Permittee-Responsible Mitigation Plan for the Oak Orchard Wastewater Treatment Industrial Treatment Train and Conveyance Corridor

at the Youngs Creek Restoration Site

Town of Clay, Onondaga County New York

Prepared For:

Onondaga County Department of Water Environment Protection

Prepared By:

HGS, LLC, a wholly owned subsidiary of
Resource Environmental Solutions, LLC
14 Jupiter Way, Suite 7
Albany, New York 12205

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TABLE OF CONTENTS

1.0 Introduction 4
2.0 Objectives 5
3.0 Site Selection and Congruence with Watershed Needs 8
3.1 Site Selection Methods and Justification 8
3.2 Oneida Watershed Needs 10
4.0 Site Protection Instrument(s) 11
5.0 Baseline Data 11
5.1 Land Use 11
5.2 Geology and Soils 11
5.3 Environmental Resource Identification 12
5.3.1.1 Wetland 12
5.3.1.1 Hydrology 13
5.3.1.2 Vegetation 13
5.3.1.3 Soils 13
5.3.1.4 Streams 13
5.4 Rare, Threatened and/or Endangered Species 14
5.5 Cultural Resources 14
6.0 Mitigation Work Plan 14
6.1 Mitigation Approaches and Benefits 14
6.1.1.1 Wetland Enhancement (DEC and USACE) 15
6.1.1.2 Wetland Preservation (DEC) 15
6.1.1.3 Upland Enhancement (DEC) 15
6.2 Wetland Enhancement Sequence 16
7.0 Maintenance Plan 16
8.0 Performance Standards 18
9.0 Monitoring Requirements 18
9.1 As-Built Report 18
9.2 Annual Monitoring Reports 18
10.0 Long-Term Management 19
11.0 Adaptive Management 20
References 21

LIST OF TABLES

Table 1: Site Location Information
Table 2a: Impact and Mitigation Summary
Table 2b: Impact Calculation Summary
Table 2c: NYSDEC Enhancement Summary
Table 3: Site Impairment Summary
Table 4: Ecological Inventories
Table 5: Land Use
Table 6: Soils
Table 7: Identified Resources
Table 8: Restoration Summary
Table 9: Monitoring Timeline
Table 10: Performance Standards
Table 11: Monitoring Requirements

LIST OF APPENDICES

Appendix A: Figures

Figure 1A: Impact Location
Figure 1B: Project Location: Youngs Creek Restoration Site (YCRS)
Figure 2: HUC-8 Watershed
Figure 3A: YCRS Creek Existing Conditions – State
Figure 3B: YCRS Existing Conditions - Federal
Figure 3C: YCRS Delineated Aquatic Resources
Figure 4: YCRS Ecological Inventory
Figure 5A: YCRS 2001 National Land Cover
Figure 5B: YCRS 2011 National Land Cover
Figure 5C: YCRS 2021 National Land Cover
Figure 6A: YCRS 1938 Historic Aerial Imagery
Figure 6B: YCRS 1951 Historic Aerial Imagery
Figure 6C: YCRS 1966 Historic Aerial Imagery
Figure 6D: YCRS 2018 Extant Aerial Imagery
Figure 7: YCRS Soil Survey
Figure 8: YCRS Creek Topography
Figure 9: YCRS FEMA Flood Hazards
Figure 10: YCRS Post Restoration Resource Development
Figure 11: YCRS Temporary Wetland Impacts
Figure 12: YCRS Invasive Species Coverage

Appendix B: Site Protection Instrument

Appendix C: Agency Coordination

Appendix D: Design Plan

Appendix E: Representative Site Photos

Appendix F: Preliminary Jurisdictional Determination Report

1.0 Introduction

HGS, LLC (Agent) a wholly owned subsidiary of Resource Environmental Solutions (RES), has created a Permittee-Responsible Mitigation (PRM) Plan on behalf of Onondaga County Department of Water Environment Protection (Permittee) to compensate for impacts to state and federally regulated wetlands associated with the development of the Industrial Treatment Train and Conveyance corridor at the Oak Orchard Wastewater Treatment facility located at 4300 Oak Orchard Road, Town of Clay, Onondaga County, New York (Project). RES has prepared this PRM Plan in accordance with Title 33 of the Code of Federal Regulations Part 332 – Compensatory Mitigation for Losses of Aquatic Resources, Public Notice Announcing the Compensatory Mitigation Guidelines and Mitigation Checklist for Review of Mitigation Plans for the U.S. Army Corps of Engineers - New York District issued in January 2005, and Article 24 Freshwater Wetlands Act. The PRM Plan will require approval from the New York State Department of Environmental Conservation (NYSDEC) and the U.S. Army Corps of Engineers (USACE).

The proposed PRM Plan will offset conversion impacts to palustrine forested (PFO) wetlands within the Oneida (HUC-8 04140202) watershed. The 8.68-acre off-site PRM will be established at the Youngs Creek Restoration Site (YCRS). Site location, distance from impact site, and watershed information can be found in Table 1 below and in Appendix A: Figures 1A, 1B, and 2.

Table 1: Site Location Information

PRM Site	Watershed (HUC-8)	Watershed (HUC-12)	County	Town	Coordinates	Address	Distance from Project
Youngs Creek Restoration Site (YCRS)	Oneida 04140202	Oneida River 041402020905	Onondaga	Clay	43.20375, -76.16058	9022 Mud Mill Rd Brewerton, NY 13039	2.6 miles

Figure 2: HUC-8 Watershed Map identifies the 8-Digit Hydrologic Unit Code (HUC) watershed encompassing the Project and PRM Site. The Figures 3A through 3C, including YCRS Existing Conditions for both State Federal, display the location of the PRM Site and show notable features surrounding the PRM Site, including NYSDEC wetlands and streams, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) wetlands, and United States Geological Survey flow lines.

Proposed mitigation efforts at the PRM Site will offset impacts to wetlands resulting from the Project. Mitigation activities will provide the following ecological benefits:

- enhancement of wetland resources
- improved habitat
- improved vegetative diversity
- improved biogeochemistry
- removal of invasive species
- permanent protection

The Agent and the Permittee request to be contacted prior to visiting the PRM Site to allow for landowner notification.

The Agent, acting on behalf of the Permittee, will be responsible for implementing the PRM Plan in addition to meeting performance standards, and performing monitoring, and management of the PRM Site.

2.0 Objectives

The Project will result in impacts to federal and/or state regulated wetlands. Wetland mitigation will be provided to offset all impacts to federal and state regulated resources associated with the Project and will satisfy the requirements set forth by NYSDEC and USACE. Table 2 quantifies the impact, ratio, and mitigation based on the requirements outlined in Article 24 of the New York Environmental Conservation Law, and within the DEC provided ratio table for Micron related actions in the Notice of incomplete application for DEC permit 7-3124-00018 and 7-3124-00615.

The proposed methods of compensatory mitigation include enhancement within an existing degraded wetland, and enhancement within an existing upland buffer as allowable in Article 24 of the New York Environmental Conservation Law. Specifically, the Agent applied the NYSDEC memorandum "Freshwater Wetlands Regulation Guidelines on Compensatory Mitigation" (NYSDEC 1993) which sets forth certain recommendations for conducting compensatory mitigation in the state of New York. This memorandum includes but is not limited to the following specific applicable provisions:

- The preferred order of compensatory mitigation is wetland restoration, then creation, and finally enhancement;
- Restoration means reclaiming a degraded wetland to bring back one or more functions that have been partially or completely lost by such actions as filling or draining.
- Restoration is probably most applicable when off-site mitigation is used to replace some or all of the wetland functions impacted by the proposed project; and
- There are no mandated ratios for replacing lost wetland acreage, but replacement on at least a 1:1 basis is desirable.

Ultimately, the overall objective of the PRM Site is to offset the unavoidable conversion of PFO wetland area to PEM wetland area and/or function. Enhancement activities will improve select functions of an existing wetland or adjacent area to promote further ecological uplift and implement the necessary cover types. Table 2a-c quantifies the impact, ratio, and mitigation generated based on the requirements outlined in Article 24 of the New York Environmental Conservation Law and 33 CFR Part 332 - Compensatory Mitigation for Losses of Aquatic Resources.

Table 2a: Impact and Mitigation Summary									
Impact Type	Impact (Acres)	Replacement Ratio	Mitigation Units Needed	Agency	Agency Mitigation Approach[1]	Mitigation Site	Mitigation Site Acres	Mitigation Ratio	Mitigation Units Generated
Oak Orchard Wastewater Treatment Plant- Industrial Treatment Train									
Permanent PSS	0.79	2	1.58	DEC	Restoration	Fish Creek	1.58	1	1.58
				Total	**Total**	**-**	**1.58**	**-**	**1.58**
Adjacent Area	3.29	-	-	DEC	Upland Enhancement	Youngs Creek	1.80	-	1.80
						Fish Creek	1.86	-	1.86
				Total	**Total**	**-**	**3.29**	**-**	**3.29**
Oak Orchard Wastewater Treatment Plant Expansion- Conveyance Corridor									
Permanent Conversion - PFO	3.70	2	7.40	DEC	Enhancement to PEM	Youngs Creek	5.35	4.5	1.19
				USACE/DEC	Enhancement	Fish Creek	2.90	3	0.96
				USACE/DEC	Ag Enhancement	Fish Creek	5.28	2	2.64
				USACE/DEC	Restoration	Fish Creek	2.69	1	2.69
				USACE	Re-Enhancement	Fish Creek	1.58	1	1.58
Total	**3.70**	**Total**	**7.40**		**Total**	**-**	**16.35**	**-**	**7.40**

*Please note that 1.58 acres of the Restoration at Fish Creek is Satisfying the 1.58 mitigation units needs from the NYSDEC only Permanent impacts from the WWTP-ITT and also 1.58 mitigation credits for USACE for the impacts at WWTP CC.

Table 2b: NYSDEC Impact Calculation Summary				
Project	**Impact**	**Impact Area**	**Impact Ratio**	**Mitigation Credits needed**
Oak Orchard WWTP Industrial Treatment Train	Permanent Fill- PSS	0.79	2	1.58
Oak Orchard WWTP Industrial Treatment Train Totals		0.79		1.58
Oak Orchard WWTP Conveyance Corridor	Permanent Conversion- PFO	3.7	2	7.40
Oak Orchard WWTP Conveyance Corridor Total		3.7		7.40
Joint Totals		4.49		8.98
			NYSDEC Total Credit Need	**8.98**

Table 2c: Impact Calculation Summary				
Project	**Impact**	**Impact Area**	**Impact Ratio**	**Mitigation Credits needed**
Oak Orchard WWTP Conveyance Corridor	Permanent Conversion- PFO	3.7	2	7.40
Oak Orchard WWTP Conveyance Corridor Total		3.7		7.40
			USACE Total Credit Need	**7.40**

Table 2d. NYSDEC Enhancement Summary			
Approach	**Acres**	**Mitigation Ratio**	**Mitigation Credits Generated**
Fish Creek Restoration Site			
Restoration PFO	4.27	1	4.27
Ag Enhancement to PFO	5.28	2	2.64
Enhancement to PFO	2.90	3	0.96
Adjacent Area Buffer	1.86	-	-
Total	14.33	-	7.87
Youngs Creek Restoration Site			
Enhancement PEM	5.35	4.5	1.19
Preservation PFO	0.47	0	
Adjacent Area Buffer	1.80	-	-
Upland Preservation	0.63	-	
Youngs Creek Total	8.25	-	1.19
Joint Total	**22.58**	-	**9.06**

Table 2e. USACE Enhancement Summary			
Approach	**Acres**	**Mitigation Ratio**	**Mitigation Credits Generated**
Fish Creek Restoration Site			
Restoration PFO	4.27	1	4.27
Ag Enhancement to PFO	5.28	2	2.64
Enhancement to PFO	2.90	3	0.96
Adjacent Area Buffer	1.86	-	-
Total	14.33	-	7.87

3.0 Site Selection and Congruence with Watershed Needs

3.1 Site Selection Methods and Justification

The Permittee has explored multiple mitigation options to compensate for the proposed impacts resulting from the Project. As mitigation bank and in-lieu fee credits are not available for the totality of the Project and onsite mitigation was not feasible, the Permittee determined that permittee-responsible off-site mitigation within the same watershed was the most conducive and ecologically beneficial mitigation option.

In accordance with the applicable state and federal requirements, the site selection process for off-site mitigation locations prioritizes the long-term, self-sustaining ecological suitability of the site to provide the desired resource improvements using a watershed-based approach. The factors that were considered in the selection of the PRM Site include the following:

- Hydrological conditions, soil characteristics, vegetative characteristics, and other physical characteristics.
- Compatibility with adjacent land uses and watershed management plans.
- Watershed-scale features, such as aquatic habitat diversity, habitat connectivity, and other landscape-scale functions.
- The size and location of the compensatory mitigation site relative to hydrologic sources and other ecological features.
- Reasonably foreseeable effects that compensatory mitigation may have on ecologically important aquatic or terrestrial resources (e.g., shallow sub-tidal habitat, mature ecosystem), cultural sites, functions and services, or habitat for federally- or state-listed threatened and endangered species; and
- Other relevant factors including, but not limited to, development trends, anticipated land use changes, habitat status and trends, local or regional goals for the restoration or protection of habitat types or functions (e.g., re-establishment of habitat corridors or habitat for species of concern), water quality goals, and floodplain management goals.

Additional key factors that were considered in determining the site selection include:

- the location within the sub-watershed;
- continuity with state and federal wetlands or streams;
- fulfilling mitigation needs within large, scalable, ecologically beneficial locations;
- the extent of degradation, disturbance, and restoration feasibility
- the restoration activities and potential effects to neighboring properties; and
- Co-location with previously approved mitigation projects.

Selecting a large and contiguous site supports the establishment of self-sustaining ecosystems as the risk of failure is drastically reduced from inputs outside site boundaries.

A comprehensive land search was initiated in May 2024. The land search covered many properties that meet initial geospatial analysis criteria in the applicable watersheds. Many of the landowners were unwilling to lose desirable land or participate in a restoration project. Some interested landowners permitted preliminary site visits for biologists, ecologists, and restoration experts to evaluate restoration potential. Evaluated properties that were not desirable and/or did not meet the restoration criteria were abandoned.

The PRM Site was ultimately selected because:

- it fulfills all the site selection/restoration objectives within the HUC-8 watershed
- the landowners were willing to participate
- no significant constraints or existing encumbrances were encountered
- the landscape positions optimize long-term resiliency;
- and the continuity with adjacent watershed features maximizes self-sustainable mitigation and ecological uplift potential.

The existing conditions of the Youngs Creek Restoration Site (YCRS) make it an attractive mitigation site, as resources within the proposed PRM Site exhibit significant degradation from agriculture and historic forestry/vegetation manipulation. Swales were installed to dewater historic wetlands within and adjacent to the PRM Site. Uplands that were historically likely wetland have increased wetland habitat fragmentation within the PRM Site. Over time, the palustrine emergent wetland area has been reduced and exhibits little vegetative diversity, consisting primarily of brown knapweed (*Centaurea jacea*), reed canary grass (*Phalaris arundinacea*) and broadleaf cattail (*Typha latifolia*) with spots of purple loosestrife (*Lythrum salicaria*). The palustrine scrub shrub wetland and palustrine forested wetland predominantly include invasive multiflora rose (*Rosa multiflora*), and bush honeysuckle species (*Lonicera spp.*). Several smaller swales and tractor tire ruts exist throughout the existing uplands within the PRM Site. Years of agricultural manipulation have left the hydrologic regime highly impaired.

Additionally, the vegetation at the YCRS has been highly modified. Historically, forested areas were cleared to create open space for agriculture. The YCRS was periodically mowed to prevent forest succession to retain space for cattle and/or hay practices. Currently, one of the two dominant woody species exhibiting growth is black ash (*Fraxinus nigra.*). Even though it is a pioneer species, ash species exhibit high mortality due to the emerald ash borer. Restoration actions would accelerate the successional processes toward a healthy, mature ecosystem. The herbaceous vegetation primarily includes invasive and prolific species such as brown knapweed, purple loosestrife, and reed canary grass. The woody vegetation is predominantly comprised of invasive species such as multiflora rose and bush honeysuckle. The existing vegetative community lacks robust biodiversity with non-native species encroachment, consisting of mostly one (herbaceous) stratum that lacks large woody carbon retention in the wetland system.

The above stressors have created a degraded wetland system where targeted restoration actions would improve the wetland functions and values. The site-specific impairments for wetlands and streams are summarized in Table 3 below.

Table 3: Young Creek Restoration Site Impairment Summary	
Site Specific Impairments	
Issue 1	**Issue 2**
Vegetation Modifications (Historic Agricultural Disturbances)	Invasive Species

3.2 Oneida Watershed Needs

The PRM Site is situated in the Erie-Ontario Lowlands physiographic province, which exhibits a mix of land uses from forestry to agriculture. The PRM Site is in proximity to several Significant Natural Communities and NYS land as shown in Figure 4: Ecological Inventory. Notable features within a 5-mile radius of the PRM Site are also outlined in Table 4 below.

Table 4: Ecological Inventories	
NYNHP (5 Mile Radius)	
Name	**Description**
Cicero Swamp	Black Spruce-tamarack bog
Big Bay Swamp	Silver maple-ash swamp
Big Bay Swamp	Deep Emergent marsh
Toad Harbor Swamp	Red Maple- Hardwood Swamp

The Oneida watershed has a mixed urban and rural land use, with heavy influence from agricultural practices and industry expansion which has resulted in ongoing water quality degradation and loss of wetland habitat throughout the watershed. Land cover within and surrounding the PRM Site is primarily agricultural (pasture/hay,) (Appendix A, Figures 5a through 5c: National Land Cover Map).

The existing and proposed resources provide an opportunity to support many watershed goals and continue the legacy of restoration work in the larger watershed. The PRM Site sits in the Oneida Watershed, nestled in the Oswego River Watershed. The stream, Youngs Creek, is a tributary for the Oneida River, which confluences with the Seneca River to form the Oswego River. The Oswego River flows into Lake Erie and was designated by the EPA as an Area of Concern, before being delisted in 2006, due to the improvements made by the local communities. The Central New York Regional Planning & Development Board (2004) identified multiple issues within the Oneida Lake Watershed including water quality degradation sources such as nutrient input, sedimentation, and invasive species. Wetlands have been recognized as being under threat from de-watering or conversion to upland and have been a focus of conservation efforts within the watershed.

In 2018, the New York Natural Heritage Program released the New York State Riparian Opportunity Assessment. The model identifies and prioritizes sites for riparian restoration. The model also scores the environmental stress and health based of each HUC-8. In the Oneida River HUC-12 (041402020905), the major ecological stressors include Topographical Wetness Index, Dam retention, and Landscape Conditions. For Ecological Health, the HUC scored low in the health of floodplain complexes and river connection, indicating that there is room for improvement and opportunity for wetland restoration in riparian adjacent areas.

Mitigation at the PRM Site will apply a holistic approach that targets the enhancement of wetland resources to a larger, more contiguous floodplain wetland systems providing optimal ecological uplift of aquatic resources over existing conditions. The mitigation approach will improve habitat, restore hydrologic/biogeochemical processes, attenuate runoff, and improve downstream water quality, while promoting the propagation of native species over invasive species. These objectives support the local watershed goals. The PRM Site will be permanently protected, and will contribute

to the health and resiliency of biological communities and aquatic resources within the watershed. The YCRS will be co-located with a previously approved wetland mitigation site, where restoration has already occurred, helping to bolster that PRM. The enhancement proposed at YCRS will add additional benefits such as reduced habitat fragmentation, water quality benefits, and habitat heterogeneity.

4.0 Site Protection Instrument(s)

A Site Protection Instrument (SPI) in the form of a Conservation Easement, will be executed to permanently protect the PRM Site. The SPI will be executed in advance of the proposed activities outlined in the PRM Plan and will be recorded within 60 days with the Onondaga County Clerk's Office following NYSDEC and USACE approval. A Conservation Easement template provided by USACE Buffalo District is included in Appendix B: Site Protection Instrument. The SPI restricts activities that are incompatible with the objectives of the PRM Plan.

5.0 Baseline Data

A suite of baseline data has or will be collected to inform the site-specific mitigation approach. Baseline investigations completed or to be completed include:

- Land use characterization
- Soil characterization
- Wetland delineation and watercourse identification
- Boundary survey
- Topographical survey
- Geotechnical investigation
- Vegetative community characterization
- Rare, threatened and/or endangered species consultation
- Cultural resource review
- Watershed research
- Photo and field note documentation

The following sections present the findings of the baseline data review. The data was used to guide the proposed restoration approaches described in Section 6.0. Mitigation Work Plan.

5.1 Land Use

Historically, the region surrounding the YCRS was heavily used for agriculture and forestry (Appendix A, Figure 6A-6D: Historic Aerial Imagery Series). The land within and surrounding the PRM has sustained damage from cattle activity and agriculture for many years, resulting in the degradation and loss of aquatic resources. A land use summary is provided in Table 5 below for the PRM Site. Mapping is also provided in Appendix A, Figure 5C: YCRS 2021 National Land Cover.

Table 5: Youngs Creek Restoration Site Land Use

Deciduous Forest (%)	Hay/Pasture (%)	Woody Wetlands (%)	Emergent Herbaceous Wetlands (%)
11%	63%	24%	2%

5.2 Geology and Soils

The PRM Site is located within the Erie-Ontario Lowlands physiographic province of New York (USGS 2023). The Erie-Ontario Lowlands consist of low and flat areas underlain with marine clays

and limestone which occasionally outcrop along the lake shore. The entire province is underlain by sedimentary rock, including dolostone, limestone, and sandstone.

Based on the United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey, the table below provides the soil mapping unit series for the PRM Site (NRCS 2023). The approximate extents of these soil mapping units are provided in Figure 7: Soil Survey. The soils found within the PRM Site are predominately non-hydric in nature but contain hydric inclusions. The parent material of all soils throughout the site is silty and clayey glaciolacustrine deposits. The dominant soil type throughout the PRM Site is somewhat poorly drained. Soils within the PRM Site present ideal conditions to target enhancement of the existing upland and wetland.

A summary of the soil series within the PRM Site is summarized in Table 6 below.

Table 6: Youngs Creek Restoration Site Soils

Unit	Landform	Drainage Class	Hydric Rating	Site %
Cd – Canandaigua mucky silt loam	Depressions	Poorly drained	Predominantly Hydric	16.4
ChB – Collamer silt loam, 2 to 6 percent slopes	Lake plains	Moderately well drained	Predominantly Non-Hydric	17.2
NgA – Niagara silt loam, 0 to 4 percent slopes	Lake plains	Somewhat poorly drained	Predominantly Non-Hydric	66.4

5.3 Environmental Resource Identification

Wetland and watercourse investigations were conducted to identify the extent of wetlands and watercourses within the PRM Site as elaborated in Appendix F: Preliminary Jurisdictional Determination Report. Results from the investigations are summarized below, and mapping of identified features is provided in Figure 3C: Delineated Aquatic Resources. Detailed descriptions, data forms, photographs and additional mapping are included in the Preliminary Jurisdictional Determination Report(s) provided in Appendix F.

Table 7: Youngs Creek Restoration Site Identified Resources

Resource	Class	Existing Acres/Footage[1]	Proposed Acres/Footage[1]
Wetland	PEM	5.35	5.35
	PSS	0.00	0.00
	PFO	0.47	0.47
	Total	**5.82**	**5.82**
Upland	UPL	2.43	2.43
Site Acreage		**8.68**	**8.68**

[1]Wetland and Upland Area does not include 0.43 acres of stream channel, but the stream channel is calculated in the site acreage.

Additionally, Figure 8: Topography highlights the topographic contours and elevations used to aid in the delineation. A FEMA (Flood Emergency Management Agency) floodway map is also provided in Appendix A: Figure 9: FEMA Flood Hazards. FEMA floodplains were not identified within the PRM Site (FEMA 2011).

5.3.1.1 Wetland

The PRM Site contains 5.99 acres of wetland within a larger wetland complex. Table 7: Identified Resources provides a breakdown of the acreage of the wetlands within the PRM Site. Figure 3A: Existing Conditions – State Map (Appendix A: Figures), shows the locations of the NYSDEC Class

2 Wetland (Wetland ID: BRE-14) within the proposed PRM Site. Figure 3C: Delineated Aquatic Resources Map shows the location of the wetlands within the PRM Site. Additional information is provided in the wetland delineation report provided as Appendix F: Preliminary Jurisdictional Determination Report.

5.3.1.1 Hydrology

The hydrology sources for the existing wetlands consists of overbank flow from the adjacent streams and direct precipitation. The areas identified for wetland enhancement exhibit hydrologic manipulation through historic agricultural practices. Ditching and filling of these areas has allowed the propagation of upland and invasive species. Wetland enhancement activities will allow for a diverse native flora to establish.

5.3.1.2 Vegetation

Much of the existing vegetation found within the PRM Site consists of invasive emergent wetland species such as reed canary grass, purple loosestrife, and cattail, as well as generalist species such as brown knapweed. Additionally, the PRM site largely consists of woody generalist species such as multiflora rose and bush honeysuckle. Interspersed throughout are native wetland plants such as woolgrass (*Scirpus cyperinus*), boneset (*Eupatorium perfoliatum*) and various sedge species (*Carex spp.*). Wetland plants often associated with cattle pasture such as goldenrod species (*Euthamia spp.* and *Solidago spp.*) are also scattered throughout the PRM Site. Due to the impaired hydrology, upland plants such as knapweed are encroaching into the wetland enhancement areas. A few green ash trees are colonizing the wetland area, but it is highly unlikely these individuals will persist due to the high mortality from emerald ash borer. Within the emergent wetland and upland areas, the approximate aerial cover of invasive vegetation ranges from 30-40%, consisting of Knapweed, bush honeysuckle, multiflora rose, purple loosestrife, and reed canary grass. The wetland area along Stream-1a1 has an approximate aerial cover of invasive emergent vegetation that ranges from 50-60%, consisting of cattail, purple loosestrife, and reed canary grass, as well as concentrated segments of 70-80% reed canary grass (Appendix A, Figure 12: Invasive Species Coverage). Invasive species will be managed during the monitoring period, through invasive species control and native species reseeding. Native shrubs and trees will be planted throughout the PRM Site to promote vegetative diversity and further outcompete invasive species. The targeted post-construction condition will be a heterogenous, native vegetative community containing multiple vegetative strata.

5.3.1.3 Soils

The soils within the PRM Site are clay-dominated and have been impacted through historic agricultural practices including farm machinery and cattle presence.

5.3.1.4 Streams

Multiple stream segments are within and adjacent to the PRM Site. Two stream segments are within the proposed conservation area. Stream S-1A1 starts at the northwest corner of the conservation boundary, and spans 976.77 linear feet before joining stream S-1A. Stream S-1A flows out of the pervious mitigation area, and meets S-1A1 to then flow out of the northwest boundary of the conservation easement, totaling 622 linear feet. No work is proposed on either stream, and neither stream will be impacted as a result of the proposed wetland enhancement activities. The streams will be preserved as an incidental part of the conservation area. Additional

information is provided in the delineation report in Appendix F: Preliminary Jurisdictional Determination Report.

