STORMWATER POLLUTION PREVENTION PLAN

Agricola Wind Project

Cayuga County, New York

OCTOBER 2024

PREPARED FOR:

Agricola Wind LLC

PREPARED BY:

Westwood

Stormwater Pollution Prevention Plan (SWPPP) Narrative

Agricola Wind

Cayuga County, New York

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Project Number: R0042617.01
Date: October 29, 2024

Westwood

Table of Contents

Tables

Appendices

1.0 Introduction and Purpose

This Stormwater Pollution Prevention Plan (SWPPP) is prepared in accordance with the New York State Operating Permit for the National Pollutant Discharge Elimination System (NPDES) regulations as established by the Clean Water Act and guided by the State of New York. The New York Department of Environmental Conservation (DEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP) GP-0-20-001 (Expiration date: January 28, 2025) provides the framework of requirements for compliance to discharge stormwater from a construction site disturbing one (1) or more acres at a time. A copy of the GP is provided in Appendix A. The purpose of the SWPPP is to ensure the design, implementation, management and maintenance of Best Management Practices (BMPs) in order to prevent or minimize sediment and other pollutants in stormwater discharges associated with the land disturbance activities; compliance with the New York Water Quality Standards; and compliance with the terms and conditions of the GP.

This SWPPP is for implementation by the Owner and Operator, as listed in Section 3.5 of this SWPPP, at the Agricola Wind Project ("Project"), with the project location as defined in Section 3.1 of this SWPPP. This report shall be on the site at all times during construction.

The following are outlined in this site specific SWPPP:

- Control measures for stormwater pollution prevention during each phase of construction,
- Control measures for stormwater pollution prevention after construction,
- Sources of stormwater and non-stormwater pollution, and
- Inspection and maintenance procedures.

2.0 SWPPP Certifications and Signatures

2.1 Qualified Professional Certification

All components of this SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), including the associated post-construction stormwater management practice component, were prepared by me or under my direct supervision in accordance with the GP.

Signature	Title	Date
Printed Name	Contact Number	Company

Engineer Stamp

2.2 Subcontractor Certification and Signatures

As a subcontractor, you are required to comply with the SWPPP for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer. Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the certification statement in Appendix G.

3.0 Site Information and Description

3.1 Site Location and Vicinity Map

The Agricola Wind Project Site ("Project Site") is located in Cayuga County, New York. The Project Site is located approximately 10 miles south of Auburn, New York, and within the towns of Scipio and Venice. The nearest intersection is State Route 34 and Center Rd. The Project Site is bordered upon the north by Center Rd, upon the south by Bruton Rd, the west by State Route 34 and the east by State Route 38. Refer to Appendix D of this SWPPP for the full vicinity map.

Table 1: Project Location

Latitude and Longitude Points (Decimal) #	
Latitude	42.761667
Longitude	-76.525

3.2 Existing Conditions

The slope and terrain of the Project Site generally consists of a localized higher area with some scattered depressions that generally slopes down to the nearest lake and river. The Project Site currently has stormwater runoff flowing via field conveyances and creeks to the northeast and southwest. The Surface water within the Project Site area discharges to Owasco Lake and Big Salmon Creek to the east and west of the site, respectively.

3.2.1 Non-vegetative Cover

Prior to construction, existing non-vegetative cover within the Project Site includes aggregate/gravel roads and paved highway.

3.2.2 Vegetative Cover

Prior to construction, existing vegetative cover within the Project Site primarily consists of agricultural crops including corn, alfalfa, soybeans, and grassland/pastures. Secondary existing vegetative cover within the Project Site includes deciduous forest and wetlands.

3.2.3 Land Use

Prior to construction, the Project Site was primarily used for agricultural purposes. A Phase 1 Environmental Site Assessment (ESA) for this site was completed, and the report was provided by Ambient Environmental on April 3, 2024. No recognized environmental conditions were found in the report.

3.3 Project Type and Proposed Conditions

The proposed wind energy facility will consist of up to 24 turbines, access roads, and supporting facilities, including a substation, switchyard, and an operation and maintenance (O&M) facility.

3.3.1 Non-vegetative Cover

Post-construction non-vegetative cover within the Project Site will include aggregate access roads and turbine concrete pedestals, a substation pad, a switchyard pad, an Aircraft Detection Lighting System (ADLS) tower, and meteorological (MET) tower foundations.

3.3.2 Vegetative Cover

Post-construction, vegetative cover will be restored to pre-construction conditions, including agricultural land use and crop cover. Areas not returned to agricultural conditions or covered by wind energy facility infrastructure will be restored with grass cover via seeding. Any equivalent seed mixes will be included in the SWPPP as revisions.

3.3.3 Land Use

The proposed land use includes wind energy facility infrastructure consisting of turbines, access roads, a substation, a switchyard, MET towers, and an ADLS tower. Existing agricultural land uses will be restored and returned to pre-construction land use conditions where the permanent wind energy infrastructure is not constructed.

3.4 Project Estimates

Table 2: Project Area Estimates

Project Area	Disturbed Area	Existing Impervious Area	Post-Construction Impervious Area
3989 Acres	370.1 Acres	66.15 Acres	91.3 Acres

Please refer to Appendix E for the engineering plan set for the Project, which depict the tree clearing areas, areas of disturbance and non-disturbance, and existing site contours, water features, and vegetation.

3.5 Owner and Operator(s) Information

Owner Contact Information		Operator Contact Information	
Company:	Agricola Wind LLC	Company:	TBD
Contact Name:	Andy MacCallum	Contact Name:	TBD
Title:	Managing Director	Title:	TBD
Address:	90 State Street Albany, NY 12207	Address:	TBD
Contact Phone Number:	902-877-5622	Contact Phone Number:	TBD
Contact Email:	amaccallum@liberty-renewables.com	Contact Email:	TBD

3.5.1 The Owner or Operator (i.e. permittee) Responsibilities

The permittee responsibilities include:

- Developing a SWPPP prior to submittal of the Notice of Intent (NOI).
- Ensuring the Project specifications allow, or provide for the selection, design, installation, implementation, and maintenance of adequate BMPs in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (New York Standards and Specifications). Any deviations from the New York Standards and Specifications or alternative control devices should be explained in the SWPPP.
- Ensuring the provisions of the SWPPP are implemented from the commencement of construction activity until all areas of disturbance have achieved final stabilization and the Notice of Termination (NOT) has been submitted to DEC.
- Submitting a complete and accurate NOI. A copy of the NOI is provided in Appendix B of this SWPPP.
- Maintaining a copy of the GP, NOI, NOI acknowledgement letter, SWPPP, inspection reports, contractor certification statement(s), and other documentation needed to demonstrate eligibility with the GP at the construction site until all disturbed areas have achieved final stabilization and an NOT has been submitted to DEC. The documents shall be in a secure location and accessible to inspectors during normal business hours.
- Ensuring that construction activity will not disturb greater than 5 acres of soil at any one time without prior written authorization from DEC or, in areas under the jurisdiction of a regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the Owner or Operator of the construction activity). At a minimum, the Owner or Operator must comply with the following requirements to be authorized to disturb for than 5 acres of soil at any one time:
    - Ensuring a qualified trained inspector has performed at least two (2) site inspections in accordance with Part IV.C. of the GP every seven (7) calendar days as long as greater than five (5) acres remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

  - In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures (in conformance with the New York Standards and Specifications) must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased.
  - A phasing plan has been prepared defining the maximum disturbed area per phase and showing required cut and fill activity.
  - Any additional state specific practices have been installed to protect water quality.
  - The above requirements have been included in the SWPPP.
- Keeping the SWPPP current so that it accurately documents the erosion and sediment control practices that are used or will be used during construction, and all post-construction stormwater management practices that will be constructed at the Project Area. At a minimum, the Owner or Operator shall amend the SWPPP, including construction drawings:
  - Whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the site;
  - Whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants;
  - To address issues or deficiencies identified during an inspection by the Qualified Inspector, the Department or other regulatory authority; and
  - To document the final construction conditions.
- Ensuring other contractors affected by modifications in Project specifications are notified in a timely manner to modify their BMPs as necessary for SWPPP compliance, obtaining a contractor certification statement, and making a copy of the SWPPP available.

4.0 Receiving Waters

The table below summarizes the receiving waters from the Project Site. Where necessary the receiving waters has been designated immediate (for the first surface water receiving drainage from the Project Site) and ultimate (for the surface water receiving runoff from Project Site after the immediate receiving waters). The receiving waters listed are located within a mile and receive water from the Project Site discharge location(s).

The western portion of the Project Site drains southwest to Big Salmon Creek via overland flow leading to tributaries and the eastern portion of the Project Site drains northwest to Owasco Lake via unnamed tributaries. Refer to Appendix D for drainage maps, which depict on-site and adjacent surface waters, wetlands, drainage basin boundaries, and discharge locations.

Table 3: Receiving Waters

Name of Receiving Waterbody	Immediate (I) or Ultimate (U)	Type (wetland, lake, stream, ditch)	Impaired? Y/N	Approved TMDL? Y/N	Is the Waterbody On or Off Site?	If Wetland, is it in State or Federal Jurisdiction?
Unnamed Tributaries of Owasco Lake	I	Stream	N	N	On-site	N/A
Unnamed Tributaries of Big Salmon Creek	I	Stream	N	N	On-site	N/A
Owasco Lake*	U	Lake	Y	N	Off-site	N/A
Big Salmon Creek	U	River	N	N	Off-site	N/A

*Owasco Lake is 1.14 miles from the nearest site disturbance limit and is impaired for non-construction related impairments (fecal coliform).

4.1 Impaired and/or TMDL Waters

There are no impaired waterbodies included within the Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy which receive stormwater discharge within 1 mile from the Project Site disturbed area according to the DEC website: https://gisservices.dec.ny.gov/gis/stormwater/ and Current 2018 NYS Section 303(d) List (accessed 04/23/2024).

4.2 404/401 Permit Applicability

The Project will involve the placement of material and fill into jurisdictional waters of the US (WOTUS) therefore section 404 and 401 permit compliance is required for this project.

5.0 Soil Information

Soils present within 3% or more of the Project Site consists of silt loams, mucky silt loams, and gravelly silt loams. These soils primarily belong to Hydrologic Soil Groups (HSGs) B and B/D as well as C/D. HSGs B/D and C/D have moderately low and moderately high runoff potentials when wet, respectively, and high runoff potentials when drained while HSG B has a moderate infiltration rate when thoroughly wet. Comprehensive soil maps are provided in Appendix C. (Source: http://websoilsurvey.nrcs.usda.gov/app/, accessed 04/23/2024).

Table 4: Soil K Factors and Erosivity Hazards

Soil Name / Type	Hydrologic Soil Group	K Factor	Erosivity Hazard				Reason(s) for Erosivity Rating
			Slight	Moderate	Severe	Very Severe	
Alden mucky silt loam, till substratum	C/D	0.28	X				Lack of slope
Conesus gravelly silt loam 3 to 8 percent slopes	B/D	0.32	X				Lack of slope
Honeoye silt loam, 3 to 8 percent slopes	B	0.37		X			Surface kw times slope times R index (0.36)
Honeoye silt loam, 8 to 15 percent slopes	B	0.37		X			Surface kw times slope times R index (0.64)
Kendaia and Lyons soils, 0 to 3 percent slopes	B/D	0.28	X				Lack of slope
Langford channery silt loam, 2 to 8 percent slopes	D	0.24	X				Lack of slope
Lansing gravelly silt loam, 3 to 8 percent slopes	B	0.32	X				Lack of slope
Lima silt loam, 0 to 3 percent slopes	B/D	0.32	X				Lack of slope

Lima silt loam, 3 to 8 percent slopes	B/D	0.32		X			Surface kw times slope times R index (0.12)

Table 5: Soil Particle Sizes

Soil Type	% Sand	% Clay	% Silt	% Site Area
Alden mucky silt loam, till substratum	26.3	51.7	22.0	5.1
Conesus gravelly silt loam 3 to 8 percent slopes	26.0	55.0	19.0	5.3
Honeoye silt loam, 3 to 8 percent slopes	26.0	55.0	19.0	29.7
Honeoye silt loam, 8 to 15 percent slopes	26.0	55.0	19.0	4.6
Kendaia and Lyons soils, 0 to 3 percent slopes	26.0	55.0	19.0	10.9
Langford channery silt loam, 2 to 8 percent slopes	26.0	52.0	22.0	3.1
Lansing gravelly silt loam, 3 to 8 percent slopes	26.0	55.0	19.0	7.1
Lima silt loam, 0 to 3 percent slopes	26.0	55.0	19.0	14.0
Lima silt loam, 3 to 8 percent slopes	26.0	55.0	19.0	10.4

6.0 Construction Information

6.1 Construction Overview

Construction activity will include installation of up to 24 wind turbines. Construction of the wind turbines requires, but is not limited to, the installation of a substation, a switchyard, two (2) meteorological towers, an ADLS tower, an operations and maintenance building, two (2) temporary laydown yards and one (1) temporary concrete batch plant, underground electrical collection, overhead electrical collection, and 16-foot-wide gravel access roads with temporary 36-foot-wide disturbance due to temporary compacted shoulders (10 feet on each side) for truck transport of materials and crane walking paths. Minor construction activity will be necessary for some existing road and radii. The crane paths are specifically designed to follow access roads to limit disturbance of streams and other sensitive areas such as steep slopes and will be approximately 36 feet wide where located away from access roads. All temporary crane paths will be restored to preconstruction conditions after the use of the paths. The SWPPP shall be amended to show locations and disturbance areas as necessary should locations change during construction.

6.2 Construction Activity Description

NOTE: All sensitive areas shall be marked prior to start of earth disturbance activities. If any subsurface drainage features (tile drains, culverts, etc.) and/or surface drainage features (ditches, etc.) are altered during construction, they will be restored to pre-construction conditions and drainage patterns. Restoration work will be coordinated with the landowner.

1. Access road construction activity and phasing:
    a. Apply perimeter sediment controls and temporary stabilization of ditch (erosion control blanket or turf reinforcement mat).
    b. Strip and stockpile topsoil along one or both sides of the road in a linear berm.
    c. Compact subgrade.
    d. Place geotextile underlayment and apply gravel base.
    e. Decompact soils following turbine erection.
    f. Apply topsoil for non-aggregate areas during final grade.
    g. Apply final gravel cap to road.
    h. Maintain pre-construction drainage patterns and runoff.
    i. If any subsurface and/or surface drainage features are altered during construction, restore to pre-construction condition and drainage patterns.
    j. Return disturbed areas not part of the final road to pre-construction condition.

2. Turning radii and temporary intersections construction activity and phasing:
    a. Apply perimeter sediment controls and temporary stabilization of ditch and banks of road (erosion control blanket or turf reinforcement mat).
    b. Install culvert as called for in plan.

c. Strip and stockpile topsoil.
d. Fill with native material to grade.
e. Apply gravel base.
f. Remove turning radii improvements following turbine component delivery or turbine erection by removing gravel and fill soils.
g. Remove any extra culvert lengths.
h. Reapply topsoil and final grade.
i. Apply seed and erosion control blanket, TRM, or mulch cover for restoration to pre-construction condition.

3. Turbine Area construction activity and phasing:

a. Install silt fence at the perimeter as necessary and as shown on the plans.
b. Strip and segregate topsoil; apply topsoil in a soil berm around the down grade perimeter of the turbine pad area.
c. Excavate areas required for the foundation and stockpile the subsoils.
d. Dewater accumulated ground water or stormwater via pump as necessary, dewatering bag and ensure discharged water does not contribute sedimentation to receiving waters.
e. Provide temporary stabilization measures (mulch, erosion control blanket and turf re-enforcement mat).
f. Temporarily cover the stockpiles with hydromulch or other temporary cover BMP for water and wind erosion protection.
g. Construct concrete washout area or use a common concrete washout during concrete work of mud mat and foundation work.
h. Backfill subsoils and topsoil with a rough grade.
i. Grade crane pad turbine erection.
j. Erect the turbine.
k. Return disturbed areas not part of the final road to pre-construction condition.

5. Electrical Underground construction activity and phasing:

a. Open trench or plow collection line across fields; if drain tile is encountered, locate and repair/restore as necessary.
b. Segregate topsoil from subsoils unless otherwise agreed upon by the landowner.
c. If required, dewater accumulated ground water or stormwater via pump and dewatering bag, and ensure discharged water does not contribute sedimentation to receiving waters.
d. If open trenching or plowing through a waterway or conveyance, install perimeter control such as logs, silt fence or rock check.
e. Apply seed and erosion control blanket or mulch to restore grass waterway to pre-construction condition.

6. Horizontal directional drilling and jack boring:

a. Call 811 to verify dig location for safety compliance.
b. Generate traffic control plan, flagging operations and confirm points of entry and egress.
c. Contractor should submit an accidental release/frac out plan to site safety manager for review to include all SDS information and excess drilling fluid/ contaminated material disposal.
d. Walk area to verify bore entry and exit points.
e. Contractor to verify all soil conditions and regulations pertaining to waters of the state, apply all mitigation measures i.e. buffer zones etc.
f. Install silt fence and other sediment controls as necessary along downgradient perimeter as detailed in the plans.
g. Implement track out controls and mitigation as needed throughout boring operations to maintain pedestrian right of ways, if applicable.
h. Verify spill prevention control and countermeasures prior to commencement of boring operations.
i. Remove topsoil layer, stockpile, and stabilize soils in accordance with project plan details within secured area.
j. Excavate bore pit, stockpile subsoils, and stabilize in accordance with project plan details within secured area separated from topsoil pile.
k. Utilize drip trays under drilling equipment.
l. Install delineations/barricades at the end of each shift to prevent pedestrian and animal access.
m. Upon completion of bore, stabilize the area as shown on the project plans.
n. Perform general housekeeping to remove all excess materials and refuse.
o. BMPs should be inspected, maintained, and remain in place until final stabilization is achieved.
p. Upon achieving final stabilization, remove all temporary BMPs.

7. Laydown Yard construction activity and phasing:

a. Provide stable accesses to area; install culverts as necessary and according to the plans for the accesses.
b. Install silt fence and other sediment controls as necessary and as detailed in the plan.
c. Strip and stockpile topsoil around the up-gradient perimeter of the lay down yard for a diversion of water or downgrade perimeter of the yard for runoff control.
d. Apply rock base to designed thickness.
e. Temporarily cover the stockpiles with hydromulch or wood after seeding with temporary seed mix.
f. Provide necessary secondary containment, secure storage and maintenance activities during operation.
g. Remove rock; decompact and reapply topsoil to the area after the lay down yard is no longer needed.
h. Return disturbed areas to preconstruction condition which may include applying seed and mulch cover for restoration.

8. Batch Plant construction activity and phasing:

    a. Provide stable accesses to area; install culverts as necessary and according to the plans for the accesses.
    b. Install silt fence and other sediment controls as necessary and as detailed in the plan.
    c. Strip and stockpile topsoil around the up-gradient perimeter of the plant yard for a diversion of water or downgrade perimeter of the yard for runoff control.
    d. Apply rock base to designed thickness.
    e. Temporarily cover the stockpiles with hydromulch or wood mulch after seeding with temporary seed mix.
    f. Provide necessary secondary containment, secure storage and maintenance activities during operation.
    g. Provide a designated and contained concrete washout area as per detail and SWPPP specifications; properly dispose of washout water or recycle as needed.
    h. Sample all discharges from concrete batch plant area.
    i. Provide dust control and material control as required.
    j. Remove rock; decompact and reapply topsoil to the area after the batch plant is no longer needed.
    k. Return disturbed areas to preconstruction condition which may include applying seed and mulch cover for restoration.

9. Met Tower / ADLS construction activity and phasing:

    a. Apply perimeter sediment controls.
    b. Strip and stockpile topsoil along one or both sides of the access road and tower area in a linear berm.
    c. Compact subgrade.
    d. Apply gravel base to tower access.
    e. Following tower erection the soils should be decompacted.
    f. Apply topsoil during final grade.
    g. Apply final gravel cap to tower access.
    h. Maintain pre-construction drainage patterns and runoff.
    i. Return disturbed areas not part of the final road or tower area by applying seed and mulch cover for restoration to pre-construction condition.

10. Collector Substation / Switchyard construction activity and phasing:

    a. Provide stable accesses to area; install culverts as necessary and according to the plans for the accesses.
    b. Install silt fence and other sediment controls as necessary and as detailed in the plan.
    c. Strip and stockpile topsoil around the up-gradient perimeter for a diversion of water or downgrade perimeter of the substation for runoff control.

d. Apply rock base to designed thickness.
e. Temporarily cover the stockpiles with hydromulch or wood mulch after seeding with temporary seed mix.
f. Concrete washout area needed prior to concrete work.
g. Construction of electrical components and fencing.
h. Return disturbed areas not part of the final gravel pad to agricultural condition or apply seed and mulch cover for restoration to preconstruction condition.

11. Electrical Overhead construction activity and phasing:

a. Access structure areas from public roads or through the established right-of-way.
b. Avoid vehicle traffic through swales, waterways and wetlands.
c. Selectively remove vegetation only necessary to complete construction activity.
d. Stockpile spoil piles or other soil/material out of the ditch areas and provide fiber logs for perimeter sediment control.
e. If the structure foundation area accumulates water, dewater to existing vegetated area or use dewatering bags to control discharge of sediment.
f. Backfill material around the structure.
g. Return disturbed areas to agricultural condition and operational control of the farmer or apply seed and mulch cover for restoration to pre-construction condition.

12. Operation and Maintenance Facility construction activity and phasing:

a. Provide stable accesses to area; install culverts as necessary and according to the plans for the accesses.
b. Install silt fence and other sediment controls as necessary and as detailed in the plan.
c. Strip and stockpile topsoil around the up-gradient perimeter for a diversion of water or downgradient perimeter of the area for runoff control.
d. Temporarily cover the stockpiles with hydromulch or straw mulch after seeding with temporary seed mix.
e. Install concrete washout area prior to concrete work.
f. Concrete work and building construction.
g. Apply rock base to designed thickness.
h. Apply rock base for parking areas as designed.
i. Provide mulch and seed or blanket and seed following final grade.

6.3 Construction Activity Sequence and Estimated Dates

Table 6: Project Schedule

Activity	Start Date	End Date
Overall Project	10/01/2026	12/31/2027
Installation of Stormwater Controls / BMPs	TBD	TBD
Temporary Laydown / Staging and Batch Plant	TBD	TBD
Grading Activity	TBD	TBD
Access Roads	TBD	TBD
Turbine Pads / Turbine Erection	TBD	TBD
Underground Collection (Electrical) and Horizontal Drilling	TBD	TBD
Crane Walk Paths	TBD	TBD
Meteorological Towers / ADLS Tower	TBD	TBD
Collector Substation	TBD	TBD
Switch Yard	TBD	TBD
Overhead Collection / Electrical	TBD	TBD
Operation and Maintenance Facility	TBD	TBD
Turning Radius and Temporary Road	TBD	TBD
Final Restoration	TBD	TBD
Notice of Termination	12/31/2027	

6.4 Project Phasing

Project activities will be completed using a phasing method. Activities will begin with tree and shrub clearing and then will move to construction of laydown yards, access roads, and facility foundations / equipment pads.

Erosion/sedimentation control BMPs are installed prior to or concurrent with disturbance activities. BMPs will be installed and maintained throughout the project as needed. First, laydown areas will be graded and stabilized with aggregate base. Excavations and foundations will then begin. Roads and turning radius will be graded and constructed. Underground collections will be installed. Crane paths and turbine erection will follow. Safety and site cleanliness will be emphasized through the entirety of the project, while site cleanup and restoration of disturbances will be ensured once construction is complete.

6.5 Stormwater Team and Project Contacts

Table 7: Stormwater Team and Project Contacts

Company*	Name or Position	Responsibility	Contact Number
Agricola Wind LLC	Andy MacCallum	Site Development	902-877-5622
TBD	TBD	Tree Clearing	TBD
TBD	TBD	Temporary Laydown / Staging and Batch Plant	TBD
TBD	TBD	Access Roads	TBD
TBD	TBD	Turbine Pads / Turbine Erection	TBD
TBD	TBD	Underground Collection (Electrical)	TBD
TBD	TBD	Crane Walk Paths	TBD
TBD	TBD	Meteorological Towers	TBD
TBD	TBD	Interconnect / Substation	TBD
TBD	TBD	Overhead Collection / Electrical	TBD
TBD	TBD	Project Environmental Contact	TBD
TBD	TBD	Routine SWPPP Inspections	TBD
Westwood Surveying and Engineering, P.C.	Aaron Mlynek, CPESC	SWPPP development	952-697-5710
TBD	TBD	Restoration	TBD
TBD	TBD	BMP installation	TBD
TBD	TBD	BMP Maintenance	TBD

*All contractors and subcontractors identified above should sign a copy of the Certification Statement in Appendix G.

The owner or operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed.

7.0 Additional Site or Project Considerations

7.1 Chemical Treatments

No polymer or other chemicals may be used without written approval from the DEC.

At the time of SWPPP completion the use of chemical additives or polymers for purposes of sediment flocculation are not anticipated for this project. If, during construction, flocculation treatment becomes needed based on construction sequencing, construction methods or weather conditions the following table shall be updated for documentation and written approval from DEC shall be attached to the SWPPP. Additionally, the plan sets shall be updated to reflect the locations of flocculation use. Document the changes as an amendment in this narrative.

Table 8: Flocculation Plan Summary

Flocculation Chemical	Application Location	Primary Soil Types	Settling BMPs Used	Application Method	Receiving Water	Mfr Dosing Rate

7.2 Endangered or Threatened Species

Potential endangered and threated species within the Project Site were reviewed and summarized for the Project by EDR. The results of these surveys were reviewed during preparation of this SWPPP, and any recommendations were considered. Construction activities, including implementation of stormwater control measures, are not anticipated to affect identified species of concern.

The reports summarizing findings for endangered and threatened species may be available upon request.

7.3 Cultural Resources

Archaeological and cultural resources surveys were completed for the site by EDR. The results of these surveys were reviewed during preparation of this SWPPP, and avoidance areas were incorporated into the project design. Construction activities, including implementation of stormwater control measures, will not take place within the avoidance areas.

If relevant to stormwater BMP design, implementation, inspection, or maintenance, the reports summarizing findings for cultural resources may be included in Appendix H.

7.4 Invasive Species Control Plan

Construction activities will result in soil disturbance which has the potential to spread or introduce invasive species to the Project Area. An Invasive Species Management and Control Plan (ISMCP) will be developed to prevent the spread of invasive species throughout the Project Area. The ISMCP would include the proposed control procedures for current and introduced invasive

populations, locating and identification of target species, construction equipment and material inspection protocols, equipment cleaning operations, invasive monitoring, and Project Area restoration activities. This plan was pending at the time of SWPPP completion. This section will be updated as the plan becomes available.

Post-construction monitoring for invasive will be conducted over a period of at least five years following the completion of construction and restoration activities.

8.0 Stormwater Management

8.1 Temporary Practices

It is not anticipated that temporary stormwater management practices, such as sediment basins, will be required during construction. Please note that all contiguous disturbances draining to a common point should be less than 5 acres at any given time to avoid the need for temporary practices. For larger disturbed areas, such as the laydown yards or batch plant, stabilization of exposed areas with aggregate shall be staged so that total contiguous exposed areas are under the 5-acre threshold. However, construction of the proposed infiltration basin will begin during and will include temporary BMPs. Refer to section 8.2 below for more information.

8.1.1 Calculations

Basin ID	Storm Frequency	Rainfall Amount	Runoff Area	Provided Storage Volume
Substation	2 yr. / 24 hr.	2.37”	4.2 Acres	0.80 ac ft.
POI/Switchyard	2 yr. / 24 hr.	2.37”	4.2 Acres	0.75 ac ft.

8.2 Permanent Practices

The owner or operator of a construction activity that requires post-construction stormwater management practices must select, design, install, and maintain the practices to meet the performance criteria in the New York State Stormwater Management Design Manual, dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices (SMPs) are not designed in conformance with the performance criteria in the Design Manual, the owner or operator must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standard.

In accordance with Part I.C.2 of the GP, the post-construction stormwater management practices proposed for the project meet Sizing Criteria for New Development and are in conformance with the New York State Stormwater Management Design Manual, dated January 2015.

In accordance with the New York State Stormwater Management Design Manual, the following post-construction stormwater management practices will be implemented to reduce runoff, meet pollutant removal goals, prevent overbank flooding, reduce erosion in channels, and control extreme flood events. Proposed SMPs include an infiltration basin next to the proposed substation and O&M pad and diversion swales to reroute clean water along roadways. Another measure includes a filtration basin next to the switchyard. These stormwater management practices were chosen to improve the water quality by removing pollutants from small, frequent storm events that typically contain higher concentrations of pollutants. The state of New York utilizes the Water Quality Volume (WQv), which is defined as the volume of runoff generated from the entire 90th percentile rain event, to choose the most effective stormwater management practices to capture and treat 90% of each 24-hour rain event.

