NORTH SENECA
SOLAR PROJECT

APPENDIX 13-C
Stormwater Pollution Prevention Plan
ORES Permit Application No. 23-00036

REVISION 1

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) – REVISION 1

North Seneca Solar Project

Towns of Junius and Waterloo

Seneca County, New York

Prepared for: North Seneca Solar Project, LLC

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FOR PERMITTING ONLY

NOT FOR CONSTRUCTION

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EDR Project No. 22059

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CONTRACT DRAWINGS (Full Size Drawings Bound Separately)

1. DEFINITIONS AND ACRONYMS

DEFINITIONS

Commencement of Construction: The initial disturbance of soils associated with clearing, grading or excavation activities, or other construction activities that disturb or expose soils such as demolition or stockpiling of fill material.

Discharge(s): Any addition of pollutant to waters of the State through an outlet or point source.

EDR: Environmental Design and Research, Landscape Architecture, Engineering and Environmental Services, DPC

Final Stabilization: All soil disturbance activities at the site have ceased and uniform perennial vegetative cover with a density of 80 percent over the entire pervious surface has been established or equivalent stabilization measures such as permanent landscape mulches, rock rip-rap, or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete, or pavement.

Qualified Inspector: A person that is knowledgeable in the principles and practices of erosion and sediment control. Qualified Inspectors include:

- A person with one of the following credentials: Licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), or Registered Landscape Architect.

- A person working under the direct supervision of, and at the same company as, the Licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control (i.e., the individual has received four hours of NYSDEC endorsed training in proper erosion and sediment control within the prior three years).

Trained Contractor: An employee from a contracting (construction) firm that has received four hours of NYSDEC endorsed training from a Soil and Water Conservation District (or other NYSDEC endorsed entity) in proper erosion and sediment control principles no later than two years from the date this general permit is issued. After receiving the initial training, the trained individual shall receive four hours of training every three years.

Temporarily Ceased: An existing disturbed area that will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization: When exposed soil has been covered with materials to prevent the exposed soil from eroding as set forth in the NYS Standards and Specifications for Erosion and Sediment Control. Examples of materials include mulch, seed and mulch, and rolled erosion control products.

ACRONYMS

DOW	Department of Water
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NOT	Notice of Termination
NYSDEC	New York State Department of Environmental Conservation
SWPPP	Stormwater Pollution Prevention Plan

2. INTRODUCTION AND REGULATORY REQUIREMENTS

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared by EDR (Engineer) to provide instruction on appropriate construction management practices that will guide **North Seneca Solar Project, LLC.** (Owner) in its field activities and operations to minimize the discharge of pollutants in stormwater runoff and protect water quality during and after construction activities.

ALL PERSONNEL ENGAGED IN **NORTH SENECA SOLAR PROJECT** CONSTRUCTION ACTIVITIES SHALL ABIDE BY THIS SWPPP.

This SWPPP is a requirement of New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-20-001 (General Permit) effective January 29, 2020, with an expiration date of January 28, 2025. The General Permit authorizes stormwater discharges to surface waters of the State from construction related activities. The contents of this SWPPP discuss and describe the requirements of this permit.

The SWPPP is required to be kept at the project site and made available for review by applicable regulatory agencies, Engineer, and Contractors. Regulatory agencies that have jurisdiction over the project site may elect to review this SWPPP and, if necessary, may notify the Owner that modifications to the SWPPP or site conditions are required.

The NOI, SWPPP, and inspection reports must be made available for public review by the Owner. The Owner shall produce copies of these documents for any person within five business days of the receipt of a written request. The requester is responsible for copying costs.

The General Permit requires that a review of the project be completed to determine whether stormwater discharge or construction activities affect a property that is an historic or archaeological resource listed or eligible for listing on the State or National Register of Historic Places. Further, the General Permit requires that a review of the project be completed to determine whether construction activities or discharges from construction activities may adversely affect an endangered or threatened species. Documentation of this review is included in Appendix D – State Historic Preservation Office (SHPO) and Endangered and Threatened Species (E&T) documentation.

The Owner shall retain the following documents for a period of at least five years from the date that the site achieves final stabilization:

1. The SWPPP including:
   - NOI
   - NOI acknowledgement letter
   - Contractor Certification(s)
   - NOT
2. Stormwater Construction Site Inspection Reports
3. Contract Documents including construction drawings and technical specifications.
4. Correspondence (from NYSDEC, municipality, Engineer, etc.) regarding stormwater management

3. PERMIT COVERAGE

The erosion and sedimentation control devices included in this SWPPP were selected to minimize the discharge of pollutants and to assist in the prevention of a violation of the water quality standards as discussed in the General Permit under Section 1.B for Effluent Limitations Applicable to Discharges from Construction Activities. Additionally, as required in Section C of the General Permit, the post-construction stormwater management practices included in this SWPPP were selected and designed to meet the performance criteria in the 2015 New York State Stormwater Management Design Manual. The SWPPP for the project has been prepared with no deviations from the 2016 New York State Standards and Specifications for Erosion and Sediment Control or the 2015 New York State Stormwater Management Design Manual. **North Seneca Solar Project** is not subject to the requirements of a

regulated, traditional land use control MS4. Construction related stormwater discharges from the project construction site will be authorized 5 business days from the date the NYSDEC receives a complete electronic NOI or 10 business days from the date the NYSDEC receives a complete paper copy of the NOI (Appendix A).

4. SWPPP REVISION REQUIREMENTS

The Owner or the Contractors shall amend this SWPPP when modifications to the design, construction, operator, or maintenance of the project could affect the potential for discharge of pollutants in stormwater runoff. Scenarios where amendments are required include, but are not limited to, the following:

- The currently installed erosion and sediment control practices are ineffective in minimizing pollutants in stormwater discharges.
- An additional Contractor will be implementing the stormwater management and/or erosion and sediment control facilities and must complete the Contractor certification.
- Issues are identified by qualified inspector, a NYSDEC representative, or other regulatory authority that require a modification.

The Contractor is responsible for the installation of all erosion and sediment control devices as specified in this SWPPP.

If changes in site conditions occur as a result of the workmanship or actions of the Contractor, time of year, and/or weather conditions, the Contractor will be responsible for revising the SWPPP documents, implementing all SWPPP revisions, and installing all additional or revised stormwater management and erosion and sediment control devices at their own cost. All SWPPP revisions will be completed within seven days of receiving notification that revisions are necessary. Revisions shall be reviewed and accepted by the Owner and the Engineer prior to implementation.

If existing site conditions observed by the Contractor are different than what is shown in the SWPPP documents, the Contractor shall report in writing all discrepancies to the Owner prior to any site disturbance. The Owner shall review the documented discrepancies and provide in writing acceptance or denial of discrepancies to the Contractor. When the Owner provides written acceptance of any agreed upon discrepancies prior to any site disturbance, the Owner shall revise the SWPPP document and provide it to the Contractor within three days. The Contractor shall review the revised SWPPP within three days of receipt and document in writing any changes to the negotiated contract. After acceptance by the Owner**,** the Contractor shall be responsible for full implementation of the revised SWPPP's stormwater management and erosion and sediment control practices. All SWPPP revisions will be completed within seven days of receiving notification to proceed with the revisions.

All SWPPP revisions must be marked with the revision date and distributed by the Owner or the Contractors to the involved parties (i.e., subcontractors, Engineer, and municipality).

5. SITE INFORMATION

5.1 SITE AND PROJECT DESCRIPTION

The Owner is constructing a 90 MWAC solar energy generation facility in multiple locations within the Towns of Waterloo and Junius, Seneca County, New York. Proposed project features include approximately 386 acres of solar array, 4.7 miles of access roads, and 5.2 miles of electrical collection line.

A location map and soils information for the project area are located within the preliminary plan and profile drawings.

Stormwater from the site discharges into Dublin Brook and Pond Brook.

5.2 SITE LOCATION AND OWNER/OPERATOR CONTACT INFORMATION

Contact information for the site is as follows:

Owner/Operator:	North Seneca Solar Project, LLC
Contact:	Camille Kaynor, Development Manager
Address:	422 Admiral Blvd. Kansas City, MO 64106
Telephone:	816-509-4173
E-mail Address:	ckaynor@savionenergy.com

5.3 CONTRACT DOCUMENTS

The Contract Documents include Preliminary Design Drawings as listed in the Table of Contents and this SWPPP.

6. SWPPP CONSTRUCTION REQUIREMENTS

6.1 PRE-CONSTRUCTION REQUIREMENTS

Prior to construction, the Owner shall have the Contractors and subcontractors identify at least one person from their company who meets the requirements of a Trained Contractor. This person will be responsible for the implementation of the SWPPP and the inspection of the erosion and sediment controls in accordance with the New York Standards and Specifications for Erosion and Sediment Controls. The Owner's representative shall ensure that at least one Trained Contractor is onsite daily when soil disturbance activities are being performed. The Trained Contractor shall inspect the site's erosion and sediment control practices daily to ensure these facilities are operational.

Pre-construction requirements to be followed by the Owner and Contractors prior to the commencement of any construction activities are described in Appendix E.

6.2 CONSTRUCTION REQUIREMENTS

Construction activity will not disturb greater than 5 acres of soil at any one time without prior written permission of the Owner's representative and the DOW SPDES program contact at the regional NYDEC office.

6.2a Over 5 Acres of Disturbance

To obtain approval from the regional NYSDEC office, the Owner is required to submit a written request to DOW SPDES program contact at the regional NYSDEC office that contains the following information:

1. A phasing plan that defines:
   - The maximum disturbed area per phase
   - The required cuts and fills
   - Any additional erosion and sediment control measures that will be implemented
   - Identification of additional water quality treatment practices to be installed
2. An explanation of why the 5 acre disturbance limit must be exceeded.
3. Acknowledgement that a qualified inspector will conduct at least two site inspections every seven days. The inspections must be separated by a minimum of two calendar days.
4. Acknowledgement that where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures, in conformance with the New York State Standards and Specifications for Erosion and Sediment Control, shall be installed within seven days of the date the soil disturbance activity ceased.
5. Acknowledgement that the Owner/Operator shall install any additional practices to protect water quality as necessary based on site conditions.

If the current site disturbance is reduced to less than 5 acres, then the inspection frequency can be reduced to the required frequency as identified in Section 6.2c. The Owner shall notify the DOW SPDES program contact at the regional NYSDEC office writing prior to reducing the frequency of inspections.

6.2b Construction Sequence

The Contractors shall install erosion and sediment control practices downstream of the project area, prior to disturbance, to prevent sediment transport to offsite areas. General Construction Sequence includes:

1. Install temporary stabilized construction entrance and temporary laydown yards. Install silt fence on downgradient side of entire temporary laydown area.
2. Install construction fence, vegetation protection, and construction road stabilization as necessary for site work.
3. Install silt fence prior to upgradient soil disturbances.
4. Strip topsoil and create stabilized stockpile on site.
5. Install and stabilize sediment trapping devices along with contributing drainage swales.
6. Establish rough grade for site and stormwater management practices. Leave slope surfaces slightly roughened to a depth of 1-2 inches. Do not back blade slopes.
7. Sediment traps, temporary diversion swales and/or temporary outlets, as shown on the drawings, should be installed around permanent basins to direct and discharge runoff until the site is stabilized.
8. Install temporary and/or permanent check dams in drainage swales as detailed and shown on the erosion and sediment control plans.
9. Begin site work including collection line and electrical equipment installation, solar panel installation, continue access road construction.
10. Complete soil restoration per Section 5.1.6 of the Design Manual on all disturbed areas that will be vegetated in their final states.
11. Complete fine grading.
12. Apply permanent seed and mulch.
13. Install remainder of planting and overseed areas of sparse vegetation.
14. When site has reached final stabilization, remove temporary erosion and sediment control measures.

6.2c Construction Site Inspection

The Owner will be responsible for providing a Qualified Inspector to inspect erosion and sediment control practices, post-construction stormwater management practices that are under construction, disturbed areas, and all points of discharge from the construction site.

Specifically, the Qualified Inspector shall:

- Inspect all erosion and sediment control practices to ensure integrity and effectiveness.
- Verify that erosion and sediment control practices required by the SWPPP and the General Permit have been installed as appropriate for the phase of work and conditions at the site.
- Ensure that post-construction stormwater management practices are installed in accordance with the SWPPP.
- Inspect all areas of disturbance that have not achieved final stabilization.
- Observe all points of discharge from the site, including natural surface waterbodies located within or immediately adjacent to the construction site, conveyance systems, and overland flow.
- Provide the certifications required for the NOT.

The Qualified Inspector shall also take digital photographs with date-stamp that clearly show the conditions of erosion and sediment control practices and stormwater management practices that have been identified as needing corrective actions and of practices that have had corrective actions since the last inspection. These photographs shall be attached to the inspection from within seven calendar days of the inspection.

If corrective actions are needed, the Qualified Inspector must notify the Owner and the appropriate Contractor within one business day of completing the inspection. The Contractor shall begin implementing the corrective action within one business day of receiving notification and complete it within seven calendar days following the date of the inspection. Additional mitigation measures are to be implemented by the Contractors if necessary due to site conditions to minimize sediment transport or discharge of sediment laden runoff offsite.

The Qualified Inspector shall complete an inspection at least once every seven calendar days. If authorization to disturb greater 5 acres of soil at one time is received, the qualified inspector shall conduct at least two site inspections every seven calendar days. There shall be a minimum of two full calendar days between inspections. An Inspection Report form for conducting the inspections is included in Appendix F. Completed Inspection Reports are to remain on file at the site in Appendix F.

Temporary Construction Shutdown

If soil disturbing activities have been temporarily suspended, such as for winter shutdown, and temporary stabilization measures have been applied to all disturbed areas, the Owner may reduce inspections to a minimum of one inspection every 30 calendar days. The Owner shall notify the DOW SPDES program contact at the NYSDEC Regional Office prior to reducing the frequency of inspections. The Owner shall resume inspections in accordance with this section as soon as soil disturbance activities resume.

