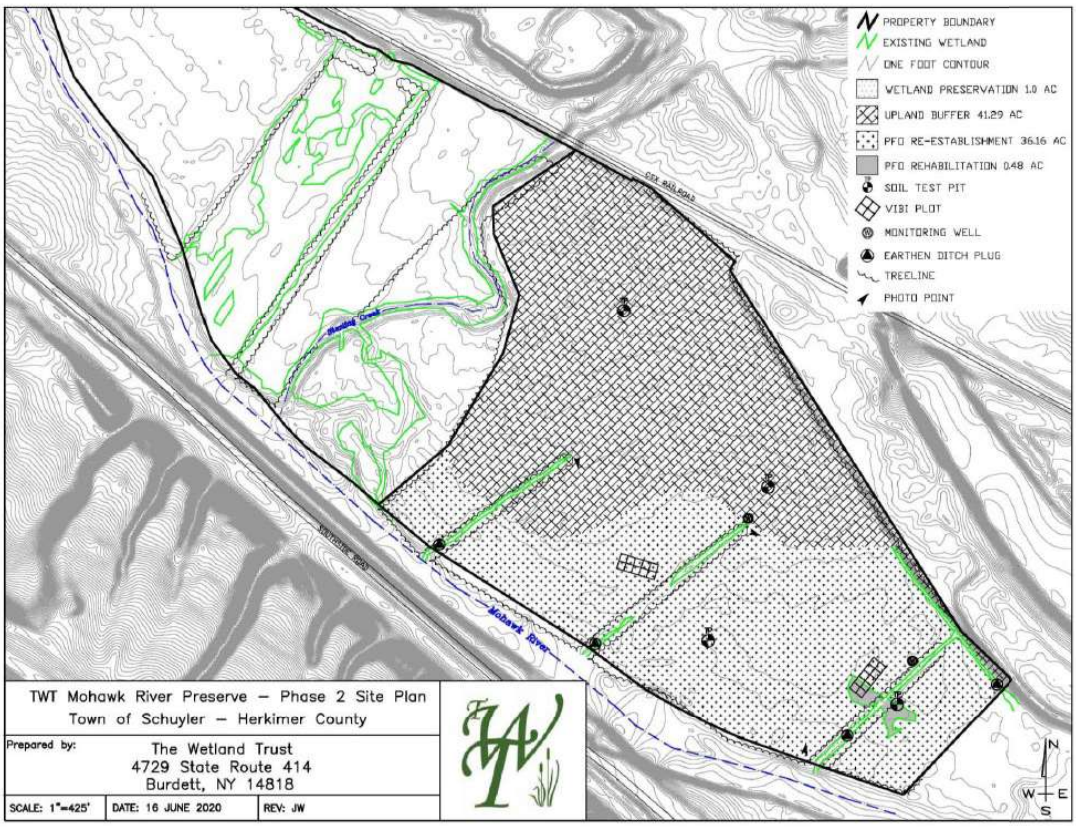
Quad: Ilion
Sheet 4 of 5

Figure 2: Mohawk River Preserve Phase 1 Site Plan.



The Wetland Trust- Mohawk River Preserve ILF Site
D/A Processing No. LRB-2019-00486
Herkimer County, NY
Quad: Ilion
Sheet 5 of 5

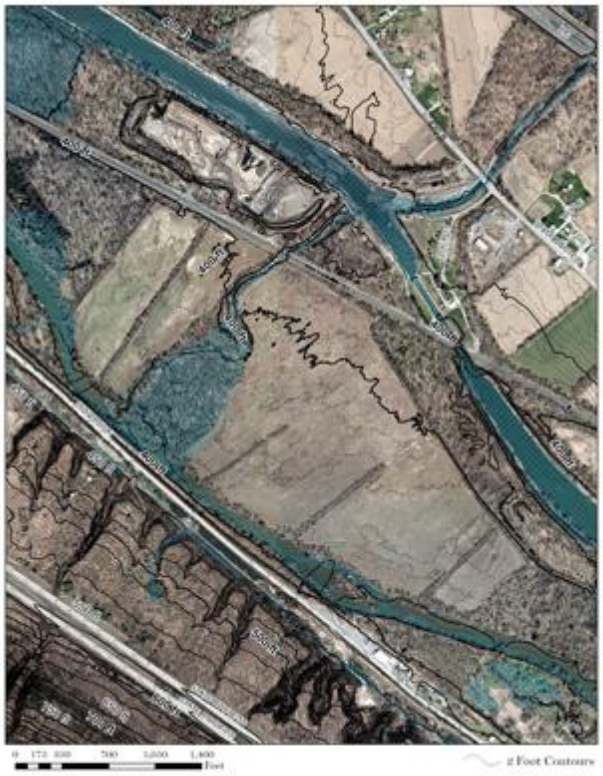
Figure 3: Mohawk River Preserve Phase 2 Site Plan.



Wetland Mitigation Plan
Mohawk River Preserve
Mohawk Service Area, HUA 02020004

The Wetland Trust's Susquehanna Basin Headwaters and Adjacent Basins In-Lieu Fee Program

August 2020



Prepared by:
The Wetland Trust, Inc.
4729 State Route 414
Burdett, NY 14818
607-765-4780
www.thewetlandtrust.org

Submitted to:
United States Army Corps of Engineers
New York and Buffalo District's Interagency Review Team

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1. Introduction and Objectives

The Wetland Trust's Mohawk River Preserve encompasses a wetland mitigation site in the Mohawk River Basin, HUA 02020004, Service Area (SA) 6. The property is located within The Wetland Trust's (TWT) Susquehanna Basin Headwaters and Adjacent Basins In-Lieu Fee Program (ILFP). TWT, the ILFP Sponsor, is responsible for developing a mitigation plan for every site within its program. This plan provides all necessary site descriptions and actions to be taken for developing mitigation credits as required by Federal Register Volume 73, Number 70, Part 332.4.

The Mohawk River Preserve is bounded by the Erie Canal to the north and Mohawk River to the south, with expansive wet farm fields providing excellent wetland restoration opportunity, and a large wetland forest to provide addition habitat diversity. It is relatively open, with topography and hydrology lending itself to forested and scrub shrub wetland habitats. Its large size and location provide ample room for adequate buffers, hydrology, and habitat connectivity. This plan includes wetland establishment, re-establishment, rehabilitation, and preservation components developed for mitigation credits.

The objectives of this plan are to:

a. Develop mitigation credits to meet Mohawk River Basin, HUA 02020004, SA 6 needs.

b. Re-establish, rehabilitate, and preserve the functions and services of wetlands on the site.

c. Through objective "b" provide additional habitat for wetland wildlife species, including those in decline, such as cerulean warblers, *Setophaga cerulea*, which prefer mature riparian bottomland forest.

2. Site Selection

TWT purchased a 156.4-acre parcel near the Erie Canal, Lock 19 located off NY Route 5 South, Town of Schuyler, Herkimer County in the 8-digit HUA 02020006, (Latitude 43.071167, Longitude -75.117052 and Figure 1). Legal access to the Mohawk River Preserve is through NYS Canal Corporation and CSX Railroad properties. The parcel is somewhat linear, with its 7,600-foot southern boundary along the Mohawk River and a 4,500-foot northern boundary along CXS, NYS Canal Corporation. There is one adjacent private landowner.

This location was selected for its substantial size, which lends itself to long-term stability. In addition, its soils and topography provide for substantial scrub shrub and forested wetland re-establishment and rehabilitation. Furthermore, there are older-growth forested and shrub buffers on the site's perimeter. Its relatively isolated location precludes nearby development. The generally rural area—with large residential parcels, scattered agriculture, and low development pressure—adds further protection value.

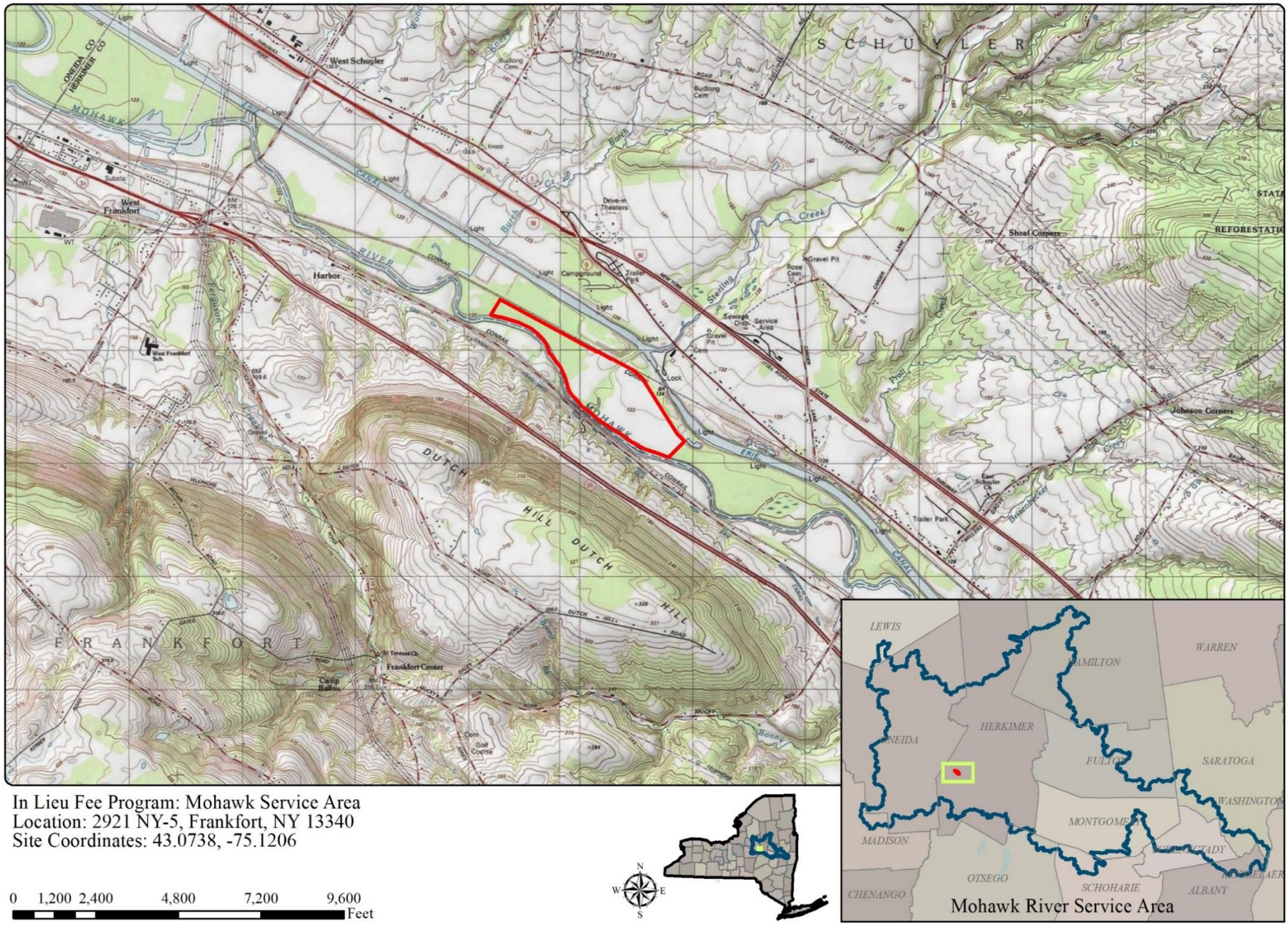
3. Site Protection Instrument

The Wetland Trust, Inc., 4729 State Route 414 Burdett, NY 14818 is a 501(c)(3) nonprofit corporation whose mission is the protection, conservation, and restoration of wetlands. TWT presently owns fee simple, and plans to own in perpetuity, the 156.4-acre parcel known as the Mohawk River Preserve as described in this mitigation plan.

There are two layers of protection in this project. First, TWT is the permanent landowner and ILFP Sponsor providing for a robust protection layer, as any easement violation will also impact the viability of the Sponsor's ILFP Instrument (ILFPI). The Bank Sponsor, a land trust, also own the mitigation site. This arrangement reduces the risk of protection violations, compared to a situation where the lands were privately owned.

Second, TWT will have on file at the Herkimer County Clerk's office a USACE-approved Conservation Easement (CE) (Appendix A), as well as this Mitigation Plan. This plan outlines the 156.4-acre CE area that is protected as the Mohawk River Preserve Mitigation Site within which mitigation credits will be developed. In this instance, the entire tax parcel representing the Mohawk River Preserve and the CE boundary are one and the same. The CE is held by The Wetland Conservancy, Inc. (TWC), P.O. Box 220, Burdett, NY 14818-0220, a 501(c)(3) nonprofit corporation. The CE names the USACE as third-party entity to be notified in the case of violations.

Figure 1. TWT Mohawk River Preserve Location.



3.1 Default provisions

Should the District Engineer (DE), acting in consultation with its NY Interagency Review Team (IRT) determine that the Sponsor is in material default of any provision of the site's Mitigation Plan or the ILFPI, the DE may begin a series of actions to rectify the issue in a stepped approach.

3.1.1 The DE may require adaptive management and other actions to correct the deficiencies and the Sponsor agrees to implement all such actions, reporting to the DE its actions for review and approval.

3.1.2 Should actions in 3.1.1 not be considered satisfactory by the DE, then the DE may notify the Sponsor that the sale or transfer of any credits from that particular site (or in the case of an ILFPI default, all sites) will be suspended until the appropriate deficiencies have been remedied. Upon notice of such suspension, the Sponsor agrees to immediately cease all sale or transfer of mitigation credits until the Corps informs the Sponsor in writing that sales or transfers may be resumed.

3.1.3 Should the Sponsor remain in default, the DE, acting in consultation with the IRT, may terminate operation of this site; in the case of an ILFPI failure, the DE, acting in consultation with the IRT would terminate the entire ILFP. Upon termination, the Sponsor agrees to perform and fulfill all obligations relating to credits that were sold or transferred prior to termination, either from the specific site terminated or the entire ILFPI, depending on the specific circumstances being addressed. Closure procedures are more fully described in 3.2.

3.2 Closure provisions

Closure may be initiated for the entire ILFPI, or individual site within the ILFPI by:

a. the DE, acting in consultation with the IRT, due to circumstances as described under 3.1.3, where a site and/or ILFPI is in default, or

b. the Sponsor, who believes due to circumstances as described under 3.1.3 that Termination is the best avenue to address default issues, or

c. a determination of the DE, acting in consultation with the IRT, and the Sponsor that all applicable performance measures have been achieved, all available credits for that ILFP site have been debited or abandoned, and the sponsor has complied with all other terms of the Mitigation Plan and Instrument.

d. Furthermore,

- Upon ILFP closure (i.e., all individual sites within the ILFP have been closed), no further credit sale or transfer may occur at any ILFP site, and the DE, acting in consultation with the IRT, will perform a final compliance inspection.

- The period of long-term ownership/stewardship/preservation begins at closure under all circumstances described in 3.2 a, b, or c. This phase, for the entire ILFPI, or the specific ILFP site being closed, must be fully funded with adequate resources, and approved by the DE, acting in consultation with the IRT.

- In cases where stewardship transfer is part of the closure procedures, the new steward will be identified and approved by the DE, acting in consultation with the IRT.

3.3 Force majeure provisions

It is specifically acknowledged that remedies in this Mitigation Plan or ILFPI do not apply to violations, natural or unnatural impacts caused by third parties, war, Acts of God, force majeure, or other causes beyond the control of the Sponsor.

4. Credit Accounting

4.1 Credit determination

The DE, acting in consultation with the IRT, will determine credits based on wetland acres that meet or exceed performance standards, and proposed credit ratios (Table 1). The DE, acting in consultation with the IRT, will use additional determinations such as adequate distance from roads of at least 150 feet where credit production may be reduced, and any available assessment tools, using a sliding scale of quality based on the assessment of functions and services. Credit releases described in Section 7 will be modified as yearly monitoring provides specific information on the size and quality of the wetlands being developed. This plan has been broken into a Phase 1 component that will be initiated upon plan approval and a Phase 2 component initiated in 2021 or 2022. The Phase 1 will cover all credit sales through 2020.

Table 1. Credit generation, based on site plans shown in Figures 2 and 3.

Cover type	Mitigation type	Ratio	Phase 1 acres (credits)	Phase 2 acres (credits)	Total Credits
Palustrine Forest Wetland	Re-establishment	1:1	16.79 (16.79)	36.16 (36.16)	52.95
Palustrine Forest in 150-ft. railroad zone	Re-establishment	4:1	2.49 (0.62)		0.62
Palustrine Forest Wetland	Rehabilitation of drained wetland areas	3:1		0.48 (0.16)	0.16
Palustrine Forest Wetland	Rehabilitation of drained active agricultural areas	1:1	3.43 (3.43)		3.43
Palustrine Forest Wetland in 150-ft. railroad zone	Rehabilitation	5:1	0.02 (0.004)		0.004
Upland Forest Buffer	Establishment	10:1		41.29 (4.13)	4.13
Wetland	Preservation	20:1	43.80* (2.19)		2.19
Upland Forest Buffer	Preservation	25:1	12.17 (0.49)		0.49
Permanent Fill	Impact	1:1	-0.01		-0.01
Total Credits			**23.514**	**40.45**	**63.964**

* *All preservation credits, including 1 acre in the Phase 2 area will be taken during Phase 1 as there will be a CE covering the entire site recorded after the Plan is approved.*

4.2 Credit release schedule

TWT anticipates this site will generate 63.964 credits in two phases. Phase 1 Credit (23.514 total credits available) release will coincide with satisfaction of success criteria and other mileposts.

All preservation credits (2.68) and twenty (20%) percent of the total non-preservation generated credits, or 4.169 credits, minus 0.01 of impacts will be released upon approval of this mitigation plan, documentation of legal preservation through a conservation easement recorded with the parcel deed, and establishment of financial assurances. **Total release = 6.839**.

An additional ten percent (10%) or 2.084 of the non-preservation generated credits will be released after submittal and approval of the as-built report. **Total release = 2.084**.

An interim credit release request will be included in the three (3) Monitoring Reports submitted as described in Section 8.2. Each Report will request fifteen percent (15%) or 3.127 of the total non-preservation generated credits if it provides sufficient information that the interim goal for that report has been met, and with written concurrence of the USACE. **Total release = 3.127 per monitoring report**.

The final twenty-five percent (25%) or 5.210 of the total non-preservation generated credits will be held until all performance goals are met. Final credit amounts will be adjusted (up or down) to account for actual wetland acres re-established or rehabilitated based on the degree each area meets Section 7 performance goals, and other obligations set forth in the ILFPI, such as an approved and funded long-term management plan. **Total release = 5.210**.

The Phase 2 credit release will follow the same track, using the same percentages described above and be a separate credit release. Should the Phase 1 not meet its goals, then the Phase 2 will be readjusted down to keep the entire site credit release schedule on track to meet the mitigation credits available at that site. This second phase will provide additional security that the site can meet its mitigation credit goals.

Figure 2: Mohawk River Preserve Phase 1 Site Plan.

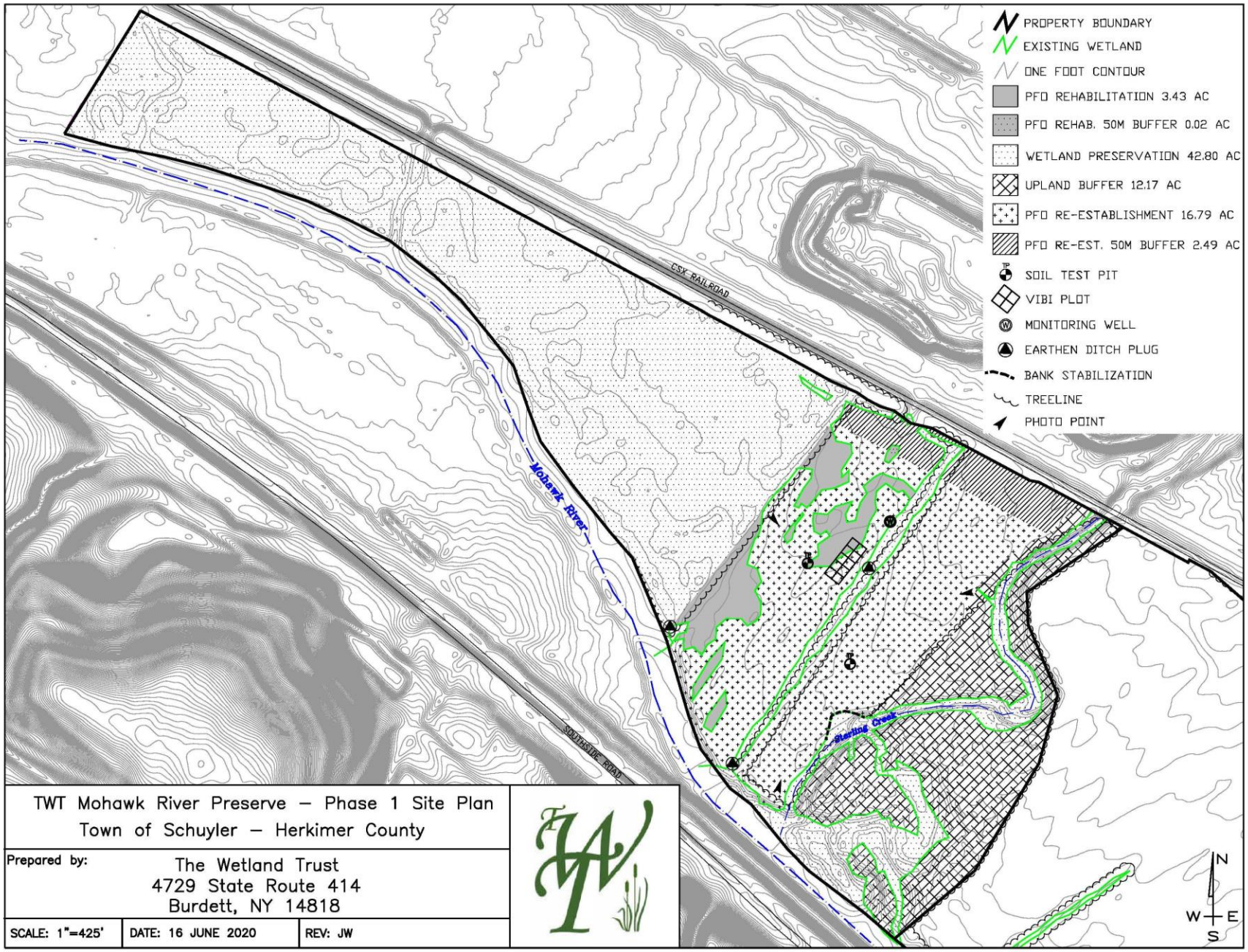
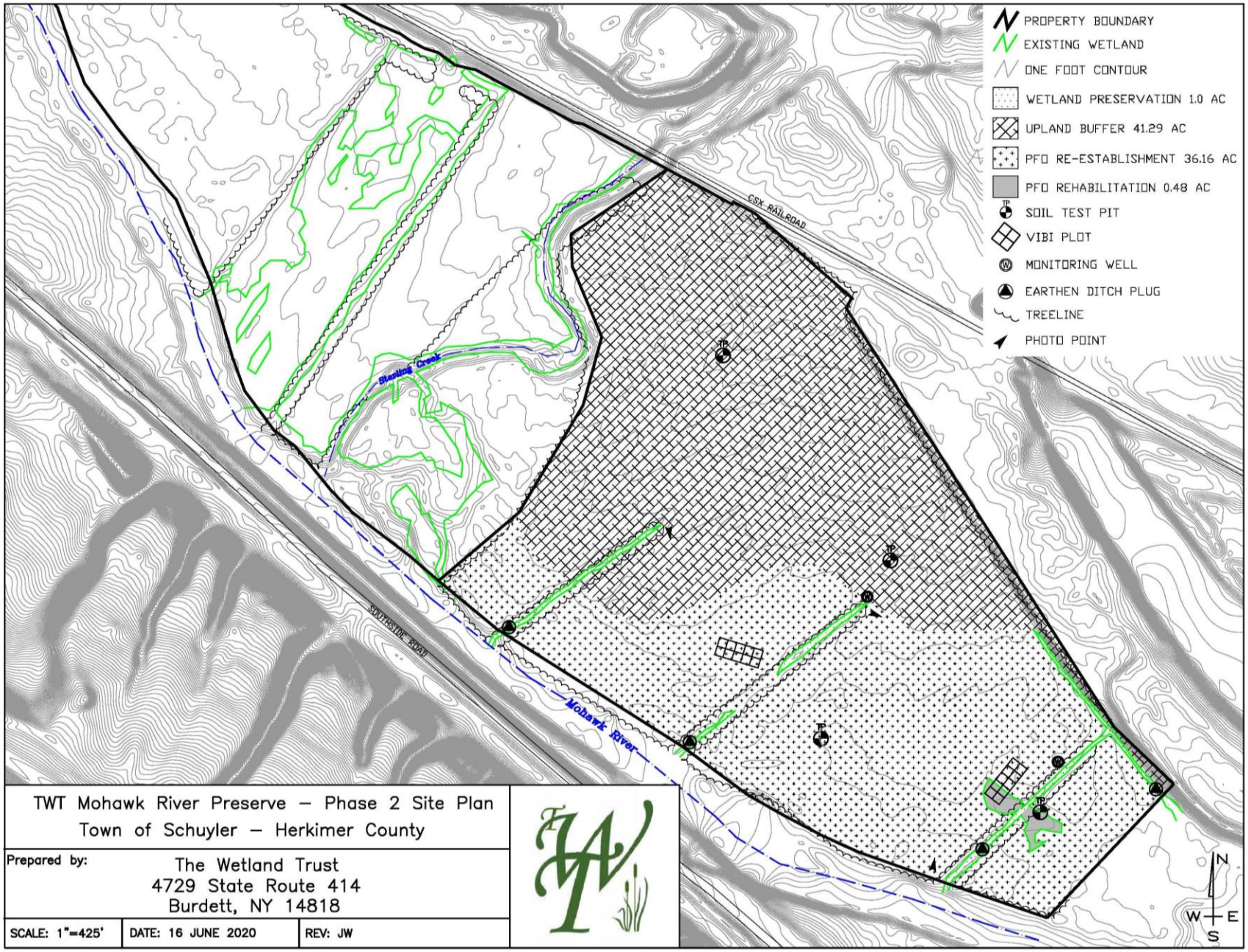


Figure 3: Mohawk River Preserve Phase 2 Site Plan.



5. Baseline Ecological Characteristics

5.1 Historic and existing plant communities, including wetlands

Historic plant communities

There is both recent and historic evidence of land manipulation and alteration at the Mohawk River Preserve. No historic plant community data are available, but the unchanged land use, as evidenced by historic aerial photographs of the site, suggests that historic and present plant communities are similar.

The western portion of the property is mostly forested wetland contiguous with DEC Regulated Wetland IN-4. The eastern portion of the property consists predominantly of agricultural fields, with emergent wetlands along old drainage ditches or where ground elevations are lower than surrounding areas (Figure 4).

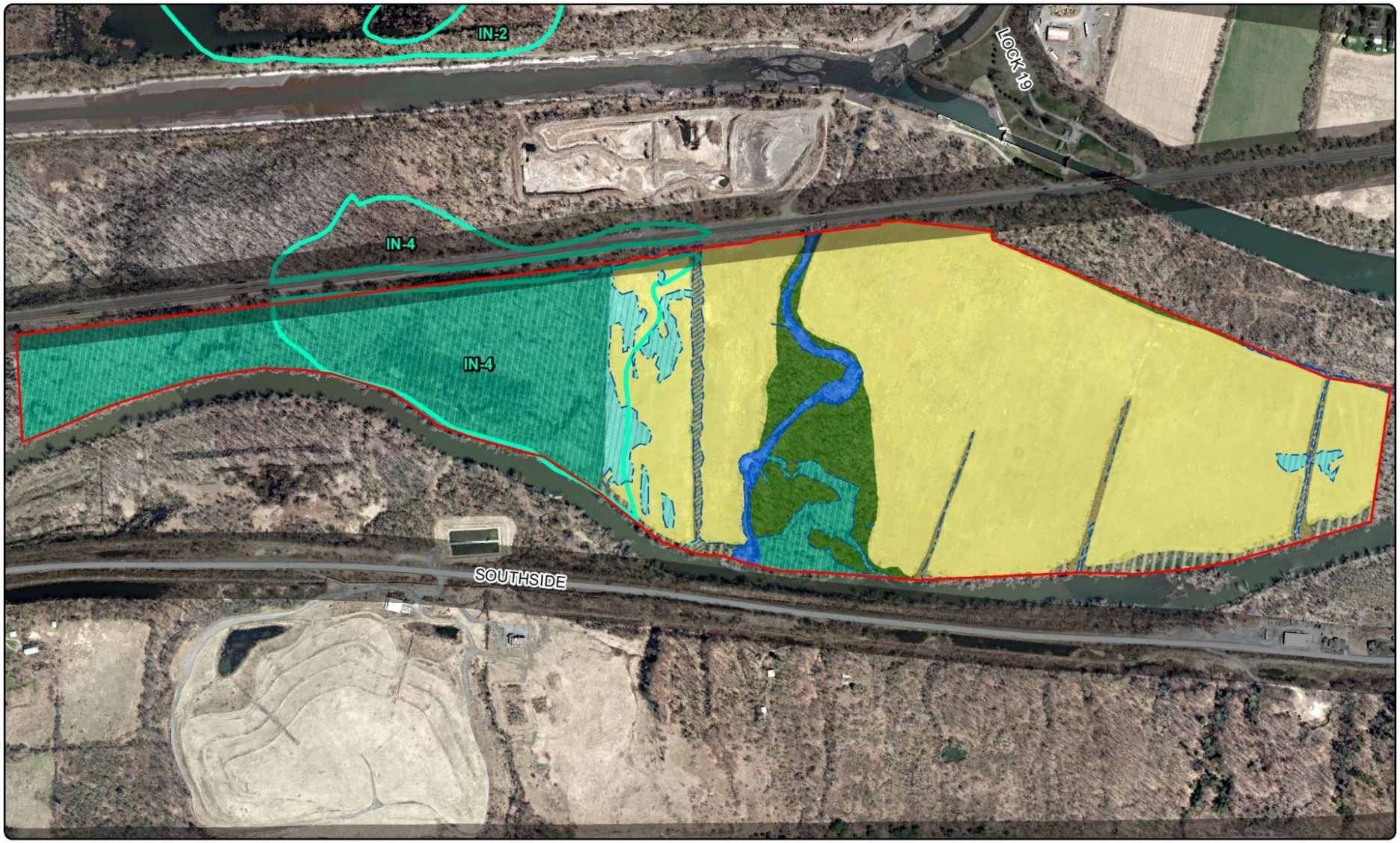
Present plant communities

Upland communities

The 10.5 acres of upland forest are primarily located at the center of the property along the Sterling Creek corridor, with woody species including American sycamore (*Platanus occidentalis*), box elder (*Acer negundo*), red maple (*Acer rubrum*), white willow (*Salix alba*), green ash (*Fraxinus pennsylvanica*), eastern cottonwood (*Populus deltoides*), black cherry (*Prunus serotina*), and American elm (*Ulmus americana*) (Figure 4). Poison ivy (*Toxicodendron radicans*) and Virginia creeper (*Parthenocissus quinquefolia*) were observed. Invasive species found in upland forest areas include glossy buckthorn (*Rhamnus frangula*), common buckthorn (*Rhamnus cathartica*), non-native bush honeysuckles (*Lonicera* spp.), multiflora rose (*Rosa multiflora*) and Japanese barberry (*Berberis thunbergii*). As a note, these invasive species will be removed during site construction.

The 93 acres of agricultural fields are primarily mixed upland forbs with corn stubble throughout, and hydrophytes interspersed in some areas. A wide variety of herbaceous plants also are present, including quackgrass (*Elymus repens*), barnyardgrass (*Echinochloa crus-galli*), annual ragweed (*Ambrosia artemisiifolia*), Canada goldenrod (*Solidago canadensis*), field bindweed (*Convolvulus arvensis*), common dandelion (*Taraxacum officinale*), common milkweed (*Asclepias syriaca*), orchard grass (*Dactylis glomerata*), poison ivy, and timothy (*Phleum pretense*). The primary invasive species is common mugwort (*Artemisia vulgaris*), representing approximately 16 percent of the area (Table 2a). Other invasive species include Canada thistle (*Cirsium arvense*), giant reed (*Phragmites australis*), reed canarygrass (*Phalaris arundinacea*), and purple loosestrife (*Lythrum salicaria*), which are present in small, dispersed patches.

Figure 4: Mohawk River Preserve Land Use.



Wetland Communities

There are about 44 wetland acres presently on the site (Figure 5). The majority is forested wetlands (40 acres), dominated by American sycamore, red maple, green ash, American elm, eastern cottonwood, redosier dogwood (*Cornus sericea*), and northern spicebush (*Lindera benzoin*). Invasive species in these areas include common buckthorn (*Rhamnus cathartica*), multiflora rose, European alder (*Alnus glutinosa*), and honeysuckle.

About 4 acres of emergent wetlands are found in the agricultural fields, with the most common hydrophytes being upright sedge (*Carex stricta*), sensitive fern (*Onoclea sensibilis*), common rush (*Juncus effusus*), field horsetail (*Equisetum arvense*), hyssopleaf hedgenettle (*Stachys aspera*), fox sedge (*Carex vulpinoidea*), lurid sedge (*Carex lurida*), moneywort (*Lysimachia nummularia*), American bur-reed (*Sparganium americanum*), and jewelweed (*Impatiens capensis*). Invasive hydrophytes include narrowleaf cattail (*Typha angustifolia*), purple loosestrife, reed canarygrass, and giant reed.

Invasive Species

Invasive species coverage was developed using data collected from vegetative data points, stand mapping, Vegetative Index of Biotic Integrity (VIBI) data, and drone photo interpretation. The results for ten invasive species across the entire property are provided in Table 2a. These data were also used to determine the invasive species coverage in the wetland reestablishment and preservation areas (Table 2b). Figures 6 through 9 depict coverage for the four most common invasive species: common mugwort, purple loosestrife, reed canarygrass, and giant reed.

Re-establishment area baseline VIBI information

Vegetative Index of Biotic Integrity (VIBI) and VIBI-Floristic Quality (VIBI-FQ) data were collected to determine pre-construction scores for vegetative quality. The existing land use of the survey area is recent corn field, including large quantities of adventive plants along with some true invasives species. VIBI-FQ scores for the site were very low at 3, leaving significant room for improvement. The summary of the Western Field, re-establishment plot (Figure 2) VIBI data sheet is in Appendix E. The Phase 2 VIBI plot will be developed in 2021 before that phase is initiated.

Figure 5: Mohawk Preserve Wetland Delineation Map.

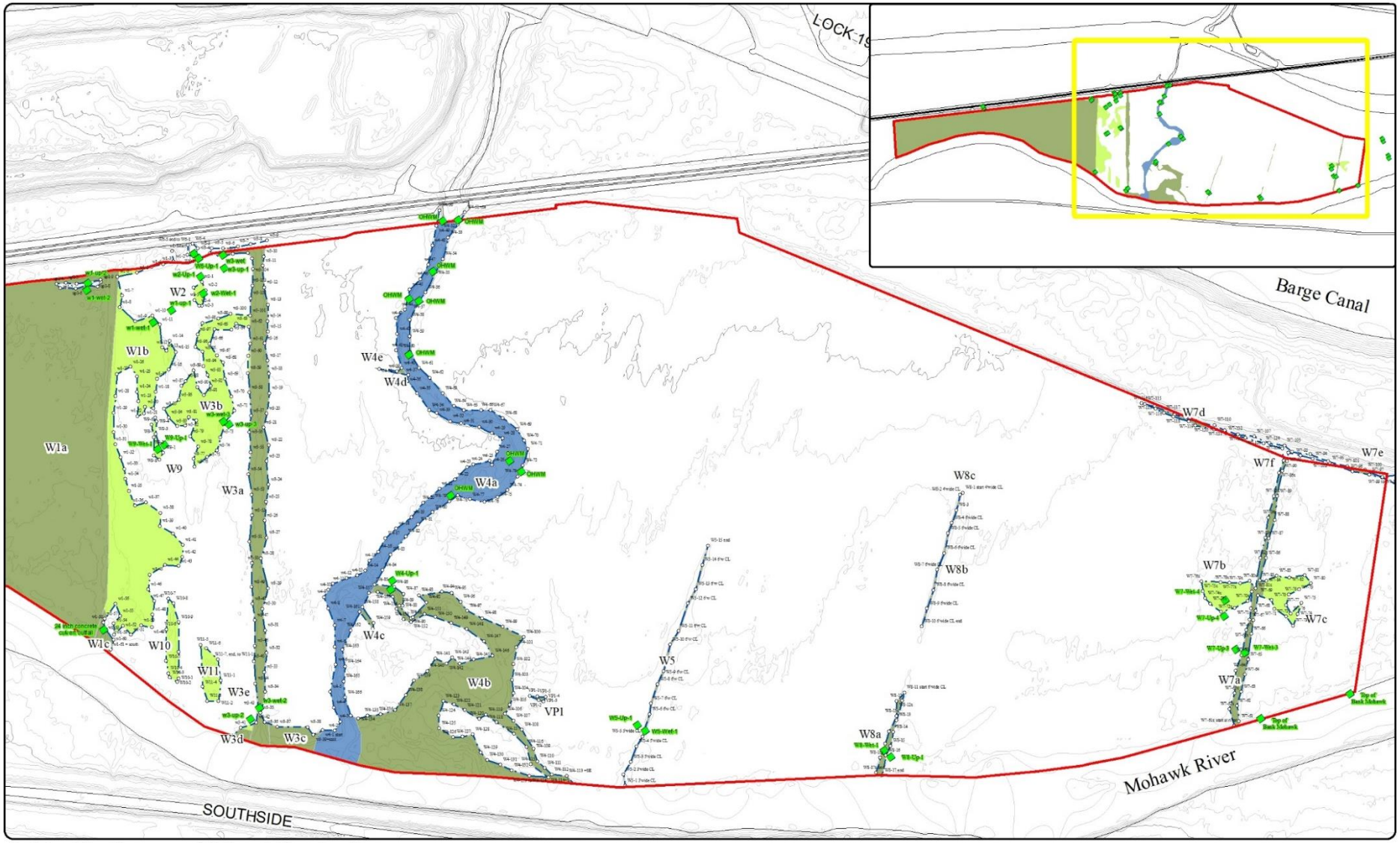


Table 2a. Invasive percent cover in across major land use types in the Mohawk River Preserve.