Once construction activity is completed, temporary measures can be removed or converted for final conditions. Construction of the filtration and infiltration basin should be complete and follow the design specifications listed below.

POST-CONSTRUCTION BASIN SUMMARY TABLE

	REMOVE			REVISED EOF		
FINAL BASN TYPE	SKIMMER	RISER	CULVERT	ELEVATION (FT)	WIDTH (FT)	COMMENTS
DETENTION	X	X	-	-		
WET	X	-	-	-		
INFILTRATION	X	X	X	-		
FILTRATION	X	X	X	-		

NOTE: BAFFLES TO BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND SITE STABILIZATION IS ACHIEVED.

The proposed substation, switchyard, and O&M building will be constructed on a pad. Runoff from this pad is designed to flow into proposed diversions swales.

Roads are to be treated using wet swales downstream of impervious areas. Access roads that have a significant amount of upstream runoff will have diversion swales in order to route this runoff around the wet swales.

8.2.1 Calculations

Refer to the Preliminary Hydrology Study completed by Westwood Surveying and Engineering, P.C., dated 07/21/2023.

Refer to the Stormwater Management Memo for SMP design calculations completed by Westwood Surveying and Engineering, P.C., dated 10/04/2024.

8.3 Post Construction Operation and Maintenance Procedures

In accordance with the SPDES General Permit, the SWPPP shall include a maintenance schedule to achieve continuous and effective operation of each post-construction erosion and sediment control practice and stormwater control practice. The Owner/Operator shall at all times properly operate and maintain stormwater controls. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures as well as operation and maintenance of all facilities, systems of treatment, systems of control, and related appurtenances that were installed as a requirement of the SWPPP.

The following person, company or entity is responsible for the long-term operation and maintenance of the permanent stormwater facilities for the Project.

Entity or Organization: _____

Contact Name: _____

Street address: _____

City, state, zip: _____

Email: _____

The following procedures, which include the maintenance requirements found in the NYSDEC "Maintenance Guidance – Stormwater Management Practices" ("NYSDEC Maintenance Guidance," dated March 31, 2017) for the proposed facilities, constitute the post-construction operation and maintenance plan for the facility. The long-term controls specific to the facility shall be inspected using the NYSDEC Maintenance Guidance checklists provided in Appendix F.

1. Level 1 Inspection & Maintenance: A Level 1 Inspector (owner/management representative familiar with the site) shall inspect the Project Site at least annually; however it is recommended that inspections be conducted twice per year for the first five (5) years after construction, including after at least one significant rain event and snow melt. These controls include:
   - Swales
   - Ponds and Wetlands

   In addition to the items specified in the NYSDEC Maintenance Guidance, the following site features should be observed during the Level 1 Inspection:
   - Inspect for breaches and bare spots and repair as necessary.
   - Remove built-up sediment prior to it exceeding a depth greater than 6 inches and dispose in accordance with all applicable waste disposal regulations.
   - Limit vegetation growth to a maximum height of 18 inches.
   - Remove all trash and debris as necessary and dispose in accordance with all applicable regulations.

2. Level 2 or 3 Inspection & Maintenance: If significant issues are observed during the Level 1 Inspection, a Level 2 Inspection may be required. The Level 2 Inspector is typically a landscape contractor or similar trained in stormwater management, inspection, and maintenance. A Level 2 inspection would typically be triggered by the following observations during the Level 1 Inspections:
   - Swales
   - Bare soil, signs of erosion
   - Presence of trash, grass clippings, mulch, or other materials
   - Dying or stressed vegetation
   - Buildup of materials at inlets
   - Ponds and Wetlands:
   - Severe erosion
   - Excessive algae or aquatic plants
   - Settlement and pipe corrosion

- Major sediment build-up

Please refer to the sheets titled "Level 2 Inspections and Triggers for Level 3" for additional guidance.

For issues that cannot be fixed with routine maintenance or minor repair (such as an improperly sized control) a Level 3 Inspection will be required. A Level 3 Inspector is a Professional Engineer or similarly licensed professional.

Inspection and maintenance of long-term stormwater controls will be the responsibility of the facility operator. Routine maintenance activities, such as vegetation control and trash removal, shall be accounted for in annual planning and budgeting and performed on a regular basis. Non-routine maintenance (such as large-scale repairs or installation of new stormwater practices) shall be implemented as soon as possible while adhering to good engineering practices, at the discretion of the Level 3 professional.

Note that this plan shall be updated, as necessary, to include all permanent stormwater management structures listed on the NOI. The plan shall include the operation and maintenance procedures necessary for the structures to function as designed after final stabilization, as described in the GP.

9.0 Temporary and Permanent BMPS

9.1 Soil Management and Compaction Minimization

After clearing and grubbing, the operator(s) should strip and stockpile topsoil material for reapplication on all future permanent pervious surface areas. During development, grading and utility construction the subsoils will be compacted as necessary for construction using typical excavation and backfill techniques. During final grade, reapplication of the preserved topsoil should be completed by a wide-pad dozer and other equipment to minimize compaction of the topsoil material. The operator(s) should restrict vehicle and equipment use to avoid soil compaction where feasible; or techniques such as ripping the soil for decompaction should be completed following topsoil placement and prior to reseeding or other restoration activity. Additional deep ripping and decompaction information can be referenced in Appendix E in the "Deep Ripping and Decompaction" guidance dated April 2008 (as updated) drafted by New York State Department of Environmental Conservation.

9.2 Natural Buffers and No-disturbance Areas

9.2.1 Natural Buffers

An undisturbed buffer zone should be preserved for site perimeters or around surface waters contained within the Project Site as feasible. Buffers will be used in environmentally sensitive site areas. The use of linear sediment controls will be installed upgradient to provide sediment control and delineate the buffer. Refer to the site erosion and sediment control plans for the location of the buffer. Typical buffer widths are summarized below in the table. The following activities are prohibited from taking place within the buffer area:

- Placing stockpiles and/or sediment basins;
- Disturbing vegetation;
- Placing construction material; and
- Storing gas, oils, and other potential polluting material.

Table 9: Buffer Widths

Land Slopes (%)	Minimum Filter Strip Width (Feet)
Less than or equal to 10	50
20	60
30	85
40	105
50	125
60	145
70	165

9.2.2 No-disturbance Areas

Environmental Sensitive Areas are identified in the civil plans (see Appendix E). No ground disturbing activities (e.g., grading, excavation, grubbing, or incidental disturbance from vehicle

traffic, etc.) are allowed in these areas. Wetlands are not to be encroached with machinery and wetlands are to be protected.

9.3 Erosion Prevention Practices

The following controls are anticipated to minimize soil loss from the construction site area. The controls should help to minimize soil from being transported from water and wind as well as aide in establishment of temporary and permanent vegetation. Prior to grading and during clearing and grubbing, the areas of vegetation preservation, buffers and other areas of no-disturbance should be flagged, staked, or otherwise delineated.

9.3.1 Soil Stabilization Timing

Soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased.

Table 10: Erosion Controls

Potential BMPs	Construction Phase or Activity								Application Notes
	Temp Laydown/Batch	Access Roads	Turbine Pads / Erection	UG Collection	Met Towers	Collector Substation and Switch Yard	OH Electrical	O&M Facility	
Construction Phasing	T	T	T	T	T	T	T	T	Minimize soil disturbance, as feasible, per phase. Stake/flag areas that are to be left undisturbed.
Protecting Vegetation (buffers)	T	T	T	T	T	T	T	T	Minimize soil disturbance, as feasible. Stake/flag vegetated areas that are to be left undisturbed.
Proposed Riparian Buffers	T	T	T	T	T	T	T	T	Minimize soil disturbance, as feasible. Stake/flag areas that are to be left undisturbed.
Surface Roughing	T	T	T	T	T	T	T	T	Use tracked equipment perpendicular to contour on steep slopes for temp/short term erosion control.
Mulching	P	P	P	P	P	P	P	P	Apply at two tons / acre. Crimp or otherwise secure to soil. Weed Free mulch should be used.
Anchored Stabilization Matting	P	P	P	P	P	P	P	P	Potential type of blanket could include biodegradable netting. Install per manufacturer's recommendations.

Hydromulch	P	P	P	P	P	P	P	P	Apply at a rate recommended from the material or product supplier for the specific application from two directions to prevent shadowing. Could use in lieu of mulch.	
Temporary Seed Mix	P	P	P	P	P	P	P	P	Application Rate = See below	Prepare soil prior to seeding.
Permanent Seed Mix	P	P	P	P	P	P	P	P	Application Rate = See below	Broadcast and rake seed into soil prior to mulch or blanket.

T= Temporary BMPs which will be removed following construction completion and final stabilization.

P= Permanent BMPs which will provide vegetative, non-vegetative stabilization or will not be removed following completion of construction.

For temporary and permanent vegetation of the site, the following approved General Seed Mix from the New York Standards and Specifications may be used:

Mix #6			
Creeping red fescue	Ensylva, Pennlawn, Boreal	20	.45
Chewings Fescue	Common	20	.45
Perennial ryegrass	Pennfine, Linn	5	.10
Red Clover	Common	10	.45
*General purpose erosion control mix. Not to be used for a turf planting or play grounds.			

General Seed Mix:	Variety	lbs./ acre	lbs/1000 sq. ft.
Red Clover[1] OR	Acclaim, Rally, Red Head II, Renegade	8[2]	0.20
Common white clover[1]	Common	8	0.20
PLUS			
Creeping Red Fescue	Common	20	0.45
PLUS			
Smooth Bromegrass OR	Common	2	0.05
Ryegrass (perennial)	Pennfine/Linn	5	0.10
[1] add inoculant immediately prior to seeding [2] Mix 4 lbs each of Empire and Pardee OR 4 lbs of Birdsfoot and 4 lbs white clover per acre. All seeding rates are given for Pure Live Seed (PLS)			

Pure Live Seed, or (PLS) refers to the amount of live seed in a lot of bulk seed. Information on the seed bag label includes the type of seed, supplier, test date, source of seed, purity, and germination. Purity is the percentage of pure seed. Germination is the percentage of pure seed that will produce normal plants when planted under favorable conditions.

Alternative seed mixes may be selected for specific site features for the New York Standards and Specifications, pages 4.42-4.47.

9.4 Soil Restoration Practices

Following construction activities, disturbed soils will be restored in accordance with Table 4.6 of the New York Standards and Specifications, shown below.

Table 4.6
Soil Restoration Requirements

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only - no change in grade	HSG A&B	HSG C&D	Protect area from any ongoing construction activities.
	Apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A&B	HSG C&D	
	Aerate* and apply 6 inches of topsoil	Apply full Soil Restoration**	
Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls)	Apply full Soil Restoration (decompaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.		

* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.
** Per "Deep Ripping and De-compaction, DEC 2008".

9.5 Sediment Control Practices

The following controls are anticipated to minimize sediment discharge, capture sediment in suspension and minimize sedimentation off site.

Table 11: Sediment Controls

Potential BMPs	Construction Phase or Activity								Application Notes
	Temp Laydown/Batch Plant/Borrow Pit	Access Roads	Turbine Pads / Erection	UG Collection	Met Towers	Collector Substation and Switch Yard	OH Electrical	O&M Facility	
Silt fence	T	T	T	T	T	T	T	T	Machine sliced install w/ wood posts at six foot spacing. Install perimeter silt fence prior to

									downgradient soil disturbance.
Fiber rolls	T	T	T	T	T	T	T	T	Install on contour, minimum of nine-inch roll, wood, or straw fiber. Secure with two inch posts every two feet on center.
Topsoil Berms	T	T	T P			T P	T P	T P	Side slopes of 3:1 with at least one foot height. Use temporary erosion control to stabilize berm.
Rock Checks (Rock Dam)	T P	T P	T P	T P	T P	T P	T P	T P	See detail in plan set.

T= Temporary BMPs which will be removed following construction completion and final stabilization.

P= Permanent BMPs which will provide vegetative, non-vegetative stabilization or will not be removed following completion of construction.

9.6 Run-on and Runoff Controls

The following controls are anticipated to minimize scour, transport water across or down steep slopes or critical areas, divert clean water, and / or provide temporary conveyances to maintain drainage.

Table 12: Run-on and Runoff Controls

Potential BMPs	Construction Phase or Activity								Application Notes
	Temp Laydown/Batch Plant/Borrow Pit	Access Roads	Turbine Pads / Erection	UG Collection	Met Towers	Collector Substation and	OH Electrical	O&M Facility	
Riprap Apron / Energy Dissipation	T	P				P		P	See detail in plans. Install within twenty-four hours of connection to surface waters.
Earth Dike (diversion berm)	T P	T P	T P	T P	T P	T P	T P	T P	See detail, use temp erosion control to stabilize berm. Install prior to disturbing down gradient areas.
Culvert Protection	T P	T P		T P		T P		T P	See details in plan set. Install within twenty-

									four hours of installation of culverts.
Temporary Sediment Basin		T				T		T	See Section 8.1 of this SWPPP
Temporary Swale	T	T	T	T	T	T	T	T	See details in plan set.
Streambank Protection	T	T	T	T	T	T	T	T	See details in plan set.
Wet / Dry Swale	P	P	P	P	P	P	P	P	See details in plan set.
Water bars	T P	T P	T P	T P	T P	T P	T P	T P	See details in plan set.
Drainage Swale	P	P	P	P	P	P	P	P	See details in plan set.
Riprap Slope	P	P	P	P	P	P	P	P	See details in plan set.
Perimeter Dike / Swale	T P	T P	T P	T P	T P	T P	T P	T P	See details in plan set.

T= Temporary BMPs which will be removed following construction completion and final stabilization.

P= Permanent BMPs which will provide vegetative, non-vegetative stabilization or will not be removed following completion of construction.

9.7 Tracking Controls

The following controls are anticipated to minimize or prevent sediment track-out from construction site exits to paved surfaces or to retrieve material tracked onto paved surfaces to minimize or prevent the material from being washed into surface waters or stormwater inlets.

Table 13: Tracking Controls

Potential BMPs	Construction Phase or Activity								Application Notes
	Temp Laydown/Batch	Access Roads	Turbine Pads / Erection	UG Collection	Met Towers	Collector Substation and Switch Yard	OH Electrical	O&M Facility	
Rock Pad (stabilized construction entrance)	T	T				T		T	See detail in plans. Install at all site exits prior to grading. Maintain for duration of project.
Construction Road Stabilization	T	P	P		P	P			See detail and notes in plans.
Street Scraping	T	T	T	T	T	T	T	T	Scrape large clumps/amounts of

									material with soft tracked or wheeled equipment prior to sweeping.
Street Sweeping	T	T	T	T	T	T	T	T	Sweep paved surfaces within twenty-four hours of discovery.

T= Temporary BMPs which will be removed following construction completion and final stabilization.

P= Permanent BMPs which will provide vegetative, non-vegetative stabilization or will not be removed following completion of construction.

9.8 Dewatering and Basin Draining Practices

The Project is not anticipated to have site dewatering occur. However, if it should be necessary, it will be performed in accordance with the SDDANR standard specifications described below.

Dewatering of turbid water (water that is visibly cloudy or brown in color) should be discharged via pump and hose or overland flow (via temporary ditch or grade cuts) to a temporary sediment basin for pretreatment. The use of riprap apron (energy dissipation) should be used for the discharge location. If riprap is not used, an alternative form of energy dissipation should be used to prevent scour and re-suspension of soil at the discharge point of the hose. If discharge to a temporary sediment basin is not feasible, the use of dewatering dumpsters, dewatering bags or other prefabricated product should be used. The use of rock checks, erosion control blanket, and sumps or traps shall be considered for overland flow dewatering. After the use of BMPs, the water could be discharged through a vegetated buffer and energy dissipation. The inspector or contractor should complete the table below for documentation during construction. The discharge of water from the site should be visibly clear in appearance.

The discharge of accumulated water should not:

- Contain oil, grease, a sheen, odor, or concrete washout (use an oil-water separator or suitable filtration device is material is found);
- Adversely impact adjacent properties with water or sediment;
- Adversely impact surface waters;
- Cause erosion of slopes and channels;
- Cause nuisance conditions; or
- Contribute to inundation of wetlands which negatively impact the wetlands.

9.9 Alternative Design Elements

The stormwater control measures proposed in this SWPPP have been selected and designed, and will be implemented, in accordance with the New York Standards and Specifications. No alternative controls or other deviations from the standards are proposed to be implemented during construction activities.

9.10 Winter Stabilization Practices

For work performed between November 15th and April 1st, the winter stabilization practices presented on page 2.38 of the New York Standards and Specifications will be implemented. These

practices include measures to prevent erosion during melt events and protect existing erosion and sediment control BMPs.

If the Project Site will not have earth disturbing activities ongoing during the winter season, all bare exposed soil must be stabilized by establishing vegetation, straw or other acceptable mulch, matting, rock, or rolled erosion control product. Seeding of areas with mulch cover is preferred but seeding without stabilization is not acceptable.

9.11 Soil Decompaction and Restoration

9.11.1 Soil Restoration in Non-Agricultural Areas

In accordance with the New York State Stormwater Management Design Manual, Section 5.1.6, soil restoration is a required practice in areas of development where soils have been compacted and will be vegetated. Soil restoration requirements for non-agricultural areas are summarized below. If soil restoration practices are not implemented as required, the post-construction runoff curve number must be modified to reflect the addition of impervious surfaces.

Table 14: Soil Restoration Requirements – Non-Agricultural Areas

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
Minimal Soil Disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped but no grading occurs	HSG A&B	HSG C&D	
	Apply 6 inches of topsoil	Aerate (see definition below) and apply 6 inches of topsoil	
Areas of cut or fill	HSG A&B	HSG C&D	Side slopes of 3:1 with at least one foot height. Use temporary erosion control to stabilize berm.
	Aerate (see definition below) and apply 6 inches of topsoil	Apply full soil restoration (see definition below)	
Heavy traffic areas on site	Apply full soil restoration (see definition below)		
Areas where runoff reduction and/or infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities, construct a single-phase operation fence area.
Redevelopment areas	Soil restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious.		

Source: New York State Stormwater Management Design Manual, Table 5.3

Aeration is the use of machines, such as tractor-drawn implements with coulters, rollers with spikes, or prongs which function like a mini-subsoiler.

Full Soil Restoration entails the following process:

1. Apply 3 inches of compost over soil;
2. Till compost into subsoil to a depth of at least 12 inches. Note that tilling should not be performed within the drip line of any existing trees or over utility installation withing 24 inches of the surface;
3. Remove stone/rock materials that are 4 inches or larger;
4. Apply topsoil to a depth of 6 inches;
5. Vegetate as approved.
6. At the end of restoration, an inspector should be able to push a 3/8" metal bar 12 inches into the soil using body weight.

9.11.2 Soil Restoration in Agricultural Areas

In active agricultural areas, restoration must occur in accordance with the "New York State Agriculture and Markets 2018 Guidelines for Agricultural Mitigations for Wind Power Projects." General restoration requirements are summarized below; please refer to Appendix E for the full guidelines.

- Disturbed agricultural areas will be decompacted to a depth of 18 inches with a deep ripper or heavy-duty chisel plow.
- Following decompaction, all rocks 4 inches and larger will be removed from the surface of the subsoil.
- Topsoil will be replaced to original depth and original contours will be re-established where possible.
- Subsoil decompaction and topsoil replacement must be avoided after October 1, unless approved by landowner in consultation with Ag. and Markets.

10.0 Inspection, Maintenance, and Corrective Actions

Construction activity and all support activities must be inspected (using the inspection form found in Appendix G or an alternative form) within the parameters of the schedules below. The inspector shall be a "qualified inspector" with the requirements of this SWPPP and the GP, as well as familiar with the construction site. This person is delegated by the owner and listed in Section 6.4 is the "qualified inspector". Additionally, there is a requirement for a "trained contractor" to conduct daily inspections in the active work area as detailed below.

Trained Contractor - means an employee from the contracting (construction) company, identified in Part II.A.6., that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the trained contractor shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company, identified in Part III.A.6, that meets the qualified inspector qualifications (e.g). licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other department endorsed entity). The trained contractor is responsible for the day-to-day implementation of the SWPPP.

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, CPESC, Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s). It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity.

Table 15: Qualified Inspectors

Company Name	Inspector Name	Phone Number	Qualifications	Trained Contractor or Qualified Inspector?

10.1 Scope of Inspections

Site stormwater inspection reports shall include the following elements:

- Date and time of inspections;
- Inspector name and title;
- Description of the weather and soil conditions at time of inspection;
- Description of the condition of the runoff at all points of discharge;
- Identification of any discharges of sediment from the construction site;
- Description of the condition of all natural surface waterbodies location within or immediately adjacent to the property boundaries of the construction site;
- Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance or weren't installed properly;
- Description and sketch of areas with active soil disturbance activity;
- Description and sketch of areas that have been disturbed but are inactive at the time of inspection;
- Description and sketch of area that have been stabilized since last inspection;
- Current phase of construction and all post construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
- Corrective actions that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures and to correct deficiencies identified within the construction of the post construction stormwater management practices;
- Identification and status of all corrective actions required by previous inspection;
- Digital photos with date stamp, clearly showing the condition of all practices that have been identified as needing corrective actions; and
- Signature of the inspector.

All inspections should be documented within twenty-four hours after completing the field inspection and available in paper or electronic form on site. If the inspection does not have incidents of non-compliance the report should contain a certification that the site is in compliance with the SWPPP and GP.

The qualified inspector shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified inspector shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

Within one business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and appropriate contractor or subcontractor of the GP of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions per the maintenance schedule table below.

10.2 Inspection Schedule

Table 16: Inspection Schedule

If the site is:	Then an inspection is needed:	Notes and Information
Active	Within the active work area on a daily basis	Inspections completed by the "trained contractor" for all erosion and sediment control practices and pollution prevention measures to ensure they are maintained in effective operating conditions at all times.
Active and less than 5 acres disturbed	Once every 7 calendar days	Inspection is needed by the "qualified inspector" or their qualified delegate.
Active and more than 5 acres disturbed and /or directly discharging to impaired water bodies	Twice within a 7-calendar day period.	Inspection is needed by the "qualified inspector" or their qualified delegate and the two inspections within the 7-calendar day period must be separated by a minimum of 2 full calendar days. At the time of preliminary SWPPP preparation, the Project is not authorized for disturbance of 5 or more acres.
Temporarily suspended (winter shutdown)	Once every 30 calendar days	Temporary stabilization measures must be applied to exposed soils and the permittee shall notify the DOW Water Program contact at the regional office in writing prior to reducing the inspections. Qualified Inspector must conduct the inspections.
Shut down with partial project completion	No inspections needed	Inspections can cease once ALL disturbed soils are stabilized with final stabilization and all post construction stormwater have been constructed and operational in the partially completed areas of the project. The owner or operator shall notify the DOW Water Program contact at the Regional Office in writing prior to the shutdown. If soil disturbance activities are not resumed within two years from the date of shutdown, the owner or operator shall have the qualified inspector perform a final inspection and certify that all disturbed areas have achieved final stabilization, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT.

10.3 Maintenance Schedule

Within one business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and contractor of any corrective actions that need to be taken. The contractor shall begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

Table 17: Maintenance Schedule

BMP	Observed Condition for Maintenance	Maintenance Interval
All non-functional BMPs	Sediment overtopping, under water, scoured ends, undermined, destroyed, non- functional as designed, intentionally removed, and run over by vehicles.	Maintenance or replacement should be initiated within one business day after discovery or notification and completed prior to seven calendar days after discovery or notification, or as soon as field conditions allow prior to the next anticipated storm event.
Perimeter Sediment Control (silt fence, fiber logs, berms, etc.)	½ full of sediment, flattened to ½ height,	Removal/cleanout of accumulated sediment and deltas shall be initiated within one business day and be completed within seven days or prior to next rainfall; whichever is soonest.
Inlet protection BMPs, conveyances, surface waters	Sediment deposition, sediment deltas and accumulation of sediment material.	Removal/cleanout of accumulated sediment and deltas shall be initiated within one business day and be completed within seven days or prior to next rainfall; whichever is soonest. Stabilize as needed if soils are exposed during removal/cleanout.
Temp sedimentation basins and traps; permanent sediment basins	Sediment deposition and accumulation to ½ of the storage volume.	Cleanout, remove accumulated sediment material shall be initiated within one business day and be completed within 72 hours of observation, or as field conditions allow access prior to the next anticipated storm event.
Site exit locations, rock exit pads, other anti-tracking practices	Accumulated sediment in rock or other anti-tracking BMP, tracking of sediment from the site onto paved surfaces	Top dress rock, maintain rock exit, or other anti-tracking controls. Initiated corrections within one business day, and complete within seven days or prior to next rainfall, whichever is sooner. Scrap and/or sweep paved surfaces, by end of the same working day as discovery or notification and prior to the next anticipated rain event.
Paved surfaces; adjacent streets	Tracked sediment and soil material from the site hauling or access	Sweep by end of the same working day as discovery or notification, or as soon as field conditions allow. Additional and/or more frequent sweeping may be needed to maintain public safety or prevent washing from forecast rains.

10.4 SWPPP Amendments

This plan and the attachments in the appendices must be updated or kept current at all times. The owner or operator shall amend the SWPPP within seven (7) days of a routine inspection results or upon notification from the DEC to include additional requirements or modified requirements which take place during construction if one or more of the following occur:

- There is a change in design, construction, or operation at the construction site that has, or could have, an effect on the discharge of pollutants.
- There is a need to address issues or deficiencies identified during an inspection by the qualified inspector, the Department, or other regulatory authority. Response is needed to the agency within fourteen days or as otherwise directed by the agency.

- There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP.
- The SWPPP proves to be ineffective in:
    - Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by the GP; or
    - Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity,
- A new contractor or subcontractor is added that will implement any measure of the SWPPP.

Amendments to the SWPPP should be documented on the SWPPP Amendment Log provided in Appendix G.

11.0 Pollution Prevention Management

Potential pollutant sources including construction and waste materials that are used or stored at the site are described below. Upon proper implementation of the BMPs potential pollutant sources are not reasonably expected to affect the stormwater discharges from the site. Construction materials and chemicals used or stored on site should be kept in small quantities whenever possible. Materials shall only be stored in non-sensitive areas and not in close proximity to watercourses, wetlands, or floodplains.

A Spill Prevention, Control and Countermeasure plan (SPCC) will be needed if materials or tanks present on site contain more than, or have the ability to contain more than, 1,320 gallons of petroleum products. When not in use, petroleum products should be stored in sealed containers and out of contact with the elements to prevent direct contact with stormwater. Inadvertent spills should be cleaned up immediately upon discovery and the materials should be disposed of in accordance with local, state, and federal requirements. Contractors should have spill kits available on site for rapid deployment to contain and cleanup spills.

Table 18: Potential Pollutants List

Potential Pollutant	Location	Control Measure*
Antifreeze	Vehicle/Equipment	S.C./Drip pan
Diesel Fuel	Vehicle/Equipment/Fuel Tank	S.C./Drip pan
Gasoline	Vehicle/Equipment/Fuel Tank	S.C./Drip pan
Hydraulic Oils/Fluids	Vehicle/Equipment	S.C./Drip pan
Grease	Vehicle/Equipment	S.C./Drip pan
Sanitary Waste Restrooms	Portable	Service Provider to Secure Units From Tipping
Trash And Construction Debris	Various	Dumpster
Paints	Contractor	S.C. and secure/covered storage.
Glue/Adhesives/Curing Compounds	Contractor	S.C. and secure/covered storage.
Soil Amendments	Various	S.C. and secure/covered storage.
Landscaping Materials Fertilizer	Various	S.C. and secure/covered storage.
Concrete Mortar	Mobile Mixer	S.C./Washout Area and secure/covered storage
Concrete	Trucks/Washout	Washout Area/S.C.
Bentonite	Directional Boring/Utility Contractor	S.C./Sump area
Sediment	Exposed soils/Disturbed Areas	Sediment, Erosion, Tracking, and Runoff Controls

*S.C. refers to secure secondary containment unit or area.

11.1 Storage, Handling and Disposal of Construction Materials

11.1.1 Storage and Handling

- All products shall be kept in their original container, with original labels still attached, unless the container is not re-sealable.
- Hazardous materials shall be returned to the hazardous material storage area at the end of each day.
- An effort should be made to store only enough products to do the required job.
- The contractor shall provide tanks or barrels to collect liquid byproducts that pose a pollution hazard.
- The pollutants shall be removed from the site on a weekly basis and disposed of in accordance with federal, state, and local regulations.
- All spills shall be cleaned up immediately after discovery, in accordance with the manufacture's recommended methods.
- Hazardous materials shall be properly stored to prevent vandalism or unauthorized access.
- Containment units shall be installed in accordance with federal, state, and local regulations.
- No hazardous material shall be stored within 200 feet of an identified critical area.
- If building materials, chemicals, or general refuse is being used, stored, disposed of, or otherwise managed inappropriately, the contractor shall correct such defects within twenty-four hours of detection or notification.

