STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

CEMENTON TRANSITIONAL HORIZONTAL DIRECTIONAL DRILL (HDD) PROJECT

TOWN OF CATSKILL
GREENE COUNTY, NEW YORK

PSC Case Number: 10-T-0139

IN COMPLIANCE WITH THE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION GENERAL PERMIT GP-0-20-001
FOR
STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

Prepared for:

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ACRONYMS & ABBREVIATIONS

CFR	Code of Federal Regulation
CHPE	Champlain Hudson Power Express, Inc.
CRIS	Cultural Resource Information System
DPS	New York State Department of Public Service
ECL	Environmental Conservation Law
EI	Environmental Inspector
EM&CP	Environmental Management and Construction Plan
ERM	Environmental Resource Mapper
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GP	General Permit
HDD	Horizontal Directional Drill
HDPE	High-density polyethylene
HSG	Hydrologic Soil Group
HVDC	High Voltage Direct Current
IPaC	Information for Planning and Consultation
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NYCRR	New York Code, Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
OPRHP	Office of Parks, Recreation, and Historic Preservation
Project	Cementon Transitional HDD
PVC	Polyvinyl chloride
ROW	Right-of-Way
SDS	Safety Data Sheets
SMDM	Stormwater Management Design Manual
SPCC	Spill Prevention, Control, and Countermeasure
SPDES	State Pollutant Discharge Elimination System
SSESC	Standards and Specifications for Erosion and Sediment Control
SWPPP	Storm Water Pollution Prevention Plan

TRC	TRC Environmental Corporation
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United State Fish and Wildlife Service
USGS	United States Geological Survey

1.0 Introduction

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared by TRC Environmental Corporation (TRC) for CHPE, LLC and CHPE Properties, Inc. (collectively "CHPE" and "Certificate Holders") in regard to construction activities associated with the Cementon Transitional Horizontal Directional Drill (HDD) Project (the Project) segment. The overall CHPE Project involves the construction of ±339 miles of High Voltage Direct Current (HVDC) terrestrial and submarine transmission line from the Canadian border to Queens, New York to deliver 10.4 Terawatt-hours of renewable energy annually into New York City by the end of 2025. Work associated with other segments of the CHPE Project will be permitted separately, and subject to separate SWPPPs submitted for each Segment.

The purpose of this SWPPP is to establish requirements and instructions for the management of construction-related stormwater discharges from the Project Site. Erosion and sediment controls have been designed and shall be installed and maintained to minimize the discharge of pollutants and prevent a violation of the water quality standards.

2.0 Regulatory Requirements

The Project shall comply with all applicable local, state, and federal regulations as follows.

This SWPPP has been prepared in accordance with the "New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity" General Permit GP-0-20-001, effective January 29, 2020, through January 28, 2025. The NYSDEC requires coverage under GP-0-20-001 for any "construction activities involving soil disturbances of one or more acres; including disturbances of less than one acre that are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land; excluding routine maintenance activity that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility."

The Project is classified as the installation of an underground, linear utility with no increase in impervious area. Per Table 1 of GP-0-20-001 Appendix B, the Project involves construction activities that require the preparation of a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of the permit. A copy of the General Permit GP-0-20-001 is provided in Appendix B of this SWPPP.

The Notice of Intent (NOI) will be submitted to NYSDEC, certifying that this Project complies with the technical requirements of GP-0-20-001. The Project is not located within a regulated Municipal Separate Storm Sewer System (MS4) community.

The Project received a Department of the Army Permit (Permit No. NAN-2009-01089) on April 20, 2015, last modified on April 28, 2021, as well as a New York State Public Service Commission 401 Water Quality Certification on January 18, 2013. This Project is subject to the requirements of an Environmental Management and Construction Plan (EM&CP) as developed for compliance with this Project's Article VII Certificate.

3.0 Permit Coverage Information

This SWPPP serves as the minimum requirements necessary to address soil exposure and stormwater management during construction activities. This SWPPP is a living document that may be amended for unforeseen circumstances. If unanticipated site conditions warrant changes or additions to existing practices, the Owner/Operator and the Contractor(s), in consultation with the Qualified Inspector or Project Engineer, will be required to implement those measures in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (SSESC) and amendments to the SWPPP shall be made as appropriate. The SWPPP and associated documentation must be kept current to ensure the erosion and sediment control practices are accurately documented.

In accordance with GP-0-20-001, documented site inspections will be performed to ensure the required erosion and sediment control measures have been installed properly and are in good condition. Inspections will occur for the duration of construction, until earth-disturbing construction activities have ceased, and final stabilization has been achieved.

4.0 SWPPP Amendments

The SWPPP and associated documents must be kept current at all times. Amendments to the SWPPP and associated documents, including EM&CP Plan and Profile Drawings, should be made:

- Whenever the current provisions are ineffective in minimizing impacts to the stormwater discharge from the Project Site;
- Whenever there is a change in design or construction activities and sequencing that has or could have an impact to the stormwater discharge; and
- To address deficiencies or issues identified during monitoring and inspection.

Refer to GP-0-20-001 for additional information on SWPPP amendment procedures and requirements. Amendments to the SWPPP shall be documented in Appendix I.

5.0 Project Site Information

The Project Site is located on property owned by Glens Falls Lehigh Valley Cement Company in the Town of Catskill, Greene County, New York. The Project Site is located within the NYSDEC Region 4 jurisdiction and the Cementon United States Geological Survey (USGS) 7.5 Minute Topographic Quadrangle. The Project Site location is depicted on the Study Area Map in Appendix E.

The HDD operation will install conduits to be used for future installation of submarine cable transition from the Hudson River to land cable for the overland route. The assembled conduit for this Project will span approximately 800 feet. Access to the Project Site will be provided from existing access roads, consisting of pavement and gravel, leading from Route 9W to the HDD work pad within the Glens Falls Lehigh Valley Cement Company property. Material and equipment staging and storage will remain at the Project Site are for the HDD.

The general scope of work for the Project which may result in soil disturbance includes, but is not limited to, minimal site clearing, grading, temporary construction access, conduit installation,

horizontal directional drilling (HDD), and installation of the temporary HDD work pad and erosion and sediment controls.

The Project Site is located within a 688.77-acre parcel, of which, approximately 0.79 acres will be disturbed by the Project. The existing groundcover of the Project Site is composed primarily of gravel and dirt with surrounding forested area. The site topography is relatively flat generally sloping to the east towards the Hudson River.

The Project Site is not located adjacent to notable buildings or features aside from the cement company, which is located south of the HDD bore pit. It is not expected that the HDD will have significant impacts to any of the surrounding features. The Certificate Holder will utilize the pre-established Best Management Practices (BMPs) to mitigate risks to surrounding natural resources, nearby infrastructure (including the railroad line) and existing site features.

The HDD exit in the Hudson River will be located approximately 500 feet from the western riverbank, in an area with water depths of approximately 35 feet.

The following subsections detail the soils, wetlands and waterbodies, environmental and cultural resources, floodplain, and rainfall information for the Project. Refer to the environmental resource information in Appendix E and the EM&CP Plan and Profile Drawings in Appendix F for additional Project Site land cover, environmental and cultural resource, and topographic information.

5.1 Soils Classification

Review of the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey indicated the predominant soil series mapped within the Project Site are the following:

- Covington and Madalin soils, Hydrologic Soil Group (HSG) rating D;
- Farmington gravelly silt loam, HSG rating D;
- Hudson and Vergennes soils, HSG rating C/D;
- Hudson and Vergennes silty clay loams, HSG rating C/D;
- Kingston and Rhinebeck soils, HSG Rating D;
- Medisaprists-Hydraquents, tidal marsh, HSG rating A/D;
- Riverhead loam, HSG rating A; and
- Udorthents, loamy, HSG rating A.