5.4 Rare, Threatened and/or Endangered Species

The Agent conducted environmental due diligence for the PRM Site on October 09, 2025, and was issued a USFWS Project Code (2026-0003261). The USFWS Information for Planning and Consultation (IPaC) results indicate the potential presence of Indiana bat (IB) (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*) and tricolored bat (*Perimyotis subflavus*). The Northeast Determination Key (DKey) was completed to determine the potential impacts to the species. The results indicated that the PRM Site "may affect" the Indiana Bat. Consultation will continue with the USFWS. Currently, no tree removal is proposed. If tree removal becomes necessary time of year restrictions will be followed, where no trees are cut from April 1st through September 30th.

A Northeast Consistency Letter using the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key was initiated on October 31st, and response is pending. Once the determination letter is received it will be forwarded to the agencies required. At this time, no further consultation is required. The official species list and NLEB Dkey are included with Appendix C: Agency Coordination.

A desktop review using the Environmental Resource Mapper (ERM) indicated a known location for threatened or endangered bat species and sedge wren within the PRM Site. The Agent will proceed with formal consultation with NYSDEC regarding these species (Appendix C: Agency Coordination).

5.5 Cultural Resources

A consultation through New York's State Historic Preservation Office Cultural Resource Information System (CRIS) is not applicable to this project as there will be no ground disturbance.

6.0 Mitigation Work Plan

6.1 Mitigation Approaches and Benefits

The goal of the mitigation approach is to enhance 5.99 acres of wetland habitat and 2.43 acres of upland adjacent area. Mitigation actions will target specific deficiencies within the enhancement areas relating to hydrology, vegetation, and/or soil to improve the functions and values of the expanded, existing wetland, and adjacent areas. The objective is to restore a diverse hydrologic regime, repair wetland soil health, reduce habitat fragmentation, and create a diverse and natural wetland and upland vegetative community that is both self-sustaining and resilient.

The primary ecological stressor at the PRM Site is the historic and recent agricultural practices, such as cattle activity, historic filling and the introduction of invasive species, which have resulted in the loss or degradation of wetland habitat. The goal of the PRM Site is to restore and enhance multiple wetland functions that have been lost or impaired within the degraded floodplain complex and create a self-sustaining, resilient, and highly functioning wetland ecosystem.

The activities proposed across the PRM Site will accelerate ecological succession, induce habitat heterogeneity, improve nutrient retention, attenuate stormwater runoff, reduce downslope erosion, and improve water quality. Surface microtopographic variance will promote carbon

retention and slow water, restoring the natural carbon cycle in the system and improving hydrologic storage. invasive species treatment will restore the native floral community. As the PRM Site develops, the establishment of native species through robust seeding regiments in tandem with invasive species control will improve the floral communities' resilience to invasive species encroachment. Furthermore, the PRM Site will be permanently protected by a SPI.

Mitigation approaches and locations within the PRM Site are shown in Appendix A Figure 10: Post-Restoration Resource Development Map. Specific details and specifications are provided in Table 8 and Appendix D: Design Plans.

6.1.1.1 Wetland Enhancement (DEC and USACE)

The enhancement area will involve the improvement of select functions in the existing wetland area. Enhancement at the PRM Site will target the uplift of the vegetative community over existing conditions. The goal is to reduce current invasive species coverages which range from 30-80% to 5% (10% including cattail species) or less at the end of the monitoring period. A portion of the wetland enhancement will also offset the loss of adjacent upland area at the impact site. Mitigation actions will include the control of invasives species and native seeding to promote heterogenous forest habitat. Invasive species control will be most intensive during the first two to three years of the PRM Site. Invasive species control practices will apply a targeted, spot-control treatment on species such as reed canary grass, brown knapweed, and purple loosestrife during the timeframe applicable for those species. A cut-stump method will be used for woody invasives such as multiflora rose. In tandem with invasive species control, the robust seeding will increase biodiversity and restore the wetland to the desired cover types as detailed in Appendix A: Figure 10: Post-Restoration Resource Development Map and Appendix D: Design Plan.

In the wetland enhancement area, large woody debris will be utilized to increase wildlife habitat suitability and help hydrological retention by slowing the flow of water through the site. Large woody debris will be sourced from the PRM site and be used to roughen up the surface of the wetland enhancement area. Additionally, logs will be installed throughout the enhancement area.

In the enhancement area, robust wetland seeding will accelerate ecological succession. Native species seeding will stabilize soils, induce habitat heterogeneity, improve nutrient retention, attenuate stormwater runoff, reduce riparian shear stresses, and improve water quality. As the PRM Site develops, the establishment of native species through seedings will improve the floral community's resilience to invasive species encroachment.

6.1.1.2 Wetland Preservation (DEC)

The wetland preservation area will not involve a robust management plan. Invasive species will be treated throughout the preservation area, and the current wetlands will be maintained to continue functionality and success.

6.1.1.3 Upland Enhancement (DEC)

The upland enhancement area will involve the improvement of select functions in the existing adjacent upland areas. Upland enhancement at the PRM Site will target the uplift of the vegetative community over existing conditions, with the goal of reducing current invasive species coverage. The current range for invasive species in adjacent upland areas is 30-80%, and through control of invasive species, and native seeding the upland enhancement area will decrease to 10% or less at the end of the monitoring period. The mitigation activities will offset the loss of wetland adjacent habitat at the impact site. Invasive species control will be most intensive during the first two to

three years of the PRM Site. Invasive species control practices will utilize targeted spot-control treatment on species such as brown knapweed and Eurasian pasture grasses during the timeframe applicable for those species. A cut-stump method will be used for woody invasives such as multiflora rose. In tandem with invasive species control, the robust seeding will increase biodiversity and restore the wetland to the desired cover types as detailed in Appendix A Figure 10: Post-Restoration Resource Development Map and Appendix D: Design Plan.

In the enhancement area, native upland seeding will improve native habitat and accelerate ecological succession. Native species seeding will stabilize soils, induce habitat heterogeneity, improve buffering capacity for surrounding wetlands, and promote carbon retention to restore the natural carbon cycle in the system. As the PRM Site develops, the establishment of native species through seedings will improve the floral community's resilience to invasive species encroachment.

Table 8: Restoration Summary

Restoration Type	Scope	Specifications			
		Grading	Long-Term Protection	Invasive Control	Herbaceous Seeding
Wetland Enhancement-(DEC)	Manipulating select functions to improve existing wetland.	No	Yes	Yes	Yes (5lbs/acre)
Adjacent Upland Enhancement (DEC)	Manipulating select functions to improve existing adjacent upland area.	No	Yes	Yes	Yes (5lbs/acre)

6.2 Wetland Enhancement Sequence

The wetland enhancement process will involve diligent invasive species management and robust seeding efforts. Initial enhancement work, specifically during Year 1, will involve the application of an aquatic approved chemical herbicide to the invasive species within the PRM Site. The PRM Site will be controlled either early or late in the growing season while native species are dormant to avoid adverse impacts to native vegetation present within the PRM Site. Upon initial weed control completion, and depending on the time of year and season, the initial seeding will be conducted. Weed control activities will require follow-up monitoring to ensure effectiveness of the control method(s).

Existing native woody vegetation including shrubs and trees, particularly within the PFO portions of the PRM Site, will be maintained and will not be adversely affected by the proposed enhancement activities.

A facultative wetland seed mix and a mix of native wetland tree and shrub species will be used across the PRM Site. The specific locations for all reseeding efforts to be used throughout the PRM Site are shown on the planting plans (Appendix D: Planting Plan).

7.0 Maintenance Plan

The PRM Site will be monitored and maintained by the Agent, as described in Section 9.0: Monitoring Requirements.

Annual maintenance will be documented in the annual monitoring reports along with a discussion of any anticipated maintenance activities that will be needed the following year. In general, two to three site visits will be conducted annually during the first 3 years to monitor the PRM Site for invasive species and seeding success and implement annual maintenance needs.

Maintenance will be heaviest during the first 3 years, and will entail manual invasive control, along with two or three chemical control events. For the rest of the PRM Site life-cycle, maintenance efforts will focus on controlling pockets of invasive species that may still be present and monitoring for the establishment of new stands of invasive species. Control methods will address the individual species as they are found. The Agent projects that by the fourth and fifth years, the intensity of management efforts required will drop off significantly as the native plant community stablishes and becomes resilient to encroachment of invasive species. The monitoring requirements and proposed timeline are listed and described in Table 9 below.

Table 9: Monitoring Timeline

Parameters					Monitoring Year														
Resource Type	**Restoration Type**	**Monitoring Method**	**Quantity**	**Sampling Parameters**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Wetland/Upland	**Enhancement**	**Wetland/Upland Assessment**	**1 per acre of wetland or upland enhancement** (3 fixed plot, 2 randomized plot)	Herb stratum sampling (5'x5') Photo documentation (4 total N, S, E, W)	X	X	X	X	X		X		X		X		X		X

*Randomized plots will be re-randomized for each monitoring event. Fixed plots will remain unchanged throughout the monitoring period.

8.0 Performance Standards

NYSDEC and USACE will apply best professional judgment, visual observations, and monitoring reports to evaluate attainment of performance standards and to determine whether part or all of the PRM Site has successfully met the conditions of the PRM Plan. The proposed performance standards are listed and described in Table 10 below.

Table 10: Performance Standards

Performance Standard*	Wetland Enhancement	Upland Enhancement
Native perennial hydrophyte plant coverage will be at least 65 percent by the end of the first growing season, 80 percent by the end of the second growing season, and at least 90 percent each monitoring year thereafter.	Yes	No
Invasive Species Performance Standard Wetland: Invasive plant coverage (species identified in NYCRR Part 575) will not exceed 20 percent by the end of the first growing season, 15 percent by the end of the second growing season, and 10 percent each monitoring year thereafter (reflected as the cumulative average of invasive plants species). Wetland areas will have less than 5% relative cover of all non-Typha invasive plant species. Due to the difficulty of distinguishing the three (3) species of cattails (Typha latifolia, Typha angustifolia, and Typha x glauca), the total relative cover of all Typha spp. will be less than 10%. After the first monitoring event, EPA/Corps will consider non-native or cryptogenic species to be invasive if it comprises 10% or more relative cover of the mitigation site. Plants that meet this definition will be considered invasive for the remainder of site management.	Yes	No
Invasive Species Performance Standard Upland: Invasive plant coverage (species identified in NYCRR Part 575) will not exceed 20 percent by the end of the first growing season, 15 percent by the end of the second growing season, and 10 percent each monitoring year thereafter (reflected as the cumulative average of invasive plants species).	No	Yes
**Performance will be based on the average of all monitoring plots established site wide.*		

9.0 Monitoring Requirements

The Agent will monitor the PRM Site to inspect the condition of the PRM Site and to demonstrate attainment of the Performance Standards.

9.1 As-Built Report

An as-built report will be submitted to NYSDEC and USACE within 60 days following completion of construction including the initial seeding. The as-built report will describe in detail the work performed and provide a list of species seeded. The as-built report shall provide a depiction of finished grades (as applicable), seedings, and permanent monitoring plots.

9.2 Annual Monitoring Reports

The monitoring period will begin in the first growing season following construction. Monitoring will occur twice a year for the first two years, once a year for the next three (3) years, and every other year for the final five (10) years until year ten (15). If all performance standards are achieved, the Agent may request a reduction in monitoring efforts for the remaining monitoring period. After all performance standards are achieved and after the final report in monitoring year ten (or earlier), the Agent will transfer the PRM Site into the long-term management phase as described in Section 10.0 Long-Term Management.

Monitoring will occur during the spring and fall in the years where two monitoring events are required and will occur once during the applicable growing season thereafter. The Agent will

submit spring monitoring reports to NYSDEC and USACE on or before June 31st and all other monitoring reports will be submitted to the NYSDEC and USACE by December 31st. The monitoring reports will include all data collected from the year's monitoring events to assess progress towards the performance standards detailed in Section 8.0: Performance Standards. Table 11: Monitoring Requirements summarizes the sampling parameters and specifications.

Table 11: Monitoring Requirements[1]

Monitoring Plot Type	Specifications	Data Collected	Quantity
Herbaceous Plots[2]	5' by 5'	Species, Percent Coverage, Facultative Status, Nativity, and Plot Photo (Center)	1 per acre

[1]Performance will be based on the average of all monitoring plots established at the PRM Site.

Additionally, the monitoring report will include a detailed discussion of maintenance and management activities conducted during that year, along with a proposed maintenance schedule for the following year. The report will also include discussion of all activities that took place at the PRM Site. At a minimum, the monitoring report should also include the following:

- Photos taken from ground level at each monitoring plot to document overall conditions.
- A description of vegetative communities developing at each monitoring plot
- A description of the generalized degree and distribution of exotic/invasive species
- Identification of measures used to eradicate exotic/invasive species and document results of these efforts.
- A corrective action plan or explanation to address any Performance Standards that have not been achieved if applicable.

Monitoring will adhere to the following schedules:

- The monitoring of vegetation (herbaceous species) will be conducted during the growing season.
- If all Performance Standards (Section 9: Performance Standards) have not been met by the tenth year, then the Agent will submit a remedial plan. The remedial plan must evaluate the likely reasons for not achieving performance standards, describe the actions needed to correct the situation, and a schedule for conducting the remedial work. Once approved, the remedial plan will be implemented according to the approved schedule.
- Monitoring reports will be submitted for each applicable monitoring year. To corroborate that compensatory mitigation performances were met, there will be a Submittal of a final monitoring report.

10.0 Long-Term Management

After the PRM Site has achieved all performance standards, the Agent may submit a request to the NYSDEC and USACE to proceed to the long-term management phase.

Long-term management responsibilities are anticipated to be minimal after the monitoring period as the site will be resilient to outside pressure following the establishment of a dense native plant community. Long-term management responsibilities will include annual site inspections, and invasive species control, described as follows.

PRM Site boundaries will be marked with metal signs at regular intervals reading "Wetland Conservation Area" to prevent casual trespass and encroachment.

Site inspection will be performed at least once annually and qualitatively document observed on-site conditions, invasive species cover, and conditions of signage. Information gathered during the site inspection(s) with representative photos will be presented in a brief long-term management report submitted annually by December 31st. The report shall include a brief maintenance plan and schedule to address invasive species establishment, damaged signs, or (when necessary). The maintenance activities needed will then be implemented in the following year and summarized in the next annual report.

The responsible party will inspect and qualitatively estimate invasive species cover annually and implement treatment (if necessary). Signage will be inspected annually; damaged or lost signs will be replaced as needed. Trash will be removed as encountered during annual inspections.

The Agent will remain responsible for long-term management of the PRM Site until a suitable long-term steward is identified and approved by NYSDEC and the USACE. The Agent will establish a long-term management fund approved by USACE prior to construction completion. When a suitable long-term steward is identified and approved, the Agent will transfer these funds to the long-term steward to cover long-term management responsibilities.

Long-term management will continue every other year for ten years following site close-out. After ten years long-term management activities may cease, and the PRM Site will remain permanently protected by the SPI.

11.0 Adaptive Management

Adaptive management will take place during the monitoring period. The focus of adaptive management will be the extent of newly constructed wetland and the vegetative community throughout the site. As the site develops, invasive species coverages may change in density or location. The monitoring of invasive species will inform the invasive species control protocol. As certain species establish in density and location, control practices will be adapted to target those species. Hydrologic monitoring throughout the monitoring period will be used in tandem with hydrophytic vegetation establishment, to determine if any new wetland areas are not receiving enough hydrology. Any such areas will be analyzed to determine if additional work is needed to improve hydrology retention.

If all Performance Standards have not been met by the tenth year of monitoring, then the Agent will submit a remedial plan, and an additional monitoring period will be prescribed in consultation with USACE and NYSDEC. The remedial plan will evaluate the likely reasons for not achieving performance standards, describe the actions needed to correct the situation to ensure successful mitigation, and a schedule for conducting the remedial work. Once approved, the remedial plan will be implemented according to the approved schedule.

Remedial actions could include additional invasive species control efforts to eradicate invasive species, additional reseeding to improve native vegetation cover, or additional grading to improve hydrology.

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APPENDIX A
FIGURES

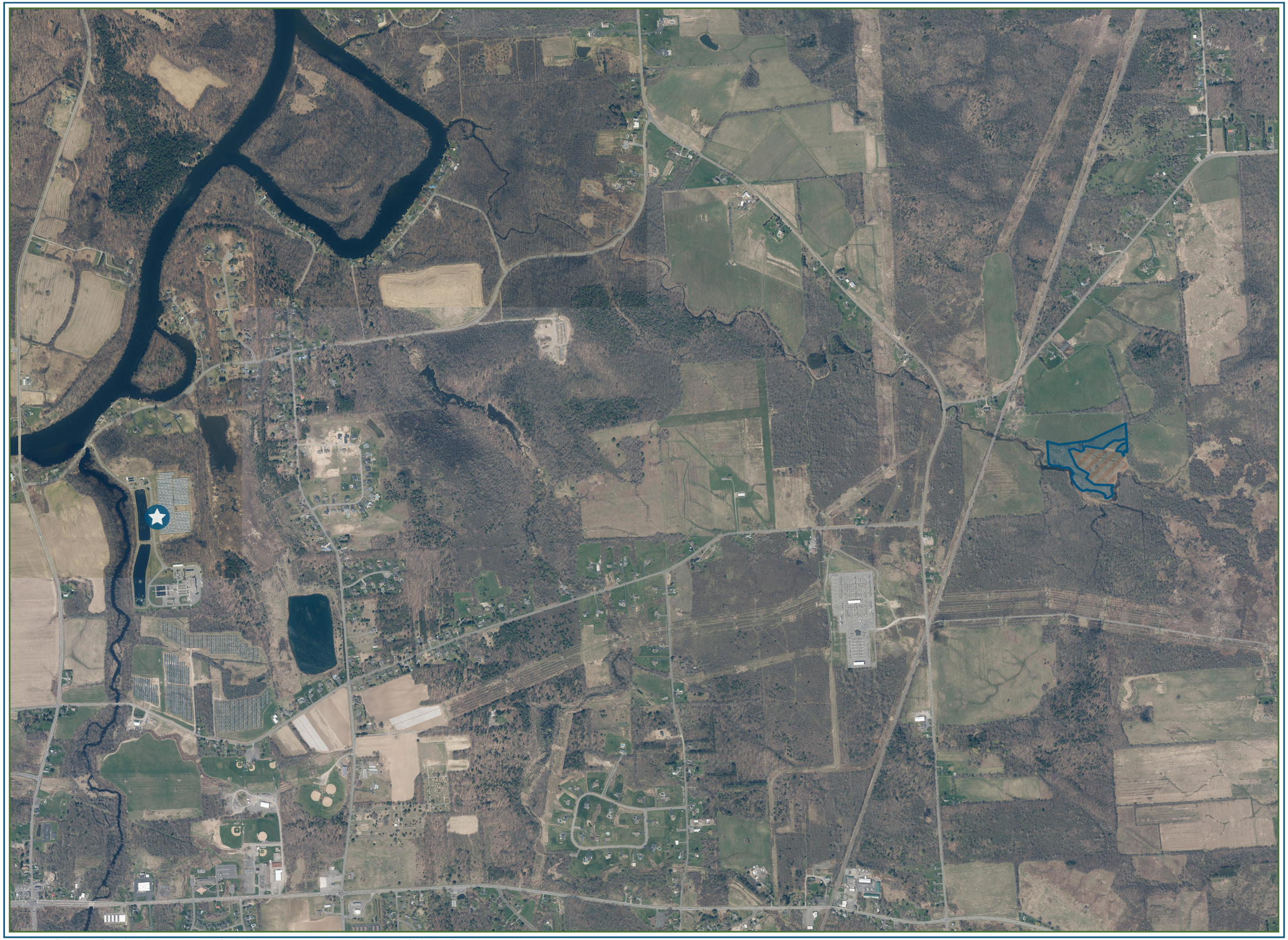

Figure 1A
Impact Location

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Impact Location

Conservation Area (±8.68 AC)

Existing PRM

N

1 in = 0.25 mi *when printed at 11x17"*

0 0.125 0.25

Miles

Reference: Project limits are approximate and do not reflect a survey.
Data Source: NYS DOP (2020); ESRI Reference Layer (2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/14/2025
Project Number: 113375

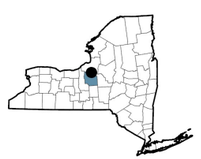

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Figure 1B
Project Location

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

7.5 Minute Quadrangle Index

Conservation Area
(±8.68 AC)

Existing PRM

N 1 in = 0.25 mi *when printed at 11x17"*

0 0.125 0.25
Miles

Reference: Project limits are approximate and do not reflect a survey. The Area of Investigation is located in the 1:24K Brewerton (43076-B2) 7.5' USGS quadrangle.
Data Source: ESRI USA_Topo_Maps (ESRI 2024); USGS 7.5' quadrangle index (2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/14/2025
Project Number: 113375

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Figure 2
HUC 8 Watershed

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

PRM Project Location

HUC 8 Watersheds

Lake Ontario
HU-04150200

Chaumont-Perch
HU-04150102

Salmon-Sandy
HU-04140102

Black
HU-04150101

Raquette
HU-04150305

Irondequoit-Ninemile
HU-04140101

Oswego
HU-04140203

Oneida
HU-04140202

Mohawk
HU-02020004

Seneca
HU-04140201

Chenango
HU-02050102

Upper Susquehanna
HU-02050101

Watertown
Syracuse
Utica
Auburn
Homer
Cortland

Stony Creek
Trout Brook
Black River
Erie Canal
Cross Lake
Ninemile Creek
Skaneateles Lake
Cayuga Lake
Owasco Inlet
West River
Beaver Creek
Butternut Creek
Otego Creek
Otselic River

244 ft
2354 ft
2143 ft

NEW YORK

N

1 in = 10 mi *when printed at 11x17"*

0 1 2 4 6 8 10
Miles

Reference: Project limits are approximate and do not reflect a survey.
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Project Number: 113375

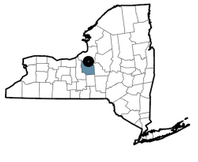

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Figure 3A
Existing Conditions - State

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Conservation Area (±8.68 AC)

Existing PRM

DEC Regulated Streams

Classification

C

DEC Regulated Wetlands

Previously Mapped Freshwater Wetlands

Informational Freshwater Wetlands

N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate and do not reflect a survey.
Data Source: NYS DOP (2020); ESRI Hybrid Reference (ESRI 2024); NYS DEC (2024)
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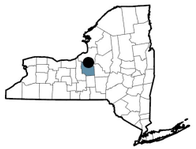
Project Number: 113375



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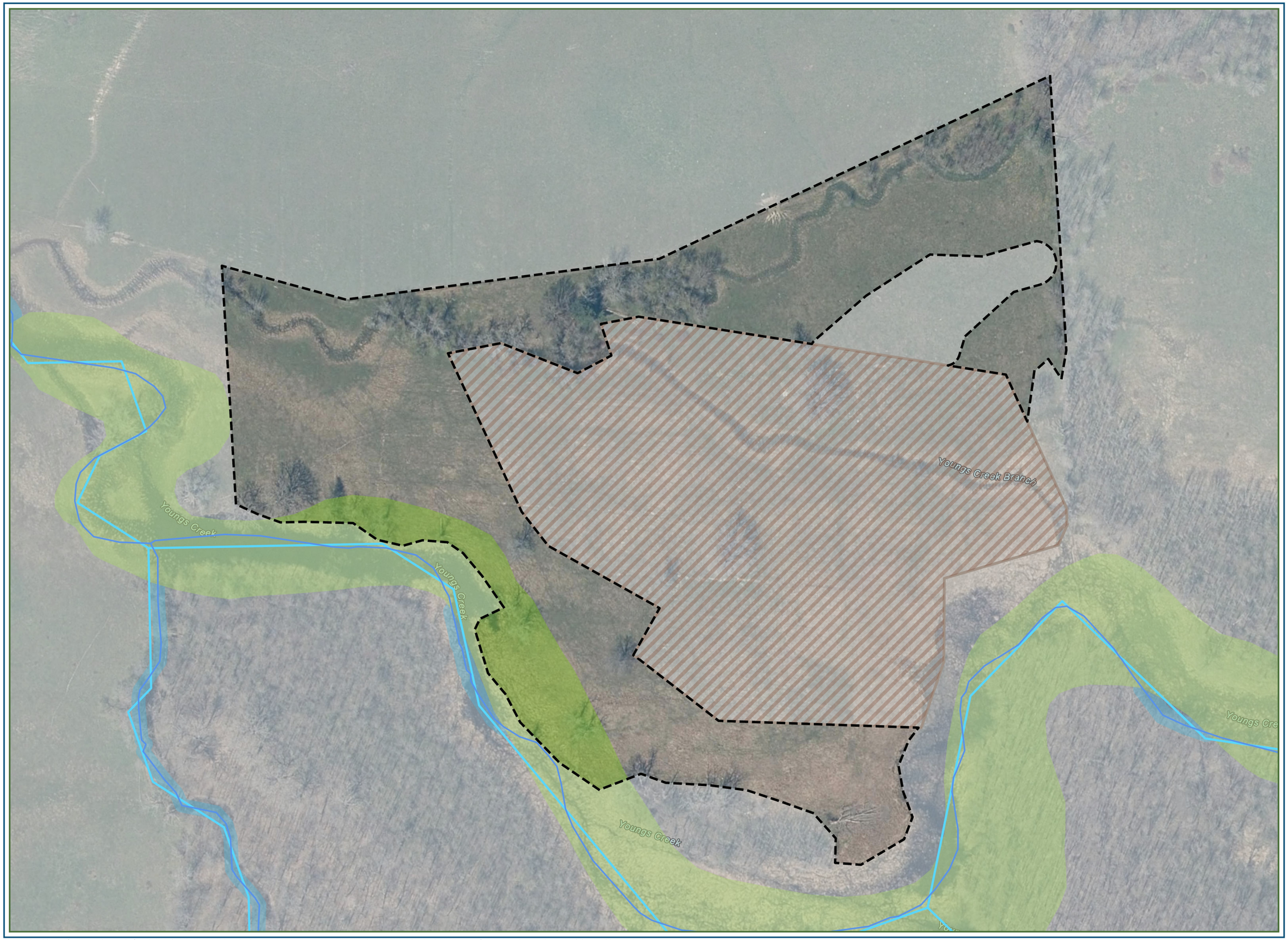

Figure 3B
Existing Conditions - Federal

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

- Conservation Area (±8.68 AC)
- Existing PRM

Streams
- NHD Flowlines
- StreamStats Streamgrid

NWI Wetlands
- Freshwater Emergent Wetland
- Riverine

N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate and do not reflect a survey.
Data Source: NYS DOP (ft); ESRI Hybrid Reference (ESRI 2024); USFWS NWI (2024); USGS NHD (2024); USGS StreamStats (2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375

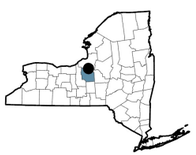

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Figure 3C
Delineated Aquatic Resources

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

- Conservation Area (±8.68 AC)
- Existing PRM

Data Points

Wetland

- PEM | Palustrine Emergent

Non-Wetland

- Upland

Delineated Streams (±1,599.18 LF)

