STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

69 kV KM ELECTRIC TRANSMISSION LINE REPLACEMENT PROJECT

Central Hudson Gas and Electric Corporation

Dutchess County

Town of Poughkeepsie, Town of Wappinger, New York

December 2021 EDR Project No. 17107

FOR MUNICIPAL REVIEW NOT FOR CONSTRUCTION



Prepared by:

Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. 217 Montgomery Street, Suite 1100 Syracuse, New York 13202 P: 315.471.0688 www.edrdpc.com

TABLE OF CONTENTS

1.	Definitions & Acronyms				
2.	Introduction and Regulatory Requirements2				
3.	Permit Coverage				
4.	SWPPP	Revision Requirements	. 3		
5.	Site Info	rmation	. 4		
5.1	Site &	Project Description	. 4		
5.2	Site Lo	ocation and Owner/Operator Contact Information	. 4		
5.3	Contra	act Documents	. 4		
6.	SWPPP	Construction Requirements	. 4		
6.1	Pre-C	onstruction Requirements	. 4		
6.2	Const	ruction Requirements	. 5		
	6.2a	Over 5 Acres of Disturbance	. 5		
	6.2b	Construction Sequence	. 5		
	6.2c	Construction Site Inspection	. 6		
	6.2d	Authorized Non-Stormwater Discharges	.7		
	6.2e	Prohibited Non-Stormwater Discharges	.7		
	6.2f	Maintaining Surface Water Quality			
_	6.2g	Chemical and Oil Management			
7.		ater Management During Construction			
7.1		on and Sediment Controls			
7.2		zation Practices			
	7.2a	Warm Weather Stabilization Practices			
7.3	7.2b Additio	Winter Stabilization Practices			

APPENDICES

- Appendix A NYSDEC Notice of Intent (NOI) & MS4 Acceptance Form
- Appendix B NYSDEC Acknowledgement of NOI Letter
- Appendix C Location Map/Soils Information
- Appendix D SHPO and E&T Documentation
- Appendix E Pre-Construction Requirements
- Appendix F Stormwater Construction Site Inspection Reports
- Appendix G NYSDEC Notice of Termination (NOT)

CONTRACT DRAWINGS (FULL SIZE DRAWINGS BOUND SEPARATELY)

Cover

Sheet 1Index & NotesSheets 2 - 6Plan and Profile DrawingsSheets 7 - 9Details

1. **DEFINITIONS & 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.

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: a Licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), or a 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 4 hours of NYSDEC endorsed training in proper erosion and sediment control within the prior 3 years).

Trained Contractor: an employee from a contracting (construction) firm that has received 4 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 2 years from the date this general permit is issued. After receiving the initial training, the trained individual shall receive 4 hours of training every 3 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 Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR), referred to as the Engineer, to provide instruction on appropriate construction management practices that will guide **Central Hudson Gas & Electric Corporation**, referred to as the 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 **THE 69KV KM ELECTRIC TRANSMISSION LINE REPLACEMENT 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.

This SWPPP has been developed in conformance with applicable provisions of Chapter 213 of the Town of Wappinger Code, Chapters 97 and 173 of the Town of Poughkeepsie Code, among others, the General Permit, and the latest version of the New York State Standards and Specifications for Erosion and Sediment Control (the Bluebook).

The SWPPP will be kept at the project site and made available for review by applicable regulatory agencies, the 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 5 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 5 years from the date that the site achieves final stabilization:

- The SWPPP including:
 - NOI
 - Municipal Separate Storm Sewer System (MS4) acceptance form
 - NOI acknowledgement letter
 - Contractor Certification(s)
 - NOT
- Stormwater Construction Site Inspection Reports
- Contract Documents including Construction Drawings and Technical Specifications
- Correspondence (from NYSDEC, town, 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. If there are any deviations proposed, then a demonstration of equivalence must be included. 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. The nature of the project is redevelopment with no increase in impervious area, therefore post-construction stormwater management is not required.

The **69 kV KM Electric Transmission Line Replacement Project** is 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 and signed MS4 SWPPP Acceptance form, or 10 business days from the date the NYSDEC receives a complete paper copy of the NOI and signed MS4 SWPPP acceptance form (Appendix A).

4. SWPPP REVISION REQUIREMENTS

The SWPPP must be kept up to date to accurately document the current and future erosion and sediment control for the site. The Owner or the Contractors shall amend this SWPPP when modifications to the design, construction, operation, 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 at the direction of the Owner and/or the Environmental Inspector (EI).

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 to revise the SWPPP Documents, implement all SWPPP revisions, and install all additional or revised stormwater management, and erosion and sediment control devices at their own cost. All SWPPP revisions will be completed within 14 days of receiving notification that revisions are necessary. Revisions shall be reviewed and accepted by the Owner and the Engineer prior to implementation. Certain corrective or emergency measures to prevent a discharge of sediment to surface waters may be implemented immediately upon the direction of the Owner and/or the El.

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 3 days. The Contractor shall review the revised SWPPP within 3 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 14 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 & PROJECT DESCRIPTION

The Owner is replacing a 69kV transmission line that runs through the Towns of Poughkeepsie and Wappinger, in Dutchess County, New York.

The soils information for this site is given in Appendix C.

Stormwater from the site discharges into Wappinger Creek through multiple tributaries eventually discharging to the Hudson River.

5.2 SITE LOCATION AND OWNER/OPERATOR CONTACT INFORMATION

Contact information for the site is as follows:

Owner/Operator: Central Hudson Gas & Electric Corp.							
Contact:	Eric Chastain, P.E.						
Address:	Environmental Coordinator						
	284 South Ave						
	Poughkeepsie, New York 12601						
Phone No.:	(845) 486-5734						
Email:	EChastain@cenhud.com						

5.3 CONTRACT DOCUMENTS

The Contract Documents include Planimetric and Profile 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 1 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 & Sediment Controls. The El will be the qualified inspector on this project. As part of the El's inspections, as required per Section 6.2c, the El will verify that at least 1 Trained Contractor has been and will be on-site daily when soil disturbance activities are being performed (see definitions in Section 1). The Trained Contractor shall inspect the site's erosion and sediment control practices daily to ensure these facilities are in effective operating condition at all times.

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 MS4 stormwater contact.

6.2a Over 5 Acres of Disturbance

To obtain approval from the MS4, the Owner is required to submit a written request to MS4 stormwater contact that contains the following information:

- A construction sequencing 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, and
 - Identification of additional water quality treatment practices to be installed.
 - An explanation of why the 5-acre disturbance limit must be exceeded.
- Acknowledgement that a qualified inspector will conduct at least 2 site inspections every 7 days. The inspections must be separated by a minimum of 2 calendar days.
- 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 7 days of the date the soil disturbance activity ceased.
- 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 MS4 Stormwater Contact in 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. Establish the limit of disturbance with construction fencing.
- 2. Installed temporary stabilized construction entrances.
- 3. Install silt fence, and any other necessary erosion and sediment control practices as needed, and at the direction of the EI and/or Owner, prior to anticipated up-gradient soil disturbances.
- 4. Project construction, including 1) minor grading along access routes and work sites, if necessary, 2) excavation of foundation holes, 3) installation of casings and anchors, 4) assembly and setting of poles, 5) transfer of conductor from old poles to new, 6) removal of old poles, 7) pulling of new conductor, and 8) clipping in the new conductor.
- 5. Scarify subsoil and decompact all compacted areas.
- 6. Rough grade any disturbed soils and apply temporary seed and mulch to exposed soils throughout all phases of construction. Install and maintain additional erosion and sediment control practices as needed.
- 7. Apply permanent seed and mulch.
- 8. When site has reached final stabilization, and after review and confirmation by the EI and/or the Owner, the Contractor shall remove temporary erosion and sediment control measures.