Final Site Inspection

The Qualified Inspector shall perform a final inspection of the site, as required by NYSDEC to certify that:

- All disturbed areas have achieved final stabilization
- Temporary erosion and sediment control practices have been removed
- Post-construction stormwater management practices have been constructed in conformance with the SWPPP

Prior to certification, at their own cost, the Contractors shall supply as-built topographic surveys of all post-construction stormwater management practices to document that the stage/storage relationship has been met. As-builts shall also show rims, inverts, orifices, pipe sizes, elevations, etc. Upon satisfactory completion of the final site inspection, as required by the NYSDEC, the Qualified Inspector shall provide the certifications required to file the NOT form provided in Appendix I.

6.2d Authorized Non-Stormwater Discharges

Discharges from the following sources are authorized provided that they are directed to a sediment trapping device:

- Clean wash water (does not contain soaps, detergents or solvents) from cleaning construction vehicles and equipment
- Site dewatering (ground water) from pits, excavations, and trenches

Sediment trapping devices shall be designed and located by the Contractor and approved by the Owner and the Engineer prior to installation.

If clean, potable water is discharged from the site for any reason, it shall be directed over a grassed area prior to reaching offsite areas. Potable water shall not be discharged directly to a natural waterbody or watercourse.

Water used for dust control shall be applied using appropriate quantities and methods. No chemicals, soaps, detergents, etc., shall be used.

6.2e Prohibited Non-Stormwater Discharges

The following discharges are prohibited:

- Wastewater from washout and cleanout of concrete, stucco, paint, form release oils, curing compounds, and other construction materials (It is a requirement of this SWPPP that these materials be washed out into a containment area or tank on site. All waste material must be disposed of offsite in accordance with Federal, State, and local requirements.)
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance
- Soaps or solvents used in vehicle and equipment washing
- Toxic or hazardous substances from a spill or other release

6.2f Maintaining Surface Water Quality

It is expected that compliance with this SWPPP and the General Permit will prevent discharges of pollutants which would cause or contribute to a violation of the surface water quality standards contained in Parts 700 through 705 of Title 6 of Official Compilation of Codes, Rules and Regulations of the State of New York. Potential violations include:

- An increase in turbidity that will cause substantial visible contrast to natural conditions
- An increase of suspended, colloidal or settleable solids that will cause deposition or impair surface waters for their best usages
- A residue from oil and floating substances, visible oil film, or globules of grease

If there is evidence indicating that the stormwater discharges authorized by the General Permit are causing, have reasonable potential to cause, or are contributing to a violation of surface water quality standards, the Owner or operator must take appropriate corrective action within one business day. The corrective action must be documented in the next SWPPP inspection report. To address the surface water quality standard violation, the Owner or operator may need to provide additional information, include and implement appropriate controls from this SWPPP to correct the problem, or obtain an individual SPDES Permit.

6.2g Chemical and Oil Management

Secondary containment for oil containers shall be provided. If total oil storage onsite exceeds a cumulative total of 1,320 gallons, a spill prevention control and countermeasure (SPCC) plan is to be prepared by the Contractors and maintained on site.

Spills of petroleum products, chemicals, and other hazardous materials shall be reported in accordance with State, Federal, and local regulations. If a spill occurs at the site during construction, the Contractors shall contact the NYSDEC Spill Hotline (1-800-457-7362). The following material management practices are to be used by the Contractors to reduce the risk of spills or other accidental exposure of pollutants to stormwater runoff during construction:

- Products including, but not limited to, building materials, building products, construction waste, trash, landscaping materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste shall be stored under a roof or other cover.
- Products shall be securely stored in their original containers, or as recommended by the manufacturer, and labeled appropriately.
- The amount of product stored onsite will be appropriate for usage on the site. Do not bring excessive quantities to the site for storage.
- Whenever practical, products are to be used up or containers resealed before proper disposal of contents and containers offsite.
- Substances are not to be mixed with one another unless recommended by the manufacturer.

- Surplus product and empty containers are to be disposed of in accordance with manufacturer's recommendations and applicable regulations and/or permit conditions. Do not discharge any substances into the storm sewer.
- Onsite vehicles are to be monitored for leaks and receive regular preventative maintenance to reduce the chance of the leakage of petroleum products. Petroleum products are to be stored in closed containers that are clearly labeled.
- Used oils are to be disposed of properly.

In addition to the material management practices discussed above, the following practices are to be followed by the Contractors for spill preparedness and cleanup.

- Spills are to be reported and cleaned up immediately after discovery.
- Manufacturers' recommended methods for spill cleanup are to be followed in the case of a spill, including the use of appropriate Personal Protective Equipment (PPE). Material Safety Data Sheets (MSDS) for materials at the site provide information on spill cleanup and should be stored in the project office or other accessible location.
- Materials and equipment necessary for spill cleanup are to be kept in designated material storage areas onsite. Spill response materials are to include items such as brooms, dust pans, mops, rags, gloves, goggles, spill control materials, sand, sawdust, disposal containers specifically for spill cleanup, and other response materials dependent on the materials stored at the site.
- If a spill does occur at the site, a spill report is to be completed by the Contractor in accordance with NYSDEC requirements and filed with this SWPPP.

6.3 POST-CONSTRUCTION MAINTENANCE REQUIREMENTS

An NOT shall be filed with the NYSDEC when the project is permanently stabilized. The NOT requires certification from the Qualified Inspector, as required by the NYSDEC that the site has been stabilized and that all post-construction practices have been constructed in conformance with the SWPPP. The post-construction stormwater practices will be privately owned, and Yellow Barn Solar LLC is required to have a maintenance plan in place, and is required to provide operation and maintenance of the practices in accordance with this SWPPP. Post construction maintenance will be the ultimate owner of the stormwater facilities and are required to have a maintenance plan in place. Post-construction maintenance and inspection checklists have been included in Appendix G for reference.

7. STORMWATER MANAGEMENT DURING CONSTRUCTION

Anticipated locations for the erosion and sediment control practices are shown on the construction drawings. These practices, and any practices added due to conditions at the site, are to be installed and maintained in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (NYSDEC 2016).

The Contractor is to provide a construction stabilization schedule (see Appendix E) to detail when construction activities are anticipated to start and when areas will be stabilized. This record is to become part of this SWPPP as Appendix E.

7.1 EROSION AND SEDIMENT CONTROLS

Proposed erosion and sediment control practices were designed in accordance with the following documents:

- New York State Standards and Specifications for Erosion and Sediment Control (NYSDEC 2016)
- New York State Stormwater Management Design Manual (the Design Manual) NYSDEC (January 2015)
- NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-20-001) (effective date January 29, 2020)

The erosion and sediment control practices are identified in the Contract Documents and must be installed and maintained to meet the requirements of the SWPPP.

Practices that must be directed to a temporary sediment trapping device that was not identified in the contract drawings shall be designed by the Contractor. Prior to installing these practices, the Contractor shall provide a detail and proposed location of the sediment trap to be approved by the Owner prior to installation.

Structural erosion and sediment control practices should generally be inspected weekly by a Qualified Inspector and after storms by the Trained Contractor.

7.2 STABILIZATION PRACTICES

7.2a Warm Weather Stabilization Practices

Stabilization practices must follow the guidelines specified in the 2016 New York State Standards and Specifications for Erosion and Sediment. For portions of the site where soil disturbance activities have temporarily or permanently ceased, stabilization measures must be initiated by the end of the next business day and completed within 14 days of the date the most recent soil disturbance activity ceased, or within seven days if the current project disturbance is 5 acres or greater.

7.2b Winter Stabilization Practices

The following stabilization practices, per the 2016 New York State Standards and Specifications for Erosion and Sediment, will be employed by the Contractor for any construction activities with ongoing land disturbance and exposure between November 15 to the following April 1:

The Contractor shall:

1. Prepare a snow management plan with adequate storage for snow and control of melt water, requiring cleared snow to be stored in a manner not affecting ongoing construction activities.
2. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.
3. A minimum 25 foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes that are visible above the snow pack.
4. Edges of disturbed areas that drain to a waterbody within 100 feet will have two rows of silt fence, 5 feet apart, installed on the contour.
5. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations that restrict the flow of runoff and meltwater shall be removed.
6. Sediment barriers must be installed at all appropriate perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.
7. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 feet from the toe of the stockpile to prevent soil migration and to capture loose soil.
8. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three days. Rolled erosion control blankets must be used on all slopes, three horizontal to one vertical or steeper.
9. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.
10. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil should be stabilized at the end of each work day unless:
    - Work will resume within 24 hours in the same area and no precipitation is forecast; or
    - The work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.
11. Use stone paths to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum of 10 feet in width but wider as necessary to accommodate equipment.

The site shall be inspected frequently to ensure that the erosion and sediment control plan is performing its winter stabilization function. If the site will not have earth disturbing activities ongoing during the winter season, all bare exposed soil must be stabilized by established vegetation, straw, or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.

Compliance inspections must be performed and reports filed properly by the Qualified Inspector in accordance with the SWPPP for all sites under a winter shutdown.

7.3 ADDITIONAL STORMWATER CONTROLS

The following are additional Best Management Practices to be implemented at the site to minimize pollutant transport:

- Material Transport – Take proper precautions to prevent spilling materials during transport. Any spilled materials will be swept or removed as soon as practicable so that they do not enter surface and/or subsurface drainage systems.
- Dust Control – Provide dust control measures to prevent dust from leaving the site. Measures may include water application or mulching but shall not include the use of chemical additives. Any sediment that is tracked off the site shall be removed using a hand broom or other cleaning equipment.
- Solid Waste Management – Store waste in covered dumpsters or other appropriate containers. Waste is to be disposed of regularly and properly in accordance with local, State, and/or Federal regulations.
- Portable Toilets – Install and clean portable toilets regularly. Locate portable toilets where they will not be impacted by construction activities.
- Building Materials Storage – Properly store and contain building materials onsite.

8. POST-CONSTRUCTION STORMWATER MANAGEMENT

8.1 STORMWATER QUALITY

The Design Manual requires stormwater management designs to provide the following:

1. Water Quality Volume (WQv) treatment
2. Provide Runoff Reduction Volume (RRv) Requirements

This Project will include the construction of solar panels, permanent access roads, and an electrical substation that will increase impervious cover in various watersheds within the project area. The solar panels for the project are proposed to be constructed on a rack system above the ground, with vegetation beneath. Based on the guidance memorandum provided by NYSDEC on April 5, 2018 (included in Appendix I), stormwater management is only required for the traditional impervious areas (i.e,, buildings, roads, substation pads, etc.) For the access roads it is anticipated that vegetated filter strips, bioretention areas, and level spreaders primarily will be used to meet post-construction stormwater management requirements for RRv and WQv. Generally, runoff from the access roads will sheet flow off the road directly to vegetated filter strips. The filter strips for the project will be designed in accordance with the latest revision of the NYSDEC Stormwater Management Design Manual, which requires a minimum width of 50', and a maximum contributing length of impervious surface of 75'. The access roads for the project are proposed to be 16' wide, which meets the maximum contributing length criteria. If, based on site conditions roadside drainage is collected in swales, this runoff will be directed to a level spreader to return the runoff to sheet flow, then to a filter strip. Alternatively in the final design, based on site conditions, the swales may be designed as dry swales that will provide the required WQv and RRv for the contributing areas. The stormwater runoff from the substation is anticipated to be managed by utilizing the Alternative Substation Cross-Section for Stormwater Management. This cross-section has been approved by NYSDEC and is designed to contain the runoff within the substation cross-section. Underdrains will control the discharge rate and discharge to a level spreader and vegetated filter strip. An analysis of the applicability of each practice will be developed when construction documents are prepared for these facilities. The sizing calculations for post-construction stormwater management will be included in an Attachment to the Stormwater Management Engineering Memo (Appendix H).

8.2 STORMWATER QUANTITY

Stormwater quantity requirements include the following:

- Channel Protection Volume (CPv) – Extended detention of the 1 year storm to protect stream channels from erosion
- Overbank Flood Control (Qp) – Attenuate the 10 year storm post-construction peak discharge rate to pre-construction rates
- Extreme Flood Control (Qf) – Attenuate the 100 year storm post-construction peak discharge rate to pre-construction rates

An analysis of stormwater as it relates to quantity control will be developed when construction documents are prepared for the facility. It is anticipated that the addition of impervious surfaces for the access roads and substation are at such a small scale as compared to the overall project area, that the stormwater model will show that the discharge rates from the project watersheds are equal to the pre-construction conditions. If, during the development of the construction documents the stormwater model shows an increase in discharge from the project site, standard practices will be designed in accordance with the latest revision of the NYSDEC Stormwater Management Design Manual to reduce the discharge to pre-construction rates.