The Soil Conservation Service defines the HSGs as follows:

- Type A Soils: Soils having a high infiltration rate (low runoff potential).
- Type B Soils: Soils having a moderate infiltration rate.
- Type C Soils: Soils having a slow infiltration rate.
- Type D Soils: Soils having a very slow infiltration rate (high runoff potential).

For soils assigned to a dual hydrologic group, the first letter refers to drained areas and the second refers to undrained areas. In project areas of unknown soil type or areas not within agricultural land, the more conservative soil classification is typically assumed.

Refer to Appendix E for the USDA NRCS Soil Resource Report for the Project Site.

5.2 Wetlands and Waterbodies

Review of the NYSDEC ERM indicated three freshwater wetlands adjacent to the Project. The Project Site is located within the 100-foot adjacent area of the mapped wetlands. One NYSDEC Class C stream is mapped adjacent to the access road to the Project Site.

Field delineations were completed in 2021 and 2022 to identify existing waterbodies and wetlands at the Project Site. Four freshwater non-tidal wetlands (Wetland E, P, C-23, and HS-101) were located adjacent to the Project Site. Wetlands E, P, and HS-101 were identified as PEM wetlands; and Wetland C-23 was identified as a PEM/PSS wetland. These wetlands are presumably federally protected wetlands. Wetlands C-23 and HS-101 are State-mapped wetlands. No streams were identified within the Project Site during delineation efforts. Refer to the Wetland and Stream Delineation Report provided as Appendix K of the EM&CP for additional information regarding wetland and streams at the Project Site. No impacts to wetlands or waterbodies are anticipated as a result of the Project.

The Project Site ultimately discharges to the Hudson River, located east of the Project Site. The remaining wetlands and stream identified during field delineations do not receive runoff from the Project Site. The Project does not discharge to a 303(d) waterbody segment listed within Appendix E of GP-0-20-001 and is not located within a restricted watershed listed in Appendix C of GP-0-20-001, AA or AA-s waterbody, or a Sole Source Aquifer.

5.3 Floodplains

According to Federal Emergency Management Agency (FEMA), the Flood Insurance Rate Map (FIRM) Panel 36039C0443F, dated May 16, 2008, the Project Site is located primarily within Zone AE, with western portions of the Site within Zone X. FEMA defines the flood zones as follows:

- Zone X are areas determined to be outside the 0.2% annual chance floodplain.
- Zone AE are special flood hazard areas subject to inundation by the 1% (100-year flood) annual chance flood and is an area where base flood elevations have been determined.

The NYSDEC Environmental Resource Mapper (ERM) also identified the Project Site to be located adjacent to areas within a base flood elevation plus 72/75" sea-level rise. The base flood elevation for Flood Zone AE nearest to the Project Site is identified on the FIRM Panel as 9 feet above mean sea level.

5.4 Environmental Resource Information

A review of the NYSDEC ERM indicated rare plants or animals, and significant natural communities are present within the Project Site. The Project was identified as being located within the vicinity of the Hudson River Estuary tidal river Significant Natural Community. All appropriate avoidance and mitigation actions recommended by NYSDEC will be undertaken to protect this natural community. No impacts to this natural community are proposed. In addition, these resources were addressed within the Article VII and federal permitting processes.

A review of the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system identified the following threatened or endangered species which have the potential to be present at the Project Site:

- Indiana Bat (*Myotis sodalist*) – federally-listed endangered species
- Monarch Butterfly (*Danaus plexippus*) – federally-listed candidate species

Tree clearing is not proposed, therefore impacts to the Indiana Bat and it's habitat are not anticipated as a result of the Project. Consultation with the USFWS and the New York Natural Heritage Program (NYNHP) is ongoing to confirm the presence or absence of State-listed and/or federally-listed rare, threatened, or endangered species that may be present within or near the Project Site. If rare, threatened, or endangered species or their critical habitats occur the Project Site, appropriate avoidance and mitigation actions will be completed to protect the identified species.

5.5 Cultural Resource Information

A review of the NYS Office of Parks Recreation and Historic Preservation (OPRHP) Cultural Resources Information System (CRIS) database indicates that the Project Site does not contain sites that are listed on the National or State Registers of Historic Places. One building located approximately 1,000 feet from the Project is listed as not eligible for listing on the National or State Registers of Historic Places. Impacts to the historic buildings are not anticipated as a result of the Project.

The Project Site was also identified on CRIS as being located within an archaeologically sensitive area. Consultation with OPRHP was completed on October 14, 2022. The OPRHP concluded that the State Historic Preservation Office (SHPO) has no archaeological concerns for the HDD pit locations and no archaeological survey is warranted. In addition, OPRHP concluded no historic properties, including archaeological and/or historic resources, will be adversely affected by the Project.

6.0 Contract Documents

The Contractor is responsible for the implementation of this SWPPP, as well as the installation, construction, repair, replacement, inspection and maintenance of erosion and sediment control practices. Each Contractor shall sign the Contractor Certification Form provided in Appendix C prior to the commencement of construction activities.

This SWPPP and associated documentation, including but not limited to, a copy of the GP-0-20-001, NOI, NYSDEC NOI Acknowledgement Letter, Contractor Certification Form, EM&CP Plan and Profile Drawings, inspection reports, and permit eligibility forms, must be maintained in a secure location for the duration of the Project.

7.0 Personnel Contact List

The Construction Personnel Contact List for the Project is provided in Appendix C. The listed personnel are responsible for ensuring compliance with the SWPPP and associated permit conditions. The Construction Personnel Contact List shall be updated as necessary to remain current throughout construction and restoration of the Project.

Personnel responsibilities include, but are not limited to, the following:

- Implement the SWPPP;
- Oversee maintenance practices identified in the SWPPP;
- Conduct or provide for inspection and monitoring activities;
- Identify potential erosion, sedimentation, and pollutant sources during construction and ensure issues are addressed appropriately and in a timely manner;
- Identify necessary amendments to the SWPPP and ensure proper implementation; and,
- Document activities associated with the implementation of this SWPPP and supporting documents.

Refer to GP-0-20-001 for information regarding specific personnel responsibilities.

8.0 Project Construction and Sequencing

The conduits will be installed via HDD, which is a trenchless installation method used to avoid obstacles and sensitive areas or features and reduce the amount of ground surface disturbance. HDD will also prevent the disturbance of banks and shorelines of waterbodies. HDD activities are a multi-stage process as detailed below.

This section provides the Owner/Operator and the Contractor with a suggested order of construction that will minimize erosion and the transport of sediments. The individual objectives of the construction techniques described herein shall be considered an integral component of the Project design. The construction sequence is not intended to prescribe definitive construction methods and should not be interpreted as a construction specification document.

The Contractor shall follow the general principles outlined below throughout the construction phase:

- Protect and maintain existing vegetation wherever possible;
- Minimize the area of disturbance;
- To the extent possible, route unpolluted flows around disturbed areas;
- Install approved erosion and sediment control devices as early as possible;
- Minimize the time disturbed areas are left un-stabilized; and,
- Maintain erosion and sediment control devices in proper condition.

The Contractor should use the suggested construction sequence and techniques as a general guide and modify the suggested methods and procedures as required to best suit seasonal and site-specific physical constraints for the purpose of minimizing the environmental impact due to construction. All exposed soil areas that remain undisturbed for greater than seven days shall be stabilized in accordance with this SWPPP and the SSESC.
The Project is anticipated to involve three stages of work; site preparation, construction, and site restoration. Prior to the commencement of construction activities, temporary erosion and sediment control measures shall be installed per the General Permit requirements, the SSESC standards, and EM&CP Plan and Profile Drawings provided in Appendix F. The Project stages are detailed below, though some tasks may occur simultaneously or in a different order based on

contractor's means and methods. Refer to Section 4.0 of the EM&CP for specific construction activities, methods, and sequencing.