6.2c Construction Site Inspection

The Owner will be responsible to provide an EI, who meets the requirements of a qualified inspector, to inspect erosion and sediment control practices, disturbed areas, and all points of discharge from the construction site.

Specifically, the Environmental 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.

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 form within 7 calendar days of the inspection.

If immediate corrective actions are required to mitigate a current or potential water quality issue, the EI must notify the Owner and the appropriate Contractor immediately upon discovering the occurrence. The EI will notify the Owner and appropriate Contractor of other corrective actions that are necessary to keep the site in compliance with the General Permit and this SWPPP within 1 business day of completing the inspection. The Contractor shall begin implementing the corrective action within 1 business day of receiving notification and complete it as soon as possible, no later than 14 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 off-site.

The EI shall complete an inspection at least once every 7 calendar days. If authorization has been received to disturb greater 5 acres of soil at one time, then the EI shall complete inspections as required in Section 6.2a. 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 1 inspection every 30 calendar days. The Owner shall notify the MS4's stormwater contact in writing 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 EI shall perform a final inspection of the site to certify that:

- All disturbed areas have achieved final stabilization.
- Temporary erosion and sediment control practices have been removed.

Upon satisfactory completion of the final site inspection, the EI shall provide the certifications required to file the NOT form provided in Appendix G.

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 off-site 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*
- 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

*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 off-site in accordance with Federal, State, and local requirements.

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 1 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 on-site 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 notify the EI and the Owner who will then contact the NYSDEC Spill Hotline (1-800-457-7362) and the Town of Wappinger, as applicable. 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 on site 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 off-site.
- 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 manufacturers' recommendations and applicable regulations and/or permit conditions. Do not discharge any substances into the storm sewer.
- On-site 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 immediately to the EI and to the Owner. Depending on the magnitude and environmental receptors impacted by each spill, either a spill response contractor under contract to Central Hudson will be called to perform the spill cleanup, or the contractor who caused the release will cleanup the spill 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). Safety Data Sheets (SDS) 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, it shall be documented by the contractor. The EI shall make note of the spill and cleanup efforts in their inspection report, which shall include a description of the spill, the cause, and the corrective actions taken.

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)
- 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 were 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 EI prior to installation.

Structural erosion and sediment control practices should generally be inspected weekly by the EI 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 7 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 15th to the following April 1st:

The Contractor shall:

- 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.
- 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.
- 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.
- Edges of disturbed areas that drain to a waterbody within 100 feet will have 2 rows of silt fence, 5 feet apart, installed on the contour.
- 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.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) DECEMBER 2021

- 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.
- 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.
- 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 3 days. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper.
- 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.
- 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.
- 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 on-site.

Appendix A – NYSDEC Notice of Intent (NOI) and MS4 Acceptance Form

NOI for coverage under Stormwater General Permit for Construction Activity

version 1.31

(Submission #: HPC-Y58Y-0MECV, version 1)

Details

Submission Alias NOI for 69kV KM Electric Transmission Line Replacement

Originally Started By EDR Engineering

Submission ID HPC-Y58Y-0MECV

Submission Reason New

Status Draft

Form Input

Owner/Operator Information

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.) Central Hudson Gas & Electric Corp.

Owner/Operator Contact Person Last Name (NOT CONSULTANT) Chastain

Owner/Operator Contact Person First Name Eric

Owner/Operator Mailing Address 284 South Ave

City Poughkeepsie

State NY **Zip** 12601

Phone 845-486-5734

Email EChastain@cenhud.com

Federal Tax ID NONE PROVIDED

Project Location

Project/Site Name 69kV KM Electric Transmission Line Replacement Project

Street Address (Not P.O. Box) Multiple (linear utility project)

Side of Street South

City/Town/Village (THAT ISSUES BUILDING PERMIT) Wappinger & Poughkeepsie

State

NY

Zip 12590 & 12601

DEC Region 3

County DUTCHESS

Name of Nearest Cross Street Multiple

Distance to Nearest Cross Street (Feet) NONE PROVIDED

Project In Relation to Cross Street NONE PROVIDED

Tax Map Numbers Section-Block-Parcel NONE PROVIDED

Tax Map Numbers NONE PROVIDED

1. Coordinates

Provide the Geographic Coordinates for the project site. The two methods are: - Navigate to the project location on the map (below) and click to place a marker and obtain the XY coordinates.

- The "Find Me" button will provide the lat/long for the person filling out this form. Then pan the map to the correct location and click the map to place a marker and obtain the XY coordinates.

Navigate to your location and click on the map to get the X,Y coordinates

41.63032210000001,-73.91285779999998

Project Details

2. What is the nature of this project?

Redevelopment with no increase in impervious area

3. Select the predominant land use for both pre and post development conditions.

Pre-Development Existing Landuse

Linear Utility

Post-Development Future Land Use

Linear Utility (water/sewer/gas, etc.)

3a. If Single Family Subdivision was selected in question 3, enter the number of subdivision lots. NONE PROVIDED

4. In accordance with the larger common plan of development or sale, enter the total project site acreage, the acreage to be disturbed and the future impervious area (acreage)within the disturbed area.

*** ROUND TO THE NEAREST TENTH OF AN ACRE. ***

Total Site Area (acres) 37.5

Total Area to be Disturbed (acres) 8.3

Existing Impervious Area to be Disturbed (acres)

Future Impervious Area Within Disturbed Area (acres)

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

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

A (%) 22.5 B (%) 29.2 C (%) 6.3 D (%)

41.5

7. Is this a phased project? Yes

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

Start Date

7/1/2022

End Date

12/31/2022

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

Wappinger Creek

9a. Type of waterbody identified in question 9? Stream/Creek Off Site

Other Waterbody Type Off Site Description NONE PROVIDED

9b. If "wetland" was selected in 9A, how was the wetland identified? NONE PROVIDED

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

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001?

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? No

If No, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? NONE PROVIDED

If Yes, what is the acreage to be disturbed? NONE PROVIDED

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? Yes

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? Yes

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

Towns of Wappinger and Poughkeepsie

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

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?

19. Is this property owned by a state authority, state agency, federal government or local government?

No

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

Required SWPPP Components

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? Yes

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

If you answered No in question 22, skip question 23 and the Post-construction Criteria and Post-construction SMP Identification sections.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? NONE PROVIDED

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by: Professional Engineer (P.E.)