11.1.2 Disposal (Dumpsters)

- Locate dumpsters away from watercourses, streams, creeks and other surface waters or conveyances.
- Site inspector shall regularly observe for and report excess litter and solid waste and request pickup and retrieval of wastes.
- Wastes, litter, debris shall be deposited into dumpsters in a central location and / or in various satellite locations where work is active.
- Dumpsters should be supplied by and regularly maintained, emptied, and removed by a waste management company.
- Dumpsters shall be covered and closed at all times when not actively depositing water in the dumpster.

11.2 Fueling and Maintenance of Equipment and Vehicles

- Routine maintenance of vehicles shall occur in staging areas only if necessary.
- Maintenance of equipment and vehicles should be avoided and done off site where feasible.
- If fueling is done by mobile tank and dispenser, the transfer of fuel should be done under close supervision and there should be drip pans and spill containment and cleanup materials readily available. The mobile tank must be double-walled and anchored securely to transport.
- Refueling, equipment and fuel storage shall not occur within 300 feet from resources.

- If fueling is done via temporary tank, the tank should be stored within a bermed area and away from surface waters.
- Spill kits with absorbent materials shall be available on site and in close proximity to where any chemicals or petroleum products are being stored, handled, transferred, and/or used for use in cleaning up small spills. Small kits should include the following materials:
    - Water Resistant nylon zip totes
    - 1-gallon jugs of ENSORB®
    - Brooms
    - Dustpans
    - Disposal Bags
    - Goggles
    - Nitrile Gloves
- Large spill kits with absorbent and containment material shall be available on site for use in cleaning up larger spills. The materials available will likely include plastic sheeting to create a containment during large spill events. An effective way to clean up large spills in the field is to line a tracked dump vehicle, with plastic, and load the contaminated material (after a hydraulic line leak for example) into temporary containment. A dedicated waste dumpster, (fully enclosed) should be located at the contractor's laydown yard. Additional material for large spill kits should include the following:
    - Wheeled drum
    - 1.5 cubic foot bags of sorbent
    - 4-foot socks
    - 8-foot socks
    - Pads
    - Scoops
    - Brooms
    - Dustpans Disposal Bags

11.3 Spill Response

In the event of a spill or discharge of hazardous material of reportable quantity, contact the State of New York Spill-Reporting Hotline at 1-800-457-7362 within two hours. If the hazardous condition involves the release of an EPA regulated material or an oil as defined by the EPA, the release may also need to be reported to the National Response Center. Federal Reporting is required within 15 minutes of event occurrence or discovery. Contact the National Response Center at (800) 424-8802. The NRC is staffed twenty-four hours a day. For more information reference the following websites:

- http://www.dec.ny.gov/chemical/8692.html
- http://www.dec.ny.gov/docs/remediation_hudson_pdf/1x1.pdf
- http://www.dec.ny.gov/chemical/8428.html, and
- https://www.epa.gov/emergency-response/when-are-you-required-report-oil-spill-and-hazardous-substance-release

All petroleum spills that occur within New York State (NYS) must be reported to the NYS Spill Hotline (1-800-457-7362) within two hours of discovery, except spills which meet all of the following criteria:

- The quantity is known to be less than 5 gallons;
- The spill is contained and under the control of the spiller;
- The spill has not and will not reach the State's water or any land; and
- The spill is cleaned up within two hours of discovery.

A spill is considered to have not impacted land if it occurs on a paved surface such as asphalt or concrete. A spill in a dirt or gravel parking lot is considered to have impacted land and is reportable.

Table 19: Reportable Spill Quantities

Material	Where Discharged	Reportable Spill Quantities
Petroleum Material	Land (surface)	Greater than 5 Gallons
Petroleum Material	Land (subsurface)	Greater than 5 Gallons
Petroleum Material	Water	Enough to create a sheen on water
Other Material that will cause pollution if discharged to waters	Water	Any amount

11.4 Vehicle and Equipment Washing

If necessary, the contractor shall develop a designated wash area with basin containment to prevent the untreated water from discharging from the site to surface waters. BMPs include, temporary basins, inspecting the vehicles and equipment for leaks prior to washing and prohibiting washing activity until discovered leaks are repaired and maintenance is completed of the equipment or vehicle. The area shall be noted on the site plan. The water shall be contained and pumped from the site into a truck for proper disposal at a wastewater facility. No engine degreasing shall be done on site.

11.5 Concrete Washout and Other Washout

The direct discharge of concrete truck washout water to surface waters in the state, including storm sewers and other stormwater treatment facilities shall not occur. The following categories provide potential BMPs for the operator(s) to implement to avoid washout waters from impacting receiving waters.

11.5.1 Mobile Concrete and Mortar Mixers

- Use the following BMPs and guidance with the use of mortar or concrete mixers.
- Store bags of concrete and mortar in dry storage.

- Position mixers a minimum of 100 feet from the nearest watercourse or conveyance.
- If mixers must be positioned closer than 100 feet from a conveyance, install a temporary berm to prevent runoff from the mixer from flowing into the conveyance.
- Use tarp or plastic sheeting as a liner to prevent concrete or mortar from contacting the soil.
- Use buckets to contain washout / rinse water when cleaning the mobile mixer.
- Dump buckets of washout water in a designated concrete washout area.

11.5.2 Concrete Washout

- Follow the guidelines below for the installation of BMPs concrete washout areas.
- Contain washout water from the tools, equipment, and the chutes of concrete trucks, mobile mixers, or other containers with concrete material, and do not allow it to discharge into waters of the state or drain onto adjacent properties.
- Define the washout area with signage notifying the contactors of the location and use.
- The washout area should be a sufficient size to contain the expected washout material. 10'x10'x3' area should suffice for most activities.
- Multiple washout areas may be needed. Locations of the washouts should be shown on the construction plans by the contractor.
- When documenting the location of the concrete washout areas, include the date of install, date of last maintenance, and date of removal.
- Minimum of 6-millimeter-thick poly sheeting to prevent contamination of the soil and infiltration of the washout material.

Once the material is hardened it can be disposed of in a dumpster. If the material is liquid or not hardened, vacuum up the material, and haul off site to properly dispose of, or recycled at an approved facility. Some sites will not need the separate washout area if a truck chute washout is available from the concrete supplier.

11.5.3 Truck Chute Washout

Where available, all trucks with self-contained washout and water recycle systems must be used for every truck chute, tool and equipment rinse and washout. The truck should be positioned in a flat area away from inlets and surface waters where feasible. The washout of trucks during rain events should be minimized.

11.6 Portable Sanitary Facilities

All temporary portable sanitary facilities should be managed and maintained with at least the following items considered.

- Locate facilities away from watercourses, streams, creeks and other surface waters or conveyances.
- Place facilities upgradient from perimeter sediment controls and not on paved or other impervious surfaces.
- Secure facilities to the soil with stakes or tether to other non-movable structure to prevent tipping from wind or other factors. If staking or tethering is not feasible; position facilities in a secure location to prevent tipping or from being knocked over by equipment, people or wind.

- Schedule routine and regular cleanout and maintenance of facility from a reliable company.

11.7 Potential Non-stormwater Pollutant Sources and BMPs

Non-stormwater discharges shall be eliminated or reduced to the extent feasible, with the exception of those necessary for the completion of certain construction activities. A list of allowable non-stormwater discharges includes the items below.

Table 20: Non-stormwater Discharges and Potential BMPs

Type of Allowable Non-Stormwater Discharge	Likely to be Present at Site?
Discharges from emergency fire-fighting activities	☐ YES ☒ NO
Fire hydrant flushings (uncontaminated and not hyperchlorinated)	☐ YES ☒ NO
Waters used to wash vehicles, buildings, structures (turbines) and pavement (Detergents and cleansers are not allowed) to remove mud, dirt, or dust.	☒ YES ☐ NO
Water used to control dust	☒ YES ☐ NO
Potable water including uncontaminated waterline flushings (not hyperchlorinated)	☐ YES ☒ NO
Uncontaminated air conditioning or compressor condensate	☐ YES ☒ NO
Uncontaminated, non-turbid discharges of ground water, spring water, or foundation or footing drains	☐ YES ☒ NO
Pavement wash waters (no spills or leaks or detergent use)	☐ YES ☒ NO
Uncontaminated flows from excavation dewatering activities if operational and structural controls are used.	☒ YES ☐ NO

These authorized non-stormwater discharges should be conducted in accordance with the requirements of the GP, and every effort should be made to minimize non-stormwater runoff from these site activities.

The operators are responsible to implement the following BMPs and management for non-stormwater discharges.

- Waters Used to Wash Vehicles, Buildings, Structures and Pavement (without detergents): Should washing be necessary to remove soil, mud, dirt and / or dust, high powered sprayers with water could be used to clean off accumulated soil and earth materials. The washing should take place within a defined area. Existing BMPs and infiltration will likely control associated water and runoff due to the washing activity. If existing BMPs are overloaded or not functional maintenance or additional perimeter controls (such as silt fence) may be needed at the discretion of the inspector.
- Water used for Dust Control: This is not anticipated to be a contamination / pollution issue. During the dry times when dust control is needed the minimal amount of water is

anticipated to be absorbed into the soil. If any runoff does occur, the standard BMPs (such as silt fence, mulch and erosion control blanket, inlet controls and stormwater traps) should adequately control the runoff from reaching off-site surface waters.

- Uncontaminated flows from excavation dewatering activities if operational and structural controls are used: See SWPPP Section 9.7 for BMPs and dewatering methods.

12.0 Temporary Concrete Batch Plant

The Project Site has a temporary, dedicated concrete batch plant to supply concrete material for use during construction. The following information relates to the operation of the temporary concrete batch plant.

12.1 Management of Runoff

See Appendix E for the batch plant map with location, layout and controls. The batch plant should be located on higher ground where feasible with a gravel or aggregate base. Where necessary, the base should have a geotextile liner to minimize potential for infiltration of washout waters or material into the subsoils. Where the batch plant cannot be located on higher ground topsoil or earthen diversions should be constructed to divert any run-on water from adjacent areas around the batch plant operation. As necessary in areas where potential contamination is a low risk, the use of a temporary sediment trap, temporary containment berm from the internal water may be used. Industry standard erosion and sediment control practices should be used to minimize runoff into adjacent surface waters or neighboring property.

12.2 Material List

The operator of the batch plant should have a list of materials which are on site and exposed to the elements.

12.3 Routine Inspections

A qualified person should inspect the batch plant area at least once per month during the batch plant operation. The inspector shall inspect the following:

- Material handling areas,
- Above ground storage tanks,
- Hoppers and silos,
- Dust collection and containment systems, and
- Truck wash down and equipment cleaning areas.

The inspector should document where action items, maintenance, and installation of controls is needed with follow-up documentation on when the action items were addressed, and what was done to correct the items noted. A description of spills and leaks should be included in the reports or as an incident statement with the next inspection report. Insert completed inspections in Appendix G of this binder.

12.4 Training

An employee training program must be developed to educate personnel responsible for implementing any component of the SWPPP at the temporary batch plant. The frequency of the training must be at a minimum one training prior to the initiation of the operation of the concrete batch plant. Documentation of the training shall be inserted into Appendix F of this training /

meeting with a list of attendees, topics discussed, duration of the training and signatures of those in attendance.

12.5 Spill Prevention and Response Procedures

Refer to Section 11.3 of this SWPPP.

12.6 Comprehensive Inspection

At least once during the project batch plant activity an alternative person from the routine inspector should provide an additional inspection (which may be used for one of the monthly routine inspections) including the following:

A visual examination of areas draining storm water associated with the batch plant. Observe the following areas for effectiveness:

- Cleaning areas;
- Material handling areas;
- Above ground storage tanks;
- Hoppers and silos;
- Dust collection/containment systems;
- Run-on, runoff, and erosion/sediment controls in place;
- Spill response equipment and management; and
- Material on site and the list of expected materials.

Within two weeks of inspection if deficiencies are observed:

- Revise lists of potential sources and materials;
- Revise BMPs listed on the plan sheets and SWPPP where necessary; and
- Implement revisions and changes to lists, documentation, and BMPs.

The inspection report should include:

- Name of person completing the inspection,
- Date(s) of the evaluation,
- Observations,
- Findings of deficiencies, and
- Corrective Actions recommended.

13.0 Final Stabilization

Final stabilization is achieved for the Project when permanent erosion control BMPs are applied and functioning on the site. The permanent erosion control BMPs may be a combination of vegetative and non-vegetative cover types. Vegetative cover type must be a perennial vegetative cover with a density of 80% over the entire pervious surface. Additional requirements to achieving final stabilization include:

- All soil disturbing activity is complete;
- Permanent stormwater treatment system (if required) is constructed and functional, and accumulated sediment from construction activity has been removed;
- All temporary, synthetic BMPs have been removed from the site; and
- In agricultural areas (as applicable), the construction activity area has been restored to the preconstruction agricultural use.

14.0 Notice of Termination

14.1 Permit Termination Scenarios

Coverage under the GP may be terminated in one of the following scenarios.

1. Total project completion - All construction activity identified in the SWPPP has been completed; and all areas of disturbance have achieved final stabilization; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational.
2. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved final stabilization; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.
3. A new owner or operator has obtained coverage under the GP in accordance with Part II.F.
4. The owner or operator obtains coverage under an alternative SPDES general permit or an individual SPDES permit.

14.2 Qualified Inspector NOT Certification

Where scenario 1 or 2 are met in Section 14.1 above, the owner or operator shall have the qualified inspector perform a final site inspection prior to submitting the NOT. The qualified inspector shall sign the "Final Stabilization" and "Post-Construction Stormwater Management" practice certification statements on the NOT.

14.3 NOT Requirements for Post Construction Stormwater Management BMPs

Prior to submitting the NOT, the owner or operator must ensure one of the following:

1. The post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located;
2. An executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s);
3. For post-construction stormwater management practices that are privately owned, the owner or operator has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record; or
4. For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the owner or operator has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

15.0 Record Retention

15.1 During Construction

This report, amendments and attachments, inspection reports, and maintenance records will be kept on site for the duration of construction until the NOT has been filed. The records will be kept by the Owner or Operator listed on the NOI. The records should be maintained in a secure location on-site such as in a locked mailbox, job trailer, or in an on-site construction office from the start of construction until the NOT is approved.

15.2 Post Construction / Notice of Termination (NOT)

The site operator must retain all the following records for a period of at least five (5) years after the submittal of the NOT.

- Copy of the NOI
- NOI Acknowledgment Letter
- SWPPP Narrative
- Plan sets
- MS4 Acceptance Form (if applicable)
- Inspection Reports and Maintenance Records

Appendix A

GP-0-20-001 New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity

The GP-0-20-001 New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity may be accessed at the following link:

https://dec.ny.gov/docs/water_pdf/constgp020001.pdf

Appendix B

Permitting Documentation

(NOI, Permit Authorization, Site Certifications)

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-20-001)

Project Site Information

Project/Site Name

Owner/Operator Information

Owner/Operator (Company Name/Private Owner/Municipality Name)

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First name MI Last Name

Signature Date

0644089821

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR ☐☐☐☐☐☐
(for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-
RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Owner/Operator Contact Person First Name

Owner/Operator Mailing Address

City

State ☐☐ Zip ☐☐☐☐☐ - ☐☐☐☐

Phone (Owner/Operator) ☐☐☐ - ☐☐☐ - ☐☐☐☐

Fax (Owner/Operator) ☐☐☐ - ☐☐☐ - ☐☐☐☐

Email (Owner/Operator)

FED TAX ID ☐☐ - ☐☐☐☐☐☐☐ (not required for individuals)

Project Site Information

Project/Site Name

Street Address (NOT P.O. BOX)

Side of Street

○ **North** ○ **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)

State Zip - County DEC Region

Name of Nearest Cross Street

Distance to Nearest Cross Street (Feet)

Project In Relation to Cross Street

○ **North** ○ **South** ○ **East** ○ **West**

Tax Map Numbers
Section-Block-Parcel

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

https://gisservices.dec.ny.gov/gis/stormwater/

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

-7

Ex. -73.749

Y Coordinates (Northing)

Ex. 42.652

2. What is the nature of this construction project?

○ **New Construction**

○ **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION — Number of Lots
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	**Total Area To Be Disturbed**	**Existing Impervious Area To Be Disturbed**	**Future Impervious Area Within Disturbed Area**
.	.	.	.

5. Do you plan to disturb more than 5 acres of soil at any one time? ○ **Yes** ○ **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	**B**	**C**	**D**
%	%	%	%

7. Is this a phased project? ○ **Yes** ○ **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date / / - **End Date** / /

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ○ **Yes** ○ **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001? ○ **Yes** ○ **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ○ **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ○ **No**
If Yes, what is the acreage to be disturbed?

.

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ○ **No**

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ○ **Yes** ○ **No** ○ **Unknown**

16. What is the name of the municipality/entity that owns the separate storm sewer system?

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ **Yes** ○ **No** ○ **Unknown**

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ **Yes** ○ **No**

19. Is this property owned by a state authority, state agency, federal government or local government? ○ **Yes** ○ **No**

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ **Yes** ○ **No**

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ○ **Yes** ○ **No**

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ○ **Yes** ○ **No**
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ○ **Yes** ○ **No**

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ○ **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer

Contact Name (Last, Space, First)

Mailing Address

City

State Zip -

Phone - -

Fax - -

Email

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name **MI**

Last Name

Signature

Date / /

25. Has a construction sequence schedule for the planned management practices been prepared? ○ Yes ○ No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ○ Construction Road Stabilization
- ○ Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ○ Silt Fence
- ○ Stabilized Construction Entrance
- ○ Storm Drain Inlet Protection
- ○ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ○ Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ○ Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ○ Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ○ Rock Outlet Protection
- ○ Streambank Protection

Other

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ○ **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ○ **Reduction of Clearing and Grading**
- ○ **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ○ **Parking Reduction**

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- ○ All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

			.				**acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)	___.___	and/or	___.___
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)	___.___	and/or	___.___
○ Tree Planting/Tree Pit (RR-3)	___.___	and/or	___.___
○ Disconnection of Rooftop Runoff (RR-4)	___.___	and/or	___.___
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			___.___
○ Rain Garden (RR-6)			___.___
○ Stormwater Planter (RR-7)			___.___
○ Rain Barrel/Cistern (RR-8)			___.___
○ Porous Pavement (RR-9)			___.___
○ Green Roof (RR-10)			___.___
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			___.___
○ Infiltration Basin (I-2)			___.___
○ Dry Well (I-3)			___.___
○ Underground Infiltration System (I-4)			___.___
○ Bioretention (F-5)			___.___
○ Dry Swale (O-1)			___.___
Standard SMPs			
○ Micropool Extended Detention (P-1)			___.___
○ Wet Pond (P-2)			___.___
○ Wet Extended Detention (P-3)			___.___
○ Multiple Pond System (P-4)			___.___
○ Pocket Pond (P-5)			___.___
○ Surface Sand Filter (F-1)			___.___
○ Underground Sand Filter (F-2)			___.___
○ Perimeter Sand Filter (F-3)			___.___
○ Organic Filter (F-4)			___.___
○ Shallow Wetland (W-1)			___.___
○ Extended Detention Wetland (W-2)			___.___
○ Pond/Wetland System (W-3)			___.___
○ Pocket Wetland (W-4)			___.___
○ Wet Swale (O-2)			___.___

Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area(acres)
○ **Hydrodynamic**	
○ **Wet Vault**	
○ **Media Filter**	
○ **Other**	

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name

Manufacturer

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

. **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ○ **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

. **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

○ **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). [ ][ ][ ].[ ][ ][ ]

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ○ **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

[ ][ ][ ].[ ][ ][ ] **acre-feet**

CPv Provided

[ ][ ][ ].[ ][ ][ ] **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

[ ][ ][ ].[ ][ ][ ] **CFS**

Post-development

[ ][ ][ ].[ ][ ][ ] **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ○ **Yes** ○ **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP
- ○ Other
- ○ None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ **Yes** ○ **No**
If Yes, Indicate Size of Impact. .

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ○ **Yes** ○ **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ○ **Yes** ○ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned.

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name **MI**

Print Last Name

Owner/Operator Signature

Date / /

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: _____

eNOI Submission Number: _____

eNOI Submitted by: **Owner/Operator** **SWPPP Preparer** **Other**

Certification Statement - Owner/Operator

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Owner/Operator First Name M.I. Last Name

_____

Signature

_____

Date

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person: | 4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:	
Title/Position:	
Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

LETTER OF RESOLUTION
between the
NYS Department of Environmental Conservation
and the
NYS Office of Parks, Recreation and Historic Preservation
regarding compliance with PRHPL § 14.09 for the
State Pollution Discharge Elimination System
General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002)

WHEREAS, the New York State Department of Environmental Conservation (Department), having offices at 625 Broadway, Albany, NY 12233 is authorized to issue a State Pollutant Discharge Elimination System (SPDES) general permit for Stormwater Discharges from Construction Activity (CGP), pursuant to 33 U.S.C. 1342, New York State Environmental Conservation Law (ECL) §§17-0701, 70-0117(6), and 6 NYCRR 750-1.21(b)(2); and

WHEREAS, pursuant to Parks Recreation and Historic Preservation Law (PRHPL) §14.09, the State Historic Preservation Act (SHPA), and 9 NYCRR Part 428, the Department is required to consult with the Office of Parks, Recreation and Historic Preservation (OPRHP), located at Peebles Island State Park, Delaware Avenue, Cohoes NY 12238, concerning the impact of a construction activity if it appears that any aspect of the construction activity may or will cause any change, beneficial or adverse, in the quality of an historic property, which is any building, structure, site, object or district that is listed on the state or national register of historic places or is determined to be eligible for listing on the state or national register; and

WHEREAS, the Department and the OPRHP declare that it is to their mutual advantage to develop this Letter of Resolution (LOR); and

WHEREAS, this approach simultaneously maintains the efficiencies of the general permitting process for owners/operators engaged in construction activities, and allows the process of obtaining coverage under the CGP to be considered a ministerial action under the State Environmental Quality Review Act; and

WHEREAS, the Department and the OPRHP agree that adherence to the procedures outlined in the Attachment 1 to this LOR will satisfy the SHPA for both the issuance and implementation of the CGP; and

WHEREAS, 9 NYCRR § 428.12 allows the Commissioner of the OPRHP to designate certain categories of projects as exempt from the SHPA review and 9 NYCRR § 428.13 allows the Commissioner of the OPRHP to establish standards for the implementation of the SHPA for a series of similar undertakings. A list of projects meeting the regulatory criteria is in Attachment 2 to this LOR.

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth herein, the parties agree as follows:

1) The Department and the OPRHP will make use of the procedures and owner/operator consultation described in Attachment 1 to implement the terms of this LOR.

2) Construction activities falling into the categories listed in Attachment 2 will not require review under the SHPA.

3) The Department and the OPRHP commit to meeting, as needed, to review the implementation of the LOR

4) The Department will make use of the Project Cover Form (Attachment 3 to this LOR) to identify projects for the OPRHP and to initiate project review and consultation.

ARTICLE I. Responsibilities

Department Responsibilities:

The Department will condition the CGP such that a construction activity is ineligible for coverage under the CGP if the construction activity has the potential to affect a historic property, and such effects have not been resolved.

The Department acknowledges that where the OPRHP determines that a historic property may be affected, the OPRHP will recommend steps to the Department that would resolve those effects and the Department's Agency Preservation Officer (APO) may be involved in the development of a Letter of No Adverse Impact or a signatory to a Letter of Resolution for the particular construction activity.

The Department has determined that significant outreach and training for design engineers, project sponsors, planning boards and other review authorities on requirements of the SHPA will assist the Department in complying with the SHPA by addressing potential impacts to a historic property early on in the planning stages of a construction activity.

The Department is planning on providing this outreach and training across the state as part of roll-out of the renewed CGP (anticipated January 29, 2015).

The Department anticipates enhancing its enforcement of the eligibility of construction activities under the CGP by requiring documentation that demonstrates eligibility under the SHPA be maintained at the construction site.

The Department will develop a Standard Operation Procedure (SOP) to set forth the roles and responsibilities of Department staff to assure compliance with this LOR. The SOP will detail the process to be followed during the inspection of sites and in the event that human or archaeological remains are encountered during land disturbance authorized under the CGP.

The Department will update the Compliance Strategy for the CGP to reflect the enforcement protocol for projects that fail to maintain documentation demonstrating SHPA compliance and for projects that operate in contravention to the conditions of any Letters of No Adverse Impact

or Letter or Resolution for a particular construction activity, if such conditions are also related to land disturbance and/or water quality.

OPRHP Responsibilities:

OPRHP will make best efforts to respond to owner/operator consultation requests for a specific construction activity within the thirty (30) day review period in accordance with the SHPA once all required materials have been provided. Where that timeframe is not feasible, the OPRHP will advise the Department's APO and seek to resolve any issues with the consultation in a timeframe that will not unduly delay an owner/operator submitting a NOI for coverage under the CGP.

ARTICLE II. Representations

The Department's authorized representative for the administration of this LOR is:

Name: Charles Vandrei (or designated successor)
Title: Agency Historic Preservation Officer
Address: 625 Broadway Albany, NY 12233
Phone #: (518) 402-9428
Email: Charles.Vandrei@dec.ny.gov

The OPRHP's representative for the implementation and administration of this LOR:

Name: John A. Bonafide (or designated successor)
Title: Director
Address: Peebles Island
1 Delaware Avenue
*Mailing: P.O. Box 189
Waterford, NY 12188
Phone #: (518) 268-2166
Email: John.Bonafide@parks.ny.gov

Should either of the named contacts be changed by their respective agency, the agency will notify the other within 30 days.

ARTICLE III. Duration

This LOR shall be effective from the date the last party signifies their acceptance below.

ARTICLE IV. Modification

Notwithstanding any other provisions of this LOR, this agreement may be amended when such an amendment is agreed to in writing by both agencies.

ARTICLE V. Termination

This LOR may be terminated by either party giving the other party 30 days advanced written notice of such intent and the reasons thereof. Both parties agree to enter into good faith negotiations to resolve any differences and provide for an orderly closure of this LOR if agreement cannot be reached.

In **WITNESS WHEREOF**, the individuals listed below are authorized to sign and execute this LOR between their respective Executive Department Agencies, on the date appearing below their respective signatures.

New York State Department
of Environmental Conservation

By _____

Charles Vandrei

Agency Preservation Officer

Dated 1/9/15

Office of Parks, Recreation and
Historic Preservation

By _____

Ruth L. Pierpont

Deputy Commissioner
for Historic Preservation

Dated 1/9/15

Procedures-Attachment 1 to Letter of Resolution

Applicability: All construction activities seeking CGP coverage are subject to the following procedures unless they fall into one of the following exemptions:

1. Is on the list of exempt activities found in Attachment 2; or
2. It requires a federal permit or approval or is receiving federal funds and has been reviewed under Section 106 of the National Historic Preservation Act for the full coterminous project area; or
3. It requires a state agency permit, approval or funding from the DEC or another state agency, and has been reviewed under Section 14.09 of the New York State Historic Preservation Act.

Definitions:

Immediately Adjacent-shared property line, excluding construction activities that are located across a public highway

Historic Preservation Commission of a Certified Local Government-

A municipal government which is authorized to make certain historic preservation decisions. CLG's have a local preservation ordinance and an historic preservation board or commission which has been approved by OPRHP and certified by the National Park Service. For additional information see http://nysparks.com/shpo/ certified-local-governments/

Qualified Preservation Professional-professionals that meet the qualification standards as set forth in 36 CFR Part 61.

Historic Property- Any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or has been determined to be eligible for

listing on the State or National Registers of Historic Places or is locally designated as historic.

Unevaluated Property – Buildings, structures or objects that are greater than 50 years of age that have not been evaluated for eligibility for listing on the State or National Registers of Historic Places.

Archaeologically Sensitive Area – A location as defined by OPRHP as having the potential to contain unidentified and unevaluated archaeological resources.

Screening Process:

1: The owner/operator shall check the archeological sensitivity map and the National and State Registers of Historic Places (by either using DEC's EAF Mapper and OPRHP's CRIS website) to determine if the construction activity is located:

a) in an *archeological sensitive area*, or

b) on an *historic property*, or

c) *immediately adjacent* to an *historic property*.

2: The owner /operator shall also determine if the construction activity will include the construction of a new permanent building on the construction site within the following distances of an *Unevaluated Property*[1].

- 1-5 acres of disturbance - 20 feet
- 5-20 acres of disturbance - 50 feet
- 20+ acres of disturbance - 100 feet,

[1] The building, structure, or object that is more than 50 years old could be on the construction site or adjacent to the construction site.

Eligibility Determination/Resolution of Impacts:

1. If the construction activity:

a. is not within an *archeologically sensitive area* as indicated on the sensitivity map, and,

b. is not on an *historic property*, and

c. is not *immediately adjacent* to an *historic property*, and

d. does not include the construction of a new permanent building on the construction site within the following distances of an *Unevaluated Property*[2] :

- 1-5 acres of disturbance - 20 feet
- 5-20 acres of disturbance - 50 feet
- 20+ acres of disturbance - 100 feet, or

e. does include the construction of a new permanent building on the construction site within the following distances from *Unevaluated Property* [3] but OPRHP, a *Historic Preservation Commission of a Certified Local Government*, or a *qualified preservation professional* has determined it is not a historically significant building, structure or object:

- 1-5 acres of disturbance - 20 feet
- 5-20 acres of disturbance - 50 feet
- 20+ acres of disturbance - 100 feet

the construction activity is eligible for coverage under the General Permit provided all other eligibility requirements have been met.