APPENDIX A

NYSDEC Notice of Intent (NOI)

(will be prepared during final engineering design)

APPENDIX B

NYSDEC Acknowledgement of NOI Letter

APPENDIX C

Location Map/Soils Information

United States Department of Agriculture

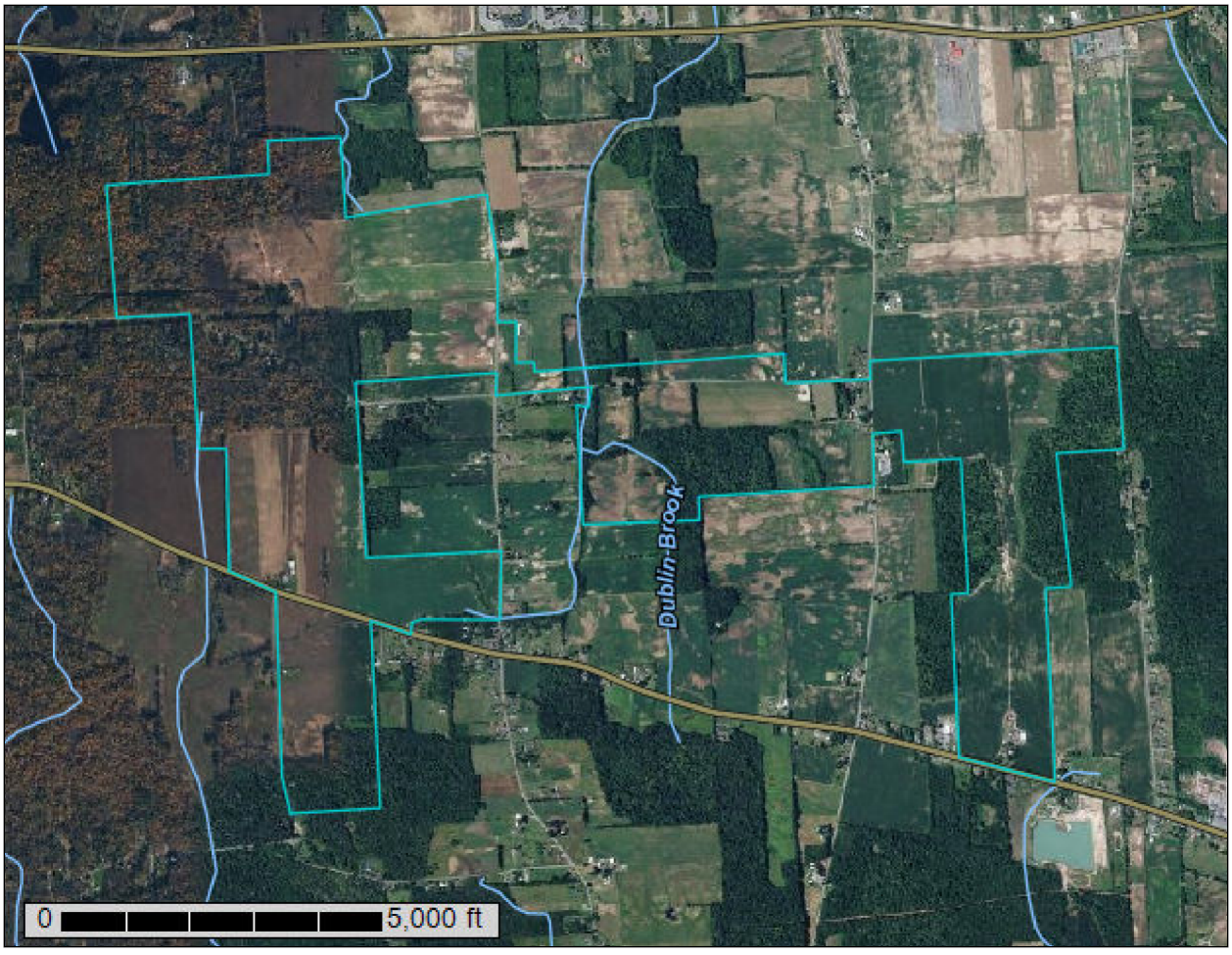
NRCS

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 Seneca County, New York

North Seneca Solar Project



February 20, 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.

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

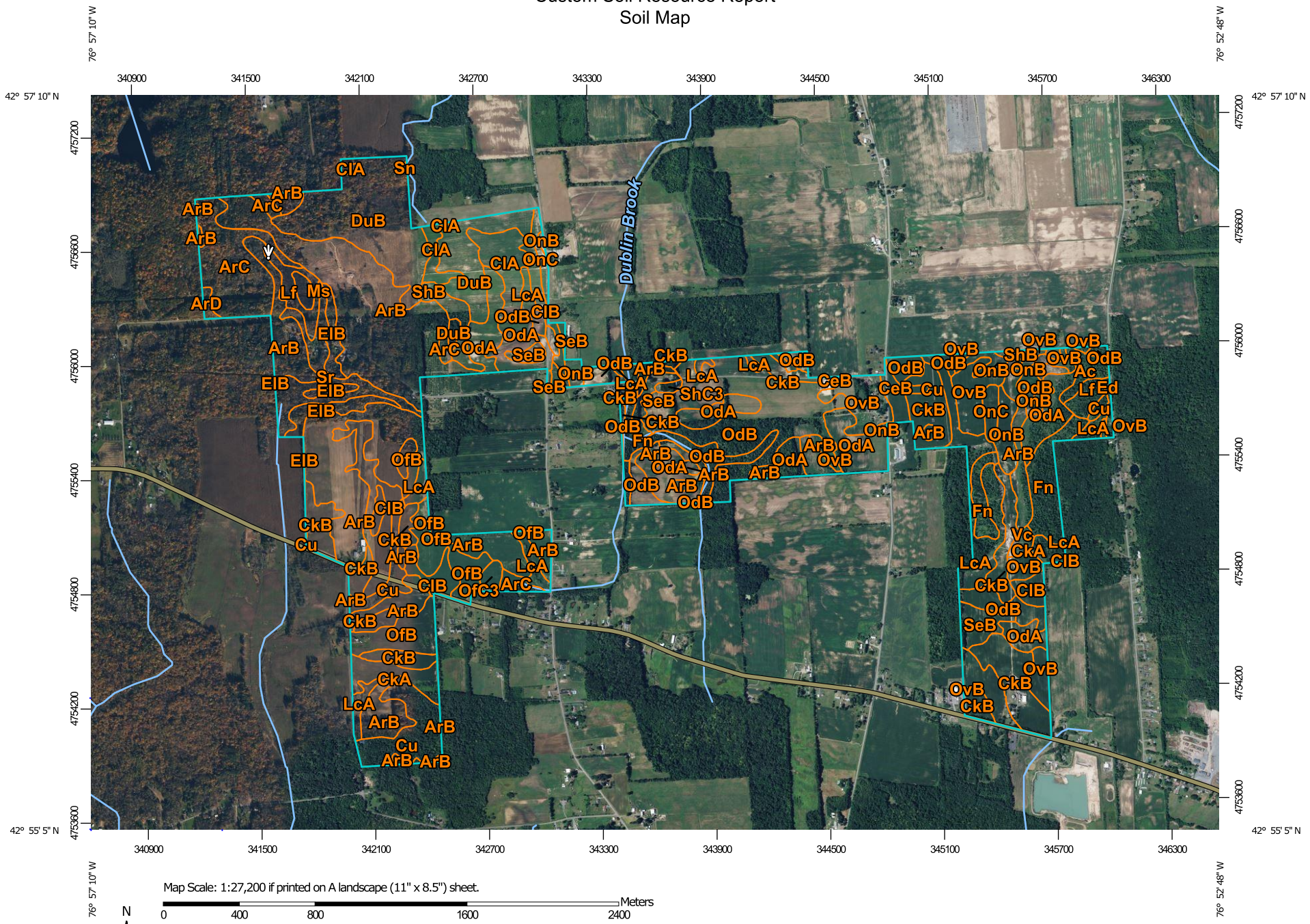
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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

Soil Map

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

Custom Soil Resource Report
Soil Map



MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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: Seneca County, New York
Survey Area Data: Version 21, Sep 6, 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—Nov 7, 2021

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ac	Alden mucky silt loam	11.1	0.9%
ArB	Arkport loamy fine sand, 1 to 6 percent slopes	301.1	23.6%
ArC	Arkport loamy fine sand, 6 to 12 percent slopes	51.3	4.0%
ArD	Arkport loamy fine sand, 12 to 20 percent slopes	1.9	0.2%
CeB	Cazenovia silt loam, 3 to 8 percent slopes	6.8	0.5%
CkA	Claverack loamy fine sand, 0 to 2 percent slopes	18.0	1.4%
CkB	Claverack loamy fine sand, 2 to 6 percent slopes	98.8	7.7%
ClA	Collamer silt loam, 0 to 2 percent slopes	28.8	2.3%
ClB	Collamer silt loam, 2 to 6 percent slopes	44.5	3.5%
CoB	Collamer silt loam, moderately shallow variant, 2 to 6 percent slopes	2.0	0.2%
Cu	Cosad loamy fine sand	41.9	3.3%
DuB	Dunkirk silt loam, 1 to 6 percent slopes	107.5	8.4%
Ed	Edwards muck	1.0	0.1%
ElB	Elnora loamy fine sand, 2 to 6 percent slopes	19.3	1.5%
Fn	Fonda mucky silty clay loam	51.5	4.0%
LcA	Lakemont silty clay loam, 0 to 3 percent slopes	53.2	4.2%
Lf	Lamson fine sandy loam and Mucky fine sandy loam	17.0	1.3%
Ms	Muck, shallow	3.6	0.3%
OdA	Odessa silt loam, 0 to 3 percent slopes	95.6	7.5%
OdB	Odessa silt loam, 3 to 8 percent slopes	127.9	10.0%
OfB	Ontario fine sandy loam, 3 to 8 percent slopes	32.1	2.5%
OfC3	Ontario fine sandy loam, 8 to 15 percent slopes	3.8	0.3%
OnB	Ontario loam, 3 to 8 percent slopes	23.9	1.9%
OnC	Ontario loam, 8 to 15 percent slopes	9.6	0.8%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
OvB	Ovid silt loam, 3 to 8 percent slopes	68.7	5.4%
SeB	Schoharie silt loam, 2 to 6 percent slopes	22.1	1.7%
ShB	Schoharie silty clay loam, 2 to 6 percent slopes	2.4	0.2%
ShC3	Schoharie silty clay loam, 6 to 12 percent slopes	1.7	0.1%
Sn	Sloan silt loam	0.3	0.0%
Sr	Stafford loamy fine sand	27.9	2.2%
Vc	Varick silty clay loam	3.3	0.3%
Totals for Area of Interest		**1,278.5**	**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.

Seneca County, New York

Ac—Alden mucky silt loam

Map Unit Setting

National map unit symbol: 9wmk
Elevation: 300 to 1,500 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Alden

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 21 inches: loam
H3 - 21 to 60 inches: silt loam

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 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 8.4 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

Collamer

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

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

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

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

ArB—Arkport loamy fine sand, 1 to 6 percent slopes

Map Unit Setting
National map unit symbol: 9wmv
Elevation: 300 to 900 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

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

Description of Arkport

Setting
Landform: Deltas on lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Glaciofluvial or deltaic deposits with a high content of fine and very fine sand

Typical profile
H1 - 0 to 9 inches: loamy fine sand
H2 - 9 to 18 inches: loamy fine sand
H3 - 18 to 59 inches: stratified loamy fine sand to fine sandy loam
H4 - 59 to 99 inches: sand

Properties and qualities
Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well 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: 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): 2e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

Claverack

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

Elnora

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

Cosad

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

Dunkirk

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

Stafford

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

Collamer

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

Palmyra

Percent of map unit: 2 percent
Hydric soil rating: No

ArC—Arkport loamy fine sand, 6 to 12 percent slopes

Map Unit Setting

National map unit symbol: 9wmw
Elevation: 300 to 900 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Arkport

Setting

Landform: Deltas on lake plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Glaciofluvial or deltaic deposits with a high content of fine and very fine sand

Typical profile

H1 - 0 to 9 inches: loamy fine sand
H2 - 9 to 18 inches: loamy fine sand
H3 - 18 to 59 inches: stratified loamy fine sand to fine sandy loam
H4 - 59 to 99 inches: sand

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): 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: 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): 3e
Hydrologic Soil Group: A
Ecological site: F101XY005NY - Dry Outwash
Hydric soil rating: No

Minor Components

Unnamed soils

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

Palmyra

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

Dunkirk

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

ArD—Arkport loamy fine sand, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: 9wmx
Elevation: 300 to 900 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Arkport

Setting

Landform: Deltas on lake plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Glaciofluvial or deltaic deposits with a high content of fine and very fine sand

Typical profile

H1 - 0 to 9 inches: loamy fine sand
H2 - 9 to 18 inches: loamy fine sand
H3 - 18 to 59 inches: stratified loamy fine sand to fine sandy loam
H4 - 59 to 99 inches: sand

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well 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: 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): 4e
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

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

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

CeB—Cazenovia silt loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9wn5
Elevation: 380 to 840 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

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

Description of Cazenovia

Setting
Landform: Till plains, reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till that contains limestone with an admixture of reddish lake-laid clays or reddish clay shale

Typical profile
H1 - 0 to 8 inches: silt loam
H2 - 8 to 31 inches: silty clay loam
H3 - 31 to 60 inches: gravelly silt loam

Properties and qualities
Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

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

Minor Components

Unnamed soils

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

Ovid

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

Romulus

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

CkA—Claverack loamy fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 9wnd
Elevation: 600 to 1,800 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Claverack

Setting

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

Parent material: Sandy glaciolacustrine deposits, derived primarily from non-calcareous sandstone or granite, that overlie clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: loamy fine sand
H2 - 8 to 32 inches: loamy fine sand
H3 - 32 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components

Lakemont

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

Cosad

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

Elnora

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

Arkport

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

CkB—Claverack loamy fine sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 9wnf
Elevation: 600 to 1,800 feet
Mean annual precipitation: 32 to 36 inches

Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Claverack

Setting

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Sandy glaciolacustrine deposits, derived primarily from non-calcareous sandstone or granite, that overlie clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: loamy fine sand
H2 - 8 to 32 inches: loamy fine sand
H3 - 32 to 60 inches: silty clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components

Cosad

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

Arkport

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

Lakemont

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

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

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

Schoharie
Percent of map unit: 2 percent
Hydric soil rating: No

ClA—Collamer silt loam, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 9wng
Elevation: 380 to 840 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

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

Description of Collamer

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

Typical profile
H1 - 0 to 9 inches: silt loam
H2 - 9 to 14 inches: silt loam
H3 - 14 to 22 inches: sandy clay loam
B3 - 22 to 60 inches: silt loam

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

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

Minor Components

Canandaigua

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

Dunkirk

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

Niagara

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

CIB—Collamer silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 9wnh
Elevation: 380 to 670 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Collamer

Setting

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

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 14 inches: silt loam
H3 - 14 to 22 inches: sandy clay loam
B3 - 22 to 60 inches: silt loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

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

Minor Components

Canandaigua

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

Dunkirk

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

Niagara

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

CoB—Collamer silt loam, moderately shallow variant, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 9wnk
Elevation: 380 to 560 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Collamer Variant

Setting

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

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 14 inches: silt loam
H3 - 14 to 22 inches: sandy clay loam
B3 - 22 to 60 inches: silt loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