Stage 1: Project Site Preparation

- Establish access to the Project Site including the stabilized construction entrance and access road;
- Stake/flag construction limits, staging/storage areas, environmentally sensitive areas, and other associated work areas;
- Mark existing utilities and infrastructure;
- Conduct clearing and vegetation management, if necessary, and grading of work areas, as required;
- Install the erosion and sediment controls as detailed on the Erosion and Sediment Control Plans; and
- Set up offshore HDD reception area in the river and environmental protection measures such as gravity cell and conductor casings.

Stage 2: Construction

- Stage HDD drill rig and equipment;
- Complete the HDD;
  - Drill the pilot hole;
  - Expand the pilot hole by reaming; and,
  - Pull back the drill string while installing the conduit.

Stage 3: Project Site Restoration

- Remove and dispose of Project related waste material at an approved disposal facility;
- Prepare soils as needed (restoration of original grade, de-compaction, soil amendments, etc.), and seed and mulch all disturbed areas. Restore disturbed soils per NYSDEC standards and specifications;
- Remove the temporary erosion and sediment controls when 80% of natural vegetative cover has been achieved and erosion issues are no longer present; and,
- Submit the NOT Form to the NYSDEC in accordance with the General Permit.

Soil disturbance of greater than five acres at any one time is not anticipated for construction. Disturbed areas will be stabilized as construction progresses to limit the area of total disturbance. Should greater than five acres of soil disturbance be required, a 5-Acre Waiver request, including a Phasing Plan, will be prepared for the Project and provided to the NYSDEC representative for approval. Refer to Section 11.2 for additional information regarding the 5-Acre Waiver request process.

9.0 Stormwater Management and Pollution Controls

Prior to the commencement of construction activities, temporary erosion and sediment controls shall be installed to prevent erosion of the soils and prevent water quality degradation in wetlands and waterbodies. Erosion and sediment controls will be utilized to limit, control, and mitigate

construction related impacts. The stormwater management and pollution controls shall include practices that involve runoff control, soil stabilization practices, and sediment control.

The erosion and sediment controls utilized at the Project Site must be installed and maintained in accordance with GP-0-20-001 and the SSESC. Improper installation of practices may result in an increase in water quality impacts to nearby waterbodies or sedimentation impacts to undisturbed lands. Deviations from the SSESC standards should be discussed with the Qualified Inspector/Qualified Professional prior to utilizing the alternative practice. If the alternative practice is acceptable, documentation is required to detail the reasoning for the alternative practice and to provide evidence that the alternative design is equivalent to the technical standard. The SWPPP shall be amended as appropriate to incorporate the alternative practice. In the event that an alternative practice fails and a standard SSESC practice is required, the Contractor shall install the required practice upon approval from the Qualified Inspector/Qualified Professional and Owner/Operator. The SWPPP shall be amended as appropriate to document changes to the practice.

The following sections detail potential stormwater impacts due to construction related activities and the temporary and permanent erosion and sediment controls to be utilized throughout the construction of the Project to mitigate impacts. Refer to the SSESC for additional guidance on installation, maintenance, and removal.

9.1 Potential Stormwater Impacts

Construction activities and processes that result in either increased stormwater runoff or the potential to add pollutants to runoff are subject to the requirements of this SWPPP. These activities may include areas of land disturbed by grading, excavation, construction, or material storage. Water that comes in contact with the surface of the Project Site as a result of precipitation (snow, hail, rain, etc.) is classified as stormwater associated with the Project and is subject to the requirements of this SWPPP.

Construction activities that may negatively impact stormwater include, but are not limited to, the following:

- Tree Clearing and Vegetation Removal: Removal of vegetation can expose and weaken soils and may result in erosion.
- Construction Site Entrance: Vehicles leaving the Project Site can track soils onto public roadways.
- Grading Operations: Exposed soils have the potential for erosion and sedimentation when not stabilized.
- Fugitive Dust: Dust generated by vehicles or from strong winds during a drought period can be deposited in wetlands, waterways, and other environmentally sensitive areas, or may negatively impact the air quality.
- General Site Construction Activities: Maintenance and heavy use of access roads can expose soils, creating significant erosion potential. Soil stockpiling from site excavations and grading may promote erosion and sedimentation. Dewatering activities may result in concentrated flows and has the potential to increase erosion.
- Construction Vehicles and Equipment: Refueling of vehicles may result in spilling or dripping gasoline and diesel fuel onto the ground. On-site maintenance of construction

equipment may result in hydraulic oil, lubricants, or antifreeze dripping onto the ground. Sediment tracking and the spread of invasive species may occur if construction vehicles are improperly maintained. Ruts caused by equipment can create paths for concentrated water flows.

- Waste Management Practices: Typical construction projects often generate significant quantities of solid waste, such as wrappings, personnel-generated trash and waste, and construction debris.

Proper utilization of staging and storage areas, stockpiling areas, and erosion and sediment controls will mitigate potential impacts to the stormwater. Refer to Section 10, below, for additional information on spill prevention and waste management procedures for the Project.

9.2 Protection of Existing Vegetation

Natural vegetation shall be preserved to the maximum extent practicable. Preserving natural vegetation will reduce soil erosion and maintain the inherent integrity of the Project Site. Protection practices may include barrier fencing to prevent equipment and vehicle traffic in vegetated and environmentally sensitive areas.

9.3 Temporary Erosion and Sediment Controls

Temporary erosion and sediment controls shall be utilized to reduce erosion, sedimentation, and pollutants in stormwater discharges, and to prevent impacts to undisturbed areas, natural resources, wetlands, waterbodies, and downstream areas. Both stabilization techniques and structural methods will be utilized, as needed, to meet these objectives.

Temporary erosion and sediment control measures shall be applied during construction to:

- Minimize soil erosion and sedimentation through the stabilization of disturbed areas and removal of sediment from construction site discharges.
- Preserve existing vegetation to the maximum extent practicable and establish permanent vegetation on exposed soils following the completion of soil disturbance activities.
- Minimize the area and duration of soil disturbance through site preparation activities and construction sequencing.

Table 1, below, lists the erosion and sediment controls anticipated to be utilized at the Project Site.

Table 1 - Proposed Erosion and Sediment Control Measures

Construction Road Stabilization	Dust Control
Protecting Vegetation During Construction	Site Pollution Prevention
Stabilized Construction Access	Temporary Access Waterway Crossing
Winter Stabilization	Check Dam

Water Bar	Anchored Stabilization Matting
Fertilizer Application	Fiber Roll
Landgrading	Lime Application
Mulching	Permanent Construction Area Planting
Soil Restoration	Surface Roughening
Temporary Construction Area Seeding	Topsoiling
Cofferdam Structures	Compost Filter Sock
Geotextile Filter Bag	Sediment Tank - Portable
Silt Fence	Straw Bale Dike
Turbidity Curtain	

The standards and specifications for the erosion and sediment control measures listed in Table 1 are provided in Appendix G. Refer to the SSESC for the Standards and Specifications of alternate measures and practices, as needed. The temporary erosion and sediment control measures not detailed in the SSESC are detailed below.

9.3.1 Temporary Stockpiling

Temporary stockpiling of granular material (gravel, excavated material/spoils, select backfill, topsoils, etc.) is expected on-site within the Project's right-of-way (ROW) throughout the construction process. Stockpiling of materials is not permitted in areas where health or safety risks are present, or where impacts to water quality may occur.

Stockpile areas shall be contained and protected with the proper erosion and sediment controls such as silt fencing and mulch and shall be located away from stormwater conveyance areas. Soil stockpiles shall be stabilized with vegetation, geotextile fabric, or plastic covers if not utilized for seven days.