---

[2] The building, structure, or object that is more than 50 years old could be on the construction site or adjacent to the construction site.

[3] The building, structure, or object that is more than 50 years old could be on the construction site or adjacent to the construction site.

2. If the construction activity:

a. is within an *archeologically sensitive area* as indicated on the archeological sensitivity map, or

b. is on an *historic property*, or

c. is located *immediately adjacent* to an *historic property*, or

d. includes the construction of a new permanent building on the construction site within the following distances from a building, structure, or object that is more than 50 years old[4] and which OPRHP, a *Historic Preservation Commission of a Certified Local Government*, or a *qualified preservation professional* has determined is a historically/archeologically significant building, structure, or object:

- 1-5 acres of disturbance - 20 feet
- 5-20 acres of disturbance - 50 feet
- 20+ acres of disturbance - 100 feet

Then:

1) Impacts to *historic properties* shall be resolved through the SEQR process, with documentation of OPRHP's agreement with such resolution, and the owner/operator shall submit the DEC consultation form (Attachment 3 to the LOR, preferably the digital version using OPRHP's CRIS system) to OPRHP, with a copy to the DEC APO. The

[4] The building, structure, or object that is more than 50 years old could be on the construction site or adjacent to the construction site.

construction activity will be eligible for coverage under the CGP, provided all other CGP eligibility requirements are met, or

2) The owner/operator shall initiate a consultation with OPRHP on behalf of DEC prior to the construction activity being deemed eligible for coverage under the CGP. Under this consultation process:

- The owner/operator shall submit the DEC consultation form (Attachment 3 to the LOR, preferably the digital version using OPRHP's CRIS system) to OPRHP, with a copy to the DEC APO, to commence the 30 day period for OPRHP review. The owner/operator shall also submit the DEC consultation form to OPRHP on behalf of DEC as an initial request for OPRHP consultation on the specific construction activity.

  -If OPRHP concurs that *historic properties* will not be affected, and issues a letter of No Impact, consultation with OPRHP is complete. The construction activity is eligible for coverage under the CGP, provided all other CGP eligibility requirements are met.

  -If OPRHP determines that *historic properties* may be affected, OPRHP will, after all necessary surveys and consultations have been performed, recommend steps to the DEC APO that would

resolve those effects and will copy the owner/operator. The construction activity is not eligible for the CGP unless a Letter of No Adverse Impact is issued from OPRHP or a Letter of Resolution is executed, that specifically allows the action to proceed under the CGP.

- The DEC APO shall decide if any of the above determinations warrant consultation with any potentially interested Indian Nations under CP-42, and will initiate such consultation on behalf of the DEC.

Changes to the Notice of Intent and CGP

DEC will amend the NOI to include the following questions:

14. Is the construction activity designated by the Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP), pursuant to 9 NYCRR §§428.12 or 428.13 as exempt from the State Historic Preservation Act (SHPA) review (see Attachment 2 of the Letter of Resolution between the NYSDEC and OPRHP, dated ???)

Yes No

If Yes, go to question 18.
If No, go to question 15.

15. Will the construction activity:

a) occur within an *archeologically sensitive area* indicated on the sensitivity map, or
b) have the potential to affect a property that is listed or determined to be eligible for listing on the National or State Registers of Historic Places, or
c) include a new permanent building on the construction site within the following distances from a building, structure, or object that is more than 50 years old and OPRHP, a *Historic Preservation Commission of a Certified Local Government*, or a *qualified preservation professional* has determined is a historically/archeologically significant building, structure, or object:
    - 1-5 acres of disturbance - 20 feet
    - 5-20 acres of disturbance - 50 feet
    - 20+ acres of disturbance - 100 feet

Yes No

If Yes, go to question 17.
If No, go to question 16.

16. Is there documentation at the construction site demonstrating:

a) that the construction activity is not within an *archeologically sensitive area* indicated on the sensitivity map, and that the construction activity is not *immediately adjacent* to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and

b) that there is no new permanent building to be built on the construction site within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the construction site within those parameters that OPRHP, a *Historic Preservation Commission of a Certified Local Government*, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:

- 1-5 acres of disturbance - 20 feet
- 5-20 acres of disturbance - 50 feet
- 20+ acres of disturbance - 100 feet?

Yes No

If Yes, go to question 18.
If No, the construction activity is not eligible for coverage under the General Permit so NOI cannot be processed.

17. Have the impacts to historic properties been resolved. Yes No

If Yes, which of the following documentation is at the construction site:

a. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and

___ the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

____ documentation from OPRHP that the construction activity will result in No Impact; or

____ documentation from OPRHP providing a determination of No Adverse Impact; or

____ a Letter of Resolution signed by the owner/operator, OPRHP and the DEC which allows for this construction activity to be eligible for coverage under the general permit under SHPA; or

b. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

_____ No Effect/No Historic Properties Affected

_____ No Adverse Effect

_____ Executed Memorandum of Agreement

c. Documentation that

____ SHPA Section 14.09 has been completed by NYS DEC or another state agency.

If No, the construction activity is not eligible for coverage under the General Permit and the NOI cannot be processed.

Attachment 2

General Construction Permit Categorical Exclusions

Under 9 NYCRR Sections 428.12/ 428.13

1. A single family house to be constructed on a single lot.

2. Installation of utility lines (water, sewer, electrical, gas and the like) which are located between the existing edge of pavement and the far edge of an existing excavated drainage ditch or existing utility lines. Exceptions include:
    a. In alluvial settings. Information on alluvial soils may be obtained from USDA Soil Surveys.
    b. Within known archaeological site boundaries found on the NYS Archaeological Sensitivity map (Using either the NYS OPRHP CRIS system or NYS DEC Environmental Mapper Tool).
    c. Within the boundaries of known cemeteries.

3. Repair or replacement of utilities in the same trench where proposed excavation will not exceed width, and depth of existing work.

4. Installation of lighting (including new underground conduit and conductors) and minor drainage work where no other new excavation work is needed outside of previously disturbed areas.

5. Excavation or other ground disturbance impacting areas 10 feet or less from existing c.1900 or later structures.

New York State Office of Parks, Recreation and Historic Preservation
Field Services Bureau
Peebles Island State Park
Waterford, NY 12188-0189

Copy to:
New York State Department of Environmental Conservation
Agency Historic Preservation Officer
Division of Lands and Forests
625 Broadway
Albany, NY 12233-4255

Attachment 3

STORMWATER CONSTRUCTION GENERAL PERMIT
REQUEST FOR STATE HISTORIC PRESERVATION ACT REVIEW

This form is being submitted to OPRHP to request consultation on historic properties or archeological resources or both in accordance with the Letter of Resolution between NYS Department of Environmental Conservation and the NYS Office of Parks, Recreation and Historic Preservation regarding compliance with PRHPL § 14.09 for the State Pollution Discharge Elimination System General Permit For Stormwater Discharges From Construction Activity (GP-0-15-002) dated _____.

DATE:_____ _____
COUNTY

PROJECT NAME:_____

NAME OF OWNER / OPERATOR OF PROPOSED CONSTRUCTION ACTIVITY _____

_____

PROJECT LOCATION

TELEPHONE

_____

E-MAIL_____

CITY/TOWN/VILLAGE

_____

CONSULTATION WITH OPRHP CRIS WEB SITE AT http://cris.parks.ny.gov or the DEC EAF Mapper http://www.dec.ny.gov/eafmapper indicates the Project Site:

__ is within an archeologically sensitive area as indicated on the sensitivity map
__ is immediately adjacent to or contains an historic property
__ OTHER _____

PLEASE ADVISE ON:

G Need for Survey / Scope of Survey Needed G Adequacy of Survey To-Date

G Significance of Identified Unevaluated Property[1] G Significance of Identified Archeological Resources

G Impact on Significant Cultural Resources G Project Alternatives (As Described) G Need for Mitigation

G Other _____

ENCLOSURES
DESCRIPTIONS, MAPS, STUDIES, ETC. AS APPROPRIATE ARE ENCLOSED_____

AGREEMENT REACHED WITH OPRHP THROUGH THE STATE ENVIRONMENTAL QUALITY REVIEW ACT OR OTHER DOCUMENTATION THAT IMPACTS TO HISTORIC PROPERTIES OR ARCHEOLOGICAL RESOURCES OR BOTH HAVE BEEN ADDRESSED (attach)_____ ____OPRHP PROJECT NUMBER (Assigned by OPRHP): PR# _____

[1] Buildings, structures or objects that are greater than 50 years of age that have not been evaluated for eligibility for listing on the State or National Registers of Historic Places.

QUESTIONS & ANSWERS

For

eNOI

FOR

SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

GP-0-10-001

September 2014
VERSION 2.0

Should we set up a company business account if there are more than one person who may be working on submitting NOI's?
At this time, Personal Accounts are recommended. Users may create a Personal Account using their business email address.

Has the system been beta tested?
The NYSDEC eForm system was tested by both by DEC employees and external users. As this is a new system, additional bugs may be found and fixed.

Many private firms have a secure FTP site. This allows sharing of work with the client/owner. Could the client/owner who signs the NOI just electronically sign the forms on the FTP site and not bother with getting on the NYSDEC site to register?
In order to be complete, the eNOI must include a completed and signed Owner/Operator Certification Form. This form can be downloaded directly from the eNOI or from the construction stormwater webpage under Forms: http://www.dec.ny.gov/chemical/43133.html.

The eNOI preparer must have the Owner/Operator complete and sign this form and then return it to them for uploading to the eNOI.

Can we print NOI before it is submitted?
Yes. By clicking on the "View" icon on the Submission History page, users can print, download, copy, open in a new window and manage access to eNOIs that have not been submitted as well as perform post-submission actions.

Do you have to print and sign preparer certification form each time or can we use the same signed form for multiple projects?
The SWPPP preparer certification certifies that a SWPPP has been developed for the specific project and has been prepared in accordance with the terms and conditions of GP-0-10-001. This requires a separate certification for each project.

Will NOT's be included as well in the future?
The Department intends to continue to work to improve and expand the capabilities of the electronic reporting system. Eventually, once EPA finalizes the eReporting Rule, all submissions will need to be submitted electronically.

Does the eNOI allow for attachment of the MS4 SWPPP Acceptance form?
Yes. The eNOI will allow you to upload a scanned version of the completed & signed MS4 SWPPP Acceptance form.

How does the MS4 Acceptance Form get processed/handled?
If the project is subject to the requirements of a regulated, traditional land use control MS4, a completed MS4 Acceptance Form that has been signed by the principal executive officer or ranking elected official from the regulated, traditional land use control MS4. The eNOI will allow you to upload a scanned version of the completed and signed certification. The Department will review the submission and confirm that projects within regulated MS4 areas

have provided the necessary certification. If they have not, the owner/operator and NOI preparer will be notified that the submission is incomplete. Authorization to commence construction will not be issued until the Department receives a complete NOI.

Is there room for additional comments if clarification is needed for example, on a linear project the long-lat may be central to the project etc.
Question 39 located in the Post Construction Criteria Section may be used to provide additional comments, explain deviations or provide additional information on the project.

I believe that I saw one of the steps of submission was payment. Is there fees for filing and if so how much will they be?
No. There are no fees for submitting the NOI. Projects will continue to be billed separately for the initial authorization and annual fees.

OWNER/OPERATOR SIGNATURE

Is there any other way to get the owner/operator to approve other than through the website?
All NOIs must be include a signed Owner/Operator Certification form and certified by the owner/operator. In order to submit the eNOI, a signed, scanned copy of the Owner/Operator Certification form must be uploaded and attached to the electronic submission.

For the time being, the Department will continue to accept paper NOIs with the owner/operator signature.

How is the preparer protected from edits that could be edited by the owner?
Only the preparer, and individuals with whom the preparer shares the eNOI submission, are able to view or edit the information. The owner will not be able to see the online submission unless the preparer shares it with the owner.

POST SUBMISSION PROCESS

Does the 5 day review period start as soon as it is submitted?
No. The Construction General Permit sets the time frame for coverage from the date the Department receives a **complete** NOI. The Department will review the submission and either notify you that additional information is needed or deem it complete. NOIs that are deemed complete will be issued an NOI Acknowledgement letter that provides the permit number and date that coverage will begin. You cannot begin construction until you have received and complied with the conditions of your letter of acknowledgement.

Once you accept the NOI, will you continue to issue the permit number by letter? Or will it be done electronically?
Initially, the Department will continue to mail a hard copy of the NOI Acknowledgment Letter to the owner/operator. Eventually, as the system is improved, it is expected that notifications will be electronic.

If the NOI is deemed incomplete, how will you notify the owner and/or preparer? E-mails will be sent to the preparer advising that the NOI is incomplete and the information that needs to be submitted.

ADDITIONAL INFORMATION/RESOURCES

When will the slides be available on the website?
The slides have been posted on the NYSDEC website, at: http://www.dec.ny.gov/docs/water_pdf/constnoiguide2014.pdf.

Will we be able to download the recording of this webinar?
The webinar was not recorded.

Westwood

12701 Whitewater Drive, Suite 300
Minnetonka, MN 55343

Main (952) 937-5150
Fax (952) 937-5822

westwoodps.com
(888) 937-5150

Date

DEC Contact
NYS Department of Environmental Conservation – Region X
Address Line 1
Address Line 2

Re: NAME Project, Permit Identification Number NYR XXXXXX
Five Acre Waiver Request

Contact Name:

On behalf of Permittee, we are submitting this letter requesting approval to disturb greater than five (5) acres of soil at a time at the NAME Project site (site) located in County, New York. The site received coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit for Storm Water Discharges from Construction Activity General Permit No. GP-0-15-002 on Date.

Approval to disturb more than five (5) acres at a time is being requested due to the large size of the site. The site boundary encompasses an area totaling of XX acres, of which XX acres will be disturbed during construction. Disturbance areas at the site are generally non-contiguous, consisting of narrow corridors for access roads/crane paths (maximum width of 100 feet) and linear electrical infrastructure (maximum width 50 feet), individual turbine sites (approximately XX acres temporary disturbance each), a substation (XX acres disturbance), point of interconnect substation (XX acres disturbance), and an operations and maintenance (O&M) building (XX acres disturbance).

Because the isolated disturbance areas are located mostly in undeveloped forested areas or cropland, the vast majority of stormwater runoff will be mitigated by sheetflow and perimeter sediment controls, erosion controls to minimize duration of exposed soils, and existing riparian buffers. At the O&M facility and point of interconnect substations, which have larger disturbance areas, sediment basins will be installed to collect and treat stormwater.

In addition to the use of riparian buffers and sediment basins, the following practices will be implemented at the site to mitigate potential stormwater impacts related to disturbing greater than five (5) acres at a time (per GP-0-15-002, Part II.C.3.a):

1. A qualified inspector will conduct at least two (2) sites inspections every seven (7) calendar days, as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections will be separated by two (2) calendar days.

2. In areas where soil disturbance activities has temporarily or permanently ceased, the application of soil stabilization measures will be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. Soil stabilization measures will be in conformance with the technical standard, New York State Standards for Specifications for Erosion and Sediment Control, dated November 2016.

3. A phasing plan has been prepared to define the maximum disturbed area per phase (see following table).

4. Any site-specific practices required to protect water quality will be implemented as soon as they are identified.

5. These requirements have been incorporated into the site-specific Stormwater Pollution Prevention Plan (SWPPP).

As referenced in item number 3, the project will be completed in four major phases, as summarized in the following table:

Table 1. Phasing Plan

Phase #	Phase Description*	Est. Disturbance (Acres)
1A	East central portion of site; 5 turbines, temporary crane paths.	42.4
1B	South central portion of site; 1 turbine, substation, O&M facility.	11.3
2A	Northeast portion of site; 11 turbines, temp crane paths.	83.7
2B	Southeast portion of site; 7 turbines, temp crane paths, underground collection lines.	67.4
3	Southwest portion of site; 3 turbines.	25.7
4	Northwest portion of site; 10 turbines, temporary crane paths.	106.9

*All phases will include construction of access roads, intersection improvements, and underground collection lines.

Please don't hesitate to contact me with any additional questions regarding this request.

Sincerely,

WESTWOOD PROFESSIONAL SERVICES

Alex Alvarado, NY PE #101100
Project Manager
Phone: 214-473-4648
Email: alex.alvarado@westwoodps.com

Appendix C

Soil Maps

United States Department of Agriculture

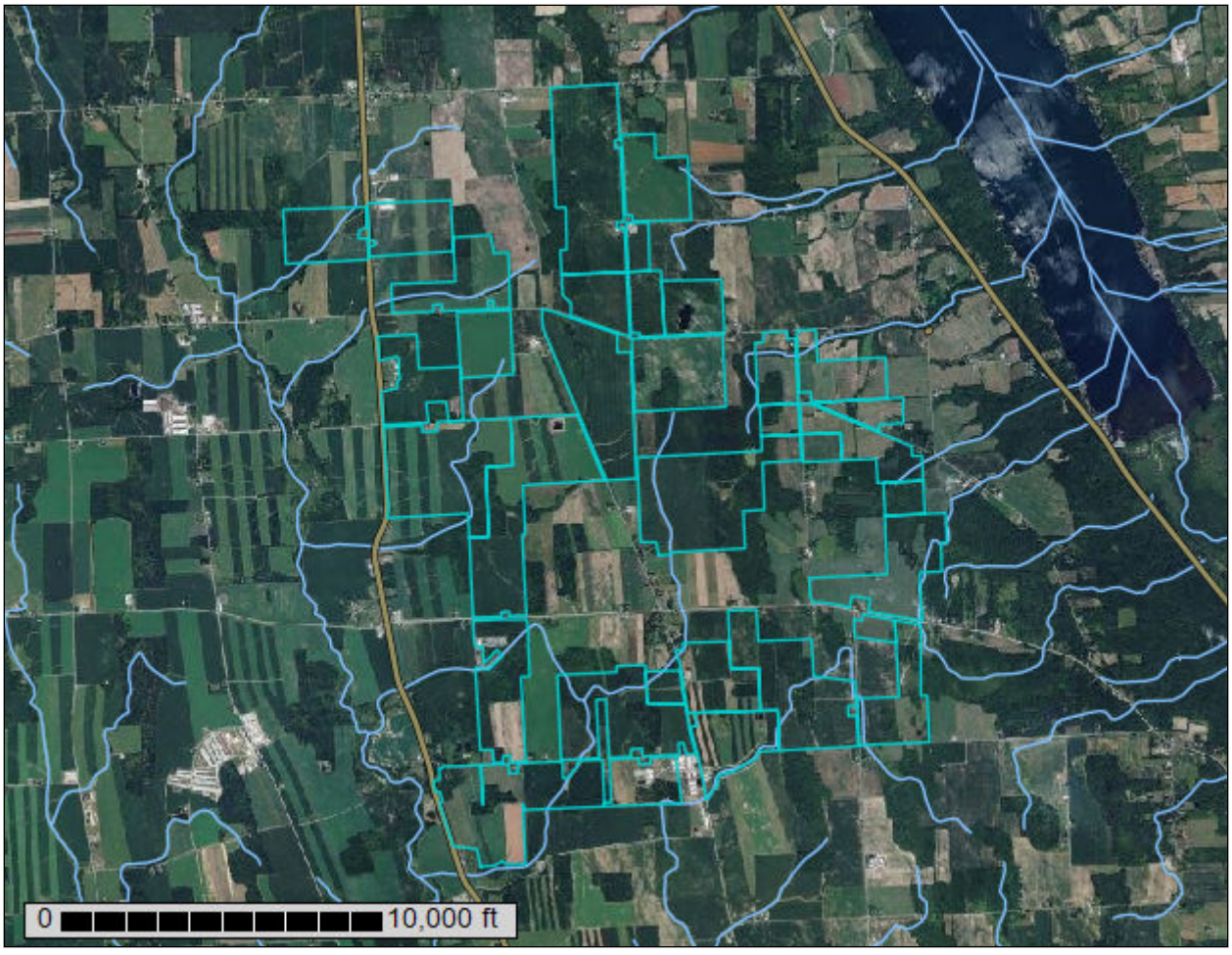
NRCS

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 Cayuga County, New York

Agricola Wind



April 22, 2024

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

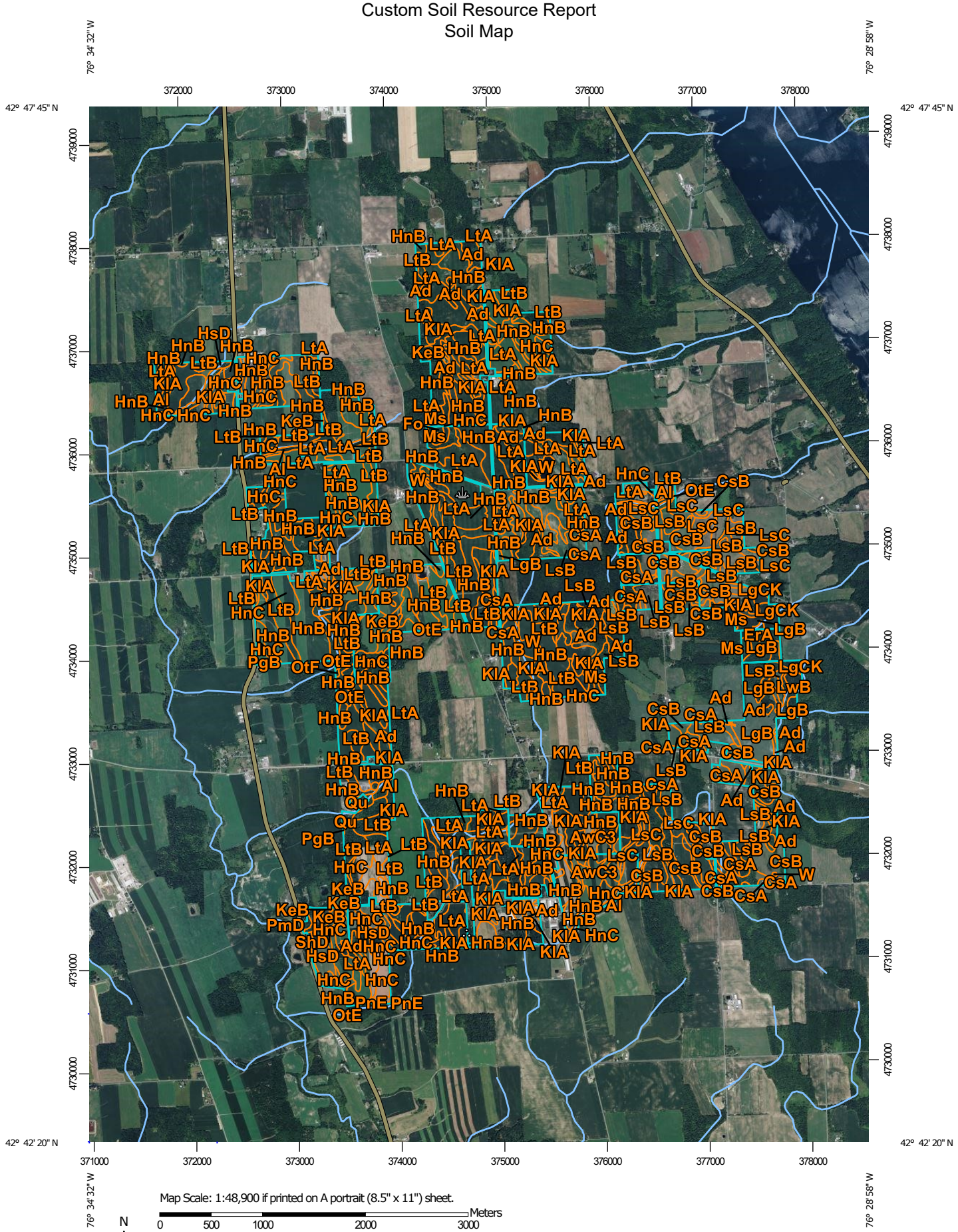
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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

Soil Map

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

Custom Soil Resource Report
Soil Map



Map Scale: 1:48,900 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 500 1000 2000 3000

Feet: 0 2000 4000 8000 12000

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 1:15,800.

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: Cayuga County, New York
Survey Area Data: Version 20, Sep 5, 2023

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

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ad	Alden mucky silt loam, till substratum	205.3	5.1%
Al	Alluvial land	23.8	0.6%
AwB	Aurora silt loam, 2 to 6 percent slopes	14.7	0.4%
AwC	Aurora silt loam, 6 to 12 percent slopes	2.7	0.1%
AwC3	Aurora silt loam, 6 to 12 percent slopes eroded	8.8	0.2%
CsA	Conesus gravelly silt loam, 0 to 3 percent slopes	62.7	1.6%
CsB	Conesus gravelly silt loam, 3 to 8 percent slopes	212.6	5.3%
DuC3	Dunkirk silt loam, 6 to 12 percent slopes, eroded	3.0	0.1%
Ee	Eel silt loam	0.6	0.0%
ErA	Erie channery silt loam, 0 to 3 percent slopes	3.6	0.1%
Fo	Fonda mucky silt loam	11.2	0.3%
HnB	Honeoye silt loam, 3 to 8 percent slopes	1,185.0	29.7%
HnC	Honeoye silt loam, 8 to 15 percent slopes	184.2	4.6%
HsD	Honeoye and Lansing soils, 14 to 20 percent slopes	47.9	1.2%
KeB	Kendaia silt loam, 3 to 8 percent slopes	48.7	1.2%
KlA	Kendaia and Lyons soils, 0 to 3 percent slopes	435.5	10.9%
LgB	Langford channery silt loam, 2 to 8 percent slopes	124.3	3.1%
LgCK	Langford channery silt loam, rolling	5.1	0.1%
LsB	Lansing gravelly silt loam, 3 to 8 percent slopes	284.1	7.1%
LsC	Lansing gravelly silt loam, 8 to 15 percent slopes	38.1	1.0%
LtA	Lima silt loam, 0 to 3 percent slopes	560.0	14.0%
LtB	Lima silt loam, 3 to 8 percent slopes	414.6	10.4%
LwB	Lordstown channery silt loam, 2 to 8 percent slopes	4.8	0.1%
Mr	Muck, deep	8.8	0.2%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ms	Muck, shallow	25.7	0.6%
OtE	Ontario, Honeoye, and Lansing soils, 20 to 35 percent slopes	23.1	0.6%
OtF	Ontario, Honeoye, and Lansing soils, 35 to 50 percent slopes	0.6	0.0%
PaB	Palmyra gravelly sandy loam, 3 to 8 percent slopes	1.4	0.0%
PgB	Palmyra gravelly loam, 3 to 8 percent slopes	4.7	0.1%
PgC	Palmyra gravelly loam, 8 to 15 percent slopes	5.3	0.1%
PmD	Palmyra soils, 15 to 25 percent slopes	2.6	0.1%
PnE	Palmyra, Howard, and Alton soils, 25 to 40 percent slopes	0.3	0.0%
Qu	Quarries	3.5	0.1%
ShD	Schoharie silty clay loam, 12 to 20 percent slopes	2.8	0.1%
Sn	Sloan silt loam	17.2	0.4%
W	Water	9.4	0.2%
Totals for Area of Interest		**3,986.9**	**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.