- Ephemeral (±1,599.18 LF)

Delineated Wetlands (±5.82 AC)

- PEM | Palustrine Emergent (±5.33 AC)
- PFO | Palustrine Forested (±0.49 AC)

N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate and do not reflect a survey. Only delineated aquatic resources that fall within the Conservation Area are shown. Site delineation occurred on 09/03/2024 through 09/04/2024 and 10/22/2024.
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Spatial Reference: NAD83 StatePlane NY C (ft)
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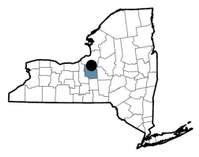
Project Number: 113375



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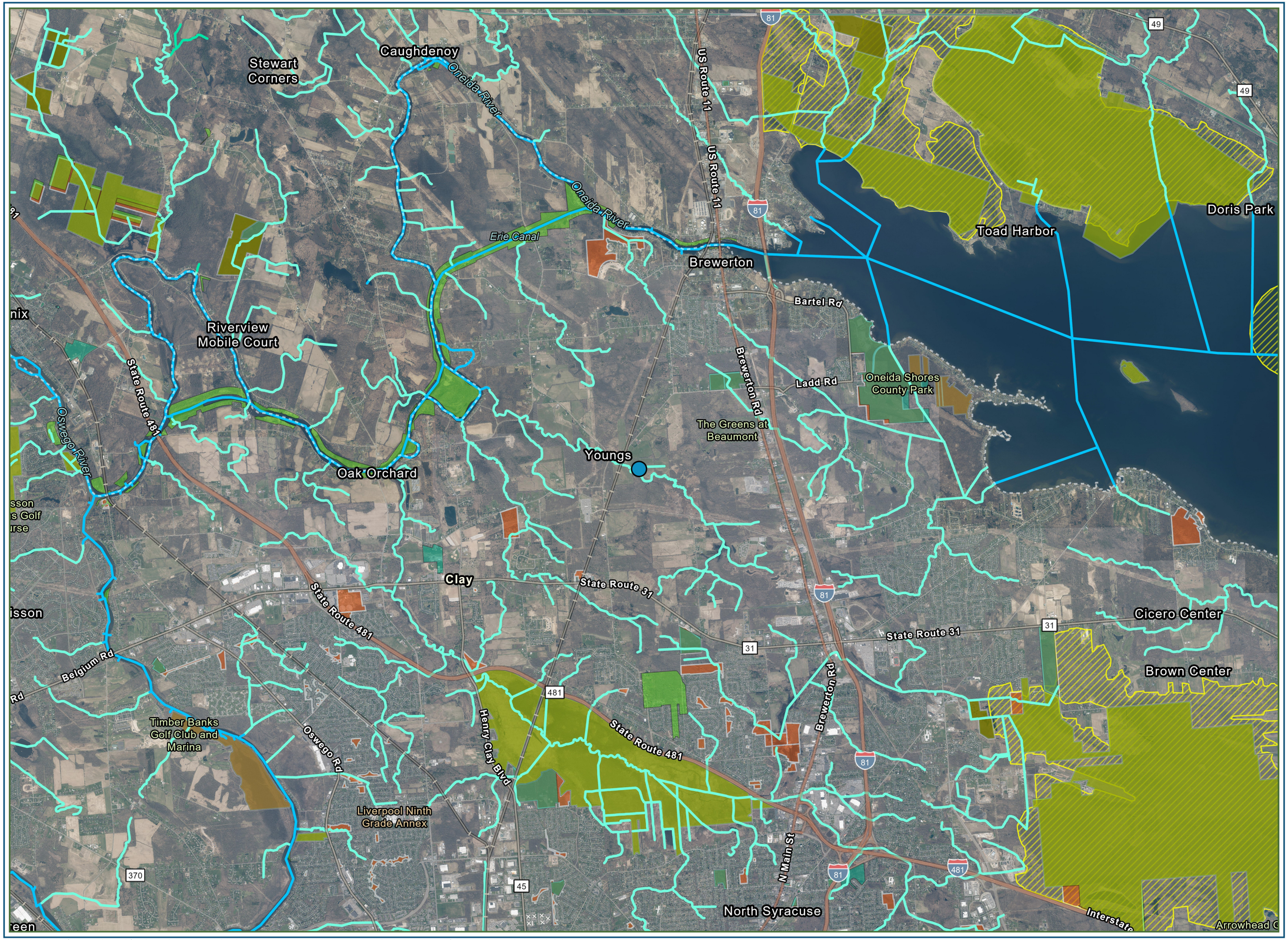

Figure 4
Ecological Inventory

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

PRM Project Location

DEC Water Quality Classifications
- B
- C
- C(T)
- C(TS)

Managed Lands
- Federal
- State
- Local Government
- Regional Agency Special District
- Non-Governmental Organization

NY Protected Areas
- Fee
- Easements

Audubon Society
- Important Bird Areas (IBA)

N

1 in = 1 mi *when printed at 11x17"*

0 0.25 0.5 0.75 1
Miles

Reference: Project limits are approximate and do not reflect a survey.
Data Source: NYS DOP (2018); NYS DEC (2024); NYPAD (2024); USGS (2022); National Audubon Society (2021)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375

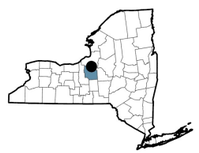

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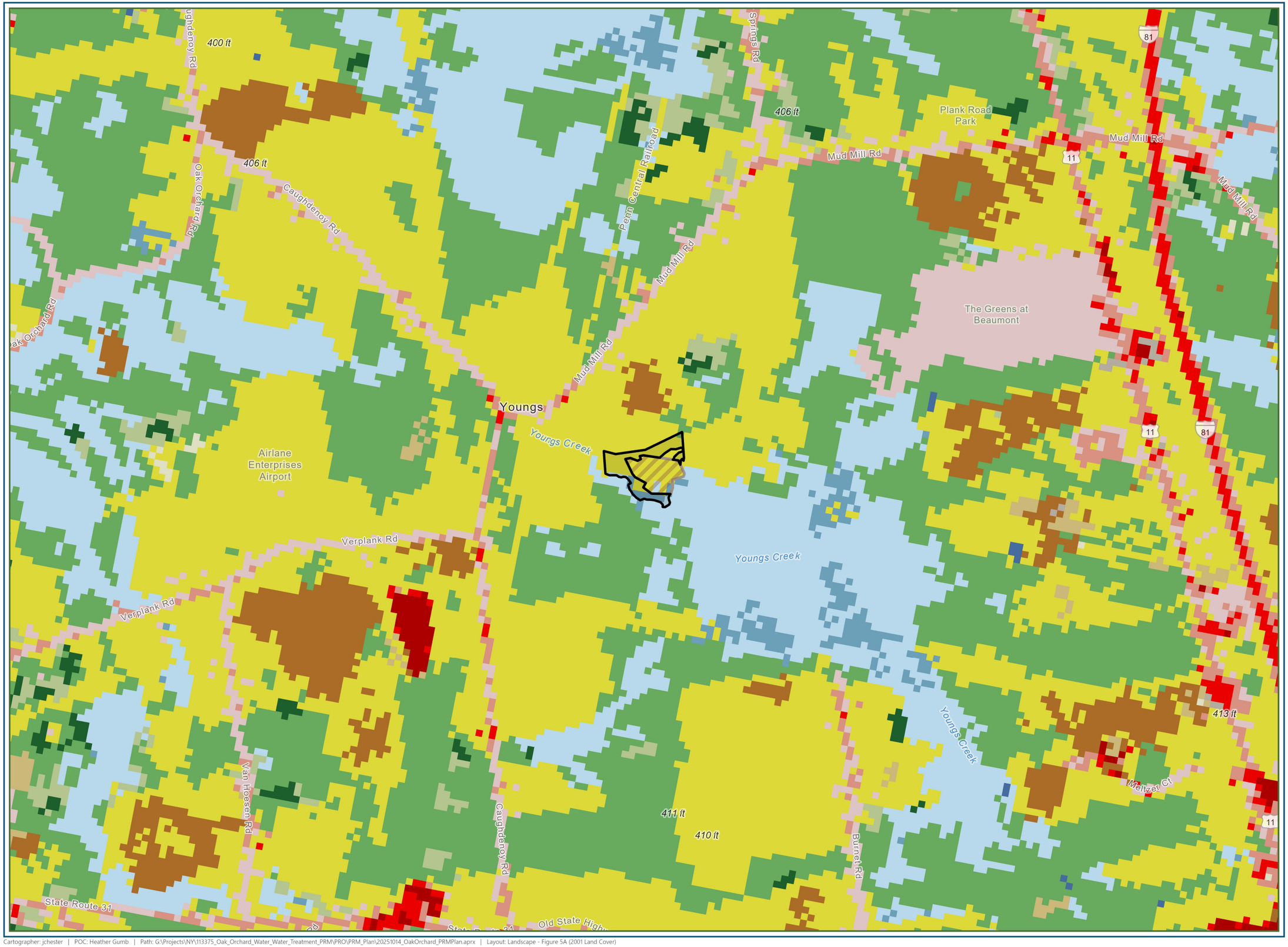
Figure 5A
2001 National Land Cover

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N



- Conservation Area (±8.68 AC)
- Existing PRM

2001 National Land Cover Database

- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Herbaceous
- Hay/Pasture
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands

N 1 in = 0.25 mi *when printed at 11x17"*

0 0.125 0.25
Miles

Reference: Project limits are approximate and do not reflect a survey.
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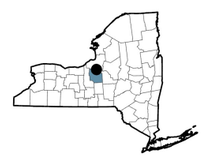
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375



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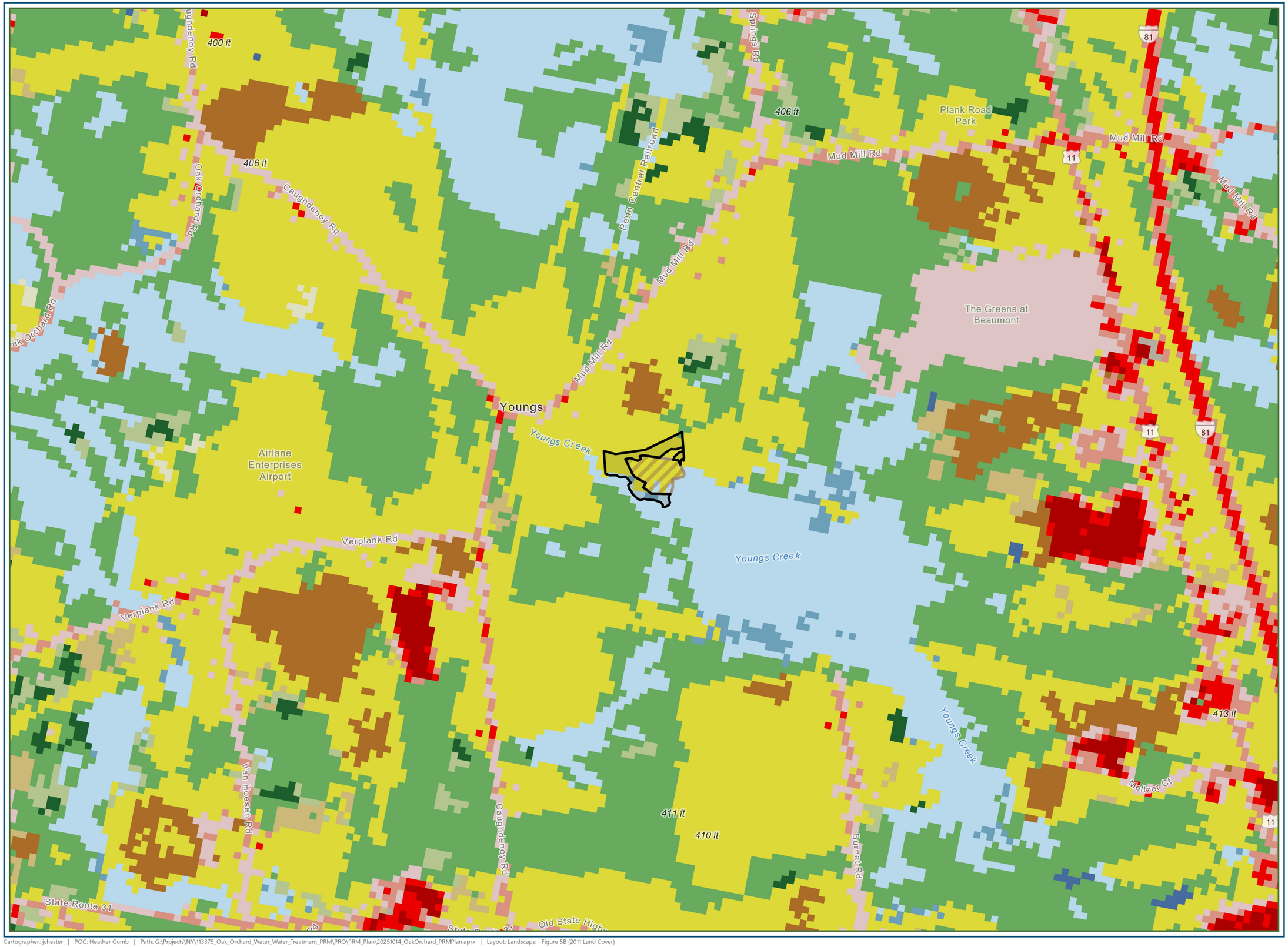

Figure 5B
2011 National Land Cover

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

- Conservation Area (±8.68 AC)
- Existing PRM

2011 National Land Cover Database

- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Herbaceous
- Hay/Pasture
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands

N 1 in = 0.25 mi *when printed at 11x17"*

0 0.125 0.25
Miles

Reference: Project limits are approximate and do not reflect a survey.
Data Source: USGS (2011); ESRI Hybrid Reference (ESRI 2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 110842

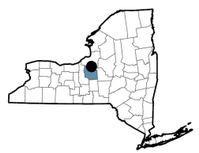

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Figure 5C
2021 National Land Cover

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Conservation Area (±8.68 AC)

Existing PRM

2021 National Land Cover Database

- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Herbaceous
- Hay/Pasture
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands

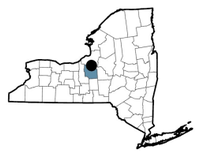
N

1 in = 0.25 mi *when printed at 11x17"*

0 0.125 0.25

Miles

Reference: Project limits are approximate and do not reflect a survey.
Data Source: USGS (2021); ESRI Hybrid Reference (ESRI 2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375



www.res.us

Cartographer: jchester | POC: Heather Gumb | Path: G:\Projects\NY\113375_Oak_Orchard_Water_Water_Treatment_PRM\PRO\PRM_Plan\OakOrchard_PRMPlan.aprx | Layout: Landscape - Figure 5C (2021 Land Cover)

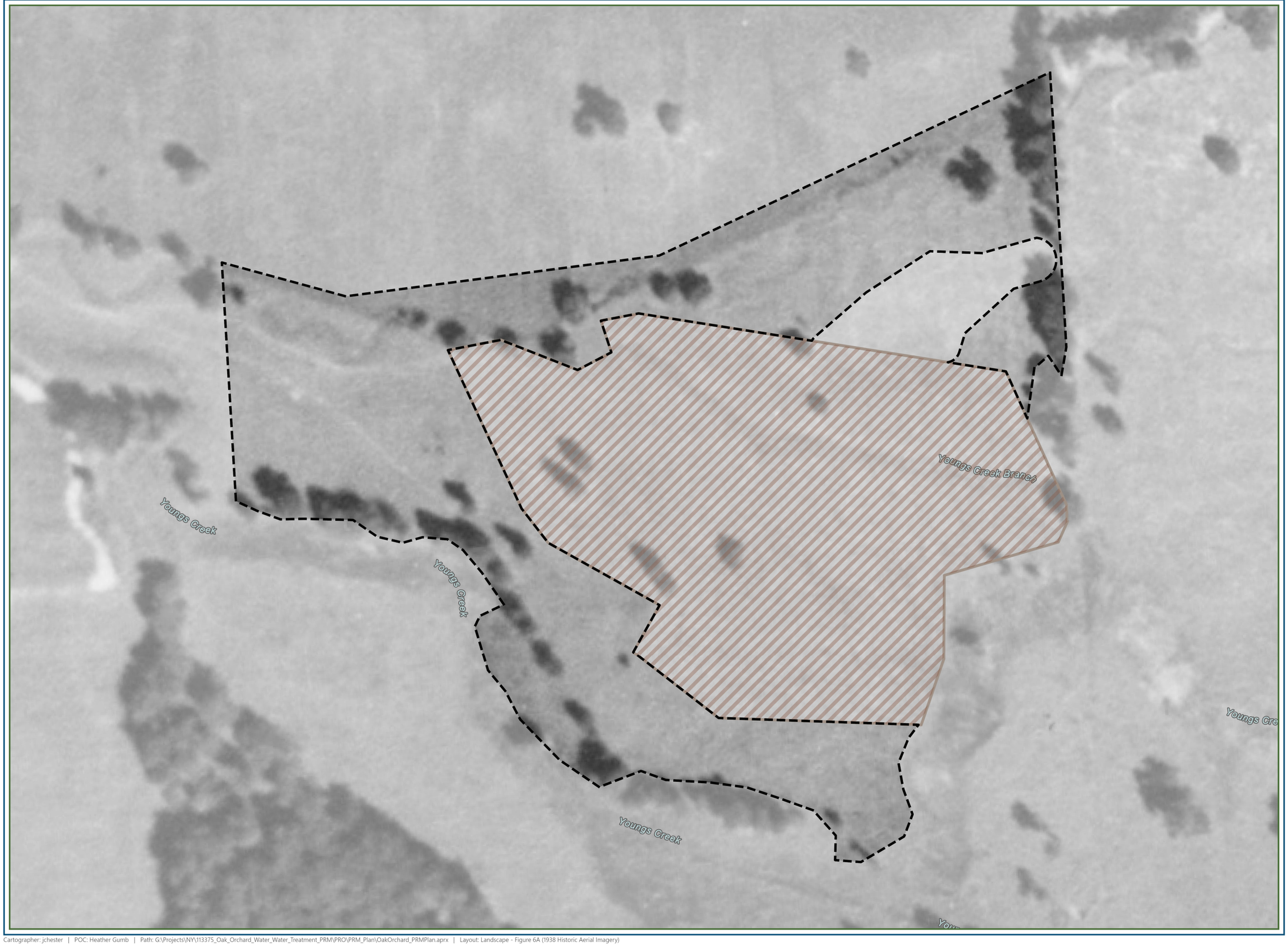


Figure 6A
1938 Historic Aerial Imagery

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Conservation Area (±8.68 AC)

Existing PRM

N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate and do not reflect a survey. The background aerial image was acquired on 09/06/1938. Present-day roads and location labels are shown for reference.
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Spatial Reference: NAD83 StatePlane NY C (ft)
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Project Number: 113375

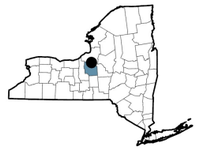

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Figure 6B
1951 Historic Aerial Imagery

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Conservation Area (±8.68 AC)

Existing PRM

N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate and do not reflect a survey. The background aerial image was acquired on 10/15/1951. Present-day roads and location labels are shown for reference.
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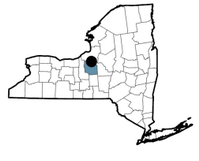
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375



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www.res.us

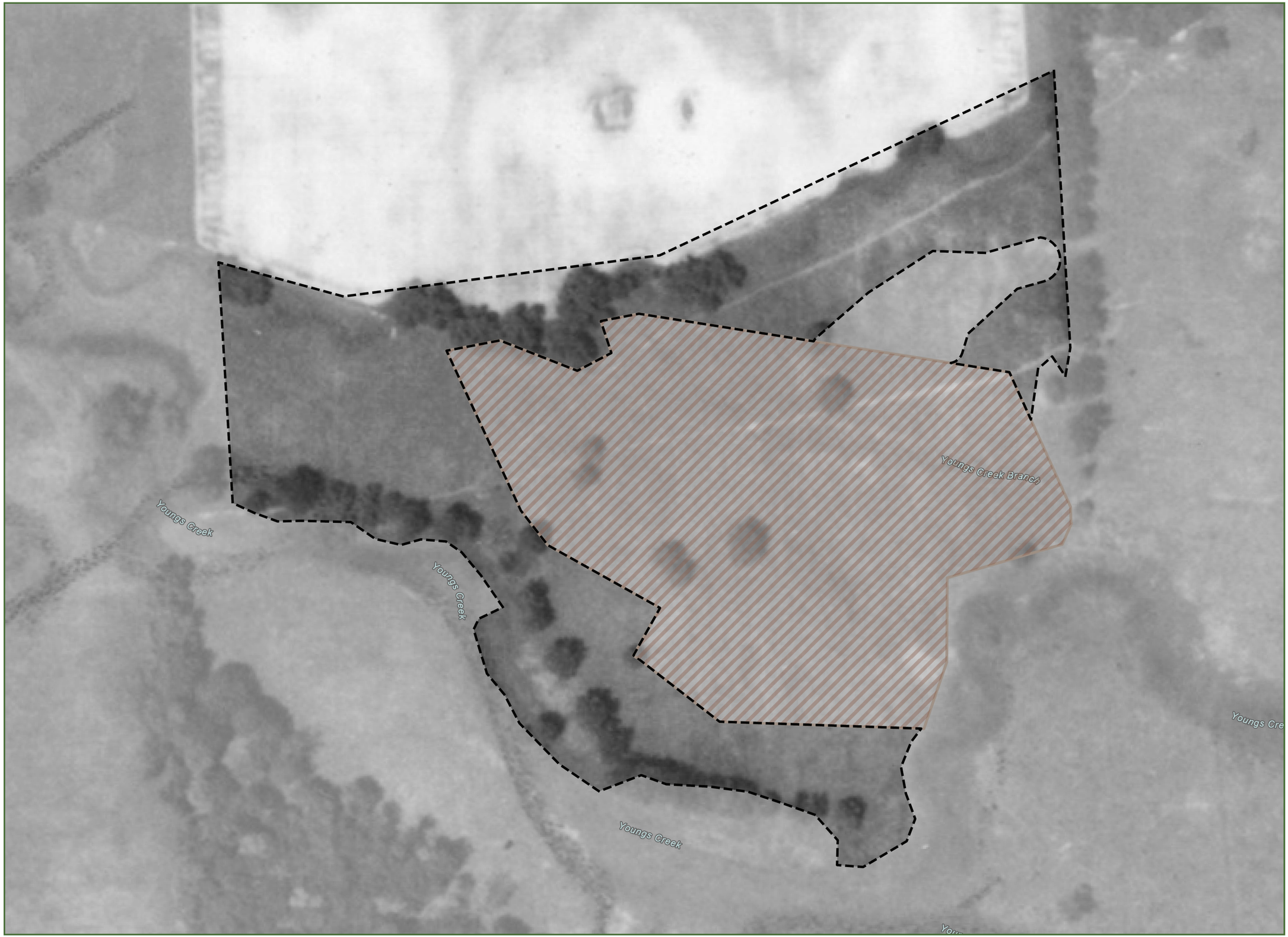

Figure 6C
1966 Historic Aerial Imagery

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Conservation Area (±8.68 AC)

Existing PRM

N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate and do not reflect a survey. The background aerial image was acquired on 06/22/1966. Present-day roads and location labels are shown for reference.
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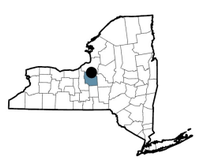

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Figure 6D
2018 Extant Aerial Imagery

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Conservation Area (±8.68 AC)

Existing PRM

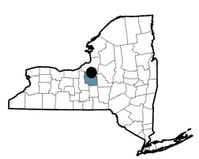
N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate and do not reflect a survey. The background aerial image was acquired in 2018.
Data Source: NYS DOP (2018); ESRI Hybrid Reference (ESRI 2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375



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www.res.us

Figure 7
Soil Survey

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Conservation Area (±8.68 AC)

Existing PRM

SSURGO Soil Map Units

Predominantly Hydric
66-99% Hydric Classification

Predominantly Non-Hydric
1-33% Hydric Classification

Non-Hydric
0% Hydric Classification

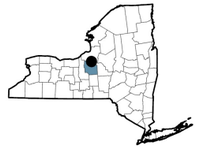
N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate and do not reflect a survey. Hydric ratings are based on the SSURGO "Hydric Classification-Presence" field.
Data Source: NYS DOP (2018); ESRI Hybrid Reference (ESRI 2024); USDA SSURGO (2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375



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www.res.us

Figure 8
Topography

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

- Conservation Area (±8.68 AC)
- Existing PRM
- Contours (10ft)
- Contours (1ft)

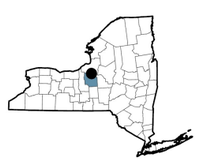
N

1 in = 150 ft *when printed at 11x17"*

0 50 100 150

US Feet

Reference: Project limits are approximate and do not reflect a survey.
Data Source: NYS DOP (2018); ESRI Hybrid Reference (ESRI 2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375



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www.res.us

Figure 9
FEMA Flood Hazards

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

- Conservation Area (±8.68 AC)
- Existing PRM

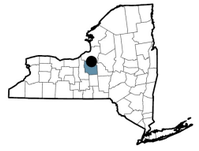
NFHL Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard

N 1 in = 0.25 mi *when printed at 11x17"*

0 0.125 0.25
Miles

Reference: Project limits are approximate and do not reflect a survey.
Data Source: NYS DOP (2018); ESRI Hybrid Reference (ESRI 2024); FEMA NFHL (2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375