Stockpile areas should be inspected and maintained as needed or directed by the Project Engineer (or Qualified Inspector/Qualified Professional).

Spoil material shall be segregated, conserving topsoil for revegetation. Spoils shall not be disposed of within wetlands, waterbodies, agricultural areas, or other environmentally sensitive areas. Excess topsoil is encouraged to be spread within the immediate disturbed areas if the material is free of rocks. Inorganic spoils shall be buried and capped with the previously stripped, native topsoil to ensure revegetation. Additional topsoil may be required to adequately cover the spoil area. If additional space is needed for on-site disposal, the SWPPP shall be amended as appropriate. Off-site disposal is not anticipated for the Project.

9.3.2 Timber Matting

Timber matting is often utilized to distribute vehicle loads on agricultural, lawn, and wetland areas. The matting aids in reducing rutting, soil compaction, and restoration activities. Poorly drained upland soils may be matted to reduce rutting and sediment tracking.

An additional benefit of matting is that mats can be arranged to act as a containment surrounding excavations. This may be especially helpful in standing water situations were conventional erosion and sediment controls are not practicable. The Contractor should be cognizant of the hydrology of the area by recognizing water staining and bank full indicators. The Qualified Inspector can assist in this identification.

Submerged matting can create a “pumping” effect as vehicles pass, resulting in disturbed soils, turbidity and sedimentation. Although the presence of matting in this situation is still better than the alternative, pumping mats will require additional stabilization and sediment control practices not planned for in the EM&CP Plan and Profile Drawings. Matting will need to be re-installed, or access will be shut down until water recedes to eliminate the erosion concern.

9.3.3 Construction Access Systems

Temporary construction access systems will be utilized to prevent or reduce impacts to sensitive areas, such as soft soil or wetlands. The construction access systems may include, but are not limited to, the use of portable mats, gravel access road, construction entrance or access during frozen weather conditions.

Access during frozen conditions may occur once the ground freezes. Snow cover may be packed down or removed for access. The frozen ground conditions will not experience rutting or sediment tracking. Periodic inspection of ground conditions is recommended to ensure frozen ground conditions are present.

Alternative construction access systems shall be approved by the Owner/Operator and the Qualified Professional prior to use. The alternate system shall be documented in the SWPPP amendments.

9.3.4 Dewatering

During subsurface construction, dewatering may be necessary to remove water from the work area. Water removed from the excavated area shall be pumped into a portable sediment tank unless there in not sufficient room in the right-of-way, in which case a geotextile filter bag shall be used.

Portable sediment tanks provide a compartment in which sediment laden water is pumped and retains the sediment prior to release of the water from the tank. Sediment tanks shall be located in an area that allows for easy clean-out and disposal of the trapped sediment and an area that will not impede construction. Sediment tanks shall be cleaned when necessary.
Geotextile filter bags may be used to collect sediment laden water from excavated work areas. Sediment is retained within the bag water prior to discharging. Geotextile filter bags shall be located in a well vegetated, relatively level area at least 100 feet from wetlands, waterbodies, and environmentally sensitive areas, and at the direction of the EI. The bag shall be replaced when the bag flow area has been reduced by 75 percent (75%).

Intake hoses used during dewatering activities to withdraw water from the excavation area shall be elevated and screened to minimize the pumping of deposited sediments. Sediment trapped and accumulated during dewatering activities shall be disposed of in an upland location at least

100 feet from wetlands and waterbodies or disposed of in at a State-approved solid waste disposal facility. Sediment accumulated during dewatering activities may be stockpiled on-site with the appropriate erosion and sediment control practices (i.e., silt fence) installed. The sediment shall be segregated from topsoil and other stockpiles. Sediment disposed of onsite shall be graded and the sediment shall be stabilized as soon as possible in accordance with this SWPPP.

9.3.5 Horizontal Directional Drilling (HDD)

To avoid unnecessary disturbance or impact to the bed, banks, and aquatic habitat of the Hudson River, horizontal directional drilling (HDD) will be utilized for installation of the conduits. The HDD process involves drilling boreholes with a fluid mixture, primarily composed of water and bentonite, a naturally occurring clay. The drilling fluid aids in the removal of cuttings from the borehole, stabilizes the borehole, and acts as a coolant and lubricant throughout the drilling process. The bentonite-water mixture is not classified as a toxic or hazardous substance, however, if released into waterbodies, bentonite has the potential to temporarily reduce water quality. Containment buoys and turbidity curtains will be employed during HDD operations to prevent adverse impacts should an inadvertent return occur. In addition, a gravity cell (trench box) will be placed over the exit hole and sunk into the river bottom to capture any residual drill fluid that might escape.

To protect public health and safety and natural resources, the Contractor shall establish operational procedures and responsibilities for the prevention, containment, and cleanup of inadvertent releases associated with the proposed HDD. The operational procedures should:

- Minimize the potential for an inadvertent release of drilling fluids associated with HDD activities;
- Provide for the timely detection of inadvertent returns;
- Protect environmentally sensitive areas (streams, wetlands, etc.) while responding to an inadvertent release;
- Ensure an organized, timely and “minimum-impact” response in the event of an inadvertent return and release of drilling fluids; and,
- Ensure that all appropriate notifications are made immediately.

The Contractor shall comply with the Owner’s/Operator’s operational procedures for HDD. Refer to Appendix F of the EM&CP for CHPE’s HDD Installation Manual for additional information regarding the HDD process and safety procedures.

9.4 Temporary Stabilization for Frozen Conditions

Winter stabilization standards apply to construction activities with ongoing soil disturbance and exposure between November 15th and April 1st. Temporary winter stabilization measures shall be employed prior to frozen conditions as detailed in the Winter Stabilization specification in Appendix G.

Erosion and sediment control measures shall be inspected to ensure proper performance and winter stabilization function. Repairs should be made as necessary to prevent erosion and sedimentation during thawing or rain events.

10.0 Construction Pollution Prevention

Proper material storage, handling, and disposal practices shall be implemented during construction to reduce the risk of exposure of materials and hazardous substances to stormwater and environmental resources. The storage, handling, and disposal procedures to be enforced by the Owner/Operator, Contractor(s) and the Qualified Inspector are described below.

10.1 Management of Spills and Releases

The Owner/Operator must be notified in the event of a non-stormwater (fuel, oil, chemical, etc.) spill or release to ensure proper reporting and clean up. The Owner/Operator shall proceed as appropriate in accordance with the Owner/Operator's, local, state, and federal environmental policies and procedures.

A spill or release shall be reported to the NYSDEC Spill Hotline (1-800-457-7362)) and the New York State Department of Public Service (DPS) Compliance Staff, as applicable, within two hours of the release. Spills of chemicals other than petroleum must comply with the New York State Hazardous Substance regulations (6 NYCRR Part 595). The Contractor is responsible for retaining documentation containing the NYS spill number and spill information to provide to the Owner/Operator and the Qualified Inspector. The Contractor is responsible for the cleanup and response actions, in accordance with the on-site spill prevention procedures manual. Contaminated soil shall be removed from the Project Site and disposed of in accordance with the product specific Safety Data Sheets (SDS) and environmental guidance.

Potential pollutant sources are likely to be stored on the construction site. Bulk petroleum storage (1,100 gallon above ground tank and/or 110 below ground tank) and chemical storage (185 gallon above ground tank and/or any below ground tank) shall not be present onsite. Construction materials typically present on construction sites, as noted in the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, include, but are not limited to, the following:

- Building Products: Asphalt sealants, copper flashing, roofing materials, adhesives, concrete admixtures, and gravel and/or mulch stockpiles;
- Chemicals: Pesticides, herbicides, insecticides, fertilizers, and landscape materials;
- Petroleum Products: Diesel fuel, oil, hydraulic fluids, gasoline, etc.;
- Hazardous or Toxic Waste: Paints, caulks, sealants, fluorescent light ballasts, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids;
- Sanitary Facilities: Portable toilets; and,
- Construction Debris: Fill, vegetative debris, stumps, and construction waste.