SWPPP Preparer Environmental Design and Research

Contact Name (Last, Space, First) Dussing, Thomas

Mailing Address 217 Montgomery St Suite 1100

City Syracuse

State NY

Zip 13202

Phone 3154710688

Email tdussing@edrdpc.com

Download SWPPP Preparer Certification Form

Please take the following steps to prepare and upload your preparer certification form:

- 1) Click on the link below to download a blank certification form
- 2) The certified SWPPP preparer should sign this form
- 3) Scan the signed form

4) Upload the scanned document

Download SWPPP Preparer Certification Form

Please upload the SWPPP Preparer Certification NONE PROVIDED Comment NONE PROVIDED

Erosion & Sediment Control Criteria

25. Has a construction sequence schedule for the planned management practices been prepared?

Yes

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

Temporary Structural

Construction Road Stabilization Dust Control Silt Fence Stabilized Construction Entrance Temporary Access Waterway Crossing

Biotechnical

None

Vegetative Measures

Mulching Protecting Vegetation Seeding Topsoiling

Permanent Structural None

Other Concrete Washout

Post-Construction Criteria

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

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project. NONE PROVIDED

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

NONE PROVIDED

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout). (Acre-feet) NONE PROVIDED

29. Post-construction SMP Identification

Use the Post-construction SMP Identification section to identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity that were used to reduce the Total WQv Required (#28).

Identify the SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use the Post-Construction SMP Identification section to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29. (acre-feet) NONE PROVIDED

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28)? NONE PROVIDED

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

32. Provide the Minimum RRv required based on HSG. [Minimum RRv Required = (P) (0.95) (Ai) / 12, Ai=(s) (Aic)] (acre-feet) NONE PROVIDED

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)? NONE PROVIDED

If Yes, go to question 33.

Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.

If No, sizing criteria has not been met; therefore, NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. SMPs

Use the Post-construction SMP Identification section to identify the Standard SMPs and, if applicable, the Alternative SMPs to be used to treat the remaining total WQv (=Total WQv Required in #28 - Total RRv Provided in #30).

Also, provide the total impervious area that contributes runoff to each practice selected.

NOTE: Use the Post-construction SMP Identification section to identify the SMPs used on Redevelopment projects.

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

NONE PROVIDED

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

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). NONE PROVIDED

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? NONE PROVIDED

If Yes, go to question 36.

If No, sizing criteria has not been met; therefore, NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

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

CPv Required (acre-feet) NONE PROVIDED

CPv Provided (acre-feet) NONE PROVIDED

36a. The need to provide channel protection has been waived because: NONE PROVIDED

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

Overbank Flood Control Criteria (Qp)

Pre-Development (CFS) NONE PROVIDED

Post-Development (CFS) NONE PROVIDED

Total Extreme Flood Control Criteria (Qf)

Pre-Development (CFS) NONE PROVIDED

Post-Development (CFS) NONE PROVIDED

37a. The need to meet the Qp and Qf criteria has been waived because: NONE PROVIDED

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? NONE PROVIDED

If Yes, Identify the entity responsible for the long term Operation and Maintenance NONE PROVIDED

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

This project is located in both the Town of Poughkeepsie and the Town of Wappinger. The total project area and disturbance includes both towns.

Post-Construction SMP Identification

Runoff Reduction (RR) Techniques, Standard Stormwater Management Practices (SMPs) and Alternative SMPs

Identify the Post-construction SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

RR Techniques (Area Reduction)

Round to the nearest tenth

Total Contributing Acres for Conservation of Natural Area (RR-1) NONE PROVIDED

Total Contributing Impervious Acres for Conservation of Natural Area (RR-1) NONE PROVIDED

Total Contributing Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2) NONE PROVIDED

Total Contributing Impervious Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2) NONE PROVIDED

Total Contributing Acres for Tree Planting/Tree Pit (RR-3) NONE PROVIDED

Total Contributing Impervious Acres for Tree Planting/Tree Pit (RR-3) NONE PROVIDED

Total Contributing Acres for Disconnection of Rooftop Runoff (RR-4) NONE PROVIDED

RR Techniques (Volume Reduction)

Total Contributing Impervious Acres for Disconnection of Rooftop Runoff (RR-4) NONE PROVIDED

Total Contributing Impervious Acres for Vegetated Swale (RR-5) NONE PROVIDED

Total Contributing Impervious Acres for Rain Garden (RR-6) NONE PROVIDED

Total Contributing Impervious Acres for Stormwater Planter (RR-7) NONE PROVIDED

Total Contributing Impervious Acres for Rain Barrel/Cistern (RR-8) NONE PROVIDED

Total Contributing Impervious Acres for Porous Pavement (RR-9) NONE PROVIDED

Total Contributing Impervious Acres for Green Roof (RR-10) NONE PROVIDED

Standard SMPs with RRv Capacity

Total Contributing Impervious Acres for Infiltration Trench (I-1) NONE PROVIDED

Total Contributing Impervious Acres for Infiltration Basin (I-2) NONE PROVIDED

Total Contributing Impervious Acres for Dry Well (I-3) NONE PROVIDED

Total Contributing Impervious Acres for Underground Infiltration System (I-4) NONE PROVIDED

Total Contributing Impervious Acres for Bioretention (F-5) NONE PROVIDED

Total Contributing Impervious Acres for Dry Swale (O-1) NONE PROVIDED

Standard SMPs

Total Contributing Impervious Acres for Micropool Extended Detention (P-1) NONE PROVIDED

Total Contributing Impervious Acres for Wet Pond (P-2) NONE PROVIDED

Total Contributing Impervious Acres for Wet Extended Detention (P-3) NONE PROVIDED

Total Contributing Impervious Acres for Multiple Pond System (P-4) NONE PROVIDED

Total Contributing Impervious Acres for Pocket Pond (P-5) NONE PROVIDED

Total Contributing Impervious Acres for Surface Sand Filter (F-1) NONE PROVIDED

Total Contributing Impervious Acres for Underground Sand Filter (F-2) NONE PROVIDED

Total Contributing Impervious Acres for Perimeter Sand Filter (F-3) NONE PROVIDED **Total Contributing Impervious Acres for Organic Filter (F-4)** NONE PROVIDED

Total Contributing Impervious Acres for Shallow Wetland (W-1) NONE PROVIDED

Total Contributing Impervious Acres for Extended Detention Wetland (W-2) NONE PROVIDED

Total Contributing Impervious Acres for Pond/Wetland System (W-3) NONE PROVIDED

Total Contributing Impervious Acres for Pocket Wetland (W-4) NONE PROVIDED

Total Contributing Impervious Acres for Wet Swale (O-2) NONE PROVIDED

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

Total Contributing Impervious Area for Hydrodynamic NONE PROVIDED

Total Contributing Impervious Area for Wet Vault NONE PROVIDED

Total Contributing Impervious Area for Media Filter NONE PROVIDED

"Other" Alternative SMP? NONE PROVIDED

Total Contributing Impervious Area for "Other" NONE PROVIDED

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

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

Manufacturer of Alternative SMP NONE PROVIDED Firefox

Name of Alternative SMP NONE PROVIDED

Other Permits

40. Identify other DEC permits, existing and new, that are required for this project/facility. Stream Bed or Bank Protection/Article 15 Freshwater Wetlands/Article 24