Cayuga County, New York

Ad—Alden mucky silt loam, till substratum

Map Unit Setting

National map unit symbol: 9q2m
Elevation: 300 to 1,500 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Alden, Till Substratum

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: A silty mantle of local deposition overlying loamy till

Typical profile

H1 - 0 to 9 inches: mucky silt loam
H2 - 9 to 24 inches: silt loam
H3 - 24 to 60 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly 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 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Minor Components

Muck

Percent of map unit: 5 percent
Landform: Marshes, swamps

Hydric soil rating: Yes

Kendaia

Percent of map unit: 4 percent
Hydric soil rating: No

Appleton

Percent of map unit: 4 percent
Hydric soil rating: No

Ellery

Percent of map unit: 4 percent
Landform: Depressions
Hydric soil rating: Yes

Erie

Percent of map unit: 4 percent
Hydric soil rating: No

Lyons

Percent of map unit: 4 percent
Landform: Depressions
Hydric soil rating: Yes

Al—Alluvial land

Map Unit Setting

National map unit symbol: 9q2n
Elevation: 100 to 3,000 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Fluvaquents

Setting

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

Typical profile

H1 - 0 to 5 inches: gravelly silt loam

H2 - 5 to 70 inches: very gravelly sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: F101XY003NY - Low Floodplain Depression
Hydric soil rating: Yes

Description of Udifluvents

Setting

Landform: Flood plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium with a wide range of texture

Typical profile

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

Properties and qualities

Slope: 0 to 8 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 low to very high (0.06 to 19.98 in/hr)
Depth to water table: About 18 to 72 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A
Ecological site: F140XY014NY - Low Floodplain, F101XY002NY - Low Floodplain
Hydric soil rating: No

Minor Components

Hamlin

Percent of map unit: 5 percent

Hydric soil rating: No

Teel

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

Wayland

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

Sloan

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

Canandaigua

Percent of map unit: 3 percent
Landform: Depressions
Hydric soil rating: Yes

Muck

Percent of map unit: 2 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

AwB—Aurora silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 9q34
Elevation: 1,000 to 1,300 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Aurora

Setting

Landform: Till plains, ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till derived mainly from calcareous shale, with some limestone and sandstone

Typical profile

H1 - 0 to 13 inches: silt loam
H2 - 13 to 32 inches: silty clay loam
H3 - 32 to 36 inches: weathered bedrock

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Farmington

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

Angola

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

Honeoye

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

Cazenovia

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

Lima

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

AwC—Aurora silt loam, 6 to 12 percent slopes

Map Unit Setting

National map unit symbol: 9q35
Elevation: 1,000 to 1,300 feet
Mean annual precipitation: 32 to 41 inches

Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Aurora

Setting

Landform: Till plains, ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till derived mainly from calcareous shale, with some limestone and sandstone

Typical profile

H1 - 0 to 13 inches: silt loam
H2 - 13 to 32 inches: silty clay loam
H3 - 32 to 36 inches: weathered bedrock

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Cazenovia

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

Honeoye

Percent of map unit: 4 percent
Hydric soil rating: No

Lima

Percent of map unit: 4 percent
Hydric soil rating: No

Farmington
Percent of map unit: 4 percent
Hydric soil rating: No

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

AwC3—Aurora silt loam, 6 to 12 percent slopes eroded

Map Unit Setting
National map unit symbol: 9q36
Elevation: 1,000 to 1,300 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

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

Description of Aurora

Setting
Landform: Till plains, ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till derived mainly from calcareous shale, with some limestone and sandstone

Typical profile
H1 - 0 to 13 inches: silt loam
H2 - 13 to 32 inches: silty clay loam
H3 - 32 to 36 inches: weathered bedrock

Properties and qualities
Slope: 6 to 12 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 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: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Honeoye

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

Cazenovia

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

Farmington

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

Lima

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

Angola

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

CsA—Conesus gravelly silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2w3j2
Elevation: 820 to 1,800 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Conesus

Setting

Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear

Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: gravelly silt loam
E/B - 9 to 14 inches: gravelly silt loam
Bt/E - 14 to 19 inches: gravelly silt loam
Bt1 - 19 to 25 inches: gravelly silt loam
Bt2 - 25 to 36 inches: gravelly silt loam
C - 36 to 79 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Lansing

Percent of map unit: 7 percent
Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Kendaia

Percent of map unit: 3 percent
Landform: Drumlins, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Nunda

Percent of map unit: 2 percent
Landform: Drumlinoid ridges, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest

Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Appleton

Percent of map unit: 2 percent
Landform: Drumlins, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Lyons

Percent of map unit: 1 percent
Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

CsB—Conesus gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w3j3
Elevation: 820 to 1,800 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Conesus

Setting

Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: gravelly silt loam
E/B - 9 to 14 inches: gravelly silt loam

Bt/E - 14 to 19 inches: gravelly silt loam
Bt1 - 19 to 25 inches: gravelly silt loam
Bt2 - 25 to 36 inches: gravelly silt loam
C - 36 to 79 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Lansing

Percent of map unit: 7 percent
Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Kendaia

Percent of map unit: 3 percent
Landform: Till plains, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Appleton

Percent of map unit: 2 percent
Landform: Till plains, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Nunda

Percent of map unit: 2 percent
Landform: Hills, drumlinoid ridges

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Lyons

Percent of map unit: 1 percent
Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

DuC3—Dunkirk silt loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 9q45
Elevation: 100 to 1,000 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Dunkirk

Setting

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

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 16 inches: silt loam
H3 - 16 to 30 inches: silt loam
H4 - 30 to 60 inches: stratified silty clay loam to silt loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F101XY008NY - Well Drained Lake Plain
Hydric soil rating: No

Minor Components

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

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

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

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

Ee—Eel silt loam

Map Unit Setting
National map unit symbol: 9q49
Elevation: 600 to 1,800 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

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

Description of Teel

Setting
Landform: Flood plains

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

Typical profile

H1 - 0 to 14 inches: silt loam
H2 - 14 to 28 inches: silt loam
H3 - 28 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 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 high to high (0.57 to 1.98 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F101XY002NY - Low Floodplain
Hydric soil rating: No

Minor Components

Collamer

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

Genesee (hamlin)

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

Udifluvents

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

Sloan

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

ErA—Erie channery silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2wn34
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Erie

Setting

Landform: Hills
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Till

Typical profile

Ap - 0 to 9 inches: channery silt loam
E - 9 to 13 inches: channery silt loam
Bg - 13 to 15 inches: channery silt loam
Bx - 15 to 38 inches: channery silt loam
C - 38 to 72 inches: channery loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 10 to 21 inches to fragipan
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 7 to 14 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F140XY024NY - Moist Dense Till

Hydric soil rating: No

Minor Components

Chippewa

Percent of map unit: 10 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Langford

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Fremont

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Fo—Fonda mucky silt loam

Map Unit Setting

National map unit symbol: 9q4k
Elevation: 50 to 650 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Fonda

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 5 inches: mucky silt loam
H2 - 5 to 13 inches: silty clay loam
H3 - 13 to 25 inches: silty clay
H4 - 25 to 60 inches: stratified silty clay loam to silty clay to silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F101XY010NY - Wet Lake Plain Depression
Hydric soil rating: Yes

Minor Components

Madalin

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

Odessa

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

Muck

Percent of map unit: 5 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Lakemont

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

Canandaigua

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

HnB—Honeoye silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w3p2
Elevation: 260 to 1,780 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Honeoye

Setting

Landform: Ridges, till plains, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: silt loam
E - 8 to 10 inches: silt loam
Bt/E - 10 to 14 inches: loam
Bt1 - 14 to 23 inches: loam
Bt2 - 23 to 29 inches: gravelly loam
C - 29 to 79 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Lima
Percent of map unit: 5 percent
Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Appleton
Percent of map unit: 4 percent
Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Lansing
Percent of map unit: 4 percent
Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Wassaic
Percent of map unit: 2 percent
Landform: Till plains, ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

HnC—Honeoye silt loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 2w3p6
Elevation: 380 to 1,840 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Honeoye

Setting

Landform: Ridges, till plains, drumlins
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: silt loam
E - 8 to 10 inches: silt loam
Bt/E - 10 to 14 inches: loam
Bt1 - 14 to 23 inches: loam
Bt2 - 23 to 29 inches: gravelly loam
C - 29 to 79 inches: gravelly loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Lima

Percent of map unit: 5 percent
Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Lansing

Percent of map unit: 4 percent
Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Appleton

Percent of map unit: 4 percent
Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Wassaic

Percent of map unit: 2 percent
Landform: Till plains, ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

HsD—Honeoye and Lansing soils, 14 to 20 percent slopes

Map Unit Setting

National map unit symbol: 2w3nh
Elevation: 390 to 1,560 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Honeoye and similar soils: 45 percent
Lansing and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Honeoye

Setting

Landform: Ridges, till plains, drumlins
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex

Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: silt loam
E - 8 to 10 inches: silt loam
Bt/E - 10 to 14 inches: loam
Bt1 - 14 to 23 inches: loam
Bt2 - 23 to 29 inches: gravelly loam
C - 29 to 79 inches: gravelly loam

Properties and qualities

Slope: 14 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Description of Lansing

Setting

Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: gravelly silt loam
E - 8 to 13 inches: gravelly silt loam
Bt/E - 13 to 21 inches: gravelly silt loam
Bt1 - 21 to 28 inches: gravelly silt loam
Bt2 - 28 to 39 inches: gravelly silt loam
C - 39 to 79 inches: gravelly loam

Properties and qualities

Slope: 14 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Lima

Percent of map unit: 5 percent
Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Conesus

Percent of map unit: 5 percent
Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Wassaic

Percent of map unit: 3 percent
Landform: Till plains, ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Kendaia

Percent of map unit: 2 percent
Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

KeB—Kendaia silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w5j4
Elevation: 430 to 1,610 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Kendaia

Setting

Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bw - 8 to 15 inches: silt loam
Bg - 15 to 20 inches: gravelly silt loam
BCg - 20 to 24 inches: gravelly loam
C - 24 to 79 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: B/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Lima
Percent of map unit: 7 percent
Landform: Till plains, drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Lyons
Percent of map unit: 4 percent
Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Churchville
Percent of map unit: 2 percent
Landform: Till plains, lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope, rise, talf
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ovid
Percent of map unit: 2 percent
Landform: Till plains, reworked lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

KlA—Kendaia and Lyons soils, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 2trwv
Elevation: 430 to 1,510 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Kendaia and similar soils: 50 percent
Lyons and similar soils: 25 percent
Lyons, frequently ponded, and similar soils: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kendaia

Setting

Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bw - 8 to 15 inches: silt loam
Bg - 15 to 20 inches: gravelly silt loam
BCg - 20 to 24 inches: gravelly loam
C - 24 to 79 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Description of Lyons

Setting

Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Calcareous loamy lodgment till derived from limestone and shale

Typical profile

Ap - 0 to 10 inches: silt loam
Bg1 - 10 to 19 inches: silt loam
Bg2 - 19 to 25 inches: silty clay loam
BCg - 25 to 34 inches: gravelly silt loam
C - 34 to 79 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Description of Lyons, Frequently Ponded

Setting

Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Calcareous loamy lodgment till derived from limestone and shale

Typical profile

Ap - 0 to 10 inches: mucky silt loam
Bg1 - 10 to 19 inches: silt loam
Bg2 - 19 to 25 inches: silty clay loam
BCg - 25 to 34 inches: gravelly silt loam
C - 34 to 79 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Minor Components

Lima

Percent of map unit: 3 percent
Landform: Till plains, drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Conesus

Percent of map unit: 3 percent
Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Palms

Percent of map unit: 2 percent
Landform: Marshes, swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Ilion

Percent of map unit: 2 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

LgB—Langford channery silt loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2ywp2
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Langford

Setting

Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Till

Typical profile

Ap - 0 to 9 inches: channery silt loam
Bw - 9 to 17 inches: channery silt loam
E - 17 to 21 inches: channery loam
Bx - 21 to 48 inches: channery silt loam
C - 48 to 72 inches: channery silt loam

Properties and qualities

Slope: 2 to 8 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 15 to 28 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 14 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F140XY024NY - Moist Dense Till
Hydric soil rating: No

Minor Components

Erie

Percent of map unit: 10 percent
Landform: Hills
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Schuyler

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F139XY006OH - Moist Till Highlands
Hydric soil rating: No

LgCK—Langford channery silt loam, rolling

Map Unit Setting

National map unit symbol: 2ywp5
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Langford and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Langford

Setting

Landform: Hills
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear

Across-slope shape: Linear
Parent material: Till

Typical profile

Ap - 0 to 9 inches: channery silt loam
Bw - 9 to 17 inches: channery silt loam
E - 17 to 21 inches: channery loam
Bx - 21 to 48 inches: channery silt loam
C - 48 to 72 inches: channery silt loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 15 to 28 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: About 14 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F140XY024NY - Moist Dense Till
Hydric soil rating: No

Minor Components

Howard

Percent of map unit: 5 percent
Landform: Terraces, valley trains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Erie

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

LsB—Lansing gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w3mb
Elevation: 460 to 1,800 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Lansing

Setting

Landform: Till plains, drumlins, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: gravelly silt loam
E - 8 to 13 inches: gravelly silt loam
Bt/E - 13 to 21 inches: gravelly silt loam
Bt1 - 21 to 28 inches: gravelly silt loam
Bt2 - 28 to 39 inches: gravelly silt loam
C - 39 to 79 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Conesus
Percent of map unit: 8 percent
Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Kendaia
Percent of map unit: 3 percent
Landform: Till plains, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Appleton
Percent of map unit: 2 percent
Landform: Till plains, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Danley
Percent of map unit: 1 percent
Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Palatine
Percent of map unit: 1 percent
Landform: Ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

LsC—Lansing gravelly silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w3md
Elevation: 520 to 1,970 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Lansing

Setting

Landform: Till plains, drumlins, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: gravelly silt loam
E - 8 to 13 inches: gravelly silt loam
Bt/E - 13 to 21 inches: gravelly silt loam
Bt1 - 21 to 28 inches: gravelly silt loam
Bt2 - 28 to 39 inches: gravelly silt loam
C - 39 to 79 inches: gravelly loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Conesus

Percent of map unit: 8 percent
Landform: Till plains, drumlins, hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Kendaia

Percent of map unit: 3 percent
Landform: Till plains, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Appleton

Percent of map unit: 2 percent
Landform: Drumlins, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Wassaic

Percent of map unit: 1 percent
Landform: Till plains, ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Danley

Percent of map unit: 1 percent
Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

LtA—Lima silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2w3kh
Elevation: 410 to 1,640 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Lima

Setting

Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: silt loam
Bt/E - 9 to 12 inches: loam
Bt1 - 12 to 16 inches: loam
Bt2 - 16 to 25 inches: gravelly loam
C - 25 to 79 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D

Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Honeoye
Percent of map unit: 6 percent
Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Kendaia
Percent of map unit: 3 percent
Landform: Ridges, drumlins, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Appleton
Percent of map unit: 3 percent
Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cazenovia
Percent of map unit: 2 percent
Landform: Reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Lyons
Percent of map unit: 1 percent
Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

LtB—Lima silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w3kk
Elevation: 380 to 1,680 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Lima

Setting

Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 9 inches: silt loam
Bt/E - 9 to 12 inches: loam
Bt1 - 12 to 16 inches: loam
Bt2 - 16 to 25 inches: gravelly loam
C - 25 to 79 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D

Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Honeoye
Percent of map unit: 6 percent
Landform: Ridges, till plains, drumlins
Landform position (two-dimensional): Summit, backslope, shoulder
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Appleton
Percent of map unit: 3 percent
Landform: Ridges, drumlins, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Kendaia
Percent of map unit: 3 percent
Landform: Ridges, till plains, drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cazenovia
Percent of map unit: 2 percent
Landform: Reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Lyons
Percent of map unit: 1 percent
Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

LwB—Lordstown channery silt loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2wzmm
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Lordstown and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lordstown

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop, interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived from sandstone and siltstone

Typical profile

Ap - 0 to 7 inches: channery silt loam
Bw1 - 7 to 17 inches: channery silt loam
Bw2 - 17 to 26 inches: channery silt loam
C - 26 to 30 inches: very channery silt loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 2 to 8 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F140XY027NY - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Mardin

Percent of map unit: 5 percent
Landform: Mountains, hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Arnot

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Mountaintop, interfluve, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Mr—Muck, deep

Map Unit Setting

National map unit symbol: 9q65
Elevation: 250 to 1,000 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Muck, Deep

Setting

Landform: Marshes, swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Deep organic material

Typical profile

H1 - 0 to 60 inches: muck

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 5.95 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 23.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F101XY004NY - Mucky Depression
Hydric soil rating: Yes

Minor Components

Muck, shallow

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

Edwards

Percent of map unit: 5 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Fonda

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

Peat and muck

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

Alden

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

Ms—Muck, shallow

Map Unit Setting

National map unit symbol: 9q66
Elevation: 250 to 1,500 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Muck, Shallow

Setting

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

Typical profile

H1 - 0 to 35 inches: muck
H2 - 35 to 60 inches: clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Very high (about 18.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F101XY004NY - Mucky Depression
Hydric soil rating: Yes

Minor Components

Peat and muck

Percent of map unit: 5 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Muck, deep

Percent of map unit: 5 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Edwards

Percent of map unit: 5 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Alden

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

OtE—Ontario, Honeoye, and Lansing soils, 20 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2w3mx
Elevation: 390 to 1,410 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Ontario and similar soils: 35 percent
Lansing and similar soils: 25 percent
Honeoye and similar soils: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ontario

Setting

Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: loam
E - 8 to 14 inches: loam
Bt/E - 14 to 21 inches: loam
Bt - 21 to 39 inches: gravelly loam
C1 - 39 to 48 inches: gravelly loam
C2 - 48 to 79 inches: gravelly loam

Properties and qualities

Slope: 20 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Description of Lansing

Setting

Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: gravelly silt loam
E - 8 to 13 inches: gravelly silt loam
Bt/E - 13 to 21 inches: gravelly silt loam
Bt1 - 21 to 28 inches: gravelly silt loam
Bt2 - 28 to 39 inches: gravelly silt loam
C - 39 to 79 inches: gravelly loam

Properties and qualities

Slope: 20 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Description of Honeoye

Setting

Landform: Ridges, till plains, drumlins
Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: silt loam
E - 8 to 10 inches: silt loam
Bt/E - 10 to 14 inches: loam
Bt1 - 14 to 23 inches: loam
Bt2 - 23 to 29 inches: gravelly loam
C - 29 to 79 inches: gravelly loam

Properties and qualities

Slope: 20 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Palmyra

Percent of map unit: 5 percent
Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Aurora

Percent of map unit: 5 percent
Landform: Ridges, benches, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Cazenovia

Percent of map unit: 5 percent
Landform: Till plains, reworked lake plains

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

OtF—Ontario, Honeoye, and Lansing soils, 35 to 50 percent slopes

Map Unit Setting

National map unit symbol: 2w3mq
Elevation: 430 to 1,460 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Ontario and similar soils: 30 percent
Lansing and similar soils: 25 percent
Honeoye and similar soils: 25 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ontario

Setting

Landform: Till plains, ridges, drumlins
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: loam
E - 8 to 14 inches: loam
Bt/E - 14 to 21 inches: loam
Bt - 21 to 39 inches: gravelly loam
C1 - 39 to 48 inches: gravelly loam
C2 - 48 to 79 inches: gravelly loam

Properties and qualities

Slope: 35 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Description of Lansing

Setting

Landform: Till plains, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: gravelly silt loam
E - 8 to 13 inches: gravelly silt loam
Bt/E - 13 to 21 inches: gravelly silt loam
Bt1 - 21 to 28 inches: gravelly silt loam
Bt2 - 28 to 39 inches: gravelly silt loam
C - 39 to 79 inches: gravelly loam

Properties and qualities

Slope: 35 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Description of Honeoye

Setting

Landform: Ridges, till plains, drumlins
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous loamy lodgment till derived from limestone, sandstone, and shale

Typical profile

Ap - 0 to 8 inches: silt loam
E - 8 to 10 inches: silt loam
Bt/E - 10 to 14 inches: loam
Bt1 - 14 to 23 inches: loam
Bt2 - 23 to 29 inches: gravelly loam
C - 29 to 79 inches: gravelly loam

Properties and qualities

Slope: 35 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Aurora

Percent of map unit: 7 percent
Landform: Ridges, benches, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Cazenovia

Percent of map unit: 7 percent
Landform: Till plains, reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Concave

Across-slope shape: Convex
Hydric soil rating: No

Palmyra

Percent of map unit: 6 percent
Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

PaB—Palmyra gravelly sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9q6w
Elevation: 380 to 1,130 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Palmyra

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile

H1 - 0 to 11 inches: gravelly sandy loam
H2 - 11 to 34 inches: gravelly loam
H3 - 34 to 60 inches: stratified very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

Ontario

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

Fredon

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

Dunkirk

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

Phelps

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

Howard

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

PgB—Palmyra gravelly loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9q6z
Elevation: 300 to 1,410 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Palmyra

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile

H1 - 0 to 11 inches: gravelly loam
H2 - 11 to 34 inches: gravelly loam
H3 - 34 to 60 inches: stratified very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

Fredon

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

Phelps

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

Wampsville

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

Alton

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

PgC—Palmyra gravelly loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9q70
Elevation: 380 to 1,250 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Palmyra

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile

H1 - 0 to 11 inches: gravelly loam
H2 - 11 to 34 inches: gravelly loam
H3 - 34 to 60 inches: stratified very gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

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

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

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

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

PmD—Palmyra soils, 15 to 25 percent slopes

Map Unit Setting
National map unit symbol: 9q71
Elevation: 380 to 1,300 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

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

Description of Palmyra

Setting
Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile
H1 - 0 to 11 inches: gravelly loam
H2 - 11 to 34 inches: gravelly loam
H3 - 34 to 60 inches: stratified very gravelly sand

Properties and qualities
Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

Howard

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

Dunkirk

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

Alton

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

Phelps

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

PnE—Palmyra, Howard, and Alton soils, 25 to 40 percent slopes

Map Unit Setting

National map unit symbol: 9q72
Elevation: 250 to 1,390 feet
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Palmyra and similar soils: 30 percent
Alton and similar soils: 25 percent
Howard and similar soils: 25 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palmyra

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile

H1 - 0 to 11 inches: gravelly loam
H2 - 11 to 34 inches: gravelly loam
H3 - 34 to 60 inches: stratified very gravelly sand

Properties and qualities

Slope: 25 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Description of Alton

Setting

Landform: Terraces, outwash plains, deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from acidic rocks, with some limestone below 40 inches

Typical profile

H1 - 0 to 7 inches: gravelly sandy loam
H2 - 7 to 41 inches: gravelly sandy loam
H3 - 41 to 63 inches: very gravelly loamy sand
C - 63 to 120 inches: stratified very gravelly sand

Properties and qualities

Slope: 25 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Description of Howard

Setting

Landform: Terraces, valley trains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, containing significant amounts of limestone

Typical profile

H1 - 0 to 10 inches: gravelly loam
H2 - 10 to 29 inches: gravelly loam
H3 - 29 to 62 inches: very gravelly loam
3C - 62 to 120 inches: stratified very gravelly sand

Properties and qualities

Slope: 25 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

Dunkirk

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

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

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

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

Qu—Quarries

Map Unit Setting
National map unit symbol: 9q75
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

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

Minor Components

Ellery (chippewa)
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

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

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

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

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

Lordstown

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

ShD—Schoharie silty clay loam, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: 2xggq
Elevation: 380 to 1,150 feet
Mean annual precipitation: 31 to 57 inches
Mean annual air temperature: 41 to 50 degrees F
Frost-free period: 100 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Schoharie

Setting

Landform: Lake terraces
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Red clayey glaciolacustrine deposits derived from calcareous shale

Typical profile

Ap - 0 to 8 inches: silty clay loam
E - 8 to 11 inches: silt loam
Bt/E - 11 to 18 inches: silty clay
Bt - 18 to 33 inches: clay
C1 - 33 to 52 inches: silty clay
C2 - 52 to 79 inches: silty clay

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Odessa

Percent of map unit: 5 percent
Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cazenovia

Percent of map unit: 5 percent
Landform: Till plains, reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Cayuga

Percent of map unit: 3 percent
Landform: Till plains, lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest, tread
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Collamer

Percent of map unit: 2 percent
Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Sn—Sloan silt loam

Map Unit Setting

National map unit symbol: 9q7g
Elevation: 900 to 1,000 feet

Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Sloan

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey alluvium washed from uplands that contain some calcareous drift

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 29 inches: silt loam
H3 - 29 to 40 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 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 to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Occasional
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F101XY003NY - Low Floodplain Depression
Hydric soil rating: Yes

Minor Components

Canandaigua

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

Warners

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

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

Eel (teel)
Percent of map unit: 5 percent
Hydric soil rating: No

Genesee (hamlin)
Percent of map unit: 5 percent
Hydric soil rating: No

W—Water

Map Unit Setting
National map unit symbol: 9q7t
Mean annual precipitation: 32 to 41 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

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

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Management

Land management interpretations are tools designed to guide the user in evaluating existing conditions in planning and predicting the soil response to various land management practices, for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture, and rangeland. Example interpretations include suitability for a variety of irrigation practices, log landings, haul roads and major skid trails, equipment operability, site preparation, suitability for hand and mechanical planting, potential erosion hazard associated with various practices, and ratings for fencing and waterline installation.

Erosion Hazard (Off-Road, Off-Trail)

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope, soil erosion factor K, and an index of rainfall erosivity (R). The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

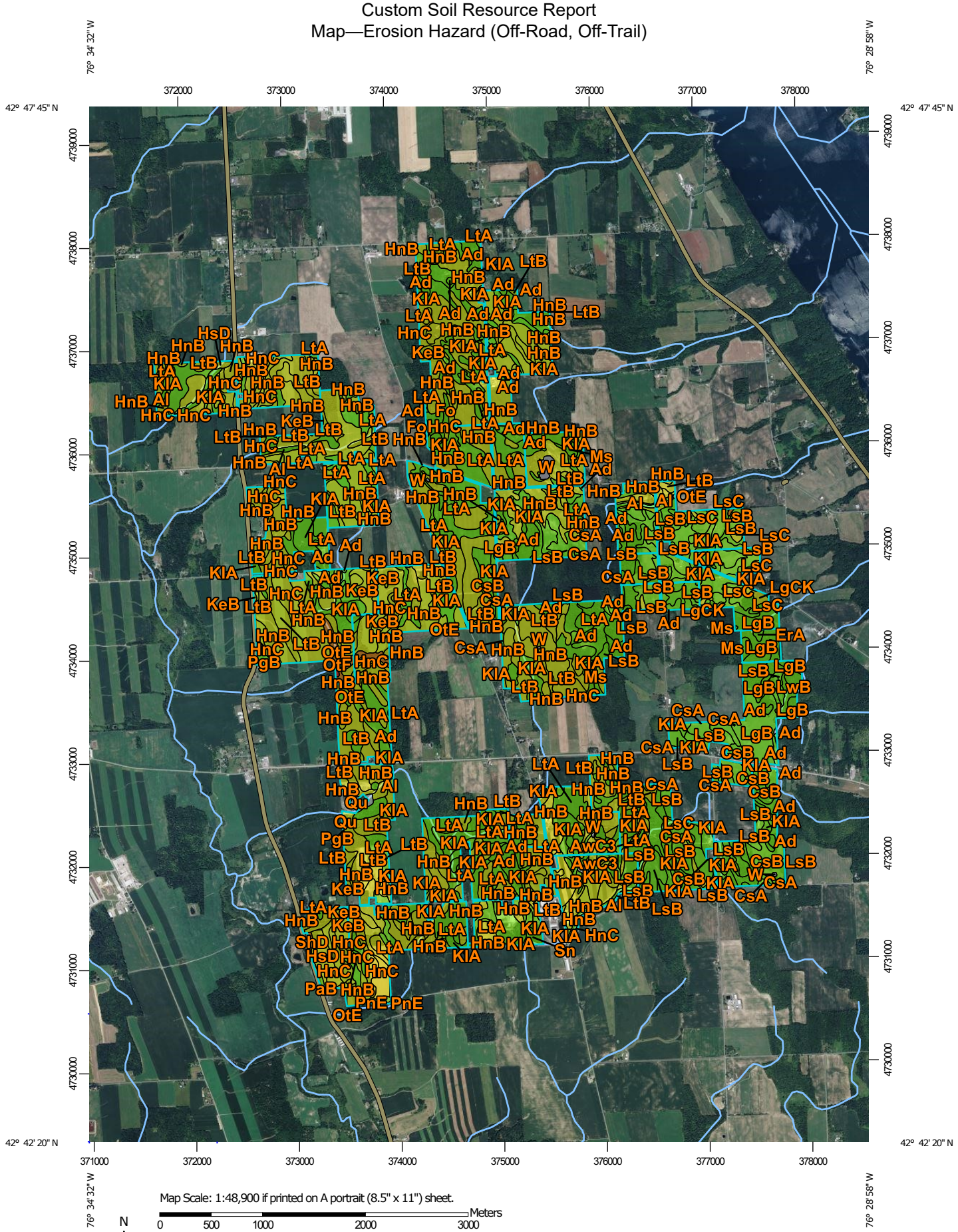
The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Erosion Hazard (Off-Road, Off-Trail)



Map Scale: 1:48,900 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 500 1000 2000 3000

Feet: 0 2000 4000 8000 12000

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 Rating Polygons
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Lines
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Points
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

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 1:15,800.

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: Cayuga County, New York
Survey Area Data: Version 20, Sep 5, 2023

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

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

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.