	Alnus glutinosa	*Artemisia vulgaris*	*Cirsium arvense*	*Lonicera sp*	*Lythrum salicaria*	*Phalaris arundinacea*	*Phragmites australis*	*Rhamnus sp.*	*Rosa multiflora*	*Typha angustifolia*	Invasive Total for each Community
	European Alder	common mugwort	Canada thistle	non-native honeysuckle	purple loosestrife	reed canarygrass	giant reed	non-native buckthorn	multiflora rose	narrowleaf cattail	
Agricultural Fields	0.00%	16.17%	7.93%	0.05%	0.92%	2.86%	2.18%	0.00%	0.00%	0.32%	30.30%
Forested Wetlands	0.59%	0.00%	0.00%	0.35%	0.00%	0.00%	0.00%	2.22%	1.53%	0.00%	4.69%
Emergent Wetlands	0.37%	0.08%	0.01%	0.19%	0.37%	0.44%	0.46%	0.45%	0.00%	0.64%	3.00%
Overall	**0.22%**	**10.05%**	**4.93%**	**0.16%**	**0.57%**	**1.78%**	**1.35%**	**0.84%**	**0.58%**	**0.20%**	**20.60%**

Table 2b. Invasive percent cover within reestablishment and preservation areas in the Mohawk River Preserve.

	Alnus glutinosa	*Artemisia vulgaris*	*Cirsium arvense*	*Lonicera sp*	*Lythrum salicaria*	*Phalaris arundinacea*	*Phragmites australis*	*Rhamnus sp.*	*Rosa multiflora*	*Typha angustifolia*	Invasive Total for each Community
	European Alder	common mugwort	Canada thistle	non-native honeysuckle	purple loosestrife	reed canarygrass	giant reed	non-native buckthorn	multiflora rose	narrowleaf cattail	
Forested Wetland Re-establishment	0.00%	0.88%	0.10%	1.04%	4.20%	4.90%	5.13%	0.00%	0.00%	7.16%	23.32%
Forested Wetland Preservation	0.43%	0.00%	0.00%	0.12%	0.00%	0.00%	0.00%	0.52%	0.00%	0.00%	1.07%

Figure 6: Mohawk River Preserve Invasive Species Cover Estimates, *Artemisia vulgaris*, Common Mugwort

In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 692 ft

0 230 460 920 1,380 1,840 Feet

Legend
Mohawk River Preserve Boundary
Artemisia vulgaris
1 - 5%
5 - 25%
25% +

Figure 7: Mohawk River Preserve Invasive Species Cover Estimates, *Lythrum salicaria*, Purple Loosestrife.

In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 692 ft

0 230 460 920 1,380 1,840 Feet

Legend
Mohawk River Preserve Boundary
Lythrum salicaria
1 - 5%
5 - 25%

Figure 8: Mohawk River Preserve Invasive Species Cover Estimates, *Phalaris arundinacea*, Reed Canarygrass.

Figure 9: Mohawk River Preserve Invasive Species Cover Estimates, *Phragmites australis*, Giant Reed.

In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 692 ft

0 230 460 920 1,380 1,840 Feet

Legend
Mohawk River Preserve Boundary
Phragmites australis
1 - 5%
5 - 25%
25% +

5.2 Site land use history

Past land use

There has been recent and historic land manipulation and alteration at the Mohawk River Preserve, based on evidence in aerial photographs, historic texts, and other reference maps. Although historic references frequently mention the region, and often refer to the area specifically, they provide no indication that the Mohawk River Preserve site was historically occupied or utilized in any way aside from farming. Even the villages of the Mohawk Nation, the river's name source, were concentrated on the terraces above the river flats and east of the site. Early descriptions of the Town of Schuyler describe "*a wide intervale [that] extends along the Mohawk, which forms the southern boundary* (of the town). *Its streams are tributaries of the Mohawk and generally flow through narrow ravines. These flats are annually overflowed.*" Thus, the Mohawk River Preserve was, and still is, regularly inundated, and therefore less likely to have ever been permanently inhabited by humans. Supporting this notion, there are also no historic and/or archeological resources pertaining to the property, according to the NY Parks, Recreation, and Historic Preservation review (Appendix B).

In addition to the frequent flooding that limits opportunities for development, the Mohawk River Preserve is isolated by anthropogenic features. The Mohawk River is on the south side of the property, and the railroad, built in the 1830s, is on the north side. In approximately 1910, the Barge Canal was built to the north of the tracks, further isolating the Preserve and creating an island between canal and river that remains today.

An aerial photo from 1947 shows that while agriculture played a somewhat larger role on the property in the early 1900s than it does today, and the Sterling Creek channel has shifted, little else has changed on the property (Figure 10). Indeed, in 1947, only a small western portion of the Preserve consisted of dense woody vegetation. The remainder of the property was cleared for agriculture, including most of the DEC-Regulated Wetland IN-4. The residual shrubby patches visible throughout the eastern part of the property suggest that while cleared, the field probably was not used for row crops, whereas most of the remainder of the agricultural fields were likely cropland. Forest cover on the property expanded eastward between 1947 and some time before 1995. In 1995, the westernmost ditch was constructed, halting the forest expansion and providing additional drainage for the western field (Figures 11-15).

Presently, the fields remain open due to agricultural activity that has occurred as recently as 2019, and will be restored upon approval of this mitigation plan.

Current land use

Current land uses on the Mohawk River Preserve Property include 10.59 acres upland forest, 93.05 acres of agricultural field, 2.80 acres of riparian buffer, 1.81 acres of forest (actually an old fencerow), and 48.32 acres of wetland or areas having wetland attributes. These include 4.22 acres of emergent wetlands in the agricultural fields, 39.34 acres of forested wetland, 2.09 acres of forested wetland that became established an old drainage ditch, and 2.67 acres of stream channel (Figure 3).

Figure 10: 1947 Aerial Photo.

In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 697 ft

0 230 460 920 1,380 1,840
Feet

Legend
Mohawk River Preserve Boundary
Wetland Delineation

Figure 11: 1960 Aerial Photo.

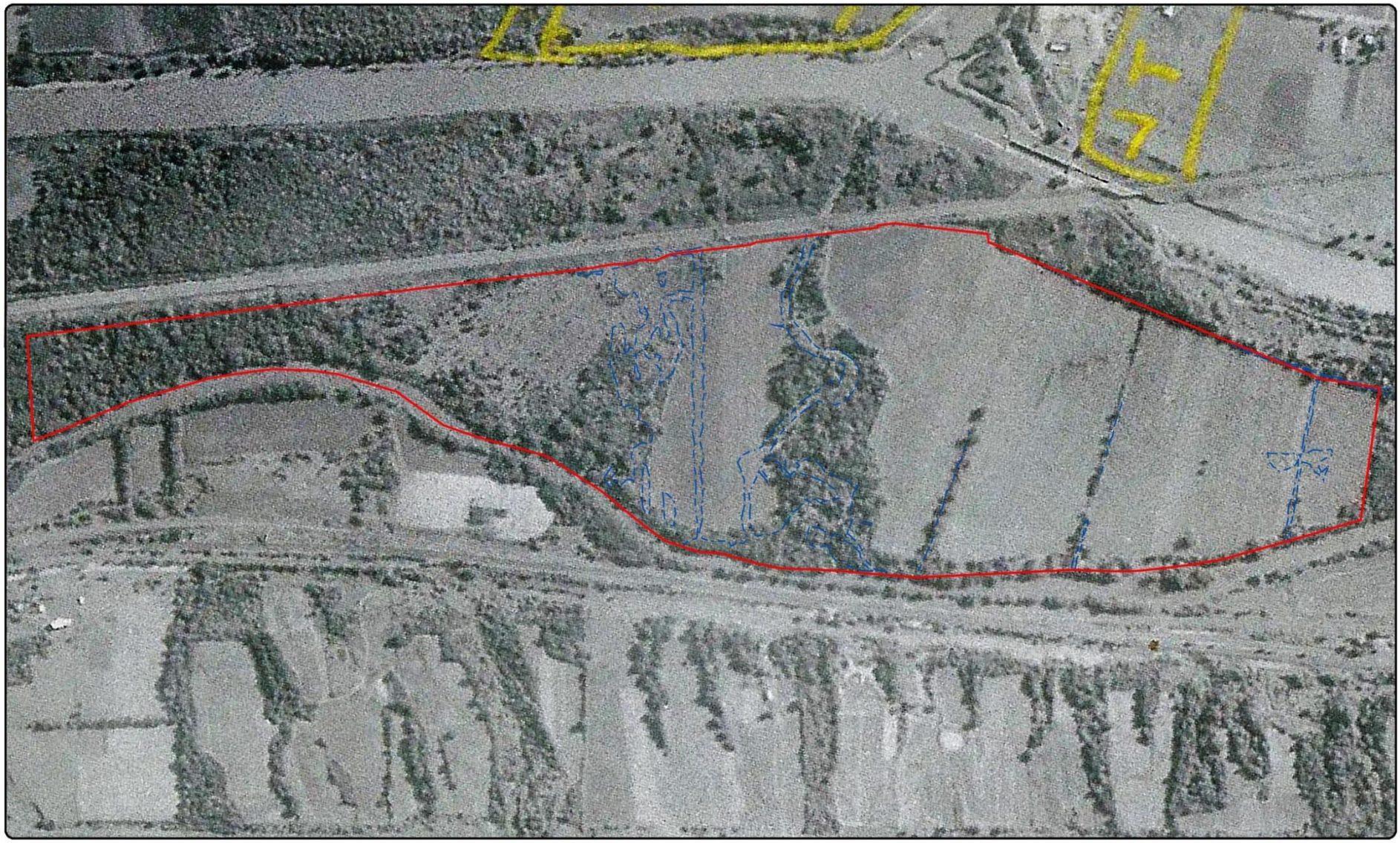


Figure 12: 1995 Aerial Photo.

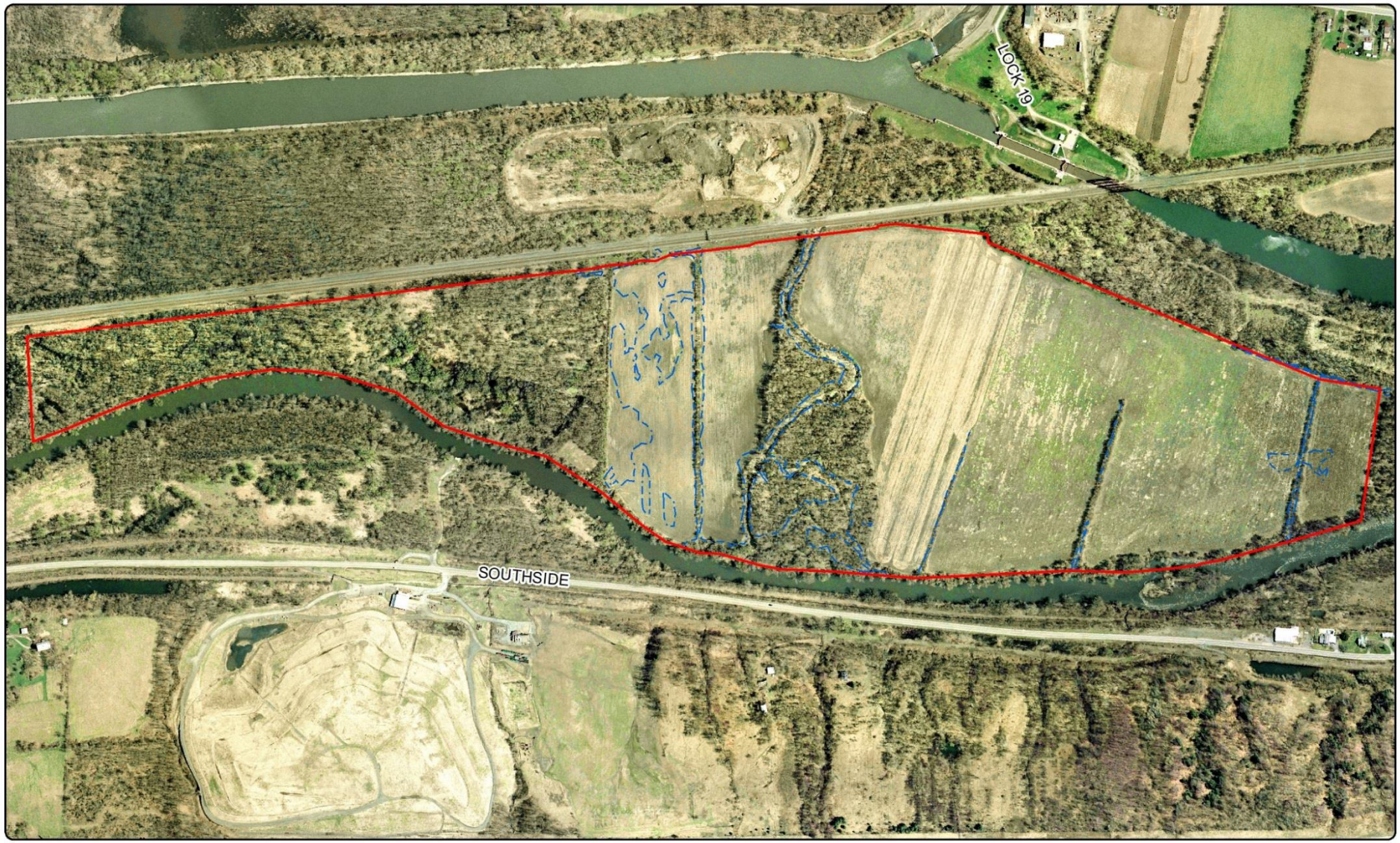
In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 697 ft

0 230 460 920 1,380 1,840 Feet

Legend
Mohawk River Preserve Boundary
Wetland Delineation

Figure 13: 2003 Aerial Photo.



In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 697 ft

0 230 460 920 1,380 1,840 Feet

Legend
Mohawk River Preserve Boundary
Wetland Delineation

Figure 14: 2013 Aerial Photo.

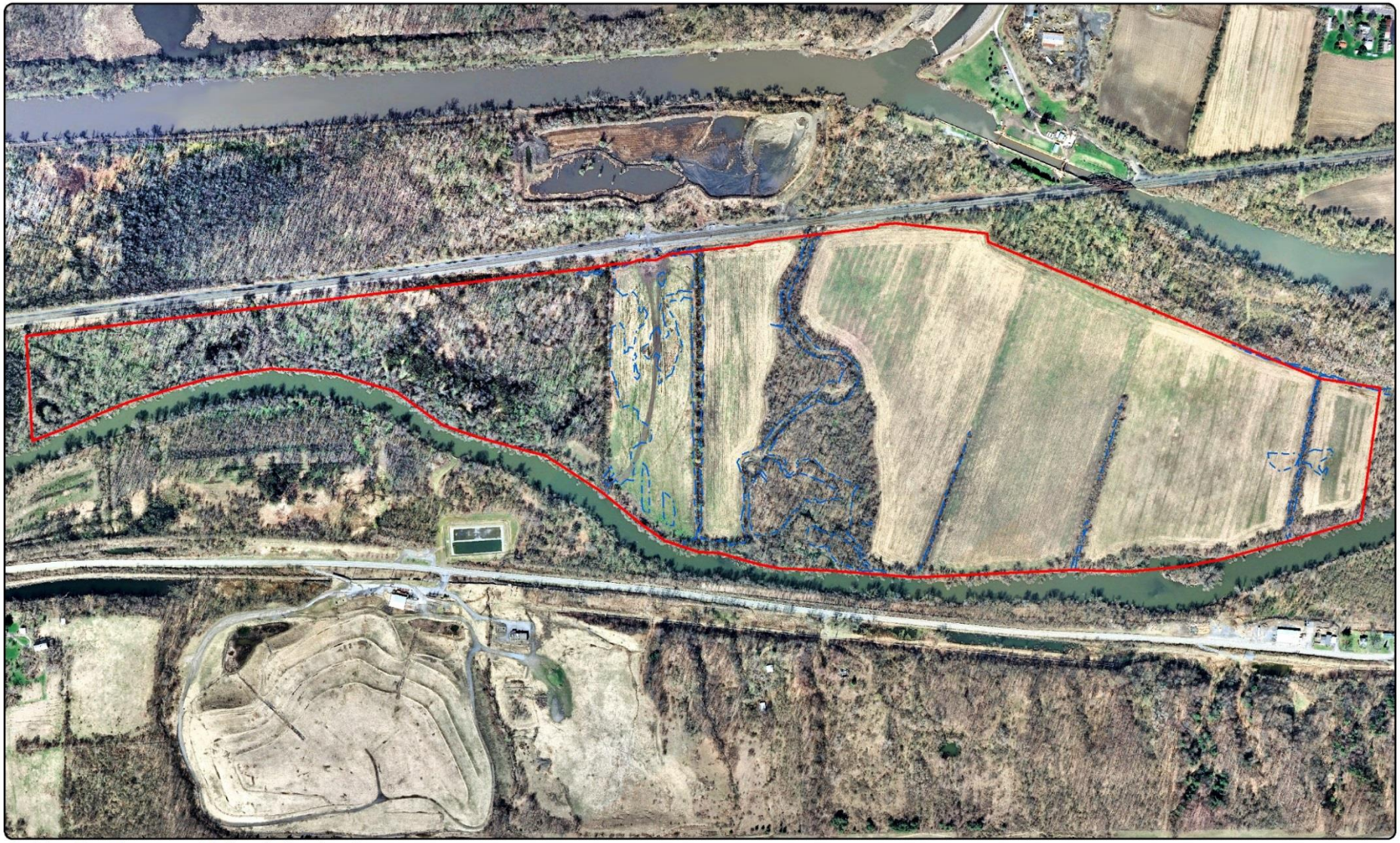


Figure 15. 2017 Aerial Photo.

In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 697 ft

0 230 460 920 1,380 1,840 Feet

Legend
Mohawk River Preserve Boundary
Wetland Delineation

Existing structures

No structures are present in the TWT Mohawk River Preserve.

5.3 Historic and existing hydrology

The entire TWT Mohawk River Preserve is located within the Mohawk River 100-year floodplain. Several hundred feet of the Preserve along the Mohawk River are in the floodway, where floodwaters may be moving during high water events. As mentioned in Section 5.2, Land Use History, the history of flooding throughout the Mohawk Valley is well documented. The frequency and intensity of Mohawk Valley flooding was so problematic that planners of the Erie Canal placed the original canal alignment south of the River, and well out of the floodplain. In Schuyler, the Erie Canal was 30 feet above the river, and 20 feet above the highest elevation of the project site. While historical flood peaks at the Preserve site are unknown, a high-water event in November 2019 was observed by project biologists. Figure 16 shows the estimated flood limits across the property based on the elevation of silt line on standing vegetation deposited during the November event. Future events, as well as the daily fluctuations in groundwater will be recorded by three groundwater wells installed across the site (Figure 2) in 2019.

The Mohawk River Preserve has other important hydrology factors to consider apart from the implied frequency of flooding. The construction of the Erie Canal in the 1910s likely altered the subsurface hydrology at the site. The Erie Canal receives water from numerous small streams along its route, and the canal channel above Lock 19 is much higher in elevation than the Mohawk. With normal pool elevations at 404′, the canal above the lock has water higher than all of the Mohawk River Preserve where the maximum elevation is 402′. The height of the canal pool likely creates a groundwater gradient moving from north to south across the site.

Field drainage is the third hydrologic factor affecting the site. Surface ditching is evident on the earliest aerial photos, and at some time prior to 1995, the westernmost two ditches were added to provide additional drainage for the western field. Between 1960 and 1995, the drainage ditches present throughout the fields were cleared and well-defined. It is unclear whether this is because they were re-excavated or simply managed. The sole exception to this drainage arrangement is in the second-to-easternmost ditch in the eastern field. The 1947 aerial photo clearly shows four fencerow-like divisions, and we know that today, three of those divisions remain as drainage ditches in the eastern field. However, between 1965 and 1995 the fourth one disappeared.

Figure 16. Extent of Flooding During a November 2019 Event.

5.4 Soil descriptions

Several soil series exist on the preserve. These include Teel and Hamlin silt loams, Palms muck, and Wayland soil complex, as described below based on the US Department of Agriculture Natural Resources Conservation Service Web Soil Survey (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm) (Figure 17).

The Teel series consists of very deep, moderately well drained soils on floodplains formed in nearly level, silty alluvial deposits. Permeability is moderate throughout the solum and slope ranges from 0 to 3 percent. Mean annual temperature is 49 degrees F, and mean annual precipitation is 37 inches. Teel soils are nearly level soils on floodplains along streams and low gradient alluvial fans. The water table extends up into the lower part of the subsoil in the winter and spring. These soils formed in alluvium predominantly from areas of glacial drift that contains limestone, fine grained sandstone, and granite. Teel soils are the moderately well drained member of a drainage sequence and the potential for surface runoff is low. These soils are used extensively for hay, corn, small grains and pasture, and less extensively for vegetables and nursery crops. Forest cover is sugar maple, ash, hemlock, beech, and elm.

The Hamlin series consists of very deep, well drained soils formed in alluvium on flood plains and high bottoms. Permeability is moderate in the solum and substratum and slope ranges from 0 to 3 percent. The Hamlin soils are nearly level soils on floodplains and high bottoms. The soils formed in post glacial alluvium mainly from areas of siltstone, shale and limestone. The potential for surface runoff is very low to low while permeability is moderate in the solum and substratum. Flooding is a hazard for the more intensive uses for this soil type where land is cleared and used for forage and truck crops. Native vegetation consists of the more demanding species of northern hardwoods.

The Palms series consist of very deep, very poorly drained soils formed in herbaceous organic materials 16 to 51 inches thick. The underlying loamy deposits are formed in closed depressions on moraines, lake plains, till plains, outwash plains, and hillside seep areas, and on floodplain backswamps. Slope ranges from 0 to 6 percent. Palms soils are formed from herbaceous organic materials and the underlying loamy deposits. The soils on nearby uplands are generally loamy. In normal years, between November and May, the depth to the top of an apparent seasonal high-water table ranges from 1 foot above the surface to 1 foot below the surface. The potential for surface runoff is negligible. Saturated hydraulic conductivity ranges from moderately high or high in the organic material and moderately high to low in the loamy material. Permeability is moderately slow to moderately rapid in the organic material and moderate or moderately slow in the loamy material. Most areas of this soil are in marsh vegetation of grasses, reeds, and sedges, as well as alder, aspen, willow, and dogwood. Some areas have been drained and are used for pasture, corn, and some truck crops.

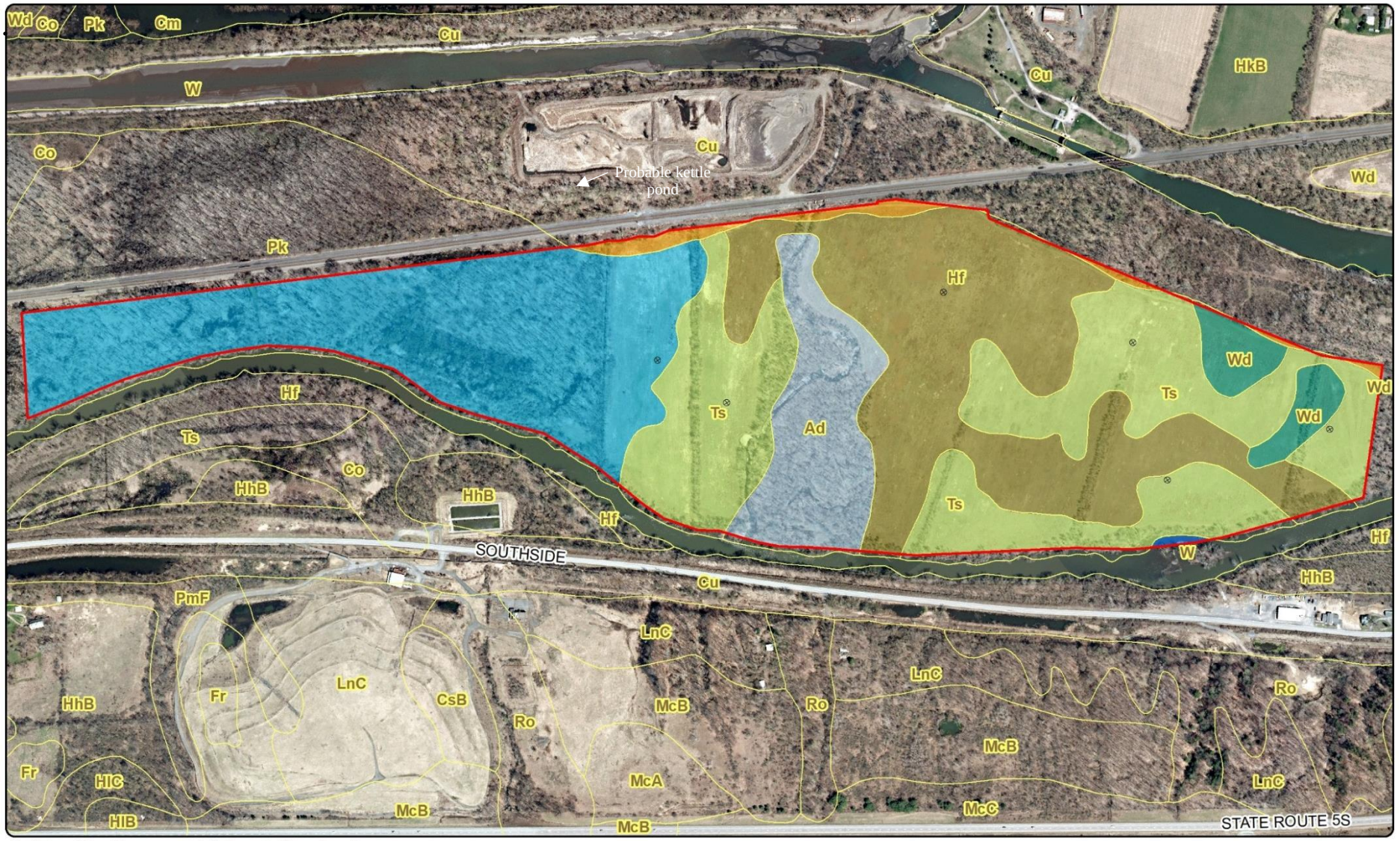
The Wayland series consists of very deep, poorly drained and very poorly drained, nearly level soils formed in recent alluvium. These soils are in low areas or slackwater areas on flood plains. Saturated hydraulic conductivity is moderately high or high in the mineral soil. Wayland soils are on nearly level or depressed parts of flood plains of streams receiving runoff from uplands that contain some calcareous

drift and mainly in or bordering areas of Wisconsin glaciation. The potential for surface runoff is negligible to very high. Saturated hydraulic conductivity is moderately high or high in the mineral soil. An apparent water table is at the surface or to a depth of 0.5 feet below the surface with occasional ponding and it is subject to flooding. Native vegetation is red maple, alder, willow, and other trees tolerant of wet sites. Some areas may be cleared and drained, and are used for crops or pasture.

5.5. Animal species including endangered species

The following tables lists wildlife species or sign observed or probable at the MCP. A review of potentially occurring federal (https://ecos.fws.gov/ipac/) and state-listed species (https://www.dec.ny.gov/animals/7494.html) indicate that bald eagles (*Haliaeetus leucocephalus*), Canada warbler *Cardellina canadensis*, black-billed cuckoo *Coccyzus erythropthalmus*, and bobolinks *Dolichonyx oryzivorus* could be present at the site if habitats are suitable. Any tree removed from the Preserve will be at the ditch plug locations. These removals are few in number, and will only done during the approved time window (e.g., after 1 November for northern long-eared bats *Myotis septentrionalis*) that would affect these species. Other species of concern were observed at the site and are included in the Table 3.

Figure 17. NRCS Soil Survey.



In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 692 ft

0 230 460 920 1,380 1,840 Feet

Legend

- Mohawk River Preserve Boundary
- Soil Test Pit Locations
- Ad - Alluvial land
- Hf - Hamlin silt loam
- Pk - Palms muck
- Ts - Teel silt loam
- Wd - Wayland soils complex
- Cu - Cut and fill land
- W - Water

5.5. Animal species including endangered species

Table 3a. Wildlife Species, identified or possible at the Mohawk River Preserve.

Common Name	Scientific Name	Conservation Status	Notes
	Mammals		
eastern coyote	*Canis latrans*		tracks
North American beaver	*Castor canadensis*		fresh sign
Virginia opossum	*Didelphis virginiana*		
striped skunk	*Mephitis mephitis*		
northern long-eared bat	*Myotis septentrionalis*	federally threatened	Not observed
northern river otter	*Lontra canadensis*		latrines
whitetail deer	*Odocoileus virginianus*		tracks
muskrat	*Ondatra zibethicus*		
raccoon	*Procyon lotor*		
eastern gray squirrel	*Sciurus carolinensis*		
	Fish		
common carp	*Cyprinus carpio*		
large-mouth bass	*Micropterus salmoides*		
	Reptiles		
snapping turtle	*Chelydra serpentina*		
eastern painted turtle	*Chrysemys picta*		
spotted turtle	*Clemmys guttata*		
wood turtle	*Glyptemys insculpta*		
northern water snake	*Nerodia sipedon*		
eastern garter snake	*Thamnophis sirtalis*		
	Amphibians		
American toad	*Anaxyrus americanus*		
gray treefrog	*Hyla versicolor*		
American bullfrog	*Lithobates catesbeinanus*		
green frog	*Lithobates clamitans*		
pickerel frog	*Lithobates palustris*		
wood frog	*Lithobates sylvaticus*		
eastern newt	*Notophthalmus viridescens*		

Table 3b. Bird Species identified at the Mohawk River Preserve.

Common Name	Scientific Name	Conservation Status/ Notes
red-winged blackbird	*Agelaius phoeniceus*	
cedar waxwing	*Bombycilla cedrorum*	
red-tailed hawk	*Buteo jamaicensis*	
Canada warbler	*Cardellina canadensis*	Not observed, but per https://ecos.fws.gov/ipac, USFWS bird of Conservation Concern (BCC)
northern cardinal	*Cardinalis cardinalis*	
turkey vulture	*Cathartes aura*	
veery	*Catharus fuscescens*	found in forest at northern portion of site; woodland thrushes are in decline
yellow-billed cuckoo	*Coccyzus americanus*	facultative wetland species often found in floodplain forest
black-billed cuckoo	*Coccyzus erythropthalmus*	Not observed, but BCC
northern flicker	*Colaptes auratus*	
eastern wood-pewee	*Contopus virens*	a declining woodland species and facultative wetland species often found in floodplain forest
American crow	*Corvus brachyrynchos*	
blue jay	*Cyanocitta cristata*	
bobolink	*Dolichonyx oryzivorus*	Not observed, but BCC
downy woodpecker	*Dryobates pubescens*	
gray catbird	*Dumetella carolinensis*	
least flycatcher	*Empidonax minimus*	
willow flycatcher	*Empidonax traillii*	
common yellowthroat	*Geothlypus trichas*	
bald eagle	*Haliaeetus leucocephalus*	Not observed, but BCC
wood thrush	*Hylocichla mustelina*	found in woods at northern portion of site; woodland thrushes are in decline, BCC
Baltimore oriole	*Icterus galbula*	
red-bellied woodpecker	*Melanerpes carolinus*	
swamp sparrow	*Melospiza georgiana*	obligate wetland species
song sparrow	*Melospiza melodia*	
indigo bunting	*Passerina cyanea*	
black-capped chickadee	*Peocile atricapillus*	
rose-breasted grosbeak	*Pheucticus ludovicianus*	
eastern towhee	*Pipilo erythrophthalmus*	
common grackle	*Quiscalus quiscula*	
eastern phoebe	*Sayornis phoebe*	
chestnut-sided warbler	*Setophaga pensylvanica*	
yellow warbler	*Setophaga petechia*	
American redstart	*Setophaga ruticilla*	
eastern bluebird	*Sialia sialis*	noteworthy
American goldfinch	*Spinus tristis*	
chipping sparrow	*Spizella passerina*	
European starling	*Sturnus vulgaris*	
house wren	*Troglodytes aedon*	
American robin	*Turdus migratorius*	
yellow-throated vireo	*Vireo flavifrons*	facultative wetland species often found in floodplain forest; this species is often most closely associated with the cerulean

		warbler in floodplain forests
warbling vireo	*Vireo gilvus*	fairly common species, but is found in numbers in floodplain forests where the Cerulean Warbler is often found
red-eyed vireo	*Vireo olivaceus*	
mourning dove	*Zenaida macroura*	

6. Mitigation Work Plan

6.1 Geographic boundaries

The geographic boundary of the mitigation area is within the CE boundary. The CE, itself, encompasses approximately 156.4 acres, and is also the parcel boundary as depicted the figures and in Appendix A.

6.2 Construction methods, timing and sequencing

Construction Methods

Mohawk River Preserve wetland re-establishment actions will include:

a. the management of invasive species across the old agricultural fields to promote vegetative growth of planted seeds and stock (Section 6.6)

b. the compaction of deeper soil layers to impede infiltration, using a vibratory roller

c. the preparation of suitable seedbed conditions, using a skid steer mounted rototiller

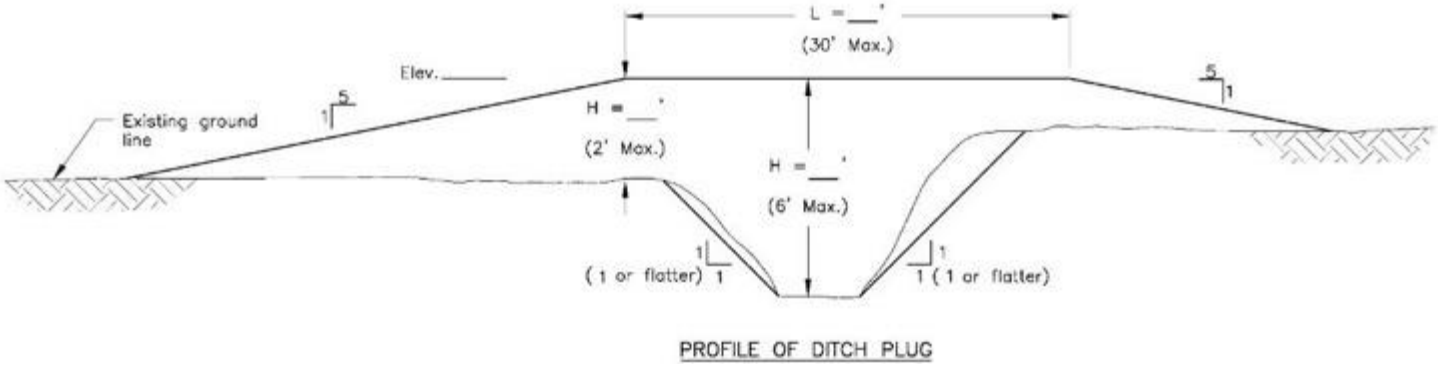
d. the installation of one or more groundwater dams parallel to the Mohawk River to intercept subsurface flow, should underground drainage be found during construction activities. Ground water dams are built in trenches dug deep enough to cut off flow, with the subsoil replaced in incremental lifts and compacted as they are placed. This results in greatly reduced permeability, raising the water table on the upstream side of the dam

e. the installation of ditch plugs to reduce field drainage, as discussed below.

Seven ditch plugs are proposed throughout the site (Figures 2 and 3). Although they vary in size somewhat, the average dimensions of the ditch plugs are approximately 20 feet in length and 10 feet in width. With each ditch plug representing 200 square feet, a total of 1,400 square feet of area will be impacted with the placement of the ditch plugs. First, all trees and brush will be removed from the ditch plug areas and stockpiled for the streambank stabilization component described below. Sediment control will be installed, and topsoil removed and stockpiled for re-spreading. A 2-foot-deep key trench below the ditch bottom will be excavated within the center of each ditch plug footprint, extending a minimum of 5 feet (on both sides) beyond the ditch line into the adjacent field. Suitable backfill material sourced on-site will be compacted in a maximum of 10-inch lifts until the desired plug height is reached. The height of the ditch plugs will vary, but the targeted height of each ditch plug will be the elevation of the adjacent field area relative the ditch bottom. When the ditch plugs have been constructed sufficiently and inspected by TWT staff, the topsoil will be re-spread at a minimum depth of 6 inches. All disturbed areas will be

seeded and mulched at a rate of 80 pounds of conservation seed mix and 1,000 pounds of mulch per acre.

Figure 18: Ditch Plug Typical Cross-section



f. the installation of streambank protection in the Sterling Creek stream channel where lateral channel migration is evident, as discussed below:

A portion of Sterling Creek (Figure 2) centrally bisects the parcel and has a failing bank that is in need of corrective action. The streambank has eroded and is migrating into the adjacent field and destabilizing the stream reach. TWT will use a root-wad revetment technique that involves layering whole tree logs with attached root balls into the stream bank. All woody material will be sourced on-site. The root masses will be approximately 4 feet in diameter and attached to logs of at least 15-20 feet in length, with minimum diameter of 12 inches, and free from excessive rot. The entire tree will be used on the project site, to include the root mass/butt log, upper logs of the tree or lengths of wood to be used as foundation logs, and the tops to be used as brush filler material. Coir fabric will be utilized to retain soil layers required for the project. A combination of hardwood stakes and native willow cuttings will be utilized to secure the fabric into the soil lifts. All work will be done during low flow conditions, avoiding periods during or immediately following precipitation events. Work will be kept to a minimum and will be done as quickly as possible to minimize environmental impacts. As per DEC regulations, the in-stream work period for this site is from May 15th to September 30th. The sequence of construction activities is as follows:

1) Locate, harvest (after 1 November) and transport appropriate tree/root wad material on-site to the project area

2) Establish access to stream by cutting roadway into bank on lower end

3) Install bypass channel and isolate the workspace

4) Install bench key 3 feet below base flow elevation, 10-15 feet wide

5) Install wood structure as detailed in attached site plans

6) Install live willow cuttings/stakes. Willow brush to be sourced on-site

7) Conduct final grading, seeding and mulching of all disturbed areas including the access road after completion

6.3 Erosion and sediment control

All erosion and sediment control practices will be installed as specified by the site's Stormwater Pollution Prevention Plan (SWPPP) prior to any ground disturbance. The limit of disturbance will be clearly marked within each wetland area and the spoil deposition area to ensure ground disturbances are minimized. Temporary devices and structures to control erosion and sedimentation in and around mitigation sites will be properly maintained at all times. Maintenance of these erosion control measures will continue throughout the course of the project. The devices and structures will be removed no later than 1 November, three full growing seasons after the planting of the mitigation site. Sediment collected by these devices will be relocated upland in a manner that prevents its erosion and transport to a waterway or wetland.

Topsoil will be re-spread across the wetland footprint of disturbed areas at a minimum depth of 6 inches, and areas within the planned wetland footprint will be seeded with wetland seeds (Table 5). Upland areas will be seeded with a conservation seed mixture at a rate of 80 pounds per acre, and all disturbed areas mulched with straw at a rate of 1,000 pounds per acre. A supply of dead and/or dying woody debris will cover at least 2% of the ground throughout the project areas after the completion of construction. All excavated spoil will be transported by truck to the spoil deposition area as depicted in Figure 2. All of the spoil material generated from the wetland areas will be permanently stockpiled within the spoil deposition area.