If SPDES Multi-Sector GP, then give permit ID NONE PROVIDED

If Other, then identify NONE PROVIDED

41. Does this project require a US Army Corps of Engineers Wetland Permit? No

If "Yes," then indicate Size of Impact, in acres, to the nearest tenth NONE PROVIDED

42. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. NONE PROVIDED

MS4 SWPPP Acceptance

43. Is this project subject to the requirements of a regulated, traditional land use control MS4? Yes - Please attach the MS4 Acceptance form below

If No, skip question 44

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

MS4 SWPPP Acceptance Form Download

Download form from the link below. Complete, sign, and upload. <u>MS4 SWPPP Acceptance Form</u>

MS4 Acceptance Form Upload NONE PROVIDED Comment NONE PROVIDED

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the certification form by clicking the link below. Complete, sign, scan, and upload the form. <u>Owner/Operator Certification Form (PDF, 45KB)</u>

Upload Owner/Operator Certification Form

NONE PROVIDED Comment NONE PROVIDED



Department of Environmental Conservation

SWPPP Preparer Certification Form

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

Project Site Information Project/Site Name

69kV KM Electric Transmission Line Replacement Project

Owner/Operator Information

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

Central Hudson Gas and Electric Corporation

Certification Statement – SWPPP Preparer

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

FJ	Dussing
MI	Last Name
	12/09/2021
	Date



Owner/Operator Certification Form

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

Project/Site Name:	69kV KM Electric Transmission Line Replacement Project							
eNOI Submission Number: HPC-Y58Y-0MECV								
eNOI Submitted by:	Owner/Operator	SWPPP Preparer	Other					

Certification Statement - Owner/Operator

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

Owner/Operator First Name

M.I. Last Name

Eric K. Chastain

Digitally signed by Eric K. Chastain Date: 2021.12.09 09:50:06 -05'00'

Signature

12/09/2021

Date

NEW YORK STATE OF OPPORTUNITYDepartment of Environmental ConservationNYS Department of Environmental Conservation Division of Water 625 Broadway, 4th Floor Albany, New York 12233-3505					
MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form					
Construction Activities Seeking Authorization Under SPDES General Permit *(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)					
I. Project Owner/Operator Information					
1. Owner/Operator Name:					
2. Contact Person:					
3. Street Address:					
4. City/State/Zip:					
II. Project Site Information					
5. Project/Site Name:					
6. Street Address:					
7. City/State/Zip:					
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information					
8. SWPPP Reviewed by:					
9. Title/Position:					
10. Date Final SWPPP Reviewed and Accepted:					
IV. Regulated MS4 Information					
11. Name of MS4:					
12. MS4 SPDES Permit Identification Number: NYR20A					
13. Contact Person:					
14. Street Address:					
15. City/State/Zip:					
16. Telephone Number:					

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

(NYS DEC - MS4 SWPPP Acceptance Form - January 2015)

Appendix B – NYSDEC Acknowledgement of NOI Letter

Appendix C – Soils Information



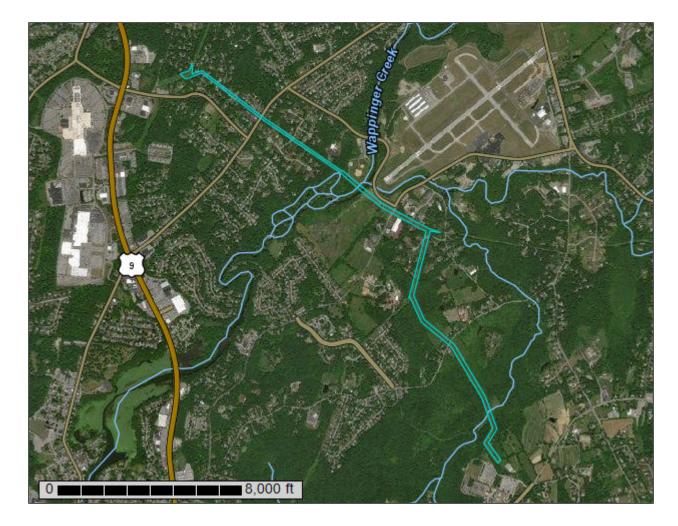
USDA United States Department of Agriculture

> 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 Dutchess County, New York



Preface

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

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

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

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

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

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

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

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

Contents

Preface	2
How Soil Surveys Are Made	
Soil Map	
Soil Map	
Legend	
Map Unit Legend	
Map Unit Descriptions	
Dutchess County, New York	
Ca—Canandaigua silt loam, neutral substratum	
CtB—Chatfield-Hollis complex, undulating, very rocky	
CtC—Chatfield-Hollis complex, rolling, very rocky	
DwB—Dutchess-Cardigan complex, undulating, rocky	
DwC—Dutchess-Cardigan complex, rolling, rocky	
GfB—Galway-Farmington complex, undulating, rocky	
GfC—Galway-Farmington complex, rolling, rocky	
Ha—Halsey mucky silt loam	
HsA—Hoosic gravelly loam, nearly level	
HsB—Hoosic gravelly loam, undulating	
HuA—Hoosic-Urban land complex, nearly level	
KrA—Knickerbocker fine sandy loam, nearly level	
MnA—Massena silt loam, 0 to 3 percent slopes	
NwB—Nassau-Cardigan complex, undulating, very rocky	
NwD—Nassau-Cardigan complex, hilly, very rocky	
Pg—Pawling silt loam	
Ud—Udorthents, smoothed	
W—Water	
References	

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.