Spill cleanup and response guidance from the NYSDEC is provided in Appendix H of this SWPPP. In addition, a Project-specific Spill Prevention, Control, and Countermeasure (SPCC) Plan has been developed and is provided within Appendix F of the EM&CP.

10.1.1 Discharges within Navigable Waters

If oil discharges within navigable waters or adjoining shorelines occurs, the Owner/Operator is required to follow federal reporting requirements found in the United States Environmental Protection Agency (USEPA) 40 CFR Part 110 - Discharge of Oil and 40 CFR Part 112 - Oil Pollution Prevention. In addition, the Owner/Operator shall notify the (DPS) Compliance Staff of oil discharges within navigable waters and/or adjoining shorelines. Any person in charge of a vessel or onshore/offshore facility is subject to the reporting requirements of the Discharge of Oil regulations if it discharges a harmful quantity of oil. A harmful quantity is any quantity of discharges oil that violates the state water quality standards causes a film or sheen on the water surface or leaves sludge or emulsion beneath the surface. Reporting of oil does not depend on the specific amount of oil discharged.

A discharge must be reported to the USEPA Regional Administrator if:

- More than 1,000 U.S. gallons of oil in a single discharge to navigable waters or adjoining shorelines; or
- More than 42 U.S. gallons of oil in each of two discharges to navigable waters or adjoining shorelines occurring within any 12-month period.

10.2 Construction Housekeeping

The Owner/Operator or the Contractor shall coordinate with local fire officials regarding on-site fire safety and emergency response. The Contractor shall keep the Construction Supervisor and the Qualified Inspector/Qualified Professional aware of chemicals and waste present on site. The Contractor shall periodically conduct safety inspections at the Project Site to identify housekeeping issues and employ spill prevention procedures.

10.2.1 Material Stockpiling

Material resulting from clearing and grubbing, grading, and other construction activities, or new material delivered to the Project Site, shall be stockpiled. The stockpiles shall be located at least 100 feet from wetlands, waterbodies, and environmentally sensitive resources, and shall have the proper erosion and sediment controls installed to prevent the migration of sediments and materials.

10.2.2 Staging, Storage, and Marshalling Areas

Construction materials and equipment should be stored in designated staging areas as indicated on the EM&CP Plan and Profile Drawings or as directed by the Project Engineer (or Qualified Inspector). The staging, storage, and marshalling areas should be located in an area that minimizes impacts to stormwater quality. Materials shall be properly stored and kept away from water resources and environmentally sensitive areas, including, but not limited to, wetlands, streams, storm drains, and ditches.

Chemicals, solvents, fertilizers, and other toxic materials must be stored in waterproof containers and must be kept in the proper storage facilities, except during use or application. Runoff containing such materials must be collected and disposed of at an approved solid waste or chemical disposal facility.

Bulk storage of materials will be staged at the Project marshalling yard per SDS specification and Environmental Health and Safety Standards, whichever is more restrictive. The bulk storage shall be located at least 100 feet from wetland, waterbodies, and environmentally sensitive resources. Contractor marshalling yards may be associated with other projects not covered under this SWPPP and General Permit. If the marshalling area is associated with this SWPPP, the yard shall be inspected by the Qualified Inspector until Project related activities have ceased. A Qualified Inspector shall inspect the marshalling yard to assess for environmental impacts prior to and throughout its use. If additional marshalling yards are required, they must abide by this SWPPP and GP-0-20-001. Amendments shall be made to the SWPPP, as necessary, for the additional marshalling areas.

10.2.3 Equipment Cleaning and Maintenance

All on-site construction vehicles, including employee vehicles, shall be monitored for leaks and shall receive regular preventative maintenance to reduce the risk of leakage. Any equipment leaking oil, fuel, or hydraulic fluid shall be repaired immediately or removed from the Project Site. Construction equipment and Contractor personal vehicles shall be parked, refueled and serviced at least 100 feet from a wetland, waterbody, or other ecologically sensitive area, at an upland location away from conveyance channels, unless approved by the Qualified Inspector/Qualified Professional.

Where there is no reasonable alternative, refueling may occur within these setbacks, but only under the observation of the Qualified Inspector or Trained Contractor and after proper precautions are taken to prevent an accidental spill. The Contractor shall take precautions to ensure that drips, spills, or seeps do not enter the ground. The use of absorbent towels and/or a portable basin beneath the fuel tank is recommended. Refueling activities shall be performed under continual surveillance with extreme care. In the event of a release, the spill shall be promptly cleaned up in accordance with the spill response and clean up procedures. The Owner/Operator shall notify DPS and NYSDEC in the event of a spill or release as soon as practicable.

Petroleum products and hydraulic fluids that are not in vehicles shall be stored in tightly sealed containers that are clearly labeled. All gasoline and fuel storage vessels with greater than a 25-gallon capacity must have secondary containment constructed of an impervious material and be capable of holding 110% of the vessel capacity.

Vehicles and equipment shall be cleaned as necessary prior to exiting the Project Site to prevent sediment track out onto public roadways. Vehicles and equipment shall enter and exit the site at designated stabilized construction entrances only. Acceptable cleaning methods include sweeping/brushing sediment off of vehicles and equipment. Spraying water is not recommended for cleaning vehicles and equipment since it can generate sediment laden runoff.

10.3 Waste Management

The Project ROW shall be kept free of debris and waste material to the maximum extent practicable. The Contractor shall comply with all required regulations governing the on-site management and off-site disposal of solid and hazardous waste generated during construction of the Project. Substances and materials with the potential to pollute surface and groundwaters must be handled, controlled and contained as appropriate to ensure they do not discharge from the Project Site.

A solid waste management program will be implemented to support proper solid waste disposal and recycling practices. Solid waste and debris that cannot be recycled, reused, or salvaged shall be stored in on-site containers for off-site disposal. The containers shall be emptied periodically by a licensed waste transport service and hauled away from the site for proper disposal. Debris shall be disposed of at a State-approved solid waste disposal site in compliance with all applicable environmental regulations. No loose materials shall be allowed at the Project Site and all waste material shall be disposed of promptly and properly. Trucks hauling debris from the Project Site shall be covered in accordance with appliable regulations. The burning of debris, waste, and other refuse is not permitted. All debris shall be removed from the Project Site prior to completion of construction and restoration.

If a hazardous material spill occurs, it must be contained and disposed of immediately. Contaminated soil shall be removed from the Project Site and disposed of in accordance with product specific SDS and associated guidelines. Reporting spills to the NYSDEC may be required per 17 New York Code, Rules and Regulations (NYCRR) 32.3 and 32.4, and the Environmental Conservation Law (ECL) 17-1734.

11.0 Maintenance Inspections and Reporting Requirements

11.1 Pre-Construction Inspection

A site assessment shall be conducted by the Qualified Inspector prior to commencement of construction activities to ensure erosion and sediment controls have been adequately and appropriately installed. The Contractor is responsible for contacting the Qualified Inspector for the pre-construction inspection following the installation of the erosion and sediment control measures.

11.2 Construction Phase Inspections

A Qualified Inspector shall conduct regular (daily) site inspections from the implementation of this SWPPP through final stabilization of the Project Site. Inspections shall occur at an interval of once every seven calendar days unless greater than five acres of soil is disturbed at any one time or if the Project Site directly discharges to a 303(d)-waterbody segment or is located in one of the watersheds listed in Appendix C of GP-0-20-001, in which inspections shall occur at least twice per every seven calendar days. The two inspections shall be separated by a minimum of two full calendar days. Written authorization from the NYSDEC representative is required prior to disturbance of greater than five acres. If a portion of the Project Site is permanently stabilized, inspections can cease in that area as long as the condition has been documented by amending the SWPPP.
The Qualified Inspector shall conduct site inspections to assess the performance of the erosion and sediment controls and identify areas requiring modification or repair. The Qualified Inspector shall complete an inspection report following each inspection.