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www.res.us

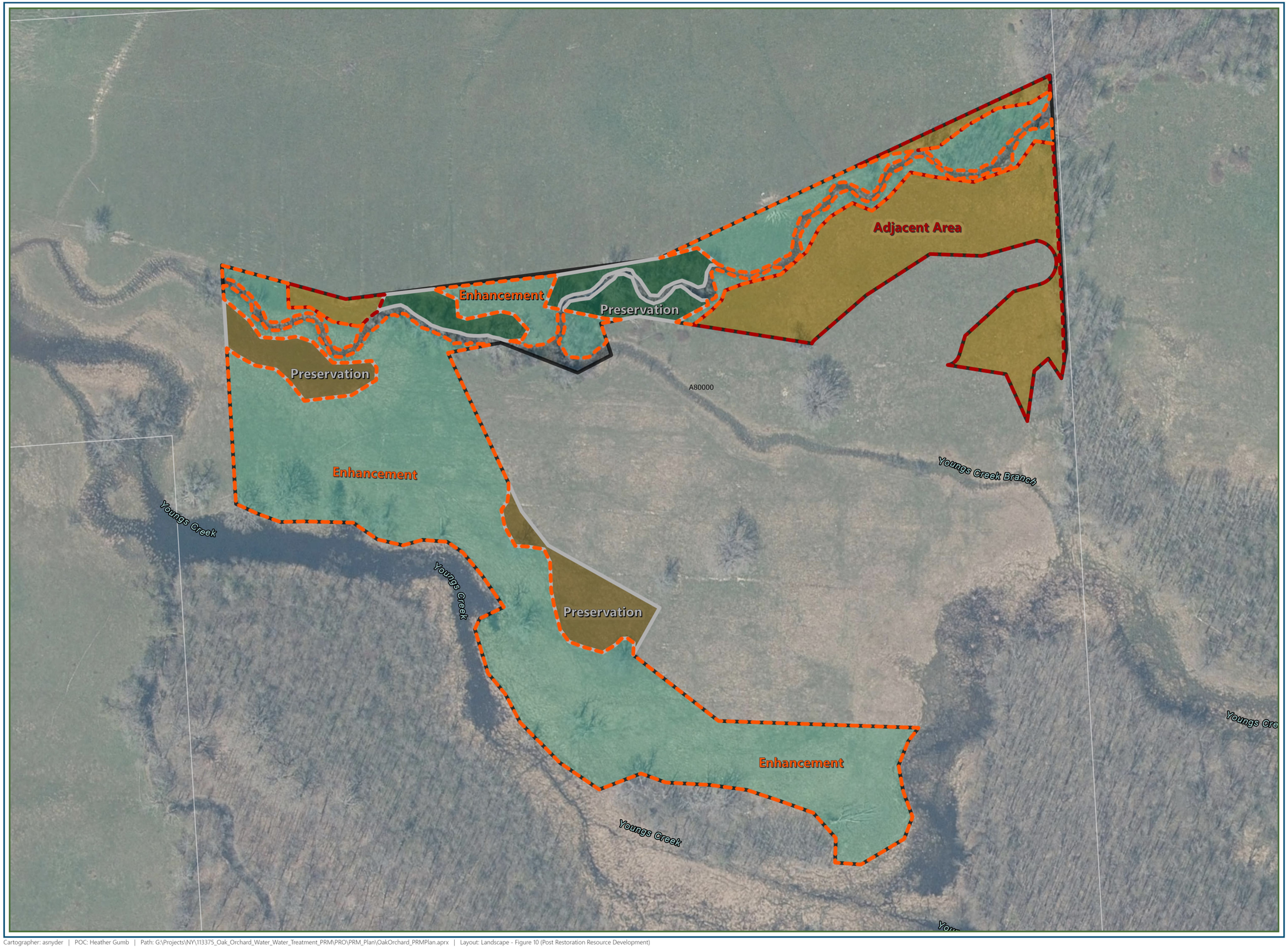

Figure 10
Post Restoration Resource Development

YCRS Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Conservation Area (±8.68 AC)

Adjacent Parcels

Enhancement | Conveyance Corridor

PEM | ±5.35 AC

Adjacent Area | Industrial Treatment Train

UPL | ±1.80 AC

Preservation

PFO | ±0.47 AC

UPL | ±0.63 AC

N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate and do not reflect a survey.
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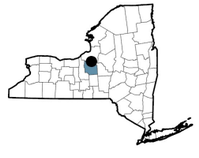
Project Number: 113375



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www.res.us

Figure 11
Temporary Wetland Impacts

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

- Limit Of Grading
- Conservation Area (±8.68 AC)
- Proposed Access
- Parcel Boundary

Stream Impacts (±45 LF)

Impact Type

- Temporary
- No Impact

Wetland Impacts (±0.39 AC)

Impact Type

- Temporary Geotech (±0.39 AC)
- No Impact

N

1 in = 250 ft *when printed at 11x17"*

0 50 100 150 200 250

US Feet

Reference: Project limits are approximate and do not reflect a survey.
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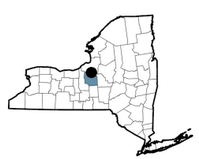
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/14/2025
Project Number: 113375



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www.res.us

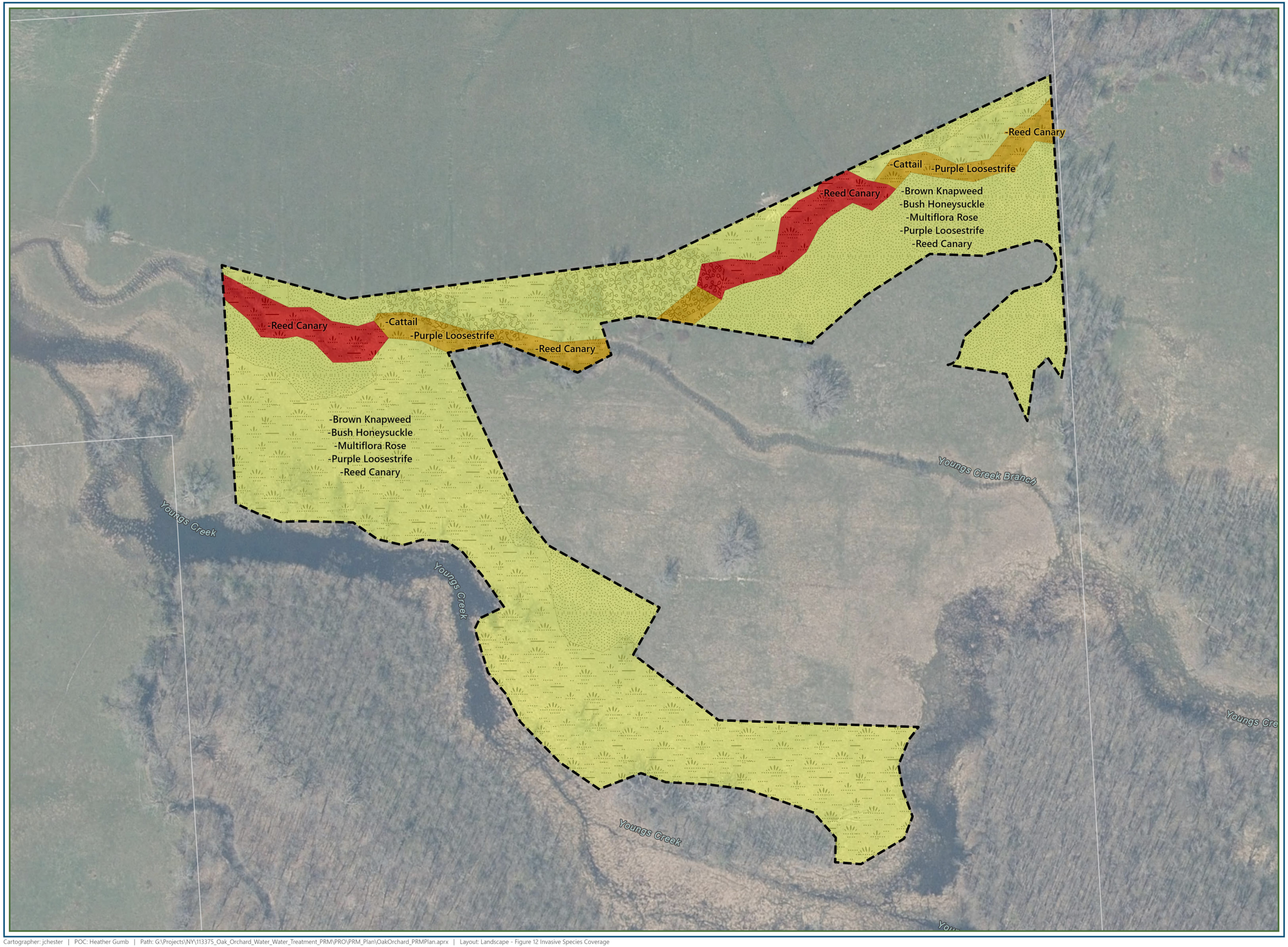


Figure 12
Invasive Species Coverage

Oak Orchard PRM
Clay, Onondaga County

76.1586°W 43.2034°N

Conservation Area (±8.68 AC)

Adjacent Parcels

Delineated Wetlands

PEM | Palustrine Emergent

PFO | Palustrine Forested

UPL | Upland

Invasive Species

Percent Cover

30-40 (±7.65 AC)

50-60 (±0.48 AC)

70-80 (±0.54 AC)

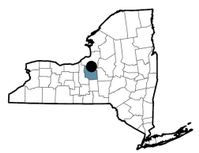
N

1 in = 125 ft *when printed at 11x17"*

0 25 50 75 100 125

US Feet

Reference: Project limits are approximate. This information is not to be used as final legal boundaries.
Data Source: NYS DOP (2018-2023)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/15/2025
Project Number: 113375



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www.res.us

APPENDIX B
SITE PROTECTION INSTRUMENT

MODEL CONSERVATION EASEMENT

THIS DECLARATION OF CONSERVATION EASEMENT, is made this ___ day of _____, 20__, by _____ (the "Grantor"), its successors and assigns, having an address at _____, _____, New York, for the benefit of, but not the burden upon, _____ (the "Grantee"), having an address at _____, _____, New York.

WHEREAS, Grantor is the owner in fee simple of real property located in the Town of _____, County of _____, and State of New York, which property is more fully described in Deed Libers of the _____ County Clerk, _____ (the "Permitted Property"); and

WHEREAS, Grantor seeks to develop the property in a manner which will result in impacts to waters of the United States. These impacts are authorized by Department of the Army Permit number _____, issued on _____, __, 20__ by the United States Army Corps of Engineers, Buffalo District ("USACE," to include any successor agency), attached as Exhibit A ("the Permit"), in accordance with Section 404 of the Federal Clean Water Act (33 U.S.C. § 1344) and/or Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 401) and implementing regulations; and

WHEREAS, in order to protect, restore, and maintain the chemical, physical, and biological integrity of waters of the United States including wetlands through the control of discharges of dredged or fill material located on the real property; in accordance with the common law and with the Conservation Easements provisions of New York Environmental Conservation Law ("ECL") Article 49, Title 3; in recognition of the continuing benefit to scenic and natural resources, the environment, and general property values; and as a condition of being issued the Permit; Grantor agrees to restrict ownership and use of the portion of the Permitted Property as identified and described by metes and bounds on Exhibit B, attached hereto, and as set forth graphically on Exhibit C, attached hereto (the "Protected Property"); and

WHEREAS, Grantor desires to declare, create, and convey to Grantee a Conservation Easement placing certain limitations and affirmative obligations on the Protected Property for the protection of wetlands, scenic, resource, environmental, and other values, and in order that the Protected Property shall remain substantially in its natural condition, in perpetuity; and

WHEREAS, Grantee is a New York public body or not-for-profit conservation organization 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 Grantee, and that third-party rights of enforcement shall also be held by the USACE 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 Permit; and

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 Grantee 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 conservation and wildlife resources thereon.

A. RESTRICTIONS

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

1. **General**. There shall be no future fillings, flooding, excavating, mining, or drilling; no removal of natural materials (soil, sand, gravel, rock, minerals, etc.); no dumping of materials; and no alteration of the topography which would materially affect the Protected Property in any manner, except as authorized by the Permit.

2. **Waters and Wetlands**. In addition to the general restrictions above, within the Protected Property there shall be no draining, dredging, damming, or impounding; no changing the grade or elevation, impairing the flow or circulation of waters, or reducing the reach of waters; and no other discharges or activity requiring a permit under applicable water pollution control laws and regulations, except as authorized by the Permit or by current New York State Department of Environmental Conservation permits, or any amendments thereof.

3. **Trees/Vegetation**. On the Protected Property there shall be no clearing, burning, cutting, or destroying of trees or vegetation, except as may be necessary to protect public health or safety or as authorized by the Permit; there shall be no planting or introduction of non-native or exotic species of trees or vegetation.

4. **Uses**. No agricultural, animal husbandry, industrial, residential development, mining, logging, or commercial activity shall be undertaken or allowed on the Protected Property.

5. **Structures**. There shall be no construction, erection, or placement of buildings, billboards, or any other structures, to include fences, parking lots, trailers, mobile homes, camping accommodations, or recreational vehicles, or additions to existing structures, on the Protected Property.

6. **New Roads**. There shall be no construction of new roads, trails, or walkways on the Protected Property without the prior written approval (including approval of the manner of construction) of Grantee and the USACE.

7. **Utilities**. There shall be no construction or placement of utilities or related facilities (including telecommunications towers and antennas) on the Protected Property without the prior written approval (including approval of the manner of construction) of Grantee and the USACE.

8. **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 Grantee and the USACE.

9. **Vehicular Use**. There shall be no use of any motorized vehicle or motorized equipment, and no use of any non-motorized bicycle anywhere on the Protected Property, except in the case of emergency, for the purpose of enforcement of applicable laws and regulations, or for the purpose of monitoring compliance with the purposes of this Conservation Easement.

10. **Subdivision**. There shall be no division or subdivision of the Protected Property.

11. **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 Grantor, Grantee, and the USACE. In the event any of 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), Grantee shall be designated as an interested party and notified of the review process.

C. GENERAL PROVISIONS

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

1. **Rights of Access and Entry**. Grantee and the USACE 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. Grantee 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. **Right to Preserve**. Grantee has the right to prevent any activity on or use of the Easement Area that is inconsistent with the terms or purposes of this Conservation Easement.

3. **Signs**. The Grantee shall have the right to place signs on the Protected Property which identify the land as being protected by this Conservation Easement. The number, size, and content of any such signs are subject to Grantor's approval and the requirements of the Permit.

4. **Enforcement**. Grantor acknowledges and agrees that Grantee's and the USACE's remedies at law for any violation of this Conservation Easement are inadequate. In the event of a breach of any of the Restrictions set forth above, Grantee or the USACE must notify Grantor in writing of the breach. 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 Grantor fails to commence such corrective action within thirty (30) days, or fails to complete the necessary corrective action, Grantee or the USACE may undertake such actions, including legal proceedings, as are necessary to effect such corrective action. Among other relief, Grantee or the USACE shall be entitled to specific performance of the terms of this Conservation Easement and to 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 Grantee or USACE expenses, expert or consultant expenses, court costs, and attorneys' fees, shall be paid by Grantor. Enforcement shall be at the discretion of Grantee or the USACE. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. Grantee's and the USACE's enforcement rights are in addition to, and shall not limit, enforcement rights available under other provisions of law or equity, or under any applicable permit or certification.

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

6. **Obligations of Ownership**. Grantor is responsible for payment of all real estate taxes, assessments, fees, or charges levied upon the Protected Property, and Grantor will provide copies of receipts evidencing payment of any such charges upon request of Grantee or the USACE. Any liens, mortgages, or other encumbrances affecting the Protected Property shall be subject to the terms of this Conservation Easement. Grantee or the USACE 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 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.

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

Section 49-0305.4. Grantor's recording and transmission to the New York Department of Environmental Conservation shall take place prior to Grantor's commencing work as authorized by the Permit.

8. **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.

9. **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, Grantor and Grantee shall promptly notify the USACE 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.

10. **Proceeds of Taking**. This Conservation Easement constitutes a real property interest immediately vested in Grantee. 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, Grantee 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 multiplying the fair market value of the Permitted Property unencumbered by this Conservation Easement (minus any increase in value after the date of this grant attributable to improvements) by the ratio of the value of this Conservation Easement at the time of this grant to the value of the Protected Property (without deduction for the value of this Conservation Easement) at the time of this grant. The values at the time of this grant shall be the values used, or which would have been used, to calculate a deduction for federal income tax purposes, pursuant to Section 170(h) of the Internal Revenue Code (whether the grant is eligible or ineligible for such a deduction). Grantee shall use its share of the proceeds in a manner consistent with the purposes of this Conservation Easement.

11. **Notification**. Any notice, request for approval, or other communication required under this Conservation Easement 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:
(Address and Contact information)

To Grantee:
(Address and Contact information)

To USACE:
U.S. Army Corps of Engineers, Buffalo District
Regulatory Branch
1776 Niagara Street
Buffalo, New York 14207

12. **Assignment**. This Conservation Easement is transferable, but only to a holder qualified under ECL Section 49-0305.3, and approved in writing by the USACE 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 paragraph (C)(16) of this instrument.

13. **Failure of Grantee**. If at any time Grantee is unable or fails to enforce this Conservation Easement, or if Grantee 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 Grantee fails to make an assignment pursuant to paragraph (C)(12) of this instrument, then Grantee's interest shall become vested in another holder qualified in accordance with an appropriate proceeding, to be brought by Grantor in a court of competent jurisdiction.

14. **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 incorporates this Conservation Easement by reference, specifically of this Conservation Easement, nor shall such failure affect Grantee's or the USACE's 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 Grantee and the USACE of such intended conveyance, providing the full names and mailing addresses of all Grantees, and the individual principals thereof, under any such conveyance.

15. **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.

16. **Amendment**. The Conservation Easement may be amended in accordance with ECL Section 49-0307, but only in writing signed by Grantor and Grantee, or their successors or assigns, and approved in writing by the USACE, its successors or assigns; provided such amendment does not affect the qualification of this Conservation Easement or the status of Grantee 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 New York State Department of Environmental Conservation, in the manner set forth in paragraph (C)(7) above.

17. **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.

18. **Warranty**. 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 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 Grantee shall have the use of and enjoy all the benefits derived from and arising out of this Conservation Easement. Grantor also warrants that the Permitted Property is not land-locked and there is access to the Protected Property by road, dedication of pathway, or by an access easement.

19. **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.

20. **Applicable Law**. This Conservation Easement shall be governed by, and construed in accordance with, the substantive law of the State of New York.

21. **Subordination [IF APPLICABLE]**. _____, the holder of that certain mortgage which encumbers some or all of the Protected Property and is recorded in the Office of the Clerk of _____ County at _____ (the "Mortgagee"), has executed this Conservation Easement for the sole purpose of subordinating the Mortgage to the terms of this Conservation Easement.

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

GRANTOR
[Name of Grantor]

By: _____

Name:

Title:

GRANTEE
[Name of Grantee]

By: _____

Name:

Title:

MORTGAGEE [IF APPLICABLE – ALSO MUST BE NOTARIZED]
[Name of Mortgagee]
For Purposes of Paragraph (C)(21) Only:

By: _____

Name:

Title:

STATE OF NEW YORK)
) ss.:
COUNTY OF)

On the day of in the year 20__ before me, the undersigned, a notary public in and for said state, personally appeared _____, 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

STATE OF NEW YORK)
) ss.:
COUNTY OF)

On the day of in the year 20__ before me, the undersigned, a notary public in and for said state, personally appeared _____, 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

PROVIDE TO SURVEYOR

Instructions for Survey for use with the Model Conservation Easement

<u>Do not record</u> the survey until approved by the Buffalo District Office of Counsel. Provide the platted survey to the attorney preparing the restrictive covenant on behalf of the owner of the property.

Surveys must contain the seal of a New York Registered Land Surveyor. The surveyor should determine the survey plat size approved or required by the land records office in the county where the land lies.

The survey should be a metes and bounds <u>boundary survey</u> of those parcels of land that will be subject to the restrictive covenant. Within the boundary survey is generally located wetland, streams, and buffers. This property generally contains all property referenced as mitigation, including preservation, restoration, establishment, and enhancement. Note that this may be different from a jurisdictional survey that would only show metes and bounds of jurisdictional wetlands or streams.

The bearings and distances should be tied in to at least one known coordinate, with a statement of precision closure <1:10,000.

State the total number of acres of each tract/parcel.

Use a legend to approximately identify the location of the wetlands, wetland buffers, streams, or upland.

Show easements, right-of-ways, roads, and structures that go on or across the parcels subject to the restrictive covenant. Provide the width and length of the easement if known, and the holder of the easement.

Provide a minimum of three or four latitude/longitude coordinates which, when connected, will form a polygon that approximately circumscribes the mitigation area. This is for use with GIS mapping.

Provide a vicinity map identifying roads adjacent to the site.

If the property subject to the restrictive covenant is land-locked and there is no road/path to the property, the property owner must dedicate an access easement to and from the property that is identified on the survey.

Surveyor shall enter "Note" on survey that provides:

> "Wetlands, Streams, and Buffers may be under the jurisdiction of the United States Army Corps of Engineers, permit number (*enter permit number*), and are protected by a recorded Conservation Easement."

APPENDIX C
AGENCY COORDINATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To: 10/13/2025 16:44:50 UTC
Project code: 2026-0003261
Project Name: Oak Orchard Waste Water Treatment Wetland Mitigation

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Technical assistance for 'Oak Orchard Waste Water Treatment Wetland Mitigation'

Dear Abigail Powell:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 13, 2025, for “Oak Orchard Waste Water Treatment Wetland Mitigation” (here forward, Project). This project has been assigned Project Code 2026-0003261 and all future correspondence should clearly reference this number.

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

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

required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect (NLAA)" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13]).

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

Species	Listing Status	Determination
Indiana Bat (*Myotis sodalis*)	Endangered	May affect

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

Other Species and Critical Habitat that May be Present in the Action Area

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

- Monarch Butterfly *Danaus plexippus* Proposed Threatened
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

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

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

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

1. Name

Oak Orchard Waste Water Treatment Wetland Mitigation

2. Description

The following description was provided for the project 'Oak Orchard Waste Water Treatment Wetland Mitigation':

> This is a wetland restoration project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.204028300000004,-76.15979777206715,14z

QUALIFICATION INTERVIEW

1. As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?

   Yes

2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

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

   No

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

   Note: for projects in Pennsylvania: Projects requiring authorization under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act would be considered as having a federal nexus. Since the U.S. Army Corps of Engineers (Corps) has issued the Pennsylvania State Programmatic General Permit (PASPGP), which may be verified by the PA Department of Environmental Protection or certain Conservation Districts, the need to receive a Corps authorization to perform the work under the PASPGP serves as a federal nexus. As such, if proposing to use the PASPGP, you would answer ‘yes’ to this question.

   Yes

4. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

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

   Yes

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

   No

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

   No

7. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

8. Is the lead federal action agency the Natural Resources Conservation Service?

   No

9. Will the proposed project involve the use or storage of herbicide?

   Yes

10. Will the proposed project involve herbaceous native vegetation removal (including prescribed fire that would result in burning of plants) or mowing?

    Yes

11. Will all activities occur within an area that is currently paved, graveled, routinely maintained lawn, and/or inside a structure?

    No

12. Will the proposed project involve demolition, rehabilitation, property elevation, renovation, and/or rebuilding of one or more existing buildings (e.g., residential, commercial and industrial buildings, or utilities)? Note: if project activities include modification of bridges and/or culverts, answer this question "No".

    No

13. Does the project area intersect the boundary of VAFO?

    Automatically answered
    No

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

    No

15. Will the proposed project involve earth moving or other ground disturbance that could cause erosion and sedimentation, and/or contamination within 300 feet of a freshwater wetland or along a stream?

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

    Yes

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

    Yes

17. Will the proposed project involve vegetation removal within 300 feet of a perennial stream bank where aquatic listed species may be present?

    No

18. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project?

    Note: If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

    Yes

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

    No

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

    No

21. Will the proposed project result in permanent changes to surface water or groundwater quantity, retention, quality or timing in areas where **bats** may be present?

    Yes

22. Will the proposed project affect wetlands in areas where **bats** may be present?

    Yes

23. Will the proposed project involve blasting where bats may be present?

    No

24. Does the project intersect the Indiana bat species list area?

    Automatically answered
    Yes

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

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

    No

26. Are there any caves, mines, or mine features that are suitable for hibernating Indiana bats within the area expected to be impacted by the project?

    No

27. Are trees present within the action area?

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

    Yes

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

    Yes

29. Has a presence/probable absence bat survey following the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines been conducted within the action area?

    No

30. Does the project involve removal or modification of a human-made structure (barn, house, or other building) known or suspected to contain roosting bats? **Note:** Most maintenance and general human disturbance in and around structures will not affect Indiana bats as bats roosting in human structures are adjusted to a certain level of routine noise and are generally expected to roost away from areas with excessive disturbance. Answer 'no' if the proposed action will not include disturbance to human structures known or suspected to contain roosting bats or if the structure does not offer suitable roosting habitat for northern long-eared bats. If unsure, answer 'yes.'

    No

31. Does the project include removal/modification of an existing culvert?

    No

32. Does the project include removal/modification of an existing bridge?

    No

33. Will the project include tree cutting, other means of knocking down or bringing down trees, or tree trimming?

    No

34. Will the project result in the use of prescribed fire?

    No

35. Will the herbicide use include only targeted application methods like spot-spraying, hack-and-squirt, basal bark, injections, cut-stump, or foliar spraying on individual plants?

    Yes

36. Does the project include temporary or permanent lighting of roadway(s), facility(ies), and/or parking lot(s)?

    No

37. Do you have any other documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

1. Approximately how many acres of trees would the proposed project remove?

   0

2. Approximately how many total acres of disturbance are within the disturbance/ construction limits of the proposed project?

   8.37

3. Briefly describe the habitat within the construction/disturbance limits of the project site.

   5.34 acres of degraded PEM wetlands and 0.58 acres of degraded PFO wetlands, 2.45 acres of degraded uplands and 1,599.18 ft of ephemeral stream.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Abigail Powell
Address: 317 East Carson St Suite 242
City: Pittsburgh
State: PA
Zip: 15219
Email apowell@res.us
Phone: 7249935114

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To: 10/13/2025 19:06:27 UTC
Project code: 2026-0003261
Project Name: Oak Orchard Waste Water Treatment Wetland Mitigation

Federal Nexus: yes
Federal Action Agency (if applicable):

Subject: Technical assistance for 'Oak Orchard Waste Water Treatment Wetland Mitigation'

Dear Abigail Powell:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on October 13, 2025, for 'Oak Orchard Waste Water Treatment Wetland Mitigation' (here forward, Project). This project has been assigned Project Code 2026-0003261 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid. Note that conservation measures for northern long-eared bat and tricolored bat may differ. If both bat species are present in the action area and the key suggests more conservative measures for one of the species for your project, the Project may need to apply the most conservative measures in order to avoid adverse effects. If unsure which conservation measures should be applied, please contact the appropriate Ecological Services Field Office***

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based upon your IPaC submission and a standing analysis completed by the Service, your project has reached the following effect determination(s):

Species	Listing Status	Determination
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	NLAA
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	NLAA

Federal agencies must consult with U.S. Fish and Wildlife Service under section 7(a)(2) of the Endangered Species Act (ESA) when an action *may affect* a listed species. Tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can *confer* under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if and when the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a NE or NLAA determination from the key to confirm that the determination is still accurate.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Indiana Bat *Myotis sodalis* Endangered
- Monarch Butterfly *Danaus plexippus* Proposed Threatened

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Steps

Consultation with the Service is necessary. The project has a federal nexus (e.g., Federal funds, permit, etc.), but you are not the federal action agency or its designated (in writing) non-federal representative. Therefore, the ESA consultation status is incomplete and no project activities should occur until consultation between the Service and the Federal action agency (or designated non-federal representative), is completed.

As the federal agency or designated non-federal representative deems appropriate, they should submit their determination of effects to the Service by doing the following.

1. Log into IPaC using an agency email account and click on My Projects, click "Search by record locator" to find this Project using **140-171435436**. (Alternatively, the originator of the project in IPaC can add the agency representative to the project by using the Add Member button on the project home page.)

2. Review the answers to the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key to ensure that they are accurate.
3. Click on Review/ Finalize to convert the ‘not likely to adversely affect’ technical assistance letter to a concurrence letter. Download the concurrence letter for your files if needed.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the New York Ecological Services Field Office and reference Project Code 2026-0003261 associated with this Project.