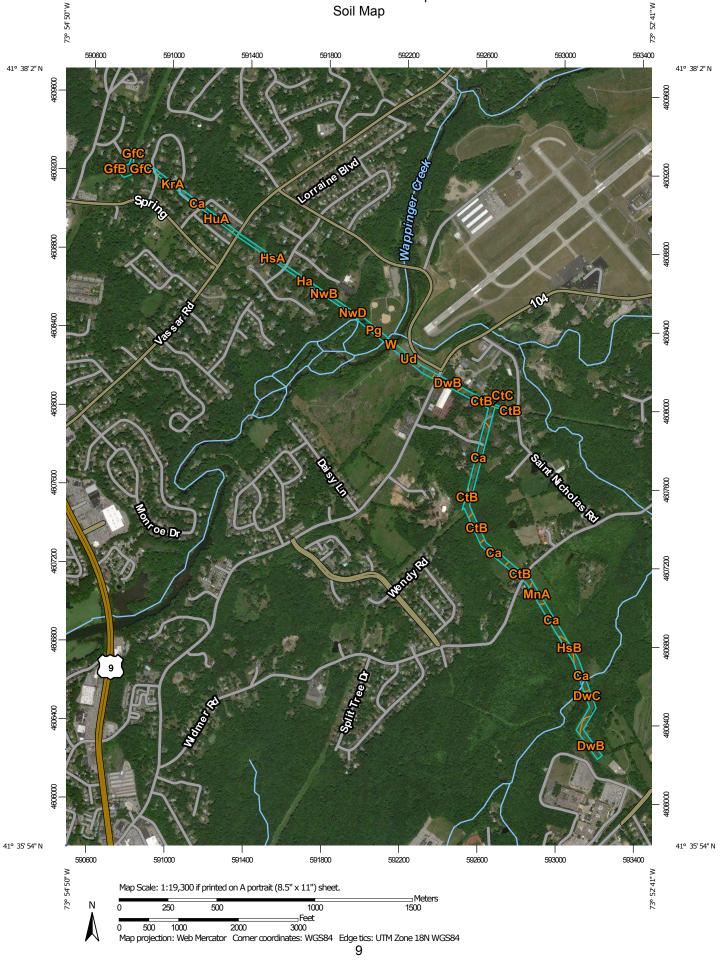
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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		MAP INFORMATION
rea of Interest (AOI) Area of Interest (AOI)	Spoil Area	The soil surveys that comprise your AOI were mapped at 1:24,000.
oils Soil Map Unit Polygons Soil Map Unit Lines	 Very Stony Spot Wet Spot 	Please rely on the bar scale on each map sheet for map measurements.
Soil Map Unit Points	△ Other ✓ Special Line Feat	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)
Blowout Borrow Pit	Water Features Streams and Can	Als Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts
Clay Spot	Transportation +++ Rails Interstate Highwa	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.
Gravel Pit Gravelly Spot	US Routes	This product is generated from the USDA-NRCS certified data a of the version date(s) listed below.
Landfill Lava Flow	Local Roads	Soil Survey Area: Dutchess County, New York Survey Area Data: Version 14, Oct 8, 2017
	Aerial Photograph	Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.
 Miscellaneous Water Perennial Water 		Date(s) aerial images were photographed: Oct 7, 2013—Feb 2 2017
 Rock Outcrop Saline Spot Sandy Spot 		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
Severely Eroded Spot		shifting of map unit boundaries may be evident.
 Sinkhole Slide or Slip Sodic Spot 		

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Са	Canandaigua silt loam, neutral substratum	7.9	26.8%
CtB	Chatfield-Hollis complex, undulating, very rocky	4.4	15.1%
CtC	Chatfield-Hollis complex, rolling, very rocky	0.4	1.2%
DwB	Dutchess-Cardigan complex, undulating, rocky	2.8	9.4%
DwC	Dutchess-Cardigan complex, rolling, rocky	1.4	4.7%
GfB	Galway-Farmington complex, undulating, rocky	1.1	3.8%
GfC	Galway-Farmington complex, rolling, rocky	0.7	2.4%
На	Halsey mucky silt loam	0.1	0.3%
HsA	Hoosic gravelly loam, nearly level	2.0	6.7%
HsB	Hoosic gravelly loam, undulating	0.8	2.8%
HuA	Hoosic-Urban land complex, nearly level	1.0	3.3%
KrA	Knickerbocker fine sandy loam, nearly level	1.0	3.5%
MnA	Massena silt loam, 0 to 3 percent slopes	0.8	2.9%
NwB	Nassau-Cardigan complex, undulating, very rocky	1.1	3.7%
NwD	Nassau-Cardigan complex, hilly, very rocky	0.4	1.4%
Pg	Pawling silt loam	1.5	5.0%
Ud	Udorthents, smoothed	1.8	6.2%
W	Water	0.2	0.7%
Totals for Area of Interest		29.4	100.0%

Map Unit Descriptions

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

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named

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

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

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

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

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

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

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

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

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

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

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

Dutchess County, New York

Ca—Canandaigua silt loam, neutral substratum

Map Unit Setting

National map unit symbol: 9rds Elevation: 100 to 1,200 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Canandaigua

Setting

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

Typical profile

H1 - 0 to 6 inches: silt loam *H2 - 6 to 40 inches:* silt loam *H3 - 40 to 72 inches:* silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4w Hydrologic Soil Group: C/D Hydric soil rating: Yes

Minor Components

Raynham

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

Sun

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

Livingston

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

Kingsbury

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

Punsit

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

CtB—Chatfield-Hollis complex, undulating, very rocky

Map Unit Setting

National map unit symbol: 9rf6 Elevation: 100 to 1,000 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Not prime farmland

Map Unit Composition

Chatfield and similar soils: 40 percent Hollis and similar soils: 30 percent Minor components: 30 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chatfield

Setting

Landform: Ridges, hills Landform position (two-dimensional): Summit Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy till derived mainly from granite, gneiss, or schist

Typical profile

H1 - 0 to 9 inches: fine sandy loam H2 - 9 to 30 inches: loam H3 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 6 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Calcium carbonate, maximum in profile: 1 percent

Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6s Hydrologic Soil Group: B Hydric soil rating: No

Description of Hollis

Setting

Landform: Ridges, hills Landform position (two-dimensional): Summit Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: A thin mantle of loamy till derived mainly from schist, granite, and gneiss

Typical profile

H1 - 0 to 3 inches: loam H2 - 3 to 15 inches: loam H3 - 15 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6s Hydrologic Soil Group: D Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 10 percent Hydric soil rating: No

Georgia

Percent of map unit: 10 percent Hydric soil rating: No

Rock outcrop

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

Massena

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

Sun

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

CtC—Chatfield-Hollis complex, rolling, very rocky

Map Unit Setting

National map unit symbol: 9rf7 Elevation: 100 to 1,000 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Not prime farmland

Map Unit Composition

Chatfield and similar soils: 40 percent Hollis and similar soils: 40 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chatfield

Setting

Landform: Hills, ridges Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy till derived mainly from granite, gneiss, or schist

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 30 inches: loam
H3 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 16 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 5.95 in/hr)

Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum in profile: 1 percent Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6s Hydrologic Soil Group: B Hydric soil rating: No

Description of Hollis

Setting

Landform: Ridges, hills Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: A thin mantle of loamy till derived mainly from schist, granite, and gneiss

Typical profile

H1 - 0 to 3 inches: loam H2 - 3 to 15 inches: loam H3 - 15 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 16 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6s Hydrologic Soil Group: D Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 10 percent Hydric soil rating: No

Rock outcrop

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

Georgia

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

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

Massena

Percent of map unit: 1 percent Hydric soil rating: No

DwB—Dutchess-Cardigan complex, undulating, rocky

Map Unit Setting

National map unit symbol: 9rfn Elevation: 50 to 1,000 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: All areas are prime farmland

Map Unit Composition

Dutchess and similar soils: 40 percent Cardigan and similar soils: 30 percent Minor components: 30 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dutchess

Setting

Landform: Ridges, hills Landform position (two-dimensional): Summit Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy till derived mainly from phyllite, slate, schist, and shale

Typical profile

H1 - 0 to 8 inches: silt loam H2 - 8 to 28 inches: silt loam H3 - 28 to 86 inches: channery silt loam

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water storage in profile: High (about 9.6 inches)

Interpretive groups

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

Description of Cardigan

Setting

Landform: Ridges, hills Landform position (two-dimensional): Summit Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy till or colluvium derived from phyllite, slate, shale, and schist

Typical profile

H1 - 0 to 8 inches: channery silt loam
H2 - 8 to 20 inches: channery loam
H3 - 20 to 30 inches: channery silt loam
H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: C Hydric soil rating: No

Minor Components

Georgia

Percent of map unit: 10 percent Hydric soil rating: No

Massena

Percent of map unit: 9 percent Hydric soil rating: No

Nassau

Percent of map unit: 9 percent Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent Hydric soil rating: Unranked Sun