Construction Sequence

The scheduling sequence for construction activities are as follows:

- Construction site layout
- Installation of silt fence per SWPPP to protect adjacent resources
- Mowing of adjacent areas prior to seed viability to limit the spread of invasive species
- Clearing of vegetation within the construction footprint
- Grubbing of stumps and organic material within construction footprint
- Initiate mitigation site construction starting with removal and stockpile of excess topsoil
- Excavation of mineral soils and transport to spoil area
- Compaction of subsoil where needed
- Final grading of mitigation site
- Placement of topsoil and seeding, mulching
- Planting of mitigation site, mulching

- Removal of temporary erosion control measures once disturbed areas are permanently stabilized

Table 4: Construction Methods, timing and sequencing

Activity	Timing	Construction Phase
Remove any potential bat roost trees >3″ dbh within the site work permitted dates of November 1 to March 31.	Immediately after plan approval and within the permit-approved window.	Pre-construction preparation
Complete site excavation, ditch plug construction and re-grading activities to re-establish wetlands as proposed in the site grading plan	Following plan approval and weather permitting	Phase I Topographic reconfiguration
Site stabilization following SWPPP outlined activities	Initiated at completion of grading for each project area	Phase II Planting/ Seeding
Tree, shrub and herbaceous plug planting/seeding in wetland areas	Wetland seed mixes will be applied at the completion of construction of each project area, and again the when moist soil conditions are present. Herbaceous plugs will be installed in spring following construction during conditions of suitable hydrology. Woody plants will be installed during the dormant period immediately following the completion of construction for all the project areas	
Supplemental plug and woody plant installation	As needed throughout the monitoring period	Phase III Maintenance

6.4 Grading plan, including elevations and slopes of substrate

This project relies on ditch plug installation to modify the site's hydrology (Figures 2 and 3) with only very small areas of grading to adjust surface contours.

6.5 Methods for establishing desired plant community, including adaptive management techniques

The desired plant community will be established through broadcasting high-quality seeds and planting trees and shrubs. Although the objective is to reestablish a forested wetland, there will also be wetland

shrubs interspersed in the site to increase plant and canopy level diversity. Plant or seed material will be obtained from nurseries or, if possible, from nearby wetlands. Species and quantities are provided in Table 5.

If the mitigation site is not adequately vegetated by the end of the third year, a remedial planting plan will be developed. If the DE acting in consultation with the IRT determines that the site (or any portion thereof) is failing to establish and is not making satisfactory progress towards meeting the performance goals within the monitoring period, TWT must develop a remedial action plan to correct the deficiencies, or alternately a reduction of credits may be levied against underperforming areas. In the former case, the remedial action plan must be submitted to the DE within three months of receipt of written notification of deficiencies. Within two months of receipt of the remedial action plan, the DE acting in consultation with the IRT must provide written acceptance of the submitted plan or a modified plan acceptable to the DE acting in consultation with the IRT. The DE acting in consultation with the IRT accepted remedial action plan (as submitted by TWT or as modified by the DE acting in consultation with the IRT) will then be returned to TWT and TWT will implement the measures specified in the remedial action plan within six months or along a timeline as otherwise provided.

Table 5: List of Species to be planted in re-establishment and rehabilitation areas*

Herbaceous Plants, re-establishment

Common Name	Latin Name	Indicator Status	CoC	Planting Rate
longhair sedge	*Carex comosa*	OBL	4	Combination of 20 pounds/ acre and/or plugs or bare roots at density of 3 feet on center
fringed sedge	*Carex crinita*	OBL	3	
Gray's sedge	*Carex grayi*	FACW	7	
greater bladder sedge	*Carex intumescens*	FACW	3	
bottlebrush sedge	*Carex lupulina*	OBL	5	
shallow sedge	*Carex lurida*	OBL	3	
white turtlehead	*Chelone glabra*	OBL	5	
sweet woodreed	*Cinna arundinacea*	FACW	5	
riverbank wildrye	*Elymus riparius*	FACW	4	
Virginia wildrye	*Elymus virginicus*	FACW	6	
spotted touch-me-not	*Impatiens capensis*	FACW	1	
pale touch-me-not	*Impatiens pallida*	FACW	4	
northern blue flag	*Iris versicolor*	OBL	5	

wood-nettle	*Laportea canadensis*	FACW	4	
ostrich fern	*Matteuccia struthiopteris*	FAC	5	
sensitive fern	*Onoclea sensibilis*	FACW	2	
switchgrass	*Panicum virgatum*	FAC	3	
bur-reed	*Sparganium americanum*	OBL	5	

Woody Plants, re-establishment

Common Name	Latin Name	Indicator Status	CoC	Planting Rate
red maple	*Acer rubrum*	FAC	2	450/acre
silver maple	*Acer saccharinum*	FACW	4	
silky dogwood	*Cornus amomum*	FACW	4	
northern spicebush	*Lindera benzoin*	FACW	6	
American sycamore	*Platanus occidentalis*	FACW	6	
eastern cottonwood	*Populus deltoides*	FAC	2	
black willow	*Salix nigra*	OBL	4	
common elderberry	*Sambucus canadensis*	FACW	3	
slippery elm	*Ulmus rubra*	FAC	5	
arrow-wood	*Viburnum dentatum*	FAC	4	

Herbaceous Plants, rehabilitation

Common Name	Latin Name	Indicator Status	CoC	Planting Rate
upland bentgrass	*Agrostis perennans*	FACU	3	Combination of 20 pounds/ acre and/or Plugs or bare roots at density of 3 feet on center
big bluestem	*Andropogon gerardii*	FACU	6	
sweet woodreed	*Cinna arundinacea*	FACW	5	
deertongue	*Dichanthelium clandestinum*	FACW	3	
Canada wildrye	*Elymus canadensis*	FACU	5	
riverbank wildrye	*Elymus riparius*	FACW	4	
Virginia wildrye	*Elymus virginicus*	FACW	6	

smooth oxeye	*Heliopsis helianthoides*	FACU	4	
ostrich fern	*Matteuccia struthiopteris*	FAC	5	
switchgrass	*Panicum virgatum*	FAC	3	
New England aster	*Symphyotrichum novae-angliae*	FACW	2	
blue vervain	*Verbena hastata*	FACW	4	

Woody Plants, rehabilitation

Common Name	Latin Name	Indicator Status	CoC	Planting Rate
red maple	*Acer rubrum*	FAC	2	450/acre
silver maple	*Acer saccharinum*	FACW	4	
yellow birch	*Betula alleganiensis*	FAC	4	
silky dogwood	*Cornus amomum*	FACW	4	
winterberry	*Ilex verticillata*	FAC	4	
black walnut	*Juglans nigra*	FACU	3	
tuliptree	*Liriodendron tulipifera*	FACU	4	
eastern white pine	*Pinus strobus*	FACU	4	
American sycamore	*Platanus occidentalis*	FACW	6	
northern red oak	*Quercus rubra*	FACU	3	
American basswood	*Tilia americana*	FACU	5	
Species composition subject to commercial availability				

6.6 Sources of water, connections to existing waters, and upland runoff

The Phase 1 re-establishment is west of Sterling Creek (Figure 2). It will utilize a combination of overland flow, direct precipitation, and interception of groundwater hydrology feeding existing adjacent wetlands (i.e., wetlands 1, 3, 10, 11; Figure 4). With the addition of two ditch plugs, there should be an increase in the area of inundation and in the water's residence.

The Phase 2 re-establishment, east of Sterling Creek Figure 3), while having fewer existing wetlands should respond similarly, with hydric conditions developed once the five ditch plugs are installed coupled with compaction throughout the field. Hydrophytes are already present in patches of low areas, as well as tire ruts, indications that soil modifications should be successful. With ditch plugs increasing inundation and soil compaction increasing residence time and decreasing water infiltration of precipitation and

floodwaters, hydric conditions should develop rapidly to meet the hydrophytic species' needs.

6.7 Invasive species control

Invasive species management throughout the mitigation areas will include mechanical, chemical, and where available, biological control of target species. Invasive and/or unwanted plant species management techniques to aid in meeting performance standards include:

- adequately preparing the site for planting through pre-planting herbicide applications and cultivation
- removing or managing invasive species from areas both adjacent to and within the re-establishment area wherever possible to reduce the standing mass, and future seed sources
- vigilantly addressing invasive species as they emerge as part of regular maintenance

TWT will both preemptively and adaptively manage invasive species within the mitigation areas on the Mohawk River Preserve property through hand pulling, mechanical removal, and, if needed, application of herbicide in accordance with all state and federal regulations. Preemptive invasive species management will occur by targeting invasive plants in and adjacent to re-establishment areas prior to ground disturbance. Figures 6 through 9 show estimated invasive cover for several key invasive species across the property, but management will occur on all species of concern, including those quantified in Table 2, and any others not previously identified. The invasive tree species at the site, European alder, will be managed to both remove standing stems, eliminating seed production, and to minimize soil disturbance around existing stands which would promote the rapid development of the seed bank.

Management will be most effective by cutting the trees, and applying herbicide to fresh stumps. Shrubby invasive species, including honeysuckle, buckthorn and multiflora rose, will be mechanically removed, and buried in upland areas to reduce re-infestation. Many of the herbaceous invasive plants are upland species, present as a result of drainage activities. The actions of re-establishing wetlands should lead to the natural reduction of these species, but early management will also more effectively promote the development of desired and planted plant communities. Herbaceous invasive species will be managed repeatedly during the construction period and after, until suitable vegetative cover is established throughout disturbed areas. This management will limit seed production at times when soils would be easily colonized. Management will include either mowing or herbicide management timed to prevent seed production. The areas targeted for an initial herbicide treatment are outlined in the Herbicide Treatment Map in Figure 19. Management will continue annually throughout the monitoring period, addressing invasive species before they reach problem levels. During the monitoring period, invasive plant species will be documented during site visits and mapped via GPS to be used to direct control measures.

Other appropriate methods for control will be determined at the time that a new species is encountered. Long-term tasks will include routine inspections in early summer (late June through mid-July) to

determine invasive species presence or absence, as well as abundance. Species found will be rapidly controlled through manual extraction or the application of herbicides before seeds reach maturity.

6.8 Soil management and erosion control measures

All slopes, soils, substrates, and constructed features within and adjacent to the work site will follow stabilization protocols described in the Mohawk River Preserve Erosion and Sediment Control plan submitted to NYS DEC prior to initiation of those activities.

Figure 19: Mohawk Preserve Herbicide Treatment Map.

In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 692 ft

0 230 460 920 1,380 1,840 Feet

Legend
- Mohawk River Preserve Boundary
- Invasive Herbaceous Plant Management
- Invasive Tree Management

7. Performance Standards

Success within the mitigation site is based on meeting the USACE criteria for the three parameters described in the 1987 Corps of Engineers Wetland Delineation Manual and 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region.

The parameters needed to result in released credits include:

- *Wetland hydrology* where areas generating credit are inundated (flooded or ponded) or the water table is ≤12 inches below the soil surface for ≥14 consecutive days during the growing season at a minimum frequency of 5 years in 10
- *Hydrophytic vegetation* where areas generating credit demonstrate a relative dominance of FAC or wetter plant coverage, meeting one or more USACE Wetland Determination Data Form Hydrophytic Vegetation Indicators
- *Hydric soils* where areas generating credit contains soil profiles that demonstrate one or more USACE Wetland Determination Data Form Hydric Soil Indicators.
- *Any unvegetated open water area* that is greater than 0.1 acre in size does not generate "wetland" credits. As unvegetated open water (<30% cover of PEM/PSS/PFO species) does not meet the definition of wetland, it is appropriate to credit these areas as buffers as they do not truly represent wetlands

The performance standards will be monitored over a 10-year term that begins the year following the submittal of the post-construction as-built report. Performance standards are based on three interim and one final goal. Credits will be released when each goal is met. The credit release schedule is described in Section 4.2. The credit amount or final release will be adjusted in accordance with the site performance at the end of the 10-year monitoring period.

7.1 First vegetative interim goals

- 50% relative cover of wetland re-establishment and rehabilitation areas by native perennial hydrophytes (FAC or wetter)
- The wetland re-establishment and rehabilitation areas will have at least 150 shrubs/trees per acre from species listed in Table 5
- No more than 25% of wetland re-establishment and rehabilitation areas are composed of invasive species such as but not limited to: purple loosestrife, reed canarygrass, common reed, non-native cattails and Japanese knotweed (*Polygonum cuspidatum*)
- Wetland re-establishment and rehabilitation areas achieve a VIBI score of 15 or greater

7.2 Second vegetative interim goals

- 60% relative cover of wetland re-establishment and rehabilitation areas by native perennial hydrophytes (FAC or wetter)

- The wetland re-establishment and rehabilitation areas will have at least 200 shrubs/trees per acre from species listed in Table 5
- No more than 20% of the wetland re-establishment and rehabilitation areas are composed of invasive species such as but not limited to: purple loosestrife, reed canarygrass, common reed, non-native cattails and Japanese knotweed
- Wetland re-establishment and rehabilitation areas achieve a VIBI score of 22.5 or greater

7.3 Third vegetative interim goals

- 75% relative cover of wetland re-establishment and rehabilitation areas by native perennial hydrophytes (FAC or wetter)
- The wetland re-establishment and rehabilitation areas will have at least 300 shrubs/trees per acre from species listed in Table 5
- No more than 10% of the wetland re-establishment and rehabilitation areas are composed of invasive species such as but not limited to: purple loosestrife, reed canarygrass, common reed, non-native cattails and Japanese knotweed
- Wetland re-establishment and rehabilitation areas achieve a VIBI score of 33.8 or greater

7.4 Final vegetative goals at end of the 10-year monitoring period

- 90% relative cover of wetland re-establishment and rehabilitation areas by native perennial hydrophytes (FAC or wetter)
- The wetland re-establishment and rehabilitation areas will have at least 450 shrubs/trees per acre from species listed in Table 5
- No more than 5% of the wetland re-establishment and rehabilitation areas composed of invasive species such as, but not limited to: purple loosestrife, reed canarygrass, common reed, non-native cattails and Japanese knotweed
- Wetland re-establishment and rehabilitation areas achieve a VIBI score of 45 or greater

8. Monitoring to Track Success Criteria and Determine Adaptive Management Implementation Needs

8.1 Monitoring report requirements

Site monitoring begins after construction is completed and continues for ten (10) years. Monitoring information collected will determine if performance standards are being met, and provide, if needed, a list of adaptive management tasks (Section 9) to help meet those standards.

Each monitoring report will include:

- Initial Post-Construction "as-built" report including post construction information will be provided with photographs, baseline ecological descriptions, as-built drawings that describe the constructed features with 0.5′ contours, map/descriptions of planted materials, wetland delineation maps by wetland habitat type (PEM,PS,PFO), delineation data forms, estimates of invasive plant species cover within the re-establishment and rehabilitation areas, and a description of any deviations from the mitigation plan
- A map or maps showing the locations of water wells, permanent photo points, areas of remedial actions, if any; changes in invasive species coverage, if any; areas of soil manipulation, if any; and areas >0.1 acre of unvegetated open water (<30% cover of PEM/PSS/PFO species)
- Descriptions of the monitoring inspection protocols used
- Hydrology data collected from permanent water wells, as well as hydrology information derived from Wetland Determination Data Forms completed throughout the site
- Description of remedial actions completed during the monitoring year
- Report on the status of all erosion control measures on the mitigation site, and any additional temporary measures needed
- Description of any measures requiring additional soil manipulation or changes in hydrology, all of which will be undertaken only after written approval from the New York District Engineer
- Review of all information collected to meet all performance goals (e.g., Sections 7.1, 7.2, 7.3, 7.4) as appropriate
- Description of the general plant health, vigor and mortality, including a prognosis for their future survival including a qualitative description of arboreal plant health, vigor and mortality, including a prognosis for their future survival and photos illustrating tree growth
- VIBI scores and data sheets for wetland re-establishment and rehabilitation areas
- Photographs at permanent photo points
- List of wildlife observed and other interesting biological occurrences

8.2 Reporting schedule

Monitoring reports by unique year and number, and an initial Post-Construction, "as-built" Report, will `be submitted by the following 28 February to describe conditions in the prior growing season (Table 6). All reports in hard copy and digital format will be submitted to the District Engineer, Department of the Army, New York District Corps of Engineers 26 Federal Plaza, New York, New York 10278-0090 and District Engineer, Department of the Army, Buffalo District Corps of Engineers, 1776 Niagara Street, Buffalo, NY 14207-3199; reports to the IRT as requested. All monitoring, reporting, requests, and adaptive management implementation will be the responsibility of TWT.

Table 6: Reporting schedule.		
Activity	Description	Year
Post-Construction Report	Submitted in February of the year following construction completion and planting	0
1st Monitoring Report	First full year of vegetation growth, with this report being used as a template for all future reports	1
2nd Monitoring Report	Third full year of vegetation growth	3
3rd Monitoring Report	Fifth full year of vegetation growth	5
4th Monitoring Report	Seventh full year of vegetation growth	7
Final Monitoring Report	Tenth full year of vegetation growth	10

In the event that construction takes more than one growing season to be completed, an interim construction report will be submitted by no later than February 28 and will describe completed tasks and those remaining. The monitoring timeline will begin following the completion of construction and planting activities described herein.

9. Adaptive Management Plan

Effective management of this mitigation site throughout the monitoring period will promote greater long-term viability of the site. There are a wide variety of factors that could affect the success of this mitigation site, but the frequent visits required to complete the 10-year site monitoring process should ensure adaptive management needs are identified and implemented early and often. Proactive responses to concerns will result in a higher likelihood of successful management. Corrective measures to address factors such as woody plant health and quantity, native herbaceous plant cover including managing invasive species, erosion control and hydrology will all be critical tools in ensuring site performance standards are achieved.

9.1 Adaptive woody plant health management

Re-establishment and rehabilitation areas will predominantly be planted to forest cover, making survivability of woody stock a key consideration of site performance. Apart from the need to achieve performance standards of 450 shrubs and trees per acre to meet the final vegetative goal, shade is a key tool for controlling invasive herbaceous plants, which would support meeting several other vegetative goals. Woody plant health can be affected by herbivory, pest infestation, and poor responses after planting due to weather or the local hydrologic regime. Deer herbivory will be managed, if needed, through exclusionary fencing and/or by cooperation with licensed hunters operating in accordance with all state and local laws. Beaver damage (e.g., plant mortality from feeding and/or flooding) management

options include an exclusionary fence targeting beaver access, protective wraps around bases of larger trees, or partnership with a licensed trapper to reduce numbers.

9.2 Adaptive plant cover management

Managing to benefit wetland plants establishment will be key to success. Timely addition of plant materials as a part of general site maintenance will allow for finding those windows of opportunity where weather and soil conditions will promote plant establishment. This is especially important in the first several years of the project and having a phased approach in the planting scheme as described in this plan will be an important advantage. Selecting a diverse assemblage of herbaceous plants should provide additional assurance that plants will become established due to their different specific requirements, and will also result in a higher quality wetland in the long term.

There will be vigilant management of invasive plants that may reduce preferred species' establishment, growth, and coverage, before, during and after the construction period (Section 6.6, Invasive species control). Adaptive management options for addressing invasive species beyond regular maintenance include herbicide spot treatment, temporarily placing weed control devices, selective regrading to favor preferred species, and increasing the planting density where needed.

9.3 Adaptive hydrology management

Because the changes in soil moisture may become evident only after construction is completed, establishing suitable hydrology in the wetland re-establishment or rehabilitation areas is very conducive to adaptive management strategies. Water well data, vegetation monitoring and close observation of plant mortality and vigor will provide key adaptive management information. Areas where infiltration is the likely cause of insufficient hydrology levels may be managed through re-compaction of subsoil layers. In other areas, modification of local topography to the grade of existing nearby wetland features may be needed to intercept additional subsurface hydrology. In locations (such as wetland W7a in Figure 4), where old drainage ditches may be lowering the surrounding water table, groundwater dams may be installed to direct subsurface flow towards the surface.

9.4 Adaptive site control management

The site is accessed from NYS Route 5S through the NYS Canal Corporation Lock 19 access road via Canal Use Occupancy Permit (# C-OC-202000145). This entry point provides quality access to TWT and its partners while providing excellent site control. Should site control become an issue, the installation of access gates, surveillance tools, and property border fencing will be options to increase property control.

TWT will regularly review the status of this site to confirm that all necessary activities have been implemented and to ensure early detection of any management concerns.

10. Long-Term Management and Maintenance Plan

10.1 Responsible party

TWT is the long-term management lead, and plans to have TWT staff in the basin who will be responsible for management, maintenance, site work, monitoring, and implementation. Certain tasks may be contracted to local partners.

10.2 Long-term management goals

The goals of the long-term management of the Mohawk River Preserve Mitigation Site is to support the long-term viability of the re-established and rehabilitated wetland areas, and their immediate buffers in perpetuity. Secondarily it is to increase the overall value of the Mohawk River Preserve Wetland Mitigation Site in terms of habitat's functions and services for increased quality and biodiversity.

10.3 Long-term evaluation schedule

The Long-Term Management and Maintenance Plan begins as soon as the site is approved and continues thereafter. Sites visits will occur, at a minimum, on an annual basis, though due to the ongoing implementation efforts on the property, visits will likely occur at a much greater frequency. TWT also uses high resolution aerial imagery to monitor its properties, and will have digital data available to all monitoring and maintenance staff as an additional property evaluation resource.

10.4 Long-term management and maintenance items

The long-term management strategy for the site will be implemented after successful completion of its initial monitoring and review period. This strategy will advocate for a sustainable approach, minimizing active management activities, and instead promoting natural wetland processes. The mitigation site, synonymous with the TWT Mohawk River Preserve, is available for study and research to our academic partners. We expect that SUNY-ESF, among other universities, may use the site for graduate research. These academic partnerships help to meet educational objectives for this mitigation plan, and stimulate site visits that may reveal adaptive management needs. Each academic partner visiting the site will be provided a simple site evaluation form to submit that will ensure continued monitoring vigilance. This form will request comments regarding invasive species, rare/threatened/endangered plant or animal species found in the mitigation area, evidence of trash and trespass in the mitigation area or any other cause of concern that need be addressed by TWT.

The parcel will be posted for protection against trespassing as well as to delineate the boundaries for outside activities such as academic research. Monitoring for maintenance addresses anticipated regular actions, include ensuring boundary posting and fence integrity, signage repair, early detection of invasive species problems, areas that require an activity such as mowing, and any areas where there is natural activity that could lead to problems such as after extreme weather events (e.g., berm maintenance, if any). Certain items such as mowing are timed to meet their objectives, such as keeping fields in early succession, but after bird nesting activities, if indeed that is appropriate for this site.

As part of long-term management plan TWT will review the functionality of the entire Mohawk River Preserve Site to identify additional implementation needs that could be undertaken to increase the site's sustainability, resilience, wetland area, and biodiversity.

11. Financial Assurances

11.1 Short-term financial assurances

TWT will provide sufficient assurance to ensure a high level of confidence that the compensatory mitigation project will be successfully completed (Section 332.3(n)(1)) through a performance bond naming the USACE New York District as the Obligee, who can then designate a third party. TWT will provide the USACE New York District with a cost estimate for appropriate costs that need to be assured, such as construction and monitoring of the project should TWT not complete these Mitigation Plan tasks. TWT plans to use the bonding company it currently uses to meet its assurance obligations for its NY Mitigation Bank, the Salt Marsh Bank in Montezuma, NY.

11.2 Long-term financial assurances

To ensure financial stability TWT will continue to own this site fee simple in perpetuity. As a 501(c)(3) nonprofit corporation, TWT has received tax-exempt status for the site, helping to ensure its long-term protection. TWT has a director-controlled Stewardship Management Investment Account specifically established for this and every SA in the ILFP. A total of $111,000 is currently in this account, with the investment income (investment instruments are low-risk and broad-based) used to support permanent long-term management and maintenance. As credits are sold, a $10,000/full credit, prorated, is deposited into the account. The funding level in Table 7 should be sufficient to sustain the long-term management of the Mohawk River Preserve Site. The fund will grow as more credits are sold, providing for an extra contingency and guard against inflation.

Table 7. Budget estimate for long-term management and maintenance tasks, Mohawk River Preserve mitigation site, 152.5 acres.

Category	Task	Frequency Every Year = 1 Every 10 years = 0.1	Estimated Cost	Amount set aside every year
Potential Adaptive Management Tasks	Replanting	0.05	2,000	100
	Reshaping terrain	0.05	1,000	50
	Invasive species removal	0.5	2500	500
	Other adaptive management tasks	0.3	1,000	300
Potential Maintenance Tasks	Boundary posting	0.05	2,500	125
	Site manipulation	0.02	1,200	24
Additional Potential Long-Term Management Tasks	Other corrective, adaptive management, Actions to ensure natural stability of site	0.1	8,000	800

Monitoring	To determine implementation tasks	1	2,000	2,000
Administration	To ensure the Mohawk River Preserve remains tax exempt	1	50	50
Total cash needed per year to cover both maintenance and long-term management tasks, with some funds rolled over for less frequent implementation tasks.				3,949
Total Stewardship investment to support all tasks, based on an investment of 4% return to generate funds, or $40/1,000 invested. Any additional funds generated will be rolled over to increase the stewardship investment or used as needed for the above tasks				98,725

12. Other Items

Where appropriate, TWT will follow specific species habitat regulatory restoration protocols for sites that may harbor rare species, beginning with coordination between TWT and USFWS to ensure these protocols are correct. TWT will also request Section 7 consultation between the Corps and USWFS as part of the procedure. Other items as determined by the DE, acting in consultation with the IRT will be included.

13. Property Transfer Provision

The Wetlands Trust shall have the right to sell, assign, transfer or convey (each a "transfer" for the purposes of this Subsection) its interest in the Mitigation Property at any time; provided, however, that any such transfer on or after the execution date of this Mitigation Plan must be made in accordance with the Mitigation Plan and the Conservation Easement, and shall be subject to prior written concurrence by USACE and the IRT. Such concurrence shall be subject to the requirement that the transferee assumes and agrees in writing to observe and perform all of TWT's obligations pursuant to this Mitigation Plan and the Conservation Easement.

From and after the date of any transfer by TWT of its interest in the Mitigation Property in which the transferee has assumed and agreed in writing to observe and perform all of the transferor's obligations pursuant to this Mitigation Plan, (a) the transferor shall have no further obligations hereunder and all references to TWT in this Mitigation Plan shall thereafter refer to such transferee, except that the transferor's liability for acts, omissions, or breaches occurring prior to the transfer shall survive the transfer. Any transfer of the TWT's interest in the Mitigation Property made without the prior written concurrence of USACE and the IRT constitutes default and the IRT may take action accordingly.

Sponsor may sell or convey its entire interest in the Mitigation Property at any time, provided that no uncured event of default exists, Sponsor is in full compliance *w*ith all requirements of this Mitigation Plan (including all Financial Assurance requirements), and subject to the prior written approval of USACE, in consultation with the IRT. If any of the Financial Assurances required under this Mitigation Plan are not completely funded at the time the Sponsor requests USACE approval of a sale or conveyance, then USACE shall not approve such sale or conveyance unless and until either the current Sponsor, or the proposed

replacement Sponsor, shall have provided all required Financial Assurances. In addition, prior to sale or conveyance, the Sponsor shall provide to each member of the IRT a written agreement signed by the replacement Sponsor, acceptable to the IRT in form and substance, in which the Sponsor assigns to the replacement Sponsor, and the replacement Sponsor assumes and agrees to perform, all of the responsibilities and obligations of the Sponsor under the Mitigation Plan. Any such sale or conveyance made without the prior written concurrence of USACE constitutes default and USACE may take action accordingly.

14. Invalid Clauses

In the event any one or more of the provisions contained in this document are held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability will not affect any other provision hereof, and this document shall be construed as if such invalid, illegal, or unenforceable provision has not been contained herein.

15. Notice Provision

Any notice required or permitted hereunder shall be deemed to have been given either (i.) when delivered by hand, or (ii.) three (3) days following the date deposited in the United States Mail, postage prepaid, by registered or certified mail, return receipt requested, or (iii.) sent by Federal Express or similar next-day nationwide delivery system, addresses as follows (or addressed in such a manner as the party being notified shall have requested by written notice to the party):

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

USACE: District Engineer, Department of the Army, Buffalo District Corps of Engineers 1776 Niagara Street, Buffalo, NY 14207-3199, and

District Engineer, Department of the Army, New York District Corps of Engineers 26 Federal Plaza, New York, New York 10278-0090

16. Dispute Resolution

In an event of dispute between the Corps and the sponsor or other interested parties (e.g., long-term land steward) concerning interpretation of the ILFPI or a site mitigation plan or its components, which is not already covered within the ILFPI or appropriate Federal regulations**,** the Corps shall consider comments from the other members of the IRT, the Sponsor, and/or information provided by an independent review. The Corps will allow 60 days for comments and information, and within the next 90 days issue a written resolution declaration. Nothing in this section will affect other legal means of addressing the issue at hand.

17. Controlling Provision

USACE approval of this Instrument constitutes the regulatory approval required for the ILFPI to be used to provide compensatory mitigation for Department of the Army permits pursuant to 22 C.F.R. 332.8(a)(l). This Instrument is not a contract between the Sponsor or property Owner and USACE or any other agency of the federal government. Any dispute arising under this Instrument will not give rise to any claim by the Sponsor or Property Owner for monetary damages. This provision is controlling notwithstanding any other provision or statement in the Instrument to the contrary.

Literature Cited:

Anderson, Hayley. 2013. Invasive European Black Alder (*Alnus glutinosa*) Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

Bried, J.T., Strout, K.L., Portante, T., 2012, Coefficients of conservatism for the vascular flora of New York and New England: Inter-state Comparisons and Expert Opinion Basis. Northeast Natural History Conference 2011. Selected Papers 6:101-114.

Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

Environmental Laboratory, 1987. Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1) U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS.New York Natural Heritage Program. 2019. Online Conservation Guide for *Floodplain Forest*. Available from: https://guides.nynhp.org/floodplain-forest/. Accessed March 26, 2020.

Place, Frank. 1860. Gazetteer of the State of New York, Embracing a Comprehensive View of the Geography, Geology and General History of the State, and a Complete History and Description of Every County, City, Town Village and Locality. R.P. Smith, 739 p.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed Feb 2020.

Appendix A. Mohawk River Preserve Mitigation Site Conservation Easement.

CONSERVATION EASEMENT

On lands of The Wetland Trust, Inc.

Off State Road 5, Frankfort, NY 13340

Town of Schuyler, Herkimer County, NY

covering the entirety of

Tax Parcels 105.3-1-72.1 and 105.3-72.2

THIS DECLARATION OF CONSERVATION EASEMENT is made as of the ____ day of _____ 2020, by The Wetland Trust, Inc. (the "Grantor"), a New York not-for-profit with offices at 4729 State Route 414, Burdett, NY 14818, for the benefit of, but not the burden upon, The Wetland Conservancy, Inc. (the "Holder"), a New York not-for-profit entity having its office at P.O. Box 220, Burdett, New York 14818.

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

WHEREAS, Grantor seeks to develop the Protected Property in a manner authorized in the Wetland Mitigation Plan for the Moawk River Preserve, Off State Road 5, Town of Schuyler, NY, as part of the TWT Susquehanna Basin Headwaters and Adjacent Basins In-Lieu Fee Program Instrument, developed under Part 332.8, Federal Register Volume 73, Number 70 and approved by the United States Army Corps of Engineers, Buffalo and New York City Districts ("Corps of Engineers" and to include any successor agency) in accordance with the Federal Clean Water Act, 33 U.S.C. Section 1344 (the "Plan"); and

WHEREAS, as compensatory mitigation for activity authorized by the Plan; in order to protect, restore, and maintain the chemical, physical, and biological integrity of waters of the United States including wetlands through the control of discharges of dredged or fill material; in accordance with the

common law and with the Conservation Easements provisions of New York Environmental Conservation Law ("ECL") Article 49, Title 3; and in recognition of the continuing benefit to scenic and natural resources, the environment, and general property values; Grantor agrees to restrict ownership and use of a portion of the approximately 88-acre Protected Property more particularly described in Schedule A (the "Protected Property"), in order that the Protected Property shall remain substantially in its natural condition (subject to applicable terms and conditions of the Plan) in perpetuity; and

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

WHEREAS, the purposes of this Conservation Easement include, without limitation, conservation and preservation of the Protected Property, with its scenic and other natural resource values and its aquatic resources, which resources include native flora and fauna, and the ecological processes that support them; diverse forest types and conditions; soil productivity; biological diversity; water quality; and wetland, riparian, and other aquatic habitats; and

WHEREAS, Grantor agrees, in accordance with ECL Section 49-0305.5, that rights of enforcement of the terms of this Conservation Easement shall be held by the Holder, and that third-party rights of enforcement shall also be held by the Corps of Engineers or other appropriate enforcement agencies of the United States and that these rights are in addition to, and do not limit, the rights of enforcement under the Plan.

NOW, THEREFORE, for the foregoing consideration, and in further consideration of the restrictions, rights, and agreements herein, Grantor hereby creates, gives, grants, bargains and conveys to the Holder a perpetual easement in, to, over and across, the Protected Property for the purposes of preservation, protection, maintenance and conservation of the Protected Property and the aquatic resources thereon.

A. RESTRICTIONS

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

1. **General.** There shall be no future grading, filling, flooding, excavating, mining or drilling; no removal of natural materials; no dumping of materials; and, no alteration of the topography which would materially affect the Protected Property in any manner, except as authorized by the Plan
2. **Waters and Wetlands.** In addition to the general restrictions above, on the Protected Property there shall be no draining, dredging, damming or impounding of waters; no changing the grade or elevation, impairing the flow or circulation of waters, or reducing the reach of waters; and, no other discharges or activity requiring a permit under applicable water pollution control laws and regulations, except as authorized by the Permit or by current New York State Department of Environmental Conservation permits, or any amendments thereof.
3. **Trees and Vegetation.** On the Protected Property there shall be no clearing, burning, cutting or destroying of trees or vegetation, nor application of herbicides except as may be necessary to protect public health or safety or as authorized by the Plan. There shall be no planting or introduction of non--native or exotic species of trees or vegetation.
4. **Waste Disposal.** There shall be no disposal or storage of liquid or solid waste or other unsightly, hazardous, toxic or offensive material on the Protected Property.
5. **Uses.** No agricultural, animal husbandry, industrial, mining, logging or commercial activity shall be undertaken or allowed on the Protected Property.
6. **Structures.** There shall be no construction, erection, or placement of buildings, billboards, or any other temporary or permanent structures, to include trailers, mobile homes, recreational vehicles, telecommunications towers or antennas, on the Protected Property.
7. **Roads.** There shall be no construction of roads, trails or walkways on the Protected Property without the prior written approval (including approval of the manner of construction) of the Holder and the Corps of Engineers.
8. **Utilities.** There shall be no construction or placement of utilities or related facilities on the Protected Property without the prior written approval (including approval of the manner of construction) of the Holder and the Corps of Engineers.

9. **Pest Control.** There shall be no application of pesticides or biological controls, including controls of problem vegetation, on the Protected Property without prior written approval (including approval of the manner of application) of the Holder and the Corps of Engineers.

10. **Vehicular Use.** There shall be no use of any vehicle or mechanical conveyance which may alter or impair the natural contour or natural vegetation on the Protected Property, except that motor vehicles may be used in case of emergency, for law-enforcement purposes, or for the purpose of compliance and monitoring compliance with the purposes of this Conservation Easement.

11. **Subdivision.** There shall be no subdivision of the Protected Property into parcels or lots, so as to create new parcels, lots or sites with or without access.

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

13. **Other Prohibitions.** Any other use of, or activity on, the Protected Property, which is or may become inconsistent with the purposes of this Conservation Easement, the preservation of the Protected Property substantially in its natural condition, or the protection of its environmental systems, is prohibited.

B. RESERVED RIGHTS OF GRANTOR

Grantor reserves the right to engage in all acts or uses not prohibited by the Restrictions, which are not inconsistent with the conservation purposes of this grant, the preservation of the Protected Property substantially in its natural condition, and the protection of its environmental systems, and which do not interfere with Grantor's obligations under the Permit. Nothing herein shall be deemed to modify or amend any other or additional agreements between or among the Grantor, the Holder and the Corps of Engineers. In the event any of the Grantor's acts or uses, whether on the Protected Property or on the Permitted Property, are subject to review under the New York State Environmental Quality Review Act (SEQRA), the Holder shall be designated as an interested party and notified of the review process.

C. GENERAL PROVISIONS

The following General Provisions shall be binding upon the Grantor and the Grantor's heirs, successors, grantees, transferees, administrators, assigns, lessees, licensees and agents, and shall

inure to the benefit of the Holder and the Corps of Engineers, and the heirs, successors, grantees, transferees, administrators, assigns, lessees, licensees and agents of the Holder and the Corps of Engineers:

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

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

3. **Events Beyond Grantor's Control.** Nothing herein shall be construed to authorize the Holder or the Corps of Engineers to institute any proceedings against Grantor for any changes to the Protected Property caused by acts of God or circumstances beyond the Grantor's control such as

earthquake, fire, flood, storm, war, civil disturbance, strike or similar causes.

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

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

6. **Extinguishment.** In the event that changed conditions render impossible the continued use of the Protected Property for conservation purposes, this Conservation Easement may only be extinguished, in whole or in part, by judicial proceeding under authority of ECL Section 49-0307.

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

8. **Proceeds of Taking.** This Conservation Easement constitutes a real property interest immediately vested in the Holder. In the event that all or a portion of this Protected Property is sold, exchanged, or involuntarily converted following an extinguishment or the exercise of eminent domain, the Holder shall be entitled to the fair market value of this Conservation Easement. The parties stipulate that the fair market value of this Conservation Easement shall be determined by identifying the fair market value of the Protected Property unencumbered by this Conservation Easement (minus any increase in value after the date of this grant attributable to

improvements) and subtracting the value of the Protected Property with the Conservation Easement at the time of this grant. The values at the time of this grant shall be the values used, or which would have been used, to calculate a deduction for federal income tax purposes, pursuant to Section l70(h) of the Internal Revenue Code (whether the grant is eligible or ineligible for such a deduction). The Holder shall use its share of the proceeds in a manner consistent with the purposes of this Conservation Easement.

9. **Notification.** Any notice, request for approval, or other communication required under this Conservation Agreement shall be sent by registered or certified mail, postage prepaid, to the following addresses (or such address as may be hereafter specified by notice pursuant to this paragraph):

To Grantor:

The Wetland Trust, Inc.

4729 State Route 414, Burdett, New York 14818

To Holder:

The Wetlands Conservancy, Inc

P.O. Box 220, Burdett, New York 14818

To the Corps of Engineers:

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

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

And

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

1776 Niagara Street, Buffalo, NY 14207-3199

10. **Assignment.** This Conservation Easement is transferable, but only to a holder qualified under ECL Section 49-0305.3, and approved in writing by the Corps of Engineers before transfer. As a condition of such transfer, the transferee shall agree to all of the restrictions, rights,

and provisions herein ,and to continue to carry out the purposes of this Conservation Easement. Assignments shall be accomplished by amendment of this Conservation Easement in accordance with Section C, Paragraph 14.

11. **Failure of Holder.** If at any time the Holder is unable or fails to enforce this Conservation Easement, or if the Holder ceases to be a holder qualified under ECL Section 49-0305, and if within a reasonable period of time after the occurrence of one of these events the Holder fails to make an assignment pursuant to paragraph 10, then the Holder's interest shall become vested in another holder qualified in accordance with an appropriate *(e.g., cy pres)* proceeding, to be brought by the Grantor in a court of competent jurisdiction .