The Owner/Operator and the Contractor(s) must ensure the erosion and sediment control practices implemented at the Project Site have been maintained in accordance with GP-0-20-001 and the SSESC. The trained Contractor shall regularly inspect the erosion and sediment control practices and pollution prevention measures to ensure they are being maintained in effective operating condition at all times. Corrective actions to the deficiencies shall be made within 24 hours of identification.

The Qualified Inspector/Qualified Professional shall inspect the debris removal on a continual basis during construction to ensure proper management and disposal. When construction and restoration are complete, the Contractor is responsible for ensuring the Project Site is free of all construction debris and materials.

11.3 Temporary Construction Activity Suspension

The Contractor must temporarily stabilize all disturbed areas prior to temporary suspension of construction activities, including winter shutdown. For construction sites where soil disturbance activities have been temporarily suspended and the appropriate temporary stabilization measures have been installed and applied to all disturbed areas, the Qualified Inspector shall begin conducting site inspections in accordance with Part IV.C.2 of GP-0-20-001. The trained Contractor may cease the regular maintenance inspections until soil disturbance activities resume.

The Owner/Operator must notify the NYSDEC representative in writing prior to reducing the frequency of inspections. Correspondence with the NYSDEC representative shall be included in Appendix D of this SWPPP.

11.4 Partial Project Completion

Construction sites where soil disturbance activities have been shut down with partial Project completion, the Qualified Inspector can stop conducting inspections once all disturbed areas have achieved final stabilization in conformance with this SWPPP.

The Owner/Operator must notify the NYSDEC representative in writing prior to shut down. Correspondence with the NYSDEC representative shall be included in Appendix D of this SWPPP.

If soil disturbance activities have ceased for two years from the date of shutdown, the Owner/Operator shall have the Qualified Inspector complete a final inspection to certify final stabilization has been achieved and all temporary erosion and sediment control measures have been removed. The Owner/Operator shall complete the NOT form and submit the form to the NYSDEC. A copy of the completed NOT shall be included in Appendix A of this SWPPP.

11.5 Reporting Requirements

Inspection and maintenance reports shall be prepared in accordance with GP-0-20-001 from the commencement of construction activities until the NOT has been submitted to the NYSDEC. The Qualified Inspector shall provide a copy of the completed inspection report to the Owner/Operator and the Contractor(s) within one business day of inspection. A copy of the inspection report shall be included in Appendix J of the on-site SWPPP. A blank SWPPP Inspection Form is provided in Appendix J.

11.6 Post-Construction Record Archiving

The Owner/Operator shall retain a copy of the SWPPP, permit coverage forms and associated documentation that were prepared in conjunction with GP-0-20-001 for a period of at least five years from the date that the NYSDEC received the competed NOT.

Appendix A – SWPPP Permit Coverage Forms

- Notice of Intent (NOI) -

- SWPPP Preparer Certification Form -

- Owner/Operator Certification Form -

- NYSDEC NOI Acknowledgement Letter for Permit Coverage -

- Notice of Termination (NOT) Form -

Appendix A – Notice of Intent (NOI)

NOI for coverage under Stormwater General Permit for Construction Activity

version 1.35

(Submission #: HPN-YHXM-AKBRQ, version 1)

Details

Originally Started By	Chelsey Kniffen
Alternate Identifier	Cementon Transitional Horizontal Directional Drill (HDD) Project
Submission ID	HPN-YHXM-AKBRQ
Submission Reason	New
Status	Draft

Form Input

Owner/Operator Information

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.)
NKT, Inc.

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

Owner/Operator Contact Person First Name
Michael

Owner/Operator Mailing Address
1255 Crescent Green, Suite 450

City
Cary

State
NC

Zip
27518

Phone
917-287-3989

Email
Michael.henssler@ntk.com

Federal Tax ID
87-1765111

Project Location

Project/Site Name
Cementon Transitional Horizontal Directional Drill (HDD) Project

Street Address (Not P.O. Box)
Alpha Blvd

Side of Street
East

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Cementon

State
NY

Zip
12414

DEC Region
4

County
GREENE

Name of Nearest Cross Street
Route 9W

Distance to Nearest Cross Street (Feet)
3400

Project In Relation to Cross Street
West

Tax Map Numbers Section-Block-Parcel
213.00-2-3

Tax Map Numbers
923, 221

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
42.14394015955661,-73.90751729996249

Project Details

2. What is the nature of this project?
New Construction

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

Pre-Development Existing Landuse
Other: Gravel Parking Lot

Post-Development Future Land Use
Other: Gravel Parking Lot with underground linear utility

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)
688.77

Total Area to be Disturbed (acres)
0.79

Existing Impervious Area to be Disturbed (acres)
0.79

Future Impervious Area Within Disturbed Area (acres)
0.79

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 (%)
47.7

B (%)
0

C (%)
2.5

D (%)
49.8

7. Is this a phased project?
No

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

Start Date
NONE PROVIDED

End Date
NONE PROVIDED

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

9a. Type of waterbody identified in question 9?
River On 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?
No

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 D (provided the map unit name is inclusive of slopes greater than 25%), 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?
No

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

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

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?
No

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
TRC

Contact Name (Last, Space, First)
Bodenhamer, Kevin

Mailing Address
2087 East 71st Street

City
Tulsa

State
OK

Zip
74136

Phone
918-481-4302

Email
kbodenhamer@trccompanies.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

> SWPPP Preparer Certification Form.pdf - 11/29/2022 11:53 AM
> **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
Check Dams
Straw/Hay Bale Dike
Turbidity Curtain
Water Bars
Temporary Access Waterway Crossing

Biotechnical
None

Vegetative Measures
Seeding
Mulching
Topsoiling
Protecting Vegetation
Straw/Hay Bale Dike

Permanent Structural
None

Other
NONE PROVIDED

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.
The Project is a segment of an overall approximate 339-mile HVDC transmission line project from the Canadian border to Queens, NY. The Project will extend approximately 800 feet to install conduit for future cable installations. Each Project segment will be permitted separately and will require separate SWPPPs. The Project is subject to the requirement of an EM&CP as developed for compliance with the Project's Article VII Certificate.

The Project is located at the end of Alpha Blvd. in the Hamlet of Congers, Town of Catskill. The Project is located at Tax Map Numbers Section-Block-Parcel 213.00-2-3; on Tax Map Book number 923, 221.

Kevin Bodenhamer's NY PE #093543-01.

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

Name of Alternative SMP
NONE PROVIDED

Other Permits

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

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?
No

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?
NONE PROVIDED

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

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.
Owner/Operator Certification Form (PDF, 45KB)

Upload Owner/Operator Certification Form

> Owner Operator Certification Form.pdf - 11/29/2022 11:53 AM
> **Comment**
> NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
11/29/2022 11:53 AM	SWPPP Preparer Certification Form.pdf	Attachment	Chelsey Kniffen
11/29/2022 11:53 AM	Owner Operator Certification Form.pdf	Attachment	Chelsey Kniffen

Appendix A – SWPPP Preparer Certification Form

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

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

Project Site Information

Project/Site Name

Cementon Transitional Horizontal Directional Drill (HDD) Project

Owner/Operator Information

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

Champlain Hudson Power Express, Inc.

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.