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

1. Name

Oak Orchard Waste Water Treatment Wetland Mitigation

2. Description

The following description was provided for the project 'Oak Orchard Waste Water Treatment Wetland Mitigation':

> This is a wetland restoration project.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.204028300000004,-76.15979777206715,14z

DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

   No

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

   Note for projects in Pennsylvania: Projects requiring authorization under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act would be considered as having a federal nexus. Since the U.S. Army Corps of Engineers (Corps) has issued the Pennsylvania State Programmatic General Permit (PASPGP), which may be verified by the PA Department of Environmental Protection or certain Conservation Districts, the need to receive a Corps authorization to perform the work under the PASPGP serves as a federal nexus. As such, if proposing to use the PASPGP, you would answer ‘yes’ to this question.

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   No

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum or winter roost? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your state wildlife agency.

    Automatically answered

    No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

    No

12. Will the action cause effects to a bridge?

    Note: Covered bridges should be considered as bridges in this question.

    No

13. Will the action result in effects to a culvert or tunnel at any time of year?

    No

14. Are trees present within 1000 feet of the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

15. Does the action include the intentional exclusion of bats from a building or building-like structure? **Note:** Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

    No

16. Does the action involve removal, modification, or maintenance of a human-made building-like structure (barn, house, or other building) **known or suspected to contain roosting bats?**

    No

17. Will the action cause construction of one or more new roads open to the public?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

18. Will the action include or cause any construction or other activity that is reasonably certain to increase average night-time traffic permanently or temporarily on one or more existing roads? **Note:** For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

    No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

20. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

    Note: For information regarding NSF/ANSI 60 please visit https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects

    No

21. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

    No

22. Will the proposed action involve blasting or drilling?

    No

23. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use at night)?

    No

24. Will the proposed action involve the use of herbicides or pesticides (e.g., fungicides, insecticides, or rodenticides)?

    Yes

25. Will the action include or result in herbicide use that may affect suitable summer habitat for the northern long-eared bat or tricolored bat?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

26. Will the action include or cause the application or drift of pesticides (e.g., fungicides, insecticides, or rodenticides) into forested areas that are suitable summer habitat for the northern long-eared bat or tricolored bat?

    Answer "Yes" if the application may result in transport (e.g., in water) or aerial drift of the pesticide into forested areas that are suitable summer habitat for the northern long-eared bat or tricolored bat.

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

27. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

    Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

28. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

29. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

    No

30. Will the proposed action result in the use of prescribed fire?

    Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

    No

31. Does the action area intersect the northern long-eared bat species list area?

    Automatically answered
    Yes

32. [Semantic] Is the action area located within 0.5 miles of radius of an entrance/opening to any known NLEB hibernacula or winter roost? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

33. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

34. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.Have you contacted the appropriate agency to determine if your action is within 150 feet of any documented northern long-eared bat roosts?

    Note: A document with links to Natural Heritage Inventory databases and other state-specific sources of information on the locations of northern long-eared bat roosts is available here. Location information for northern long-eared bat roosts is generally kept in state natural heritage inventory databases – the availability of this data varies by state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited.

    Automatically answered
    No

35. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?
    If unsure, answer "Yes."

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

36. Does the action area intersect the tricolored bat species list area?

    Automatically answered
    Yes

37. Is the action area located within 0.5-mile of radius of an entrance/opening to any known tricolored bat hibernacula or winter roost?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your state wildlife agency.

    Automatically answered
    No

38. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

39. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities?
    (If unsure, answer ""Yes."")

    Note: If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (Tillandsia usneoides), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see Appendix A in the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    Yes

40. Do you have any documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Abigail Powell
Address: 317 East Carson St Suite 242
City: Pittsburgh
State: PA
Zip: 15219
Email apowell@res.us
Phone: 7249935114

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Heritage Program

625 Broadway, Fifth Floor, Albany, NY 12233-4757
Phone: (518) 402-8935 | Fax: (518) 402-8925
www.dec.ny.gov

10/10/2025

The attached report from the Environmental Resource Mapper includes information from the New York Natural Heritage Program database with respect to the location indicated on the map below. This letter, together with the attached report from the Environmental Resource Mapper, is equivalent to, and carries the same validity, as a letter from the New York Natural Heritage Program, including for projects where a Natural Heritage letter is required.

If your location of interest does not fall within an area covered by the Rare Plants and Rare Animals layer or in the Significant Natural Communities layer, then New York Natural Heritage has no records to report in the vicinity of your project site. Submitting a project screening request to NY Natural Heritage is not necessary.

If the attached report lists that your location of interest is in the vicinity of state-listed animals, including state-listed bats, please consult the **EAF Mapper** to obtain a list of the species involved. (You do not have to be filling out an Environmental Assessment Form in order to use the EAF Mapper). Then consult the appropriate **NYSDEC Regional Office** for information on any project requirements or permit conditions.

If the attached report lists unlisted animals, rare plants, or significant natural communities, and if you would like more information on these, please submit a project screening request to **New York Natural Heritage**. For more information, please see the DEC webpage **Request Natural Heritage Information for Project Screening**.

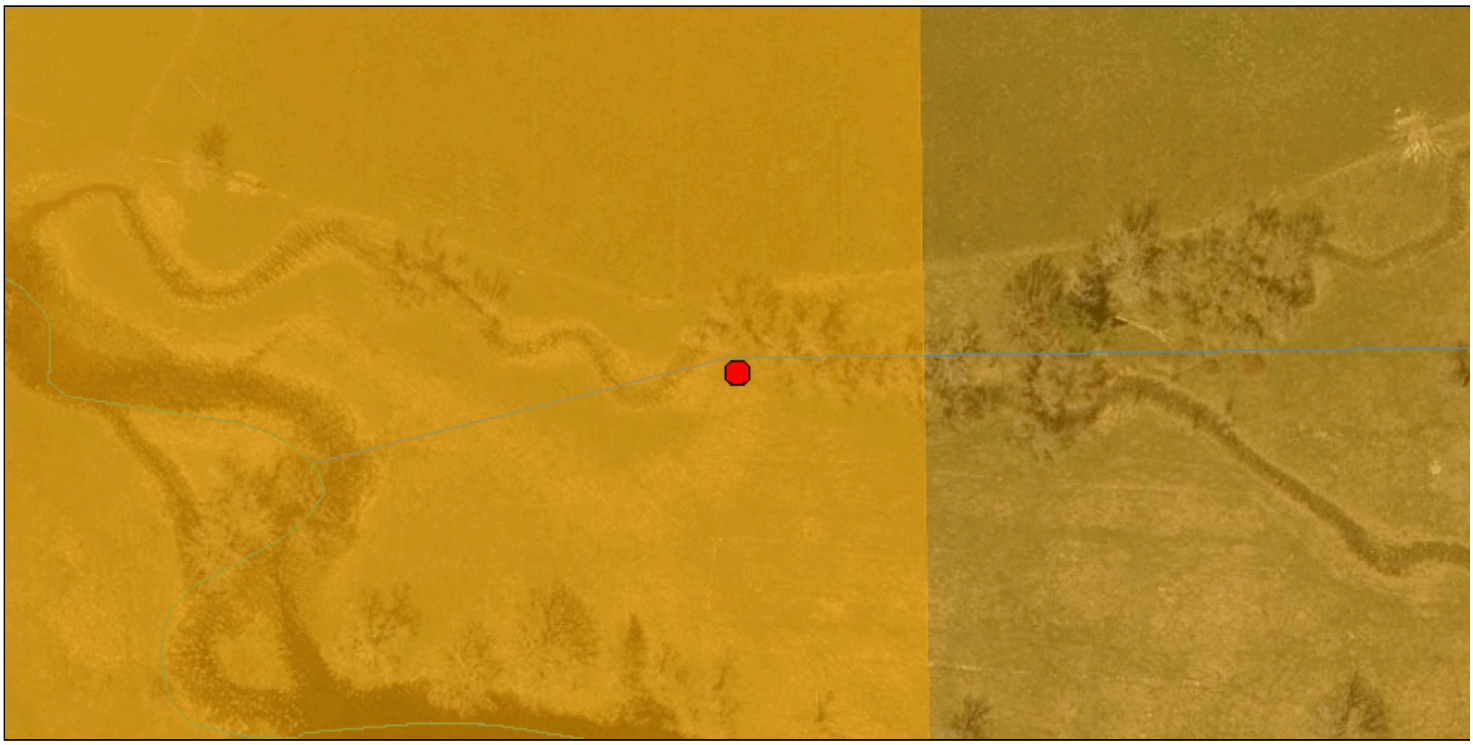
The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, NYNHP files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. NYNHP cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources from a proposed project.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the NYNHP database.

New York Natural Heritage Program

https://www.nynhp.org/.

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	**Easting:**	405792.109436281	**Northing:**	4784182.122816108
Longitude/Latitude	**Longitude:**	-76.15965791772443	**Latitude:**	43.20455196742432

The approximate address of the point you clicked on is:
13041, Clay, New York

County: Onondaga
Town: Clay
USGS Quad: BREWERTON

Rare Plants and Rare Animals

This location is in the vicinity of Bats Listed as Endangered or Threatened -- Contact NYSDEC Regional Office

This location is in the vicinity of Animals Listed as Endangered or Threatened - Contact NYSDEC Regional Office

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

Print Preview

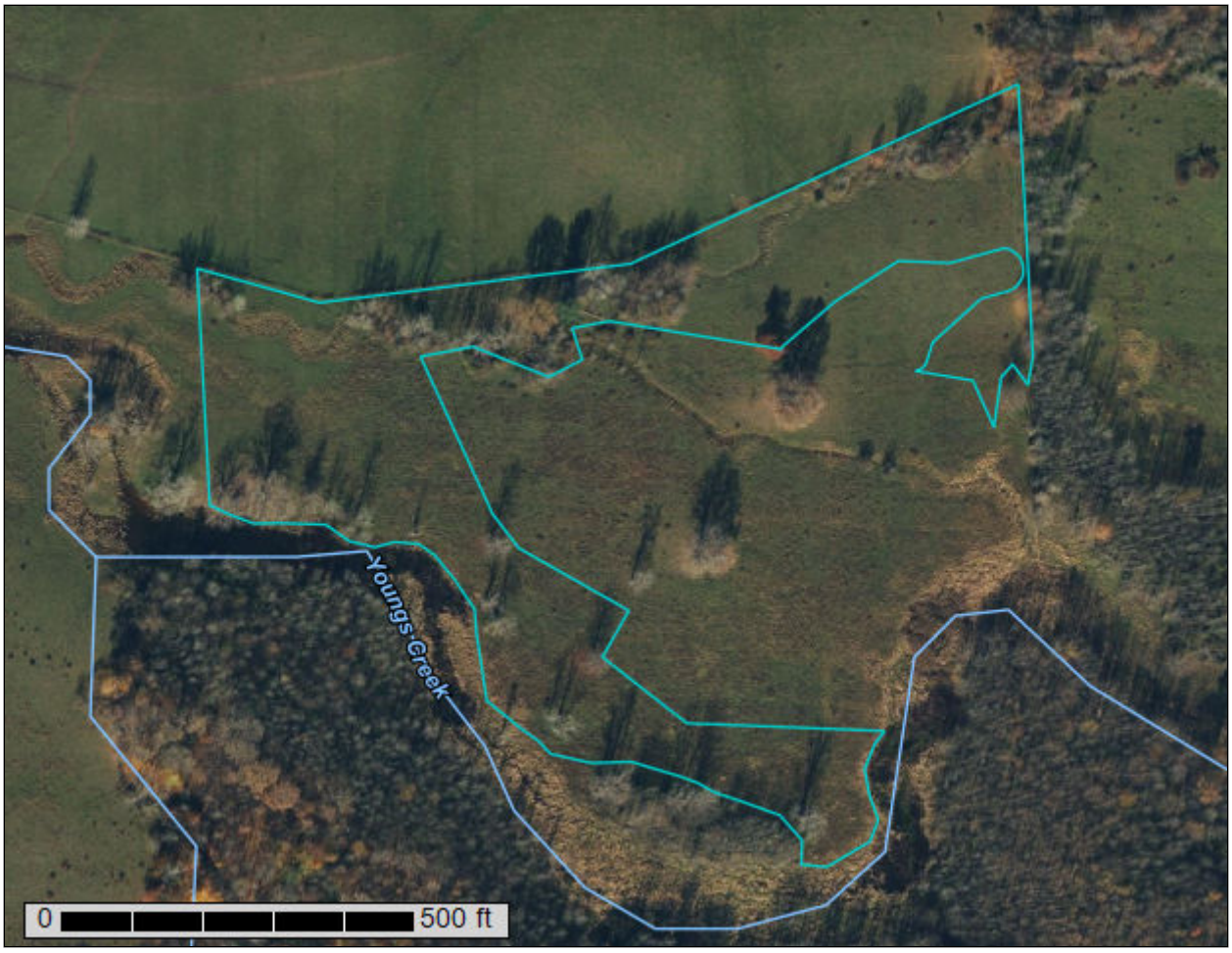
United States Department of Agriculture

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 Onondaga County, New York



October 9, 2025

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

Preface.....2
How Soil Surveys Are Made.....5
Soil Map.....8
Soil Map.....9
Legend.....10
Map Unit Legend.....11
Map Unit Descriptions.....11
Onondaga County, New York.....13
Cd—Canandaigua mucky silt loam.....13
ChB—Collamer silt loam, 2 to 6 percent slopes.....14
NgA—Niagara silt loam, 0 to 4 percent slopes.....15
References.....17

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.

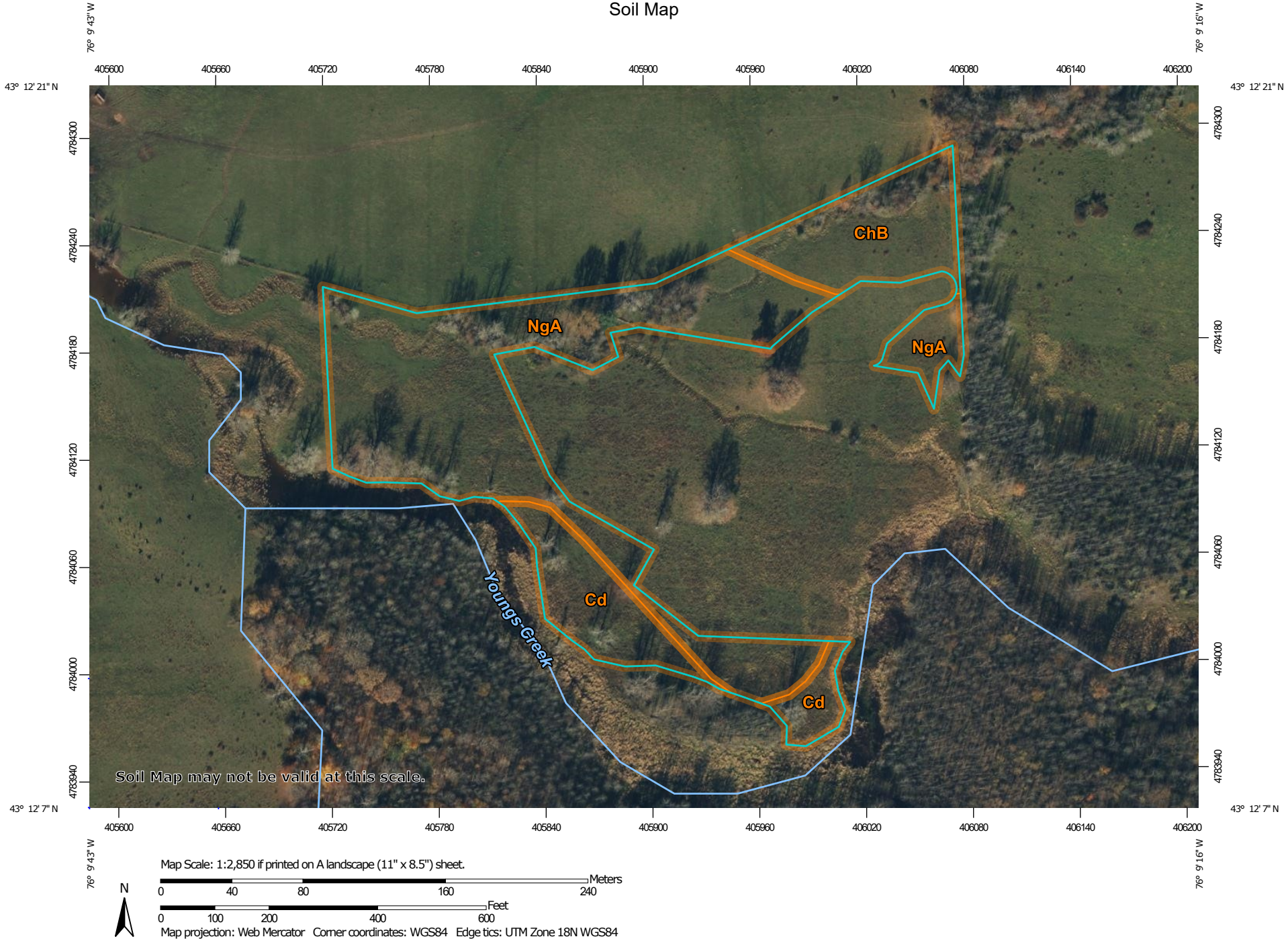
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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 Scale: 1:2,850 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

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 1:20,000.

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: Onondaga County, New York
Survey Area Data: Version 20, Sep 2, 2025

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

Date(s) aerial images were photographed: Aug 3, 2021—Nov 7, 2021

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
Cd	Canandaigua mucky silt loam	1.4	16.4%
ChB	Collamer silt loam, 2 to 6 percent slopes	1.4	17.2%
NgA	Niagara silt loam, 0 to 4 percent slopes	5.6	66.4%
Totals for Area of Interest		**8.4**	**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.

Onondaga County, New York

Cd—Canandaigua mucky silt loam

Map Unit Setting

National map unit symbol: 9vg3
Elevation: 100 to 1,000 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Canandaigua

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: mucky silt loam
H2 - 8 to 31 inches: very fine sandy loam
H3 - 31 to 60 inches: stratified silt loam to very fine sand to fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 13.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F101XY010NY - Wet Lake Plain Depression
Hydric soil rating: Yes

Minor Components

Niagara

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

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

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

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

ChB—Collamer silt loam, 2 to 6 percent slopes

Map Unit Setting
National map unit symbol: 9vgb
Elevation: 360 to 1,310 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Collamer and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Collamer

Setting
Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Silty and clayey glaciolacustrine deposits

Typical profile
H1 - 0 to 10 inches: silt loam
H2 - 10 to 16 inches: silt loam
H3 - 16 to 42 inches: silt loam
H4 - 42 to 60 inches: stratified silt loam to very fine sand

Properties and qualities
Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Niagara

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

Unnamed soils

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

Dunkirk

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

NgA—Niagara silt loam, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 9vjv
Elevation: 360 to 1,590 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Niagara

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave

Across-slope shape: Linear
Parent material: Silty and clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 11 inches: silt loam
H2 - 11 to 39 inches: silt loam
H3 - 39 to 60 inches: stratified silt loam to loamy very fine sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Canandaigua

Percent of map unit: 7 percent
Landform: Depressions
Hydric soil rating: Yes

Williamson

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

Collamer

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

Unnamed soils

Percent of map unit: 3 percent
Hydric soil rating: No

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APPENDIX D
DESIGN PLANS

OAK ORCHARD WWTP PRM DESIGN PLANS

TOWN OF CLAY, ONONDAGA COUNTY, NEW YORK

1. PROJECT DESCRIPTION:
HGS, LLC ("HGS"), A FULLY-OWNED SUBSIDIARY OF RESOURCE ENVIRONMENTAL SOLUTIONS, LLC (RES) IS PROPOSING THIS PERMITTEE-RESPONSIBLE MITIGATION (PRM) PLAN ON BEHALF OF ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENTAL PORTECTION TO COMPENSATE FOR UNAVOIDABLE IMPACTS TO WATERS OF THE UNITED STATES AND NEW YORK STATE REGULATED WETLANDS ASSOCIATED WITH THE OAK ORCHARD WASTE WATER TREATMENT PLANT UPDATES INCLUDING THE INDUSTRIAL TREATMENT TRAIN AND THE CONVEYANCE CORRIDOR (PROJECT). THE PROPOSED MITIGATION WILL INCLUDE THE REESTABLISHMENT, ENHANCEMENT AND RESTORATION OF WETLANDS, AND THE ENHANCEMENT OF ADJACENT UPLAND AREAS IN THE TOWN OF CLAY, ONONDAGA COUNTY, NY. THE MITIGATION WILL OFFSET PERMANENT IMPACTS TO PALUSTRINE SCRUB-SHRUB (PSS) AND PALUSTRINE FORESTED (PFO) WETLANDS, PERMENANT IMPACTS TO ADJACENT UPLAND AREAS, AND TEMPORARY CONVERSION IMPACTS TO PALUSTRIAN FORESTED (PFO) WETLANDS.

2. SITE ADDRESS:
9022 MUD MILL ROAD, BREWERTON, NY 13029

3. SITE COORDINATES:
LATITUDE: 43° 12' 16.9" N (43.204699)
LONGITUDE: 76° 9' 25.5" W (-76.157074)

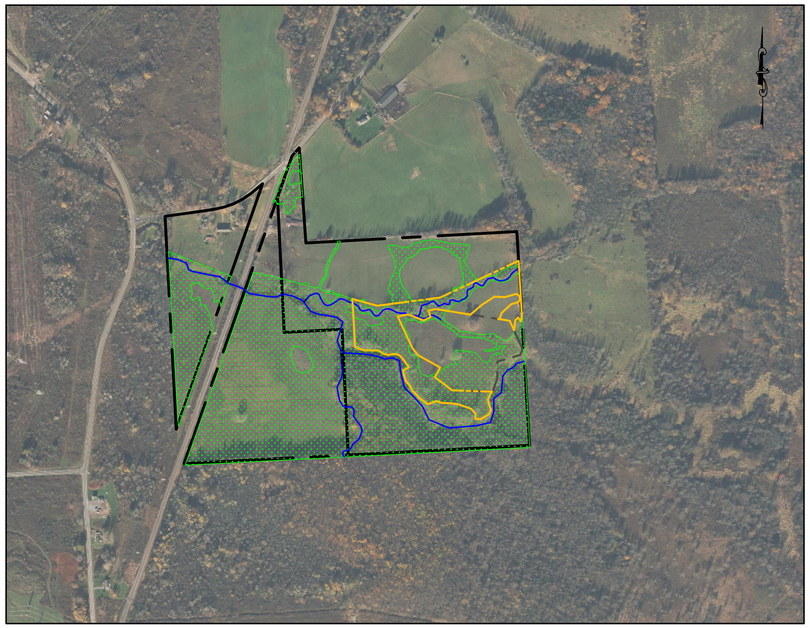
4. SPONSOR:
HGS, LLC
ATTN: HEATHER GUMB
14 JUPITER LANE, SUITE 7
ALBANY, NY 12205
EMAIL: HGUMB@RES.US
PHONE: (718) 873-4906

5. LANDOWNERS:
5.1. LEWIS, RONALD L.
9022 MUD MILL ROAD, BREWERTON, NY 13039
PARCEL ID: 048.-01-10.0

6. SURVEY INFORMATION:
6.1. EXISTING SURFACE CONTOUR DATA ACQUIRED FROM NEW YORK STATE GIS RESOURCES (HTTPS://GIS.NY.GOV/ELEVATION).
6.2. EXISTING PARCEL DATA ACQUIRED FROM ONONDAGA COUNTY GIS ON THE WEB PARCEL VIEWER (HTTPS://SPATIAL.VHB.COM/ONONDAGA/).
6.3. EXISTING TOPOGRAPHIC SURVEY COMPLETED BY RES IN SEPTEMBER 2024.
6.4. ADDITIONAL TOPOGRAPHIC SURVEY COMPLETED BY RES IN NOVEMBER 2024 AND JANUARY 2025 AND OCTOBER 2025.