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

Minor Components

Schoharie

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

Unnamed soils

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

Dunkirk

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

Odessa

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

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

Cu—Cosad loamy fine sand

Map Unit Setting
National map unit symbol: 9wnn
Elevation: 200 to 800 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Prime farmland if drained

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

Description of Cosad

Setting
Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Sandy glaciofluvial or deltaic deposits over clayey glaciolacustrine deposits

Typical profile
H1 - 0 to 9 inches: loamy fine sand
H2 - 9 to 30 inches: loamy fine sand
H3 - 30 to 60 inches: silty clay

Properties and qualities
Slope: 0 to 2 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 moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components

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

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

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

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

DuB—Dunkirk silt loam, 1 to 6 percent slopes

Map Unit Setting
National map unit symbol: 9wns
Elevation: 100 to 1,000 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

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): Summit
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 silt loam to silty clay loam

Properties and qualities

Slope: 1 to 6 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
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F101XY008NY - Well Drained Lake Plain
Hydric soil rating: No

Minor Components

Schoharie

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

Arkport

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

Niagara

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

Collamer

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

Canandaigua

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

Ed—Edwards muck

Map Unit Setting

National map unit symbol: 9wnx
Elevation: 600 to 1,000 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Edwards

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 marl

Typical profile

H1 - 0 to 33 inches: muck
H2 - 33 to 60 inches: marl

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): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 90 percent
Available water supply, 0 to 60 inches: Very high (about 13.2 inches)

Interpretive groups

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

Minor Components

Muck, deep

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

Muck, shallow

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

Sloan

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

ElB—Elnora loamy fine sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 9wp0
Elevation: 380 to 510 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Elnora

Setting

Landform: Deltas, beach ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Sandy glaciofluvial, eolian, or deltaic deposits

Typical profile

H1 - 0 to 8 inches: loamy fine sand
H2 - 8 to 34 inches: loamy fine sand
H3 - 34 to 60 inches: loamy fine sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

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

Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components

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

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

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

Fn—Fonda mucky silty clay loam

Map Unit Setting
National map unit symbol: 9wp5
Elevation: 50 to 650 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition
Fonda and similar soils: 85 percent
Minor components: 15 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 silty clay loam
H2 - 5 to 13 inches: silty clay loam
H3 - 13 to 25 inches: silty clay
H4 - 25 to 60 inches: silty clay 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

Muck, shallow

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

Lakemont

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

LcA—Lakemont silty clay loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2spjw
Elevation: 260 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: Farmland of statewide importance

Map Unit Composition

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

Description of Lakemont

Setting

Landform: Depressions

Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Red clayey glaciolacustrine deposits derived from calcareous shale

Typical profile

Ap - 0 to 6 inches: silty clay loam
Eg - 6 to 10 inches: silty clay loam
Btg1 - 10 to 15 inches: silty clay
Btg2 - 15 to 31 inches: silty clay
C - 31 to 79 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
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 0 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 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): 4w
Hydrologic Soil Group: D
Ecological site: F101XY010NY - Wet Lake Plain Depression
Hydric soil rating: Yes

Minor Components

Odessa

Percent of map unit: 5 percent
Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Canandaigua

Percent of map unit: 4 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Fonda

Percent of map unit: 4 percent

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Barre

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

Lf—Lamson fine sandy loam and Mucky fine sandy loam

Map Unit Setting

National map unit symbol: 9wpk
Elevation: 50 to 1,100 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Lamson

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Deltaic or glaciolacustrine deposits with a high content of fine and very fine sand

Typical profile

H1 - 0 to 13 inches: fine sandy loam
H2 - 13 to 33 inches: fine sandy loam
H3 - 33 to 60 inches: stratified loamy fine sand to fine sand to silty clay

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 (0.57 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: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: F101XY007NY - Wet Outwash
Hydric soil rating: Yes

Minor Components

Stafford

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

Muck, shallow

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

Elnora

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

Ms—Muck, shallow

Map Unit Setting

National map unit symbol: 9wq3
Elevation: 250 to 1,500 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Muck, shallow, and similar soils: 85 percent
Minor components: 15 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

Typical profile

H1 - 0 to 20 inches: muck
H2 - 20 to 60 inches: clay loam

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 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 20 percent
Available water supply, 0 to 60 inches: Very high (about 15.2 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

Edwards

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

Fonda

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

Muck, deep

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

OdA—Odessa silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2wrd8
Elevation: 260 to 1,540 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

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

Description of Odessa

Setting

Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Red clayey glaciolacustrine deposits derived from calcareous shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bt/E - 8 to 10 inches: silty clay loam
Bt1 - 10 to 15 inches: silty clay
Bt2 - 15 to 25 inches: silty clay
C - 25 to 79 inches: silty clay

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 low (0.00 to 0.14 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

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

Minor Components

Lakemont

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Schoharie

Percent of map unit: 5 percent

Landform: Lake terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Churchville

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

Rhinebeck

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

OdB—Odessa silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2wrdk
Elevation: 250 to 1,280 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

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

Description of Odessa

Setting

Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Red clayey glaciolacustrine deposits derived from calcareous shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bt/E - 8 to 10 inches: silty clay loam
Bt1 - 10 to 15 inches: silty clay
Bt2 - 15 to 25 inches: silty clay
C - 25 to 79 inches: silty clay

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 low (0.00 to 0.14 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

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

Minor Components

Schoharie

Percent of map unit: 6 percent
Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Lakemont

Percent of map unit: 4 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Churchville

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

Rhinebeck

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

OfB—Ontario fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2xgg3
Elevation: 250 to 1,050 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

Ontario and similar soils: 85 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
Landform position (three-dimensional): 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: fine sandy 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: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: 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: 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

Hilton

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, concave
Hydric soil rating: No

Honeoye

Percent of map unit: 5 percent
Landform: Till plains, ridges, 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

Cazenovia

Percent of map unit: 3 percent
Landform: Reworked lake plains, till plains
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: 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

OfC3—Ontario fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2xgg4
Elevation: 260 to 1,280 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

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

Description of Ontario

Setting

Landform: Ridges, till plains, drumlins
Landform position (two-dimensional): Shoulder, backslope, 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: fine sandy 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: 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

Hilton
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, concave
Hydric soil rating: No

Honeoye
Percent of map unit: 5 percent
Landform: Till plains, ridges, 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

Cazenovia
Percent of map unit: 3 percent
Landform: Reworked lake plains, till plains
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: 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

OnB—Ontario loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 2w3ps
Elevation: 250 to 1,490 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

Ontario and similar soils: 85 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, shoulder
Landform position (three-dimensional): 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: 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: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: 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: 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): 2e
Hydrologic Soil Group: B
Ecological site: F101XY012NY - Till Upland
Hydric soil rating: No

Minor Components

Hilton

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, concave
Hydric soil rating: No

Honeoye

Percent of map unit: 5 percent
Landform: Till plains, ridges, 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

Cazenovia

Percent of map unit: 3 percent
Landform: Reworked lake plains, till plains
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: 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

OnC—Ontario loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w3px
Elevation: 250 to 1,570 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

Ontario and similar soils: 85 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, 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: 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: 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 7.8 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

Honeoye

Percent of map unit: 5 percent
Landform: Till plains, ridges, 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

Hilton

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, concave
Hydric soil rating: No

Cazenovia

Percent of map unit: 3 percent
Landform: Reworked lake plains, till plains
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: 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

OvB—Ovid silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9wqh
Elevation: 250 to 1,000 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Ovid

Setting

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
Parent material: Loamy till with a significant component of reddish shale or reddish glaciolacustrine clays, mixed with limestone and some sandstone

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 24 inches: silty clay loam
H3 - 24 to 60 inches: silty clay loam

Properties and qualities

Slope: 3 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 moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None

Frequency of ponding: None
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): 3w
Hydrologic Soil Group: C/D
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Romulus

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

Unnamed soils

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

Cazenovia

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

SeB—Schoharie silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2xgh4
Elevation: 260 to 1,280 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

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): Summit, shoulder
Landform position (three-dimensional): Tread
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: silt 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: 2 to 6 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 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): 2e
Hydrologic Soil Group: D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

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

Odessa

Percent of map unit: 5 percent
Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
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

ShB—Schoharie silty clay loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2xggg
Elevation: 280 to 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: All areas are 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): Shoulder, summit
Landform position (three-dimensional): Tread
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: 2 to 6 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 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): 2e
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): Tread
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

ShC3—Schoharie silty clay loam, 6 to 12 percent slopes

Map Unit Setting

National map unit symbol: 2xggl
Elevation: 260 to 1,340 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

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): Shoulder, backslope
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: 6 to 12 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): 3e

Hydrologic Soil Group: D
Ecological site: F101XY009NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

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

Odessa
Percent of map unit: 5 percent
Landform: Lake terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
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: 9wqx
Elevation: 900 to 1,000 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Sloan and similar soils: 80 percent
Minor components: 20 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: Loamy alluvium

Typical profile

H1 - 0 to 17 inches: silt loam
H2 - 17 to 36 inches: silt loam
H3 - 36 to 60 inches: silty clay loam

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 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F101XY003NY - Low Floodplain Depression
Hydric soil rating: Yes

Minor Components

Eel

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

Muck, deep

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

Wallkill

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

Muck, shallow

Percent of map unit: 5 percent

Landform: Swamps, marshes
Hydric soil rating: Yes

Sr—Stafford loamy fine sand

Map Unit Setting

National map unit symbol: 9wqy
Elevation: 380 to 520 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Stafford

Setting

Landform: Deltas, beach ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Sandy glaciofluvial or glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: loamy fine sand
H2 - 8 to 34 inches: loamy fine sand
H3 - 34 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Ecological site: F101XY006NY - Moist Outwash
Hydric soil rating: No

Minor Components

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

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

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

Vc—Varick silty clay loam

Map Unit Setting
National map unit symbol: 9wqz
Elevation: 430 to 980 feet
Mean annual precipitation: 32 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 145 to 185 days
Farmland classification: Farmland of statewide importance

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

Description of Varick

Setting
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy till or congeliturbate strongly influenced by clayey calcareous shale, in places incorporating re-worked glaciolacustrine deposits

Typical profile
H1 - 0 to 8 inches: silty clay loam
H2 - 8 to 24 inches: silty clay loam
H3 - 24 to 28 inches: weathered bedrock

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Poorly 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 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Minor Components

Angola

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

Ilion

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

Unnamed soils

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

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APPENDIX D

SHPO and E&T Documentation

(SHPO determination will not be available until final engineering design)

APPENDIX E

Pre-Construction Requirements

E-1: PRE-CONSTRUCTION MEETING DOCUMENTS AND INSPECTION REPORTS

General Project Information			
Project Name	North Seneca Solar Project		
Project Location	Towns of Junius and Waterloo	**County**	Seneca County
SPDES Permit ID No.		**NYSDEC Date of Authorization**	

PREAMBLE TO SITE ASSESSMENT AND INSPECTIONS – TO BE READ BY ALL PERSONS INVOLVED IN THE CONSTRUCTION OF STORMWATER RELATED ACTIVITIES

1. The Owner/Operator and Contractors shall read the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities GP-0-20-001. This SWPPP has been prepared for the project and represents the minimum standards for compliance. The Contractors must follow the requirements of the SWPPP.
2. A copy of the General Permit (GP-0-20-001), the SWPPP, NOI, NOI Acknowledgement Letter, MS4 Acceptance form (if applicable), inspection reports and any correspondence with the NYSDEC must be kept at the work site at all times. (e.g., in the job trailer.)
3. Prior to commencing soil disturbance, the Owner/Operator and/or Contractors must complete the forms and certifications in this Appendix. This information must be kept up to date.
4. All enclosed certifications shall be completed by the contractor. Subcontractors responsible for implementing erosion and sediment control measures or constructing stormwater management practices shall also complete the certifications. Each certification is to be completed and signed by a president, treasurer or vice president, or any person who performs similar policy or decision-making functions, and by the onsite individual having responsibility for the firm.
5. The Owner/Operator shall have a qualified inspector conduct an assessment of installed erosion and sediment controls and overall preparedness of the site prior to the commencement of construction. The inspection report in this section shall be used record the results of the inspection.
6. Site inspections shall be conducted by the qualified inspector at least once every seven calendar days when construction actives commence. For sites where the Owner/Operator has received authorization from the New York State Department of Environmental Conservation (NYSDEC) to disturb greater than five acres of soil at one time or where the project site discharges directly to a 303(d) impaired waterbody or is in a watershed listed in Appendix C of the General Permit, the qualified inspector shall conduct at least two site inspections every seven calendar days. There shall be a minimum of two full calendar days between inspections. The Owner/Operator shall maintain a record of all inspection reports onsite in Appendix F and have them available to the permitting authorities upon request.
7. The qualified inspector will notify the Owner/Operator and Contractor of any items to be addressed within one day business day of the inspection. The Contractors need to start corrective measures within one business day of notification and complete corrective actions in a reasonable time frame.
8. Prior to filing the Notice of Termination (NOT) or the end of permit term, the Owner/Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing, etc.) have been removed and that post-construction stormwater management practices have been installed in accordance with the SWPPP. The Owner/Operator must certify that, based upon their inquiry, all the information contained within the NOT is true.

9. Prior to submitting the NOT, the Owner/Operation is required to have one of the following in place (for permanent stormwater practices):
    a. Provide proof that the post-construction stormwater management practices, including any right-of-ways needed for maintenance of such practices, have been deeded to the municipality in which the practices are located, or
    b. Provide confirmation that the municipality has executed an agreement to maintain the post-construction stormwater management practices, or
    c. For privately-owned post-construction stormwater management practices, provide proof that the Owner/Operator has modified their deed of record to include a deed covenant that requires operation of the practices in accordance with the operations and maintenance plan.
    d. For institutional-owned or municipal-owned post-construction stormwater practices, provide proof that the Owner/Operator has policy and procedure in place to ensure operation of the practices in accordance with the operations and maintenance plan.
10. In the event of a transfer of ownership or responsibility for stormwater runoff, the original Owner/Operator (permittee) must notify the new Owner/Operator in writing of the requirement to obtain permit coverage by submitting a new Notice of Intent. Once the new Owner/Operator obtains permit coverage, the original Owner/Operator shall submit a completed NOT with the name and permit identification number of the new Owner/Operator. If the original Owner/Operator maintains ownership of a portion of the construction activity and will disturb soil, they must obtain their coverage under the general permit. Permit coverage for the new Owner/Operator will be effective when an acknowledgement letter is received from the NYSDEC confirming receipt of the completed Notice of Intent (NOI), provided the original Owner/Operator was not subject to a sixty business day authorization period that has not expired as of the date the Department receives the NOI from the new Owner/Operator.