12. **Subsequent Transfer.** This Conservation Easement shall be perpetual and run with the land and shall be binding upon all future owners of any interest in the Protected Property. The conveyance of any portion of or any interest in the Protected Property, by sale, exchange, devise or gift, shall be made by an instrument which expressly provides that the interest thereby conveyed is subject to this Conservation Easement, without modification or amendment of the terms of this Easement, and such instrument shall expressly incorporate this Conservation Easement by reference, specifically setting forth the date, office, liber and page of the recording of this Conservation Easement. The failure of any such instrument to comply with the provisions hereof shall not affect the validity or enforceability of this Conservation Easement, nor shall such failure affect the Holder's or the Corps of Engineers' rights hereunder. No less than thirty (30) days prior to conveyance of any interest in the Protected Property, Grantor (to include any successor Grantor) shall notify the Holder and the Corps of Engineers of such intended conveyance, providing the full names and mailing addresses of all Grantees, and the individual principals thereof, under any such conveyance.

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

14. **Amendment.** This Conservation Easement may be amended in accordance with ECL Section 49-0307, but only in a writing signed by the Grantor and the Holder, or their successors or assigns, and approved in writing by the Corps of Engineers, its successors or assigns; provided such amendment does not affect the qualification of this Conservation Easement or the status of the Holder under ECL Section 49-0305 or any other applicable law; and provided such amendment is consistent with the conservation purposes of this grant and its perpetual duration. Any amendment to this Conservation Easement shall be recorded and provided to the Holder, the Corps of Engineers and the New York State Department of Environmental Conservation, in the

manner set forth in paragraph C-5 above.

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

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

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

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

Execution by Grantor: The Wetland Trust, Inc.

By: _____

Title: Executive Director

STATE OF NEW YORK) ss.:

COUNTY OF Schuyler)

On the __day of _____ in the year 2020 before me, the undersigned, a notary public in and for said state, personally appeared the Grantor **James Curatolo**, Executive Director of The Wetland Trust, Inc. personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed this instrument.

_____

Notary Public Date: _____

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

By: _____

Title: Chair

STATE OF NEW YORK) ss:

COUNTY OF Tompkins)

On the __day of _____ in the year 2020 before me, the undersigned, a notary public in and for said state, personally appeared the Holder **Aaron Ristow**, Chair of The Wetland Conservancy, Inc. personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed this instrument.

_____ _____

Notary Public Date

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

Town of Schuyler, Herkimer County, N, covering the entirety of

Tax Parcels 105.3-1-72.1 and 105.3-72.2

ALL THAT TRACT OR PARCEL OF LAND, situate in the Town of Schuyler, County of Herkimer, State of New York, bounded and described as follows: Beginning at a point in the northerly boundary of the Mohawk River which point is on the westerly line of property now or formerly owned by Mannino; thence in a generally northeasterly direction along Mannino's westerly line 650+/- to a point in the southerly boundary of New York State Canal lands; thence in a generally north-westerly direction along the southerly boundary of said New York State Canal lands 2000 ± feet to a concrete post set at the edge of a drainage ditch; thence in a generally south westerly direction along the edge of said drainage ditch 1780 ± feet to a point in the northerly boundary of the Mohawk River; thence in a generally south easterly direction along the northerly boundary of said Mohawk River 2230+/- feet to the point and place of beginning.

TOGETHER WITH a right of way 20' in width along the northerly portion of premises of first parties immediately adjacent to the west of the premises hereinabove described which said Right of Way is bounded on the east by property herein conveyed to second parties, on the north by Conrail lands, on the west by the overpass over the railroad and on the south by a line 20' distant from the aforesaid northerly line and parallel thereto.

ALSO ALL THAT TRACT OR PARCEL OF LAND situate in the Town of Schuyler, County of Herkimer, viz: Beginning at a point in the northerly boundary of Conrail (formerly New York Central Railroad property), which said point is 400 ±' westerly of an overpass over said railroad and which overpass is northerly of the property of the first parties; thence in a generally north easterly direction to the southerly boundary of New York State Canal Lands; thence in a generally north westerly direction along the southerly boundary of New York State Canal lands to the easterly boundary of lands now or formerly owned by Ward; thence in a generally southeasterly direction along said Ward's easterly line to the northerly boundary of Conrail; thence in a generally north easterly direction along the northerly boundary of Conrail to the point and place of beginning.

ALSO ALL THAT TRACT OR PARCEL OF LAND situate in the Town of Schuyler County of Herkimer, State of New York, bounded and described as follows: Beginning at a point in the northerly boundary of the Mohawk River which said point is the southwesterly (previously erroneously recited as southeasterly in prior conveyances of record) corner of premises conveyed to Rosario Di Gristina and Mary Di Gristina, which said deed is to be recorded contemporaneously herewith; thence in a generally northeasterly direction along the westerly line of the aforesaid parcel conveyed this date, to Rosario Di Gristina and Mary Di Gristina and along a drainage ditch 1780± feet to a concrete post set at the edge of said drainage ditch; thence in a generally northwesterly direction along the southerly boundary of New York State Canal Lands and Conrail

Lands a distance of 4800± feet to a point in the easterly boundary of premises now or formerly owned by Ward; thence in a generally southwesterly direction along the said easterly line of Ward a distance of 460± feet to a point in the northerly boundary of the Mohawk River; thence in a generally southeasterly (previously erroneously recited as westerly in prior conveyances of record) direction along the northerly boundary of the Mohawk River to the point and place of beginning.

TOGETHER WITH a Right of Way, for ingress and egress, 20 feet in width along the northerly boundary of premises aforesaid, conveyed this day to Rosario Di Gristina and Mary Di Gristina, which said premises adjoin the premises herein conveyed to the east.

Also a right of way over said property, lying between the northerly line of Conrail and the southerly line of New York State Canal Lands conveyed herein this day by the same aforesaid deed.

Appendix B. NYS Parks, Recreation, and Historic Preservation review letter

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

July 08, 2020

Jeremy Waddell
Upper Susquehanna Coalition
183 Corporate Drive
Owego, NY 13827

Re: USACE
Mohawk River Preserve Wetland Mitigation
Town of Schuyler, Herkimer County, NY
20PR03888

Dear Jeremy Waddell:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based upon this review, it is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

Appendix C. Mohawk River Preserve mitigation site wetland delineation maps and report.

DIEHLUX, LLC

- Innovative Ecology -

November 8, 2019

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

RE: MOHAWK SA SITE
2921 NY-5, TOWN OF SCHUYLER, HERKIMER COUNTY, NEW YORK
FRESHWATER WETLANDS DELINEATION REPORTING

Dear Mr. Curatolo

The following represents our findings, recommendations, and conclusions upon completion of the freshwater wetlands, watercourse and waterbody delineation services authorized by The Wetlands Trust Inc., herein referred to as "the Client" on August 1, 2019. The proposed project includes delineation of all wetlands, watercourses and/or waterbodies on the approximate 160-acre property located immediately north of the Mohawk River and south of the existing CSX Railroad in the Town of Schuyler, Herkimer County, New York (Site). A copy of the Site location maps provided by the Client are included in Appendix I.

A. Purpose

The purpose of this investigation was to determine the location of state or federally-regulated freshwater wetlands, watercourses, or water bodies within the limits of the Site, as well as any environmental permitting requirements associated with Articles 15 and 24 of the New York State Environmental Conservation Law (ECL), as well as Sections 404 and 401 of the Clean Water Act. Generally, these environmental regulations pertain to the protection and preservation of wetlands, watercourses and waterbodies throughout New York and/or the United States.

B. Preliminary Review

As part of the freshwater wetlands and waterbody field delineation services, a preliminary review of the existing Site conditions was performed prior to our Site visit utilizing reasonably available data and mapping obtained from the following resources:

- United States Geological Survey (USGS) Topographic Map(s);
- County GIS Map(s), if available;
- New York State (NYS) Department of Environmental Conservation (DEC) Environmental Resource Mapper Freshwater Wetlands Map(s);
- United States Fish & Wildlife Services (USFWS) National Wetland Inventory (NWI) Map(s);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soils Map(s);
- Google Earth satellite imagery; and
- Project Documents, Reports, etc. (as provided by the Client or Client representative)

Copies of these maps and associated documents are included as Appendix II.

C. Freshwater Wetlands Field Delineations

A field investigation of any upland/wetland, watercourse, or water body boundaries was completed on the Site. The field investigation was completed in accordance with the following technical manual(s):

- Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

- U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

- New York State Department of Environmental Conservation. July,1995. *Freshwater Wetlands Delineation Manual*.

D. Field Findings

The Site is located immediately south of an active CSX rail line/Erie Canal and north of the Mohawk River. The Site is predominantly agricultural land/fallow field with a large forested wetland (NYSDEC Wetland IN-4) located along the western edge and a smaller wooded area/wetland at eastern end. The westernmost fields had been recently mowed during the October 10/11 delineation field visits. The remaining eastern fields had not been planted/tilled this year and were mostly comprised of 4-5-foot tall mugwort and goldenrod, along with primrose, black-eyed Susan and clover. The Site is flat with a very slight decrease in topography change in elevation from north to south. A wetland, watercourse and water body field investigation was completed at the proposed Site by qualified wetlands biologists on October 10, 11, 21, and November 4, 2019. The average temperature was 45-65° Fahrenheit. Field conditions were not problematic and suitable plant cover was conducive to performing the fieldwork. In total, nine (9) wetlands and one vernal pool were identified during the delineation.

From October 10 and 11th delineation: Wetland W1, represents the eastern edge of NYSDEC Wetland IN-4. The predominantly forested wetland expands into the western edge of the westernmost open farm field. The swamp extends from the toe of slope at rail line south to the bank of the Mohawk River. An Upland inclusion (UP1) was delineated within the northeast corner of the wetland. W1-1x to W1-19x represent the northern edge at the rail line toe of slope. Wetland W2 is an isolated depression located within the northern extent of the westernmost open farm field. Wetland W3 is a scrub-shrub/forested linear wetland located within a hedgerow between the two westernmost agricultural fields. Wetland W4 is a mixture of riparian benches located along the banks of the mapped un-named tributary to the Mohawk River and a forested wetland complex surrounded by upland floodplain forests. Deeply incised banks were noted during the delineation, which made for unsafe flagging of the ordinary high-water mark (OHWM) of the subject watercourse. As such, the top of bank was mainly identified during the delineation. Wetland W5 was a linear scrub-shrub/forested wetland located within the hedgerow of the central farm fields. The wetland was likely man-made to convey water away from farm fields. Wetland W6 is an emergent/scrub-shrub wetland dominated by common reed near the entrance from rail line to westernmost farm fields.

From October 21st delineation: Wetland W7 is predominantly a forested wetland complex located at the eastern portion of the Site. A large forested wetland was observed at the eastern edge of property limits and transitioned into a series of ditch lines along the northern edge of property/eastern ag fields and the easternmost field hedgerow. It is unclear if DEC Wetland IN-1 extended as far west as Wetland W7 due to it being located at the eastern property limit and DIEHLUX not having access/permission to be on such adjacent property. Wetland W8 is located in the easternmost hedgerow between the

fallow farm fields. The northern portion was mainly a 4-6' wide ditch line that transitioned into a wider wetland at the southern end near Mohawk River.

From November 4th delineation: Per the direction of the Client from their meeting with the U.S. Army Corps of Engineers (USACE), DIEHLUX visited the Site to delineate three additional small emergent wetlands within the southern edge of the westernmost farm field. Upon arrival, DIEHLUX staff observed a significant amount of standing flood water within the field from recent storm event/high rainfall (Photo 21). One of the additional wetlands (Wetland W9) was delineated within the farm field, immediately adjacent to Wetlands W1/W3. The second and third wetland areas identified by the Corps further to the south, however, were under significant standing flood water and were not able to be field delineated. The northern edge of the floodplain boundary (denoted by W10 in Table 1) was collected in the field, only to provide the Client with more field level data and planning information regarding high rainfall events and current floodplain hydrology on-Site.

It is important to note that the soil profiles were problematic during several test pits within the wetlands on-site. The non-hydric conditions observed are likely a result of ongoing agricultural activities within the farm fields and fluvial deposits within the 100-year floodplain of the Mohawk River which forms the southern boundary of the Site. Specifically, soil profiles at W1-Wet-1, W2-Wet-1 and W7-Wet-4 displayed a consistent profile from 0 to 18" inches. There was little to no evidence (chroma/value color, texture, depletion, reduction, etc.) indicating a change in the soil profile from the A to B horizon at these locations. These observations were noted and cited within the associated data sheets. Table 1 below outlines the findings of our investigation(s):

Table 1.

Resource(s)	**Flagging**	**Location**	**Type**	**Dominant Vegetation**
Federally/State Regulated Freshwater Wetland/Watercourse (PFO1E/PEM1H) NYSDEC Wetland IN-4	W1-1 to W1-61 W1-1x to W1-19x UP1-1 to UP1-10	Eastern edge of NYSDEC wetland IN-4, within/west of westernmost open ag field	Wetland: Palustrine, Forested, Broad Leaved-Deciduous Seasonally Flooded/Saturated/ Palustrine, Emergent Marsh, Persistent, Permanently Flooded,	Red Maple American Elm Black Willow Green Ash Cattail Purple Loosestrife Boneset Joe Pye Weed Common Reed Jewelweed
Federally Regulated Freshwater Wetland (PEM1E)	W2-1 to W2-6	Isolated depression at north end of	Wetland: Palustrine, Emergent Marsh, Persistent, Seasonally Flooded/Saturated	Cattail Reed Canary Grass Wild Geranium Soft Rush

		westernmost ag field		Purple Loosestrife Carex spp.
Federally Regulated Freshwater Wetland (PFO1E/PSS1E/PEM1H)	W3-1 to W3-105	West of proposed access easement in open field	Wetland: Palustrine, Forested, Broad Leaved-Deciduous Seasonally Flooded/Saturated/ Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated, Palustrine, Emergent Marsh, Persistent, Permanently Flooded	Red Osier Dogwood Silky Dogwood European Alder American Elm Black Willow Green Ash Horsetail Watercress Jewelweed Goldenrod
Federally Regulated Freshwater Wetland/Watercourse (PFO1A/R4SBC) Un-named tributary to Mohawk River - NYSDEC Class C Watercourse	W4-1 to W4-167	Forested area along watercourse located between western/eastern ag fields	Wetland/Watercourse: Palustrine, Forested, Broad Leaved-Deciduous, Temporarily Flooded/ Riverine, Intermittent, Streambed, Seasonally Flooded	American Elm Black Willow Green Ash Red Osier Dogwood Moonseed Iris Rough Horsetail Jewelweed Equisetum Spp.
Vernal Pool 1	VP1-1 to VP1-5	Open depression located south central in Site, immediately east of Wetland W4 near central ag field edge		Isolated open water depression approximately 4' by 25'. 0-4 inches of standing water present throughout
Federally Regulated Freshwater Wetland (PFO1E/PSS1E)	W5-1 to W5-15	Linear wetland along hedgerow in central portion of Site	Wetland: Palustrine, Forested, Broad Leaved-Deciduous Seasonally Flooded/Saturated/ Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated,	Centerline of linear wetland – averaged 4-6' wide American Elm Green Ash Red Osier Dogwood Rough Horsetail Nettle
Federally Regulated Freshwater Wetland (PSS1E/PEM1E)	W6-1 to W6-5	Depression at toe of slope of rail line and access drive to fields over RR	Wetland: Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated, Palustrine, Emergent Marsh, Persistent, Seasonally Flooded/Saturated	Common Reed Black Willow Cottonwood Red Maple

Federally Regulated Freshwater Wetland (PFO1E/PSS1E/PEM1E) NYSDEC Wetland IN-1?	W7-1 to W7-125 W7-61x to W7-87x	Located along northeastern/ eastern property limits	Wetland: Palustrine, Forested, Broad Leaved-Deciduous Seasonally Flooded/Saturated/ Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated, Palustrine, Emergent Marsh, Persistent, Seasonally Flooded/Saturated	Red Maple American Elm Green Ash Cottonwood Sensitive Fern Stinging Nettle Wild Geranium Horsetail Jewelweed Beggar Ticks
Federally Regulated Freshwater Wetland/Ditch (PFO1E)	W8-1 to W8-11 W8-12/W8-12x to W8-17/W8-17x	Easternmost hedgerow between ag fields	Wetland/Ditch: Palustrine, Forested, Broad Leaved-Deciduous Seasonally Flooded/Saturated	Centerline of ditch (4-6' wide) transitioning into linear wetland Green Ash American Elm Red Osier Dogwood Stinging Nettle Jewelweed Horsetail Goldenrod
Federally Regulated Freshwater Wetland (PEM1E)	W9-1 to W9-	Isolated depression at west/central portion of westernmost ag. field	Wetland: Palustrine, Emergent Marsh, Persistent, Seasonally Flooded/Saturated	Cattail Reed Canary Grass Wild Geranium Soft Rush Purple Loosestrife Carex spp.
Northern edge of Floodplain boundary during 11/4/19 Site visit	W10-1 to W10-18	Southern portion of westernmost ag. field	Floodplain	Flood line collected for planning purposes only

Site photographs are documented as Appendix III.

E. Conclusions and Recommendations

As part of the wetlands investigation for this project Site, we included an evaluation of Section 401 and 404 jurisdiction and permitting applicability, as well as potential regulatory or permitting requirements under Articles 15 and 24 of the NYS ECL, or local municipal government.

The following outlines our conclusions and recommendations regarding wetlands and watercourse permitting requirements for this proposed project:

1. The Town of Schuyler, Herkimer County, New York, does not appear to have a separate Chapter for local regulation of wetlands, waterbodies or watercourses. Therefore, no specific/separate local wetlands, watercourse, or water body permits are anticipated to be required by the Town of Schuyler.

2. According to the NYS DEC Environmental Resource Map, state-regulated resources are located on-Site. IN-4 (Wetland W1) is an approximately 42-acre freshwater wetland complex designated as a Class 2 wetland that extends through the western portion of the Site. This wetland and its associated 100-buffer/adjacent area is subject to Article 24 regulations under the Environmental Conservation Law (ECL). It is unclear if DEC Wetland IN-1 extended as far west as Wetland W7 due to it being located at the eastern property limit as DIEHLUX did not have access/permission to be on adjacent parcel.

   In addition, an un-named tributary to the Mohawk River flows north to south within the forested wetland located in the central portion of the Site (Wetland W4). This stream is a "Class C" designated watercourse and would be jurisdictional under NYS DEC Article 15 regulations. As such, a Joint Application for Permit (JAP) will need to be completed for any regulated activities for the excavation or placing of fill in the aforementioned freshwater wetlands, their 100-foot adjacent area, the bed or banks of the Class C stream, or navigable waters of the state, below the mean high water level. It is important to note that the OHWM of the Mohawk River along the southern edge of the Site was not collected nor flagged per direction of the Client. Copies of NYS DEC Environmental Resource maps are documented in Appendix II.

3. According to the U.S. Fish & Wildlife Service National Wetlands Inventory Map, several mapped wetlands and watercourses are located on-Site. An intermittent watercourse (R4SBC) flows south through the central portion (forested wetland – Wetland W4) of the Site from the Erie Canal to the Mohawk River. The Erie Canal (R2UBHx) is located just north of the Site beyond project area. In addition, two large forested wetlands are mapped in the central and western portion of the Site. Lastly, a forested wetland and two ponds are mapped near the eastern Site limit. These wetlands are somewhat consistent with the observations from field delineation; however, the wetlands were far more extensive on-Site. In addition, un-mapped wetlands within the hedgerows (Wetlands W3, W5, W7 and W8) were unmapped wetlands delineated during the field visits. Please refer to Appendix II for current NWI mapping.

It is DIEHLUX's understanding the Client will be utilizing the Site to expand and construct wetlands for future mitigation credit acquisition. Given such, it is unclear if federally regulated Waters of the US (WOUS) and/or state regulated wetlands/watercourses will be impacted as

a result of the proposed project. Consultation with the U.S. Army Corps of Engineers (USACE) Buffalo District Office in accordance with Section 404 of the Clean Water Act as well as Region 6 of NYS DEC under Articles 15 and 24 of the ECL may be warranted. Should the project scope be updated or revised to incorporate additional areas of disturbance beyond those previously reviewed during the Site visits on October 10, 11, 21, and November 4, 2019, DIEHLUX recommends additional evaluation of the Site.

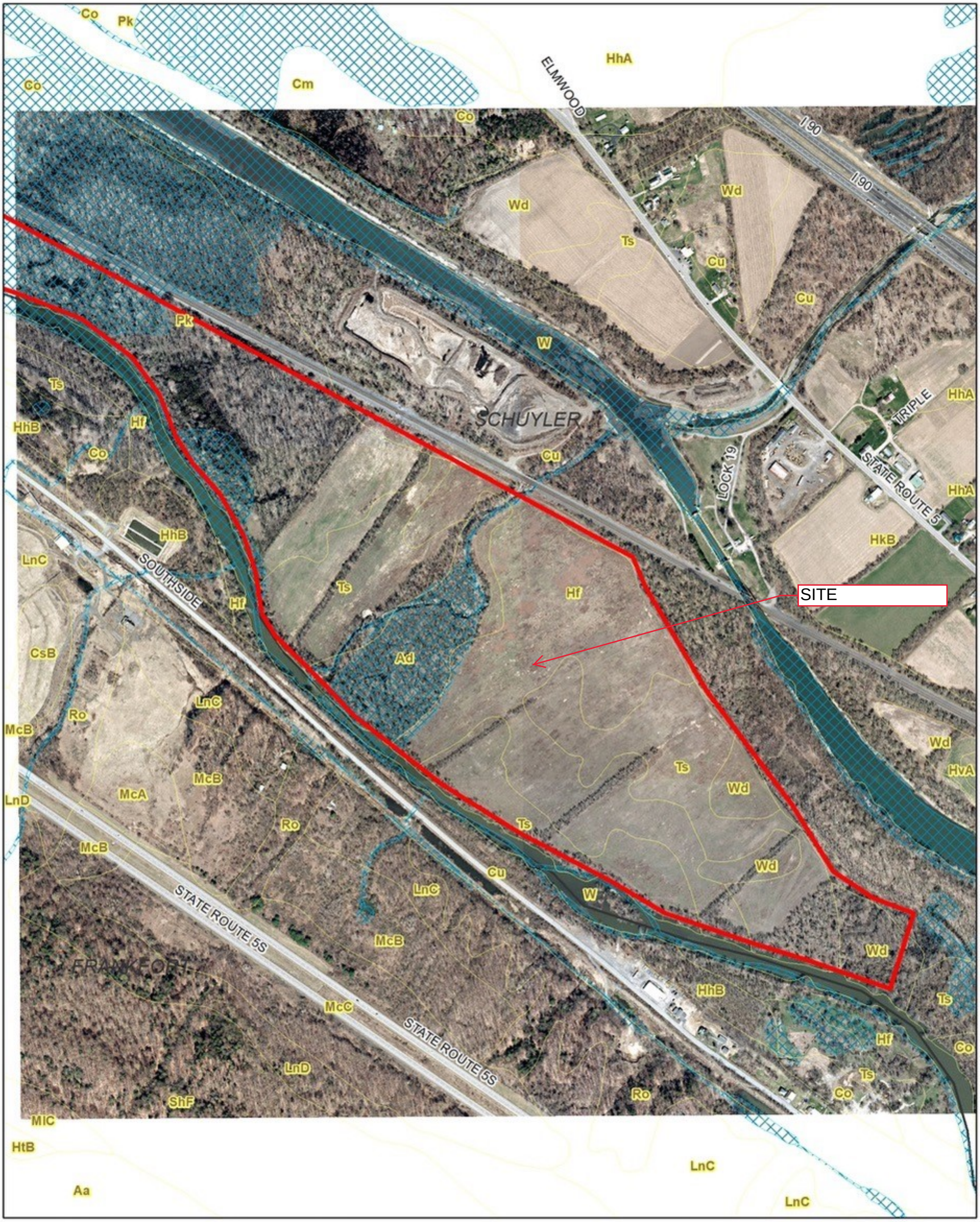
We appreciate the opportunity to be involved in your project and hope that you have found our services helpful. We are happy to assist with any required permit applications or follow up should you need our assistance. Please contact us if you have any questions, comments, concerns or requests for additional information.

Respectfully Submitted,

Travis Money
Manager of Ecological Services/Senior Ecologist

Attachments: Appendix I – Site Location Maps
Appendix II - Preliminary Site Review Data
Appendix III – Site Photographs
Appendix IV – Wetland Flag Coordinates/Sketch Map
Appendix V - USACE Data Sheets

APPENDIX I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Feet
Herkimer County Soils

Ruler

Line | Path | Polygon | Circle | 3D path | 3D polygon

Measure the distance or area of a geometric shape on the ground

Perimeter: 16,908.27 Feet

Area: 162.88 Acres

☑ Mouse Navigation | Save | Clear

Hwy 5

Diamond D Drive-In Rd

Elmwood Rd

Old Route 5S

E River Rd

90

11

2921 NY-5

Mohawk

SITE

Creek Rd

Triple Rd

Center Rd

Cander Lane Rd

5S

13

240

1995 Hill Rd

© 2018 Google

Google Earth

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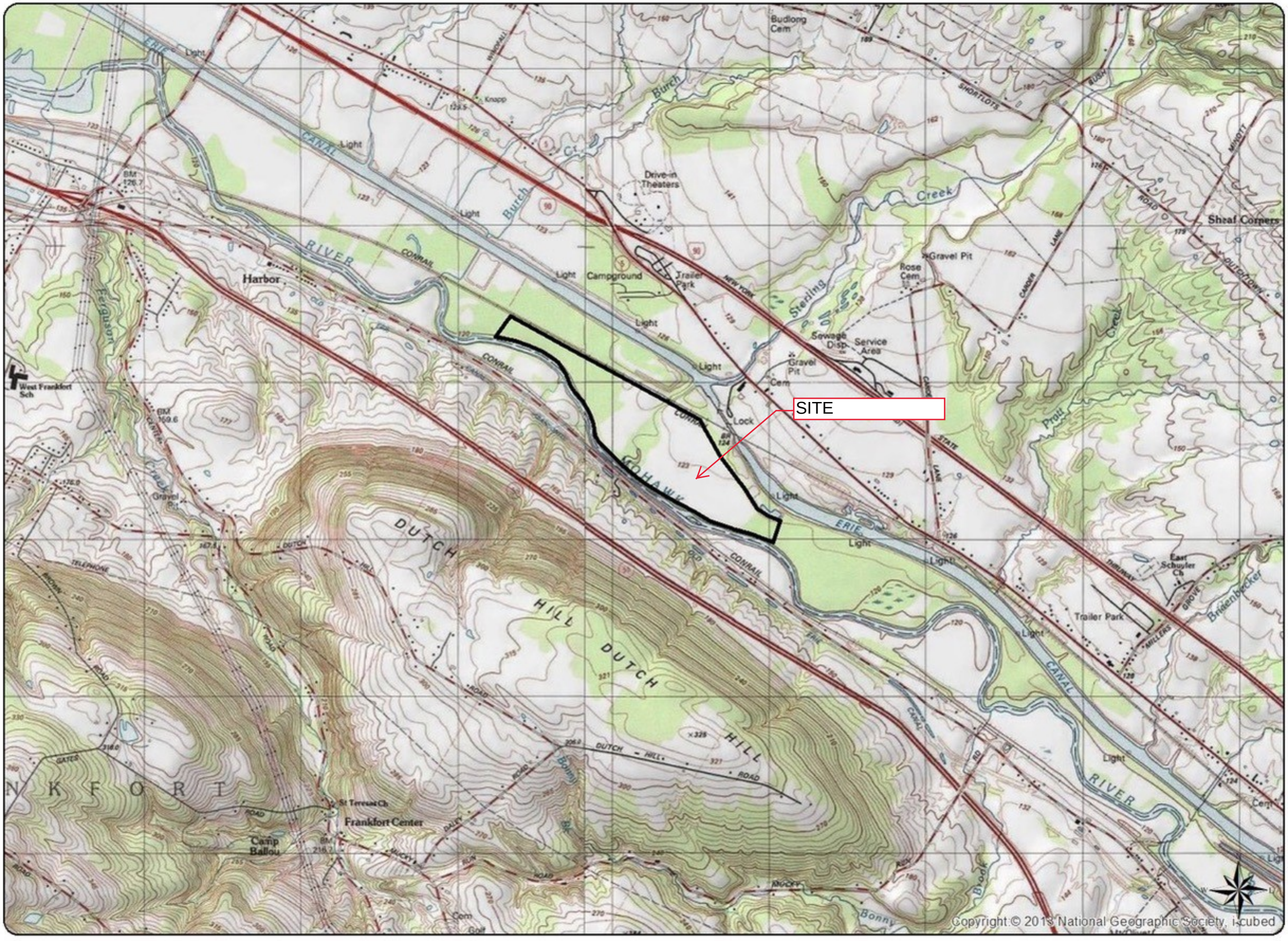

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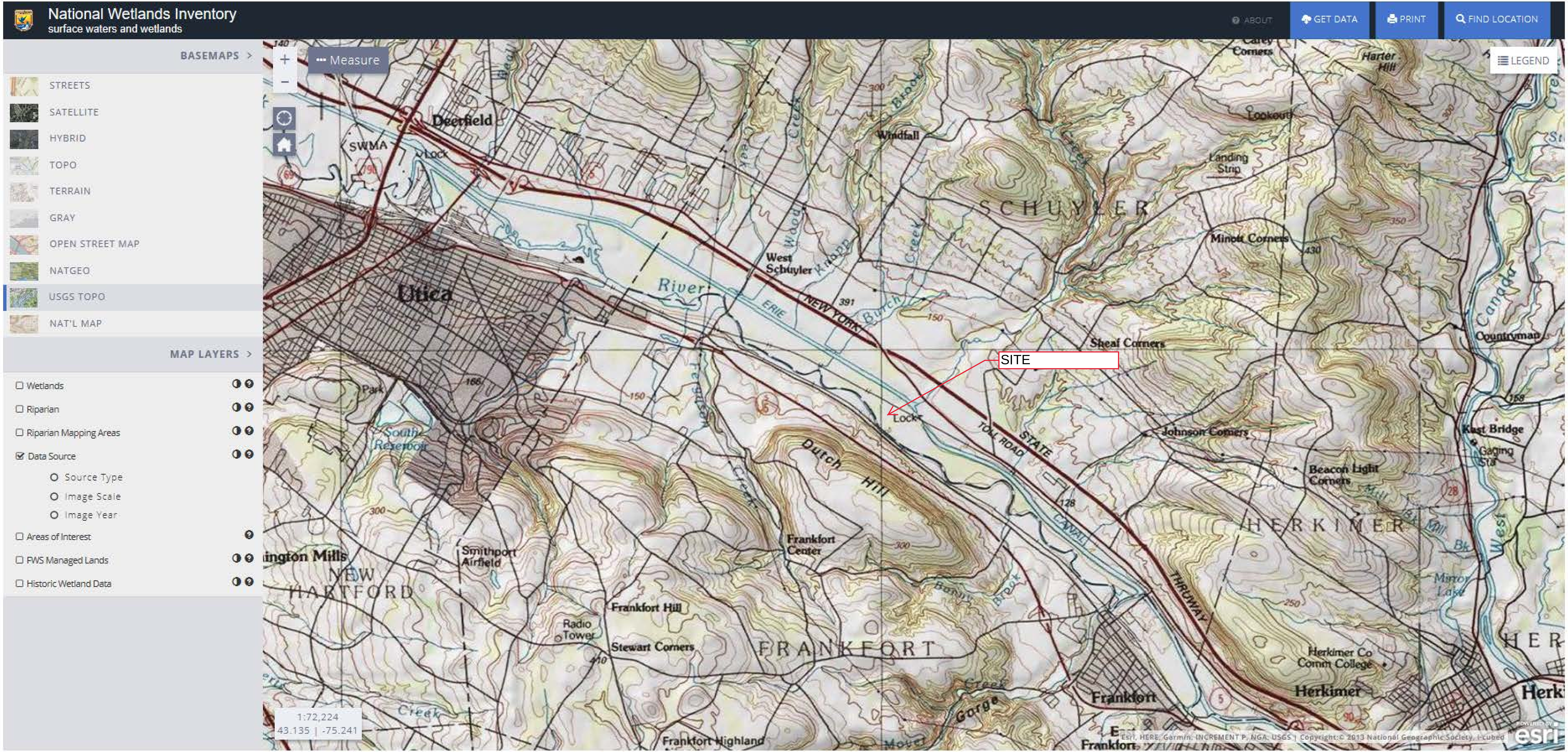
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Utica
SCHUYLER
West Schuyler
Windfall
Lookout
Landing Strip
Minott Corners
Sheaf Corners
Countryman
Johnson Corners
Beacon Light Corners
Kast Bridge
HERKIMER
River
ERIE
NEW YORK
STATE
TOLL ROAD
THRUWAY
CANAL
Lock
Dutch Hill
Frankfort Center
Frankfort Hill
Stewart Corners
Radio Tower
Smithport Airfield
NEW HARTFORD
FRANKFORT
Frankfort
Herkimer
Herkimer Co Comm College
Frankfort Highland
South Reservoir
Harter Hill
Mirror Lake
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National Wetlands Inventory
surface waters and wetlands

ABOUT | GET DATA | PRINT | FIND LOCATION

BASEMAPS >

- STREETS
- SATELLITE
- HYBRID
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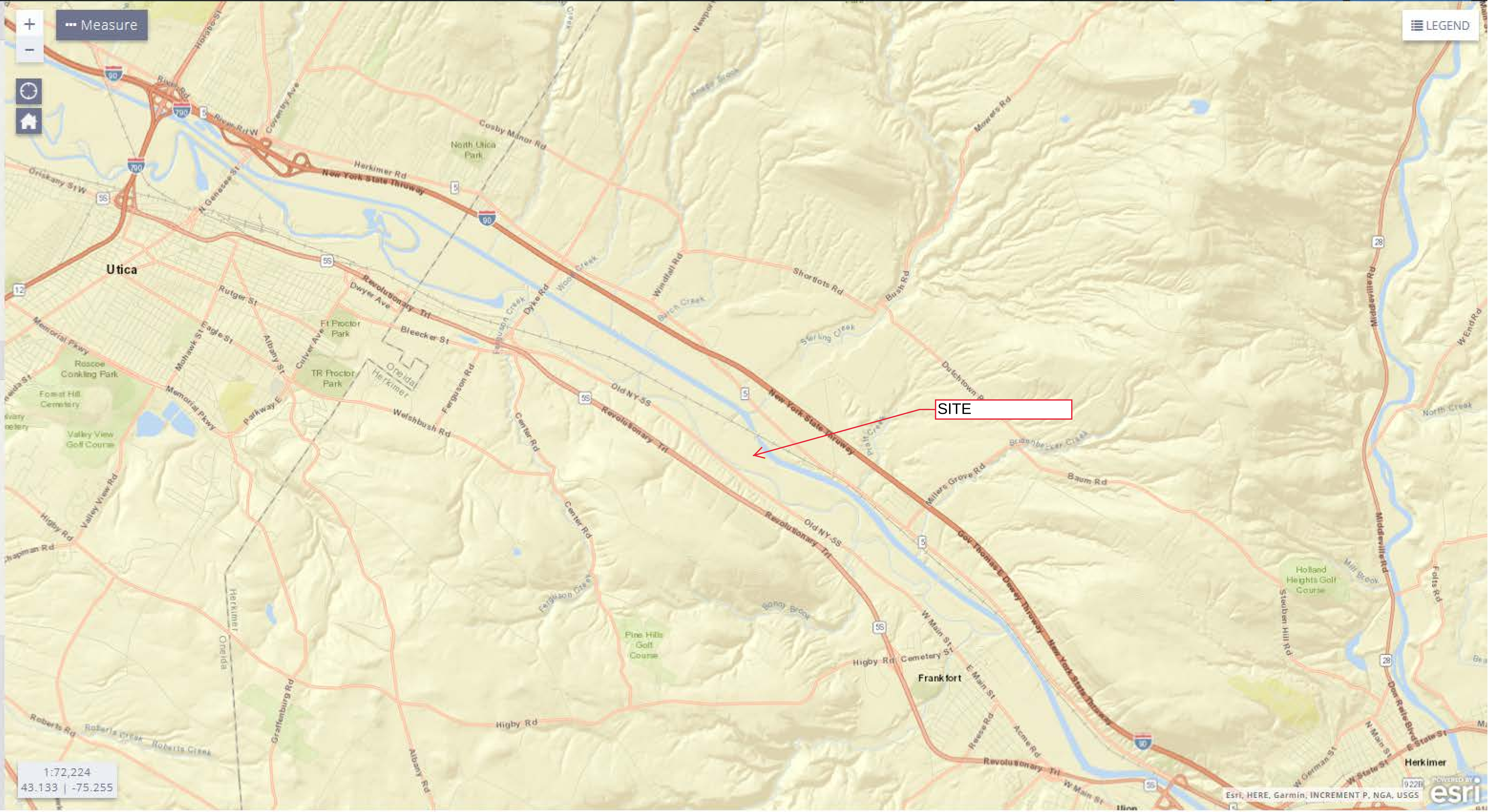
- TERRAIN
- GRAY
- OPEN STREET MAP
- NATGEO
- USGS TOPO
- NAT'L MAP

MAP LAYERS >

- ☐ Wetlands
- ☐ Riparian
- ☐ Riparian Mapping Areas
- ☑ Data Source
  - Source Type
  - Image Scale
  - Image Year
- ☐ Areas of Interest
- ☐ FWS Managed Lands
- ☐ Historic Wetland Data