7. WETLAND INFORMATION:
WETLAND DELINEATION COMPLETED BY HGS IN AUGUST 2024.

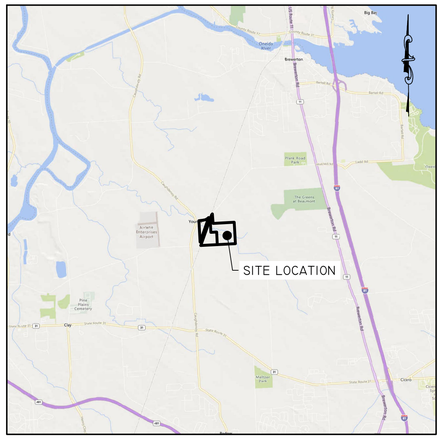
8. SITE AREA:
OAK ORCHARD PRM BOUNDARY: 8.68 ACRES
EXISTING PRM BOUNDARY: 7.36 ACRES



SITE LOCATION MAP
COORDINATE SYSTEM: NY83-CF

0 500 1000 2000
Feet
SCALE: 1" = 500'

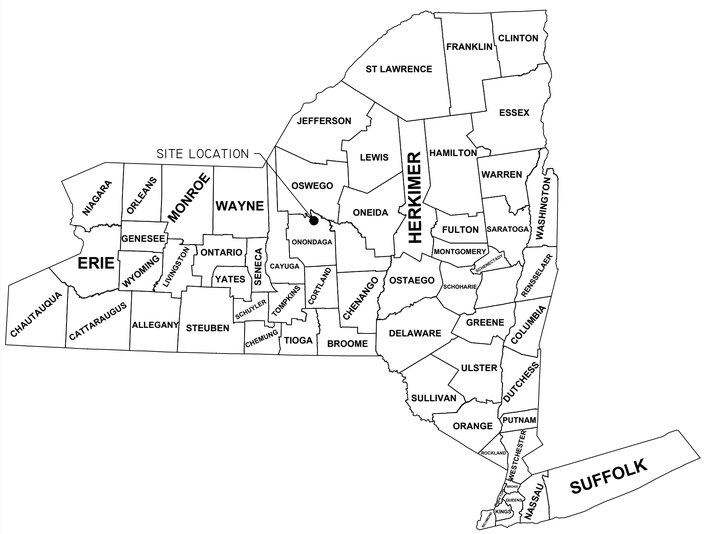
MAP LEGEND
- PROPERTY BOUNDARY
- OAK ORCHARD PRM BOUNDARY
- EXISTING PRM BOUNDARY
- EXISTING WETLAND
- EXISTING STREAM



PROJECT LOCATION MAP

0 5000 10000 20000
Feet
SCALE: 1" = 5000'

SHEET INDEX	
SHEET #	SHEET TITLE
C000	COVER SHEET
C100	EXISTING CONDITIONS
C300	PROPOSED GRADING
C600	PROPOSED CROSS SECTIONS
C800	CONSTRUCTION DETAILS
C900	SITE RESTORATION PLAN
C901	PLANTING LIST
C902	PLANTING DETAILS



HGS, LLC.
ATTN: HEATHER GUMB
14 JUPITER LANE, SUITE 7
ALBANY, NY, 12205
EMAIL: HGUMB@RES.US
PHONE: (718) 873-4906

NO.	DESCRIPTION	DATE	BY
REVISIONS			

OAK ORCHARD WWT PRM
New York
Onondaga County
Town of Clay
PROJECT NO. 13375
SHEET C000
DRAWN BY: KH
CHECKED BY: MC
APPROVED BY: HG
DATE: October 15, 2025

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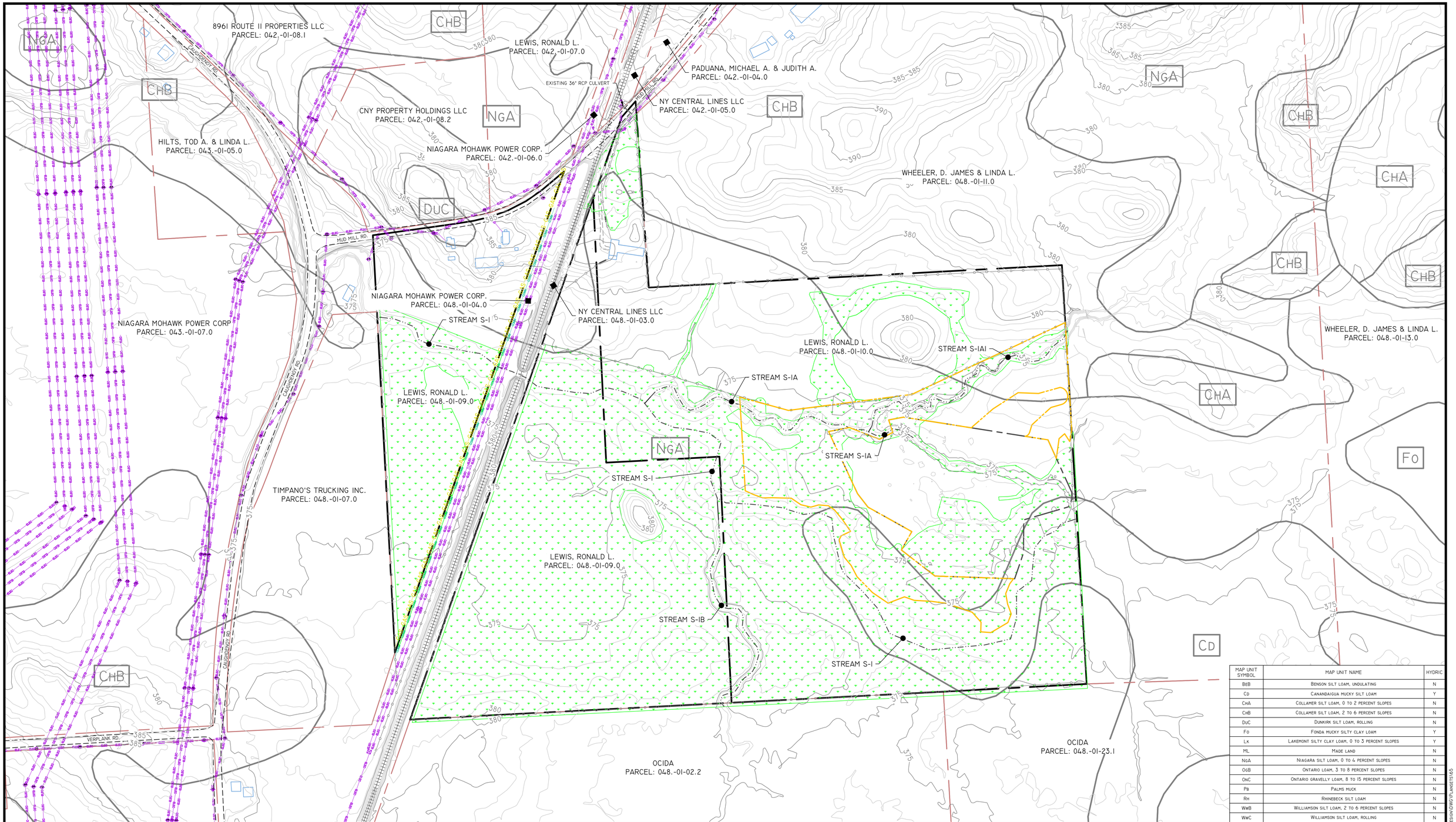
COORDINATE SYSTEM: NY83-CF



MAP UNIT SYMBOL	MAP UNIT NAME	HYDRIC
BeB	Benson silt loam, undulating	N
Cd	Canandaigua mucky silt loam	Y
ChA	Collamer silt loam, 0 to 2 percent slopes	N
ChB	Collamer silt loam, 2 to 6 percent slopes	N
DuC	Dunkirk silt loam, rolling	N
Fo	Fonda mucky silty clay loam	Y
Lk	Lakemont silty clay loam, 0 to 3 percent slopes	Y
ML	Made land	N
NgA	Niagara silt loam, 0 to 4 percent slopes	N
OgB	Ontario loam, 3 to 8 percent slopes	N
OnC	Ontario gravelly loam, 8 to 15 percent slopes	N
Pb	Palms muck	N
Rh	Rhinebeck silt loam	N
WwB	Williamson silt loam, 2 to 6 percent slopes	N
WwC	Williamson silt loam, rolling	N

REVISIONS

NO.	DESCRIPTION	DATE	BY

LEGEND

- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- OAK ORCHARD PRM BOUNDARY
- EXISTING PRM BOUNDARY
- EXISTING THALWEG
- EXISTING WETLANDS
- EXISTING SOIL BOUNDARY
- EXISTING STRUCTURES
- EXISTING ELECTRIC LINE (ELEC)
- EXISTING ELECTRIC POLE (PP)
- EXISTING ELECTRIC TOWER
- EXISTING GUY WIRE
- EXISTING GAS LINE (GAS)
- EXISTING COMMUNICATION LINE (COMM)
- EXISTING FENCE
- EXISTING GATE
- ROAD
- ACCESS PATH
- TREE LINE
- EXISTING RAILROAD
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

NOTES

SEAL

SCALE

0 150 300 600 Feet

SCALE 1" = 150'

RESOURCE ENVIRONMENTAL SOLUTIONS
14 JUPITER LANE , SUITE 7
ALBANY, NY 12205
TELEPHONE: (718) 873-4906
WWW.RES.US
EMAIL: HGUMB@RES.US

OAK ORCHARD WWTP PRM

EXISTING CONDITIONS

DRAWN BY:	KH	NEW YORK	
CHECKED BY:	MC	ONONDAGA COUNTY	TOWN OF CLAY
APPROVED BY:	HG	SHEET: C100	PROJECT NO: 13375
DATE:	OCTOBER 15, 2025		COORDINATE SYSTEM: NY83-CF

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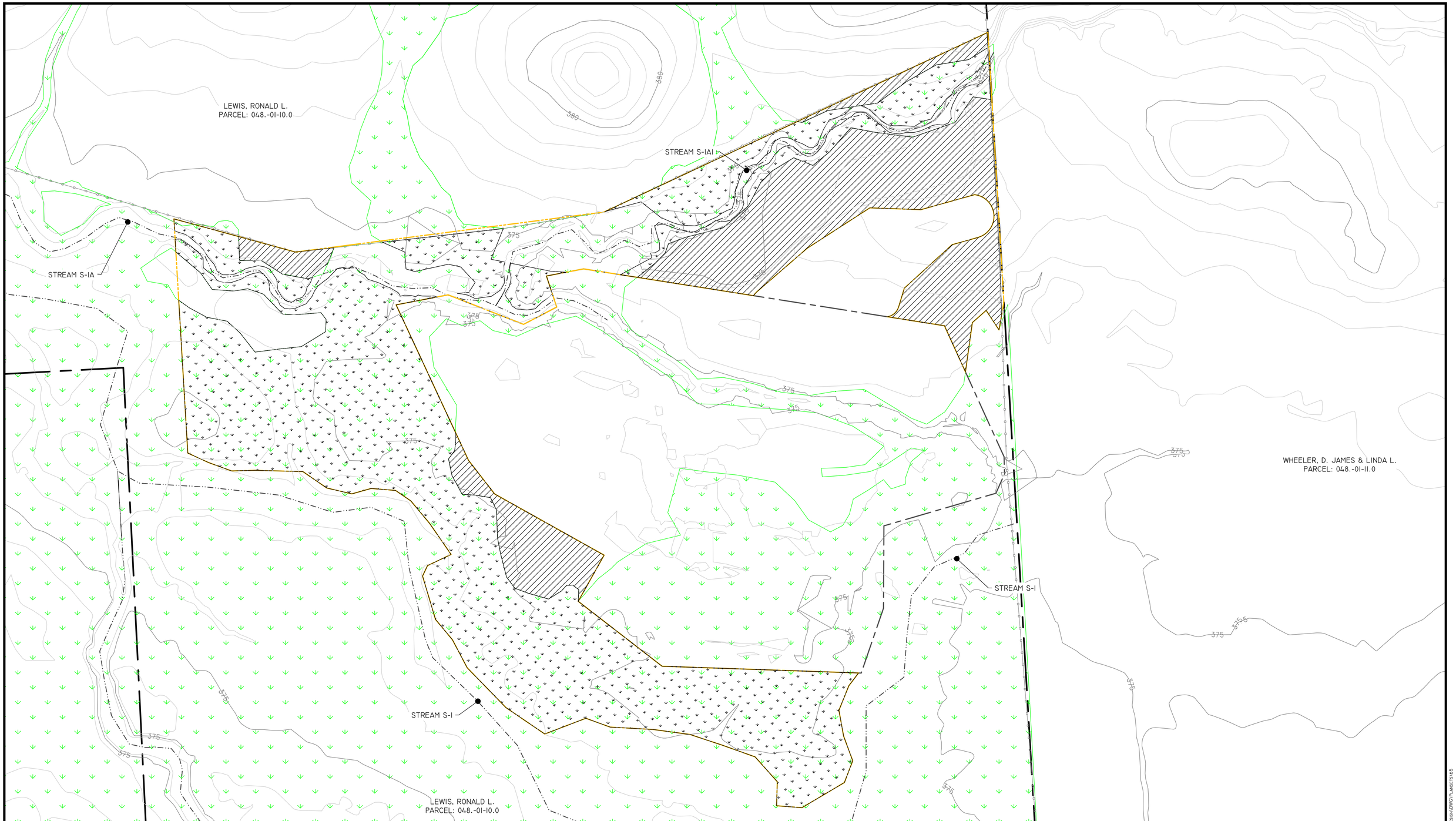
LAST SAVED BY: HGUMB
PLOT DATE: 10/15/2025
COORDINATE SYSTEM: NY83-CF



REVISIONS

NO.	DESCRIPTION	DATE	BY

LEGEND

- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- OAK ORCHARD PRM BOUNDARY
- EXISTING PRM BOUNDARY
- RESERVED RIGHTS BOUNDARY
- EXISTING THALWEG
- EXISTING WETLANDS
- EXISTING SOIL BOUNDARY
- EXISTING STRUCTURES
- EXISTING ELECTRIC LINE (ELEC)
- EXISTING ELECTRIC POLE/TOWER (PP)
- ROAD
- ACCESS PATH
- TREE LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED UPLAND ENHANCEMENT SEEDING
- PROPOSED WETLAND SEEDING

NOTES

SEAL

SCALE

0 60 120 240 Feet

SCALE 1" = 60'

RESOURCE ENVIRONMENTAL SOLUTIONS
14 JUPITER LANE , SUITE 7
ALBANY, NY 12205
WWW.RES.US
TELEPHONE: (718) 873-4906
EMAIL: HGUMB@RES.US

OAK ORCHARD WWTP PRM

SITE RESTORATION PLAN

DRAWN BY:	KH	NEW YORK	
CHECKED BY:	MC	ONONDAGA COUNTY	TOWN OF CLAY
APPROVED BY:	HG	SHEET: C900	PROJECT NO: 113375
DATE:	NOVEMBER 10, 2025		COORDINATE SYSTEM: NY83-CF

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SEEDING LIST

ZONE	*SCIENTIFIC NAME*	COMMON NAME	INDICATOR STATUS	MIX DENSITY	SEEDING RATE (26.486 LBS/5.34 AC)
NY WET MEADOW RESTORATION MIX 30/10	*Elymus virginicus*	Virginia Wild Rye	FACW	10.21%	2.70
	Andropogon gerardii	Big Bluestem	FACU	6.07%	1.61
	Panicum virgatum	Wand Panic Grass	FAC	4.25%	1.13
	Carex comosa	Bearded Sedge	OBL	1.52%	0.40
	Carex scoparia	Pointed Broom Sedge	FACW	4.25%	1.13
	Carex vulpinoidea	Common Fox Sedge	OBL	15.19%	4.02
	Scirpus atrovirens	Dark-Green Bulrush	OBL	6.99%	1.85
	Carex lurida	Shallow Sedge	OBL	0.61%	0.16
	Juncus effusus	Lamp Rush	OBL	10.12%	2.68
	Scirpus cyperinus	Cottongrass Bulrush	OBL	8.61%	2.28
	Asclepias incarnata	Swamp Milkweed	OBL	0.49%	0.13
	Doellingeria umbellata	Parasol White-Top	FACW	3.39%	0.90
	Eupatorium perfoliatum	Common Boneset	FACW	4.05%	1.07
	Eutrochium maculatum	Spotted Trumpetweed	OBL	3.61%	0.96
	Heliopsis helianthoides	Smooth Oxeye	FACU	0.16%	0.04
	Lobelia siphilitica	Great Blue Lobelia	FACW	5.06%	1.34
	Lythrum alatum	Wing-Angle Loosestrife	OBL	7.59%	2.01
	Rudbeckia hirta	Black-Eyed-Susan	FACU	4.66%	1.23
	Symphyotrichum prenanthoides	Crooked-Stem American-Aster	FAC	3.04%	0.80
	Zizia aurea	Golden Alexanders	FAC	0.14%	0.04
			TOTAL	**100%**	**26.49**

SEEDING LIST, CONT.

ZONE	*SCIENTIFIC NAME*	COMMON NAME	INDICATOR STATUS	MIX DENSITY	SEEDING RATE (13.573 LBS/2.15 AC)
NY UPLAND MEADOW RESTORATION MIX 20/20	*Andropogon gerardii*	Big Bluestem	FACU	9.89%	1.34
	Carex brevior	Short-Beak Sedge	FAC	1.59%	0.22
	Elymus canadensis	Nodding Wild Rye	FACU	6.28%	0.85
	Panicum virgatum	Wand Panic Grass	FAC	4.61%	0.63
	Schizachyrium scoparium	Little False Bluestem	FACU	13.18%	1.79
	Sorghastrum nutans	Yellow Indian Grass	FACU	13.18%	1.79
	Allium cernuum	Nodding Onion	FACU	0.30%	0.04
	Asclepias syriaca	Common Milkweed	UPL	0.05%	0.01
	Chamaecrista fasciculata	Sleepingplant	FACU	0.30%	0.04
	Coreopsis lanceolata	Lance-Leaf Tickseed	FACU	0.88%	0.12
	Coreopsis tinctoria	Golden Tickseed	FACU	0.88%	0.12
	Dalea purpurea	Purple Prairie Clover	-	1.98%	0.27
	Desmodium canadense	Showy Tick-Trefoil	FAC	0.15%	0.02
	Echinacea purpurea	Purple Coneflower	-	0.72%	0.10
	Liatris pycnostachya	Cat-Tail Gayfeather	FAC	0.30%	0.04
	Lupinus perennis	Wild Lupine	-	0.03%	0.00
	Monarda fistulosa	Oswego-Tea	FACU	3.84%	0.52
	Penstemon digitalis	Foxglove Beardtongue	FAC	4.64%	0.63
	Potentilla arguta	Prairie Cinquefoil	-	3.79%	0.51
	Pycnanthemum tenuifolium	Narrow-Leaf Mountain-Mint	FAC	4.15%	0.56
	Ratibida pinnata	Yellow or Grey Headed Coneflower	-	1.65%	0.22
	Rudbeckia hirta	Black-Eyed-Susan	FACU	10.11%	1.37
	Solidago juncea	Early Goldenrod	OBL	4.67%	0.63
	Solidago nemoralis	Gray Goldenrod	FACU	4.12%	0.56
	Symphyotrichum laeve	Smooth Blue American-Aster	FACU	1.21%	0.16
	Symphyotrichum novae-angliae	New England American-Aster	FACW	1.45%	0.20
	Verbena stricta	Hoary Vervain	-	1.54%	0.21
	Veronicastrum virginicum	Culver's-Root	FAC	4.39%	0.60
	Zizia aurea	Golden Alexanders	FAC	0.12%	0.02
			TOTAL	**100%**	**13.57**

ZONE	*SCIENTIFIC NAME*	COMMON NAME	INDICATOR STATUS	MIX DENSITY	SEEDING RATE (247 LBS/8.23 AC)
*TEMPORARY NURSE CROP STABILIZATION & ACCELERATED STABILIZATION COVER CROP SEEDING	*Lolium multiflorum*	Annual Rye Grass	FACU	100.00%	224.70
			TOTAL	**100%**	**224.70**
ZONE	***SCIENTIFIC NAME***	**COMMON NAME**	**INDICATOR STATUS**	**MIX DENSITY**	**SEEDING RATE (823.4 LBS/8.23 AC)**
*TEMPORARY NURSE CROP STABILIZATION & ACCELERATED STABILIZATION COVER CROP SEEDING - WINTER	*Secale cereale L.*	Cereal Rye	-	100.00%	749.00
			TOTAL	**100%**	**749.00**

* TEMPORARY NURSE CROP STABILIZATION SEEDING WILL BE USED IN CONJUNCTION WITH ALL OTHER ACCELERATED SEED MIXES

NOTES: 1. TEMPORARY NURSE CROP STABILIZATION SEEDING AND ACCELERATED STABILIZATION COVER CROP SEEDINGWERE CHOSEN USING THE NY DEC E&S MANUAL'S GUIDANCE ON PAGE 4.58 STANDARD AND SPECIFICATIONS FOR TEMPORARY CONSTRUCTION AREA SEEDING

REVISIONS

NO.	DESCRIPTION	DATE	BY

LEGEND

NOTES

SEAL

SCALE

RESOURCE ENVIRONMENTAL SOLUTIONS
14 JUPITER LANE , SUITE 7
ALBANY, NY 12205
WWW.RES.US
TELEPHONE: (718) 873-4906
EMAIL: HGUMB@RES.US

OAK ORCHARD WWTP PRM

PLANTING LIST

DRAWN BY:	KH	NEW YORK	
CHECKED BY:	MC	ONONDAGA COUNTY	TOWN OF CLAY
APPROVED BY:	HG	SHEET: C901	PROJECT NO: 11375
DATE:	NOVEMBER 10, 2025		COORDINATE SYSTEM: NY83-CF

R:\RES\ACTIVE PROJECTS\11375 - OAK ORCHARD WWT PRM\DESIGN\DWGS\PLANSETS\65
XLF: PLANTING LIST
COORDINATE SYSTEM: NY83-CF

APPENDIX E
REPRESENTATIVE SITE PHOTOS

Representative Site Photos

Photo 1 : Restoration wetland and swale.

Photo 2: Restoration wetland and swale.

Photo 3: Restoration wetland; confluence of where the swale flows into Youngs Creek

Photo 4: Restoration Wetland surrounding Youngs Creek.

Photo 5: Restoration wetland and swale.

Photo 6: Restoration upland and adjacent area.

APPENDIX F
PRELIMINARY JURISDICTIONAL DETERMINATION REPORT

Wetland Delineation and Waterbody Identification Report

HGS, LLC

Youngs Creek Restoration Site

Town of Cicero, Onondaga County, New York

October 2024

Prepared by:
HGS, LLC a wholly owned subsidiary of
Resource Environmental Solutions, LLC
18 Walker Way,
Colonie, New York 12205

Table of Contents

1.0 INTRODUCTION....1

2.0 METHODS....1

3.0 RESULTS....1

4.0 CONCLUSIONS....3

5.0 REFERENCES....5

Tables

Table 1 Wetlands Identified Within the Study Area
Table 2 Waterbodies Identified Within the Study Area

Appendix A Figures

Figure 1 Project Location Map
Figures 2a-2e Historical Imagery
Figure 3a-b Existing Conditions Map
Figure 4 Soil Survey Map
Figure 5 FEMA Flood Hazards
Figure 6 Delineated Aquatic Resources

Appendix B USACE Data Forms

Appendix C USACE Photolog

Appendix D Stream Data Forms and Photographs

Appendix E Descriptions of Soils Found Within the Study Area

Appendix F Résumés of Personnel Conducting Delineations

1.0 INTRODUCTION

HGS, LLC (HGS), a fully owned subsidiary of and hereafter referred to as Resource Environmental Solutions, LLC (RES) conducted environmental field surveys in September and October 2024 for the Youngs Creek Restoration Site (Study Area), located in the Town of Cicero, Clinton County, New York (NY). The Study Area is shown in Appendix A- Figure 1: Project Area Map. The purpose of the environmental field survey was to delineate and identify wetlands and streams within the Study Area.

The following sections of this report describe the methods used to identify and delineate wetlands and streams, the results of the field survey, and the associated documentation of any streams and wetlands identified within the Study Area.

2.0 METHODS

The identification of wetland boundaries was based on the methodology described in the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987). Determination of wetland boundaries were also guided by the methodologies presented in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (USACE 2012) and the New York State Freshwater Wetland Delineation Manual (NYSDEC 1995). Attention was given to the identification of potential hydrologic connections between wetlands and areas that could influence their jurisdictional status.

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

Assessment of vegetation focused on the identification of dominant plant species in four categories: trees (>3" diameter at breast height (DBH), >20' tall), saplings (<3" DBH, <20' tall)/shrubs (<3" DBH and >3.28' tall), herbs, and woody vines. Dominance within each stratum was measured by visually estimating those species having the largest relative basal area (trees), greatest height (trees/shrubs), greatest number of stems (woody vines), and greatest percentage of aerial coverage (herbaceous) by species. Classification of the vegetative indicator status is based on the National Wetland Plant List: 2020 Wetland Ratings, (USACE 2020).

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

Data regarding wetland hydrology, vegetation, and soils was collected at representative sampling points throughout the Study Area and recorded on the Army Corps of Engineers: Wetland Determination Form – Northcentral and Northeast Region – Version 2.0 (Appendix C).

As regulated by Section 404 of the CWA, and Section 10 of the Rivers and Harbors Act of 1899, streams were classified as perennial, intermittent, or ephemeral based upon presence of flow, estimated duration

of flow, stream bed characteristics, and presence of aquatic biota. The USACE Jurisdictional Determination Form Instructional Guidebook (USACE 2007) was used to determine stream classification and flow status. Stream boundaries were determined based on the presence of ordinary high water mark characteristics, including a "clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris" (33 CFR § 328.3). Stream boundaries were defined and mapped in the field and data regarding geomorphic characteristics, channel geometry, water depth, bed substrate, and flow regime (perennial, intermittent, ephemeral) were collected and recorded on stream data forms (Appendix E).

The growing season in the Study Area is generally between May and October (USDA-NRCS-NWCC, 2002). Field observations were supplemented with a review of United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping, United States Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS) soils mapping, and local landscape topography/morphology to provide a determination of wetlands present within the Study Area. Professional judgment was used to determine whether hydrophytic vegetation and hydric soils existed within the identified wetlands. It is understood that USACE and state agencies have the final say in acceptance of this delineation.

Each wetland and waterbody feature identified within the Study Area was given a unique map designation. The locations of wetland boundaries, stream channels, and sampling points were recorded using a Juniper Systems "Geode" (GPS) mapping grade unit with the capability of sub-meter accuracy (Figure 6: Delineated Aquatic Resources).

3.0 RESULTS

The Study Area is approximately 76.82 acres and consists of a stream-wetland floodplain complex with low topographic relief. Land use within and surrounding the Study Area includes the a railway, agricultural land, forest, and rural residential lots (Figure 1).

A review of available United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI 2011) digital data indicated that two (2) NWI wetlands are located within the Study Area. An examination of United States Geological Society (USGS) mapping for the Study Area indicated two (2) blue-line streams located within the Study Area. The NYSDEC Environmental Resource Mapper indicates there is one Class C stream (Youngs Creek -Class C(C)) within the Study Area, as well as one Class 2 Wetland (ID: BRE-14).

A review of the *Soil Survey of Onondaga County, NY* (USDA 2023) indicated that multiple soil mapping units are present within the Study Area, in which the majority of the acreage is Niagara silt loam which is hydric in nature (Figure 4: Soils Map and Appendix F: Description of Soils Found within the Study Area). The topography within the Study Area consists of low-lying floodplains with land surface elevations ranging between 370-feet above mean sea level (amsl) to approximately 382-feet amsl.

The Study Area is located within the Oneida River (HUC-12 041402020905), a sub-watershed of the Oneida River Watershed (HUC-10 0414020209), within the Oneida Subbasin (HUC-8 04140202). A review of Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Panel 36067C0083F reveals that the Study Area is not located within a Special Flood Hazard Area (SFHA) (FEMA, 2016).

None of the waterbodies that flow through the Study Area are submerged lands of the state, located within a NY coastal zone, or designated/nominated for designation as a national or state wild or scenic river. No reservoirs, federal or state parks, forests, or recreation areas were identified within the Study Area.

The identified wetlands and streams are described below and are summarized in Tables 1 and 2, respectively. Color photographs, photograph locations, and photograph directions of the wetlands and streams can be found in Appendix B: Photographs. Wetland data forms are included in Appendix C and upland data forms are included in Appendix D. Stream data forms are located in Appendix E. A table listing the soils found within the Study Area is provided as Appendix F, and Appendix G contains the résumés of the personnel conducting the delineations.

3.1 Wetlands

One (1) wetland consisting of palustrine emergent (PEM) and palustrine forested (PFO) habitat types was identified within the Study Area. (Figure 6: Delineated Aquatic Resources). The wetland is generally associated with watercourses and is situated within a floodplain complex consisting of a variety of wetland types and watercourses. Hydrology for this wetland is the result of high-water tables and floodwaters from the surrounding watercourses. All soil profiles met conditions for hydric soil indicators. The wetland is located within or adjacent to the floodplain of a Youngs Creek, which is classified by the New York State Chapter 43-B Environmental Conservation; Article 15 as a C class waterway, which is a water supporting fisheries and suitable for non-contact activities. The NYSDEC Environmental Resource Mapper classifies the wetland identified in the Study Area as a Class 2 Wetland (ID: BRE-14).

A summary of the wetland information is outlined in Table 1: Wetlands Identified Within the Study Area. Wetland and upland data forms are provided in Appendix A: USACE Data Forms. Photographs for wetland and upland data point locations can be found in Appendix B: USACE Photolog. Locations of the wetlands are shown on Figure 6: Delineated Aquatic Resources.

3.2 Waterbodies

Two (2) USGS blue-line stream and several unmapped tributaries were located within the Study Area. The NYSDEC Environmental Resource Mapper classifies the streams identified in the Study Area as Class C waterways. The streams were characterized as perennial or intermittent in nature, and are fed from adjacent wetlands, groundwater upwelling zones, and spring/seep origins. On-site streams drain immediately into Youngs Creek (NYSDEC Class C(C)) which drains into the Oneida River (NYSDEC Class B(B)) northwest of the Study Area. Detailed characteristics of the streams identified can be found in the individual data sheets included under Appendix E. Photographs are included in Appendix B. Locations of the waterbodies are shown in Appendix A: Figure 6: Delineated Aquatic Resources. A summary of the streams identified within the Study Area is outlined in Table 2: Waterbodies Identified within the Study Area.