E-1: PRE-CONSTRUCTION MEETING DOCUMENTS AND INSPECTION REPORTS

General Project Information			
Project Name	North Seneca Solar Project		
Project Location	Towns of Junius and Waterloo	**County**	Seneca County
SPDES Permit ID No.		**NYSDEC Date of Authorization**	

PRE-CONSTRUCTION SITE ASSESSMENT CHECKLIST

Construction (soil disturbance) shall not commence until all Erosion & Sediment Control Facilities have been installed, inspected, and found acceptable by the Owner/Operator. Add comments below as necessary.

Notice of Intent, SWPPP, and Contractor's Certification		
1.	Has Notice of Intent (NOI) been filed with NYSDEC, MS4 Certification (if applicable) and the NOI Acknowledgment form been received?	☐Yes ☐ No
2.	Is the SWPPP onsite? If yes, where? _____	☐Yes ☐ No
3.	Is the SWPPP current? What is the latest revision date? _____/_____/_____	☐Yes ☐ No
4.	Have all the Contractors involved with stormwater-related activities signed a Contractor's Certification Statement (Appendix E-3)?	☐Yes ☐ No
5.	Has the Contractor's Construction Stabilization Schedule (Appendix E-2) been received?	☐Yes ☐ No
Resource Protection		
6.	Are construction limits clearly flagged or fenced?	☐Yes ☐ No ☐ NA
7.	Have the important trees and associated root zones, onsite septic system absorption fields, existing vegetation areas suitable for filter strips been flagged for protection?	☐Yes ☐ No ☐ NA
8.	Were creek-crossings installed prior to land-disturbing activity?	☐Yes ☐ No ☐ NA
9.	Have wetlands been identified, flagged and protected?	☐Yes ☐ No ☐ NA
Surface Water Protection		
10.	Has runoff from undisturbed areas been diverted away from or around areas to be disturbed?	☐Yes ☐ No ☐ NA
11.	Have bodies of water either onsite or in the vicinity been identified and protected?	☐Yes ☐ No ☐ NA
12.	Have appropriate practices to protect onsite or downstream surface water been installed?	☐Yes ☐ No ☐ NA
13.	Has any grading operation occurred prior to this inspection, except for Erosion & Sediment Control Practices installation?	☐Yes ☐ No ☐ NA
Stabilized Construction Entrance		
14.	Has a temporary construction entrance been installed to prevent mud and debris from entering the public roadway?	☐Yes ☐ No ☐ NA
15.	Have construction routes and equipment parking areas needed to begin construction been stabilized immediately as work takes place, with gravel or other cover?	☐Yes ☐ No ☐ NA
16.	Is there a plan to remove or clean sediment tracked on to public roadways?	☐Yes ☐ No ☐ NA

Sediment Controls		
17.	Does the silt fence material and installation comply with the contract drawing, SWPPP, and specifications?	☐Yes ☐ No ☐ NA
18.	Are silt fences installed at appropriate spacing intervals?	☐Yes ☐ No ☐ NA
19.	Were sediment trapping devices installed as the first land disturbing activity?	☐Yes ☐ No ☐ NA
Waste and Hazardous Material Handling		
20.	Has the Owner and/or Operator or designated representative been assigned to implement the spill prevention avoidance and response approach?	☐Yes ☐ No ☐ NA
21.	Are there appropriate materials to control spills onsite? If yes, where? _____	☐Yes ☐ No ☐ NA

Items that need to be addressed prior to completion of Qualified Inspector's Certification

1.
2.
3.
4.
5.
6.

Qualified Inspector's Credentials and Certification

I hereby certify that I meet the Qualified Inspector criteria set forth in the General Permit and that the appropriate erosion and sediment controls described in the SWPPP and as described this checklist have been adequately installed or implemented, ensuring the overall preparedness of this site for the commencement of construction.

Signature: _____

Name (please print): _____

Title: _____ Date: _____

Company Name: _____

Address: _____

Phone: _____ Email: _____

Inspector Qualifications: ☐ PE ☐ RLA ☐ CPESC
☐ NYSDEC 4-hr ESC Certified

4-hour Contractor Training Completed
Card Received: ☐ Yes ☐ No
Expiration Date: _____

E-2: CONSTRUCTION STABILIZATION SCHEDULE

General Project Information			
Project Name	North Seneca Solar Project		
Project Location	Towns of Junius and Waterloo	**County**	Seneca County
SPDES Permit ID No.		**NYSDEC Date of Authorization**	

For portions of the site where soil disturbance activities have temporarily or permanently ceased, stabilization measures must be initiated by the contractor by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. Stabilization must be completed within 7 calendar days if the site current disturbance 5 acres or greater. For portions of the site that discharge directly to a 303(d) stabilization measures must be initiated by the contractor by the end of the next business day and completed within 7 calendar days from the date the current soil disturbance activity has ceased.

When construction activity is precluded by snow cover, stabilization measures shall be initiated as soon as practical.

Contractors are responsible to provide a construction schedule for review and approval by the Owner/Operator:

Soil Disturbing Activities	Location	Anticipated Start Date	Anticipated Stabilization Date
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

E-3: CONTRACTOR CERTIFICATION STATEMENT

General Project Information			
Project Name	North Seneca Solar Project		
Project Location	Towns of Junius and Waterloo	**County**	Seneca County
SPDES Permit ID No.		**NYSDEC Date of Authorization**	

Each Contractor/Subcontractor is required to complete this form and sign this certification statement prior to working onsite.

Contractor Information

Contracting Firm: _____

Address: _____

Phone (Office): _____ Job Site (Trailer): _____

Contacts: 1) _____ Mobile: _____

2) _____ Mobile: _____

3) _____ Mobile: _____

Trained Contactor Responsibilities

A Trained Individual is an employee that has received 4 hours of training approved by the NYSDEC, from a Soil and Water Conservation District, from CPESC, Inc., or from another NYSDEC-endorsed entity providing training in proper erosion and sediment control principles. Training must be completed prior to the date that this project commences (prior to project mobilization). After receiving the initial training, the individual shall receive 4 hours of NYSDEC-approved training every 3 years.

Names of Trained Individuals from the Contractor's company that will be responsible for implementing the SWPPP:

Name: _____ Title: _____

Measures Responsible for: 1) _____

2) _____

3) _____

4) _____

Name: _____ Title: _____

Measures Responsible for:
1) _____
2) _____
3) _____
4) _____

Name: _____ Title: _____

Measures Responsible for:
1) _____
2) _____
3) _____
4) _____

Contractor's Certification

I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the Qualified Inspector during a site inspection. I also understand that the Owner and/or Operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (SPDES) general permit for stormwater discharges from construction activities, and it is unlawful for any person to cause, or contribute to, a violation of water quality standards.

Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations.

I also certify that I have received a copy of the SWPPP and will retain a copy of such SWPPP onsite during construction.

Signature of President, Vice President, or Treasurer DSF

Signature: _____ Date: _____

Print Name: _____ Title: _____

Signature of Responsible Onsite Individual (Must Meet Requirements of Trained Contractor)

Signature: _____ Date: _____

Print Name: _____ Title: _____

APPENDIX F

Stormwater Construction Site Inspection Reports

Stormwater Construction Site Inspection Report Report

General Information			
Project Name	North Seneca Solar Project		
SPDES Permit I.D. No.			
Date of Inspection		Project Location	Towns of Junius and Waterloo, Seneca County, NY
Qualified Inspector's Name(s)		Qualified Inspector's Title(s)	
Inspector's Contact Information			
Describe present phase of construction			

Type of Inspection
☐ Weekly ☐ Monthly ☐ Twice Weekly

Weather at time of this inspection?
☐ Sunny ☐ Cloudy ☐ Raining ☐ Snow Cover

Soil Conditions at time of this inspection?
☐ Dry ☐ Wet ☐ Saturated

Are there any discharges at the time of inspection? ☐Yes ☐No

Describe the condition of all points of discharge to natural surface waters and all point of discharge from the construction site located within, or immediately adjacent to the project's property boundaries, which receive runoff from disturbed areas (specifically note if sediment is present):

SWPPP Documentation Compliance		
1.	Has Notice of Intent (NOI) been filed with NYSDEC and the NOI Acknowledgment form been received?	☐Yes ☐No
2.	Is the SWPPP on-site? SWPPP documentation onsite and current	☐Yes ☐No ☐Yes ☐No
3.	Is the Approved Phasing Plan for Disturbance > 5 Acres being followed?	☐Yes ☐No ☐N/A
4.	Is the Project Schedule being followed?	☐Yes ☐No
5.	Any SWPPP revisions? Latest revision date: (list all revisions and dates)	☐Yes ☐No

	BMP/Activity		Maintained? If no, list Corrective Action	List Required Completion Date, Company, and Responsible Person
Disturbance				
1.	Are construction limits and important resource areas clearly flagged or fenced?	☐Yes ☐No ☐N/A	☐Yes ☐No	
2.	Are areas outside the construction limits undergoing disturbance? If yes, explain	☐Yes ☐No		
3.	Has any single area > 5 Acres been disturbed?	☐Yes ☐No	☐Yes ☐No	
4.	Are clearing and grubbing operations minimized to the smallest practicable area?	☐Yes ☐No ☐N/A	☐Yes ☐No	
5.	Has clean stormwater runoff been diverted around areas to be disturbed?	☐Yes ☐No ☐N/A	☐Yes ☐No	
E&SC Practices				
6.	Were the sediment traps installed prior to any land-disturbing activity?	☐Yes ☐No ☐N/A	☐Yes ☐No	
7.	Are stabilized temporary construction entrances and construction staging area(s) in place?	☐Yes ☐No ☐N/A	☐Yes ☐No	
8.	Have construction access roads been properly stabilized?	☐Yes ☐No ☐N/A	☐Yes ☐No	
9.	Is there evidence of sediment being tracked onto the street?	☐Yes ☐No	☐Yes ☐No	
10.	Has silt fence been or other perimeter sediment control barriers been installed?	☐Yes ☐No ☐N/A	☐Yes ☐No	
11.	Are storm drain inlets properly protected?	☐Yes ☐No ☐N/A	☐Yes ☐No	
12.	Are washout facilities for concrete available and clearly marked?	☐Yes ☐No ☐N/A	☐Yes ☐No	
13.	Are temporary and/or permanent check dams in place?	☐Yes ☐No ☐N/A	☐Yes ☐No	
14.	Are top soil and excess excavated material stored in stabilized stock piles?	☐Yes ☐No ☐N/A	☐Yes ☐No	

	BMP/Activity		Maintained? If no, list Corrective Action	List Required Completion Date, Company, and Responsible Person
15.	Are dust control measures being properly implemented?	☐Yes ☐No ☐N/A	☐Yes ☐No	
16.	Were creek crossings installed prior to any land-disturbing activity?	☐Yes ☐No ☐N/A	☐Yes ☐No	
Stabilization				
17.	Are all slopes not being actively worked properly stabilized?	☐Yes ☐No ☐N/A	☐Yes ☐No	
18.	Are soil slopes steeper than 1V: 3H undergoing surface roughening/seed/mulch?	☐Yes ☐No ☐N/A	☐Yes ☐No	
19.	Are disturbed areas stabilized within 14 days?	☐Yes ☐No ☐N/A	☐Yes ☐No	
20.	Is the site adequately stabilized at this time?	☐Yes ☐No	☐Yes ☐No	
Other Best Management Practices				
21.	Are vehicle and equipment fueling, clean-out, and maintenance areas free of spills, leaks, or any other deleterious material?	☐Yes ☐No ☐N/A	☐Yes ☐No	
22.	Are materials that are potential stormwater contaminants stored inside or under cover?	☐Yes ☐No ☐N/A	☐Yes ☐No	
23.	Are appropriate materials to control spill located onsite?	☐Yes ☐No ☐N/A	☐Yes ☐No	
24.	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	☐Yes ☐No ☐N/A	☐Yes ☐No	
25.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐Yes ☐No ☐N/A		
26.	Are any practices listed in the SWPPP missing?	☐Yes ☐No		

Inspector's Signature: _____

Date: _____

APPENDIX G

Post-Construction Maintenance Requirements

General Site Post-Construction Checklist	
Project Name	North Seneca Solar Project
Location	Towns of Junius and Waterloo, Seneca County, New York
Site Status	

	Maintenance Task	Frequency	Task Completed By & Date
1.	Inspect drainage inlets and remove debris	Monthly	
2.	Remove sediment from catch basin and sediment basins when design capacity is reduced by 50%	Bi-Annually (Spring & Fall)	
3.	Clean and vacuum porous pavement areas and filter strips	Bi-Annually (Spring & Fall)	
4.	Inspect swales, riprap outlet protection and stormwater practices. Remove debris and repair or restabilize areas as necessary.	Bi-Annually (Spring & Fall)	
5.	Complete stormwater practice specific (i.e. bioretention area, stormwater pond, etc.) Operation and Maintenance Check List	Bi-Annually (Spring & Fall)	
6.	Inspect site for areas of poor vegetative cover. Apply top soil, seed and mulch as necessary to revegetate.	Bi-Annually (Spring & Fall)	
7.	Inspect culverts and remove obstructions.	Annually (Spring)	
8.	Sweep paved surfaces	Annually (Spring)	
9.	Removed vegetative debris and fallen trees from buffers and undisturbed areas	Annually (Spring)	

Actions to be Taken:

Inspector's Signature: _____

Post-Construction Operation & Maintenance – Bioretention Areas			
Project Name	North Seneca Solar Project		
Location	Towns of Junius and Waterloo, Seneca County, New York		
Site Status		**Inspector's Name**	
Date		**Time**	

	Maintenance Item	Satisfactory/ Unsatisfactory	Comments
Debris Removal (Spring and Fall)			
1.	Channel clear of debris	☐ Satisfactory ☐ Unsatisfactory	
2.	No dumping of yard wastes into practice	☐ Satisfactory ☐ Unsatisfactory	
3.	Litter (branches, etc.) removed as necessary	☐ Satisfactory ☐ Unsatisfactory	
Vegetation (Spring and Fall)			
4.	Plants present that are taller than the outlet	☐ Satisfactory ☐ Unsatisfactory	
5.	Fertilized per specifications	☐ Satisfactory ☐ Unsatisfactory	
6.	Plant composition according to approved plans	☐ Satisfactory ☐ Unsatisfactory	
7.	Free of weeds	☐ Satisfactory ☐ Unsatisfactory	
8.	Grass height 6 inches or less	☐ Satisfactory ☐ Unsatisfactory	
9.	No evidence erosion	☐ Satisfactory ☐ Unsatisfactory	
Check Dams/Energy Dissipaters/Sumps (Spring, Fall and after Major Storms)			
10.	No evidence of sediment buildup	☐ Satisfactory ☐ Unsatisfactory	
11.	Sumps are less than 50% full of sediment	☐ Satisfactory ☐ Unsatisfactory	
12.	No evidence of erosion at downstream toe of drop structures	☐ Satisfactory ☐ Unsatisfactory	
Dewatering (Spring and Fall)			
13.	Dewaters between storm/no standing water	☐ Satisfactory ☐ Unsatisfactory	
Sediment Deposition (Spring and Fall)			
14.	Swale and bioretention free of sediment	☐ Satisfactory ☐ Unsatisfactory	
Outlet/Overflow Spillway (Spring and Fall)			
15.	Good condition, no need for repairs	☐ Satisfactory ☐ Unsatisfactory	

	Maintenance Item	Satisfactory/ Unsatisfactory	Comments
16.	No evidence of erosion	☐ Satisfactory ☐ Unsatisfactory	
17.	No evidence of blockages	☐ Satisfactory ☐ Unsatisfactory	
Integrity of Filter Bed			
18.	Filter bed has not been blocked or filled inappropriately	☐ Satisfactory ☐ Unsatisfactory	
19.	Top layer of stone or mulch is in place	☐ Satisfactory ☐ Unsatisfactory	

Actions to be Taken:

Inspector's Signature: _____

Post-Construction Operation & Maintenance – Open Channels			
Project Name	North Seneca Solar Project		
Location	Towns of Junius and Waterloo, Seneca County, New York		
Site Status		**Inspector's Name**	
Date		**Time**	

	Maintenance Item	Satisfactory/ Unsatisfactory	Comments
Debris Removal			
1.	Channel clear of debris	☐ Satisfactory ☐ Unsatisfactory	
Check Dams or Energy Dissipaters (Spring, Fall and after Major Storm Events)			
2.	No evidence of bypass of check dams or energy dissipaters	☐ Satisfactory ☐ Unsatisfactory	
3.	No erosion at downstream end	☐ Satisfactory ☐ Unsatisfactory	
Vegetation (Spring and Fall)			
4.	Mowed as necessary	☐ Satisfactory ☐ Unsatisfactory	
5.	All areas have suitable vegetative cover/No evidence of erosion	☐ Satisfactory ☐ Unsatisfactory	
6.	Fertilized per specification	☐ Satisfactory ☐ Unsatisfactory	
Dewatering (Spring and Fall)			
7.	Dewaters between storm/no standing water	☐ Satisfactory ☐ Unsatisfactory	
Sediment Deposition (Spring and Fall)			
8.	Clear of sediment	☐ Satisfactory ☐ Unsatisfactory	
Outlet/Overflow Spillway (Spring and Fall)			
9.	Good condition, no need for repairs	☐ Satisfactory ☐ Unsatisfactory	
10.	No evidence of erosion	☐ Satisfactory ☐ Unsatisfactory	

Actions to be Taken:

_____

_____

_____

_____

Inspector's Signature: _____

Post-Construction Operation & Maintenance – Vegetated Filter Strip/Riparian Forest Buffer			
Project Name	North Seneca Solar Project		
Location	Towns of Junius and Waterloo, Seneca County, New York		
Site Status			
Date		**Inspector's Name**	

	Maintenance Item	Satisfactory/ Unsatisfactory	Comments
Debris Removal			
1.	Channel clear of debris	☐ Satisfactory ☐ Unsatisfactory	
Level Spreader (Spring, Fall and After Major Storm Events)			
2.	No evidence of bypass of level spreader	☐ Satisfactory ☐ Unsatisfactory	
3.	No erosion on level outlet	☐ Satisfactory ☐ Unsatisfactory	
Vegetation (Spring and Fall)			
4.	Mowed as necessary to encourage dense growth	☐ Satisfactory ☐ Unsatisfactory	
5.	All areas have suitable vegetative cover (minimum 85%)/No evidence of erosion or scour	☐ Satisfactory ☐ Unsatisfactory	
6.	Fertilized per specification	☐ Satisfactory ☐ Unsatisfactory	
7.	No unwanted vegetation (avoid use of pesticides)		
Ponding (Spring and Fall)			
8.	No evidence of excessive ponding/low spots	☐ Satisfactory ☐ Unsatisfactory	
Sediment Deposition (Spring and Fall)			
9.	Clear of sediment	☐ Satisfactory ☐ Unsatisfactory	

Actions to be Taken:

_____

_____

_____

_____

Inspector's Signature: _____

APPENDIX H

Stormwater Management Memorandum

Stormwater Management Memorandum

To:	North Seneca Solar Project, LLC Camille Kaynor – Development Manager
From:	Zachary Rhoda, EIT
Date:	October 30, 2024
Reference:	SWPPP Appendix H - Stormwater Management Memorandum North Seneca Solar Project
EDR Project No.	22059

Memo Contents:

- Project Introduction
- Methodology
- Pre-Construction Site Conditions
- Post-Construction Site Conditions and Stormwater Management
- Attachments
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Project Introduction:

This memo describes the post-construction stormwater management for the North Seneca Solar project. The project is located various leased parcels within the Towns of Junius and Waterloo, Seneca County, New York.

Methodology:

This Project will include the construction of solar panels, permanent gravel access roads, and an electrical substation that will increase impervious cover in various watersheds within the project area. The solar panels for the project are proposed to be constructed on a rack system above the ground, with vegetation beneath. Based on the guidance memorandum provided by NYSDEC on April 5, 2018 (included in Appendix I), the solar panel areas are considered pervious, and post-construction stormwater management will only be required for the traditional impervious areas including the access roads and the electrical substation.

Due to the preliminary nature of this SWPPP, and the limited amount of impervious surfaces proposed across the project area, a stormwater analysis of the pre-construction and post-construction peak discharge rates has not been completed for the access roads and solar panel array areas. Past project experience and modeling has shown that the changes in land use for solar power generation, specifically relating to the solar array areas and access roads, do not alter the existing hydrology in the proposed conditions. The area proposed for the electrical substation proposes will be designed to store the 100-year storm by using the NYSDEC approved substation alternative cross section.

Pre-Construction Site Conditions:

The Pre-Construction condition of the project site is predominately agricultural use with some residences, ranging from hay fields to row crops, and some wooded areas. The existing topography is gently rolling, with a few areas of slopes greater than 10%. The soils across the project area vary, and a detailed soil report is included as Appendix C of the SWPPP.:

Post-Construction Site Conditions and Stormwater Management:

In the post-construction condition, the project site will be the location of a utility scale solar power generation facility, with a nameplate capacity of approximately 90MW. Gravel access roads have been designed to service the solar array areas and the electrical substation. The ground beneath the solar panels will be vegetated.

The gravel access roads have been designed to sheet flow directly to vegetated filter strips where practical. In these areas, the runoff from the gravel access road is considered treated in accordance with the NYDEC Stormwater Management Design Manual. In areas where vegetated filter strips are not feasible, either due to slopes or space constraints, bioretention areas are proposed to capture and treat the WQv of the contributing area. Sizing calculations for the bioretention areas can be found in attachment 1.

There are 16 bioretention areas that provided WQv and RRv for the site. Calculations for each bioretention are located in Attachment 1.

The project's electrical substation is located in the northwest portion of the project and contains a gravel access road and a gravel substation area. Runoff from the access road is directed to a vegetated filter strip to provide the required WQv. The gravel substation area has been designed using the NYSDEC approved substation alternative cross section. The alternative cross section contains a reservoir course of washed stone that will be sized to store the 100-year design storm event within the stone voids. Underdrains located at the base of the reservoir course direct the water to a level spreader and vegetated filter strip to provide the required water quality treatment. Prior to construction, infiltration tests will be conducted to determine if the stormwater water quality and quantity requirements can be met solely through infiltration. If infiltration rates greater than 0.5 inches per hour are observed, the underdrains may be eliminated to promote infiltration and groundwater recharge.

Attachment 1

Stormwater Practice Assessments & Sizing Calculations

EDR Project No.: 22059 **Project Name:** North Seneca Solar Project **Date:** 10/28/2024

Runoff Reduction Volume P (90% Rainfall) = 1.0 Inches

RR_v *Goal - reduction of the total WQv by application of green infrastructure techniques and SMPs to replicate pre-construction hydrology.*

Minimum RRv *The minimum WQv that must be reduced.*

Minimum RRv = [(P)(Rv*)(Aic)(S)]/12

Where:

P = 90% Rainfall Event Number

Rv* = 0.05 + 0.009(I), where I is 100% impervious

Aic = Total area of new impervious cover

S = HSG Specific Reduction Factor, weighed to reflect watershed characteristics

HSG	S Factor
A	0.55
B	0.40
C	0.30
D	0.20

Post-Construction Watershed or Subwatershed	Hydrologic Soil Group				Specific Reduction Factor (S)	Post-Const. Change in Impervious Area (Aic)	Impervious Area Reduction Method	Impervious Area Reduction	Net Additional Imperious Area	Ai	RRv	RRv
	% of A	% of B	% of C	% of D		(acres)		(acres)			(ac-ft)	(cu-ft)
BIORETENTION AREA 1.1	100.0%	0.0%	0.0%	0.0%	0.55	0.2			0.2	0.099	0.01	341
BIORETENTION AREA 1.2	70.0%	0.0%	30.0%	0.0%	0.48	0.2			0.2	0.071	0.01	246
BIORETENTION AREA 1.3	40.0%	0.0%	60.0%	0.0%	0.40	0.4			0.4	0.164	0.01	566
BIORETENTION AREA 1.4	0.0%	0.0%	100.0%	0.0%	0.30	0.3			0.3	0.081	0.01	279
BIORETENTION AREA 1.5	100.0%	0.0%	0.0%	0.0%	0.55	0.3			0.3	0.182	0.01	626
BIORETENTION AREA 1.6	70.0%	0.0%	0.0%	30.0%	0.45	0.5			0.5	0.227	0.02	783
BIORETENTION AREA 2.1	0.0%	0.0%	0.0%	100.0%	0.20	0.3			0.3	0.058	0.00	200
BIORETENTION AREA 2.2	0.0%	0.0%	0.0%	100.0%	0.20	1.0			1.0	0.2	0.02	690
BIORETENTION AREA 2.3	0.0%	0.0%	20.0%	80.0%	0.22	0.2			0.2	0.037	0.00	129
BIORETENTION AREA 2.4	0.0%	20.0%	0.0%	80.0%	0.24	0.3			0.3	0.077	0.01	265
BIORETENTION AREA 2.5	70.0%	30.0%	0.0%	0.0%	0.51	0.2			0.2	0.091	0.01	313
BIORETENTION AREA 3.1	80.0%	0.0%	0.0%	20.0%	0.48	0.3			0.3	0.125	0.01	430
BIORETENTION AREA 3.2	40.0%	0.0%	0.0%	60.0%	0.34	0.4			0.4	0.136	0.01	469
BIORETENTION AREA 3.3	0.0%	100.0%	0.0%	0.0%	0.40	0.1			0.1	0.028	0.00	97
BIORETENTION AREA 3.4	100.0%	0.0%	0.0%	0.0%	0.55	0.3			0.3	0.149	0.01	512
BIORETENTION AREA 3.5	0.0%	40.0%	0.0%	60.0%	0.28	0.1			0.1	0.02	0.00	68
										Total	*0.14*	*5,946*

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Water Quality Volume P (90% Rainfall) = 1.0 Inches

WQ_v *Capture & treat 100% of the 90% rainfall event stormwater runoff volume.*

WQv = [(P)(Rv)(A)]/12

Where:
P = 90% Rainfall Event Number
Rv = 0.05 + 0.009(I), where I is percent impervious cover
A = site area in acres

Post-Construction Watershed or Subwatershed	Area (acres)	Total Post-construction Impervious Area (acres)	I (%)	Rv	WQv (ac-ft)	WQv (cu-ft)
BIORETENTION AREA 1.1	0.3	0.2	**52%**	0.52	0.01	650
BIORETENTION AREA 1.2	0.8	0.2	**19%**	0.22	0.01	634
BIORETENTION AREA 1.3	3.5	0.4	**12%**	0.16	0.05	1,971
BIORETENTION AREA 1.4	1.6	0.3	**16%**	0.20	0.03	1,180
BIORETENTION AREA 1.5	3.4	0.3	**10%**	0.14	0.04	1,692
BIORETENTION AREA 1.6	3.6	0.5	**14%**	0.18	0.05	2,314
BIORETENTION AREA 2.1	2.6	0.3	**11%**	0.15	0.03	1,425
BIORETENTION AREA 2.2	15.9	1.0	**6%**	0.11	0.14	6,149
BIORETENTION AREA 2.3	0.3	0.2	**53%**	0.53	0.01	613
BIORETENTION AREA 2.4	0.6	0.3	**50%**	0.50	0.03	1,162
BIORETENTION AREA 2.5	0.5	0.2	**36%**	0.37	0.02	679
BIORETENTION AREA 3.1	0.9	0.3	**30%**	0.32	0.02	1,009
BIORETENTION AREA 3.2	4.5	0.4	**9%**	0.13	0.05	2,131
BIORETENTION AREA 3.3	0.4	0.1	**19%**	0.22	0.01	297
BIORETENTION AREA 3.4	2.2	0.3	**13%**	0.16	0.03	1,272
BIORETENTION AREA 3.5	0.2	0.1	**41%**	0.42	0.01	260
				Total	*0.54*	*23,438*