APPENDIX II

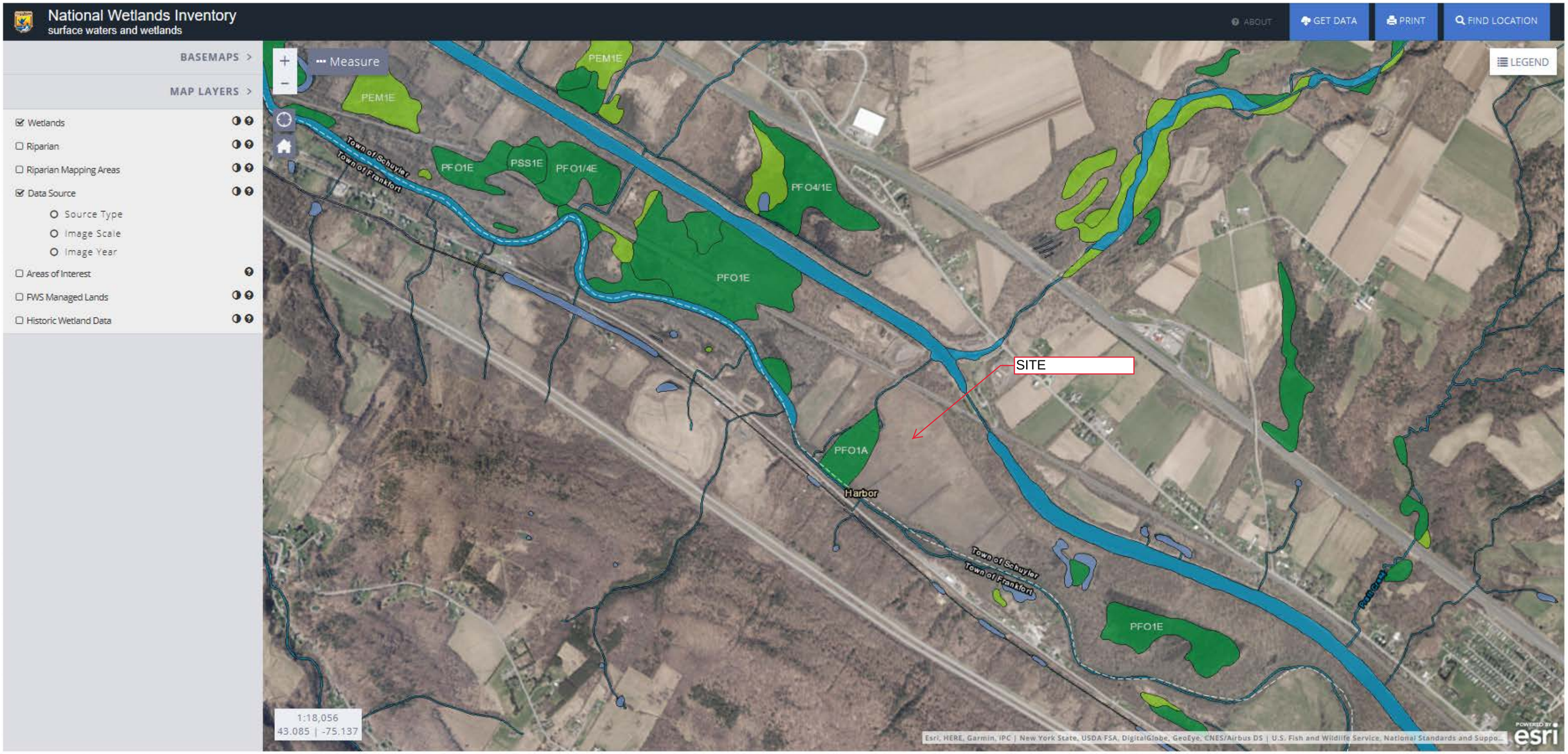
Environmental Resource Mapper

Base Map: Satellite with Labels Using this map

Search
Tools
Layers and Legend

- All Layers
- Unique Geological Features
- Waterbody Classifications for Rivers/Streams
- Waterbody Classifications for Lakes
- State Regulated Freshwater Wetlands
- State Regulated Wetland Checkzone
- Significant Natural Communities
- Natural Communities Near This Location
- Rare Plants or Animals

Other Wetland Layers
Reference Layers
Tell Me More...
Need A Permit?
Contacts


National Wetlands Inventory
surface waters and wetlands
ABOUT
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SITE (1995) - Copyright Google Earth

Elmwood Rd

New York State Thruway (Toll road)

Creek Rd

Triple Rd

Lock 19

Dutch Hill Rd

Old Route 5S

Hwy 5

Calder Lane Rd

Image U.S. Geological Survey

Google Earth

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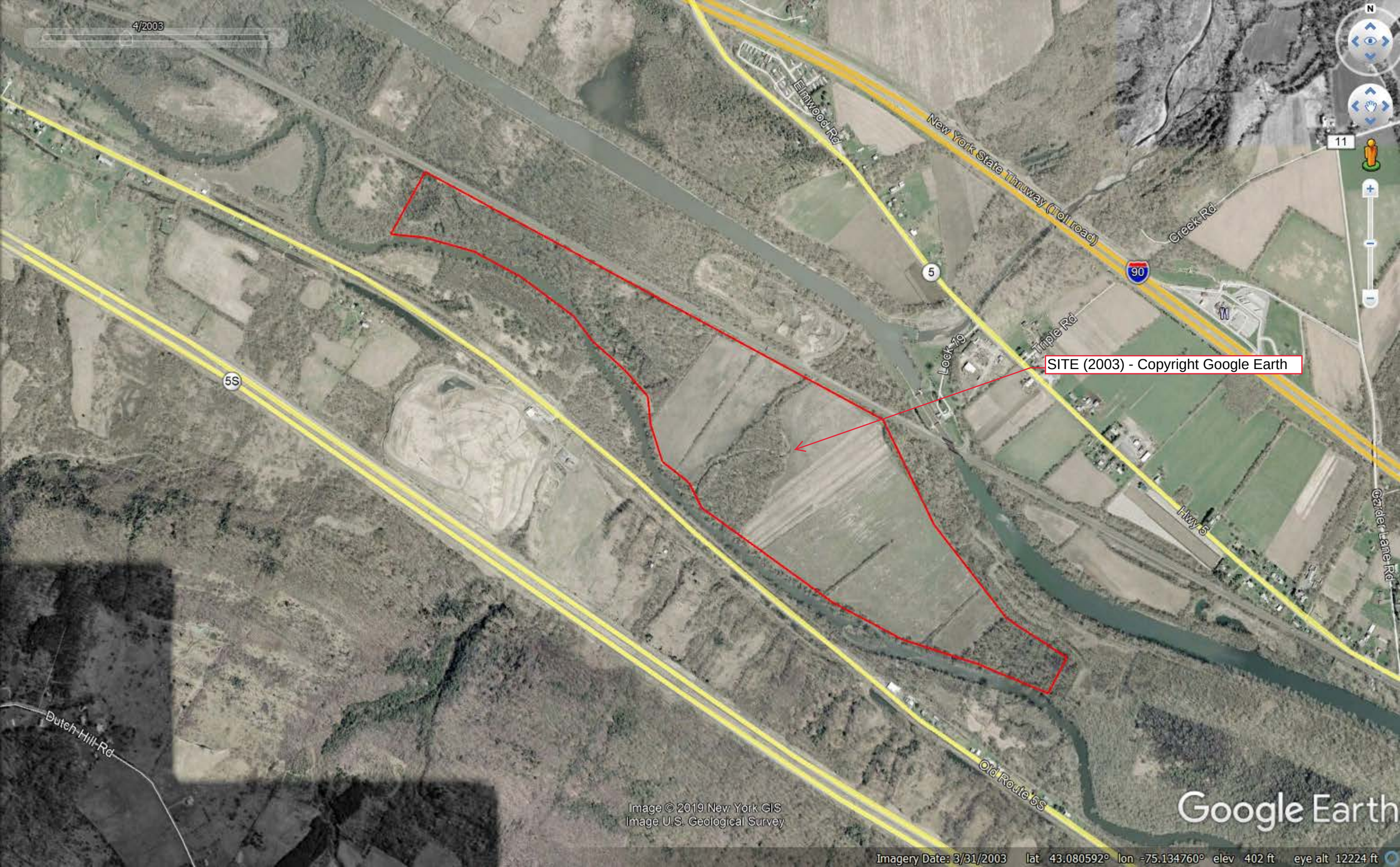
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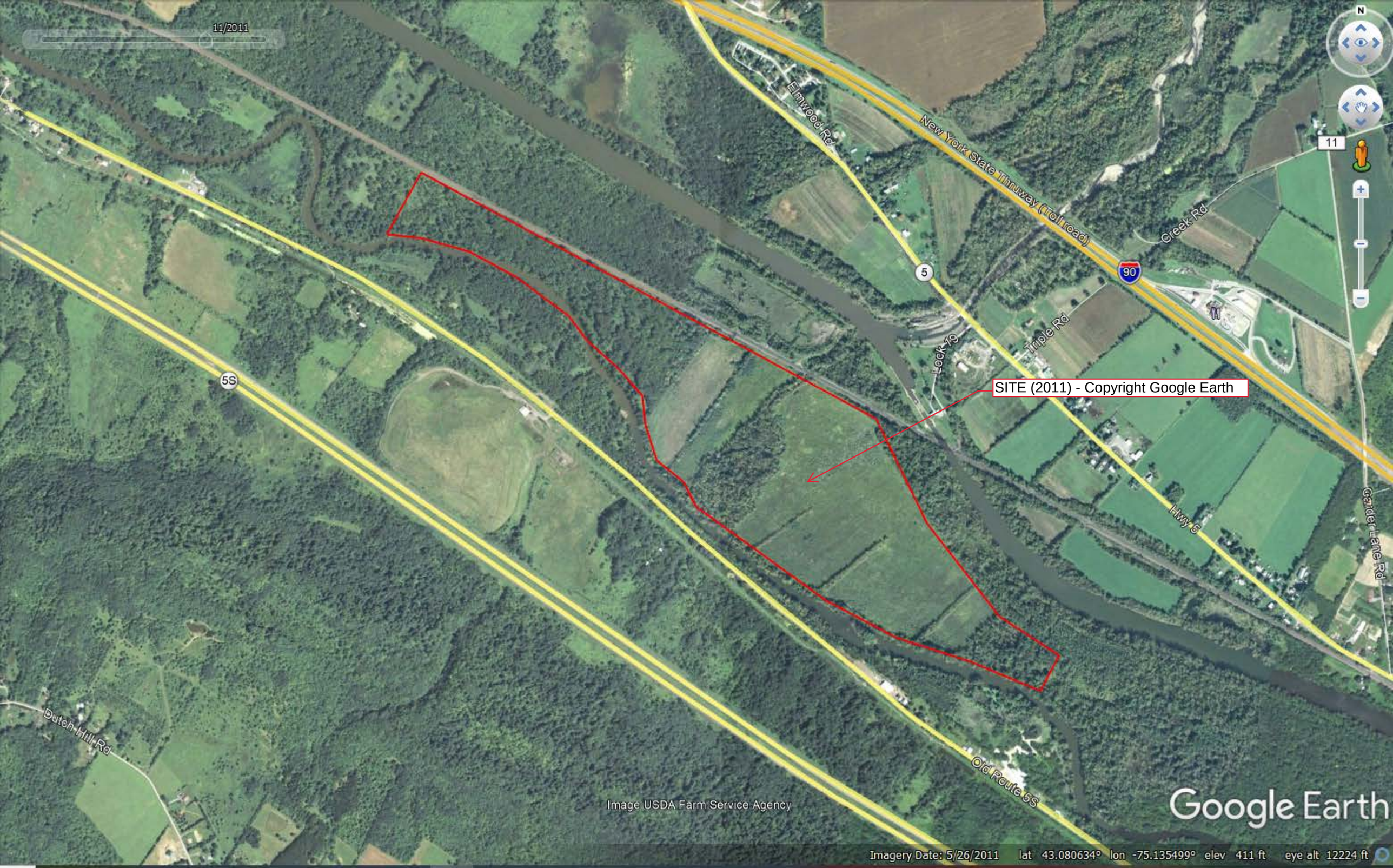
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Elmwood Rd
New York State Thruway (Toll road)
Creek Rd
Triple Rd
Lock 19
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Dutch Hill Rd
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© 2018 Google
Google Earth
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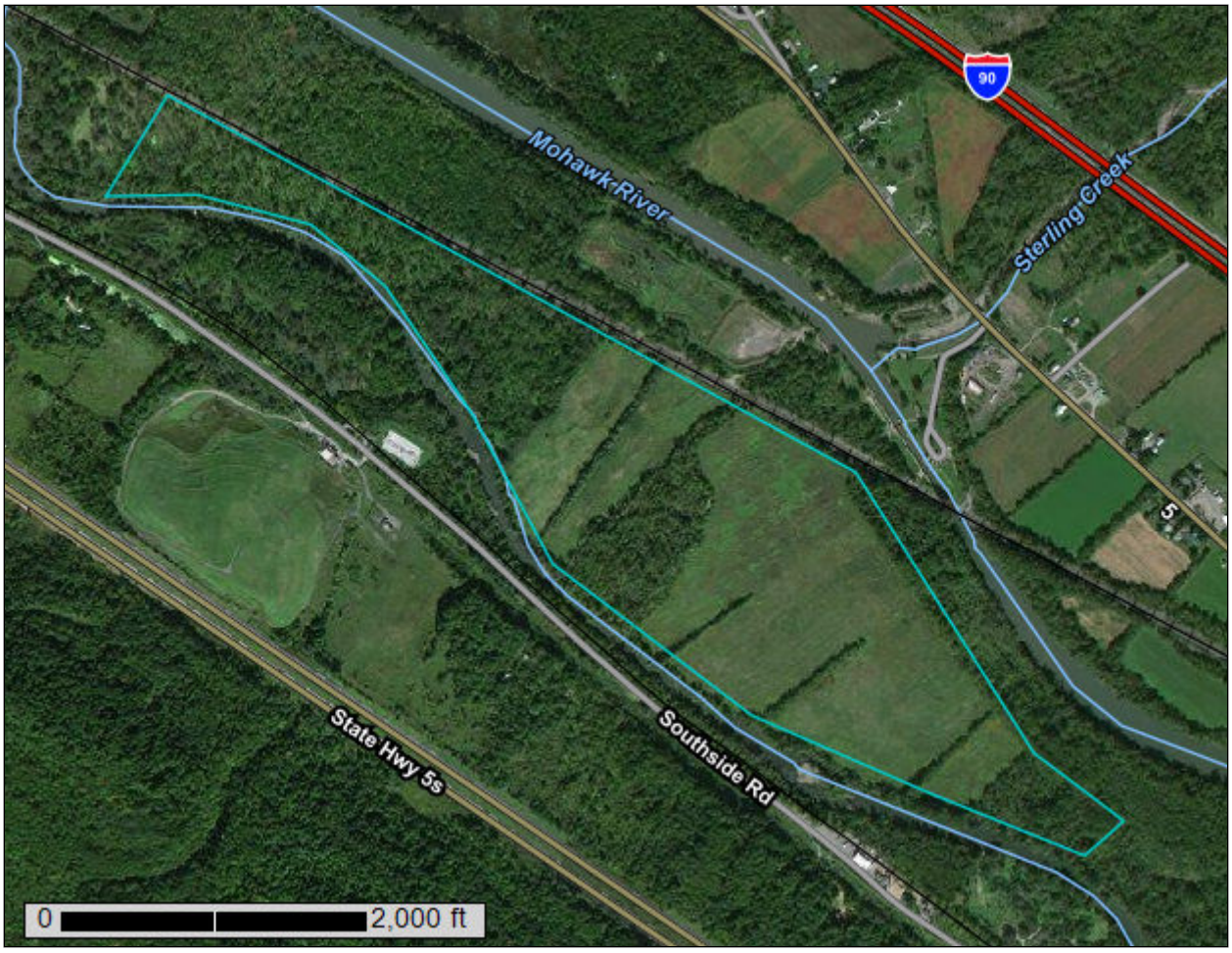
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Herkimer County, New York



September 18, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

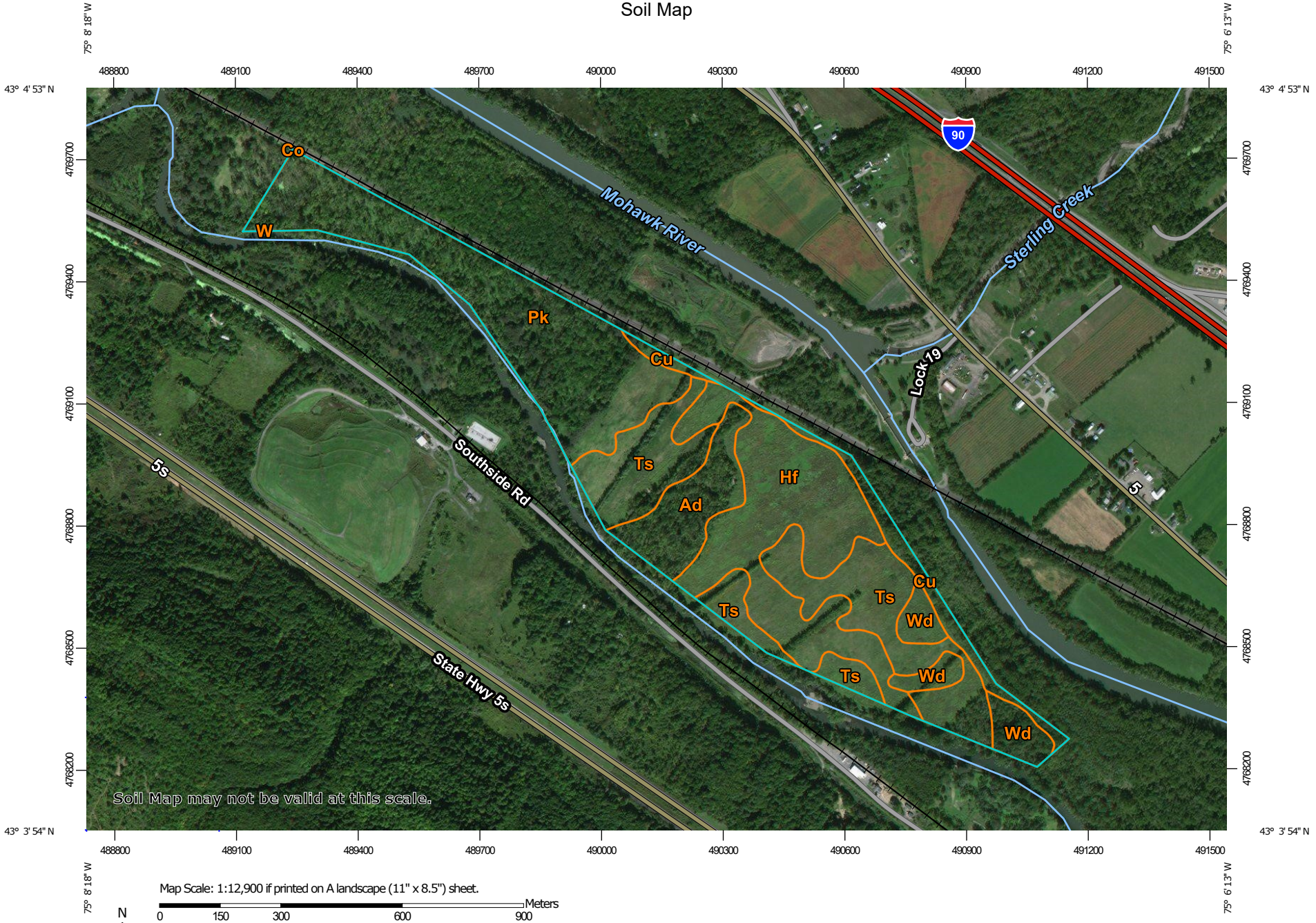
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Herkimer County, New York
Survey Area Data: Version 1, Mar 7, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 23, 2014—Sep 23, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ad	Alluvial land	13.6	8.2%
Co	Cohoctah mucky very fine sandy loam	0.0	0.0%
Cu	Cut and fill land	8.2	4.9%
Hf	Hamlin silt loam	42.7	25.6%
Pk	Palms muck	49.8	29.9%
Ts	Teel silt loam	42.9	25.7%
W	Water	0.0	0.0%
Wd	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	9.6	5.8%
Totals for Area of Interest		**166.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not

mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Herkimer County, New York

Ad—Alluvial land

Map Unit Setting

National map unit symbol: 9svp
Elevation: 100 to 3,000 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 125 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Fluvaquents and similar soils: 40 percent
Udifluvents and similar soils: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fluvaquents

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium with highly variable texture

Typical profile

H1 - 0 to 5 inches: gravelly silt loam
H2 - 5 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Description of Udifluvents

Setting

Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf

Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium with a wide range of texture

Typical profile

H1 - 0 to 4 inches: gravelly loam
H2 - 4 to 70 inches: very gravelly sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)
Depth to water table: About 24 to 72 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Wayland

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Hamlin

Percent of map unit: 5 percent
Hydric soil rating: No

Cohoctah

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Fresh water marsh

Percent of map unit: 5 percent
Landform: Marshes
Hydric soil rating: Yes

Teel

Percent of map unit: 5 percent
Hydric soil rating: No

Co—Cohoctah mucky very fine sandy loam

Map Unit Setting

National map unit symbol: 9sw7
Elevation: 600 to 1,000 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 125 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Cohoctah and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cohoctah

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy alluvium

Typical profile

H1 - 0 to 12 inches: mucky very fine sandy loam
H2 - 12 to 21 inches: fine sandy loam
2C1 - 21 to 27 inches: loamy fine sand
2C2 - 27 to 60 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Wayland
Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Teel
Percent of map unit: 5 percent
Hydric soil rating: No

Fresh water marsh
Percent of map unit: 5 percent
Landform: Marshes
Hydric soil rating: Yes

Hamlin
Percent of map unit: 5 percent
Hydric soil rating: No

Sun
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Cu—Cut and fill land

Map Unit Setting
National map unit symbol: 9sw9
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 125 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition
Udorthents and similar soils: 70 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Typical profile
H1 - 0 to 4 inches: channery loam
H2 - 4 to 60 inches: very gravelly sandy loam

Properties and qualities
Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)

Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 5.4 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Rock outcrop
Percent of map unit: 5 percent
Hydric soil rating: Unranked

Hornell
Percent of map unit: 5 percent
Hydric soil rating: No

Sun
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Lansing
Percent of map unit: 5 percent
Hydric soil rating: No

Lamson
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Mohawk
Percent of map unit: 5 percent
Hydric soil rating: No

Hf—Hamlin silt loam

Map Unit Setting
National map unit symbol: 9swm
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 125 to 165 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Hamlin and similar soils: 85 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hamlin

Setting

Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Silty alluvium mainly from areas of siltstone, shale, and limestone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 21 inches: silt loam
H3 - 21 to 38 inches: silt loam
H4 - 38 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Phelps

Percent of map unit: 5 percent
Hydric soil rating: No

Teel

Percent of map unit: 5 percent
Hydric soil rating: No

Fredon

Percent of map unit: 5 percent
Hydric soil rating: No

Pk—Palms muck

Map Unit Setting

National map unit symbol: 9syq
Elevation: 250 to 1,500 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 125 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Palms and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palms

Setting

Landform: Swamps, marshes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material over loamy glacial drift

Typical profile

H1 - 0 to 17 inches: muck
H2 - 17 to 21 inches: silt loam
H3 - 21 to 60 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 20 percent
Available water storage in profile: Very high (about 14.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Carlisle
Percent of map unit: 5 percent
Landform: Marshes, swamps
Hydric soil rating: Yes

Ilion
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Sun
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Fresh water marsh
Percent of map unit: 5 percent
Landform: Marshes
Hydric soil rating: Yes

Lyons
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Ts—Teel silt loam

Map Unit Setting
National map unit symbol: 9sz7
Elevation: 600 to 1,800 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 125 to 165 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Teel and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Teel

Setting
Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Silty alluvium

Typical profile

H1 - 0 to 11 inches: silt loam
H2 - 11 to 30 inches: silt loam
H3 - 30 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Hydric soil rating: No

Minor Components

Hamlin

Percent of map unit: 5 percent
Hydric soil rating: No

Wayland

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Cohoctah

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Phelps

Percent of map unit: 5 percent
Hydric soil rating: No

W—Water

Map Unit Setting

National map unit symbol: 1nrd5
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 125 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition
Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Wd—Wayland soils complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting
National map unit symbol: 2srgv
Elevation: 160 to 1,970 feet
Mean annual precipitation: 31 to 68 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition
Wayland and similar soils: 60 percent
Wayland, very poorly drained, and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wayland

Setting
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile
A - 0 to 6 inches: silt loam
Bg1 - 6 to 12 inches: silt loam
Bg2 - 12 to 18 inches: silt loam
C1 - 18 to 46 inches: silt loam
C2 - 46 to 72 inches: silty clay loam

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Very high (about 12.6 inches)

Interpretive groups
Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: Wet Floodplain (F139XY009OH)
Hydric soil rating: Yes

Description of Wayland, Very Poorly Drained

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: mucky silt loam
Bg1 - 6 to 12 inches: silt loam
Bg2 - 12 to 18 inches: silt loam
C1 - 18 to 46 inches: silt loam
C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: Wet Floodplain (F139XY009OH)
Hydric soil rating: Yes

Minor Components

Wakeville

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the

upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or

B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

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Report—Hydric Soils

Hydric Soils–Herkimer County, New York				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
Ad—Alluvial land				
	Fluvaquents	40	Flood plains	2, 3, 4
	Wayland	5	Flood plains	2, 3, 4
	Cohoctah	5	Flood plains	2, 4
	Fresh water marsh	5	Marshes	3
Co—Cohoctah mucky very fine sandy loam				
	Cohoctah	75	Flood plains	2, 4
	Wayland	5	Flood plains	2, 3, 4
	Fresh water marsh	5	Marshes	3
	Sun	5	Depressions	2, 3
Cu—Cut and fill land				
	Sun	5	Depressions	2, 3
	Lamson	5	Depressions	2, 3

Hydric Soils–Herkimer County, New York				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
Pk—Palms muck				
	Palms	75	Swamps, marshes	1, 3
	Carlisle	5	Marshes, swamps	1, 3
	Ilion	5	Depressions	2, 3
	Sun	5	Depressions	2, 3
	Fresh water marsh	5	Marshes	3
	Lyons	5	Depressions	2
Ts—Teel silt loam				
	Wayland	5	Flood plains	2, 3, 4
	Cohoctah	5	Flood plains	2, 4
Wd—Wayland soils complex, 0 to 3 percent slopes, frequently flooded				
	Wayland	60	Flood plains	2
	Wayland, very poorly drained	30	Flood plains	2, 3

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APPENDIX III

PHOTO 1 Wetland W1 – View northwest of DEC Wetland IN-4

PHOTO 2 View south of depression/Wetland W1 in farm field

PHOTO 3 Atypical soil profile found at Wetland Point W1-Wet-1 within tilled field

PHOTO 4 Representative wooded wetland along northeastern Site edge

PHOTO 5 View south of Wetland W2 – isolated depression within westernmost ag field

PHOTO 6 Standing water within Wetland W3 in hedgerow between ag fields

PHOTO 7 Soil at 6″ below ground surface at W3-Wet-3 within ag field

PHOTO 8 View south of emergent portion of Wetland W3 within ag field

PHOTO 9 View north of intermittent watercourse within Wetland W4

PHOTO 10 Banks of tributary were steep/prone to erosion throughout Wetland W4

PHOTO 11 Open water within forested wetland complex of Wetland W4

PHOTO 12 Vernal Pool 1 – north of Wetland W4 and east of central ag fields

PHOTO 13 Linear drainage corridor within hedgerow - Wetland W5

PHOTO 14 View north of Wetland W6 located at toe of slope near entrance to ag field

PHOTO 15 Representative photo of un-mowed ag fields on Site

PHOTO 16 View east of Wetland W7 at northeast corner of Site

PHOTO 17 View south of Wetland W7's confluence with Mohawk River

PHOTO 18 View north of water line on red maple within Wetland W7/linear corridor

PHOTO 19 View west of emergent portion of Wetland W7 complex within ag field

PHOTO 20 View east of linear drainage to Wetland W7 along northern Site limit

PHOTO 21 Significant standing/flood water present in westernmost field on 11/4/19

PHOTO 22 View north of Wetland W9 within westernmost ag field

APPENDIX IV

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

Longitude	Latitude	Comment/Flag No.
-75.12080309	43.075661	w1-1start
-75.12085481	43.07558607	w1-2
-75.12096804	43.07561659	w1-3
-75.12109521	43.07565026	W1-4
-75.12126578	43.07568305	w1-5
-75.12147353	43.07574843	w1-6
-75.12155137	43.07559801	w1-7
-75.12164911	43.07553146	w1-8
-75.12159482	43.07536073	w1-9
-75.12140154	43.07531863	w1-10
-75.12139056	43.07522387	w1-11
-75.12151246	43.07505695	w1-12
-75.121439	43.075275	w1-wet-1
-75.12149596	43.07501471	w1-13
-75.121195	43.075273	w1-up-1
-75.12140547	43.07506532	w1-14
-75.12141875	43.07496161	w1-15
-75.121598	43.07487749	w1-16
-75.12176453	43.07486948	w1-17
-75.12186231	43.07478645	w1-18
-75.12199162	43.07468753	w1-19
-75.12205851	43.07473595	w1-20
-75.1221081	43.07469893	w1-21
-75.12218625	43.07471133	w1-22
-75.122082	43.074808	w1-23
-75.12203113	43.07487568	w1-24
-75.12193367	43.07497844	w1-25
-75.12193154	43.07507725	w1-26
-75.12210607	43.0750934	w1-27
-75.12225945	43.07494794	w1-28
-75.12238666	43.07484445	w1-29
-75.12250866	43.0747153	w1-30
-75.12257015	43.07462404	w1-31
-75.12260899	43.07450943	w1-32
-75.12264492	43.07441349	w1-33
-75.1227041	43.07434189	w1-34
-75.12274707	43.07424467	w1-35
-75.12278394	43.07411627	w1-36
-75.12266479	43.07408675	w1-37
-75.12259732	43.07394682	w1-38
-75.12268587	43.0738596	w1-39
-75.12261342	43.07374854	w1-40
-75.12259835	43.07362423	w1-41
-75.12268048	43.07354336	w1-42
-75.12277042	43.07350195	w1-43
-75.12288988	43.07357392	w1-44

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.12309573	43.0735798	w1-45
-75.12320365	43.07348672	w1-46
-75.12322011	43.07337888	w1-47
-75.12332337	43.07329611	w1-48
-75.12340878	43.07321357	w1-49
-75.12349809	43.07327693	w1-50
-75.12365215	43.07326122	w1-51
-75.12367084	43.07335913	w1-52
-75.12380729	43.07334132	w1-53
-75.12374174	43.07341845	w1-54
-75.12363292	43.0734396	w1-55
-75.12359605	43.07354227	w1-56
-75.1237935	43.07349122	w1-57
-75.12383066	43.07347599	w1-58
-75.12387957	43.07342942	24 inch concrete culvert outfall
-75.12385287	43.07341336	w1-59
-75.12385002	43.07330859	w1-60
-75.12393586	43.07325431	w1-61 + south
-75.12177907	43.0758515	up1-1
-75.12189586	43.07589337	up1-2
-75.121986	43.07595	up1-3
-75.12208014	43.07598742	up1-4
-75.12207351	43.075939	up1-5
-75.12193361	43.07586713	up1-6
-75.12181615	43.07583578	up1-7
-75.12179121	43.07585237	w1-up-2
-75.1218471	43.0758091	w1-wet-2
-75.12682044	43.0779713	w1-wet-3
-75.1267871	43.0780491	w1-up-3
-75.12171762	43.07577139	up1-8
-75.12165851	43.07578984	up1-9
-75.12164966	43.07580738	up1-10 connect to up1-1
-75.12091426	43.07571396	W1-1x
-75.12097943	43.07577948	W1-2x
-75.1212475	43.07587435	W1-3x
-75.12163901	43.07602799	W1-4x
-75.12207173	43.07619498	W1-5x
-75.12258945	43.07640221	W1-6x
-75.12307716	43.07658741	W1-7x
-75.12361943	43.07680423	W1-8x
-75.12403148	43.07696236	W1-9x
-75.1245642	43.0771461	W1-10x
-75.12486861	43.07729002	W1-11x
-75.12528699	43.07744396	W1-12x
-75.12566786	43.07759174	W1-13x
-75.12601052	43.07772654	W1-14x
-75.12643093	43.07788947	W1-15x

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.12683378	43.07804215	W1-16x
-75.12723434	43.07823657	W1-17x
-75.12739278	43.0783048	W1-18x
-75.12770269	43.07838485	W1-19x, end
-75.12072334	43.07531343	W2-1 start
-75.12074262	43.07523883	W2-2
-75.12087724	43.07515127	W2-3
-75.12090816	43.07516426	W2-4
-75.12091259	43.07522644	W2-5
-75.1208402	43.07531498	W2-6, to W2-1
-75.12071004	43.07536165	w2-Up-1
-75.1207906	43.07523518	w2-Wet-1
-75.12011648	43.07529258	w3-1 start
-75.12025987	43.07535687	w3-2
-75.12037544	43.0753912	w3-3
-75.12036373	43.07540048	w3-wet
-75.12043717	43.0753071	w3-up-1
-75.1204676	43.0754687	w3-4
-75.12041523	43.07549424	w3-5
-75.12031617	43.07544059	w3-6
-75.12016528	43.07538476	w3-7
-75.12003294	43.07533844	w3-8
-75.11985759	43.07528783	w3-9
-75.11999305	43.07519298	w3-10
-75.12005834	43.07513505	w3-11
-75.12018723	43.0749827	w3-12
-75.12026164	43.0748463	w3-13
-75.12037303	43.07473844	w3-14
-75.12043597	43.07466415	w3-15
-75.12054438	43.0746021	w3-16
-75.12062608	43.07447064	w3-17
-75.12069762	43.07437623	w3-18
-75.12082106	43.0742423	w3-19
-75.12097594	43.07411821	w3-20
-75.12109453	43.0740379	w3-21
-75.12115839	43.07389316	w3-22
-75.12128243	43.07379535	w3-23
-75.12141886	43.07362805	w3-24
-75.12154927	43.07352269	w3-25
-75.12168622	43.07340275	w3-26
-75.12177514	43.07327684	w3-27
-75.12196564	43.07316298	w3-28
-75.12208989	43.07292817	w3-29
-75.12227496	43.0728168	w3-30
-75.12238608	43.07265652	w3-31
-75.12251916	43.07249603	w3-32
-75.12266249	43.07238012	w3-33

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.12278344	43.07224035	w3-34
-75.12296198	43.07211959	w3-35
-75.12298193	43.07203726	w3-36
-75.12289666	43.07194607	w3-37
-75.12261731	43.07180133	w3-38
-75.12261781	43.07172234	w3-39 + east
-75.12336732	43.07209856	w3-40+West
-75.12324059	43.07211399	w3-41
-75.12309896	43.07213498	w3-up-2
-75.12306248	43.07207648	w3-42
-75.12294376	43.07216505	w3-wet-2
-75.12294335	43.07217554	w3-43
-75.12282118	43.07234371	w3-44
-75.1226927	43.07250125	w3-45
-75.12257957	43.07260068	w3-46
-75.12241849	43.0727736	w3-47
-75.12233395	43.07289699	w3-48
-75.1222328	43.07301514	w3-49
-75.12207537	43.07317287	w3-50
-75.1219643	43.07333355	w3-51
-75.12176683	43.07349625	w3-52
-75.12164037	43.07364041	w3-53
-75.12153744	43.07379389	w3-54
-75.12137417	43.07393043	w3-55
-75.12125549	43.07407275	w3-56
-75.12113324	43.0741756	w3-57
-75.12100299	43.07434156	w3-58
-75.12088823	43.07447984	w3-59
-75.12077619	43.07459272	w3-60
-75.12067944	43.0746654	w3-61
-75.12058019	43.07478801	w3-62
-75.1206813	43.07487028	w3-63
-75.12076258	43.07484962	w3-64
-75.12091238	43.07493271	w3-65
-75.12105225	43.07485979	w3-66
-75.12105937	43.07474514	w3-67
-75.12105104	43.07466924	w3-68
-75.12113757	43.07454899	w3-69
-75.12119481	43.07439737	w3-70
-75.12125747	43.07428988	w3-71
-75.12140612	43.07425844	w3-72
-75.12139958	43.07422935	w3-up-3
-75.12143114	43.07427307	w3-wet-3
-75.12155767	43.07417676	w3-73
-75.12167331	43.07410366	w3-74
-75.12180812	43.07410404	w3-75
-75.12198481	43.07409597	w3-76

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.12194275	43.07415447	w3-77
-75.12182168	43.07421502	w3-78
-75.12182889	43.0743227	w3-79
-75.12167224	43.07440194	w3-80
-75.12171507	43.07445962	w3-81
-75.12180481	43.07442077	w3-82
-75.12188469	43.07445583	w3-83
-75.12190545	43.07455292	w3-84
-75.12189338	43.07463338	w3-85
-75.12170011	43.0746228	w3-86
-75.12158246	43.07470686	w3-87
-75.12151592	43.07472082	w3-88
-75.12137238	43.07475399	w3-89
-75.12144706	43.07462278	w3-90
-75.12143739	43.07453861	w3-91
-75.12131255	43.0745684	w3-92
-75.12127165	43.07465546	w3-93
-75.12125584	43.07473806	w3-94
-75.12117181	43.07483887	w3-95
-75.12120567	43.07490622	w3-96
-75.12110348	43.07497932	w3-97
-75.12098529	43.07503332	w3-98
-75.12080704	43.07498848	w3-99
-75.12066585	43.07496386	w3-100
-75.12049875	43.07485667	w3-101
-75.12038119	43.07497361	w3-102
-75.12028249	43.07504928	w3-103
-75.12017066	43.07516054	w3-104
-75.12010982	43.07523479	w3-105 end to w3-1
-75.12249642	43.07171084	w4-1 start
-75.12238797	43.0716498	w4-2
-75.12228126	43.07168584	w4-3
-75.12224974	43.07181141	w4-4
-75.12218186	43.07193275	w4-5
-75.12195709	43.07209034	w4-6
-75.12185099	43.07221875	w4-6
-75.12171305	43.07236338	w4-7
-75.12166107	43.07250734	w4-8
-75.12162684	43.07260328	w4-9
-75.12154403	43.072635	w4-10
-75.12146041	43.07265024	w4-11
-75.12130063	43.07262606	w4-12
-75.12117994	43.072594	w4-13
-75.12107967	43.07259007	w4-14
-75.12097755	43.07263732	w4-15
-75.12083561	43.07265476	w4-16
-75.12068558	43.07271204	W4-17

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.12052329	43.07272721	w4-18
-75.12030925	43.07273206	w4-19
-75.12010661	43.07277377	W4-20
-75.1198673	43.07279105	w4-21
-75.11966124	43.0727823	w4-22
-75.11947112	43.07280794	w4-23
-75.11939714	43.07279818	w4-24
-75.11922223	43.07274469	w4-25
-75.11922613	43.07270419	w4-26
-75.11909496	43.07276796	w4-27
-75.11895718	43.07283383	w4-28
-75.11902081	43.07292064	w4-29
-75.11909875	43.07301946	w4-30
-75.11924326	43.0731313	w4-31
-75.11933035	43.07319679	w4-32
-75.11940084	43.07331699	w4-33
-75.11945186	43.07337021	W4-34
-75.11945615	43.07354351	w4-35
-75.11946788	43.07367105	w4-36
-75.11941978	43.07370812	w4-37
-75.1196525	43.07388712	w4-38
-75.11950309	43.07378578	w4-39
-75.11943554	43.07378563	w4-40
-75.11937602	43.073933	w4-41
-75.11925796	43.07403969	w4-42
-75.11916867	43.07415228	W4-43
-75.1190307	43.0741663	w4-44
-75.11885632	43.07427866	w4-45
-75.11868883	43.07429976	w4-46
-75.11852465	43.0743611	w4-47
-75.11836244	43.07447003	w4-48
-75.11819927	43.07458441	w4-49
-75.118071	43.07467643	w4-50
-75.11785102	43.07454273	W4-51+ne
-75.11799251	43.07449466	W4-52
-75.11796643	43.07452795	OHWM
-75.11811313	43.07459569	OHWM
-75.11817062	43.07445091	W4-53
-75.11835546	43.07433291	W4-54
-75.11853015	43.0743019	OHWM
-75.11850624	43.07427652	W4-55
-75.11872606	43.0741861	W4-56
-75.11885294	43.07416725	OHWM
-75.11885818	43.07415843	W4-57
-75.1189288	43.07422583	OHWM
-75.11905312	43.07407598	W4-58
-75.11915619	43.07396441	W4-59