Kevin	C.	Bodenhamer
First name	MI	Last Name

Kevin C. Bodenhamer

Digitally signed by Kevin C. Bodenhamer
DN: cn=Kevin C. Bodenhamer, o=Oil and Gas, ou=ESV, email=kbodenhamer@trcsolutions.com, c=US
Date: 2023.01.11 15:05:37 -06'00'

Signature

01/11/2023

Date

Revised: January 2020

Appendix A – Owner/Operator Certification Form

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

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

Project/Site Name: Cementon Transitional Horizontal Directional Drill (HDD) Project

eNOI Submission Number: HPN-YHXM-AKBRQ

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

Michael Henssler
Project Manager
Michael.Henssler@nkt.com

DocuSigned by:
4B95F9D821F24DD...

Signature

23. Januar 2023 | 18:59 MEZ

Date

Appendix A – NYSDEC NOI Acknowledgement Letter for Permit Coverage

Appendix A – Notice of Termination (NOT) Form

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

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

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

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person: | 4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

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

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

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

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

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

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

_____

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

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

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

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

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

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

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

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

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

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

V. Additional Information/Explanation:

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

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

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

Printed Name:	
Title/Position:	
Signature:	Date:

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

VII. Qualified Inspector Certification - Final Stabilization:

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

Printed Name:	
Title/Position:	
Signature:	Date:

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

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

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

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

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

Appendix B – General Permit GP-0-20-001

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

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

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature

Date

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

PREFACE

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

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

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

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

Table of Contents

Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

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

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

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

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

B. Effluent Limitations Applicable to Discharges from Construction Activities

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

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

deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

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

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

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

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

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

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

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

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

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

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

b. **Soil Stabilization**. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

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

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

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

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

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

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

(i) Wastewater from washout of concrete;

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

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

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

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

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

C. Post-construction Stormwater Management Practice Requirements

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

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

a. Sizing Criteria for New Development

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

c. Sizing Criteria for Redevelopment Activity

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

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

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

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

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

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

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

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

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

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

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

D. Maintaining Water Quality

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

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

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

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

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

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

E. Eligibility Under This General Permit

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

   a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.

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

   b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
      (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
      (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
      (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
      (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or

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

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

d. Documentation that:

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

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

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

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

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

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

B. Notice of Intent (NOI) Submittal

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

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

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

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

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

C. Permit Authorization

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

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

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

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

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

c. the final SWPPP has been prepared, and

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

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

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

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

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

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

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

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

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

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

D. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination ("NOT") has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.

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

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

use control MS4, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

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

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

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

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

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

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

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

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

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

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

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

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

F. Change of Owner or Operator

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

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

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

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

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

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

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

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

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

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

b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*;

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

d. to document the final construction conditions.

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

6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor.* The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

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

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

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

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

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

B. Required SWPPP Contents

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

   Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

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

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

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

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

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

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

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

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

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

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

e. Infiltration test results, when required; and

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

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

C. Required SWPPP Components by Project Type

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

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

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

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

B. Contractor Maintenance Inspection Requirements

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

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

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

3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

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

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

- licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- New York State Erosion and Sediment Control Certificate Program holder
- Registered Landscape Architect, or
- someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].

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

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

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

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

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

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

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

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

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

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

d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization,* and all temporary, structural erosion and sediment control measures have been removed*;* and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.

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

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

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

a. Date and time of inspection;

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

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

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

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

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

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

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

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

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

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

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

5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

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

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

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

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

   a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;

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

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

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

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

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

   a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

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

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

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

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

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

B. Addresses

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

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

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

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

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

B. Continuation of the Expired General Permit

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

C. Enforcement

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

D. Need to Halt or Reduce Activity Not a Defense

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

E. Duty to Mitigate

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

F. Duty to Provide Information

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

G. Other Information

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

H. Signatory Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

I. Property Rights

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

J. Severability

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

K. Requirement to Obtain Coverage Under an Alternative Permit

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

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

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

L. Proper Operation and Maintenance

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

M. Inspection and Entry

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

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

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

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

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

N. Permit Actions

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

O. Definitions

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

P. Re-Opener Clause

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

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

Q. Penalties for Falsification of Forms and Reports

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

R. Other Permits

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

APPENDIX A – Acronyms and Definitions

Acronyms

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

Definitions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

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

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

APPENDIX B – Required SWPPP Components by Project Type

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

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

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

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

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

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

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

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

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

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

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

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

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

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover,* and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- Entire New York City Watershed located east of the Hudson River **-** Figure 1
- Onondaga Lake Watershed **-** Figure 2
- Greenwood Lake Watershed **-**Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