4.0 CONCLUSIONS

RES conducted environmental field surveys of the Study Area in September 2024 to identify wetlands and waterbodies within the Study Area. One (1) wetland totaling 57.41 acres and four (4) streams totaling 7,097.10 linear feet were identified and delineated within the Study Area. A summary of the delineated wetlands and streams can be found in Tables 1 and 2.

All statements in this document pertaining to the jurisdictional status of streams and wetlands under USACE and state regulations represent the opinion of RES and are based on current USACE and state guidance. The jurisdictional status of these features may be confirmed by a USACE Jurisdictional Determination and/or by state agencies.

Table 1. Wetlands Identified Within the Study Area

Feature Designation[1]	Cowardian Classification[3]	HGM Classification	NWI Wetland[4]	NYSDEC Classification[2]	Delineated Area (acres)[5]	Approximate Center Coordinates	
						Latitude	Longitude
W-1	PFO	Riverine/Depressional	Yes	Class 2	14.95	43.203666	-76.160645
	PEM	Riverine/Depressional	Yes	Class 2	42.46		
Total Acreage					**57.41**		

Notes:
1 RES map designation.
2 As classified by NY Chapter X, Article 1, Part 664. Freshwater Wetlands Maps and Classification
3 Palustrine system wetlands were classified as emergent (PEM), scrub-shrub (PSS), or forested (PFO).
4 National Wetlands Inventory wetland as mapped by the United States Fish and Wildlife Service, 2011.
5 Extent of wetland within the Study Area. Wetland limits extend beyond the study area.

Table 2. Waterbodies Identified Within the Study Area							
Feature Designation[1]	Waterbody	Stream Type	NYSDEC Classification[2]	Delineated Stream Length (Linear Feet)	Within a FEMA Floodplain[3]	Approximate Center Coordinates	
						Latitude	Longitude
S-1	Youngs Creek	Perennial	Class C	3,460.12	No	43.204799	-76.161856
S-1A	UNT to Youngs Creek	Ephemeral	Class C	1,138.94	No	43.204456	-76.158748
S-1A1	UNT to Youngs Creek	Ephemeral	None	989.57	No	43.205053	-76.157412
S-1B	UNT to Youngs Creek	Perennial	None	902.96	No	43.202708	-76.160542
Total Length:				**6,491.60**			

Notes:

1 FPR map designation.
2 As classified by NY Chapter 43-B, Article 15 Use and Protection of Waters. Class C – Waters that support fishing and non-contact activities. Waterbodies that do not have designated water uses are assessed per their receiving waterbody.
3 Waterbodies residing within the limits of a designated Federal Emergency Management Agency (FEMA) 100-year floodplain.

Respectfully submitted,

Lyndon Watkins | Ecologist II | Resource Environmental Solutions, LLC
18 Walker Way | Colonie, NY 12205

5.0 REFERENCES

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APPENDIX A
Figures

Figure 1
Project Location

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N

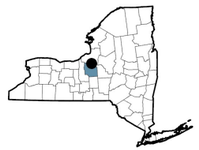
Area of Investigation (±76.82 AC)

7.5 Minute Quadrangle Index

N 1 in = 0.25 mi *when printed at 11x17"*

0 0.125 0.25
Miles

Reference: Project limits are approximate and do not reflect a survey. The Area of Investigation is located in the 1:24K Brewerton (43076-B2) 7.5' USGS quadrangle.
Data Source: ESRI USA_Topo_Maps (ESRI 2024); USGS 7.5' quadrangle index (2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/24/2024
Project Number: 110842



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www.res.us

Cartographer: asnyder | POC: Jacob Robash | Path: R:\Resgis\Projects\NY\110842_Clinton's_Ditch_Cicero_Expansion_PRM\PRO\Delineation\20240905_ClintonsDitch_Lewis_WetlandDelineation.aprx | Layout: Landscape - Figure 1 (Project Location)

Figure 2A
1938 Historic Aerial Imagery

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N

Area of Investigation
(±76.82 AC)

N

1 in = 400 ft *when printed at 11x17"*

0 100 200 300 400
US Feet

Reference: Project limits are approximate and do not reflect a survey. The background aerial image was acquired on 09/06/1938. Present-day roads and location labels are shown for reference.
Data Source: ESRI Hybrid Reference (ESRI 2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/24/2024
Project Number: 110842

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Figure 2B
1951 Historic Aerial Imagery

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N

Area of Investigation
(±76.82 AC)

N

1 in = 400 ft *when printed at 11x17"*

0 100 200 300 400
US Feet

Reference: Project limits are approximate and do not reflect a survey. The background aerial image was acquired on 10/15/1951. Present-day roads and location labels are shown for reference.
Data Source: ESRI Hybrid Reference (ESRI 2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/24/2024
Project Number: 110842

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Figure 2C
1966 Historic Aerial Imagery

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N

Area of Investigation
(±76.82 AC)

N

1 in = 400 ft *when printed at 11x17"*

0 100 200 300 400

US Feet

Reference: Project limits are approximate and do not reflect a survey. The background aerial image was acquired on 06/22/1966. Present-day roads and location labels are shown for reference.
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Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/24/2024
Project Number: 110842

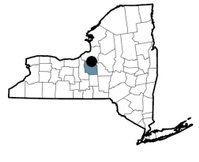

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Figure 2D
2018 Extant Aerial Imagery

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N

Area of Investigation
(±76.82 AC)

N

1 in = 400 ft *when printed at 11x17"*

0 100 200 300 400

US Feet

Reference: Project limits are approximate and do not reflect a survey. The background aerial image was acquired in 2018.
Data Source: NYS DOP (2018); ESRI Hybrid Reference (ESRI 2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/24/2024
Project Number: 110842

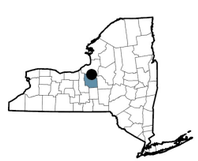

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Figure 3A
Existing Conditions - State

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N

Area of Investigation (±76.82 AC)

DEC Regulated Wetlands

Freshwater Wetlands

Freshwater Wetlands Checkzone

DEC Regulated Streams

Classification

C

N

1 in = 200 ft *when printed at 11x17"*

0 50 100 200

US Feet

Reference: Project limits are approximate and do not reflect a survey.
Data Source: NYS DOP (2020); ESRI Hybrid Reference (ESRI 2024); NYS DEC (2022)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/24/2024
Project Number: 110842

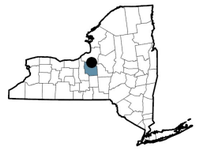

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Figure 3B
Existing Conditions - Federal

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N

Area of Investigation (±76.82 AC)

Streams
- NHD Flowlines
- StreamStats Streamgrid

NWI Wetlands
- Freshwater Emergent
- Freshwater Pond
- Riverine

N 1 in = 200 ft *when printed at 11x17"*

0 50 100 200
US Feet

Reference: Project limits are approximate and do not reflect a survey.
Data Source: NYS DOP (ft); ESRI Hybrid Reference (ESRI 2024); USFWS NWI (2024); USGS NHD (2024); USGS StreamStats (2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/24/2024
Project Number: 110842

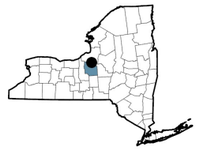

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Figure 4
Soil Survey

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N

Area of Investigation (±76.82 AC)

SSURGO Soil Map Units

- Predominantly Hydric 66-99% Hydric Classification
- Predominantly Non-Hydric 1-33% Hydric Classification
- Non-Hydric 0% Hydric Classification

N

1 in = 200 ft *when printed at 11x17"*

0 50 100 200

US Feet

Reference: Project limits are approximate and do not reflect a survey. Hydric ratings are based on the SSURGO "Hydric Classification-Presence" field.
Data Source: NYS DOP (2018); ESRI Hybrid Reference (ESRI 2024); USDA SSURGO (2024)
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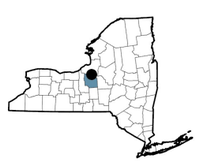
Date Exported: 10/24/2024
Project Number: 110842



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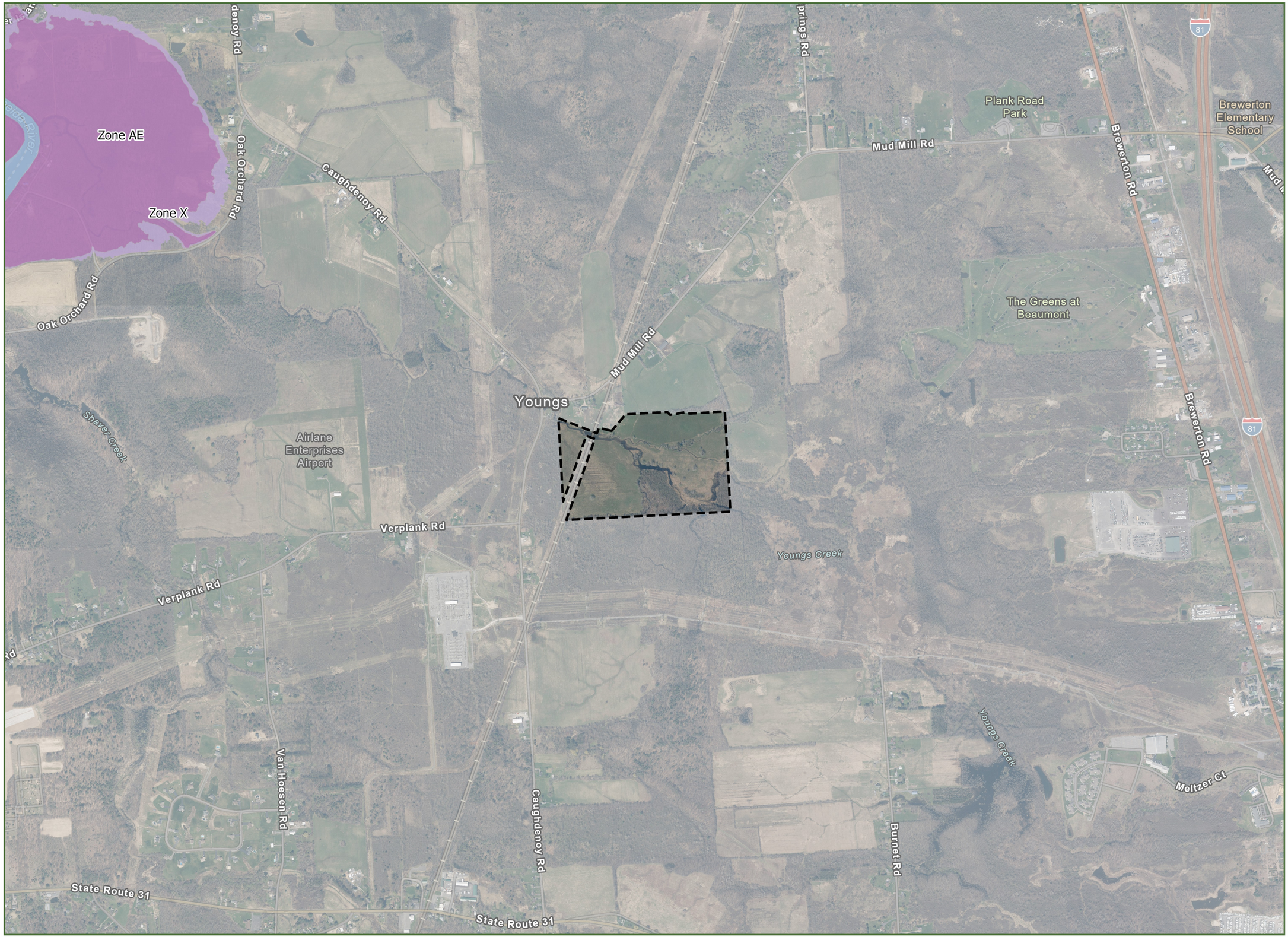


Figure 5
FEMA Flood Hazards

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N

Area of Investigation (±76.82 AC)

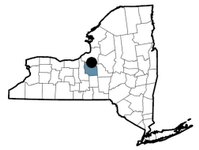
NFHL Flood Hazard Zones

- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard
- Regulatory Floodway

N 1 in = 0.25 mi *when printed at 11x17"*

0 0.125 0.25
Miles

Reference: Project limits are approximate and do not reflect a survey.
Data Source: NYS DOP (2018); ESRI Hybrid Reference (ESRI 2024); FEMA NFHL (2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/24/2024
Project Number: 110842



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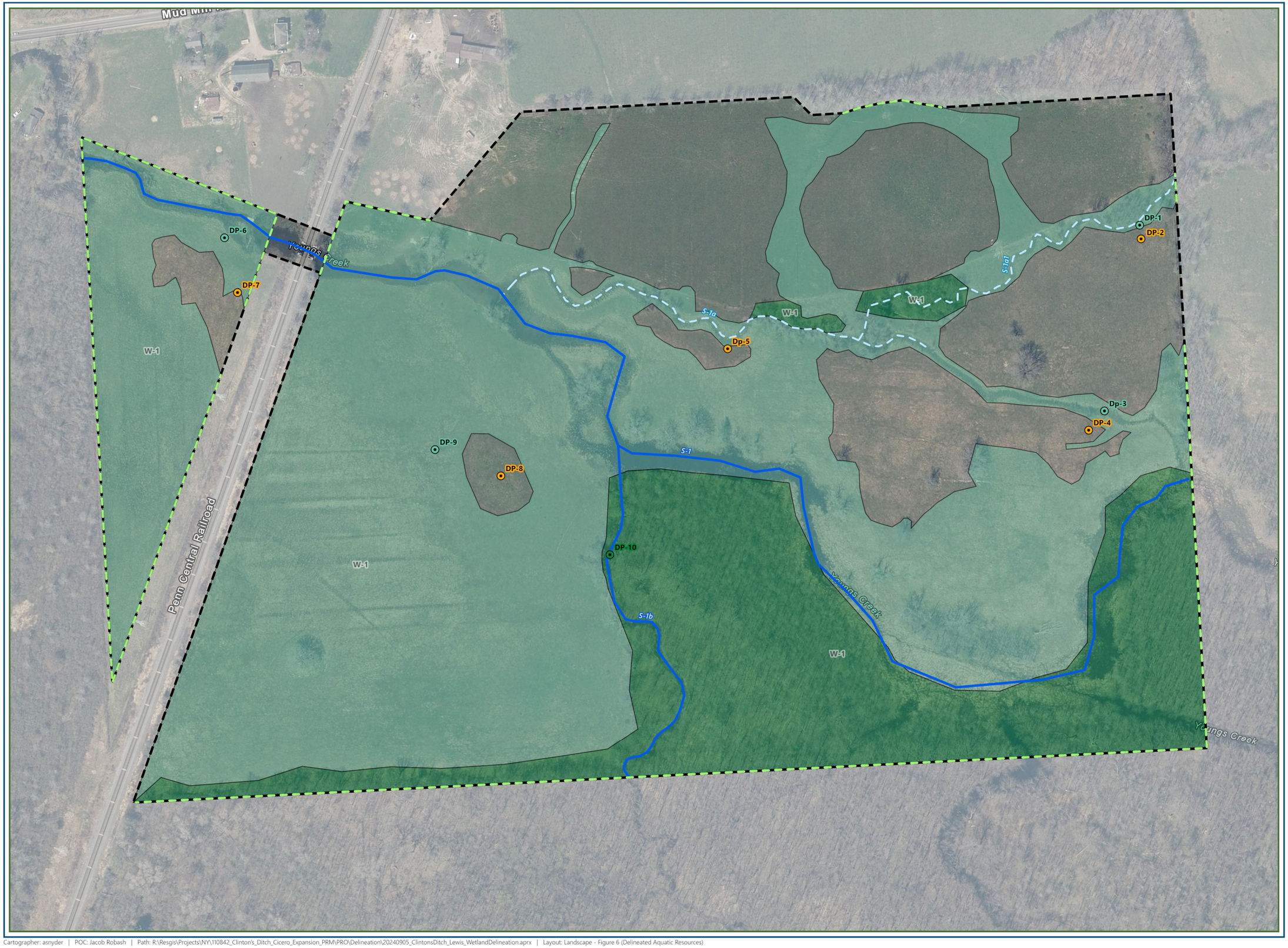
www.res.us

Cartographer: asnyder | POC: Jacob Robash | Path: R:\Resgis\Projects\NY\110842_Clinton's_Ditch_Cicero_Expansion_PRM\PRO\Delineation\20240905_ClintonsDitch_Lewis_WetlandDelineation.aprx | Layout: Landscape - Figure 5 (FEMA Flood Hazards)

Figure 6
Delineated Aquatic Resources

Youngs Creek Restoration Site
Clay, Onondaga County

76.16058°W 43.20375°N



Area of Investigation (±76.82 AC)

Open End

Data Points

Wetland

PEM | Palustrine Emergent

PFO | Palustrine Forested

Non-Wetland

Upland

Delineated Streams (±6,491.60 LF)

Perennial (±4,363.08 LF)

Ephemeral (±2,128.52 LF)

Delineated Wetlands (±57.41 AC)

PEM | Palustrine Emergent (±42.46 AC)

PFO | Palustrine Forested (±14.95 AC)

N

1 in = 200 ft *when printed at 11x17"*

0 50 100 200

US Feet

Reference: Project limits are approximate and do not reflect a survey. Aquatic resources beyond the Area of Investigation were not delineated. Site delineation occurred on 09/03/2024 through 09/04/2024.
Data Source: NYS DOP (2018); ESRI Hybrid Reference (ESRI 2024)
Spatial Reference: NAD83 StatePlane NY C (ft)
Date Exported: 10/24/2024
Project Number: 110842

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APPENDIX B
USACE Data Forms

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	3-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-1
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	Depression	Local relief (concave, convex, none):	Concave	Slope (%):	0-1%
Subregion (LRR or MLRA):	LRR:L	Lat:	43.2051797 N	Long:	-76.1564163
Datum:	NAD83				
Soil Map Unit Name:	ChB:Collamer silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

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?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y		

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

Historic Ag practices

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):		
Water table present?	Yes	X	No		Depth (inches):	12	**Wetland Hydrology Present?** Y
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	8	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-1

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1 *Fraxinus nigra*	5	Y	FACW
2			
3			
4			
5			
6			
7			
8			
	5	= Total Cover	

Sapling/Shrub stratum (Plot size: r = 15')			
1 *Cornus racemosa*	5	Y	FAC
2 *Lonicera morrowii*	5	Y	FACU
3			
4			
5			
6			
7			
8			
9			
10			
	10	= Total Cover	

Herb stratum (Plot size: r = 5')			
1 *Phalaris arundinacea*	98	Y	FACW
2 *Impatiens capensis*	2	N	FACW
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
	100	= Total Cover	

Woody vine stratum (Plot size: r = 30')			
1			
2			
3			
4			
5			
6			
	0	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across all Strata:	4	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	75%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	105	x 2 =	210
FAC species	5	x 3 =	15
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column totals	115 (A)		245
Prevalence Index = B/A =			2.13 (B)

Hydrophytic Vegetation Indicators:

X	1 – Rapid Test for Hydrophytic Vegetation
X	2 – Dominance Test is >50%
X	3 – Prevalence Index is ≤3.0[1]
	4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? Y

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

SOIL Sampling Point: DP-1

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

Depth (In.)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/1	85%	5YR 4/6	15%	C	PL/M	Clay loam	
14-20	10YR 4/2	80%	5YR 4/6	20%	C	PL/M	Clay loam	

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (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) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- 2cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148**)
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	3-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-2
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	Hillslope	Local relief (concave, convex, none):	Convex	Slope (%):	1-3%
Subregion (LRR or MLRA):	LRR:L	Lat:	43.2050966	Long:	-76.1564612
Datum:	NAD83				
Soil Map Unit Name:	ChB: Collamer silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation , soil , or hydrology significantly disturbed? Are "normal circumstances" present? Yes

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?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	Y		
Indicators of wetland hydrology present?	N		

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

Historic Ag practices

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):
Water table present?	Yes		No	X	Depth (inches):
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):

Wetland Hydrology Present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-2

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		

Sapling/Shrub stratum (Plot size: r = 15')			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	0 = Total Cover		

Herb stratum (Plot size: r = 5')			
1	*Centaurea jacea*	75	Y	FACU
2	*Solidago altissima*	15	N	FACU
3	*Symphyotrichum pilosum*	5	N	FACU
4	*Fraxinus nigra*	5	N	FACW
5				
6				
7				
8				
9				
10				
11				
12				
	100 = Total Cover			

Woody vine stratum (Plot size: r = 30')			
1			
2			
3			
4			
5			
6			
	0 = 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%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column totals	100 (A)		390

Prevalence Index = B/A = 3.90 (B)

Hydrophytic Vegetation Indicators:

- 1 – Rapid Test for Hydrophytic Vegetation
- 2 – Dominance Test is >50%
- 3 – Prevalence Index is ≤3.0[1]
- 4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? N

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

SOIL Sampling Point: DP-2

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

Depth (In.)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	95%	7.5YR 4/6	5%	C	PL/M	Clay loam	
8-18	10YR 4/3	80%	7.5YR 5/8	20%	C	M	Clay loam	

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (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) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- 2cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148**)
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	3-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-3
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	Depression	Local relief (concave, convex, none):	Concave	Slope (%):	0-1%
Subregion (LRR or MLRA):	LRR:L	Lat:	43.2040522	Long:	-76.1567888
Datum:	NAD83				
Soil Map Unit Name:	NgA: Niagara silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

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?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y		

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

Historic Ag practices

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):		
Water table present?	Yes	X	No		Depth (inches):	12	**Wetland Hydrology Present?** Y
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	2	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-3

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		

Sapling/Shrub stratum (Plot size: r = 15')			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	0 = Total Cover		

Herb stratum (Plot size: r = 5')			
1	*Phalaris arundinacea*	40	Y	FACW
2	*Lythrum salicaria*	25	Y	OBL
3	*Scirpus cyperinus*	25	Y	OBL
4	*Euthamia graminifolia*	8	N	FAC
5	*Mentha arvensis*	5	N	FACW
6	*Galium palustre*	5	N	OBL
7	*Eutrochium maculatum*	5	N	OBL
8	*Juncus effusus*	3	N	OBL
9	*Cicuta maculata*	3	N	OBL
10	*Symphyotrichum lanceolatum*	3	N	FACW
11				
12				
		122 = Total Cover		

Woody vine stratum (Plot size: r = 30')			
1			
2			
3			
4			
5			
6			
	0 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across all Strata:	3	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:

OBL species	66	x 1 =	66
FACW species	48	x 2 =	96
FAC species	8	x 3 =	24
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	122 (A)		186

Prevalence Index = B/A = 1.52 (B)

Hydrophytic Vegetation Indicators:

- X 1 – Rapid Test for Hydrophytic Vegetation
- X 2 – Dominance Test is >50%
- X 3 – Prevalence Index is ≤3.0[1]
- 4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? Y

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

SOIL Sampling Point: DP-3

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

Depth (In.)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	95%	7.5YR 4/6	5%	C	PL/M	Clay loam	
2-18	10YR 5/2	65%	10YR 5/6	35%	C	PL/M	Clay loam	

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (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) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- 2cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148**)
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	3-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-4
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	terrace	Local relief (concave, convex, none):	Convex	Slope (%):	0-1
Subregion (LRR or MLRA):	LRR:L	Lat:	43.2039337	Long:	-76.1569178
Datum:	WGS84				
Soil Map Unit Name:	NgA: Niagara silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

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?	N	**Is the sampled area within a wetland?** N
Hydric soil present?	Y	
Indicators of wetland hydrology present?	Y	

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

Active cattle pasture

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes		No	X	Depth (inches):	**Wetland Hydrology Present?** Y
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Active cattle pasture

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-4

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		

Sapling/Shrub stratum (Plot size: r = 15')	Absolute % Cover	Dominant Species?	Indicator Staus
1 *Rosa multiflora*	5	Y	FACU
2 *Viburnum dentatum*	3	Y	FAC
3			
4			
5			
6			
7			
8			
9			
10			
	8 = Total Cover		

Herb stratum (Plot size: r = 5')	Absolute % Cover	Dominant Species?	Indicator Staus
1 *Centaurea jacea*	40	Y	FACU
2 *Euthamia graminifolia*	25	Y	FAC
3 *Plantago lanceolata*	15	N	FACU
4 *Festuca rubra*	10	N	FACU
5 *Solidago rugosa*	5	N	FAC
6 *Prunella vulgaris*	3	N	FAC
7 *Fraxinus nigra*	2	N	FACW
8 *Symphyotrichum lateriflorum*	2	N	FAC
9			
10			
11			
12			
	102 = Total Cover		

Woody vine stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1			
2			
3			
4			
5			
6			
	0 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across all Strata:	4	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	50%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	38	x 3 =	114
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column totals	110 (A)		398

Prevalence Index = B/A = 3.62 (B)

Hydrophytic Vegetation Indicators:

- 1 – Rapid Test for Hydrophytic Vegetation
- 2 – Dominance Test is >50%
- 3 – Prevalence Index is ≤3.0[1]
- 4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? N

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

SOIL Sampling Point: DP-4

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

Depth (In.)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/2	55%	7.5YR 4/6	15%	C	PL/M	Clay loam	
			10YR 5/2	30%	D	M		Depletion

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (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) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- 2cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148)**
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	3-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-5
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	Terrace	Local relief (concave, convex, none):	None	Slope (%):	0-1%
Subregion (LRR or MLRA):	LRR:L	Lat:	43.2044246	Long:	-76.1599653
Datum:	NAD83				
Soil Map Unit Name:	NgA: Niagara silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

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?	N	**Is the sampled area within a wetland?** N
Hydric soil present?	Y	
Indicators of wetland hydrology present?	Y	

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

History of Ag practices

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):
Water table present?	Yes		No	X	Depth (inches):
Saturation present? (includes capillary fringe)	Yes		No	X	Depth (inches):

Wetland Hydrology Present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-5

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		

Sapling/Shrub stratum (Plot size: r = 15')			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	0 = Total Cover		

Herb stratum (Plot size: r = 5')			
1 *Plantago lanceolata*	45	Y	FACU
2 *Festuca rubra*	20	Y	FACU
3 *Centaurea jacea*	15	N	FACU
4 *Agrostis gigantea*	10	N	FACW
5 *Cynosurus cristatus*	8	N	FAC
6 *Juncus tenuis*	8	N	FAC
7 *Euthamia graminifolia*	5	N	FAC
8 *Phleum pratense*	5	N	FACU
9 *Erigeron strigosus*	2	N	FACU
10			
11			
12			
	118 = Total Cover		

Woody vine stratum (Plot size: r = 30')			
1			
2			
3			
4			
5			
6			
	0 = 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%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	21	x 3 =	63
FACU species	87	x 4 =	348
UPL species	0	x 5 =	0
Column totals	118 (A)		431
Prevalence Index = B/A =			3.65 (B)

Hydrophytic Vegetation Indicators:

- 1 – Rapid Test for Hydrophytic Vegetation
- 2 – Dominance Test is >50%
- 3 – Prevalence Index is ≤3.0[1]
- 4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? N