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.11925534	43.07386165	W4-60
-75.11928546	43.07384914	OHWM
-75.11927566	43.07370569	W4-61
-75.11924187	43.07359049	W4-62
-75.1192212	43.07342145	W4-63
-75.11919832	43.07328309	W4-64
-75.11913747	43.07320839	W4-65
-75.11897308	43.07312787	W4-66
-75.11888799	43.07308168	W4-67
-75.11882779	43.07297143	W4-68
-75.11876584	43.07282776	W4-69
-75.11877254	43.07271742	W4-70
-75.11879267	43.07264491	W4-71
-75.11894752	43.07255699	W4-72
-75.11900628	43.07252714	OHWM
-75.11904398	43.07265526	OHWM
-75.11906422	43.07250676	W4-73
-75.11924976	43.07246131	W4-74
-75.11938277	43.07245908	W4-75
-75.11953517	43.07249212	W4-76
-75.11965157	43.07257916	W4-77
-75.1198108	43.07269825	OHWM
-75.11974	43.072662	W4-78
-75.11985623	43.07266286	W4-79
-75.12008117	43.0726678	W4-80
-75.12029202	43.07265302	W4-81
-75.12048344	43.07263075	W4-82
-75.12074036	43.07257748	W4-83
-75.1209173	43.07251185	W4-84
-75.12108547	43.07244962	W4-85
-75.12096917	43.07234705	W4-Wet-1
-75.12089752	43.07240173	W4-Up-1
-75.1209188	43.07234204	W4-86
-75.12087567	43.07225187	W4-87
-75.12095775	43.07217529	W4-88
-75.12098886	43.07219148	W4-89
-75.12096107	43.07205172	W4-90
-75.12094063	43.07204896	W4-91
-75.12071947	43.07208619	W4-92
-75.12073962	43.07216839	W4-93
-75.12050632	43.0720838	W4-94
-75.12042366	43.07202761	W4-95
-75.1203999	43.07192801	W4-96
-75.12039595	43.07183409	W4-97
-75.12030526	43.07171571	W4-98
-75.12017164	43.07155927	W4-99
-75.12004485	43.07139117	W4-100

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.12017965	43.071356	W4-101
-75.1203122	43.07125668	W4-102
-75.12042943	43.07115644	W4-103
-75.12049933	43.0710598	W4-104
-75.12036434	43.07096414	VP1-1
-75.12031462	43.07089323	VP1-2
-75.12027551	43.07086265	VP1-3
-75.12022441	43.07088375	VP1-4
-75.12030308	43.07092597	VP1-5
-75.12061041	43.07099828	W4-105
-75.12071029	43.07095863	W4-106
-75.12067763	43.07087386	W4-107
-75.12065619	43.07077201	W4-108
-75.12067182	43.07058924	W4-109
-75.12071987	43.070487	W4-110
-75.1206943	43.0704055	W4-111
-75.12067257	43.0703271	W4-112
-75.12054358	43.07024725	W4-113 +SE
-75.12071969	43.07032537	W4-114+S
-75.12079859	43.07049562	W4-115
-75.12072438	43.07063561	W4-116
-75.12075786	43.07078023	W4-117
-75.12084442	43.07094233	W4-118
-75.12089495	43.07104379	W4-119
-75.12097967	43.07104769	W4-120
-75.12105619	43.07117464	W4-121
-75.12112018	43.07126607	W4-122
-75.12120184	43.07133684	W4-123
-75.12133402	43.07125971	W4-124
-75.12141459	43.07117273	W4-125
-75.1213412	43.07104715	W4-126
-75.12125065	43.07100535	W4-127
-75.12114041	43.07097314	W4-128
-75.12118669	43.07081261	W4-129
-75.12117305	43.07073274	W4-130
-75.1210844	43.07063692	W4-131
-75.12101301	43.07054604	W4-132
-75.12088688	43.07042401	W4-133 to W4-114
-75.12006776	43.06990538	W5-1 3'wide CL
-75.12000975	43.06998869	W5-2 3'wide CL
-75.11986001	43.07003931	W5-3 5'wide CL
-75.11970698	43.07011828	W5-4 5'wide CL
-75.11958952	43.07015788	W5-5 5'wide CL
-75.11953061	43.07019185	W5-Wet-1
-75.11956864	43.07026655	W5-Up-1
-75.11937922	43.07027344	W5-6 6'w CL
-75.11929581	43.07034001	W5-7 6'w CL

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.11911176	43.07043982	W5-8 6'w CL
-75.11897349	43.07050039	W5-9 6'w CL
-75.11874385	43.07064826	W5-10 6'w CL
-75.11857432	43.07069808	W5-11 6'w CL
-75.11831393	43.07084268	W5-12 6'w CL
-75.11814818	43.07090231	W5-13 6'w CL
-75.11793002	43.0710367	W5-14 6'w CL
-75.11775408	43.07113959	W5-15 end
-75.12209519	43.07162088	W4-134
-75.1219906	43.07159887	W4-135
-75.12186298	43.07154362	W4-136
-75.12170029	43.07150414	W4-137
-75.12150429	43.07155305	W4-138
-75.12133662	43.07161469	W4-139
-75.12114977	43.07161579	W4-140
-75.12099725	43.07166026	W4-141
-75.12092632	43.0715736	W4-142
-75.12083509	43.07159031	W4-143
-75.12080566	43.07151239	W4-144
-75.12065152	43.07147597	W4-145
-75.12045575	43.0714117	W4-146
-75.12043824	43.0715495	W4-147
-75.12051943	43.07171483	W4-148
-75.12062455	43.07182718	W4-149
-75.12073199	43.07194438	W4-150
-75.12081199	43.0720148	W4-151
-75.12098695	43.07202543	W4-152
-75.12104179	43.07207894	W4-153
-75.12103692	43.07217996	W4-154
-75.12099266	43.07228348	W4-155
-75.1210983	43.07238323	W4-156
-75.12118964	43.07242	W4-157
-75.12134298	43.07235568	W4-158
-75.12133603	43.07219446	W4-159
-75.12138244	43.07216198	W4-160
-75.12139753	43.07233878	W4-161
-75.12159525	43.0722524	W4-162
-75.12179715	43.07216201	W4-163
-75.12188425	43.07203547	W4-164
-75.12199268	43.0719427	W4-165
-75.12208301	43.07182567	W4-166
-75.12214563	43.07167742	W4-167 to- W4-134
-75.12068433	43.07556458	W6-1 start
-75.1206361	43.07552446	W6-2
-75.12062294	43.07554902	W6-Wet-1
-75.12060865	43.07549587	W6-Up-1
-75.12054809	43.07556041	W6-3

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.12056521	43.07561524	W6-4
-75.12061728	43.07563179	W6-5end to W6-1
-75.11547964	43.0730174	Upland grass\wheat
-75.11088815	43.06833977	W7-1 start
-75.11077537	43.0682353	W7-2
-75.11051924	43.06810001	W7-3
-75.11040522	43.06801287	W7-4
-75.1103389	43.06796166	W7-Wet-1
-75.11028259	43.06806491	W7-Up-1
-75.11017895	43.0679739	W7-5
-75.10998156	43.06791956	W7-6
-75.10977631	43.06782445	W7-7
-75.10957142	43.0677199	W7-8
-75.10921411	43.06755216	W7-9
-75.1090178	43.0674154	W7-10
-75.10880746	43.06747082	W7-11end +east
-75.11054331	43.06662199	Edge of River
-75.11073168	43.0667147	W7-12start +SE
-75.11078576	43.06677664	W7-13
-75.11077464	43.06693727	W7-14
-75.11073867	43.06700485	W7-15
-75.1106953	43.06708435	W7-16 (C-5)
-75.1107576	43.06715048	W7-17
-75.11080082	43.06728372	W7-18
-75.11066235	43.06732018	W7-19
-75.11049308	43.06730673	W7-20
-75.11026568	43.06730694	W7-21
-75.11014372	43.06738843	W7-22
-75.11007027	43.06749735	W7-23
-75.11009375	43.06762348	W7-24
-75.1098908	43.06772181	W7-25
-75.1097453	43.06762372	W7-26
-75.10971973	43.06756277	W7-27
-75.10961488	43.06740783	W7-28
-75.10949984	43.06726955	W7-29 end +east
-75.11100712	43.0682994	W7-30
-75.11091696	43.06825196	W7-31
-75.11086757	43.06815729	W7-32
-75.11087902	43.06801849	W7-33
-75.11089525	43.06795918	W7-34
-75.11086653	43.06786361	W7-35
-75.11087089	43.06778336	W7-36
-75.11081556	43.06771285	W7-37
-75.11073923	43.06761928	W7-38
-75.11077732	43.06751668	W7-39
-75.11097472	43.06746827	W7-40
-75.111031	43.06742403	W7-41

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.11114614	43.06733196	W7-42
-75.1109336	43.06733006	W7-43
-75.11070944	43.06740521	W7-44
-75.11056931	43.06743831	W7-45
-75.11033454	43.06745504	W7-46
-75.1102092	43.06746234	W7-47
-75.1102691	43.06737577	W7-48
-75.11053483	43.06738393	W7-Up-2
-75.11060008	43.06728856	W7-Wet-2
-75.1104832	43.06735263	W7-49
-75.11065021	43.06735371	W7-50
-75.11080331	43.0673454	W7-51
-75.11081641	43.06726454	W7-52
-75.11086691	43.06722922	W7-53
-75.11074419	43.06707222	W7-54
-75.11080523	43.06695421	W7-55
-75.1108469	43.06685156	W7-56
-75.11088082	43.06678709	W7-57
-75.11105162	43.06675703	W7-58
-75.11119399	43.06685077	W7-59
-75.11126393	43.06681964	W7-60end +S/SW
-75.11278379	43.0671097	Top of Bank mohawk
-75.11376763	43.06736409	Top of bank Mohawk
-75.11405577	43.06743262	W7-61x start at river
-75.11398327	43.06744123	W7-61
-75.11399494	43.06756972	W7-62x
-75.11390556	43.06755504	W7-62
-75.1138419	43.06765058	W7-63x
-75.11377441	43.06762923	W7-63
-75.11362668	43.06772826	W7-64
-75.11368914	43.06780138	W7-64x
-75.11353114	43.06787628	W7-65x
-75.11355304	43.06794971	W7-Up-3
-75.11349215	43.06788293	W7-Wet-3
-75.1135039	43.06781587	W7-65
-75.11330732	43.06797552	W7-66
-75.11332764	43.06802217	W7-66x
-75.11323151	43.06807767	W7-67x
-75.11320032	43.06805627	W7-67
-75.11311877	43.06811085	W7-68
-75.1131477	43.06814764	W7-68x
-75.11299805	43.06820309	W7-69
-75.1130303	43.06825598	W7-69x
-75.11312685	43.06821392	W7-70x
-75.11329365	43.06822942	W7-71x
-75.11333847	43.06833171	W7-Wet-4
-75.1134454	43.06826601	W7-72x

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.11344981	43.06822998	W7-Up-4
-75.11349156	43.06837074	W7-73x
-75.11350342	43.06843441	W7-74x
-75.11348213	43.06849297	W7-75x
-75.11343142	43.06856628	W7-76x
-75.11326065	43.068469	W7-77x
-75.11317927	43.06842342	W7-78x
-75.11308493	43.06837044	W7-79x
-75.112984	43.06834045	W7-80x
-75.1129028	43.06810617	W7-70
-75.11293518	43.06803594	W7-71
-75.11287443	43.06792691	W7-72
-75.11286696	43.06783214	W7-73
-75.11275221	43.06788857	W7-74
-75.1126456	43.06794651	W7-75
-75.11281289	43.06792428	W7-76
-75.11280351	43.06800555	W7-77
-75.11270696	43.06806179	W7-78
-75.11258015	43.06805102	W7-79
-75.11243228	43.06803456	W7-80
-75.11243676	43.06811802	W7-81
-75.11259329	43.06817589	W7-82
-75.11269771	43.06824569	W7-83
-75.11282536	43.06826199	W7-84
-75.1129726	43.06826259	W7-81x
-75.11288291	43.0682973	W7-85
-75.11268338	43.06841981	W7-86
-75.11273272	43.06844663	W7-82x
-75.11253046	43.06853749	W7-87
-75.11255905	43.06855821	W7-83x
-75.11235691	43.06863459	W7-88
-75.11240008	43.06868129	W7-84x
-75.11218104	43.06878119	W7-89
-75.11221062	43.06880064	W7-85x
-75.11197082	43.06892767	W7-90
-75.11201314	43.06893179	W7-86x
-75.1118919	43.06899436	W7-87x
-75.11186346	43.06897613	W7-91
-75.11179669	43.06902282	W7-92
-75.11170493	43.06894883	W7-93
-75.11161211	43.0688682	W7-94
-75.11148555	43.06876003	W7-95
-75.11132725	43.06859588	W7-96
-75.11119254	43.06849325	W7-97
-75.1110943	43.06841366	W7-98 to W7-30
-75.1110854	43.06841656	W7-99 to W7-1
-75.11120085	43.06854606	W7-100

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.11134127	43.06865682	W7-101
-75.11148564	43.06878219	W7-102
-75.11160549	43.06891059	W7-103
-75.11176049	43.06901317	W7-104
-75.11178698	43.06909233	W7-105
-75.11191091	43.06918053	W7-106
-75.11200615	43.06929675	W7-107
-75.11214649	43.06938869	W7-108
-75.11224279	43.06947754	W7-109
-75.11230128	43.06956254	W7-110
-75.11244443	43.06967188	W7-111
-75.11260223	43.06982077	W7-112
-75.11272927	43.06997294	W7-113
-75.1128334	43.07005329	W7-114
-75.11280702	43.07003322	W7-115
-75.11274263	43.0699505	W7-116
-75.11268767	43.06988233	W7-117
-75.11262844	43.06981389	W7-118
-75.11251491	43.06970571	W7-119
-75.11248127	43.06964968	W7-120
-75.11233289	43.06953598	W7-121
-75.11225021	43.06944913	W7-122
-75.1120973	43.06932709	W7-123
-75.11196901	43.06920446	W7-124
-75.11182705	43.06908203	W7-125 to W7-87x
-75.11506015	43.07029183	W8-1 start 4'wide CL
-75.11509692	43.07029163	W8-2 4'wide CL
-75.11523044	43.07020435	W8-3
-75.11535577	43.0701398	W8-4 6'wide CL
-75.11545932	43.07008854	W8-5 6'wide CL
-75.11562069	43.06997092	W8-6 6'wide CL
-75.11579194	43.06989143	W8-7 6'wide CL
-75.11595727	43.0697723	W8-8 6'wide CL
-75.11613928	43.06967894	W8-9 6'wide CL
-75.11630324	43.06958246	W8-10 6'wide CL end
-75.11688841	43.06921713	W8-11 start 6'wide CL
-75.1169588	43.06917108	W8-12
-75.11701441	43.06919744	W8-12x
-75.11711404	43.06909378	W8-13x
-75.11713635	43.06906624	W8-13
-75.11724362	43.06900107	W8-14
-75.11727843	43.06902539	W8-14x
-75.11739278	43.06896131	W8-15x
-75.11735983	43.06892169	W8-15
-75.11745122	43.06892662	W8-Wet-1
-75.11746228	43.06887859	W8-16
-75.1174338	43.0688537	W8-Up-1

TWT Mohawk Site

DIEHLUX Wetland Delineation GPS Coordinates - 10/10/19-10/11/19, 10/21/2019 & 11/4/2019

-75.11753275	43.06889104	W8-16x	
-75.1176277	43.06876022	W8-17 end	
-75.11766769	43.06880862	W8-17x end	
-75.12218138	43.07434013	W9-1	
-75.12218904	43.07439196	W9-2	
-75.12213327	43.07450179	W9-3	
-75.12204264	43.07458332	W9-4	
-75.12202888	43.07461627	W9-5	
-75.12211012	43.07458462	W9-6	
-75.12217157	43.07449107	W9-7	
-75.12228804	43.07436557	W9-8	
-75.1222662	43.07431172	W9-9, end, to W9-1	
-75.12212953	43.07439369	W9-Up-1	
-75.12221708	43.07439585	W9-Wet-1	
-75.12168802	43.07373163	W10-1, to W3-54	Floodplain Boundary
-75.12185945	43.07358607	W10-2	Floodplain Boundary
-75.1219991	43.07371665	W10-3	Floodplain Boundary
-75.12196191	43.07391295	W10-4	Floodplain Boundary
-75.12213978	43.07377243	W10-5	Floodplain Boundary
-75.12232481	43.07371117	W10-6	Floodplain Boundary
-75.12242533	43.07369116	W10-7	Floodplain Boundary
-75.12233086	43.07386724	W10-8	Floodplain Boundary
-75.12221096	43.07389946	W10-9	Floodplain Boundary
-75.12221434	43.0740254	W10-10	Floodplain Boundary
-75.12214848	43.07411837	W10-11	Floodplain Boundary
-75.12221174	43.07420119	W10-12	Floodplain Boundary
-75.12236182	43.07413497	W10-13	Floodplain Boundary
-75.12238723	43.07426741	W10-14	Floodplain Boundary
-75.12244296	43.07439053	W10-15	Floodplain Boundary
-75.12235843	43.0745126	W10-16	Floodplain Boundary
-75.12235794	43.07464803	W10-17	Floodplain Boundary
-75.12227027	43.0748025	W10-18, end	Floodplain Boundary

TWT Mohawk Site

Wetland Delineation Point Coordinates - Interpolated from Delineation Verification Site Visit notes, Drone Photo and LiDAR Contours

Longitude	Latitude	Comment/Flag No.
-75.12349600	43.07273828	W10-1
-75.12353173	43.07272633	W10-2
-75.12356761	43.07279062	W10-3
-75.12355955	43.07282518	W10-4
-75.12349962	43.07291936	W10-5
-75.12329042	43.07312925	W10-6
-75.12307794	43.07332842	W10-7
-75.12305833	43.07327245	W10-8
-75.12313278	43.07312108	W10-9
-75.12332574	43.07291835	W10-10, end, to W10-1
-75.12311859	43.07252664	W11-1
-75.12327270	43.07239901	W11-2
-75.12337681	43.07245370	W11-3
-75.12332505	43.07257288	W11-4
-75.12307376	43.07286382	W11-5
-75.12304767	43.07281382	W11-6
-75.12300840	43.07268282	W11-7, end, to W11-1

APPENDIX V

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W1-Wet-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.075275 Long: -75.121439 Datum: WGS 84

Soil Map Unit Name: Palms Muck NWI classification: PEM

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

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

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

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

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

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

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

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

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

Remarks:
wetland/sampling point was located within active farm field that had not been planted during growing season of 2019 and had recently been mowed.

VEGETATION – Use scientific names of plants. Sampling Point: W1-Wet-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Lonicera tatarica*			FACU
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Lythrum salicaria*	15	No	OBL
2. *Phalaris arundinacea*			FACW
3. *Polygonum sagittatum*			OBL
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*	45	Yes	OBL
6. *Impatiens capensis*	5	No	FACW
7. *Carex stricta*	5	No	FACW
8. *Scirpus spp.*			FACW
9. *Sphagnum spp.*			FACW
10. *Bidens spp.*			FACW
11. *Eupatorium perfoliatum*	5	No	FACW
12. *Juncus effusus*	5	No	OBL
	80	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 W1-Wet-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					Loamy/Clayey	
8-16	10YR 3/1	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)
- X 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:

The wetland is located within a recently tilled agricultural field and 100 year floodplain of Mohawk River. It is evident that the A/B horizons have been repeatedly mixed and tilled together from farming practices. The soil was a dark (10YR 2/1 and 3/1) black silty clay loam for the entire test pit ~16-18-inches. Given the USDA soil series listing of Palm Muck, the hydrology and vegetation indicators, one can presume additional hydric soil indicators to form once farming practices cease.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W1-Up-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

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

Subregion (LRR or MLRA): LRR L Lat: 43.075273 Long: -75.121195 Datum: WGS 84

Soil Map Unit Name: Palms muck (Pk) 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 X, 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:
sampling point was located within active farm field that had not been planted during growing season of 2019 and had recently been mowed.

VEGETATION – Use scientific names of plants.

Sampling Point: W1-Up-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*			FACU
2. *Pinus strobus*			FACU
3. *Thuja occidentalis*			FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*			FACU
6. *Acer saccharum*			FACU
7. *Fagus grandifolia*			FACU
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus frangula*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4. *Prunus serotina*			FACU
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Rubus lawrencei*			FAC
2. *Toxicodendron radicans*			UPL
3. *Pteridium aquilinum*			FACU
4. *Cornus canadensis*			FACU
5. *Rubus allegheniensis*			FACU
6. *Solidago canadensis*	10	No	FACU
7. *Artemisia vulgaris*	65	Yes	UPL
8. *Trifolium repens*	10	No	FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Asclepias syriaca*			FACU
12. *Daucus carota*			UPL
	85 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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	20	x 4 =	80
UPL species	65	x 5 =	325
Column Totals:	85 (A)		405 (B)

Prevalence Index = B/A = 4.76

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 W1-Up-1

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

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

[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: _____

Depth (inches): _____

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

Remarks:

Tilled ag field

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W1-Wet-2

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): none Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.0758091 Long: -75.1218471 Datum: WGS 84

Soil Map Unit Name: Palms Muck NWI classification: PFO

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 6

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

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

Remarks:
near upland inclusion of wetland W1 at northwest corner of Site, south of rail line

VEGETATION – Use scientific names of plants. Sampling Point: W1-Wet-2

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Salix alba*	35	Yes	FACW
5. *Acer negundo*	25	Yes	FAC
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*	15	Yes	FACW
4. *Lonicera tatarica*			FACU
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Lythrum salicaria*			OBL
2. *Phalaris arundinacea*			FACW
3. *Polygonum sagittatum*			OBL
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*	25	Yes	FACW
7. *Carex stricta*			FACW
8. *Geranium bicknellii*	10	Yes	FACW
9. *Lysichiton americanus*	10	Yes	FACW
10. *Bidens spp.*			FACW
11. *Eupatorium perfoliatum*			FACW
12. *Juncus effusus*			OBL
	45	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 W1-Wet-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					Mucky Loam/Clay	silty loam with gravel
4-8	10YR 4/1	85	7.5YR 4/6	15	C	M	Loamy/Clayey	silty clay loam
8-14	7.5YR 3/1	90	10YR 5/6	10	C	M	Loamy/Clayey	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)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- X Loamy Mucky Mineral (F1) (**LRR K, L**)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

Depth (inches): _____

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: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W1-Up-2

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): convex Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.0758523 Long: -75.1211791 Datum: WGS 84

Soil Map Unit Name: Palms muck (Pk) NWI classification:

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
upland inclusion of wetland W1 at northwest corner of Site, south of rail line

VEGETATION – Use scientific names of plants.

Sampling Point: W1-Up-2

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*			FACU
2. *Pinus strobus*			FACU
3. *Thuja occidentalis*			FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*	10	Yes	FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*	30	Yes	FAC
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus frangula*	10	Yes	FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*	15	Yes	FACU
4. *Prunus serotina*			FACU
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	25	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*	10	No	FAC
2. *Toxicodendron radicans*	20	Yes	UPL
3. *Pteridium aquilinum*			FACU
4. *Cornus canadensis*			FACU
5. *Rubus allegheniensis*	15	Yes	FACU
6. *Solidago canadensis*	10	No	FACU
7. *Artemisia vulgaris*			UPL
8. *Trifolium repens*			FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*	5	No	FACU
11. *Asclepias syriaca*			FACU
12. *Daucus carota*			UPL
	60	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	50	x 3 =	150
FACU species	55	x 4 =	220
UPL species	20	x 5 =	100
Column Totals:	125 (A)		470 (B)

Prevalence Index = B/A = 3.76

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 W1-Up-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	100					Sandy	
8-16	10YR 3/3	100						sandy dry loam with debris/gravel

[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: _____

Depth (inches): _____

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

Remarks:

hillside of upland inclusion - may be historical spoils pile from rail-line

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W1-Wet-3

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): none Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.0779713 Long: -75.12682044 Datum: WGS 84

Soil Map Unit Name: Palms Muck NWI classification: PFO

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- _____ High Water Table (A2)
- _____ Saturation (A3)
- X 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)
- X 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)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 2
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____

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

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

Remarks:
at toe of slope of rail line along northern boundary, east of channel.

VEGETATION – Use scientific names of plants. Sampling Point: W1-Wet-3

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	10	No	FACW
2. *Ostrya virginiana*	5	No	FACU
3. *Fraxinus pennsylvanica*	15	No	FACW
4. *Salix alba*			FACW
5. *Acer rubrum*	25	Yes	FAC
6. *Acer saccharinum*	25	Yes	FACW
7. *Alnus glutinosa*			FACW
	80	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*	15	Yes	FACW
4. *Lonicera tatarica*			FACU
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Lythrum salicaria*			OBL
2. *Phalaris arundinacea*			FACW
3. *Polygonum sagittatum*			OBL
4. *Onoclea sensibilis*	15	Yes	FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*			FACW
7. *Urica dioica*	15	Yes	FAC
8. *Geranium bicknellii*	15	Yes	FACW
9. *Iris versicolor*	10	No	FACW
10. *Equisetum arvense*	15	Yes	FACW
11. *Eupatorium perfoliatum*			FACW
12. *Juncus effusus*			OBL
	70	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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 W1-Wet-3

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
0-3	10YR 4/2	100					Mucky Loam/Clay	
3-8	10YR 4/1	90	10YR 5/4	10	C	M	Loamy/Clayey	silty clay loam
8-16	7.5YR 4/1	80	10YR 5/6	20	C	M	Loamy/Clayey	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)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

Depth (inches): _____

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: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W1-Up-3

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): _____ Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.0780491 Long: -75.1267871 Datum: WGS 84

Soil Map Unit Name: Palms muck (Pk) NWI classification: _____

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
along rail line slope, northwestern edge of Site

VEGETATION – Use scientific names of plants. Sampling Point: W1-Up-3

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*			FACU
2. *Pinus strobus*			FACU
3. *Thuja occidentalis*			FACU
4. *Acer rubrum*	5	No	FAC
5. *Fraxinus americana*	15	Yes	FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*	15	Yes	FAC
	35	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus frangula*	10	Yes	FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*	10	Yes	FACU
4. *Prunus serotina*			FACU
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	20	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*	5	No	UPL
3. *Pteridium aquilinum*			FACU
4. *Cornus canadensis*			FACU
5. *Rubus allegheniensis*	5	No	FACU
6. *Solidago canadensis*	15	Yes	FACU
7. *Artemisia vulgaris*	15	Yes	UPL
8. *Trifolium repens*			FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Asclepias syriaca*			FACU
12. *Daucus carota*			UPL
	40	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	45	x 4 =	180
UPL species	20	x 5 =	100
Column Totals:	95 (A)		370 (B)

Prevalence Index = B/A = 3.89

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 W1-Up-3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/4	100					Sandy	rocky from rail line
6-12	10YR 3/3	100						sandy loam with gravel

[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: _____

Depth (inches): _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W2-Wet-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): none Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07523518 Long: -75.1207906 Datum: WGS 84

Soil Map Unit Name: Palms Muck NWI classification: PEM

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
at northern edge of westernmost field near RR crossing, mowed ag field

VEGETATION – Use scientific names of plants. Sampling Point: W2-Wet-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*			FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*			FACW
4. *Salix alba*			FACW
5. *Acer rubrum*			FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Lonicera tatarica*			FACU
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Lythrum salicaria*	20	Yes	OBL
2. *Phalaris arundinacea*	15	Yes	FACW
3. *Polygonum sagittatum*			OBL
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*	25	Yes	OBL
6. *Impatiens capensis*			FACW
7. *Urica dioica*			FAC
8. *Geranium bicknellii*	15	Yes	FACW
9. *Iris versicolor*			FACW
10. *Equisetum arvense*	15	Yes	FACW
11. *Eupatorium perfoliatum*			FACW
12. *Juncus effusus*	5	No	OBL
	95	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 W2-Wet-1

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
0-16	10YR 3/1	100					Mucky Loam/Clay	

[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)
- X 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:

The wetland is located within a recently tilled agricultural field and 100 year floodplain of Mohawk River. It is evident that the A/B horizons have been repeatedly mixed and tilled together from farming practices. The soil was a dark (10YR 3/1) black silty clay loam for the entire test pit ~16-18-inches. Given the USDA soil series listing of Palm Muck, the hydrology and vegetation indicators, one can presume additional hydric soil indicators to form once farming practices cease

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W2-Up-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): _____ Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.0752351 Long: -75.1203637 Datum: WGS 84

Soil Map Unit Name: Palms muck (Pk) 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 X, 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:
within north edge of westernmost ag field

VEGETATION – Use scientific names of plants.

Sampling Point: W2-Up-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*			FACU
2. *Pinus strobus*			FACU
3. *Thuja occidentalis*			FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*			FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*			FAC
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus frangula*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4. *Prunus serotina*			FACU
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*	15	Yes	FACU
4. *Phalaris arundinacea*	10	No	FAC
5. *Rubus allegheniensis*			FACU
6. *Solidago canadensis*	5	No	FACU
7. *Artemisia vulgaris*	15	Yes	UPL
8. *Trifolium repens*	25	Yes	FACU
9. *Dactyis glomerata*	5	No	FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Asclepias syriaca*			FACU
12. *Daucus carota*			UPL
	75 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 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	10	x 3 =	30
FACU species	50	x 4 =	200
UPL species	15	x 5 =	75
Column Totals:	75 (A)		305 (B)

Prevalence Index = B/A = 4.07

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 W2-Up-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					Sandy	
8-12	10YR 3/2	100						

[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: _____

Depth (inches): _____

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

Remarks:

tilled farm field

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W3-Wet-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07540048 Long: -75.12036373 Datum: WGS 84

Soil Map Unit Name: cut and fill land (CU) NWI classification: PSS

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- _____ High Water Table (A2)
- _____ Saturation (A3)
- X 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)
- X 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)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 2
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No _____	Depth (inches): _____

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

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

Remarks:
within scrub shrub depression/drainageway at northern edge of westernmost field

VEGETATION – Use scientific names of plants. Sampling Point: W3-Wet-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*			FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*			FACW
4. *Salix alba*	20	Yes	FACW
5. *Acer rubrum*			FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*	5	Yes	FACW
	25	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*	20	Yes	FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*	20	Yes	FACW
4. *Lonicera tatarica*			FACU
5. *Salix alba*	15	Yes	FACW
6. *Alnus glutinosa*	15	Yes	FACW
7.			
	70	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Lythrum salicaria*			OBL
2. *Phalaris arundinacea*			FACW
3. *Polygonum sagittatum*			OBL
4. *Onoclea sensibilis*	5	No	FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*	15	Yes	FACW
7. *Urica dioica*			FAC
8. *Geranium bicknellii*	5	No	FACW
9. *Iris versicolor*			FACW
10. *Equisetum arvense*	15	Yes	FACW
11. *Eupatorium perfoliatum*			FACW
12. *Juncus effusus*			OBL
	40	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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 W3-Wet-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100						
2-14	10YR 4/1	95	10YR 3/4	5	C	M	Loamy/Clayey	silty 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)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

Depth (inches): _____

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: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W3-Up-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): _____ Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.0753701 Long: -75.12043717 Datum: WGS 84

Soil Map Unit Name: Palms muck (Pk) 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 X, 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:
within north edge of westernmost ag field, just south of Wetland W3

VEGETATION – Use scientific names of plants. Sampling Point: W3-Up-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*			FACU
2. *Pinus strobus*			FACU
3. *Thuja occidentalis*			FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*			FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*			FAC
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus frangula*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*	10	Yes	FACU
4. *Prunus serotina*			FACU
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	10 =Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*	20	Yes	FACU
4. *Phalaris arundinacea*			FAC
5. *Rubus allegheniensis*			FACU
6. *Solidago canadensis*	5	No	FACU
7. *Artemisia vulgaris*	5	No	UPL
8. *Trifolium repens*	20	Yes	FACU
9. *Dactyis glomerata*	5	No	FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Taraxacum officinale*	15	Yes	FACU
12. *Daucus carota*			UPL
	70 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (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	75	x 4 =	300
UPL species	5	x 5 =	25
Column Totals:	80 (A)		325 (B)

Prevalence Index = B/A = 4.06

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.)
corn stalks still remaining from last year's harvest

SOIL

Sampling Point W3-Up-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100						
6-14	10YR 3/2	100						sandy dry 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: _____

Depth (inches): _____

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

Remarks:

tilled farm field/edge

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W3-Wet-2

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): drainageway Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07216505 Long: -75.12294376 Datum: WGS 84

Soil Map Unit Name: Teel Silt Loam (TS) NWI classification: PFO

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

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

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

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

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

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

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)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X 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)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 4
Water Table Present?	Yes X	No ____	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): ____

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

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

Remarks:
within forested linear wetland/drainageway within southern edge of hedgerow, just north of Mohawk River

VEGETATION – Use scientific names of plants. Sampling Point: W3-Wet-2

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	25	Yes	FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*	20	Yes	FACW
4. *Salix alba*	20	Yes	FACW
5. *Acer rubrum*			FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*	5	No	FACW
	70	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*	5	Yes	FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Lonicera tatarica*			FACU
5. *Salix alba*			FACW
6. *Alnus glutinosa*			FACW
7.			
	5	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Lythrum salicaria*			OBL
2. *Phalaris arundinacea*			FACW
3. *Polygonum sagittatum*			OBL
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*	25	Yes	FACW
7. *Urica dioica*			FAC
8. *Geranium bicknellii*			FACW
9. *Iris versicolor*			FACW
10. *Equisetum arvense*	20	Yes	FACW
11. *Eupatorium perfoliatum*			FACW
12. *Toxicodendron radicans*	10	No	FAC
	55	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 W3-Wet-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	95	10YR 3/4	5	C	PL	Loamy/Clayey	Distinct redox concentrations
6-18	10YR 4/2	90	10YR 3/4	10	C	M	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)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

Depth (inches): _____

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: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W3-Up-2

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): _____ Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07213498 Long: -75.12309896 Datum: WGS 84

Soil Map Unit Name: Teel Silt Loam (TS) NWI classification: _____

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
southeast corner of westernmost ag field

VEGETATION – Use scientific names of plants. Sampling Point: W3-Up-2

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*			FACU
2. *Pinus strobus*			FACU
3. *Thuja occidentalis*			FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*			FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*			FAC
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus frangula*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4. *Prunus serotina*			FACU
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*	10	No	FACU
4. *Phalaris arundinacea*			FAC
5. *Rubus allegheniensis*			FACU
6. *Solidago canadensis*	15	No	FACU
7. *Artemisia vulgaris*	50	Yes	UPL
8. *Trifolium repens*	5	No	FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Taraxacum officinale*	15	No	FACU
12. *Daucus carota*			UPL
	95 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	45	x 4 =	180
UPL species	50	x 5 =	250
Column Totals:	95 (A)		430 (B)

Prevalence Index = B/A = 4.53

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.)
corn stalks from last year's crop

SOIL

Sampling Point W3-Up-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/1	100						dark silt loam
8-14	10YR 3/2	100						

[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: _____

Depth (inches): _____

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

Remarks:

tilled field edge

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W3-Wet-3

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): none Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07427307 Long: -75.12143114 Datum: WGS 84

Soil Map Unit Name: Teel Silt Loam (TS) NWI classification: PEM

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

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

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

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

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

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

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)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X 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): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): _____

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

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

Remarks:
along eastern edge of westernmost ag field that had been recently mowed.

VEGETATION – Use scientific names of plants.

Sampling Point: W3-Wet-3

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*			FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*			FACW
4. *Salix alba*			FACW
5. *Acer rubrum*			FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Lonicera tatarica*			FACU
5. *Salix alba*			FACW
6. *Alnus glutinosa*			FACW
7.			
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Lythrum salicaria*	20	Yes	OBL
2. *Phalaris arundinacea*	15	No	FACW
3. *Carex spp.*	10	No	FACW
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*	30	Yes	OBL
6. *Impatiens capensis*			FACW
7. *Urica dioica*			FAC
8. *Geranium bicknellii*	10	No	FACW
9. *Iris versicolor*			FACW
10. *Equisetum arvense*			FACW
11. *Eupatorium perfoliatum*			FACW
12. *Toxicodendron radicans*			FAC
	85 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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 W3-Wet-3

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 2/1	90	10YR 3/3	5	C	PL	Loamy/Clayey	Distinct redox concentrations
6-18	10YR 3/1	87	10YR 3/4	13	C	M	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**)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

Depth (inches): _____

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

Remarks:

The wetland is located within a recently tilled agricultural field and 100 year floodplain of Mohawk River. It is evident that the A/B horizons have been repeatedly mixed and tilled together from farming practices. The soil was a dark (10YR 2/1 and 3/1) black silty clay loam for the entire test pit ~16-18-inches. Given the USDA soil series listing of Palm Muck, the hydrology and vegetation indicators, one can presume additional hydric soil indicators to form once farming practices cease

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/10/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W3-Up-3

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): _____ Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07422935 Long: -75.12139958 Datum: WGS 84

Soil Map Unit Name: Teel Silt Loam (TS) NWI classification: _____

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
eastern edge of westernmost ag field

VEGETATION – Use scientific names of plants.

Sampling Point: W3-Up-3

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*			FACU
2. *Pinus strobus*			FACU
3. *Thuja occidentalis*			FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*			FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*			FAC
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus frangula*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4. *Prunus serotina*			FACU
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*	15	Yes	FACU
4. *Phalaris arundinacea*			FAC
5. *Rubus allegheniensis*			FACU
6. *Solidago canadensis*	5	No	FACU
7. *Artemisia vulgaris*	5	No	UPL
8. *Trifolium repens*	40	Yes	FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Taraxacum officinale*	10	No	FACU
12. *Daucus carota*			UPL
	75	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 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	70	x 4 =	280
UPL species	5	x 5 =	25
Column Totals:	75 (A)		305 (B)

Prevalence Index = B/A = 4.07

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.)
corn stalks from last year's crop

SOIL

Sampling Point W3-Up-3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/3	100						dark silt loam
8-14	7.5YR 2.5/2	100						

[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: _____

Depth (inches): _____

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

Remarks:
tilled ag field

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/11/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W4-Wet-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07234705 Long: -75.12096917 Datum: WGS 84

Soil Map Unit Name: Alluvial Land (Ad) NWI classification: PFO

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- X 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)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 8

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

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

Remarks:
Located within wooded wetland adjacent to tributary and upland floodplain forest.