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

DwC—Dutchess-Cardigan complex, rolling, rocky

Map Unit Setting

National map unit symbol: 9rfp Elevation: 50 to 1,000 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Dutchess and similar soils: 40 percent Cardigan and similar soils: 30 percent Minor components: 30 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dutchess

Setting

Landform: Ridges, hills Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy till derived mainly from phyllite, slate, schist, and shale

Typical profile

H1 - 0 to 8 inches: silt loam H2 - 8 to 28 inches: silt loam H3 - 28 to 86 inches: channery silt loam

Properties and qualities

Slope: 5 to 16 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e Hydrologic Soil Group: B Hydric soil rating: No

Description of Cardigan

Setting

Landform: Hills, ridges Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy till or colluvium derived from phyllite, slate, shale, and schist

Typical profile

H1 - 0 to 8 inches: channery silt loam
H2 - 8 to 20 inches: channery loam
H3 - 20 to 30 inches: channery silt loam
H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 16 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: C Hydric soil rating: No

Minor Components

Georgia

Percent of map unit: 10 percent *Hydric soil rating:* No

Massena

Percent of map unit: 9 percent Hydric soil rating: No

Nassau

Percent of map unit: 9 percent Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent Hydric soil rating: Unranked

Sun

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

GfB—Galway-Farmington complex, undulating, rocky

Map Unit Setting

National map unit symbol: 9rg0 Elevation: 100 to 1,000 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: All areas are prime farmland

Map Unit Composition

Galway and similar soils: 40 percent Farmington and similar soils: 30 percent Minor components: 30 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Galway

Setting

Landform: Benches, ridges, till plains Landform position (two-dimensional): Summit Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Calcareous loamy till

Typical profile

H1 - 0 to 6 inches: gravelly loam H2 - 6 to 30 inches: gravelly loam H3 - 30 to 31 inches: gravelly loam H4 - 31 to 35 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: C Hydric soil rating: No

Description of Farmington

Setting

Landform: Till plains, benches, ridges Landform position (two-dimensional): Summit Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy till or congeliturbate derived from limestone, dolomite, shale, and sandstone, and in many places mixed with wind and water deposits

Typical profile

H1 - 0 to 7 inches: loam H2 - 7 to 15 inches: very fine sandy loam H3 - 15 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3s Hydrologic Soil Group: D Hydric soil rating: No

Minor Components

Georgia

Percent of map unit: 10 percent *Hydric soil rating:* No

Stockbridge

Percent of map unit: 10 percent Hydric soil rating: No

Massena

Percent of map unit: 8 percent Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent Hydric soil rating: Unranked

Sun

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

GfC—Galway-Farmington complex, rolling, rocky

Map Unit Setting

National map unit symbol: 9rg1 Elevation: 100 to 1,000 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Farmland of statewide importance

Map Unit Composition

Galway and similar soils: 40 percent Farmington and similar soils: 30 percent Minor components: 30 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Galway

Setting

Landform: Benches, ridges, till plains Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Calcareous loamy till

Typical profile

H1 - 0 to 6 inches: gravelly loam

- H2 6 to 30 inches: gravelly loam
- H3 30 to 31 inches: gravelly loam
- H4 31 to 35 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 16 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: C Hydric soil rating: No

Description of Farmington

Setting

Landform: Ridges, till plains, benches

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till or congeliturbate derived from limestone, dolomite, shale, and sandstone, and in many places mixed with wind and water deposits

Typical profile

H1 - 0 to 7 inches: loam

H2 - 7 to 15 inches: very fine sandy loam

H3 - 15 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 5 to 16 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: D Hydric soil rating: No

Minor Components

Georgia

Percent of map unit: 10 percent Hydric soil rating: No

Stockbridge

Percent of map unit: 10 percent *Hydric soil rating:* No

Massena

Percent of map unit: 8 percent Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent Hydric soil rating: Unranked

Sun

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

Ha—Halsey mucky silt loam

Map Unit Setting

National map unit symbol: 9rg8 Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Halsey

Setting

Landform: Depressions Landform position (two-dimensional): Toeslope Landform position (three-dimensional): Tread Down-slope shape: Concave Across-slope shape: Concave Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 9 inches: mucky silt loam

H2 - 9 to 33 inches: gravelly loam

H3 - 33 to 60 inches: stratified very gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Moderate (about 7.2 inches)

Interpretive groups

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

Minor Components

Fredon

Percent of map unit: 10 percent Landform: Depressions Hydric soil rating: No

Palms

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

Carlisle

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

HsA—Hoosic gravelly loam, nearly level

Map Unit Setting

National map unit symbol: 9rgj Elevation: 100 to 1,100 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Hoosic

Setting

Landform: Terraces, deltas, outwash plains Landform position (two-dimensional): Summit Landform position (three-dimensional): Tread Down-slope shape: Convex Across-slope shape: Convex Parent material: Sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 9 inches: gravelly loam
H2 - 9 to 24 inches: very gravelly sandy loam
H3 - 24 to 70 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent Depth to restrictive feature: More than 80 inches Natural drainage class: Somewhat excessively 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: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3s Hydrologic Soil Group: A Hydric soil rating: No

Minor Components

Copake

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

Haven

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

Knickerbocker

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

Fredon

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

Halsey

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

HsB—Hoosic gravelly loam, undulating

Map Unit Setting

National map unit symbol: 9rgk Elevation: 100 to 1,100 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Hoosic

Setting

Landform: Deltas, outwash plains, terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Tread Down-slope shape: Convex Across-slope shape: Convex Parent material: Sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 9 inches: gravelly loam

- H2 9 to 24 inches: very gravelly sandy loam
- H3 24 to 70 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively 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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3s Hydrologic Soil Group: A Hydric soil rating: No

Minor Components

Copake

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

Haven

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

Knickerbocker

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

Fredon

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

Halsey

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

HuA—Hoosic-Urban land complex, nearly level

Map Unit Setting

National map unit symbol: 9rgr Elevation: 100 to 1,100 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Hoosic

Setting

Landform: Deltas, outwash plains, terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Tread Down-slope shape: Convex Across-slope shape: Convex Parent material: Sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 9 inches: gravelly loam

- H2 9 to 24 inches: very gravelly sandy loam
- H3 24 to 70 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively 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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3s Hydrologic Soil Group: A Hydric soil rating: No

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8s Hydric soil rating: Unranked

Minor Components

Copake

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

Haven

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

Knickerbocker

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

Udorthents

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

Fredon

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

Halsey

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

KrA—Knickerbocker fine sandy loam, nearly level

Map Unit Setting

National map unit symbol: 9rh0 Elevation: 100 to 800 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: All areas are prime farmland

Map Unit Composition

Knickerbocker and similar soils: 85 percent *Minor components:* 15 percent

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

Description of Knickerbocker

Setting

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

Typical profile

H1 - 0 to 10 inches: fine sandy loam
H2 - 10 to 19 inches: sandy loam
H3 - 19 to 30 inches: loamy sand
H4 - 30 to 72 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2s Hydrologic Soil Group: A Hydric soil rating: No