Tables—Erosion Hazard (Off-Road, Off-Trail)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
Ad	Alden mucky silt loam, till substratum	Slight	Alden, till substratum (75%)		205.3	5.1%
Al	Alluvial land	Slight	Fluvaquents (40%)		23.8	0.6%
			Udifluvents (35%)			
AwB	Aurora silt loam, 2 to 6 percent slopes	Slight	Aurora (75%)		14.7	0.4%
AwC	Aurora silt loam, 6 to 12 percent slopes	Moderate	Aurora (80%)	Surface kw times slope times R index (0.53)	2.7	0.1%
AwC3	Aurora silt loam, 6 to 12 percent slopes eroded	Moderate	Aurora (75%)	Surface kw times slope times R index (0.53)	8.8	0.2%
CsA	Conesus gravelly silt loam, 0 to 3 percent slopes	Slight	Conesus (85%)		62.7	1.6%
			Lansing (7%)			
			Kendaia (3%)			
			Nunda (2%)			
			Appleton (2%)			
			Lyons (1%)			
CsB	Conesus gravelly silt loam, 3 to 8 percent slopes	Slight	Conesus (85%)		212.6	5.3%
			Lansing (7%)			
			Kendaia (3%)			
			Lyons (1%)			
DuC3	Dunkirk silt loam, 6 to 12 percent slopes, eroded	Moderate	Dunkirk (80%)	Surface kw times slope times R index (0.64)	3.0	0.1%
Ee	Eel silt loam	Slight	Teel (80%)		0.6	0.0%
ErA	Erie channery silt loam, 0 to 3 percent slopes	Slight	Erie (80%)		3.6	0.1%
			Chippewa (10%)			
			Fremont (5%)			
Fo	Fonda mucky silt loam	Slight	Fonda (75%)		11.2	0.3%
HnB	Honeoye silt loam, 3 to 8 percent slopes	Moderate	Honeoye (85%)	Surface kw times slope times R index (0.36)	1,185.0	29.7%
			Lima (5%)	Surface kw times slope times R index (0.25)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Lansing (4%)	Surface kw times slope times R index (0.15)		
			Appleton (4%)	Surface kw times slope times R index (0.25)		
			Wassaic (2%)	Surface kw times slope times R index (0.15)		
HnC	Honeoye silt loam, 8 to 15 percent slopes	Moderate	Honeoye (85%)	Surface kw times slope times R index (0.64)	184.2	4.6%
			Lima (5%)	Surface kw times slope times R index (0.61)		
			Lansing (4%)	Surface kw times slope times R index (0.59)		
			Appleton (4%)	Surface kw times slope times R index (0.61)		
			Wassaic (2%)	Surface kw times slope times R index (0.59)		
HsD	Honeoye and Lansing soils, 14 to 20 percent slopes	Moderate	Honeoye (45%)	Surface kw times slope times R index (0.71)	47.9	1.2%
			Lansing (40%)	Surface kw times slope times R index (0.62)		
			Lima (5%)	Surface kw times slope times R index (0.68)		
			Conesus (5%)	Surface kw times slope times R index (0.59)		
			Wassaic (3%)	Surface kw times slope times R index (0.65)		
			Kendaia (2%)	Surface kw times slope times R index (0.52)		
KeB	Kendaia silt loam, 3 to 8 percent slopes	Moderate	Kendaia (85%)	Surface kw times slope times R index (0.03)	48.7	1.2%
			Lima (7%)	Surface kw times slope times R index (0.12)		
			Lyons (4%)	Surface kw times slope times R index (0.03)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Ovid (2%)	Surface kw times slope times R index (0.12)		
			Churchville (2%)	Surface kw times slope times R index (0.43)		
KlA	Kendaia and Lyons soils, 0 to 3 percent slopes	Slight	Kendaia (50%)		435.5	10.9%
			Lyons (25%)			
			Lyons, frequently ponded (15%)			
			Conesus (3%)			
			Lima (3%)			
			Palms (2%)			
			Ilion (2%)			
LgB	Langford channery silt loam, 2 to 8 percent slopes	Slight	Langford (85%)		124.3	3.1%
			Erie (10%)			
LgCK	Langford channery silt loam, rolling	Moderate	Langford (90%)	Surface kw times slope times R index (0.30)	5.1	0.1%
			Erie (5%)	Surface kw times slope times R index (0.05)		
LsB	Lansing gravelly silt loam, 3 to 8 percent slopes	Slight	Lansing (85%)		284.1	7.1%
			Conesus (8%)			
			Kendaia (3%)			
LsC	Lansing gravelly silt loam, 8 to 15 percent slopes	Moderate	Lansing (85%)	Surface kw times slope times R index (0.48)	38.1	1.0%
			Conesus (8%)	Surface kw times slope times R index (0.35)		
			Kendaia (3%)	Surface kw times slope times R index (0.35)		
			Appleton (2%)	Surface kw times slope times R index (0.56)		
			Wassaic (1%)	Surface kw times slope times R index (0.56)		
			Danley (1%)	Surface kw times slope times R index (0.56)		
LtA	Lima silt loam, 0 to 3 percent slopes	Slight	Lima (85%)		560.0	14.0%
			Honeoye (6%)			
			Appleton (3%)			

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Kendaia (3%)			
			Cazenovia (2%)			
			Lyons (1%)			
LtB	Lima silt loam, 3 to 8 percent slopes	Moderate	Lima (85%)	Surface kw times slope times R index (0.12)	414.6	10.4%
			Honeoye (6%)	Surface kw times slope times R index (0.22)		
			Appleton (3%)	Surface kw times slope times R index (0.12)		
			Kendaia (3%)	Surface kw times slope times R index (0.03)		
			Cazenovia (2%)	Surface kw times slope times R index (0.12)		
			Lyons (1%)	Surface kw times slope times R index (0.03)		
LwB	Lordstown channery silt loam, 2 to 8 percent slopes	Slight	Lordstown (90%)		4.8	0.1%
			Mardin (5%)			
			Arnot (5%)			
Mr	Muck, deep	Slight	Muck, deep (75%)		8.8	0.2%
Ms	Muck, shallow	Slight	Muck, shallow (75%)		25.7	0.6%
OtE	Ontario, Honeoye, and Lansing soils, 20 to 35 percent slopes	Severe	Ontario (35%)	Surface kw times slope times R index (0.78)	23.1	0.6%
			Honeoye (25%)	Surface kw times slope times R index (0.92)		
			Aurora (5%)	Surface kw times slope times R index (0.84)		
			Cazenovia (5%)	Surface kw times slope times R index (0.92)		
OtF	Ontario, Honeoye, and Lansing soils, 35 to 50 percent slopes	Very Severe	Ontario (30%)	Surface kw times slope times R index (1.00)	0.6	0.0%
			Honeoye (25%)	Surface kw times slope times R index (1.00)		
			Aurora (7%)	Surface kw times slope times R index (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Cazenovia (7%)	Surface kw times slope times R index (1.00)		
PaB	Palmyra gravelly sandy loam, 3 to 8 percent slopes	Slight	Palmyra (75%)		1.4	0.0%
PgB	Palmyra gravelly loam, 3 to 8 percent slopes	Slight	Palmyra (80%)		4.7	0.1%
PgC	Palmyra gravelly loam, 8 to 15 percent slopes	Slight	Palmyra (80%)		5.3	0.1%
PmD	Palmyra soils, 15 to 25 percent slopes	Moderate	Palmyra (80%)	Surface kw times slope times R index (0.28)	2.6	0.1%
PnE	Palmyra, Howard, and Alton soils, 25 to 40 percent slopes	Moderate	Palmyra (30%)	Surface kw times slope times R index (0.58)	0.3	0.0%
			Howard (25%)	Surface kw times slope times R index (0.58)		
			Alton (25%)	Surface kw times slope times R index (0.58)		
Qu	Quarries	Not rated	Quarries (70%)		3.5	0.1%
			Alden (5%)			
			Langford (5%)			
			Angola (5%)			
			Benson (5%)			
			Lordstown (5%)			
			Ellery (Chippewa) (5%)			
ShD	Schoharie silty clay loam, 12 to 20 percent slopes	Severe	Schoharie (85%)	Surface kw times slope times R index (0.78)	2.8	0.1%
			Odessa (5%)	Surface kw times slope times R index (0.78)		
			Cayuga (3%)	Surface kw times slope times R index (0.78)		
			Collamer (2%)	Surface kw times slope times R index (0.78)		
Sn	Sloan silt loam	Slight	Sloan (75%)		17.2	0.4%
W	Water	Not rated	Water (100%)		9.4	0.2%
Totals for Area of Interest					**3,986.9**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Slight	2,006.2	50.3%
Moderate	1,941.1	48.7%
Severe	25.9	0.6%
Very Severe	0.6	0.0%
Null or Not Rated	12.9	0.3%
Totals for Area of Interest	**3,986.9**	**100.0%**

Rating Options—Erosion Hazard (Off-Road, Off-Trail)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Reports

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

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

Soil Erosion

This folder contains a collection of tabular reports that present soil erosion factors and groupings. The reports (tables) include all selected map units and components for each map unit. Soil erosion factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factor Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic layer.

Report—RUSLE2 Related Attributes

Soil properties and interpretations for erosion runoff calculations. The surface mineral horizon properties are displayed or the first mineral horizon below an organic surface horizon. Organic horizons are not displayed.

RUSLE2 Related Attributes–Cayuga County, New York

Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
Ad—Alden mucky silt loam, till substratum								
Alden, till substratum	75	—	C/D	.28	5	26.3	51.7	22.0
Al—Alluvial land								
Fluvaquents	40	—	A/D	.32	5	32.1	55.9	12.0
Udifluvents	35	—	A	.32	5	45.0	43.0	12.0

RUSLE2 Related Attributes–Cayuga County, New York								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
AwB—Aurora silt loam, 2 to 6 percent slopes								
Aurora	75	—	D	.32	2	27.1	50.9	22.0
AwC—Aurora silt loam, 6 to 12 percent slopes								
Aurora	80	—	D	.32	2	27.1	50.9	22.0
AwC3—Aurora silt loam, 6 to 12 percent slopes eroded								
Aurora	75	—	D	.32	2	27.1	50.9	22.0
CsA—Conesus gravelly silt loam, 0 to 3 percent slopes								
Conesus	85	298	B/D	.32	5	26.0	55.0	19.0
CsB—Conesus gravelly silt loam, 3 to 8 percent slopes								
Conesus	85	161	B/D	.32	5	26.0	55.0	19.0
DuC3—Dunkirk silt loam, 6 to 12 percent slopes, eroded								
Dunkirk	80	—	C	.49	5	13.6	64.4	22.0
Ee—Eel silt loam								
Teel	80	—	B/D	.37	5	14.3	73.7	12.0
ErA—Erie channery silt loam, 0 to 3 percent slopes								
Erie	80	200	D	.37	3	20.0	56.0	24.0
Fo—Fonda mucky silt loam								
Fonda	75	—	C/D	.49	5	20.0	58.0	22.0
HnB—Honeoye silt loam, 3 to 8 percent slopes								
Honeoye	85	151	B	.37	5	26.0	55.0	19.0
HnC—Honeoye silt loam, 8 to 15 percent slopes								
Honeoye	85	98	B	.37	5	26.0	55.0	19.0
HsD—Honeoye and Lansing soils, 14 to 20 percent slopes								
Honeoye	45	59	B	.37	5	26.0	55.0	19.0
Lansing	40	59	B	.32	5	26.0	55.0	19.0
KeB—Kendaia silt loam, 3 to 8 percent slopes								
Kendaia	85	161	B/D	.28	5	26.0	55.0	19.0

RUSLE2 Related Attributes–Cayuga County, New York								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
KlA—Kendaia and Lyons soils, 0 to 3 percent slopes								
Kendaia	50	298	B/D	.28	5	26.0	55.0	19.0
Lyons	25	200	C/D	.28	5	26.0	55.0	19.0
Lyons, frequently ponded	15	200	C/D	.28	5	26.0	55.0	19.0
LgB—Langford channery silt loam, 2 to 8 percent slopes								
Langford	85	161	D	.24	4	26.0	52.0	22.0
LgCK—Langford channery silt loam, rolling								
Langford	90	98	D	.24	4	26.0	52.0	22.0
LsB—Lansing gravelly silt loam, 3 to 8 percent slopes								
Lansing	85	161	B	.32	5	26.0	55.0	19.0
LsC—Lansing gravelly silt loam, 8 to 15 percent slopes								
Lansing	85	112	B	.32	5	26.0	55.0	19.0
LtA—Lima silt loam, 0 to 3 percent slopes								
Lima	85	200	B/D	.32	5	26.0	55.0	19.0
LtB—Lima silt loam, 3 to 8 percent slopes								
Lima	85	161	B/D	.32	5	26.0	55.0	19.0
LwB—Lordstown channery silt loam, 2 to 8 percent slopes								
Lordstown	90	151	C	.32	2	30.0	56.0	14.0
Ms—Muck, shallow								
Muck, shallow	75	—	B/D	—	1	—	—	—
OtE—Ontario, Honeoye, and Lansing soils, 20 to 35 percent slopes								
Ontario	35	49	B	.28	5	41.0	42.0	17.0
Honeoye	25	49	B	.37	5	26.0	55.0	19.0
Lansing	25	49	B	.32	5	26.0	55.0	19.0
OtF—Ontario, Honeoye, and Lansing soils, 35 to 50 percent slopes								
Ontario	30	49	B	.28	5	41.0	42.0	17.0
Honeoye	25	49	B	.37	5	26.0	55.0	19.0
Lansing	25	49	B	.32	5	26.0	55.0	19.0
PaB—Palmyra gravelly sandy loam, 3 to 8 percent slopes								
Palmyra	75	—	A	.10	3	66.5	15.5	18.0

RUSLE2 Related Attributes–Cayuga County, New York								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
PgB—Palmyra gravelly loam, 3 to 8 percent slopes								
Palmyra	80	—	A	.17	3	41.1	36.9	22.0
PgC—Palmyra gravelly loam, 8 to 15 percent slopes								
Palmyra	80	—	A	.17	3	41.1	36.9	22.0
PmD—Palmyra soils, 15 to 25 percent slopes								
Palmyra	80	—	A	.17	3	41.1	36.9	22.0
PnE—Palmyra, Howard, and Alton soils, 25 to 40 percent slopes								
Palmyra	30	—	A	.17	3	41.1	36.9	22.0
Alton	25	—	A	.15	5	69.4	20.6	10.0
Howard	25	—	A	.24	5	45.3	42.7	12.0
ShD—Schoharie silty clay loam, 12 to 20 percent slopes								
Schoharie	85	59	D	.49	5	11.0	54.0	35.0
Sn—Sloan silt loam								
Sloan	75	—	B/D	.24	5	26.3	51.7	22.0

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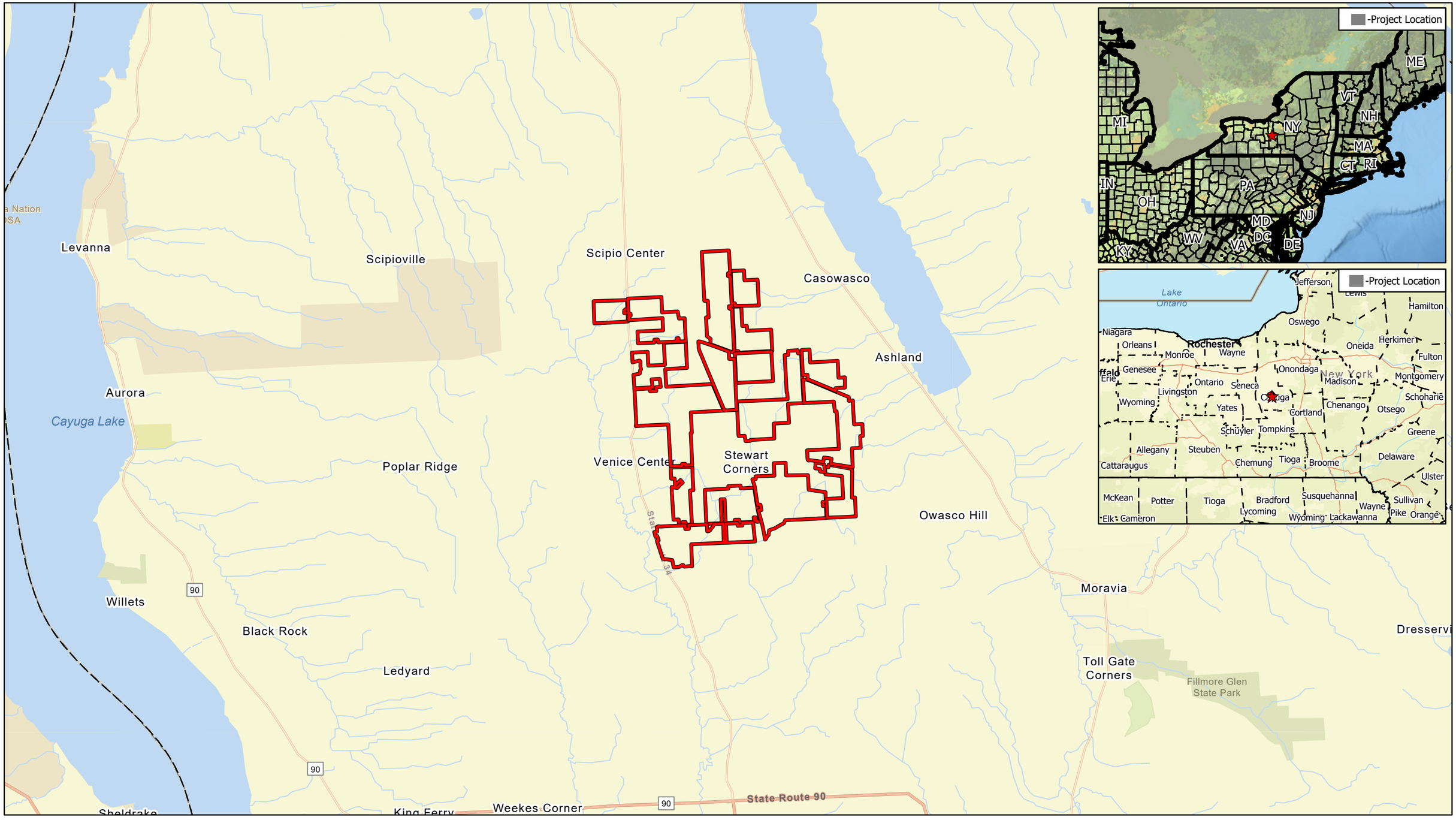
Appendix D

Vicinity Map, Pre and Post Drainage Maps, USGS Map and Impaired Water Map



Data Source(s): Westwood (2024); Esri WMS Basemap Imagery (Accessed 2024); USGS (2024); FEMA (2024); USDA (2024)

Westwood
Toll Free (888) 937-5150 westwoodps.com

Legend

- Project Boundary
- County Boundary

N

0 3,500 7,000 Feet

Agricola Wind

Cayuga County, NY

Vicinity Map

September 18, 2024

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Vicinity Map - Vicinity Map | 9/18/2024 2:37 PM | Elcelin

Data Source(s): Westwood (2024); Esri WMS Basemap Imagery (Accessed 2024); USGS (2024); FEMA (2024); USDA (2024)

Legend

- Project Boundary
- County Boundary

N

0 1,500 3,000 Feet

Agricola Wind

Cayuga County, NY

USGS Topographic Map

September 18, 2024

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USGS Topo Map - USGSTopoMap | 9/18/2024 2:51 PM | EKeith

ID #	Latitude	Longitude
1	42.758305	-76.500649
2	42.755396	-76.500959
3	42.749856	-76.49681
4	42.745842	-76.495363
5	42.732326	-76.501257
6	42.729991	-76.506755
7	42.730217	-76.509316
8	42.728684	-76.520512
9	42.732602	-76.526309
10	42.731904	-76.531726
11	42.731053	-76.534355
12	42.733738	-76.540686
13	42.736799	-76.540771
14	42.742925	-76.543395
15	42.745928	-76.544016
16	42.74789	-76.542292
17	42.748906	-76.5427
18	42.752958	-76.543906
19	42.755417	-76.545126
20	42.755429	-76.54688
21	42.766019	-76.546079
22	42.771469	-76.561671
23	42.771378	-76.56554
24	42.780974	-76.533557
25	42.775488	-76.528034
26	42.771491	-76.532844
27	42.766503	-76.531289
28	42.757956	-76.531187
29	42.761033	-76.527502
30	42.759443	-76.522228
31	42.765152	-76.520283
32	42.750181	-76.524716
33	42.746486	-76.523394
34	42.749741	-76.515717
35	42.729125	-76.510186
36	42.724856	-76.546261
37	42.735188	-76.540689
38	42.752402	-76.54345
39	42.755877	-76.540822
40	42.765079	-76.545603
41	42.77293	-76.558121
42	42.76568	-76.519119
43	42.756095	-76.533373
44	42.750463	-76.526759
45	42.752535	-76.510447
46	42.752405	-76.507714
47	42.752547	-76.499085
48	42.743435	-76.494083
49	42.732316	-76.515992
50	42.728897	-76.516468
51	42.731587	-76.526266
52	42.726601	-76.53551

Name: Owasco Lake
HUC 12: 041402011305
Drains to: 041402011306

Name: Red Creek-Cayuga Lake
HUC 12: 041402011203
Drains to: 041402011205

Name: Big Salmon Creek
HUC 12: 041402011101
Drains to: 041402011102

Name: Hemlock Creek-Owasco Inlet
HUC 12: 041402011303
Drains to: 041402011305

Merrifield
Scipio Center
Casowasco
Indian Cove
Edgewater
Ashland
Owasco Lake
Owasco River
Owasco Inlet
Venice Center
Stewart Corners
Owasco Hill
Big Salmon Creek
Little Salmon Creek
Carter Rd
Burtless Rd
Sherwood Rd
Poplar Ridge Rd
Donovan Rd
Kenyon Rd
Bruton Rd
Long Hill Rd
Schoolhouse Rd
Lyons Rd
Sally Rd
Ketchum Rd
Rockefeller Rd
State Route 38
Duryea St
Fire Lane 29
Cork St
Black St
W Corey Rd
Saxton Rd
Line Rd
Center Rd

Data Source(s): Westwood (2024); Esri WMS Basemap Imagery (Accessed 2024); USGS (2024); FEMA (2024); USDA (2024)

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Toll Free (888) 937-5150 westwoodps.com

Legend

- OH Pole
- Batch Plant
- Discharge Location
- Turbines
- ADLS Tower
- MET Tower
- Access Roads
- Crane Path
- Delineated Streams
- NHD Flowlines
- OH Collection
- UG Collection
- Basins
- NHD Waterbodies
- Delineated Wetland
- Disturbance Limits
- Switchyard
- Substation
- Temporary Turns
- Laydown Yards
- O&M Facility
- Project Boundary
- HUC12 Boundary
- County Boundary

N

0 1,500 3,000 Feet

Agricola Wind

Cayuga County, NY

Drainage Map

September 18, 2024

N:\0042617.01_GIS\R0042617_070_SWPPP\Agricola Wind\Agricola Wind.aprx
Drainage Map - Drainagemap | 9/18/2024 2:54 PM | EKeith

Appendix E

Site Plans, Erosion and Sediment Control Plans, Details, Soil Decompaction Guidance

Know what's below. Call before you dig.

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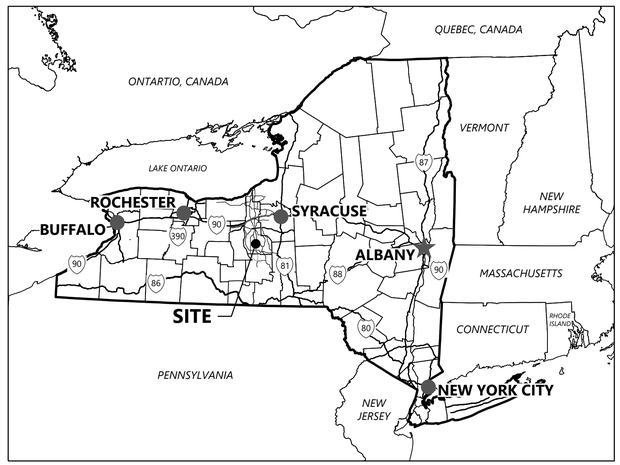
Agricola Wind Project

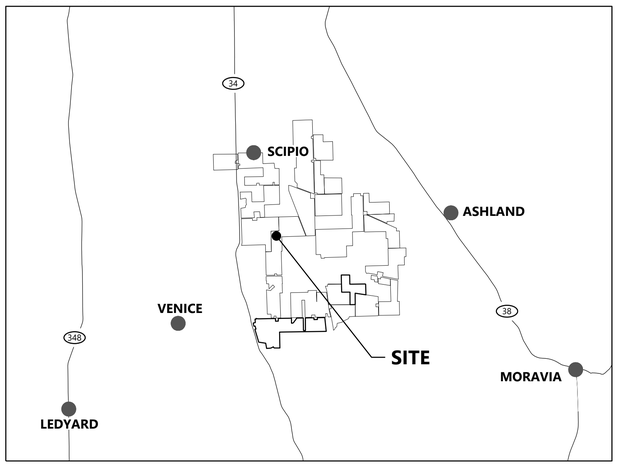
Cayuga County, New York

Civil Construction Plans

REGIONAL MAP



VICINITY MAP



DATA SET INFORMATION			
Coordinate System	NSRS11.NY-CF		
BASE FILE	**FILE NAME / NOTES**	**PROVIDER**	**DATE**
AERIAL IMAGE	2023-12-13_Aerial	Westwood	12/13/2023
LAND CONTROL	Facility Site Parcel	Liberty	4/2/2024
BOUNDARY SURVEY	0042617V-SURV	Westwood	7/22/2024
TOPOGRAPHY	0042617V-DTM	Westwood	7/30/2024
TURBINE ARRAY	Wind Turbine	Liberty	8/1/2024
UNDERGROUND COLLECTION	0042617E-WIRE	Westwood	8/12/2024
OVERHEAD COLLECTION	2024-04-15 Overhead Collection Design	Reynolds Architecture Engineering	4/15/2024
STREAMS/WETLANDS	2024-06-18_Delineated Wetland	EDR	7/11/2024
ENVIROMENTALLY SENSITIVE AREAS	Archaeological Site Avoidance Area	EDR	8/9/2024
FEMA INFO	2023-06-29 FEMA_36011C_20230321	EDR	6/29/2023
GEOTECHNICAL REPORT	AgricolaWind_PreliminaryGeotechReport_2024-07-17	Westwood	7/17/2024

CONTACT INFORMATION				
NAME	**COMPANY NAME**	**PROJECT ROLE**	**EMAIL**	**PHONE**
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Hector Rodriguez	Westwood Surveying & Engineering, LLC	Civil Engineering Lead	hector.rodriguez@westwoodps.com	(469) 304-2212
Alli Leach	Westwood Surveying & Engineering, LLC	Civil Engineer of Record	Alli.Leach@westwoodps.com	(214) 473-4647

PREPARED FOR:

Agricola Wind LLC

90 State Street
Albany, NY 12207

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Agricola Wind Project
Cayuga County, New York

Cover

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: C001

REV: 0

Sheet List Table	
SHEET NUMBER	SHEET TITLE
C001	Cover
C002	Index
C200	Delivery Flow Plan
T300	Tree Clearing Overall Plan
T301	Tree Clearing - T-1
T302	Tree Clearing - 1
T303	Tree Clearing - T-2
T304	Tree Clearing - T-3
T305	Tree Clearing - 2
T306	Tree Clearing - 3
T307	Tree Clearing - 4
T308	Tree Clearing - T-14
T309	Tree Clearing - T-13
T310	Tree Clearing - 5
T311	Tree Clearing - T-15
T312	Tree Clearing - 6
T313	Tree Clearing - 7
T314	Tree Clearing - 8
T315	Tree Clearing - 9
T316	Tree Clearing - T-24
T317	Tree Clearing - T-23
T318	Tree Clearing - 10
T319	Tree Clearing - T-22
T320	Tree Clearing - 11
T321	Tree Clearing - 12
T322	Tree Clearing - T-21
T323	Tree Clearing - 13
T324	Tree Clearing - T-19 & T-20
T325	Tree Clearing - 14
T326	Tree Clearing - MET-2
T327	Tree Clearing - 15
T328	Tree Clearing - T-4
T329	Tree Clearing - T-5
T330	Tree Clearing - T-6
T331	Tree Clearing - T-7
T332	Tree Clearing - 16
T333	Tree Clearing - T-8
T334	Tree Clearing - T-10
T335	Tree Clearing - T-9
T336	Tree Clearing - T-11
T337	Tree Clearing - 17
T338	Tree Clearing - T-16
T339	Tree Clearing - 18
T340	Tree Clearing - 19
T341	Tree Clearing - T-17
T342	Tree Clearing - 20
T343	Tree Clearing - 21
T344	Tree Clearing - 22
T345	Tree Clearing - 23
T346	Tree Clearing - T-12
T347	Tree Clearing - 24
T348	Tree Clearing - T-18
T349	Tree Clearing - 25
T350	Tree Clearing - MET-1 & ADLS-1
T351	Tree Clearing - 26