VEGETATION – Use scientific names of plants. Sampling Point: W4-Wet-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	20	Yes	FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*	20	Yes	FACW
4. *Salix alba*	15	Yes	FACW
5. *Acer rubrum*			FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	55	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*	25	Yes	FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Lonicera tatarica*			FACU
5. *Salix alba*	10	Yes	FACW
6. *Alnus glutinosa*			FACW
7.			
	35	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Menispermum canadense*	15	Yes	FAC
2. *Phalaris arundinacea*			FACW
3. *Carex spp.*			FACW
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*	15	Yes	FACW
7. *Urica dioica*			FAC
8. *Geranium bicknellii*			FACW
9. *Iris versicolor*	15	Yes	FACW
10. *Equisetum arvense*			FACW
11. *Eupatorium perfoliatum*			FACW
12. *Toxicodendron radicans*	15	Yes	FAC
	60	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 9 (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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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 W4-Wet-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					Loamy/Clayey	
4-14	7.5YR 3/1	100						gravelly loamy coarse 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)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

Depth (inches): _____

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

Remarks:

The wetland is located within the 100 year floodplain of the Mohawk River.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/11/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W4-Up-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): convex Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07240173 Long: -75.12089752 Datum: WGS 84

Soil Map Unit Name: Alluvial Land (Ad) NWI classification:

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
upslope from W4-Wet-1

VEGETATION – Use scientific names of plants.

Sampling Point: W4-Up-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*	15	Yes	FACU
2. *Crataegus monogyna*	10	No	FACU
3. *Platanus occidentalis*	15	Yes	FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*	15	Yes	FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*			FAC
	55	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus cathartica*	20	Yes	FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4.			
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*	20	Yes	FACU
	40	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*	10	Yes	UPL
3. *Plantago major*			FACU
4. *Phalaris arundinacea*			FAC
5. *Rubus allegheniensis*			FACU
6. *Solidago canadensis*			FACU
7. *Artemisia vulgaris*			UPL
8. *Trifolium repens*			FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Taraxacum officinale*			FACU
12. *Daucus carota*			UPL
	10	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	75	x 4 =	300
UPL species	10	x 5 =	50
Column Totals:	105 (A)		410 (B)

Prevalence Index = B/A = 3.90

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 W4-Up-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100						dark silt loam
2-8	10YR 3/2	100						
8-14	7.5YR 3/1	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)
- ___ 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: _____

Depth (inches): _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/11/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W5-Wet-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): drainageway/linear corridor Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07019185 Long: -75.11953061 Datum: WGS 84

Soil Map Unit Name: Teel Silt Loam (TS) NWI classification: PSS/PFO

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

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

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

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

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

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

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)
- X Sediment Deposits (B2)
- X Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X 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)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2
Water Table Present?	Yes X	No ____	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): ____

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

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

Remarks:
Located within scrub-shrub/wooded linear drainageway/corridor within hedgerow of central portion of Site

VEGETATION – Use scientific names of plants.

Sampling Point: W5-Wet-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	15	Yes	FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*	10	Yes	FACW
4. *Salix alba*			FACW
5. *Acer rubrum*			FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	25	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*	5	No	FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*	40	Yes	FACW
4. *Lonicera tatarica*			FACU
5. *Salix alba*	5	No	FACW
6. *Alnus glutinosa*			FACW
7.			
	50	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Menispermum canadense*			FAC
2. *Phalaris arundinacea*			FACW
3. *Carex spp.*			FACW
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*			FACW
7. *Urica dioica*	10	Yes	FAC
8. *Geranium bicknellii*			FACW
9. *Iris versicolor*			FACW
10. *Equisetum arvense*	5	No	FACW
11. *Equisetum hyemale*	15	Yes	FACW
12. *Toxicodendron radicans*	5	No	FAC
	35	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Vitis riparia*	10	Yes	FAC
2.			
3.			
4.			
	10	=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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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 W5-Wet-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 3/2	100					Loamy/Clayey	
4-10	10YR 4/3	100					Loamy/Clayey	
10-16	2.5Y 5/4	100					Loamy/Clayey	silty 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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

Depth (inches): _____

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

Remarks:

The wetland is located within the 100 year floodplain of the Mohawk River.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/11/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W5-Up-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): convex Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07026655 Long: -75.11956864 Datum: WGS 84

Soil Map Unit Name: Teel Silt Loam (Ts) NWI classification:

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
upslope in ag field from W5-Wet-1 in drainageway/hedgerow

VEGETATION – Use scientific names of plants. Sampling Point: W5-Up-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*			FACU
2. *Crataegus monogyna*			FACU
3. *Platanus occidentalis*			FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*			FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*			FAC
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus cathartica*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4.			
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*	5	No	UPL
3. *Plantago major*	5	No	FACU
4. *Phalaris arundinacea*			FAC
5. *Rubus allegheniensis*			FACU
6. *Solidago canadensis*	10	Yes	FACU
7. *Artemisia vulgaris*	10	Yes	UPL
8. *Trifolium repens*	15	Yes	FACU
9. *Dactyis glomerata*	5	No	FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Taraxacum officinale*	10	Yes	FACU
12. *Daucus carota*	10	Yes	UPL
	70	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (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	45	x 4 =	180
UPL species	25	x 5 =	125
Column Totals:	70 (A)		305 (B)

Prevalence Index = B/A = 4.36

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 W5-Up-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100						
6-14	10YR 2/2	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)
- ___ 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: _____

Depth (inches): _____

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

Remarks:
within tilled ag field

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/11/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W6-Wet-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07554902 Long: -75.12062294 Datum: WGS 84

Soil Map Unit Name: Cut and Fill Land (CU) NWI classification: PEM/PSS

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No _____	Depth (inches): _____
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 6

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

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

Remarks:
Isolated depression located at toe of slope with RR tracks, north of westernmost ag field, just east of access road across tracks

VEGETATION – Use scientific names of plants.

Sampling Point: W6-Wet-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*			FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*			FACW
4. *Salix alba*			FACW
5. *Acer rubrum*	40	Yes	FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Lonicera tatarica*			FACU
5. *Salix alba*	15	Yes	FACW
6. *Alnus glutinosa*			FACW
7. *Populus deltoides*	15	Yes	FAC
	30	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Phragmites australis*	70	Yes	FACW
2. *Phalaris arundinacea*			FACW
3. *Artemisia vulgaris*	10	No	FACW
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*			FACW
7. *Urica dioica*			FAC
8. *Geranium bicknellii*			FACW
9. *Iris versicolor*			FACW
10. *Equisetum arvense*			FACW
11. *Equisetum hyemale*			FACW
12. *Toxicodendron radicans*			FAC
	80	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Vitis riparia*	5	Yes	FAC
2.			
3.			
4.			
	5	=Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 W6-Wet-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/1	100					Loamy/Clayey	gravelly loam
6-10	10YR 3/1	100					Loamy/Clayey	gravel with fill - auger refusal at 10"

[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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

Located at toe of slope with RR tracks. Auger refusal at ~10" at 3 locations due to apparent fill. Farming equipment, RR ballast and fill observed within wetland/sampling point.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/11/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W6-Up-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): convex Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07549587 Long: -75.12060865 Datum: WGS 84

Soil Map Unit Name: Cut and Fill Land (CU) NWI classification:

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
along northern edge of westernmost ag field near rail line crossing

VEGETATION – Use scientific names of plants. Sampling Point: W6-Up-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*			FACU
2. *Crataegus monogyna*			FACU
3. *Platanus occidentalis*			FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*			FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*			FAC
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus cathartica*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4.			
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*	15	Yes	FACU
4. *Phalaris arundinacea*			FAC
5. *Phragmites australis*	15	Yes	FACW
6. *Solidago canadensis*	10	Yes	FACU
7. *Artemisia vulgaris*	10	Yes	UPL
8. *Trifolium repens*	10	Yes	FACU
9. *Dactyis glomerata*	10	Yes	FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Taraxacum officinale*	5	No	FACU
12. *Daucus carota*			UPL
	75	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	10	x 5 =	50
Column Totals:	75 (A)		280 (B)

Prevalence Index = B/A = 3.73

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 W6-Up-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	5YR 2.5/1	100						dark silt loam
6-14	10YR 3/1	100						

[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: _____

Depth (inches): _____

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

Remarks:
within tilled ag field

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W7-Wet-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): none Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.006796166 Long: -75.1103389 Datum: WGS 84

Soil Map Unit Name: Wayland Soils Complex (Wd) NWI classification: PFO

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

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

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

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

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

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

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)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 2
Water Table Present?	Yes X	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): _____

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

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

Remarks:
At toe of slope along northern property limit - unclear due to permission to be on adjacent landowner parcel if this wetland represents the western edge of NYSDEC Wetland IN-1 or not.

VEGETATION – Use scientific names of plants.

Sampling Point: W7-Wet-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	25	Yes	FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*	60	Yes	FACW
4. *Salix alba*			FACW
5. *Acer rubrum*	3	No	FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	88	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Lonicera tatarica*			FACU
5. *Salix alba*			FACW
6. *Alnus glutinosa*			FACW
7. *Populus deltoides*			FAC
		=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Phragmites australis*			FACW
2. *Phalaris arundinacea*			FACW
3. *Artemisia vulgaris*			FACW
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*	20	Yes	FACW
7. *Urica dioica*	35	Yes	FAC
8. *Geranium bicknellii*			FACW
9. *Iris versicolor*			FACW
10. *Equisetum arvense*			FACW
11. *Equisetum hyemale*			FACW
12. *Toxicodendron radicans*			FAC
	55	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Vitis riparia*	15	Yes	FAC
2.			
3.			
4.			
	15	=Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 W7-Wet-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					Loamy/Clayey	
4-8	10YR 3/1	85	10YR 5/4	15	C	M	Loamy/Clayey	
8-16	7.5YR 4/1	90	10YR 4/4	10	C	M	Loamy/Clayey	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)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- X 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: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W7-Up-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): convex Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.06806491 Long: -75.11028259 Datum: WGS 84

Soil Map Unit Name: Wayland Soils Complex (Wd) NWI classification:

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
upslope/hillside from edge of Wetland W7/W7-Wet-1 sampling point

VEGETATION – Use scientific names of plants. Sampling Point: W7-Up-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*	15	Yes	FACU
2. *Crataegus monogyna*			FACU
3. *Platanus occidentalis*			FACU
4. *Carya glabra*	35	Yes	FACU
5. *Fraxinus americana*			FACU
6. *Populus deltoides*	15	Yes	FAC
7. *Acer negundo*			FAC
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus cathartica*	15	Yes	FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4.			
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	15	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*			FACU
4. *Phalaris arundinacea*			FAC
5. *Phragmites australis*			FACW
6. *Solidago canadensis*			FACU
7. *Artemisia vulgaris*			UPL
8. *Trifolium repens*			FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*	5	Yes	FACU
11. *Taraxacum officinale*			FACU
12. *Daucus carota*			UPL
	5	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals:	85 (A)		310 (B)

Prevalence Index = B/A = 3.65

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 W7-Up-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/1	100						dark silt loam
2-8	7.5YR 3/1	100						
8-16	10YR 3/3	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)
- ___ 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: _____

Depth (inches): _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W7-Wet-2

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): historical streambed/ditchline Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.06728856 Long: -75.11060008 Datum: WGS 84

Soil Map Unit Name: Wayland Soils Complex (Wd) NWI classification: PFO/PEM

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

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

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

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

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

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

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)
- X Water-Stained Leaves (B9)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2
Water Table Present?	Yes X	No ____	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): ____

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

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

Remarks:
within historical stream channel/ditchline of Wetland W7 wetland complex

VEGETATION – Use scientific names of plants. Sampling Point: W7-Wet-2

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	5	No	FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*	35	Yes	FACW
4. *Salix alba*			FACW
5. *Acer rubrum*	5	No	FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	45	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Lonicera tatarica*	5	Yes	FACU
5. *Salix alba*			FACW
6. *Alnus glutinosa*			FACW
7. *Populus deltoides*			FAC
	5	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Phragmites australis*			FACW
2. *Phalaris arundinacea*			FACW
3. *Artemisia vulgaris*			FACW
4. *Onoclea sensibilis*	20	Yes	FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*	40	Yes	FACW
7. *Urica dioica*	20	Yes	FAC
8. *Geranium bicknellii*	5	No	FACW
9. *Iris versicolor*			FACW
10. *Equisetum arvense*			FACW
11. *Equisetum hyemale*			FACW
12. *Toxicodendron radicans*			FAC
	85	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Vitis riparia*			FAC
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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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 W7-Wet-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	100					Loamy/Clayey	
6-16	10YR 3/1	80	10YR 7/6	20	C	M	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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- X 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: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W7-Up-2

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): convex Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.06738393 Long: -75.11053483 Datum: WGS 84

Soil Map Unit Name: Wayland Soils Complex (Wd) NWI classification:

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
upslope from edge of Wetland W7/W7-Wet-2 sampling point

VEGETATION – Use scientific names of plants. Sampling Point: W7-Up-2

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*			FACU
2. *Crataegus monogyna*			FACU
3. *Tilia americana*	50	Yes	FACU
4. *Carya glabra*			FACU
5. *Fraxinus americana*			FACU
6. *Populus deltoides*			FAC
7. *Acer negundo*			FAC
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus cathartica*	15	Yes	FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*	15	Yes	FACU
4.			
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	30	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*	10	Yes	UPL
3. *Plantago major*			FACU
4. *Phalaris arundinacea*			FAC
5. *Phragmites australis*			FACW
6. *Solidago canadensis*			FACU
7. *Artemisia vulgaris*	15	Yes	UPL
8. *Trifolium repens*			FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Taraxacum officinale*			FACU
12. *Alliaria petiolata*	15	Yes	FACU
	40	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	80	x 4 =	320
UPL species	25	x 5 =	125
Column Totals:	120 (A)		490 (B)

Prevalence Index = B/A = 4.08

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 W7-Up-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100						dark sandy loam
2-8	7.5YR 3/1	100						
8-16	10YR 3/2	100						

[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: _____

Depth (inches): _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W7-Wet-3

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): ditchline in hedgerow Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.06788293 Long: -75.11349215 Datum: WGS 84

Soil Map Unit Name: Wayland Soils Complex (Wd) NWI classification: PFO

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

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

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

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

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

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

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)
- X Water-Stained Leaves (B9)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
ditchline within easternmost hedgerow of Wetland W7 wetland complex

VEGETATION – Use scientific names of plants. Sampling Point: W7-Wet-3

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	20	Yes	FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*	40	Yes	FACW
4. *Salix alba*			FACW
5. *Acer rubrum*			FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*	15	Yes	FACW
4. *Lonicera tatarica*	20	Yes	FACU
5. *Salix alba*			FACW
6. *Alnus glutinosa*			FACW
7. *Populus deltoides*			FAC
	35	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Phragmites australis*			FACW
2. *Phalaris arundinacea*			FACW
3. *Artemisia vulgaris*			FACW
4. *Onoclea sensibilis*	5	No	FACW
5. *Typha angustifolia*			OBL
6. *Impatiens capensis*	10	Yes	FACW
7. *Urica dioica*	15	Yes	FAC
8. *Geranium bicknellii*			FACW
9. *Iris versicolor*			FACW
10. *Equisetum arvense*			FACW
11. *Equisetum hyemale*			FACW
12. *Toxicodendron radicans*			FAC
	30	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Vitis riparia*			FAC
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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 W7-Wet-3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					Loamy/Clayey	
4-8	10YR 4/2	87	10YR 5/1	3	D		Loamy/Clayey	Depletions
			10YR 3/4	10	C			
8-14	2.5Y 5/1	10	2.5Y 5/4	10	C		Loamy/Clayey	Distinct 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)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- X 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: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W7-Up-3

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): _____ Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.0674941 Long: -75.11355304 Datum: WGS 84

Soil Map Unit Name: Wayland Soils Complex (Wd) NWI classification: _____

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
along ag field edge, slightly upslope from edge of Wetland W7/W7-Wet-3 sampling point

VEGETATION – Use scientific names of plants. Sampling Point: W7-Up-3

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*			FACU
2. *Crataegus monogyna*			FACU
3. *Tilia americana*			FACU
4. *Carya glabra*			FACU
5. *Fraxinus americana*	15	Yes	FACU
6. *Populus deltoides*			FAC
7. *Acer negundo*			FAC
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus cathartica*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*	15	Yes	FACU
4.			
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	15	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*			FACU
4. *Phalaris arundinacea*			FAC
5. *Phragmites australis*			FACW
6. *Solidago canadensis*	10	No	FACU
7. *Artemisia vulgaris*	50	Yes	UPL
8. *Trifolium repens*			FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Taraxacum officinale*			FACU
12. *Equisetum arvense*	15	Yes	FAC
	75	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	40	x 4 =	160
UPL species	50	x 5 =	250
Column Totals:	105 (A)		455 (B)

Prevalence Index = B/A = 4.33

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 W7-Up-3

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 2.5/1	100						silty loam with some sand
6-14	7.5YR 3/1	100						

[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: _____

Depth (inches): _____

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

Remarks:

edge of tilled ag field

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W7-Wet-4

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): none Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.06833171 Long: -75.11333847 Datum: WGS 84

Soil Map Unit Name: Wayland Soils Complex (Wd) NWI classification: PEM

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

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

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

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

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

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

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)
- X Water-Stained Leaves (B9)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
depressional areas extending from ditchline into easternmost ag fields (east/west of hedgerow)

VEGETATION – Use scientific names of plants. Sampling Point: W7-Wet-4

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	20	Yes	FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*	40	Yes	FACW
4. *Salix alba*			FACW
5. *Acer rubrum*			FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*	15	Yes	FACW
4. *Lonicera tatarica*	20	Yes	FACU
5. *Salix alba*			FACW
6. *Alnus glutinosa*			FACW
7. *Populus deltoides*			FAC
	35	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Phragmites australis*			FACW
2. *Phalaris arundinacea*	15	Yes	FACW
3. *Artemisia vulgaris*			FACW
4. *Onoclea sensibilis*			FACW
5. *Bidens vulgata*	10	No	FAC
6. *Impatiens capensis*			FACW
7. *Urica dioica*			FAC
8. *Geranium bicknellii*	10	No	FACW
9. *Lythrum salicaria*	35	Yes	FACW
10. *Equisetum arvense*	15	Yes	FACW
11. *Equisetum hyemale*			FACW
12. *Toxicodendron radicans*			FAC
	85	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Vitis riparia*			FAC
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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 W7-Wet-4

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/1	100					Loamy/Clayey	
6-16	10YR 3/1	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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

The wetland is located within a recently tilled agricultural field and 100 year floodplain of Mohawk River. It is evident that the A/B horizons have been repeatedly mixed and tilled together from farming practices. The soil was a dark (7.5 YR 3/1 and 10YR 3/1) black silty clay loam for the entire test pit ~16-18-inches. Given the USDA soil series listing of Wayland Soils Complex, the hydrology and vegetation indicators, one can presume additional hydric soil indicators to form once farming practices cease.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W7-Up-4

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): _____ Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.06822998 Long: -75.11344981 Datum: WGS 84

Soil Map Unit Name: Wayland Soils Complex (Wd) 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 X, 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:
along low spot within ag field southwest of Wetland W7

VEGETATION – Use scientific names of plants. Sampling Point: W7-Up-4

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*			FACU
2. *Crataegus monogyna*			FACU
3. *Tilia americana*			FACU
4. *Carya glabra*			FACU
5. *Fraxinus americana*			FACU
6. *Populus deltoides*			FAC
7. *Acer negundo*			FAC
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus cathartica*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4.			
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*			FACU
4. *Phalaris arundinacea*	5	No	FAC
5. *Phragmites australis*			FACW
6. *Solidago canadensis*	25	Yes	FACU
7. *Artemisia vulgaris*	50	Yes	UPL
8. *Trifolium repens*	5	No	FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Taraxacum officinale*			FACU
12. *Equisetum arvense*	5	No	FAC
	90	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	30	x 4 =	120
UPL species	50	x 5 =	250
Column Totals:	90 (A)		400 (B)

Prevalence Index = B/A = 4.44

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 W7-Up-4

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100						silty loam with some sand
8-14	7.5YR 2.5/1	100						

[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: _____

Depth (inches): _____

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

Remarks:

recently tilled ag field

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W8-Wet-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): drainageway Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.06892662 Long: -75.11745122 Datum: WGS 84

Soil Map Unit Name: Hamlin Silt Loam (Hf) NWI classification: PFO/PSS

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

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

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

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

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

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

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)
- X Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- X 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 4
Water Table Present?	Yes X	No ____	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): ____

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

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

Remarks:
ditchline/drainageway within hedgerow, drains south to Mohawk river

VEGETATION – Use scientific names of plants.

Sampling Point: W8-Wet-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	30	Yes	FACW
2. *Ostrya virginiana*			FACU
3. *Fraxinus pennsylvanica*	30	Yes	FACW
4. *Salix alba*			FACW
5. *Acer rubrum*			FAC
6. *Acer saccharinum*			FACW
7. *Alnus glutinosa*			FACW
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*	20	Yes	FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*	10	Yes	FACW
4. *Lonicera tatarica*			FACU
5. *Salix alba*			FACW
6. *Alnus glutinosa*			FACW
7. *Populus deltoides*			FAC
	30	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Phragmites australis*			FACW
2. *Phalaris arundinacea*			FACW
3. *Artemisia vulgaris*			FACW
4. *Onoclea sensibilis*			FACW
5. *Bidens vulgata*	5	Yes	FAC
6. *Impatiens capensis*	10	Yes	FACW
7. *Urica dioica*			FAC
8. *Geranium bicknellii*	5	Yes	FACW
9. *Lythrum salicaria*			FACW
10. *Equisetum arvense*			FACW
11. *Equisetum hyemale*			FACW
12. *Toxicodendron radicans*			FAC
	20	=Total Cover	
Woody Vine Stratum (Plot size:)			
1. *Vitis riparia*			FAC
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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 W8-Wet-1

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
0-3	7.5YR 2.5/1	100					Loamy/Clayey	
3-12	10YR 3/1	90	10YR 3/4	10	C	M	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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

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

The wetland is located within a recently tilled agricultural field and 100 year floodplain of Mohawk River. It is evident that the A/B horizons have been repeatedly mixed and tilled together from farming practices.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 10/21/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W8-Up-1

Investigator(s): Colin Diehl/Travis Money Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): _____ Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.0688537 Long: -75.1174338 Datum: WGS 84

Soil Map Unit Name: Hamlin Silt Loam (Hf) NWI classification: _____

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

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

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

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

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

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

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
along field edge, east of Wetland W8/hedgerow

VEGETATION – Use scientific names of plants. Sampling Point: W8-Up-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Rhamnus cathartica*			FACU
2. *Crataegus monogyna*			FACU
3. *Tilia americana*			FACU
4. *Carya glabra*			FACU
5. *Fraxinus americana*	25	Yes	FACU
6. *Populus deltoides*			FAC
7. *Acer negundo*			FAC
	25	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus cathartica*			FAC
2. *Lonicera tatarica*	15	Yes	FACU
3. *Fraxinus americana*	15	Yes	FACU
4.			
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*	20	Yes	FACU
	50	=Total Cover	
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*			FACU
4. *Phalaris arundinacea*			FAC
5. *Phragmites australis*			FACW
6. *Solidago canadensis*	15	Yes	FACU
7. *Artemisia vulgaris*	20	Yes	UPL
8. *Trifolium repens*			FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*	5	No	FACU
11. *Taraxacum officinale*			FACU
12. *Equisetum arvense*			FAC
	40	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (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	95	x 4 =	380
UPL species	20	x 5 =	100
Column Totals:	115 (A)		480 (B)

Prevalence Index = B/A = 4.17

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 W8-Up-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	5YR 3/1	100						sandy/silt loam
6-16	7.5YR 3/1	100						

[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: _____

Depth (inches): _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 11/4/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W9-Wet-1

Investigator(s): Colin Diehl Section, Township, Range: Schuyler

Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07439585 Long: -75.12221708 Datum: WGS 84

Soil Map Unit Name: Palms Muck NWI classification: PEM

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

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

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

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

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

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

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

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

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

Remarks:
wetland/sampling point was located within active farm field that had not been planted during growing season of 2019 and had recently been mowed.

VEGETATION – Use scientific names of plants. Sampling Point: W9-Wet-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Cornus sericea*			FACW
2. *Acer rubrum*			FAC
3. *Fraxinus pennsylvanica*			FACW
4. *Lonicera tatarica*			FACU
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Lythrum salicaria*	20	Yes	OBL
2. *Phalaris arundinacea*			FACW
3. *Polygonum sagittatum*			OBL
4. *Onoclea sensibilis*			FACW
5. *Typha angustifolia*	30	Yes	OBL
6. *Impatiens capensis*	10	No	FACW
7. *Carex stricta*	5	No	FACW
8. *Scirpus spp.*	5	No	FACW
9. *Geranium bicknellii*	10	No	FACW
10. *Bidens spp.*			FACW
11. *Eupatorium perfoliatum*	5	No	FACW
12. *Juncus effusus*			OBL
	85	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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 W9-Wet-1

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 2.5/1	100					Loamy/Clayey	
6-12	10YR 3/1	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)
- X 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:

The wetland is located within a recently tilled agricultural field and 100 year floodplain of Mohawk River. It is evident that the A/B horizons have been repeatedly mixed and tilled together from farming practices.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mohawk SA City/County: Herkimer Sampling Date: 11/4/19

Applicant/Owner: The Wetlands Trust, Inc. State: NY Sampling Point: W9-Up-1

Investigator(s): Colin Diehl Section, Township, Range: Town of Schuyler

Landform (hillside, terrace, etc.): none Local relief (concave, convex, none): _____ Slope %: 0-3

Subregion (LRR or MLRA): LRR L Lat: 43.07439369 Long: -75.12212953 Datum: WGS 84

Soil Map Unit Name: Palms muck (Pk) 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 X, 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:
within central portion of westernmost ag field

VEGETATION – Use scientific names of plants. Sampling Point: W9-Up-1

Tree Stratum (Plot size: 15 by 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*			FACU
2. *Pinus strobus*			FACU
3. *Thuja occidentalis*			FACU
4. *Acer rubrum*			FAC
5. *Fraxinus americana*			FACU
6. *Acer saccharum*			FACU
7. *Acer negundo*			FAC
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 by 20')			
1. *Rhamnus frangula*			FAC
2. *Lonicera tatarica*			FACU
3. *Fraxinus americana*			FACU
4. *Prunus serotina*			FACU
5. *Acer saccharum*			FACU
6. *Lindera benzoin*			FACW
7. *Rosa multiflora*			FACU
	=Total Cover		
Herb Stratum (Plot size: 10 by 15')			
1. *Urtica dioica*			FAC
2. *Toxicodendron radicans*			UPL
3. *Plantago major*	10	No	FACU
4. *Phalaris arundinacea*	20	Yes	FAC
5. *Rubus allegheniensis*			FACU
6. *Solidago canadensis*	10	No	FACU
7. *Artemisia vulgaris*	15	Yes	UPL
8. *Trifolium repens*	20	Yes	FACU
9. *Dactyis glomerata*			FACU
10. *Parthenocissus quinquefolia*			FACU
11. *Asclepias syriaca*			FACU
12. *Daucus carota*			UPL
	75	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	40	x 4 =	160
UPL species	15	x 5 =	75
Column Totals:	75 (A)		295 (B)

Prevalence Index = B/A = 3.93

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

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

SOIL

Sampling Point W9-Up-1

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 2/1	100					Sandy	
7-16	10YR 3/2	100						

[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: _____

Depth (inches): _____

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

Remarks:

tilled farm field

Appendix D. Supplemental site photos including photo location map.

Mohawk River Preserve Photopoint Locations Map

In Lieu Fee Program: Mohawk Service Area
Location: 2921 NY-5, Frankfort, NY 13340
Site Coordinates: 43.0738, -75.1206

1 in = 692 ft

0 230 460 920 1,380 1,840 Feet

Legend

- Photopoint Locations
- Mohawk River Preserve Boundary

N W E S

Photopoint 1: Forested Wetland Preservation Area looking west northwest, 4/25/2019

Photopoint 2: Western Field 1 looking southwest, 7/13/2019

Photopoint 3: Western Field 1 looking south, 7/13/2019

Photopoint 4: Western Field 1 looking north along western field boundary, 4/25/2019

Photopoint 5: Ditch on western boundary of western field 1, ditch drains through pipe under tree at the center of the field to the river. 11/10/2019

Photopoint 6: Western Field 1 looking north along ditch between Fields 1 and 2, 4/25/2019

Photopoint 7: Western Field 2 looking southwest, 7/13/2019

Photopoint 8: Western Field 2 stream encroachment looking south, 4/25/2019

Photopoint 9: Abandoned channel along Sterling Creek, part of mapped Wetland 3, 4/25/2019

Photopoint 10: Eastern Field 1 looking southwest along eastern edge of Sterling Creek corridor, 4/25/2019

Photopoint 11: Eastern Field 1 looking east toward Sterling Creek corridor, 7/13/2019

Photopoint 12: Eastern Field 1 looking west, 7/13/2019

Photopoint 13: Eastern Field 1 looking southwest from northeastern boundary, 5/23/2019

Photopoint 14: Eastern Field 1 looking southwest, 7/13/2019

Photopoint 15: Ditch between eastern fields 1 and 2 looking north northwest, 4/25/2019

Photopoint 16: Eastern Field, looking across the ditch between Fields 1 and 2, looking northwest along edge of field boundary ditch, part of mapped Wetland 7. 4/25/2019

Appendix E: Baseline VIBI data collection sheets.

Species	Common Name	CofC	Tolerance	Nativity	Form	Shade	Type	WET	Habit	EMP	MW	NCNE	Relative Cover	Weighted CofC
Acorus calamus	SWEET-FLAG	0	tolerant	adventive	forb	advent	DI	OBL	PE	OBL	OBL	OBL	2.5701E-05	0
Alnus incana	SPECKLED ALDER	6	sensitive	native	shrub	full	DI	FACW+	W	FACU	FACW	FACW	0.035981392	0.215888355
Artemisia vulgaris	COMMON MUGWORT	0	tolerant	adventive	forb	advent	DI	FACU-	PE	UPL	UPL	UPL	0.061682387	0
Bidens cernua	NODDING BEGGAR'S-TICK	3	midrange	native	forb	full	DI	OBL	AN	OBL	OBL	OBL	0.00128505	0.003855149
Carex lacustris	LAKE SEDGE	5	midrange	native	sedge	partial	MO	OBL	PE	OBL	OBL	OBL	2.5701E-05	0.000128505
Carex lurida	BOTTLEBRUSH SEDGE	3	midrange	native	sedge	full	MO	OBL	PE	OBL	OBL	OBL	2.5701E-05	7.7103E-05
Carex vulpinoidea	FOX SEDGE	1	tolerant	native	sedge	full	MO	OBL	PE	OBL	FACW	OBL	2.5701E-05	2.5701E-05
Cirsium arvense	CANADA THISTLE	0	tolerant	adventive	forb	advent	DI	FACU	PE	FACU	FACU	FACU	0.015420597	0
Daucus carota	QUEEN-ANNE'S-LACE	0	tolerant	adventive	forb	advent	DI	(UPL)	BI	UPL	UPL	UPL	0.014135547	0
Dichanthelium clandestinum	DEER'S-TONGUE PANIC GRASS	2	tolerant	native	grass	shade	MO	FAC+	PE	FAC	FACW	FACW	0.019275746	0.038551492
Echinochloa crus-galli	BARNYARD GRASS	0	tolerant	adventive	grass	advent	MO	FACU	AN	FAC	FACW	FAC	0.056542188	0
Epilobium ciliatum	NORTHERN WILLOW-HERB	4	midrange	native	forb	full	DI	FAC-	PE	FAC	FACW	FACW	0.003855149	0.015420597
Equisetum arvense	FIELD HORSETAIL	0	tolerant	native	fern	full	SVP	FAC	PE	FAC	FAC	FAC	0.09380863	0
Euthamia graminifolia	FLAT-TOPPED GOLDENROD	2	tolerant	native	forb	full	DI	FAC	PE	FAC	FACW	FAC	2.5701E-05	5.1402E-05
Lactuca serriola	PRICKLY LETTUCE	0	tolerant	adventive	forb	advent	DI	FAC-	BI	FAC	FACU	FACU	2.5701E-05	0
Leersia oryzoides	RICE CUT GRASS	1	tolerant	native	grass	full	MO	OBL	PE	OBL	OBL	OBL	0.003855149	0.003855149
Lycopus americanus	AMERICAN WATER-HOREHOUN	3	midrange	native	forb	full	DI	OBL	PE	OBL	OBL	OBL	2.5701E-05	7.7103E-05
Lysimachia nummularia	MONEYWORT	0	tolerant	adventive	forb	advent	DI	OBL	PE	FACW	FACW	FACW	0.003855149	0
Lythrum salicaria	PURPLE LOOSESTRIFE	0	tolerant	adventive	forb	advent	DI	FACW+	PE	FACW	OBL	OBL	0.015420597	0
Phalaris arundinacea	REED CANARY GRASS	0	tolerant	cryptogenic	grass	full	MO	FACW+	PE	FACW	FACW	FACW	0.020560796	0
Plantago lanceolata	ENGLISH PLANTAIN	0	tolerant	adventive	forb	advent	DI	UPL	PE	UPL	FACU	FACU	0.082243183	0
Plantago major	COMMON PLANTAIN	0	tolerant	adventive	forb	advent	DI	FACU	PE	FACU	FAC	FACU	0.032126243	0
Ranunculus repens	CREEPING BUTTERCUP	0	tolerant	adventive	forb	advent	DI	FAC	PE	FAC	FAC	FAC	0.041121591	0
Rumex crispus	CURLY DOCK	0	tolerant	adventive	forb	advent	DI	FACU	PE	FAC	FAC	FAC	2.5701E-05	0
Sparganium americanum	AMERICAN BUR-REED	6	sensitive	native	forb	full	MO	OBL	PE	OBL	OBL	OBL	0.008995348	0.053972089
Symphyotrichum lateriflorum	CALICO ASTER	2	tolerant	native	forb	shade	DI	FACW-	PE	FACW	FACW	FAC	0.023130895	0.04626179
Taraxacum officinale	COMMON DANDELION	0	tolerant	adventive	forb	advent	DI	FACU-	PE	FACU	FACU	FACU	0.023130895	0
Trifolium repens	WHITE CLOVER	0	tolerant	adventive	forb	advent	DI	FACU-	PE	FACU	FACU	FACU	0.411215914	0
Typha angustifolia	NARROW-LEAVED CAT-TAIL	0	tolerant	adventive	forb	advent	MO	OBL	PE	OBL	OBL	OBL	0.00128505	0
Verbascum thapsus	COMMON MULLEIN	0	tolerant	adventive	forb	advent	DI	(UPL)	BI	FACU	UPL	UPL	2.5701E-05	0
Zea mays	CORN	0	tolerant	adventive	grass	advent	MO	(UPL)	AN	(UPL)	(UPL)	(UPL)	0.030841194	0

Site Information

Site Name:	TWT ILFP Mohawk Service Area Lock 19 Site			**Site Code:**	1
County:		**Sampling date(s):**	11/10/2019		
Collector(s):	M. Yearick		**Affiliation:**		
					Create Summary Report
Phone number:		**email address:**			

Plot Information

General Plot Information	
Monitoring Type	**VIBI & VIBI FQ**
Monitor Event	**1st**
Total Modules	**10**
Intensive Modules	**4**
Plot Congituration	**VIBI-Std (2x5)**
Area (ha)	**0.10**
Latitude	
Longitude	
Centerline	
Army Corps Region	**NCNE**
Plant Community Information	
VEG Class	**NON WETLAND**
1st Plant Community	
Veg. Group	**Non-woody communities**
Veg. Modifier	**farm field**
Other	
2nd Plant Community	
VEG Class	**EMERGENT**
Veg. Group	**Wet meadow**
Veg. Modifier	**other (specify dominants)**
Other	**Ranunculus acris, Sparganium americanum**
HGM Information	
Primary HGM Class	**DEPRESSION**
Sub class	**Ground water**
Secondary HGM Class	
Sub class	
Sub or Super Sample	**NO**
% Sub or Super Sample	**100%**
Total plot canopy closure %	
Total plot herbaceous cover %	

VIBI-TEMPLATE VERSION: 2015.2

VIBI Calculation Summary Information

Metric	Value		VIBI - Metric Score		VIBI FQ
	Statewide	ACOE Region	Statewide	ACOE Region	Metric Score
Carex	3	3	*NA*	*NA*	*NA*
Cyperaceae	3	3	*NA*	*NA*	*NA*
Dicot	6	6	*NA*	*NA*	*NA*
Shade	3	3	*NA*	*NA*	*NA*
Shrub	1	1	*NA*	*NA*	*NA*
Hydrophyte	9	10	*NA*	*NA*	*NA*
Seedless Vascular Plant	1	1	*NA*	*NA*	*NA*
Annual/Perennial ratio	0.13	0.13	*NA*	*NA*	*NA*
FQAI	6.83	6.83	*NA*	*NA*	0.00
Weighted C of C	0.38	0.38	*NA*	*NA*	3.15
%bryophyte	0.00%	0.00%	*NA*	*NA*	*NA*
%hydrophyte	7.34%	7.34%	*NA*	*NA*	*NA*
%sensitive	4.50%	4.50%	*NA*	*NA*	*NA*
%tolerant	94.98%	94.98%	*NA*	*NA*	*NA*
%invasive graminoids	2.18%	2.18%	*NA*	*NA*	*NA*
Pole timber (small tree)	0.00	0.00	*NA*	*NA*	*NA*
Subcanopy IV	0.00	0.00	*NA*	*NA*	*NA*
Canopy IV	0.00	0.00	*NA*	*NA*	*NA*
Biomass	0	0	*NA*	*NA*	*NA*
%unvegetated	NA	NA	*NA*	*NA*	*NA*
Informational Parameters					
stems/ha wetland trees	0.00	0.00			
stems/ha wetland shrubs	0.00	0.00			
%buttonbush	0.00%	0.00%			
%perennial native hydrophytes	18.90%	18.90%			
%perennial native	18.90%	18.90%			
%perennial	89.71%	89.71%			
%adventives	80.97%	80.97%			
%open water	0.38%	0.38%			
%unvegetated open water	0.13%	0.13%			
%bare ground	5.50%	5.50%			
Wetness Index	0.38	0.38			
VIBI Total Score:			**0**	**0**	**3**
Average %Cover of Plot:	**97.27%**				

*** If total %cover is < 75% for non-forested veg classes, then weighted CofC VIBI-FQ metric score is proportioned.**

	Module			Module			Module			Module			Module			Residual
	2			9			8			3						
	Corner	Corner		Corner	Corner		Corner	Corner		Corner	Corner		Corner	Corner		
	4	2		2	4		2	4		2	4					
species	Level	Level	Cover Class	Level	Level	Cover Class	Level	Level	Cover Class	Level	Level	Cover Class	Level	Level	Cover Class	Cover Class
%open water	1		3	1		1	1		1	1		1	1			
%unvegetated open water	1		2	1		1	1		1	1		1	1			
%bare ground	1		4	1		5	1		5	1		4	1			
%litter cover	1		3	1		5	1		6	1		5	1			
Sparganium americanum	4		4													
Leersia oryzoides	4		3													
Ranunculus repens	3	2	5	4	4	5		2	2		1	2				
Epilobium ciliatum	3		3													
Trifolium repens	3	4	8	4	2	6	4	2	6	4	4	8				
Zea mays	3	3	4	3	3	4	3	3	3	3	3	4				
Alnus incana	2	3	3		4	3	3	4	5	4	2	4				
Phalaris arundinacea	2		4		1	2	2		2	3		4				
Cirsium arvense		4	3		2	3	4	2	3	3		3				
Plantago lanceolata		4	4	4	4	4	4	4	6	4	2	5				
Daucus carota		4	4		1	2	4		3							
Lythrum salicaria		3	3	2		2	2		2		4	4				
Artemisia vulgaris		2	3	2	3	5	3	2	5	4	2	5				
Echinochloa crus-galli		2	4	3		4	2	2	5		4	5				
Bidens cernua		1	2													
Taraxacum officinale		1	4	2	4	4		2	3	3		2				
Plantago major					4	3	2	4	5	4		4				
Equisetum arvense					3	6	4	4	6	3		3				
Dichanthelium clandestinum								4	5							
Symphyotrichum lateriflorum								4	5	2		3				
Lysimachia nummularia								1	3							
Verbascum thapsus										4		1				
Typha angustifolia											4	2				
Carex lurida											4	1				
Lycopus americanus											1	1				
Carex lacustris																1
Lactuca serriola																1
Acorus calamus																1
Euthamia graminifolia																1
Rumex crispus																1
Carex vulpinoidea																1

Appendix F. Mohawk River Preserve mitigation site soil investigation report.