EDR Project No.: 22059 **Project Name:** North Seneca Solar Project
Date: 10/28/2024

Bioretention Area 1.1			
Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]			
RRv required =	341	cu-ft	
WQv required=	650	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	542	sf	minimum required area
	597	sf	Design Bioretention Area

Bioretention Area 1.2			
Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]			
RRv required =	246	cu-ft	
WQv required=	634	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	528	sf	minimum required area
	547	sf	Design Bioretention Area

Bioretention Area 1.3			
Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]			
RRv required =	566	cu-ft	
WQv required=	1,971	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	1,643	sf	minimum required area
	1,646	sf	Design Bioretention Area

Bioretention Area 1.4

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	279	cu-ft	
WQv required=	1,180	cu-ft	
df =	1.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	885	sf	minimum required area
	1,029	sf	Design Bioretention Area

Bioretention Area 1.5

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	626	cu-ft	
WQv required=	1,692	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	1,410	sf	minimum required area
	1,650	sf	Design Bioretention Area

Bioretention Area 1.6

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	783	cu-ft	
WQv required=	2,314	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	1,928	sf	minimum required area
	2,035	sf	Design Bioretention Area

Bioretention Area 2.1

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	200	cu-ft	
WQv required=	1,425	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	1,187	sf	minimum required area
	1,229	sf	Design Bioretention Area

Bioretention Area 2.2

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	690	cu-ft	
WQv required=	6,149	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	5,124	sf	minimum required area
	5,250	sf	Design Bioretention Area

Bioretention Area 2.3

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	129	cu-ft	
WQv required=	613	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	511	sf	minimum required area
	579	sf	Design Bioretention Area

Bioretention Area 2.4

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	265	cu-ft	
WQv required=	1,162	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	969	sf	minimum required area
	1,028	sf	Design Bioretention Area

Bioretention Area 2.5

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	313	cu-ft	
WQv required=	679	cu-ft	
df =	1.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	509	sf	minimum required area
	528	sf	Design Bioretention Area

Bioretention Area 3.1

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	430	cu-ft	
WQv required=	1,009	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	841	sf	minimum required area
	879	sf	Design Bioretention Area

Bioretention Area 3.2

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	469	cu-ft	
WQv required=	2,131	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	1,776	sf	minimum required area
	1,789	sf	Design Bioretention Area

Bioretention Area 3.3

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	97	cu-ft	
WQv required=	297	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	248	sf	minimum required area
	297	sf	Design Bioretention Area

Bioretention Area 3.4

Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]

RRv required =	512	cu-ft	
WQv required=	1,272	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	1,060	sf	minimum required area
	1,096	sf	Design Bioretention Area

Bioretention Area 3.5			
Af = [(WQv required)*(df)] / [(k)(hf+df)(tf)]			
RRv required =	68	cu-ft	
WQv required=	260	cu-ft	
df =	2.5	ft	filter bed depth
k =	0.5	ft/day	per manual
hf =	0.5	ft	average height of water above filter bed
tf =	2	days	design filter bed drain time
Af =	216	sf	minimum required area
	292	sf	Design Bioretention Area

APPENDIX I

NYSDEC SPDES General Permit for Stormwater Discharge from Construction Activity, GP-0-20-001
&
NYSDEC Solar Panel Installation Guidance Memo

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature

Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System ("NPDES")* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;

2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants* to *surface waters of the State.*

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* ("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.

a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:

   (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s;

   (ii) Control stormwater *discharge*s, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;

   (iii) *Minimize* the amount of soil exposed during *construction activity*;

   (iv) *Minimize* the disturbance of *steep slopes*;

   (v) *Minimize* sediment *discharge*s from the site;

   (vi) Provide and maintain *natural buffer*s around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharge*s, unless *infeasible*;

   (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;

   (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

   (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.

b. **Soil Stabilization**. In areas where soil disturbance activity has temporarily or permanently ceased, the application of 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. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures 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. See Appendix A for definition of *Temporarily Ceased*.

c. **Dewatering**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:

(i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

(ii) *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and

(iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Prohibited *Discharge*s.** The following *discharge*s are prohibited:

(i) Wastewater from washout of concrete;

(ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

(iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;

(iv) Soaps or solvents used in vehicle and equipment washing; and

(v) Toxic or hazardous substances from a spill or other release.

f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-construction Stormwater Management Practice Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("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.

2. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

(i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQv") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible.

In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
(2) The site discharges directly to tidal waters, or fifth order or larger streams.

(iv) *Overbank* Flood Control Criteria ("Qp"): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
(1) the site discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) Extreme Flood Control Criteria ("Qf"): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
(1) the site discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watershed

(i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
(2) The site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

(i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.

(1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or

(2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or

(3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or

(4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

(ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iii) *Overbank* Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharge*s; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharge*s from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.

4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharge*s after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharge*s that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;

3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;

4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;

6. *Construction activities* for residential, commercial and institutional projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

7. *Construction activities* for linear transportation projects and linear utility projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which are undertaken on land with no existing *impervious cover*; and

   c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:

   a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building 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 NYS Office of Parks, Recreation and Historic Preservation (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, or

   b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
      (i) 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
      (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
      (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
      (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or

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

(i) No Affect
(ii) No Adverse Affect
(iii) Executed Memorandum of Agreement, or

d. Documentation that:

(i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharge*s from *construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.

2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the “MS4 SWPPP Acceptance” form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.

3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (http://www.dec.ny.gov/). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

   NOTICE OF INTENT
   NYS DEC, Bureau of Water Permits
   625 Broadway, 4th Floor
   Albany, New York 12233-3505

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.

2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:

   a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (http://www.dec.ny.gov/) for more information,

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

c. the final SWPPP has been prepared, and

d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.

3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

   a. For *construction activities* that are <u>not</u> subject to the requirements of a *regulated, traditional land use control MS4*:

      (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or

      (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has <u>not</u> been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;

      (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed "*MS4* SWPPP Acceptance" form, or

(ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed "MS4 SWPPP Acceptance" form.

4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that 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 the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

use control MS4, the *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 in order to be authorized to disturb greater than five (5) acres of soil at any one time:

a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures 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. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.

e. The *owner or operator* shall include the requirements above in their SWPPP.

4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..

5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of *a construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

   An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4,* the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.

3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.

4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:

    a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

b. 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*;

c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* the Department or other regulatory authority; and

d. to document the final construction conditions.

5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4. of this permit.

6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. 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.

   The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

   "I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharge*s from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

    a. Background information about the scope of the project, including the location, type and size of project

b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge*(s);

c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);

d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;

e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;

f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;

g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;

k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and

l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

   Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, 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.

   The post-construction stormwater management practice component of the SWPPP shall include the following:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;

c. A Stormwater Modeling and Analysis Report that includes:
   (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;

   (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;

   (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;

   (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;

   (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and

   (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;

d. Soil testing results and locations (test pits, borings);

e. Infiltration test results, when required; and

f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria,* Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators* of *construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.

2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.

3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* 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.

C. Qualified Inspector Inspection Requirements

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- New York State Erosion and Sediment Control Certificate Program holder
- Registered Landscape Architect, 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].

1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:

   a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located

in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and

d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:

a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.

b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* 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. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 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. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.

e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization,* all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.

4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

b. Name and title of person(s) performing inspection;

c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;

f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;

g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);

k. Identification and status of all corrective actions that were required by previous inspection; and

l. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. 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.

5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit 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 in a reasonable time frame.

6. All inspection reports shall be signed by the *qualified inspector.* Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.

2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

   a. 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;

b. 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;

c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.

d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.

3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.

4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the "MS4 Acceptance" statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) required in Part V.A.3. of this permit.

5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

a. 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,

b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),

c. 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,

d. 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.

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit , or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

    a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

(ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) the chief executive officer of the agency, or

(ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.

3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.

4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4,* or by a duly authorized representative of that person.

   It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge*(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the owner’s or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.

4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
Cpv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DOW – Division of Water
EAF – Environmental Assessment Form
ECL - Environmental Conservation Law
EPA – U. S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review
SEQRA - State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property –means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both "sewage" and "stormwater".

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for "*Construction Activity(ies)*" also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for "*Commence (Commencement of) Construction Activities"* and "*Larger Common Plan of Development or Sale" also.*

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a *construction site* by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

Embankment –means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department's rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term “plan” in “larger common plan of development or sale” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Minimize – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State*;*
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a *combined sewer*; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Buffer –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

Performance Criteria – means the design criteria listed under the "Required Elements" sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a 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 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 that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect 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 individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Steep Slope – means land area designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%) , or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Streambank – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction site*; describes and shows the stormwater controls that will be used to control the pollutants (i.e. erosion and sediment controls; for many projects, includes post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint source*s, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.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.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single family home not located in one of the watersheds listed in Appendix C or not *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.

The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover
- Cross-country ski trails and walking/hiking trails
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover,* and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