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

SOIL

Sampling Point: DP-5

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

Depth (In.)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-6	10YR 4/2	85%	5YR 3/4	15%	C	PL/M	Clay loam	
6-18	10YR 5/2	60%	7.5YR 5/6	30%	C	PL/M	Clay loam	
			10YR 4/2	10%	C	M		Concentration

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (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) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- 2cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148**)
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	3-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-6
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	Hillslope	Local relief (concave, convex, none):	none	Slope (%):	1-3%
Subregion (LRR or MLRA):	LRR:L	Lat:	43.2051288	Long:	-76.1641796
Datum:	NAD83				
Soil Map Unit Name:	NgA: Niagara silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

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?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y		

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

Historic Ag practices

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
	Drainage Patterns (B10)
	Moss Trim Lines (B16)
X	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	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	15
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	10

Wetland Hydrology Present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-6

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1 *Salix nigra*	15	Y	OBL
2			
3			
4			
5			
6			
7			
8			
	15	= Total Cover	

Sapling/Shrub stratum (Plot size: r = 15')			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	0	= Total Cover	

Herb stratum (Plot size: r = 5')			
1 *Symphyotrichum lanceolatum*	70	Y	FACW
2 *Asclepias incarnata*	8	N	OBL
3 *Scirpus cyperinus*	8	N	OBL
4 *Lythrum salicaria*	5	N	OBL
5 *Iris versicolor*	5	N	OBL
6 *Euthamia graminifolia*	5	N	FAC
7 *Phalaris arundinacea*	3	N	FACW
8 *Epilobium coloratum*	3	N	OBL
9			
10			
11			
12			
	107	= Total Cover	

Woody vine stratum (Plot size: r = 30')			
1			
2			
3			
4			
5			
6			
	0	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across all Strata:	2	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			
OBL species	44	x 1 =	44
FACW species	73	x 2 =	146
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	122 (A)		205
Prevalence Index = B/A =			1.68 (B)

Hydrophytic Vegetation Indicators:

X	1 – Rapid Test for Hydrophytic Vegetation
X	2 – Dominance Test is >50%
X	3 – Prevalence Index is ≤3.0[1]
	4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? Y

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

SOIL Sampling Point: DP-6

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

Depth (In.)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	90%	7.5YR 4/6	10%	C	PL/M	Clay loam	
12-18	10YR 5/3	70%	7.5YR 5/6	15%	C	PL/M	Silty clay loam	
			7.5YR 5/3	10%	C	M		
			2.5YR 5/3	5%	C	M		

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (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) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- 2cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148**)
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	3-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-7
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	terrace	Local relief (concave, convex, none):	flat	Slope (%):	0-1%
Subregion (LRR or MLRA):	LRR:L	Lat:	43.2047967	Long:	-76.1640784
Datum:	NAD83				
Soil Map Unit Name:	NgA: Niagara silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

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?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	Y		
Indicators of wetland hydrology present?	N		

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

Historic Ag practices

HYDROLOGY

Wetland Hydrology Indicators:

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

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? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-7

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		

Sapling/Shrub stratum (Plot size: r = 15')			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	0 = Total Cover		

Herb stratum (Plot size: r = 5')			
1	*Solidago altissima*	65	Y	FACU
2	*Festuca rubra*	20	N	FACU
3	*Lotus corniculatus*	8	N	FACU
4	*Ranunculus hispidus*	5	N	FAC
5	*Juncus tenuis*	5	N	FAC
6				
7				
8				
9				
10				
11				
12				
	103 = Total Cover		

Woody vine stratum (Plot size: r = 30')			
1			
2			
3			
4			
5			
6			
	0 = 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%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	93	x 4 =	372
UPL species	0	x 5 =	0
Column totals	103 (A)		402
Prevalence Index = B/A =			3.90 (B)

Hydrophytic Vegetation Indicators:

- 1 – Rapid Test for Hydrophytic Vegetation
- 2 – Dominance Test is >50%
- 3 – Prevalence Index is ≤3.0[1]
- 4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? N

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

SOIL Sampling Point: DP-7

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

Depth (In.)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 4/2	90%	5YR 3/4	10%	C	PL/M	Clay loam	
13-18	10YR 3/4	60%	7.5YR 4/6	25%	C	PL/M	Silty clay loam	
			10YR 4/1	15%	D	M		

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (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) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- 2cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148**)
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	4-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-8
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	Hillslope	Local relief (concave, convex, none):	Convex	Slope (%):	3-8%
Subregion (LRR or MLRA):	LRR:L	Lat:	43.2037396	Long:	-76.1619318
Datum:	NAD83				
Soil Map Unit Name:	NgA: Niagara silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

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?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	N		
Indicators of wetland hydrology present?	N		

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

spoil pile

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-8

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		

Sapling/Shrub stratum (Plot size: r = 15')			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	0 = Total Cover		

Herb stratum (Plot size: r = 5')			
1	*Centaurea jacea*	60	Y	FACU
2	*Solidago altissima*	20	N	FACU
3	*Festuca rubra*	15	N	FACU
4	*Dactylis glomerata*	10	N	FACU
5	*Solanum carolinense*	3	N	FACU
6				
7				
8				
9				
10				
11				
12				
	108 = Total Cover			

Woody vine stratum (Plot size: r = 30')			
1			
2			
3			
4			
5			
6			
	0 = 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%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	108	x 4 =	432
UPL species	0	x 5 =	0
Column totals	108 (A)		432

Prevalence Index = B/A = 4.00 (B)

Hydrophytic Vegetation Indicators:

- 1 – Rapid Test for Hydrophytic Vegetation
- 2 – Dominance Test is >50%
- 3 – Prevalence Index is ≤3.0[1]
- 4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? N

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

SOIL Sampling Point: DP-8

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

Depth (In.)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/3	90%	5YR 4/6	10%	C	M	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:

- Histisol (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) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- 2cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148**)
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? N

Remarks:

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	4-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-9
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	terrace	Local relief (concave, convex, none):	none	Slope (%):	0-1%
Subregion (LRR or MLRA):	LRR:L	Lat:	43.20382433	Long:	-76.1624142
Datum:	NAD83				
Soil Map Unit Name:	NgA: Niagara silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

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?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y		

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

Historic Ag practices

HYDROLOGY

Wetland Hydrology Indicators:

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

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? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-9

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1			
2			
3			
4			
5			
6			
7			
8			
	0 = Total Cover		

Sapling/Shrub stratum (Plot size: r = 15')			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	0 = Total Cover		

Herb stratum (Plot size: r = 5')			
1 *Juncus tenuis*	30	Y	FAC
2 *Carex vulpinoidea*	20	Y	OBL
3 *Lycopus americanus*	20	Y	OBL
4 *Festuca rubra*	10	N	FACU
5 *Eupatorium perfoliatum*	10	N	FACW
6 *Trifolium repens*	8	N	FACU
7 *Galium palustre*	5	N	OBL
8 *Euthamia graminifolia*	5	N	FAC
9 *Cynosurus cristatus*	5	N	FAC
10 *Agrostis gigantea*	5	N	FACW
11 *Phalaris arundinacea*	3	N	FACW
12 *Spiranthes cernua*	3	N	FACW
	124 = Total Cover		

Woody vine stratum (Plot size: r = 30')			
1			
2			
3			
4			
5			
6			
	0 = Total Cover		

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across all Strata:	3	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	100%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:			
OBL species	45	x 1 =	45
FACW species	21	x 2 =	42
FAC species	40	x 3 =	120
FACU species	18	x 4 =	72
UPL species	0	x 5 =	0
Column totals	124 (A)		279
Prevalence Index = B/A =			2.25 (B)

Hydrophytic Vegetation Indicators:

	1 – Rapid Test for Hydrophytic Vegetation
X	2 – Dominance Test is >50%
X	3 – Prevalence Index is ≤3.0[1]
	4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? Y

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

SOIL Sampling Point: DP-9

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

Depth (In.)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 4/2	80%	7.5YR 5/8	20%	C	PL/M	Clay loam	
9-18	10YR 5/2	55%	5YR 5/8	30%	C	PL/M	Clay	
			10YR 4/2	15%	C	M		

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- Histisol (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) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- 2cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148**)
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Y

Remarks:

WETLAND DETERMINATION DATA FORM - North Central and Northeast Region

Project/Site:	Clinton's ditch	City/County:	Onondaga county	Sampling Date:	4-Sep-2024
Applicant/Owner:	RES	State:	NY	Sampling Point:	DP-10
Investigator(s):	LW,JH	Section, Township, Range:	Clay NY		
Landform (hillslope, terrace, etc.):	terrace	Local relief (concave, convex, none):	none	Slope (%):	0-1%
Subregion (LRR or MLRA):	LRR:L	Lat:	43.2031771	Long:	-76.1609548
Datum:	WGS84				
Soil Map Unit Name:	NgA: Niagara silt loam	NWI Classification:	None		

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

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?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y		
Indicators of wetland hydrology present?	Y		

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

Field Observations:

Surface water present?	Yes		No	X	Depth (inches):	
Water table present?	Yes	X	No		Depth (inches):	10
Saturation present? (includes capillary fringe)	Yes	X	No		Depth (inches):	6

Wetland Hydrology Present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP-10

Tree stratum (Plot size: r = 30')	Absolute % Cover	Dominant Species?	Indicator Staus
1 *Fraxinus nigra*	20	Y	FACW
2 *Salix nigra*	8	Y	OBL
3 *Tilia americana*	5	N	FACU
4			
5			
6			
7			
8			
	33	= Total Cover	

Sapling/Shrub stratum (Plot size: r = 15')			
1 *Rhamnus cathartica*	15	Y	FAC
2 *Rosa multiflora*	5	Y	FACU
3			
4			
5			
6			
7			
8			
9			
10			
	20	= Total Cover	

Herb stratum (Plot size: r = 5')			
1 *Lysimachia nummularia*	30	Y	FACW
2 *Symphyotrichum lanceolatum*	20	Y	FACW
3 *Fraxinus nigra*	10	N	FACW
4 *Persicaria virginiana*	8	N	FAC
5 *Galium palustre*	5	N	OBL
6 *Chelone glabra*	3	N	OBL
7 *Solidago gigantea*	3	N	FACW
8 *Lythrum salicaria*	3	N	OBL
9 *Persicaria punctata*	3	N	OBL
10			
11			
12			
	85	= Total Cover	

Woody vine stratum (Plot size: r = 30')			
1			
2			
3			
4			
5			
6			
	0	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species that are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across all Strata:	6	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	83%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:

OBL species	22	x 1 =	22
FACW species	83	x 2 =	166
FAC species	23	x 3 =	69
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column totals	138 (A)		297
Prevalence Index = B/A =			2.15 (B)

Hydrophytic Vegetation Indicators:

	1 – Rapid Test for Hydrophytic Vegetation
X	2 – Dominance Test is >50%
X	3 – Prevalence Index is ≤3.0[1]
	4 – Morphogical 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 Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? Y

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

SOIL

Sampling Point: DP-10

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

Depth (In.)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	95%	7.5YR 3/4	5%	C	PL/M	Silty clay loam	
6-14	10YR 4/1	92%	7.5YR 4/6	8%	C	PL/M	Silty clay loam	
14-18	7.5YR 5/2	80%	7.5YR 4/6	20%	C	M	Clay	

[1]Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. [2]Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histisol (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) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12)* **(LRR N, MLRA 136)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)***

Indicators for Problematic Hydric Soils[3]*:

- ___ 2cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Y

Remarks:

APPENDIX C
USACE Photolog

DP-001 PEM

Photo 1: (PEM) facing North.

Photo 2: (PEM) facing East.

Photo 4: (PEM) facing West.

Photo 5: (PEM) facing South.

Photo 6: Soil profile.

DP-002 UPL

Photo 1: (UPL) facing North.

Photo 2: (UPL) facing East.

Photo 6: Soil profile.

Photo 4: (UPL) facing West.

Photo 5: (UPL) facing South.

DP-003 PEM

Photo 1: (PEM) facing North.

Photo 2: (PEM) facing East.

Photo 4: (PEM) facing West.

Photo 5: (PEM) facing South.

Photo 6: Soil profile.

DP-004 UPL

Photo 1: (UPL) facing North.

Photo 2: (UPL) facing East.

Photo 4: (UPL) facing West.

Photo 5: (UPL) facing South.

Photo 6: Soil profile.

DP-005 UPL

Photo 1: (UPL) facing North.

Photo 2: (UPL) facing East.

Photo 4: (UPL) facing West.

Photo 5: (UPL) facing South.

Photo 6: Soil profile.

DP-006 PEM

Photo 1: (PEM) facing North.

Photo 2: (PEM) facing East.

Photo 4: (PEM) facing West.

Photo 5: (PEM) facing South.

Photo 6: Soil profile.

DP-007 UPL

Photo 1: (UPL) facing North.

Photo 2: (UPL) facing East.

Photo 6: Soil profile.

Photo 4: (UPL) facing West.

Photo 5: (UPL) facing South.

DP-008 UPL

Photo 1: (UPL) facing North.

Photo 2: (UPL) facing East.

Photo 6: Soil profile.

Photo 4: (UPL) facing West.

Photo 5: (UPL) facing South.

DP-009 PEM

Photo 1: (PEM) facing North.

Photo 2: (PEM) facing East.

Photo 6: Soil profile.

Photo 4: (PEM) facing West.

Photo 5: (PEM) facing South.

DP-010 PFO

Photo 1: (PFO) facing North.

Photo 2: (PFO) facing East.

Photo 4: (PFO) facing West.

Photo 5: (PFO) facing South.

Photo 6: Soil profile.

APPENDIX D
Stream Data Forms and Photographs

Stream Classification Data Form

Stream Name/Code:	S1
Sampling Location:	Youngs Creek Resotration Site
Date/Time:	9/3/2024
Investigators:	JH, LW

Stream Hydrology	
Estimated Flow (gpm)	N/A
Wetted Width (ft)	12 ft
Water Depth (ft)	3 ft

Photos		**GPS Point**
DS	**US**	
X	X	43.204845, -76.161762

Hydrology Source(s)	
X	Spring
	Seep
	Run-off
	Pond

Weather Conditions:		**5-Day Precipitation?**		
X	Sunny		Yes	X
	Partly Cloudy		No	
	Couldy			
	Rain			

Substrate Type(s)	
	Bedrock
	Boulder
	Cobble
	Gravel
	Sand
X	Silt
X	Clay
	Artificial

Watershed Characteristics	
X	Forest
X	Pasture
X	Old Field
X	Open Field
X	Wetland
X	Mixed Used
	Industrial
	Mining
X	Residential

Macroinvertebrate Observations

Other Observations

Channel Embeddedness	
	Completely (100 %)
	Mostly (75 %)
	Halfway (50 %)
x	Little/None (0-33%)

Channel Conditions	
12 ft	Active Width (ft)
N/A	Bed/Banks
N/A	Alluvial Channel
Low	Eroded Channel
N/A	Debris -filled
Med	Terrestrial Vegetation

Recommended USACE JD Status	
	TNW
	RPW
	Non-RPW

Stream Type:	
X	Perennial
	Intermittent
	Ephemeral

Stream Classification Data Form

Stream Name/Code:	S1-A
Sampling Location:	Youngs Creek Resotration Site
Date/Time:	9/3/2024
Investigators:	JH, LW

Stream Hydrology	
Estimated Flow (gpm)	N/A
Wetted Width (ft)	4 ft
Water Depth (ft)	1 ft

Photos		**GPS Point**
DS	**US**	
X	X	43.204530, -76.158815

Hydrology Source(s)	
	Spring
X	Seep
	Run-off
	Pond

Weather Conditions:		**5-Day Precipitation?**		
X	Sunny		Yes	X
	Partly Cloudy		No	
	Couldy			
	Rain			

Substrate Type(s)	
	Bedrock
	Boulder
	Cobble
	Gravel
	Sand
X	Silt
X	Clay
	Artificial

Watershed Characteristics	
X	Forest
X	Pasture
X	Old Field
X	Open Field
X	Wetland
X	Mixed Used
	Industrial
	Mining
X	Residential

Macroinvertebrate Observations

Channel Embeddedness	
	Completely (100 %)
	Mostly (75 %)
X	Halfway (50 %)
	Little/None (0-33%)

Other Observations

Channel Conditions	
4 ft	Active Width (ft)
N/A	Bed/Banks
N/A	Alluvial Channel
Med	Eroded Channel
N/A	Debris -filled
High	Terrestrial Vegetation

Recommended USACE JD Status	
	TNW
	RPW
	Non-RPW

Stream Type:	
	Perennial
	Intermittent
X	Ephemeral

Stream Classification Data Form

Stream Name/Code:	S1-A1
Sampling Location:	Youngs Creek Resotration Site
Date/Time:	9/3/2024
Investigators:	JH, LW

Stream Hydrology	
Estimated Flow (gpm)	N/A
Wetted Width (ft)	2 ft
Water Depth (ft)	2 in

Photos		**GPS Point**
DS	**US**	
X	X	43.205231, -76.156516

Hydrology Source(s)	
	Spring
X	Seep
	Run-off
	Pond

Weather Conditions:		**5-Day Precipitation?**		
X	Sunny		Yes	X
	Partly Cloudy		No	
	Couldy			
	Rain			

Substrate Type(s)	
	Bedrock
	Boulder
	Cobble
	Gravel
	Sand
X	Silt
X	Clay
	Artificial

Watershed Characteristics	
X	Forest
X	Pasture
X	Old Field
X	Open Field
X	Wetland
X	Mixed Used
	Industrial
	Mining
X	Residential

Macroinvertebrate Observations

Channel Embeddedness	
	Completely (100 %)
	Mostly (75 %)
X	Halfway (50 %)
	Little/None (0-33%)

Other Observations

Channel Conditions	
2 ft	Active Width (ft)
N/A	Bed/Banks
N/A	Alluvial Channel
Med	Eroded Channel
N/A	Debris -filled
High	Terrestrial Vegetation

Recommended USACE JD Status	
	TNW
	RPW
	Non-RPW

Stream Type:	
	Perennial
	Intermittent
X	Ephemeral

Stream Classification Data Form

Stream Name/Code:	S1-B
Sampling Location:	Youngs Creek Resotration Site
Date/Time:	9/3/2024
Investigators:	JH, LW

Stream Hydrology	
Estimated Flow (gpm)	N/A
Wetted Width (ft)	12 ft
Water Depth (ft)	1 ft

Photos		**GPS Point**
DS	**US**	
X	X	43.203190, -76.160991

Hydrology Source(s)	
	Spring
X	Seep
	Run-off
	Pond

Weather Conditions:		**5-Day Precipitation?**		
X	Sunny		Yes	X
	Partly Cloudy		No	
	Couldy			
	Rain			

Substrate Type(s)	
	Bedrock
	Boulder
	Cobble
X	Gravel
	Sand
X	Silt
X	Clay
	Artificial

Watershed Characteristics	
X	Forest
X	Pasture
X	Old Field
X	Open Field
X	Wetland
X	Mixed Used
	Industrial
	Mining
X	Residential

Macroinvertebrate Observations

Channel Embeddedness	
	Completely (100 %)
	Mostly (75 %)
X	Halfway (50 %)
	Little/None (0-33%)

Other Observations

Channel Conditions	
2 ft	Active Width (ft)
N/A	Bed/Banks
N/A	Alluvial Channel
Med	Eroded Channel
N/A	Debris -filled
Low	Terrestrial Vegetation

Recommended USACE JD Status	
	TNW
	RPW
	Non-RPW

Stream Type:	
X	Perennial
	Intermittent
	Ephemeral

Photo 1: Stream S1 Perennial, Facing Downstream

Photo 2: Stream S1 Perennial, Facing Upstream

Photo 3: Stream S-1a Ephemeral, Facing Downstream

Photo 4: Stream S-1a Ephemeral, Facing Upstream

Photo 5: Stream S1-a1 Ephemeral, Facing Downstream

Photo 6: Stream S1-a1 Ephemeral, Facing Upstream

Photo 7: Stream S-1b Perennial, Facing Downstream

Photo 8: Stream S-1b Perennial, Facing Upstream

APPENDIX E
Soils Found Within the Study Area

Descriptions of Soils Found Within the Study Area

Soil Series Symbol	Soil Series Description	Soil Series Setting (Landform)	Farmland Classification	Soil Limitations				Hydrologic Soil Group	Hydric Rating
				Depth to Restrictive Features		Natural Drainage Class	Hydric Rating Percentage (%)[2]		
				Depth to Any Soil Restrictive Layer (inches)	Depth to Water Table (inches)				
Cd	Canandaigua mucky silt loam	Depressions	Farmland of statewide importance	>80	0	Poorly drained	95	C/D	Hydric
ChB	Collamer silt loam, 2 to 6 percent slopes	Lake plains	All areas are prime farmland	>80	18-24	Moderately well drained	0	C/D	Non-hydric
NgA	Niagara silt loam, 0 to 4 percent slopes	Lake plains	Prime farmland if drained	>80	6-18	Somewhat poorly drained	7	C/D	Predominantly non-hydric

Notes:

1. Soils data obtained from the following: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed September 2024.
2. Criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.
3. The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:
   a. All Histels except for Folistels, and Histosols except for Folists.
   b. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
      i. 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
      ii. Show evidence that the soil meets the definition of a hydric soil
   c. Soils that are frequently ponded for long or very long duration during the growing season.
      i. 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
      ii. Show evidence that the soil meets the definition of a hydric soil.
   d. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
      i. 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
      ii. Show evidence that the soil meets the definition of a hydric soil

APPENDIX F
Résumés of Personnel Conducting Delineations

Lyndon Watkins

Ecologist II

As an Ecologist with RES. Lyndon routinely performs Waters of the U.S. (WOUS) delineations and perennial stream assessments in Virginia, as well as stream and wetland mitigation monitoring and reporting. Lyndon has experience writing and submitting reports to local, state, and federal environmental agencies, such as the Virginia Department of Environmental Quality (DEQ) and the US Army Corps of Engineers (USACE). Lyndon is a Fisheries professional with four years of applied Wetland Delineation experience and 10 years in the Natural Resources/Environmental Conservation field

AT A GLANCE

Contact
lwatkins@res.us | 518.321.4850

Years' Experience
10 years

Education

- BS, Bachelor's in Fisheries and Aquaculture

Professional Certifications and Training

- First Aid / CPR
- NAACC Certified Observer
- Open Water Diving Certificate

SELECT WORK EXPERIENCE

New York State Department of Environmental Conservation

Served as a Long Term Seasonal Fish and Wildlife Technician. Experience included aiding fisheries surveys including boat and backpack electrofishing, Gillnet, trap net, and angling; assisting in fall egg take of brook trout and lake trout; aged scale and spine samples; performing wetland delineations in accordance with state and federal guidelines; utilizing GIS to create wetland maps and propose wetland map amendments; facilitating pre-application meetings for state environmental permitting with town and county governments; enforcing regulatory actions for Art. 15 and Art. 24 of the Environmental Conservation Law (ECL); utilizing NAACC to inform regulatory actions on protected streams (Art. 15) to local and state municipalities; and executing regulatory compliance inspections.

State University of New York at Cobleskill

Served as an Instructional Support Assistant and was responsible for maintaining field equipment and preparing for field classwork; transporting gear and students to labs and assisting in lab instruction; aiding in the outside instruction of students and supervising student's independent research projects; and instructing students on proper sampling methods and techniques.

New York Aquarium

Served as an Aquarist, maintaining proper care and health of all mechanical systems and live organisms within assigned areas including up to five large saltwater enclosures, both tropical and temperate, and 7 tropical freshwater enclosures. Also spearheaded the breeding program for five endangered African fish species and coral propagation; maintained live food cultures of zooplankton, brine shrimp, and mysid shrimp for larval fish rearing; and supervised volunteers and aided school outreach programs.

Washington Department of Fish and Wildlife

Fisheries Technician responsible for the collection of biological data on Pacific Salmon and Steelhead in the Lower-Mid Columbia River System, CWT (coded wire tags) scale samples. Also observed Commercial Gillnet Fisherman collecting counts of catch and recording data such as drift times, GPS locations and gear specifications; and independently completed stream surveys on foot and by boat on spawning tributaries, collecting basic water quality parameters, completed redd counts, collected biological data and CWTs of all carcasses found.

Pacific States Marine Fisheries Commission

Dam Angler/ Station Attendant responsible for angling for the control of the Northern Pikeminnow in The Dalles Region of the Columbia River and manning a creel station to collect fish from sport reward anglers, hand out payment vouchers and collect biological data.

State University of New York at Cobleskill Fish Hatchery

Served as Assistant Manager maintaining proper care and health of all mechanical systems and live organisms in SUNY Cobleskill's 40,000-gallon cold water hatchery containing 4 species of trout and warm water species such as tilapia, african cichlids, and shellfish. Also managed and trained staff regarding daily operation, maintenance, and troubleshooting of all life support systems; taught and supervised hatchery lab sections on hatchery maintenance, disease, and spawning; conducted daily water quality testing at outlet to ensure released water meets all standards according to SPDES permit.

Jessica Hefferon

Ecologist I

As an Ecologist with RES. Jessica routinely performs Waters of the U.S. (WOTUS) delineations and perennial stream assessments in New York, as well as stream and wetland mitigation monitoring and reporting. Jessica has experience writing and submitting reports to local, state, and federal environmental agencies, such as the New York State Department of Environmental Conservation (NYSDEC) and the US Army Corps of Engineers (USACE). Jessica is an Environmental professional with two years of applied Wetland Delineation experience and 5 years in the Natural Resources/Environmental Conservation field.

AT A GLANCE.

Contact
jhefferon@res.us | 585.802.8154

Years of Experience
5 years

Education
- Wildlife Management, BT, SUNY Cobleskill, 2019

SELECT WORK EXPERIENCE

HUNT-EAS

Served as an Environmental Scientist. Experience included performing wetland delineations in accordance with state and federal guidelines; utilizing GIS to create wetland maps, threatened and endangered species surveys and correspondence with state and federal agencies, jurisdictional determination and permitting applications with state and federal agencies, and Phase I and II reports.

Washington Conservation Corps.

Served as an Assistant Supervisor on the field crew out of Yakima, WA. The field crew focuses on stream restoration within the Yakima Vally. Experience included native tree and shrub planting and maintenance, invasive species removal and management, Firewise and fire prevention practices, post assisted log structures, and stream bank improvement. The job required the use and skill of power tools such as chainsaws, woodchippers and brush cutters. Additionally, as assistant supervisor, Jessica gained leadership and organizational skills.

Louisiana State University

Served as wood duck technician. Experience duck identification skills, PIT tagging, web tagging, egg handling and measurements, handling of hens and ducklings, wood duck box maintenance, aging the hens, and data collection and organization. Additionally, this job required to have the skills to trailer and operate a boat, UTV, and ATV.

Bald Head Island Conservancy

Served as a Sea Turtle Intern. Experience included sea turtle identification skills as well as identifying individual species, PIT tagging, flipper tagging, egg handling, carapace measurements, predator control, public education, and data collection and organization. This job also involved being able to take tissue biopsy samples from each individual nesting sea turtle to be processed in the laboratory. The job involved working through the night both during nesting season as well as hatchling season. Public education included leading a lesson on Loggerhead sea turtles to 30 individuals, as well as larger events open to anyone that could reach crowds of several hundred.