Minor Components

Haven

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

Hoosic

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

Fredon

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

Halsey

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

MnA—Massena silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9rh9 Elevation: 100 to 1,000 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Massena

Setting

Landform: Hills, till plains, drumlinoid ridges Landform position (two-dimensional): Footslope, summit Landform position (three-dimensional): Base slope Down-slope shape: Concave Across-slope shape: Linear Parent material: Loamy till dominated by siliceous rocks with varying proportions of limestone

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 33 inches: loam

H3 - 33 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat 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 12 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3w Hydrologic Soil Group: C/D Hydric soil rating: No

Minor Components

Sun

Percent of map unit: 10 percent Landform: Depressions Hydric soil rating: Yes

Georgia

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

Punsit

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

NwB—Nassau-Cardigan complex, undulating, very rocky

Map Unit Setting

National map unit symbol: 9rhc Elevation: 600 to 1,800 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Not prime farmland

Map Unit Composition

Nassau and similar soils: 40 percent Cardigan and similar soils: 40 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nassau

Setting

Landform: Benches, ridges, till plains Landform position (two-dimensional): Summit Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 5 inches: channery silt loam

H2 - 5 to 16 inches: very channery silt loam

H3 - 16 to 20 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 6 percent *Depth to restrictive feature:* 10 to 20 inches to lithic bedrock *Natural drainage class:* Somewhat excessively drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None

Available water storage in profile: Very low (about 1.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6s Hydrologic Soil Group: D Hydric soil rating: No

Description of Cardigan

Setting

Landform: Hills, ridges Landform position (two-dimensional): Summit Landform position (three-dimensional): Crest Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy till or colluvium derived from phyllite, slate, shale, and schist

Typical profile

H1 - 0 to 8 inches: channery silt loam

H2 - 8 to 20 inches: channery loam

H3 - 20 to 30 inches: channery silt loam

H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6s Hydrologic Soil Group: C Hydric soil rating: No

Minor Components

Dutchess

Percent of map unit: 10 percent *Hydric soil rating:* No

Rock outcrop

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

Massena

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

Sun

Percent of map unit: 1 percent Landform: Depressions Hydric soil rating: Yes

NwD—Nassau-Cardigan complex, hilly, very rocky

Map Unit Setting

National map unit symbol: 9rhf Elevation: 600 to 1,800 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Not prime farmland

Map Unit Composition

Nassau and similar soils: 45 percent Cardigan and similar soils: 30 percent Minor components: 25 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nassau

Setting

Landform: Benches, ridges, till plains Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Convex Across-slope shape: Convex Parent material: Channery loamy till derived mainly from local slate or shale

Typical profile

H1 - 0 to 5 inches: channery silt loam H2 - 5 to 16 inches: very channery silt loam H3 - 16 to 20 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water storage in profile: Very low (about 1.7 inches)

Interpretive groups

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

Description of Cardigan

Setting

Landform: Hills, ridges Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Convex Across-slope shape: Convex Parent material: Loamy till or colluvium derived from phyllite, slate, shale, and schist

Typical profile

H1 - 0 to 8 inches: channery silt loam

H2 - 8 to 20 inches: channery loam

H3 - 20 to 30 inches: channery silt loam

H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

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

Minor Components

Dutchess

Percent of map unit: 10 percent *Hydric soil rating:* No

Sun

Percent of map unit: 10 percent Landform: Depressions Hydric soil rating: Yes

Rock outcrop

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

Pg—Pawling silt loam

Map Unit Setting

National map unit symbol: 9rhk Elevation: 50 to 500 feet Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Pawling

Setting

Landform: Flood plains Landform position (two-dimensional): Summit Landform position (three-dimensional): Talf Down-slope shape: Concave Across-slope shape: Convex Parent material: Loamy over sandy and gravelly alluvium

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 33 inches: silt loam

H3 - 33 to 72 inches: very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

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

Minor Components

Linlithgo

Percent of map unit: 10 percent Hydric soil rating: No

Wayland

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

Wappinger

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

Ud—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9rj7 Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Udorthents, Smoothed

Typical profile

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

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6s Hydrologic Soil Group: A Hydric soil rating: No

Minor Components

Urban land

Percent of map unit: 10 percent Hydric soil rating: Unranked

Udorthents, wet substratum

Percent of map unit: 10 percent *Hydric soil rating:* No

Unnamed soils, undisturbed

Percent of map unit: 4 percent Hydric soil rating: Unranked

Rock outcrop

Percent of map unit: 1 percent *Hydric soil rating:* Unranked

W-Water

Map Unit Setting

National map unit symbol: 9rjc Mean annual precipitation: 41 to 47 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 115 to 195 days Farmland classification: Not prime farmland

Map Unit Composition

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

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/ nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2 053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ home/?cid=nrcs142p2 053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/ detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/ nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/? cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Appendix D – SHPO and E&T Documentation



Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO Governor ROSE HARVEY Commissioner

March 01, 2018

Mr. Jordon Loucks Project Archaeologist Environmental Design and Research 217 Montgomery St 1000 Syracuse, NY 13202

Re: PSC

KM Transmission Line Rebuild Project Towns of Wappinger and Poughkeepsie, Dutchess County, NY 17PR07942

Dear Mr. Loucks:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the New York State Office of Parks, Recreation and Historic Preservation's opinion that your project will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places.

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

Sincerely,

Michael F. Lynch, P.E., AIA Director, Division for Historic Preservation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program 625 Broadway, Fifth Floor, Albany, NY 12233-4757 P: (518) 402-8935 | F: (518) 402-8925 www.dec.ny.gov

November 3, 2017

Robert Wojcikiewicz EDR 41 State Street, Suite 401 Albany, NY 12207

Re: 69kV KM Transmission Line Rebuild County: Dutchess Town/City: Poughkeepsie, Wappinger

Dear Mr. Wojcikiewicz:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 3 Office, Division of Environmental Permits, as listed at dep.r3@dec.ny.gov, (845) 256-3054.

Sincerely,

andres Chaloux

Andrea Chaloux Environmental Review Specialist New York Natural Heritage Program



Department of Environmental Conservation

1334



The following state-listed animals have been documented in the vicinity of the project site.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for the project, please contact the Permits staff at the NYSDEC Region 3 Office at dep.r3@dec.ny.gov, (845) 256-3054. For information about potential impacts of the project on these species, and how to avoid, minimize, or mitigate any impacts, contact the Region 3 Wildlife staff at Wildlife.R3@dec.ny.gov, (845) 256-3098.

The following species has been documented near the project site, within 0.25 mile.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	FEDERAL LISTING	
Birds				
Pied-billed Grebe Breeding	Podilymbus podiceps	Threatened		1866

The following species has been documented within 1.1 miles of the project site. Individual animals may travel 2.5 miles from documented locations. The main impact of concern is the removal of potential roost trees.

COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	FEDERAL LISTING	
Mammals				
Indiana Bat	Myotis sodalis	Endangered	Endangered	11287
Maternity colony				

This report only includes records from the NY Natural Heritage database.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.