Sheet List Table	
SHEET NUMBER	SHEET TITLE
C400	Plan and Profile Overall Plan
C401	Road T-14 - Sta. -0+50.00 to 17+00.00
C402	Road T-14 - Sta. 16+00.00 to 33+50.00
C403	Road T-14 - Sta. 32+50.00 to 51+50.00
C404	Road T-14 - Sta. 51+50.00 to 67+00.00
C405	Road T-13 - Sta. -0+50.00 to 13+00.00
C406	Road T-15 - Sta. -0+50.00 to 19+00.00
C407	Road T-15 - Sta. 18+00.00 to 28+00.00
C408	Road T-23 - Sta. -0+50.00 to 20+00.00
C409	Road T-22 - Sta. -0+50.00 to 16+50.00
C410	Road T-16 - Sta. -0+50.00 to 13+00.00
C411	Road T-17 - Sta. -0+50.00 to 19+00.00
C412	Road T-17 - Sta. 18+00.00 to 26+00.00
C413	Road T-20 - Sta. -0+50.00 to 20+50.00
C414	Road T-19 - Sta. -0+50.00 to 18+50.00
C415	Road T-19 - Sta. 17+50.00 to 30+00.00
C416	Road T-12 - Sta. -0+50.00 to 12+50.00
C417	Road T-18 - Sta. -0+50.00 to 18+50.00
C418	Road T-18 - Sta. 17+50.00 to 29+00.00
C419	Road T-21 - Sta. 0+00.00 to 18+00.00
C420	Road T-24 - Sta. -0+50.00 to 15+50.00
C421	Road T-24 - Sta. 15+00.00 to 30+00.00
C422	Road T-1 - Sta. -0+50.00 to 14+50.00
C423	Road T-1 - Sta. 13+50.00 to 24+50.00
C424	Road T-2 - Sta. -0+50.00 to 18+50.00
C425	Road T-2 - Sta. 17+50.00 to 37+00.00
C426	Road T-7 - Sta. -0+50.00 to 14+00.00
C427	Road T-4 - Sta. -0+50.00 to 17+50.00
C428	Road T-4 - Sta. 16+50.00 to 31+00.00
C429	Road T-9 - Sta. -0+50.00 to 12+50.00
C430	Road T-8 - Sta. -0+50.00 to 12+00.00
C431	Road T-6 - Sta. -0+50.00 to 13+00.00
C432	Road T-11 - Sta. -0+50.00 to 14+50.00
C433	Road T-10 - Sta. -0+50.00 to 12+00.00
EC300	Erosion Control Overall Plan
EC301	Erosion Control - T-1
EC302	Erosion Control - 1
EC303	Erosion Control - T-2
EC304	Erosion Control - T-3
EC305	Erosion Control - 2
EC306	Erosion Control - 3
EC307	Erosion Control - 4
EC308	Erosion Control - T-14
EC309	Erosion Control - T-15
EC310	Erosion Control - 5
EC311	Erosion Control - T-15
EC312	Erosion Control - 6
EC313	Erosion Control - 7
EC314	Erosion Control - 8
EC315	Erosion Control - 9
EC316	Erosion Control - T-24
EC317	Erosion Control - T-23
EC318	Erosion Control - 10
EC319	Erosion Control - T-22
EC320	Erosion Control - 11

Sheet List Table	
SHEET NUMBER	SHEET TITLE
EC321	Erosion Control - 12
EC322	Erosion Control - T-21
EC323	Erosion Control - 13
EC324	Erosion Control - T-20
EC325	Erosion Control - T-19
EC326	Erosion Control - MET-2
EC327	Erosion Control - 14
EC328	Erosion Control - T-4
EC329	Erosion Control - T-5
EC330	Erosion Control - T-6
EC331	Erosion Control - T-7
EC332	Erosion Control - 15
EC333	Erosion Control - T-8
EC334	Erosion Control - T-10
EC335	Erosion Control - T-9
EC336	Erosion Control - T-11
EC337	Erosion Control - 16
EC338	Erosion Control - T-16
EC339	Erosion Control - 17
EC340	Erosion Control - 18
EC341	Erosion Control - T-17
EC342	Erosion Control - 19
EC343	Erosion Control - 20
EC344	Erosion Control - 21
EC345	Erosion Control - 22
EC346	Erosion Control - T-12
EC347	Erosion Control - 23
EC348	Erosion Control - T-18
EC349	Erosion Control - 24
EC350	Erosion Control - MET-1 & ADLS-1
EC351	Erosion Control - 25
C501	Public Intersection Improvement - 1
C502	Public Intersection Improvement - 2
C503	Public Intersection Improvement - 3
C504	Public Intersection Improvement - 4
C505	Public Intersection Improvement - 5
C506	Public Intersection Improvement - 6
C507	Public Intersection Improvement - 7
C508	Public Intersection Improvement - 8 and 9
C509	Public Intersection Improvement - 10
C601	Substation & Switchyard - Grading Plan
C602	Substation & Switchyard - Cross Sections 1
C603	Substation & Switchyard - Cross Section 2
C604	O&M - Grading Plan
C605	O&M - Cross Sections - 1
C606	O&M - Cross Sections - 2
C607	O&M - Elevations
C608	Laydown Yard Area 1
C609	Laydown Yard Area 2
C700	Construction Details - 1
C701	Construction Details - 2
C702	Construction Details - 3
C703	Construction Details - 4
C704	Construction Details - 5
C705	Construction Details - 6

Sheet List Table	
SHEET NUMBER	SHEET TITLE
C706	Construction Details - 7
C707	Construction Details - 8
C708	Construction Details - 9
C709	Construction Details - 10
C710	Construction Details - 11
C711	Construction Details - 12
C712	Construction Details - 13
C713	Construction Details - 14
C714	Construction Details - 15
C715	Construction Details - 16
C716	Construction Details - 17
C717	Construction Tables
C718	General Notes - 1
C719	General Notes - 2

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Agricola Wind Project

Cayuga County, New York

Index

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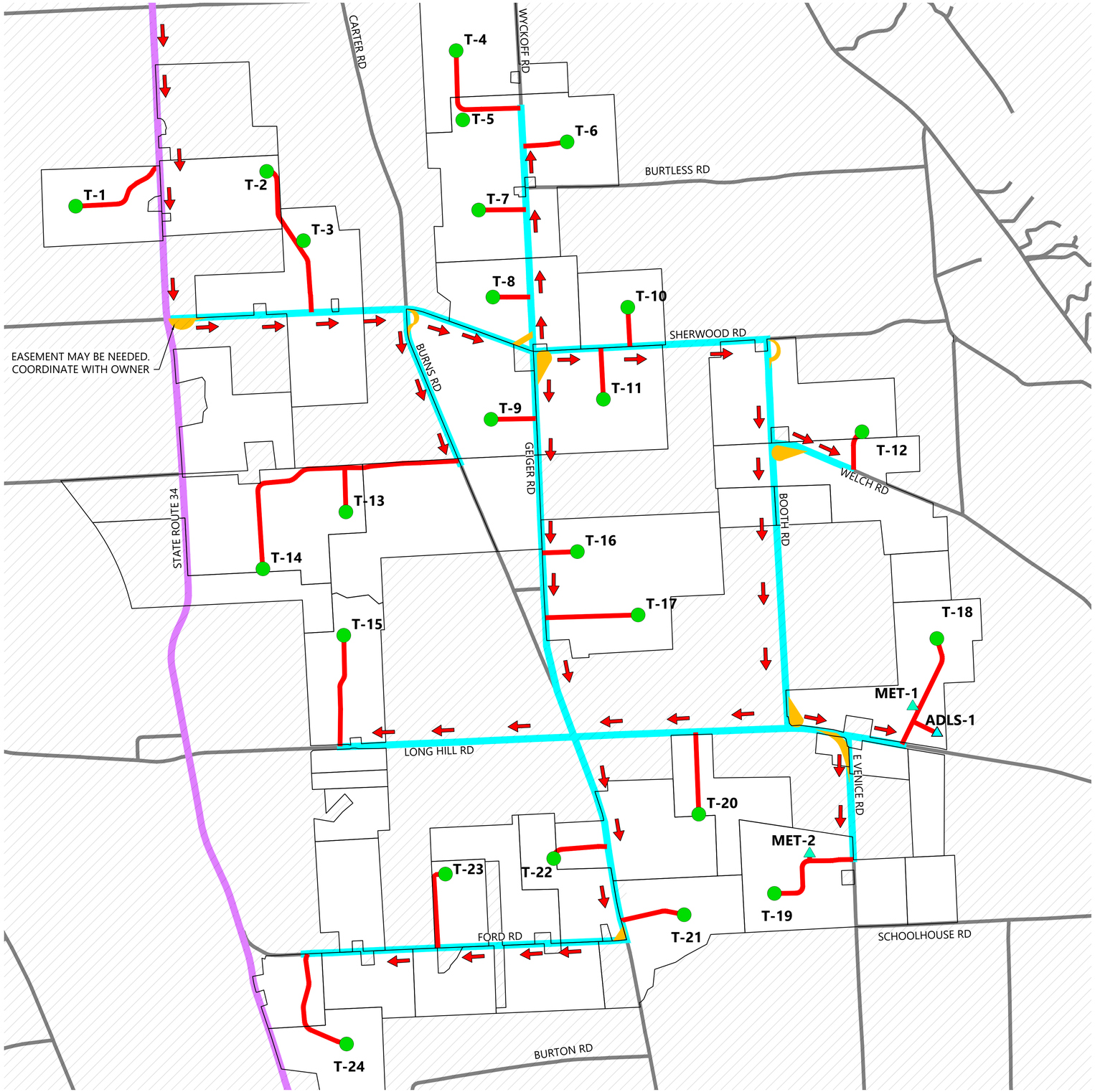

LEGEND:

- T-# — WIND TURBINE
- MET-# — PERMANENT MET TOWER
- ADLS-# — ADLS TOWER
- PROJECT BOUNDARY
- PROPOSED ACCESS ROAD
- EXISTING ROAD
- DELIVERY ROUTE (INGRESS)
- EXISTING HIGHWAY
- EX. ASPHALT DELIVERY RD.
- TEMPORARY INTERSECTION IMPROVEMENT

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0' 1200' 2400' 3600'

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Cayuga County, New York

Delivery Flow Plan

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SHEET: C200

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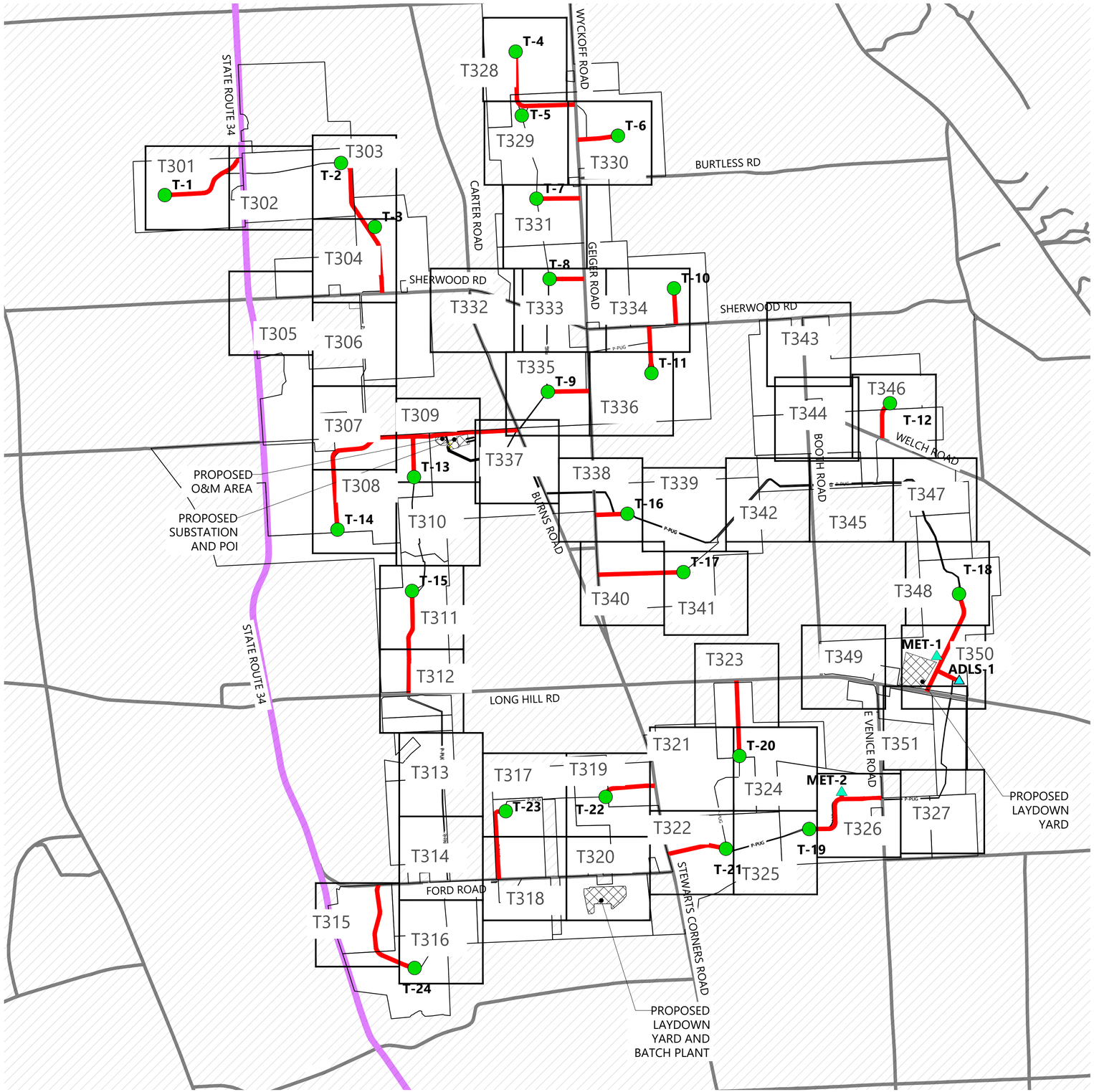

LEGEND:

- T-# — WIND TURBINE
- MET-# — PERMANENT MET TOWER
- ADLS-# — ADLS TOWER
- PROJECT BOUNDARY
- EXISTING HIGHWAY
- PROPOSED ACCESS ROAD
- P-PUG — PROPOSED COLLECTION
- EXISTING ROAD
- PROJECT FACILITIES
- TXXX — SHEET NUMBER REFERENCE

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0' 1300 2600 3900

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Cayuga County, New York

Tree Clearing Overall Plan

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SHEET: T300

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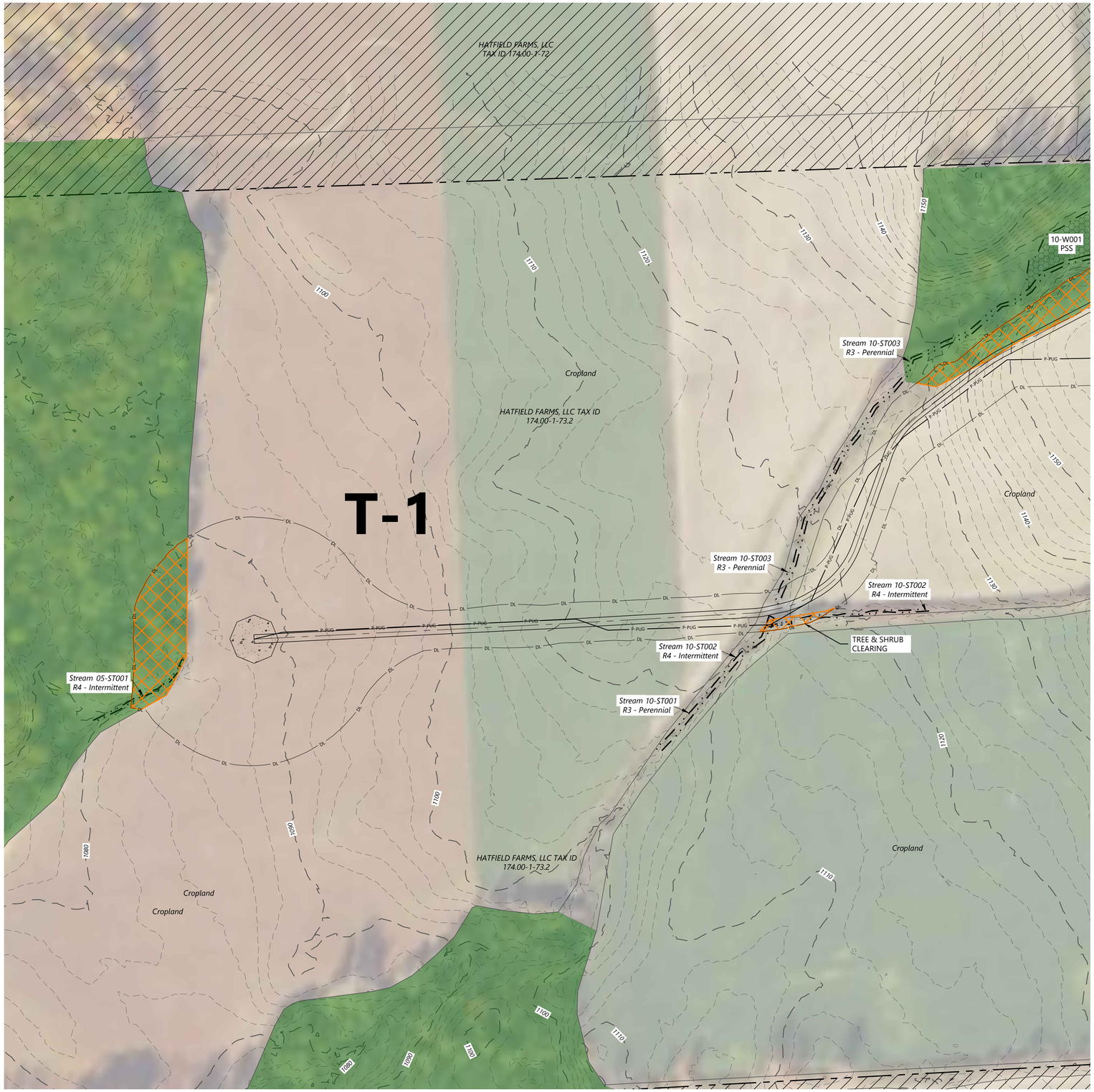


LEGEND:

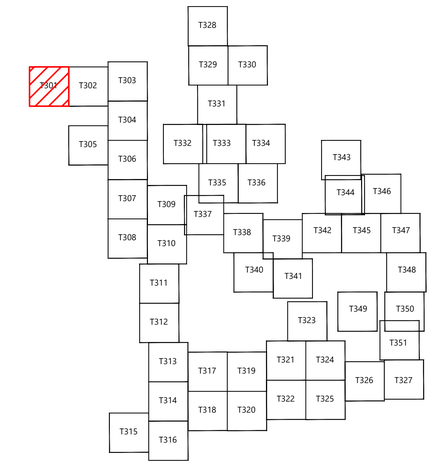
- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
- DL — DISTURBANCE LIMITS
- EXISTING ROADS
- PARCEL LINES (BOUNDARY SURVEY)
- NON-PARTICIPATING & POTENTIALLY PARTICIPATING LAND
- 900 — EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- 900 — PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- POH — EX. OVERHEAD POWER
- EX. UTILITY EASEMENT
- EX. RIGHT OF WAY
- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
- FEN — PROTECTION FENCE
- EX. CULVERTS
- EX. WETLAND
- 100-FT REGULATED ADJACENT AREA
- EX. ENVIROMENTALLY SENSITIVE AREA
- FEMA MAPPED FLOOD HAZARD AREA
- PROPOSED FACILITIES
- PROPOSED BLADE SWING AREA (OBSTACLE FREE AREA ONLY)
- APPROXIMATE PROPOSED SPOILS AND LOG STORAGE TO BE CLEARED,THEN USED FOR TEMPORARY STORAGE
- P-POH — PROPOSED OVERHEAD POWER

TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

1. TREES WILL BE FELLED AND CUT TO APPROXIMATE LENGTHS WITHIN THE LIMITS OF DISTURBANCE IN PROXIMITY TO THE PROPOSED LOG STORAGE AREA. FELLED TIMBER WILL BE STACKED IN PLACE UNTIL SUFFICIENT SPACE HAS BEEN CLEARED TO ESTABLISH IDENTIFIED LOG STORAGE AREAS. APPROXIMATE LOG STORAGE AREAS WILL BE FINALIZED BASED ON FIELD CONDITIONS.
2. CONTRACTOR TO MAINTAIN ROAD ACCESS DURING CONSTRUCTION WHEN NOT USING A BORE.
3. THE LIMITS OF TREE AND SHRUB CLEARING ARE BASED ON THE ECOLOGICAL COMMUNITY DATA DISCUSSED IN EXHIBIT 11 OF ARTICLE VIII APPLICATION. SEE EXHIBIT 11 FOR FURTHER DISCUSSION OF THE ECOLOGICAL COMMUNITY TYPES AND FACILITY'S IMPACTS TO FORESTLAND AND SHRUBLAND.

KEYMAP:



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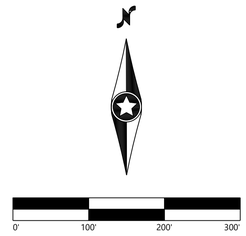

Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-1

ISSUE FOR PERMIT

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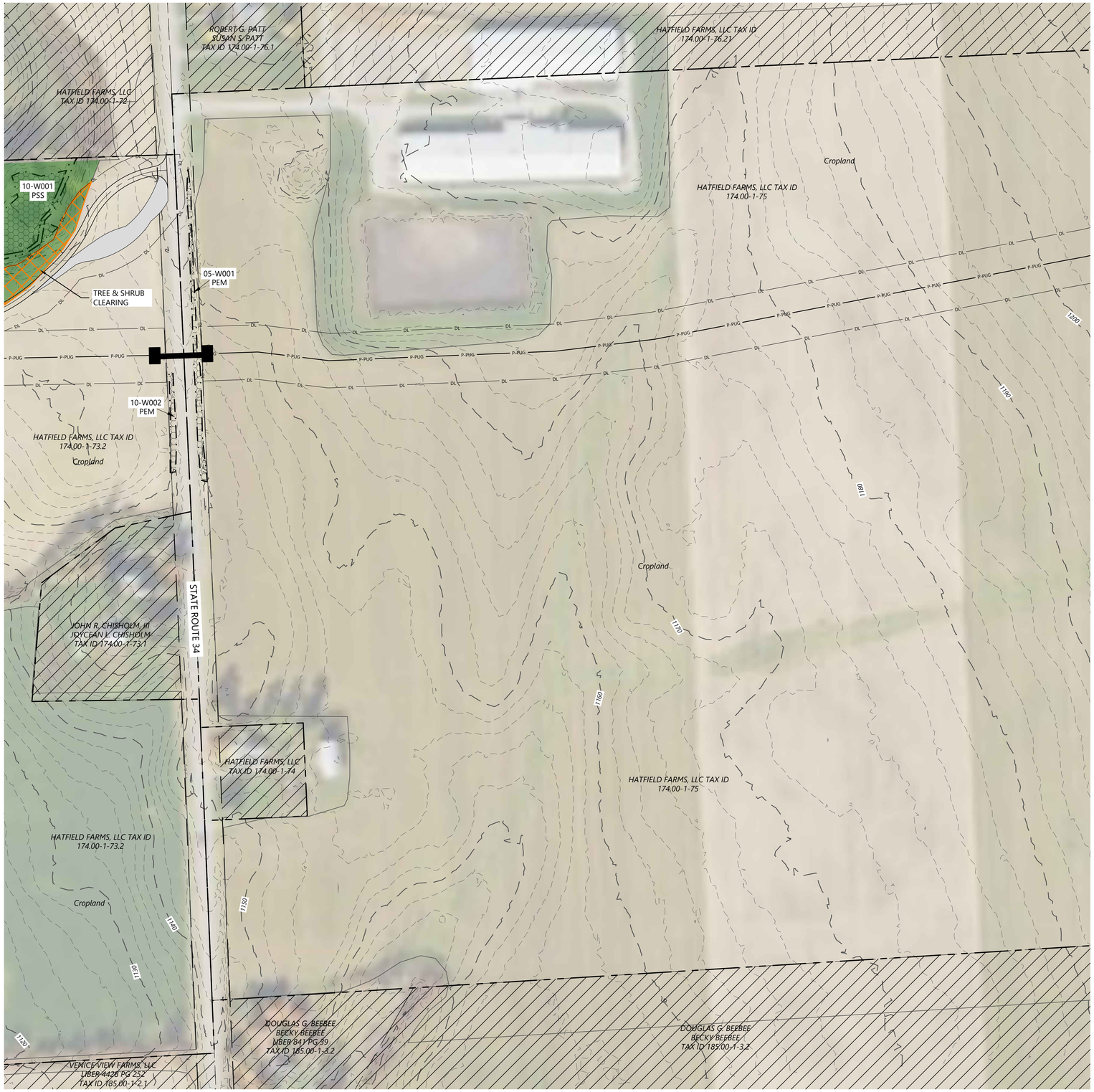

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
- DL — DISTURBANCE LIMITS
- EXISTING ROADS
- PARCEL LINES (BOUNDARY SURVEY)
- NON-PARTICIPATING & POTENTIALLY PARTICIPATING LAND
- 900 — EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- 900 — PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- POH — EX. OVERHEAD POWER
- EX. UTILITY EASEMENT
- EX. RIGHT OF WAY
- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
- FEN — PROTECTION FENCE
- EX. CULVERTS
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- PROPOSED FACILITIES
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- P-POH — PROPOSED OVERHEAD POWER

TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

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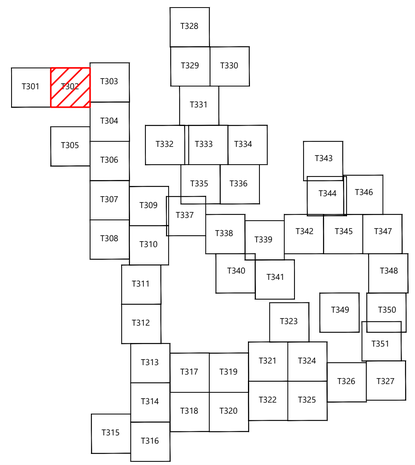
KEYMAP:



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Albany, NY 12207

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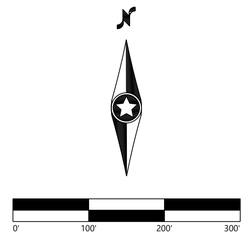

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 1

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T302 REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
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- P-POH — PROPOSED OVERHEAD POWER

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- TREE & SHRUB CLEARING

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2. CONTRACTOR TO MAINTAIN ROAD ACCESS DURING CONSTRUCTION WHEN NOT USING A BORE.
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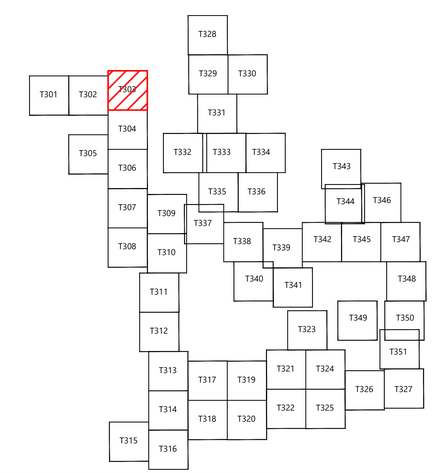
KEYMAP:



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Westwood Surveying and Engineering, P.C.