Soil Report

Elmwood Road Site
Herkimer County, NY
August 1, 2019

By Laurence D. Day, Soil Scientist (CPSS #02962)

On May 31, 2019 I observed six soil profiles on 168 acres of land owned by The Wetland Trust in the Town of Schuyler, Mohawk River watershed in southern Herkimer County, NY. The property is in the Central Great Lakes Forests Region (LRR L). Soils within the ±100 acres of currently or recently farmed fields near the mouth of Sterling Creek were investigated in order to record soil profile characteristics in representative portions of the potential work area for determination of hydric/non-hydric status as a proposed wetland In-Lieu-Fee or mitigation bank. Wetland biologists Jeremy Waddell and Melissa Yearick of The Wetland Trust selected test pit locations. An excavator was used to expose the soil profiles, all of which were around 40 inches deep.

Site Conditions: The site is a relatively flat alluvial plain that gently slopes from northeast to southwest and towards the Mohawk River (Figure 1). Access is across a railroad grade along the northern border near NY State Barge Canal lock #19. An alluvial fan from Sterling Creek forms the slightly higher area east of the site entrance. Elevations are around 123 feet above mean sea level, with local relief generally of less than 10 feet. Low-gradient ditches cross the site in a few places that are still in operation from previous agricultural land use, helping to drain the predominantly silty soils that support mixed forb vegetation growing amid corn stubble. The site is within the 100-yr flood plain of the Mohawk River with southern-most portions being within the floodway (Figure 2).

Weather of May 31 was cool and slightly overcast. A stream gage of the Mohawk River at Little Falls on this date (Figure 3) records discharge around 1,000 cubic feet per second over median flow, implying that water tables should likewise have been elevated in soils adjacent to the river. All soil colors were described using moist, non-saturated soil conditions.

NRCS Soils Mapping: Figure 4 shows NRCS soil survey mapping on and near the site, plus two pages of legend with map unit names. Dominant soil types in the farmed fields are the non-hydric Teel and Hamlin Series, with Wayland, a hydric soil, in low spots that are poorly drained and frequently flooded. Teel is currently classified as a moderately well drained, coarse-silty *Fluvaquentic Eutrudept* having a seasonal high water table from 18 to 24”; however, at the time it was mapped (late 1960s) it also was considered to occur in a somewhat poorly drained phase that today would be considered Wakeville soil. The well drained Hamlin soil is a coarse-silty *Dystric Fluventic Eutrudept* with redoximorphic features below 24 inches. Palms muck (symbol Pk), a very poorly drained *Terric Haplosaprist*, is mapped over the westernmost part of the property, most of which is forested but also extends into cropland within the study area.

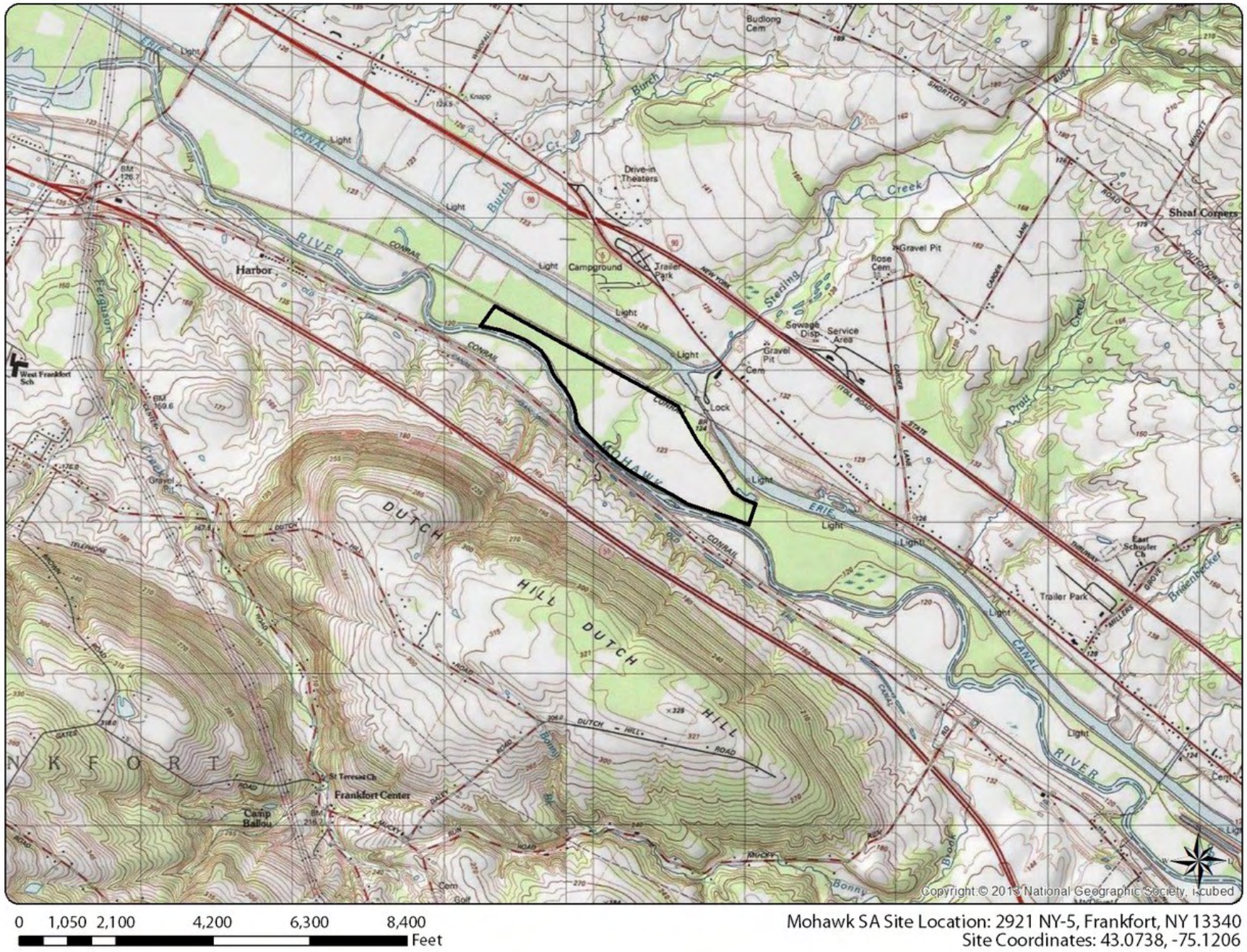


Figure 1: Location of Elmwood Road ILF site and local topography, a few miles east of Utica and just south of NY Thruway, New York.

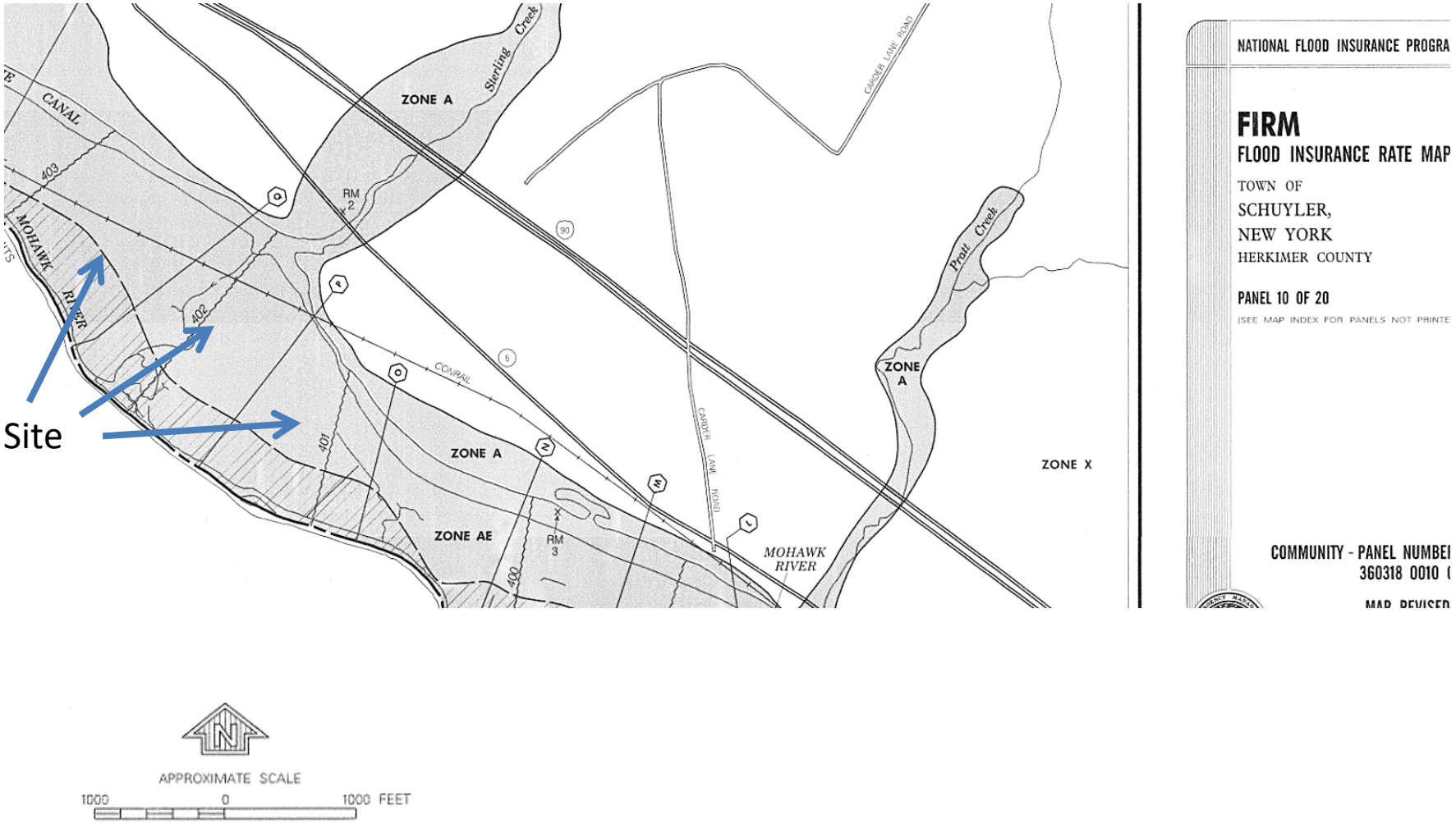
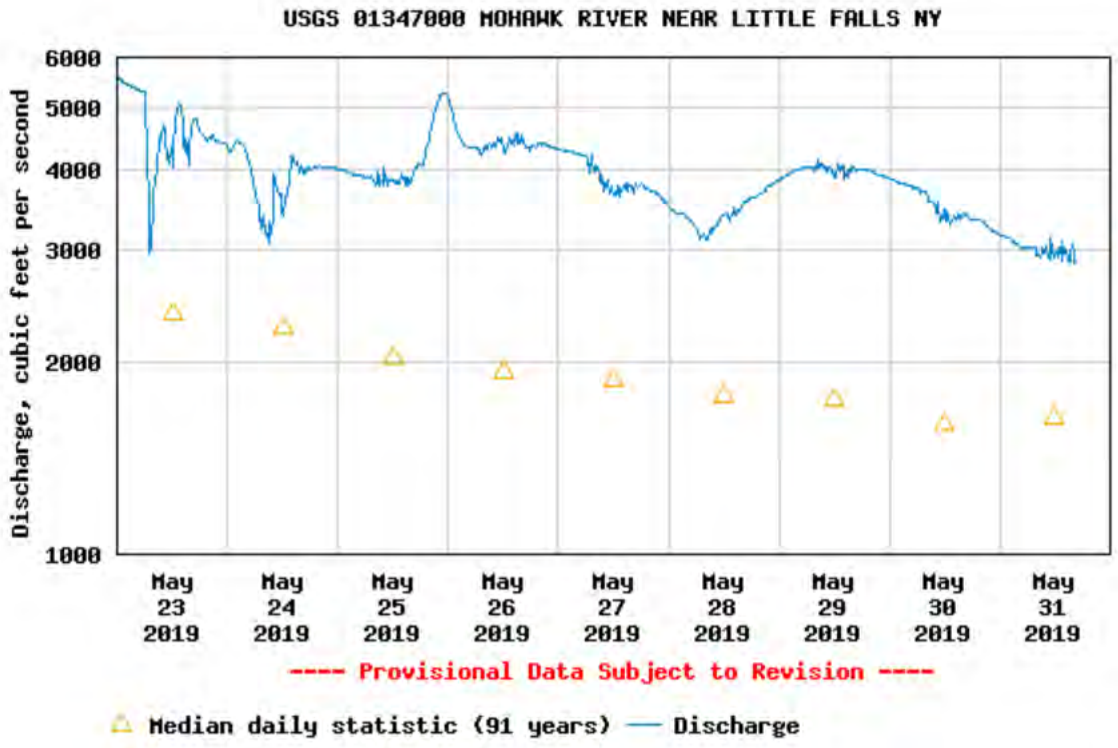


Figure 2: Portion of FEMA flood zone mapping that includes site. The entire property is within the 100-yr flood zone, with a few hundred feet along the Mohawk River in the floodway, where floodwaters are moving. [Elevations in this figure are in feet using Barge Canal Datum.]

Discharge, cubic feet per second

Most recent instantaneous value: 2880 05-31-2019 16:30 EST

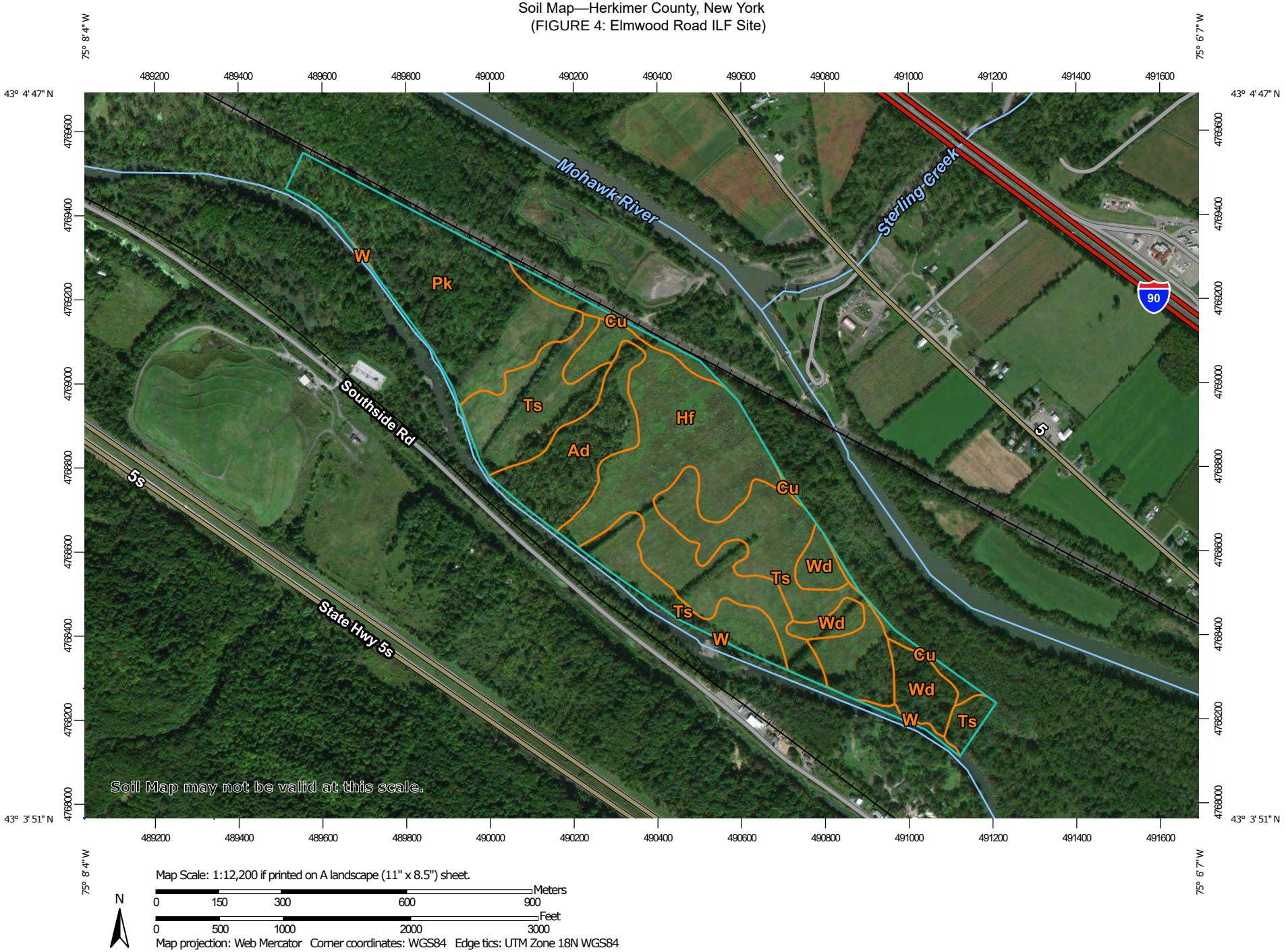


Daily discharge, cubic feet per second -- statistics for May 31 based on 91 years of record more

Min (1941)	25th percen-tile	Median	Mean	75th percen-tile	Most Recent Instantaneous Value May 31	Max (1956)
870	1300	1630	2160	2410	2880	12500

Figure 3: USGS stream gage data for a number of days preceding observations on May 31, 2019.

Soil Map—Herkimer County, New York
(FIGURE 4: Elmwood Road ILF Site)



Map Scale: 1:12,200 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Herkimer County, New York
Survey Area Data: Version 1, Mar 7, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 23, 2014—Sep 23, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ad	Alluvial land	14.7	9.0%
Cu	Cut and fill land	5.7	3.5%
Hf	Hamlin silt loam	43.8	26.9%
Pk	Palms muck	36.6	22.5%
Ts	Teel silt loam	50.5	31.0%
W	Water	0.9	0.6%
Wd	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	10.7	6.6%
Totals for Area of Interest		**162.8**	**100.0%**

Findings: Figure 5 shows test pit locations as recorded by staff of The Wetland Trust on 5/31/2019 using a GPS, and soils at each of the six test pits are described on following pages. Based on depth to redox features identified in the field, most of the soils were either moderately well drained (test pits 2, 4 and 6) or well drained (pit 3), approximating the Teel and Hamlin soils. Soils at test pits 1 and 5 were poorly drained (Wayland). Solum layers were invariably silt loam, with increased gravel content in the substratum below 36 inches in some profiles.

All the soils appeared to be the result of natural processes with the exception of row-crop agriculture disturbing the upper 6 to 11" by cultivation, wheel ruts and a plow pan evident in pit 3. Essentially no evidence of cut-and-fill activity from historic construction of the canal, railroad or widening of the canal system was observed; this is in contrast to the northernmost area immediately adjacent to the railroad grade, just off the site and adjacent to the canal (Figure 4, soil map symbol Cu).

All test pits exposed profiles of mineral soils with quite dark surface and subsoil matrix colors, often to depths over two feet. This is considerably deeper than is typical of most mineral soils and outside official color variation ranges of the above-mentioned soil series currently accepted by the USDA-NRCS, although accepted at the time the soil survey was made (Soil Survey Staff, 1975)— apparently as local variation. Because soil colors are closely linked to the U.S. Army Corps of Engineers' hydric soil indicators, and since this appears to be a parent material feature, possible explanations of the soil color anomalies at this site follow.

> Wetland soils with deep dark colors usually have elevated organic carbon content as a by-product of anaerobic conditions, along with redoximorphic features in zones of fluctuating saturation—usually at or near the soil surface. However, the six soils described here exhibited dark colors a few feet thick that often had few or no redox features within 18" of the surface. The soils natural-looking morphology may suggest natural deposition of dark, silty alluvium containing finely-divided, dark organic matter and water tables commonly between two and three feet from the surface. This scenario would likely favor gley colors at depths below the water table and well-expressed redox features where the water table fluctuates, organic material being an energy source for microbial processes such as those that create redoximorphic features. However, no gley colors were observed at in any soil horizons while zones with well-expressed redox features were typically below three feet.
>
> Another explanation for the dark and deep colors relates to the local bedrock geology in this section of the valley floor that is dominated by the black Utica Shale formation through which both the Mohawk River and Sterling Creek flow (Figure 6). Fine-sized particles of this black shale may have been incorporated throughout the alluvium on this site and the soils that developed there. In this scenario the shale-influenced alluvium, colored by dark organics of ancient origin, would presumably provide less of an available an energy source to soil microbes compared with more recent organic matter. Water tables may be at shallower depths closer to one to two feet while redoximorphic features might be less reliable of a hydric soil indicator –a problem soil due to inherent parent material color.

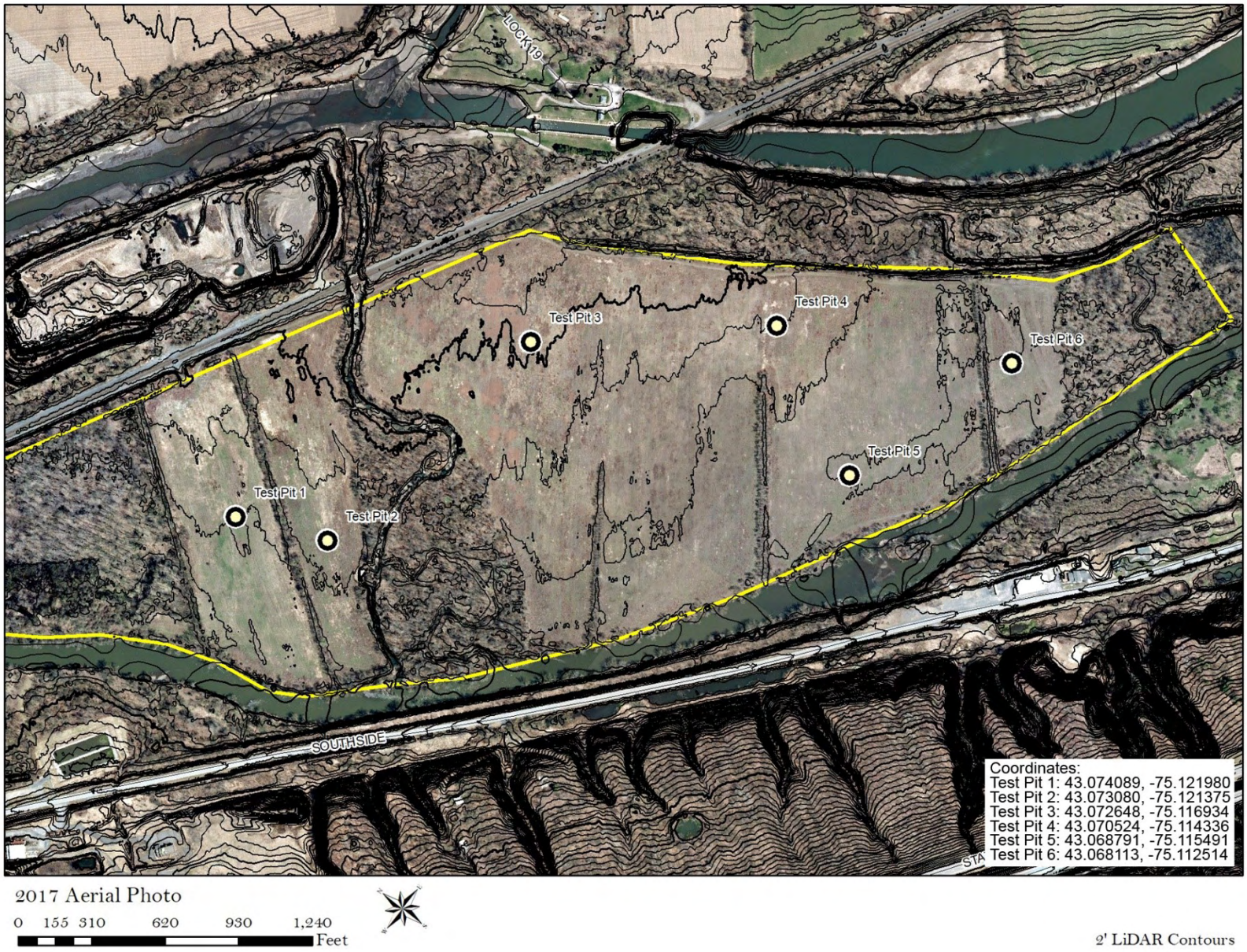


Figure 5: Test pit locations on Elmwood Road site.

PIT 1

Wetland Trust Property, Elmwood Road site, Herkimer Co., NY

Horizon	Depth	Description
Ap	0-8"	Very dark grayish brown (10Y 3/2) silt loam; strong medium granular structure; many fine & medium roots; abrupt smooth boundary.
Bg1	8-18"	Very dark grayish brown (10Y 3/2) silt loam; 10% medium distinct 7.5YR 4/4 Fe accumulations as soft masses, plus 1% as fine root stains); moderate medium blocky structure; few very fine roots; clear smooth boundary.
Bg2	18-27"	Dark gray (10YR 4/1) silt loam, with 10% coarse distinct 10YR 6/6 Fe concentrations as soft masses; weak medium subangular blocky structure; few fine roots; clear smooth boundary.
2C	27-36"	Dark brown (7.5Y 3/2) gravelly silt loam; 30% coarse distinct 7.5YR 5/6 Fe concentrations as soft masses, with 5% coarse faint 10YR 4/2 depletions on ped faces; weak medium subangular blocky structure; few fine roots; clear wavy boundary.

Comments: **This is a hydric soil, meeting the requirements of indicator F6.**
Estimated seasonal high water table at 10 to 12". Groundwater entered pit at 36" depth, rising to 29" within 1/2 hour and to 20" in four hours. Vegetation is corn stubble and mixed upland and wetland herbs.

PIT 2

Wetland Trust Property, Elmwood Road site, Herkimer Co., NY

Horizon	Depth	Description
Ap	0-10"	Very dark gray (10Y 3/1) silt loam; moderate medium granular structure, parting to weak medium subangular blocky structure; common fine and medium roots; abrupt smooth boundary.
Bg1	10-18"	Very dark gray (10Y 3/1) silt loam; moderate medium blocky structure; few fine roots; clear smooth boundary.
Bg2	18-30"	Dark brown (10YR 3/2) silt loam, with 10% coarse distinct 7.5YR 5/6 Fe concentrations as soft masses; moderate medium subangular blocky structure; few fine roots; gradual smooth boundary.
BC	30-41"	Brown (7.5Y 4/3) silt loam, with 1% medium faint 7.5YR 4/1 depletions; weak medium subangular blocky structure.

Comments: Estimated seasonal high water table at 18 to 24".
Vegetation was corn stubble and mixed upland forbs.

This is not a hydric soil.

PIT 3

Wetland Trust Property, Elmwood Road site, Herkimer Co., NY

Horizon	**Depth**	**Description**
Ap	0-11"	Very dark gray (7.5YR 3/1) silt loam; strong medium granular structure; many fine and medium roots; abrupt smooth boundary.
Apx	7-11"	(Plow pan; color as above but compact, dense & structureless, with few very fine roots.)
Bg1	11-30"	Dark gray (7.5YR 4/1) silt loam; moderate medium blocky structure; few very fine roots; gradual smooth boundary.
Bg2	30-44"	Brown (7.5YR 4/2) silt loam, with 15% fine prominent 7.5YR 5/6 Fe concentrations as soft masses, and 1% fine faint 7.5YR 5/1 depletions; moderate medium subangular blocky structure; clear smooth boundary.
C	44-47"	Mixed 50% brown (7.5Y 4/4) Fe concentrations as soft masses and 50% gray (7.5YR 5/1) depletions; silt loam; moderate medium subangular blocky structure.

Comments: Estimated seasonal high water table at 30 to 36".
Vegetation was corn stubble and mixed upland forbs.

This is not a hydric soil.

PIT 4

Wetland Trust Property, Elmwood Road site, Herkimer Co., NY

Horizon	Depth	Description
Ap	0-7"	Very dark gray (10YR 3/1) silt loam; moderate medium granular structure; common fine and medium roots; clear smooth boundary.
Bg1	7-17"	Very dark gray (10YR 3/1) silt loam; moderate medium subangular blocky structure; few fine and medium roots; clear wavy boundary.
Bg2	17-40"	Brown (10YR 4/2) silt loam, with 5% distinct 7.5 YR 4/4 Fe concentrations as soft masses, and 1% faint 10YR 4/1 depletions; moderate medium blocky structure; few medium roots clear smooth boundary.
Cg	40-44"	Brown (7.5YR 4/2) silt loam, with 5% coarse faint 7.5YR 2.5/1 MnO concentrations as soft masses and 1% fine distinct 7.5 YR 4/4 Fe concentrations as soft masses; weak medium subangular blocky structure.

Comments: Estimated seasonal high water table at 17 to 23".
Vegetation was corn stubble and mixed upland forbs.

This is not a hydric soil.

PIT 5

Wetland Trust Property, Elmwood Road site, Herkimer Co., NY

Horizon	Depth	Description
Ap	0-8"	Very dark gray (10YR 3/1) silt loam; moderate medium granular structure; common fine and medium roots; abrupt smooth boundary.
Bg1	8-11"	Very dark gray (10YR 3/1) silt loam; moderate medium subangular blocky structure; few fine roots; clear smooth boundary.
Bg2	11-23"	Dark gray (10YR 4/1) silt loam, with 10% fine prominent 10 YR 5/4 Fe concentrations as both soft masses and pore linings, and with 2% fine faint 10YR 4/2 depletions; moderate medium blocky structure; clear smooth boundary.
BCg	23-42"	Dark gray (10YR 4/1) gravelly silt loam, with 2% fine distinct Fe concentrations as soft masses, and 5% coarse faint 10YR 5/2 depletions on ped faces; massive (structureless) and firm in place.

Comments: **This is a hydric soil, meeting indicator A11.**

Estimated seasonal high water table at 11 to 17". Water slowly seeped into pit bottom over 1/2 hour. Vegetation was corn stubble and mixed upland & wetland forbs.

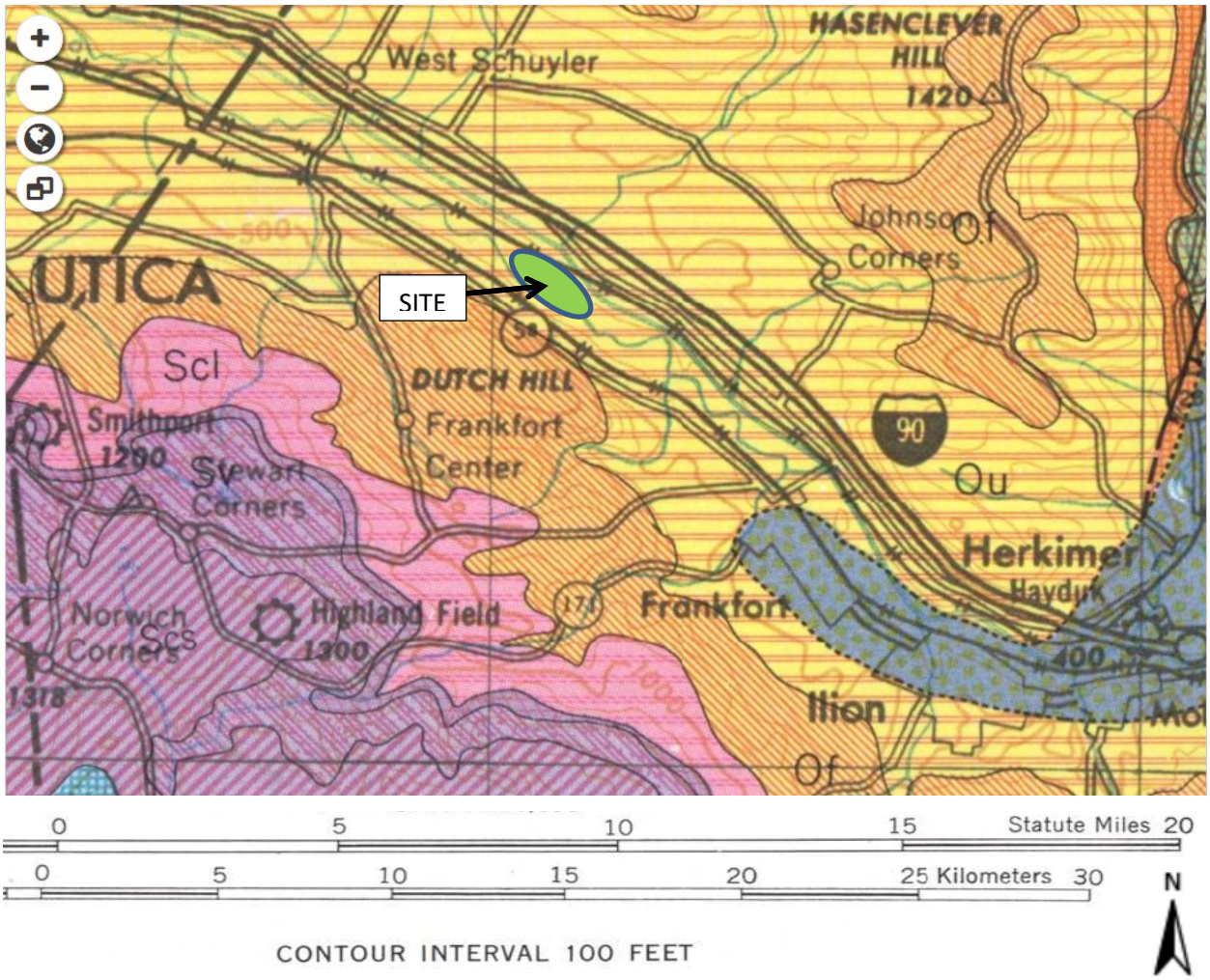
PIT 6

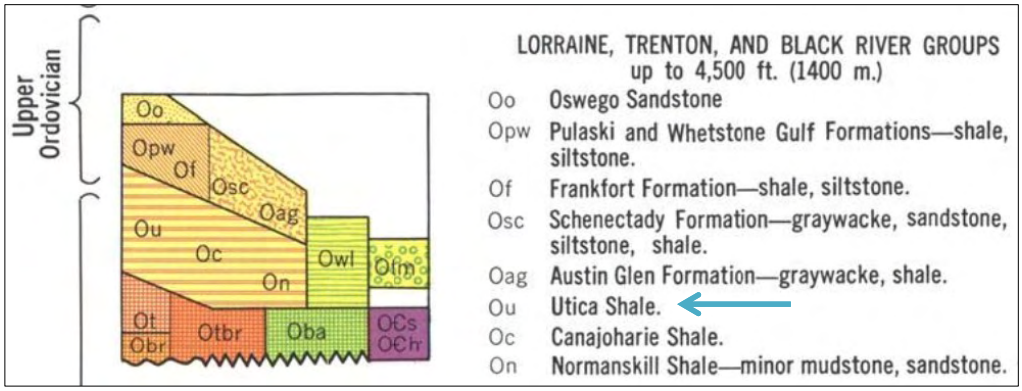
Wetland Trust Property, Elmwood Road site, Herkimer Co., NY

Horizon	Depth	Description
Ap	0-7"	Very dark gray (7.5YR 3/1) silt loam; strong medium granular structure; common fine and medium roots; abrupt smooth boundary.
Bw	7-15"	Very dark gray (7.5YR 3/1) silt loam; moderate medium subangular blocky structure; common fine roots; clear smooth boundary.
Bg1	15-26"	Dark gray (7.5YR 4/1) silt loam, with 15% fine distinct 7.5YR 5/4 Fe concentrations as soft masses and few root stains; moderate medium subangular blocky structure; few fine roots; clear smooth boundary.
Bg2	26-40"	Dark gray (7.5YR 4/1) silt loam, with 20% fine distinct 7.5YR 5/4 Fe concentrations as soft masses; weak medium subangular blocky structure; clear smooth boundary.
Cg	40-42"	Mixed dark gray (7.5Y 4/1) and brown (7.5YR 5/4) silt loam, with Fe concentrations as soft masses; silt loam; weak medium subangular blocky structure.

Comments: Estimated seasonal high water table at 15 to 21". Water seeped into pit bottom to 39" over 1/2 hour. Vegetation was corn stubble and mixed upland & wetland forbs.

This is not a hydric soil.





Lithologic constituents Major
Sedimentary > Clastic > Mudstone > Shale > Black-shale

Figure 6: Bedrock geology map, showing site within area of black Utica Shale (Fisher et al., 1970).

While the dark colors interfered somewhat with efforts to recognize faint depletions within a darker gray matrix, Fe accumulations were quite evident as distinct and prominent soft masses. Depth and distribution of plant roots were in keeping with recognized redox features, with more and larger roots occurring in horizons with few or no redox features. In the end, the hydric soil indicators seemed to work adequately with careful observations and were applied in the usual manner (US Army Corps of Engineers, 2012). A number of piezometers installed by The Wetland Trust in 2019 should help to better define water table depths going forward.

Soil Suitability for Wetland Creation: Both the poorly drained Wayland areas (near pits 1 and 5) have naturally occurring water tables near a foot of the surface and would need little or no excavation. The well drained Hamlin area (around pit 3) would likely need around two feet of excavating to approach the water table. The predominately silt loam textures throughout the site can store relatively high amounts of plant-available water in all the soil profiles. As demonstrated by the plow pan layer described in pit 3, and by hydrophytes and standing water observed in wheel ruts scattered across the fields, soil compaction efforts would significantly reduce vertical permeability and help impound precipitation. Existing drainage ditches can be plugged or have hydrologic control structures installed to help maintain elevated water tables. Relatively flat surface slopes would further enable water table controls to be effective over an extended area. (Site topography and relative elevations of the barge canal to the north and the Mohawk River to the south favor groundwater flow paths trending from northwest to southeast.) Combined, these soil and drainage features appear to favor long-term wetland creation potential at this site.

References:

FEMA flood rate maps (3603180010C, effective on06/20/2001)
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