Appendix E – Pre-Construction Requirements

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

General Project Information					
Project Name	69kV KM Electric Transmission Line Replacement Project				
Project Location	Wappinger, NY Poughkeepsie, NY			Dutchess	
SPDES Permit ID No.		NYSDEC Date of Auth	norization		

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 postconstruction 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-ofways 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 postconstruction 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	69kV KM Electric Transmiss	69kV KM Electric Transmission Line Replacement Project			
Project Location	Wappinger, NY Poughkeepsie, NY		County	Dutchess	
SPDES Permit ID No.		NYSDEC Date of Auth	orization		

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.

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

Sed	iment Controls	
17.	Does the silt fence material and installation comply with the contract drawing,	□Yes □ No □ NA
	SWPPP, and specifications?	
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
Was	te and Hazardous Material Handling	
20.		□Yes □ No □ NA
	to implement the spill prevention avoidance and response approach?	
21.	Are there appropriate materials to control spills onsite?	□Yes □ No □ NA
	If yes, where?	

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:	
Address:	
Phone:	Email:
Inspector Qualifications: PE	4-hour Contractor Training Completed
	Card Received: \Box Yes \Box No
	Expiration Date:

E-2: CONSTRUCTION STABILIZATION SCHEDULE

General Project Information					
Project Name	69kV KM Electric Transmiss	69kV KM Electric Transmission Line Replacement Project			
Project Location	Wappinger, NY Poughkeepsie, NY			Dutchess	
SPDES Permit ID No.		NYSDEC Date of Auth	orization		

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.

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	69kV KM Electric Transmiss	69kV KM Electric Transmission Line Replacement Project			
Project Location	Wappinger, NY Poughkeepsie, NY		County	Dutchess	
SPDES Permit ID No.		NYSDEC Date of Auth	norization		

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

Contractor Information

Contracting I	Firm:		
Address:			
Phone (Offic	:e):	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)		
	0)		
	3)		
	4)		
	,		

Name:		Title:	
Measures Responsible for:	1)		
Name:		Title:	
Measures Responsible for:	1)		
	2)		
	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	s of Trained Contractor)
Signature:	Date:
Print Name:	Title:

Appendix F – Stormwater Construction Site Inspection Reports

50	ormwater Inspec				
General Information					
Project Name 69kV KM Electric Transmission Line Replacement Project					
SP	DES Permit I.D. No.		EDR Project	No.	17107
Da	te of Inspection	Click or tap to enter a date.	Project Location		Wappinger, NY Poughkeepsie, NY
	alified Inspector's me(s)	Choose an item.	Qualified In Title(s)	spector's	
	pector's Contact ormation	Environmental Design & D.P.C. (EDR) Choose an item.	Research,	Cell : 111. Email : Sel	
Describe construction observed during inspection.					
Ту	be of Inspection	Choose an item. inspection? Choose an ite	m. Tem	perature (F):	Choose an item.
Tyj We Soi Are	be of Inspection eather at time of this I Conditions at time e there any discharge	inspection? Choose an ite of this inspection? es at the time of inspectio	Choose an iter on? Choose an i	m. tem.	Choose an item.
Tyj We Soi Are	be of Inspection wather at time of this I Conditions at time there any discharge ible conditions of ac	inspection? Choose an ite of this inspection? es at the time of inspectio ljacent waterways:	Choose an iter	m. tem.	Choose an item.
Tyr We Soi Are Vis	be of Inspection eather at time of this I Conditions at time e there any discharge ible conditions of ac SWPPP Document	inspection? Choose an ite of this inspection? es at the time of inspectio ljacent waterways: cation Compliance (NOI) been filed with NYSDE	Choose an iter on? Choose an iter Choose an iter	m. tem. m.	Choose an item.
Tyr We Soi Are Vis	be of Inspection eather at time of this I Conditions at time there any discharge ible conditions of ac SWPPP Document Has Notice of Intent	inspection? Choose an ite of this inspection? es at the time of inspectio ljacent waterways: cation Compliance (NOI) been filed with NYSDE rm been received?	Choose an iter on? Choose an iter Choose an iter	m. tem. m.	
Tyr We Soi Are Vis	be of Inspection eather at time of this I Conditions at time there any discharge ible conditions of ad SWPPP Document Has Notice of Intent Acknowledgment for Is the SWPPP on-site (Add Location)	inspection? Choose an ite of this inspection? es at the time of inspectio ljacent waterways: cation Compliance (NOI) been filed with NYSDE rm been received?	Choose an iter on? Choose an iter Choose an iter Choose an iter	m.	Choose an item.
Tyr We Soi Are Vis 1. 2.	be of Inspection eather at time of this I Conditions at time there any discharge ible conditions of ad SWPPP Document Has Notice of Intent Acknowledgment for Is the SWPPP on-site (Add Location)	inspection? Choose an ite of this inspection? es at the time of inspectio ljacent waterways: ation Compliance (NOI) been filed with NYSDE rm been received? ? sing Plan for Disturbance > 5	Choose an iter on? Choose an iter Choose an iter Choose an iter	m.	Choose an item. Choose an item.
Tyı We Soi Are	be of Inspection eather at time of this I Conditions at time there any discharge ible conditions of ac SWPPP Document Has Notice of Intent Acknowledgment for Is the SWPPP on-site (Add Location) Is the Approved Phase Is the Project Schedu	inspection? Choose an ite of this inspection? es at the time of inspectio ljacent waterways: ation Compliance (NOI) been filed with NYSDE rm been received? ?? sing Plan for Disturbance > 5 ile being followed? ised to reflect site and control	Choose an iter on? Choose an iter Choose an iter Choose an iter Choose an iter Choose an iter	m.	Choose an item. Choose an item. N/A

	BMP/Activity	Maintained? If no, list Corrective Action	List Required Completion Date, Company, and Responsible Person
Dist	turbance		
1.	Are construction limits and important resource areas clearly flagged or fenced?	YES	
2.	Is construction activity limited to the allowed area of disturbance?	YES	
3.	Is current site disturbance less than 5 Acres?	YES	
4.	Are clearing and grubbing operations minimized to the smallest practicable area?	YES	
5.	Has clean stormwater runoff been diverted around areas to be disturbed?	N/A	
E&S	C Practices		_
6.	Were the sediment basins installed prior to any land-disturbing activity?	N/A	
7.	Are stabilized temporary construction entrances and construction staging area(s) in place?	NO	
8.	Have construction access roads been properly stabilized?	N/A	
9.	Is there evidence of sediment being tracked onto the street?	NO	
10.	Have silt fence or other perimeter sediment control barriers been installed?	N/A	
11.	Are storm drain inlets properly protected?	N/A	
12.	Are washout facilities for concrete available and clearly marked?	N/A	
13.	Are temporary and/or permanent check dams in place?	N/A	
14.	Are topsoil and excess excavated material stored in stabilized stockpiles?	N/A	

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

Qualified Inspector:	Х	Date:	Click or tap to enter a date.
----------------------	---	-------	-------------------------------

Photo 1 – View of	Photo 2 – View of
Photo 3 – View of	Photo 4 – View of
Photo 5 – View of	Photo 6 – View of

Appendix G – 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: NY	R		
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? $\hfill\square$ yes $\hfill\square$ 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:

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:

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)