PREPARED FOR:

Agricola Wind LLC

90 State Street
Albany, NY 12207

REVISIONS:

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0	08/23/2024	ISSUE FOR PERMIT	ME	AA	AL

0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-2

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T303

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
- DL — DISTURBANCE LIMITS
- EXISTING ROADS
- PARCEL LINES (BOUNDARY SURVEY)
- NON-PARTICIPATING & POTENTIALLY PARTICIPATING LAND
- 900 — EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- 900 — PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- POH — EX. OVERHEAD POWER
- EX. UTILITY EASEMENT
- EX. RIGHT OF WAY
- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
- FEN — PROTECTION FENCE
- EX. CULVERTS
- EX. WETLAND
- 100-FT REGULATED ADJACENT AREA
- EX. ENVIROMENTALLY SENSITIVE AREA
- FEMA MAPPED FLOOD HAZARD AREA
- PROPOSED FACILITIES
- PROPOSED BLADE SWING AREA (OBSTACLE FREE AREA ONLY)
- APPROXIMATE PROPOSED SPOILS AND LOG STORAGE TO BE CLEARED,THEN USED FOR TEMPORARY STORAGE
- P-POH — PROPOSED OVERHEAD POWER

TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

1. TREES WILL BE FELLED AND CUT TO APPROXIMATE LENGTHS WITHIN THE LIMITS OF DISTURBANCE IN PROXIMITY TO THE PROPOSED LOG STORAGE AREA. FELLED TIMBER WILL BE STACKED IN PLACE UNTIL SUFFICIENT SPACE HAS BEEN CLEARED TO ESTABLISH IDENTIFIED LOG STORAGE AREAS. APPROXIMATE LOG STORAGE AREAS WILL BE FINALIZED BASED ON FIELD CONDITIONS.
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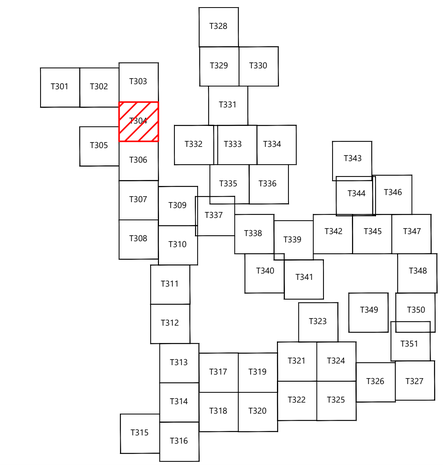
KEYMAP:



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90 State Street
Albany, NY 12207

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
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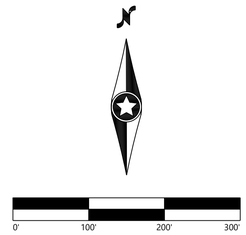

Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-3

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T304

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
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- EX. STREAM CHANNEL
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- APPROXIMATE PROPOSED SPOILS AND LOG STORAGE TO BE CLEARED,THEN USED FOR TEMPORARY STORAGE
- P-POH — PROPOSED OVERHEAD POWER

TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

1. TREES WILL BE FELLED AND CUT TO APPROXIMATE LENGTHS WITHIN THE LIMITS OF DISTURBANCE IN PROXIMITY TO THE PROPOSED LOG STORAGE AREA. FELLED TIMBER WILL BE STACKED IN PLACE UNTIL SUFFICIENT SPACE HAS BEEN CLEARED TO ESTABLISH IDENTIFIED LOG STORAGE AREAS. APPROXIMATE LOG STORAGE AREAS WILL BE FINALIZED BASED ON FIELD CONDITIONS.
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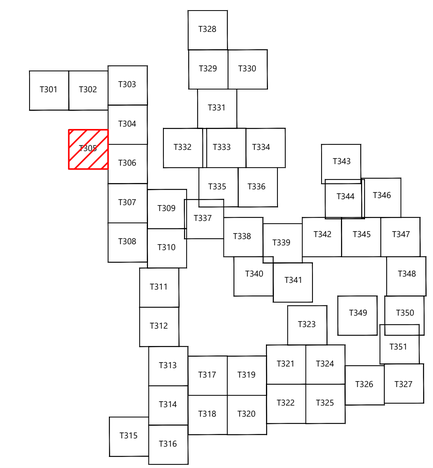

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REVISIONS:

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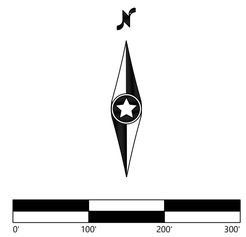

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 2

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T305

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
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- EXISTING ROADS
- PARCEL LINES (BOUNDARY SURVEY)
- NON-PARTICIPATING & POTENTIALLY PARTICIPATING LAND
- 900 — EX. INDEX CONTOUR
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- 900 — PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- POH — EX. OVERHEAD POWER
- EX. UTILITY EASEMENT
- EX. RIGHT OF WAY
- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
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- EX. CULVERTS
- EX. WETLAND
- 100-FT REGULATED ADJACENT AREA
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- PROPOSED BLADE SWING AREA (OBSTACLE FREE AREA ONLY)
- APPROXIMATE PROPOSED SPOILS AND LOG STORAGE TO BE CLEARED,THEN USED FOR TEMPORARY STORAGE
- P-POH — PROPOSED OVERHEAD POWER

TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

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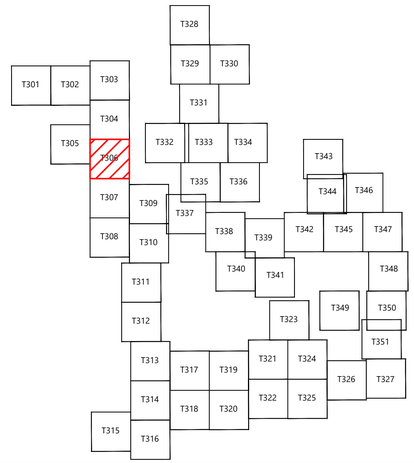

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REVISIONS:

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0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 3

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T306 REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
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- ECOLOGICAL BOUNDARY
- FEN — PROTECTION FENCE
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- PROPOSED BLADE SWING AREA (OBSTACLE FREE AREA ONLY)
- APPROXIMATE PROPOSED SPOILS AND LOG STORAGE TO BE CLEARED,THEN USED FOR TEMPORARY STORAGE
- P-POH — PROPOSED OVERHEAD POWER

TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

1. TREES WILL BE FELLED AND CUT TO APPROXIMATE LENGTHS WITHIN THE LIMITS OF DISTURBANCE IN PROXIMITY TO THE PROPOSED LOG STORAGE AREA. FELLED TIMBER WILL BE STACKED IN PLACE UNTIL SUFFICIENT SPACE HAS BEEN CLEARED TO ESTABLISH IDENTIFIED LOG STORAGE AREAS. APPROXIMATE LOG STORAGE AREAS WILL BE FINALIZED BASED ON FIELD CONDITIONS.
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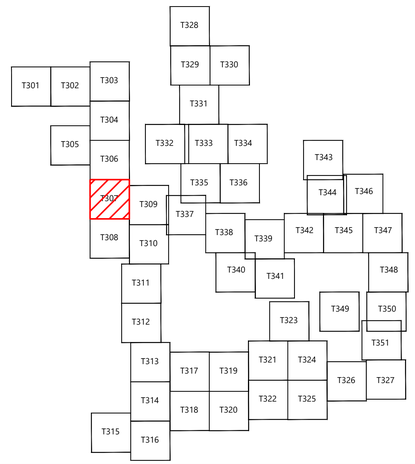

Westwood Surveying & Engineering

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ww-pc.com

Westwood Surveying and Engineering, P.C.

PREPARED FOR:

Agricola Wind LLC

90 State Street
Albany, NY 12207

REVISIONS:

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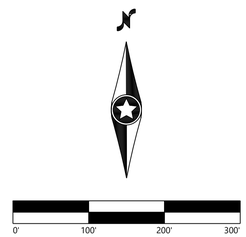

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 4

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T307

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
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- EX. INTERVAL CONTOUR
- 900 — PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- POH — EX. OVERHEAD POWER
- EX. UTILITY EASEMENT
- EX. RIGHT OF WAY
- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
- FEN — PROTECTION FENCE
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TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

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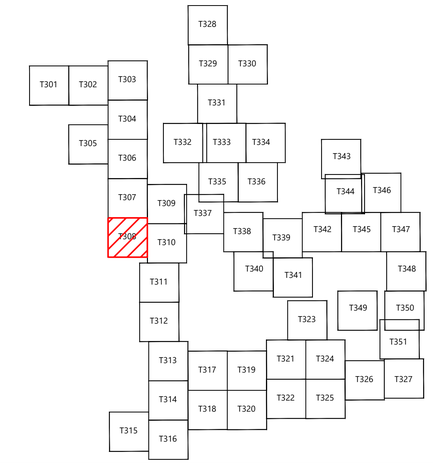

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REVISIONS:

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0	08/23/2024	ISSUE FOR PERMIT	ME	AA	AL

0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-14

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T308

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
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- APPROXIMATE PROPOSED SPOILS AND LOG STORAGE TO BE CLEARED,THEN USED FOR TEMPORARY STORAGE
- P-POH — PROPOSED OVERHEAD POWER

TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

1. TREES WILL BE FELLED AND CUT TO APPROXIMATE LENGTHS WITHIN THE LIMITS OF DISTURBANCE IN PROXIMITY TO THE PROPOSED LOG STORAGE AREA. FELLED TIMBER WILL BE STACKED IN PLACE UNTIL SUFFICIENT SPACE HAS BEEN CLEARED TO ESTABLISH IDENTIFIED LOG STORAGE AREAS. APPROXIMATE LOG STORAGE AREAS WILL BE FINALIZED BASED ON FIELD CONDITIONS.
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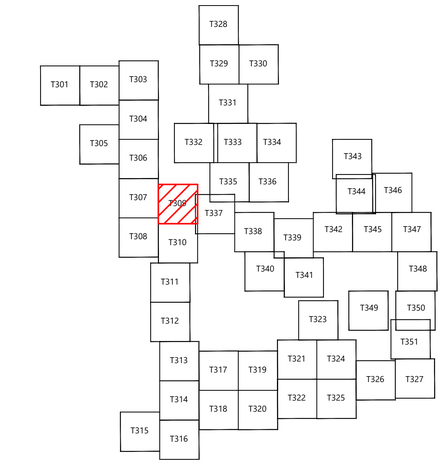

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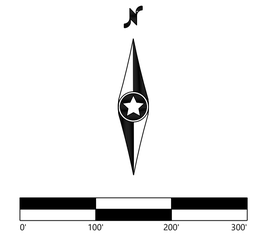

Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-13

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T309

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
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TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

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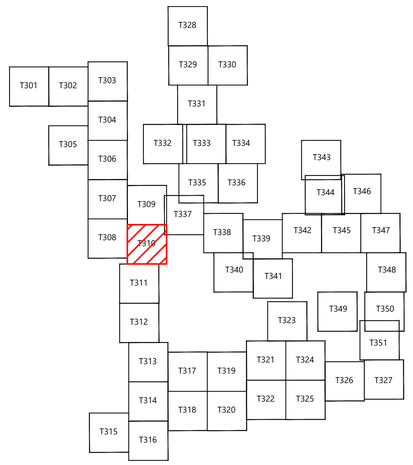

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PREPARED FOR:

Agricola Wind LLC

90 State Street
Albany, NY 12207

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	08/23/2024	ISSUE FOR PERMIT	ME	AA	AL

0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 5

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T310

REV: 0

LEGEND:

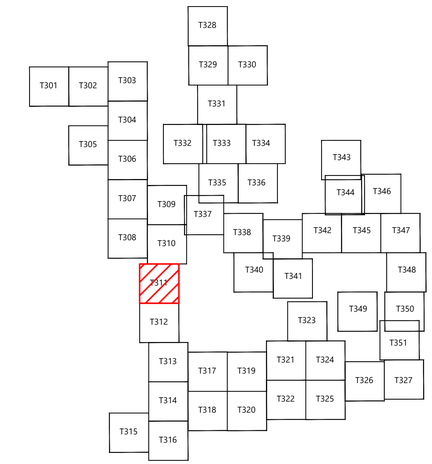
- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
- DL — DISTURBANCE LIMITS
- EXISTING ROADS
- PARCEL LINES (BOUNDARY SURVEY)
- NON-PARTICIPATING & POTENTIALLY PARTICIPATING LAND
- 900 — EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- 900 — PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- POH — EX. OVERHEAD POWER
- EX. UTILITY EASEMENT
- EX. RIGHT OF WAY
- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
- FEN — PROTECTION FENCE
- EX. CULVERTS
- EX. WETLAND
- 100-FT REGULATED ADJACENT AREA
- EX. ENVIROMENTALLY SENSITIVE AREA
- FEMA MAPPED FLOOD HAZARD AREA
- PROPOSED FACILITIES
- PROPOSED BLADE SWING AREA (OBSTACLE FREE AREA ONLY)
- APPROXIMATE PROPOSED SPOILS AND LOG STORAGE TO BE CLEARED,THEN USED FOR TEMPORARY STORAGE
- P-POH — PROPOSED OVERHEAD POWER

TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

1. TREES WILL BE FELLED AND CUT TO APPROXIMATE LENGTHS WITHIN THE LIMITS OF DISTURBANCE IN PROXIMITY TO THE PROPOSED LOG STORAGE AREA. FELLED TIMBER WILL BE STACKED IN PLACE UNTIL SUFFICIENT SPACE HAS BEEN CLEARED TO ESTABLISH IDENTIFIED LOG STORAGE AREAS. APPROXIMATE LOG STORAGE AREAS WILL BE FINALIZED BASED ON FIELD CONDITIONS.
2. CONTRACTOR TO MAINTAIN ROAD ACCESS DURING CONSTRUCTION WHEN NOT USING A BORE.
3. THE LIMITS OF TREE AND SHRUB CLEARING ARE BASED ON THE ECOLOGICAL COMMUNITY DATA DISCUSSED IN EXHIBIT 11 OF ARTICLE VIII APPLICATION. SEE EXHIBIT 11 FOR FURTHER DISCUSSION OF THE ECOLOGICAL COMMUNITY TYPES AND FACILITY'S IMPACTS TO FORESTLAND AND SHRUBLAND.

KEYMAP:



Westwood Surveying & Engineering

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TollFree (888) 937-5150
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Minnetonka, MN 55343
ww-pc.com
Westwood Surveying and Engineering, P.C.

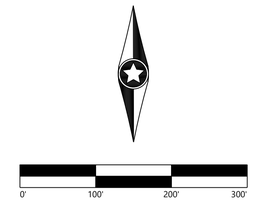
PREPARED FOR:

Agricola Wind LLC

90 State Street
Albany, NY 12207

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
0	08/23/2024	ISSUE FOR PERMIT	ME	AA	AL



Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-15

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T311

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
- DL — DISTURBANCE LIMITS
- EXISTING ROADS
- PARCEL LINES (BOUNDARY SURVEY)
- NON-PARTICIPATING & POTENTIALLY PARTICIPATING LAND
- 900 — EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- 900 — PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- POH — EX. OVERHEAD POWER
- EX. UTILITY EASEMENT
- EX. RIGHT OF WAY
- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
- FEN — PROTECTION FENCE
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TREE CLEARING LEGEND:

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- SHRUBLAND
- TREE & SHRUB CLEARING

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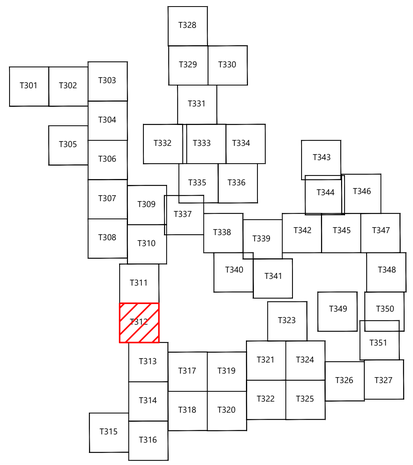

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#	DATE	COMMENT	BY	CHK	APR
0	08/23/2024	ISSUE FOR PERMIT	ME	AA	AL

0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 6

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T312

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
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- PROPOSED JUNCTION BOX
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- EX. UTILITY EASEMENT
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- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
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- EX. WETLAND
- 100-FT REGULATED ADJACENT AREA
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TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

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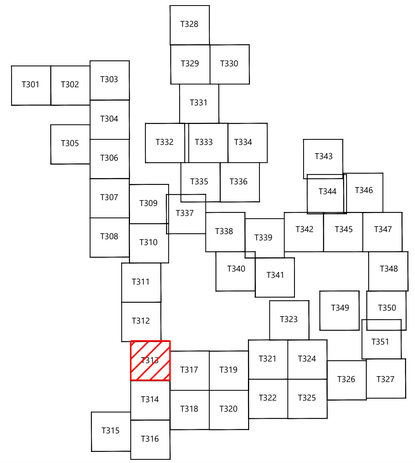

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0	08/23/2024	ISSUE FOR PERMIT	ME	AA	AL

0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 7

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T313

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
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TREE CLEARING LEGEND:

- FORESTLAND
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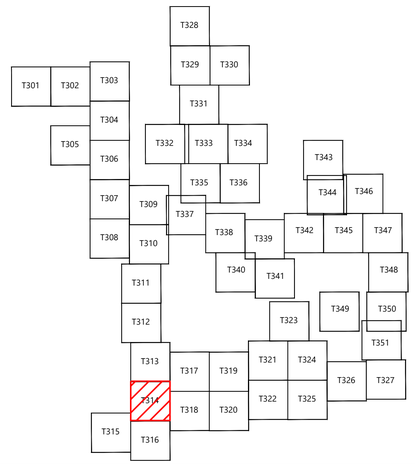

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REVISIONS:

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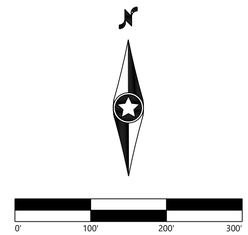

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 8

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T314

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
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- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
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TREE CLEARING LEGEND:

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- SHRUBLAND
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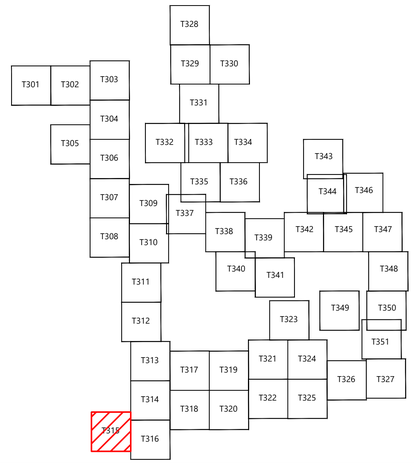

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0	08/23/2024	ISSUE FOR PERMIT	ME	AA	AL

0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 9

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T315 REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
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- 900 — PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- POH — EX. OVERHEAD POWER
- EX. UTILITY EASEMENT
- EX. RIGHT OF WAY
- EX. STREAM CHANNEL
- ECOLOGICAL BOUNDARY
- FEN — PROTECTION FENCE
- EX. CULVERTS
- EX. WETLAND
- 100-FT REGULATED ADJACENT AREA
- EX. ENVIROMENTALLY SENSITIVE AREA
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- PROPOSED FACILITIES
- PROPOSED BLADE SWING AREA (OBSTACLE FREE AREA ONLY)
- APPROXIMATE PROPOSED SPOILS AND LOG STORAGE TO BE CLEARED,THEN USED FOR TEMPORARY STORAGE
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TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

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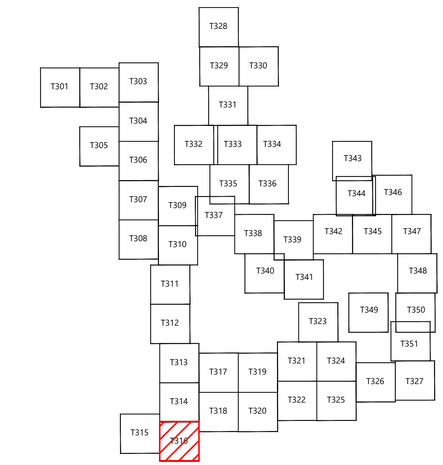

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0	08/23/2024	ISSUE FOR PERMIT	ME	AA	AL

0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-24

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T316

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
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- EXISTING ROADS
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TREE CLEARING LEGEND:

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- SHRUBLAND
- TREE & SHRUB CLEARING

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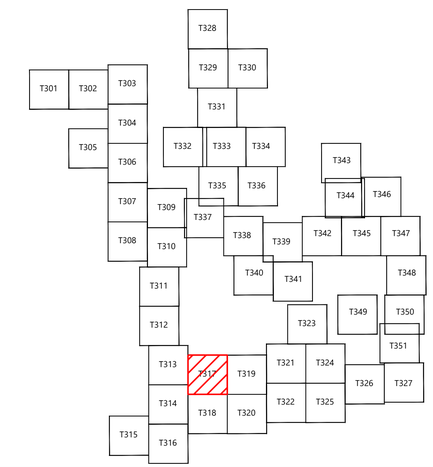

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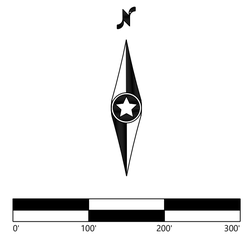

Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-23

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T317

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
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TREE CLEARING LEGEND:

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- SHRUBLAND
- TREE & SHRUB CLEARING

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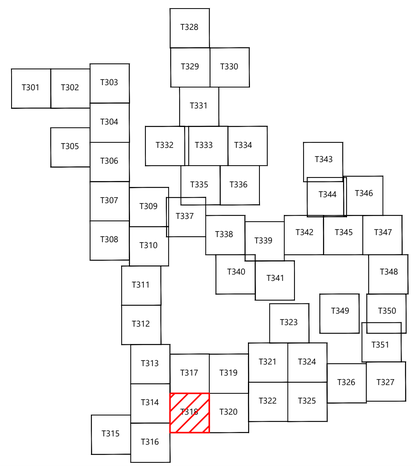
KEYMAP:



Westwood Surveying & Engineering

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Westwood Surveying and Engineering, P.C.

PREPARED FOR:

Agricola Wind LLC

90 State Street
Albany, NY 12207

REVISIONS:

#	DATE	COMMENT	BY	CHK	APR
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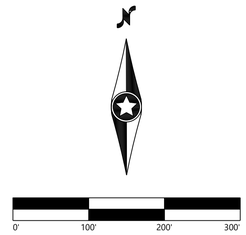

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 10

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T318

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
- P-PUG — UNDERGROUND COLLECTION AND COMMUNICATION
- PROPOSED JUNCTION BOX
- BORE LOCATION
- DL — DISTURBANCE LIMITS
- EXISTING ROADS
- PARCEL LINES (BOUNDARY SURVEY)
- NON-PARTICIPATING & POTENTIALLY PARTICIPATING LAND
- 900 — EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- 900 — PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- POH — EX. OVERHEAD POWER
- EX. UTILITY EASEMENT
- EX. RIGHT OF WAY
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- ECOLOGICAL BOUNDARY
- FEN — PROTECTION FENCE
- EX. CULVERTS
- EX. WETLAND
- 100-FT REGULATED ADJACENT AREA
- EX. ENVIROMENTALLY SENSITIVE AREA
- FEMA MAPPED FLOOD HAZARD AREA
- PROPOSED FACILITIES
- PROPOSED BLADE SWING AREA (OBSTACLE FREE AREA ONLY)
- APPROXIMATE PROPOSED SPOILS AND LOG STORAGE TO BE CLEARED,THEN USED FOR TEMPORARY STORAGE
- P-POH — PROPOSED OVERHEAD POWER

TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
- TREE & SHRUB CLEARING

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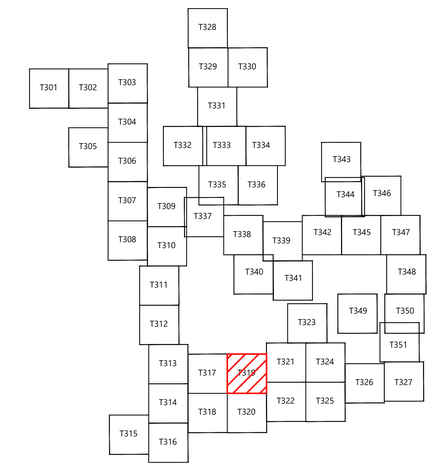

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0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-22

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T319

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
- ADLS-# — ADLS TOWER
- MET-# — PERMANENT MET TOWER
- PERMANENT ACCESS ROAD
- TEMPORARY INTERSECTION
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TREE CLEARING LEGEND:

- FORESTLAND
- SHRUBLAND
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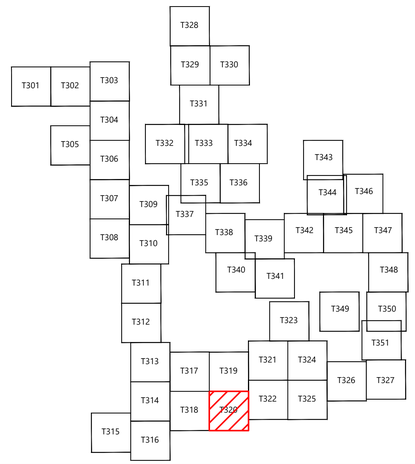

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Albany, NY 12207

REVISIONS:

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0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

Tree Clearing - 11

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T320

REV: 0

LEGEND:

- T-# — TURBINE LOCATION
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- MET-# — PERMANENT MET TOWER
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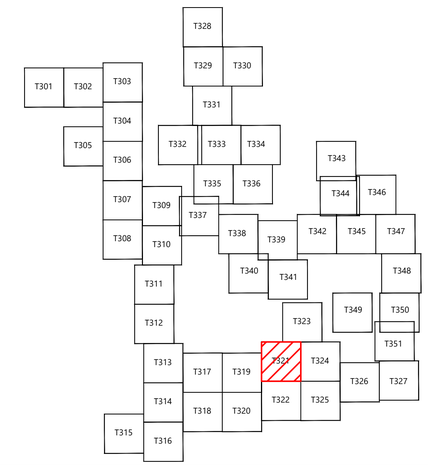

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0	08/23/2024	ISSUE FOR PERMIT	ME	AA	AL

0' 100' 200' 300'

Agricola Wind Project

Cayuga County, New York

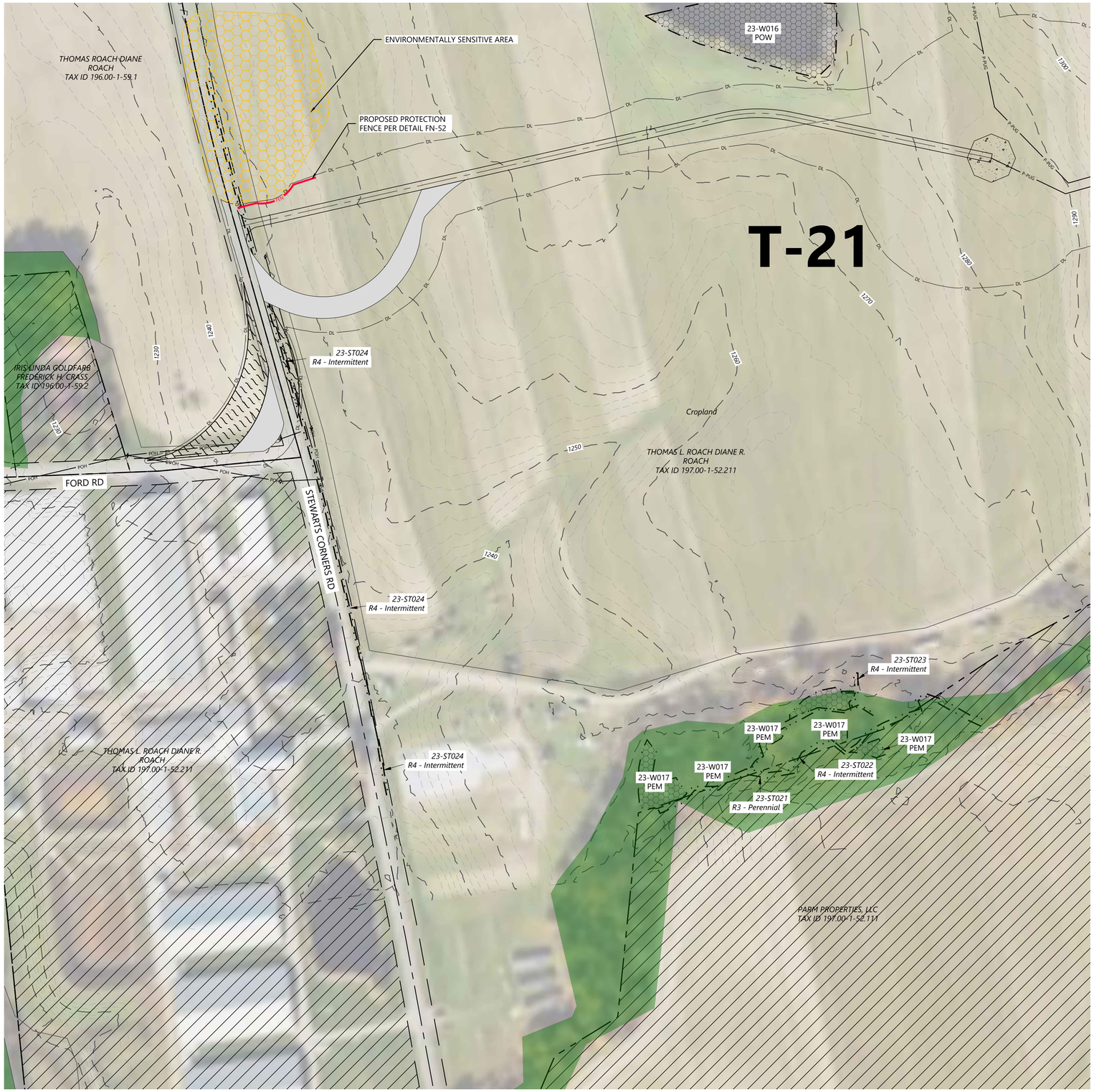
Tree Clearing - 12

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T321

REV: 0



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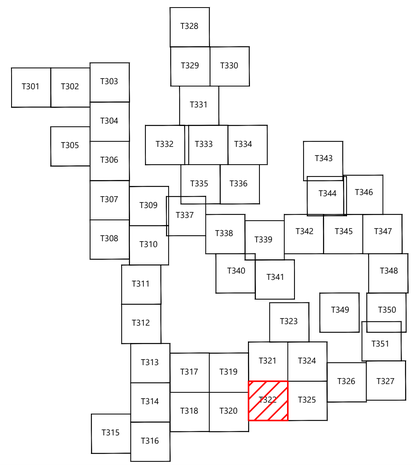

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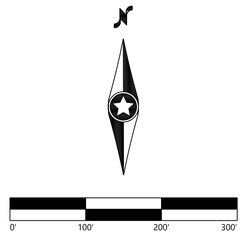

Agricola Wind Project

Cayuga County, New York

Tree Clearing - T-21

ISSUE FOR PERMIT

DATE: 08/23/2024

SHEET: T322

REV: 0