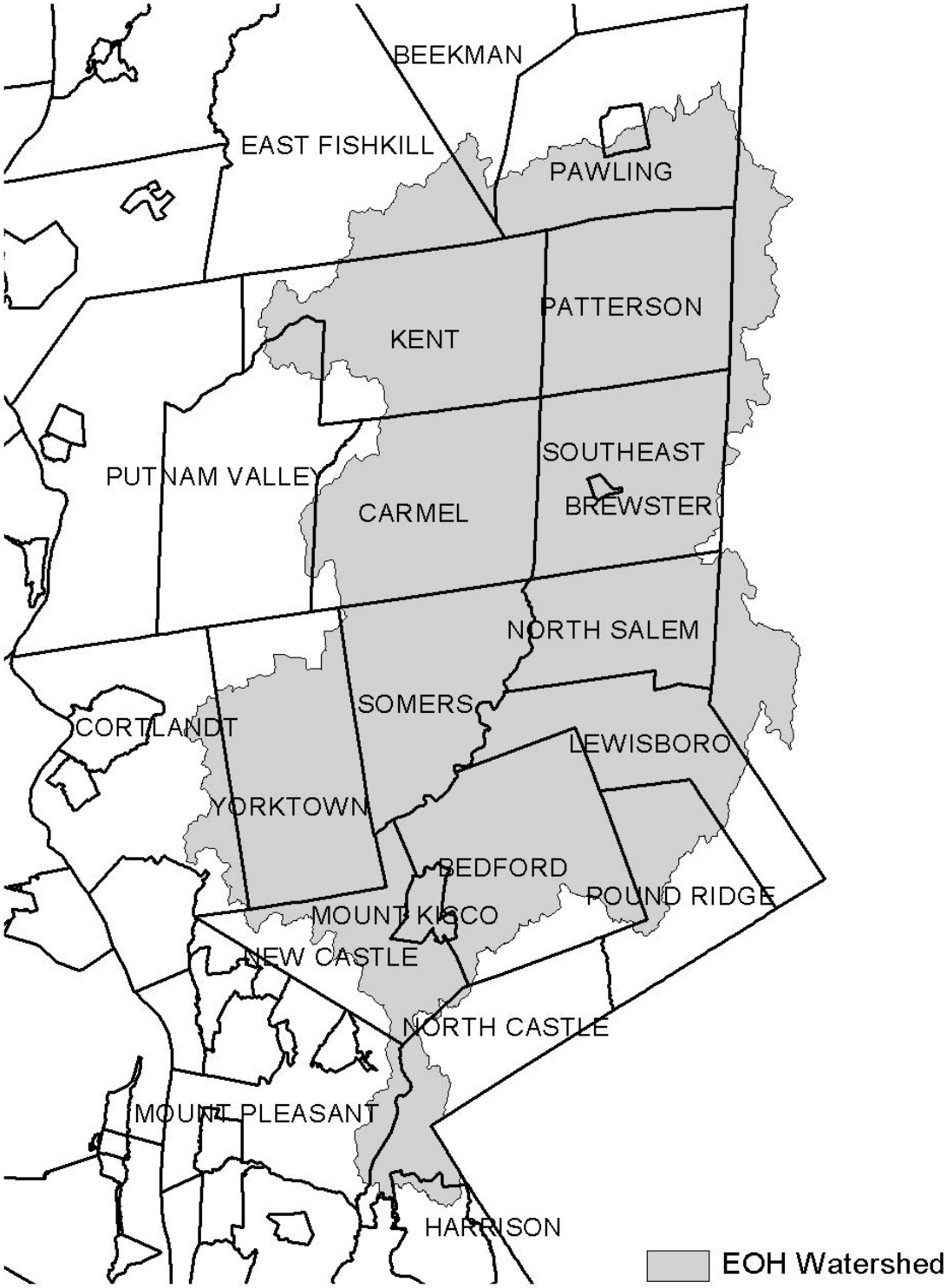


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

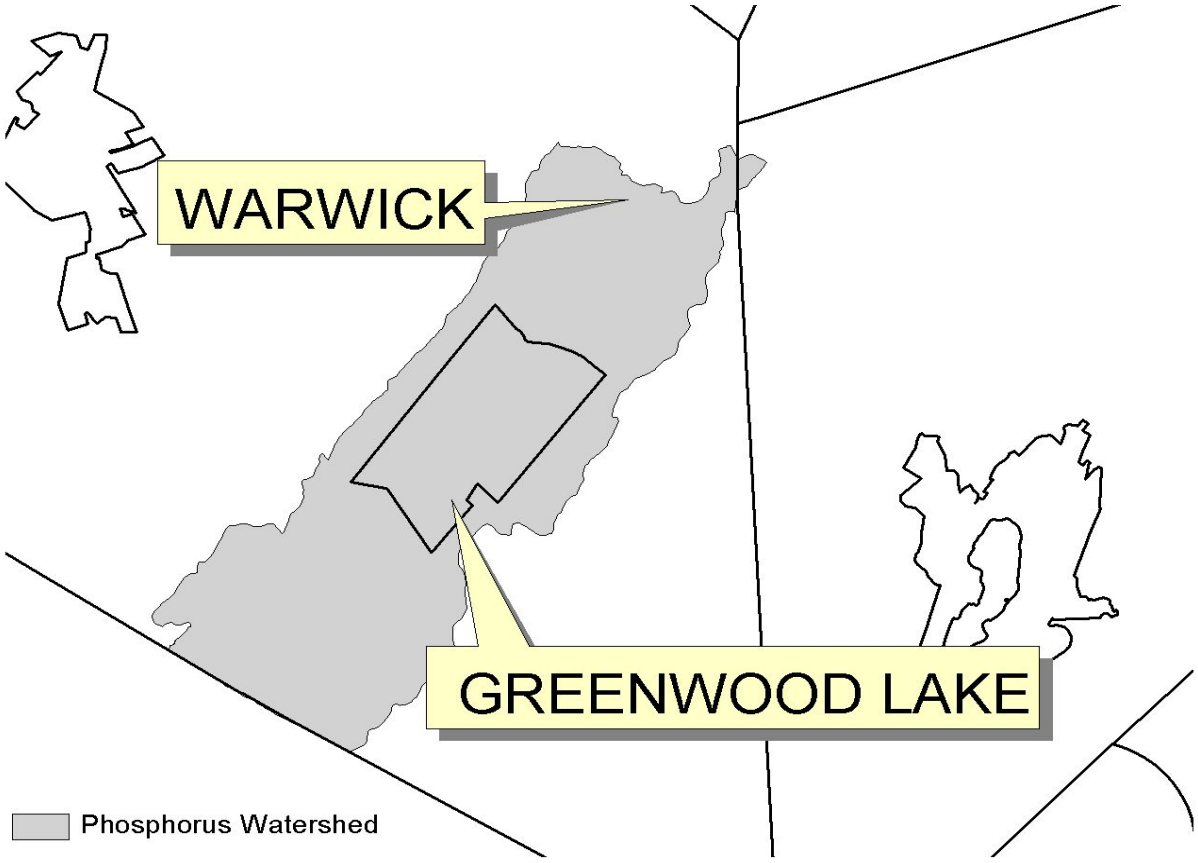


Figure 4 - Oscawana Lake Watershed

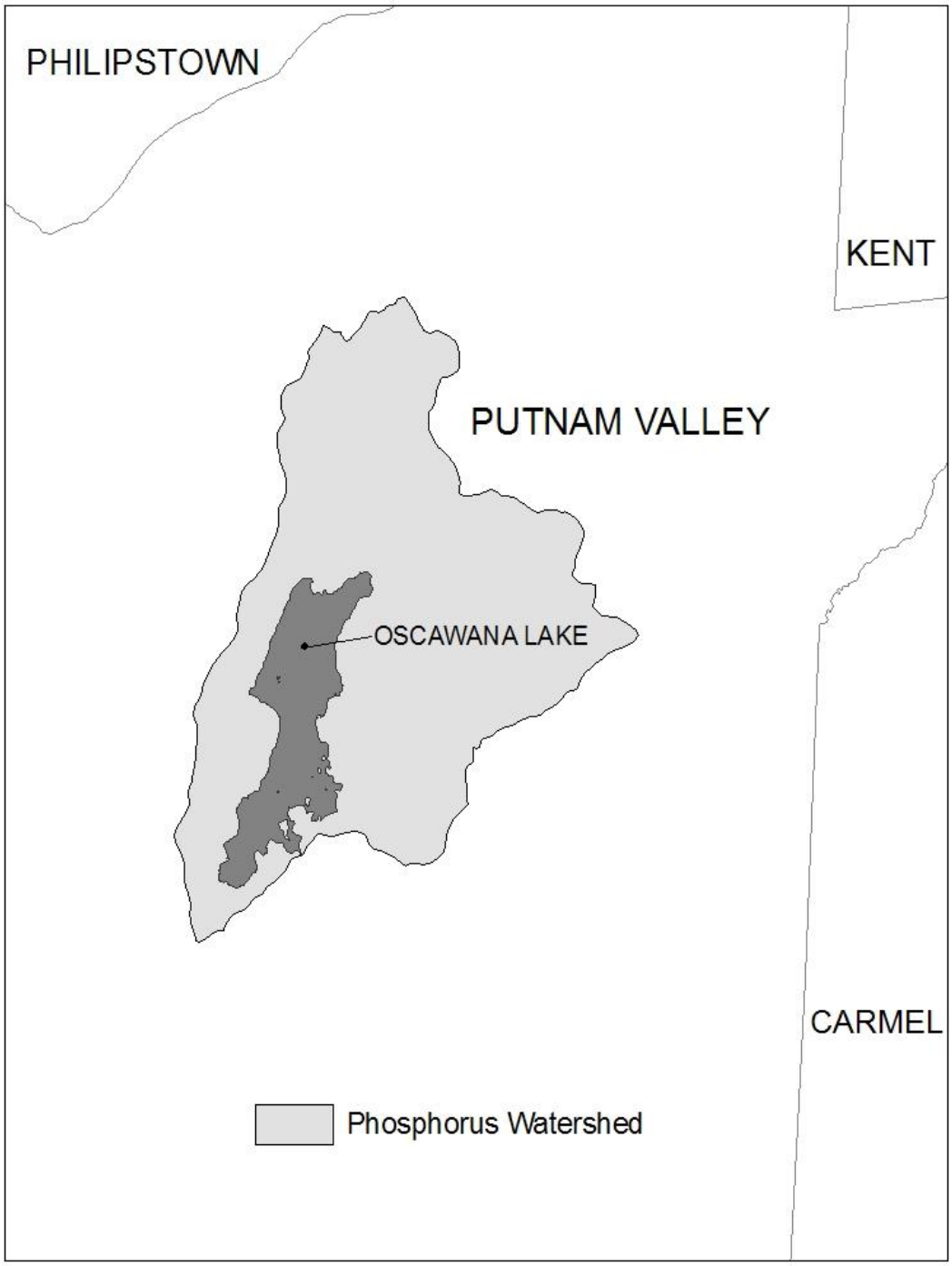
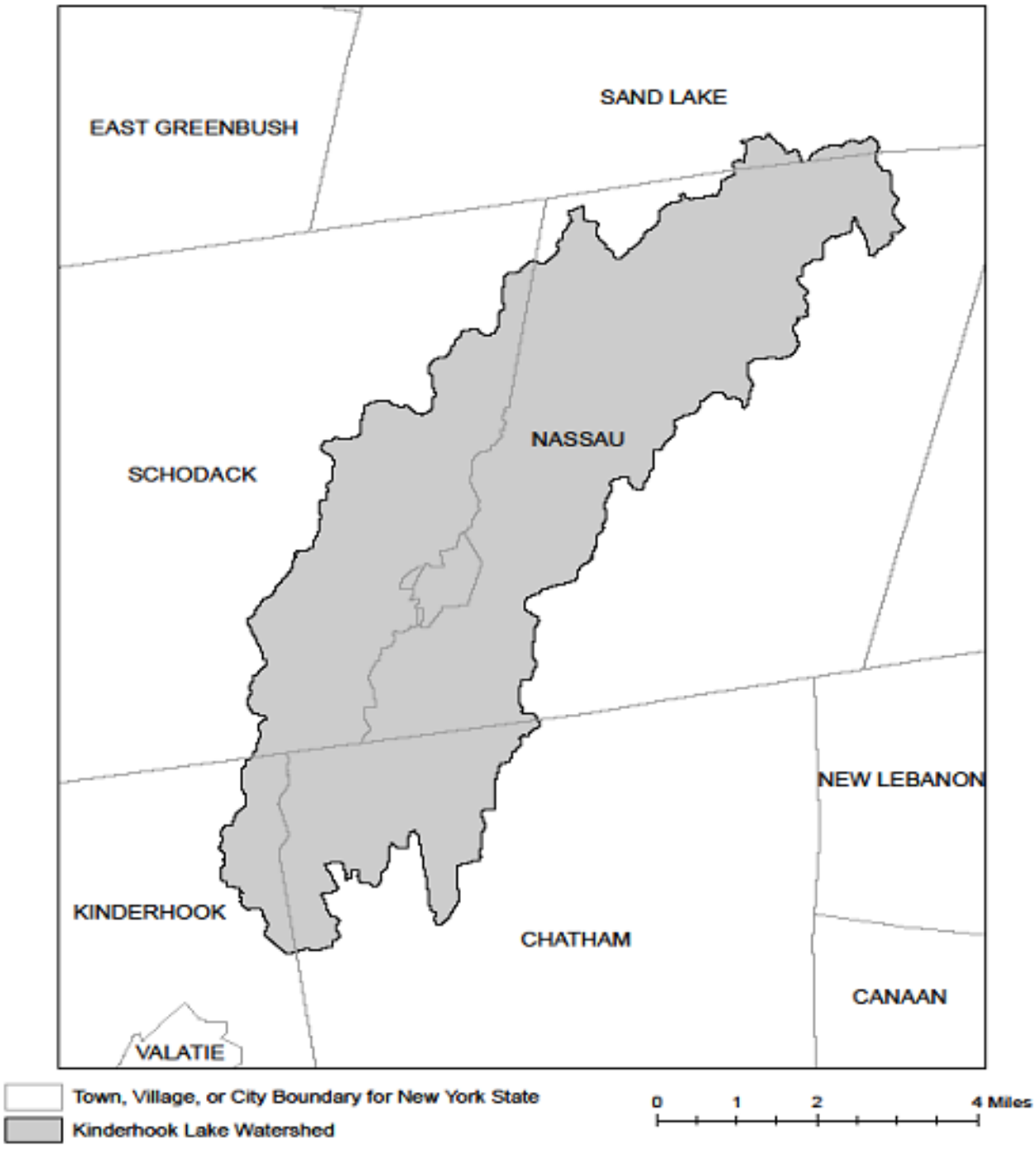


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

APPENDIX F – List of NYS DEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	100 Hillside Avenue, Suite 1W White Plains, NY 10603 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505
P: (518) 402-8111 | F: (518) 402-9029
www.dec.ny.gov

MEMORANDUM

TO: Regional Water Engineers

FROM: Robert Wither, Chief, South Permit Section

SUBJECT: Solar Panel Construction Stormwater Permitting/SWPPP Guidance

DATE: April 5, 2018

Issue

The Department is seeing an increase in the number of solar panel construction projects across New York State. This has resulted in an increase in the number of questions on Construction General Permit (CGP) and Stormwater Pollution Prevention Plan (SWPPP) requirements from design professionals because the current CGP (GP-0-15-002) does not include a specific reference to the SWPPP requirements for solar panel projects in Tables 1 and 2 of Appendix B. To address this issue, the Division of Water (DOW) has developed the following guidance on CGP/SWPPP requirements for the different types of solar panel projects.

Scenario 1

The DOW considers solar panel projects designed and constructed in accordance with the following criteria to be a "*Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields)*" type project as listed in Table 1, Appendix B of the CGP. Therefore, the SWPPP for this type of project will typically just need to address erosion and sediment controls.

1. Solar panels are constructed on post or rack systems and elevated off the ground surface,
2. The panels are spaced apart so that rain water can flow off the down gradient side of the panel and continue as sheet flow across the ground surface*,
3. For solar panels constructed on slopes, the individual rows of solar panels are generally installed along the contour so rain water sheet flows down slope*,
4. The ground surface below the panels consist of a well-established vegetative cover (see "Final Stabilization" definition in Appendix A of the CGP),
5. The project does not include the construction of any traditional impervious areas (i.e. buildings, substation pads, gravel access roads or parking areas, etc.),
6. Construction of the solar panels will not alter the hydrology from pre-to post development conditions (see Appendix A of the CGP, for definition of "Alter the hydrology…"). Note: The design professional shall perform the necessary site assessment/hydrology analysis to make this determination.

*Refer to Maryland's "Stormwater Design Guidance- Solar Panel Installations" attached for guidance on panel installation.
**See notes below for additional criteria.

Scenario 2

If the design and construction of the solar panels meets all the criteria above, except for item 6, the project will fall under the "*All other construction activities that include the construction or reconstruction of impervious area or alter the hydrology from pre-to post development conditions, and are not listed in Table 1*" project type as listed in Table 2, Appendix B of the CGP. Therefore, the SWPPP for this type of project must address post-construction stormwater practices designed in accordance with the sizing criteria in Chapter 4 of the NYS Stormwater Management Design Manual, dated January 2015 (Note: Chapter 10 for projects in NYC EOH Watershed). The Water Quality Volume (WQv)/Runoff Reduction Volume (RRv) sizing criteria can be addressed by designing and constructing the solar panels in accordance with the criteria in items 1 – 4 above, however, the quantity control sizing criteria (Cpv, Qp and Qf) from Chapter 4 (or 10) of the Design Manual must still be addressed, unless one of the waiver criteria from Chapter 4 can be applied. **See notes below for additional criteria.

**** Notes**

- Item 1: For solar panel projects where the panels are mounted directly to the ground (i.e. no space below panel to allow for infiltration of runoff), the SWPPP must address post-construction stormwater management controls designed in accordance with the sizing criteria in Chapter 4 of the NYS Stormwater Management Design Manual, dated January 2015 (Note: Chapter 10 for projects in NYC EOH Watershed).

- Item 5: For solar panel projects that include the construction of traditional impervious areas (i.e. buildings, substation pads, gravel access roads or parking areas, etc.), the SWPPP must address post-construction stormwater management controls for those areas of the project. This applies to both Scenario 1 and 2 above.

cc: Carol Lamb-Lafay, BWP
Dave Gasper, BWP

APPENDIX J

NYSDEC Notice of Termination (NOT)

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)

APPENDIX K

Amendments