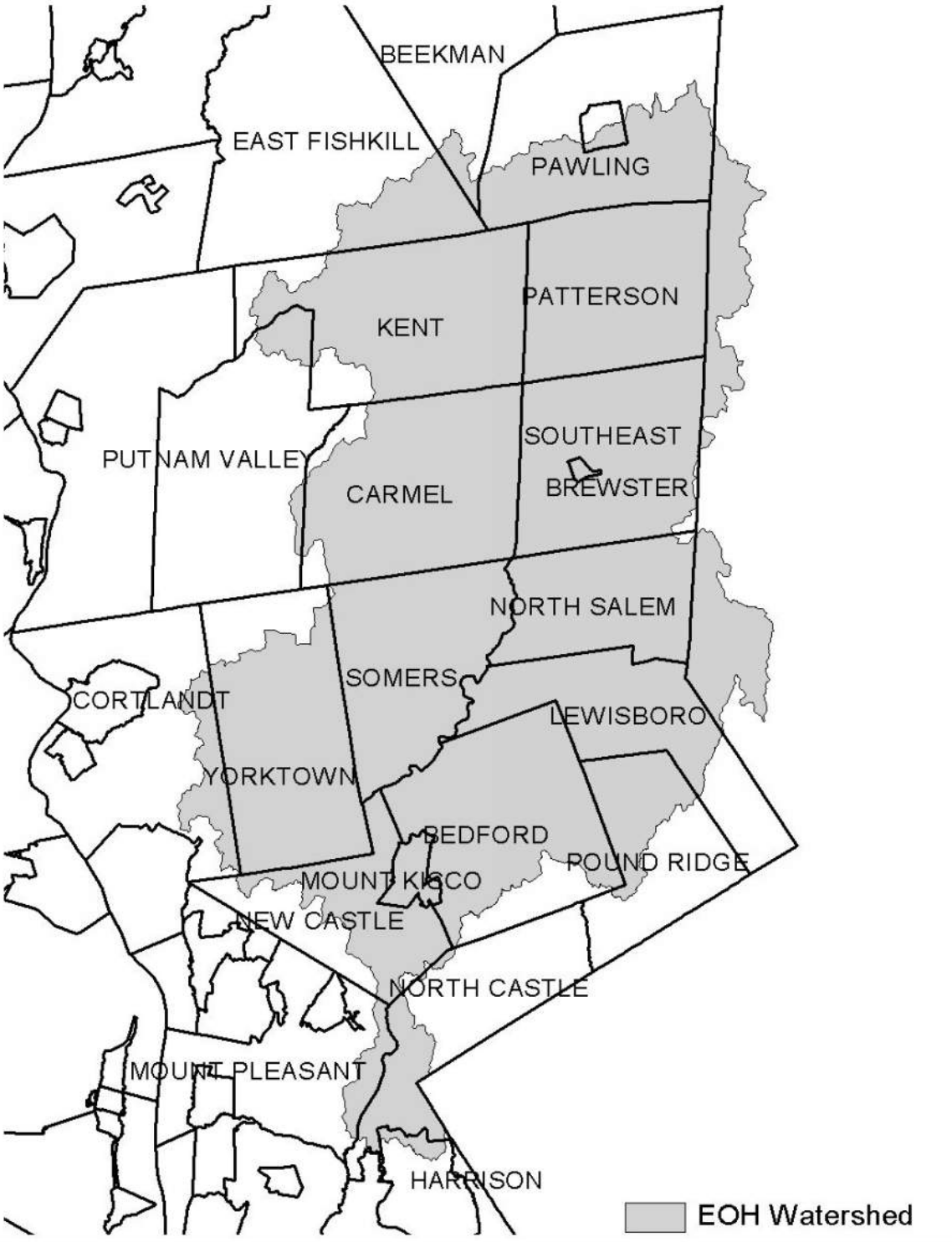


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

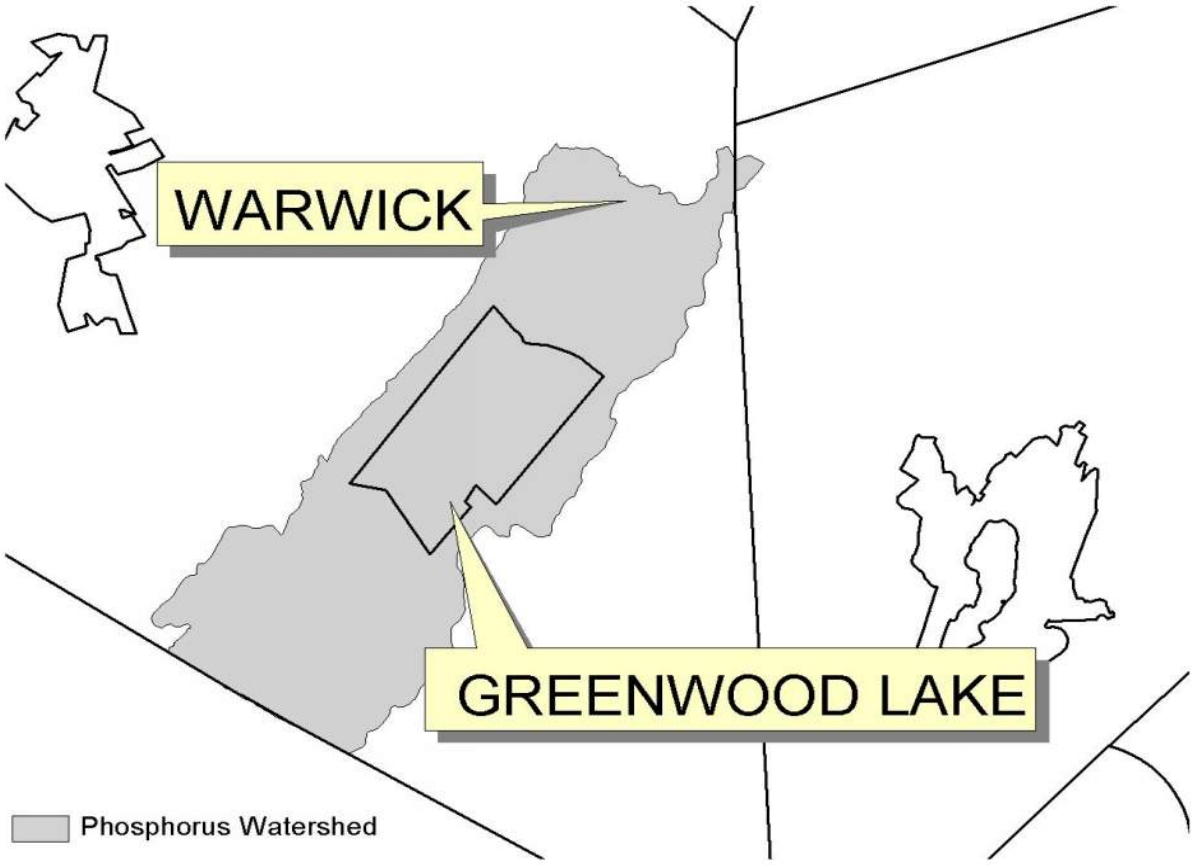


Figure 4 - Oscawana Lake Watershed

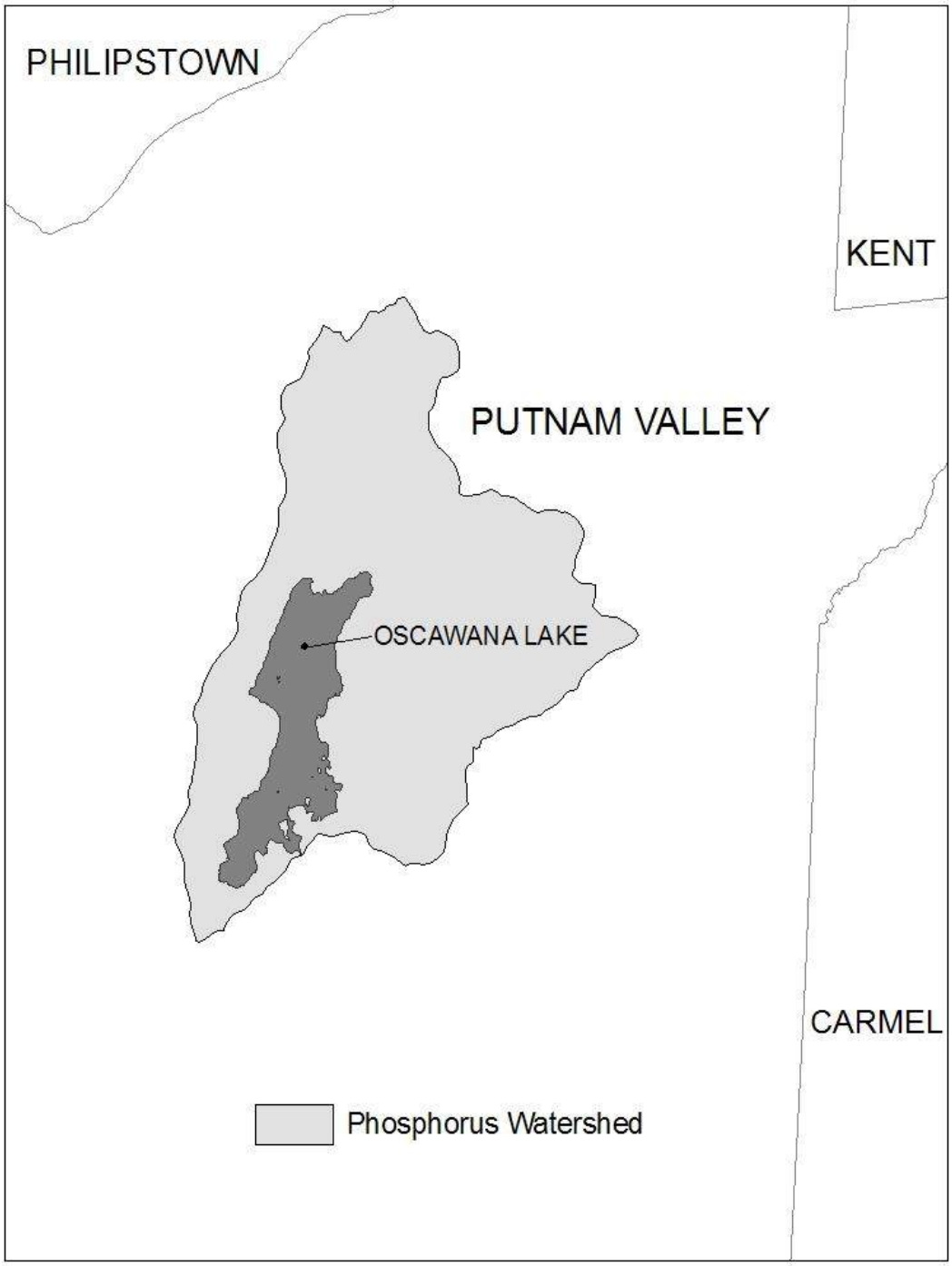
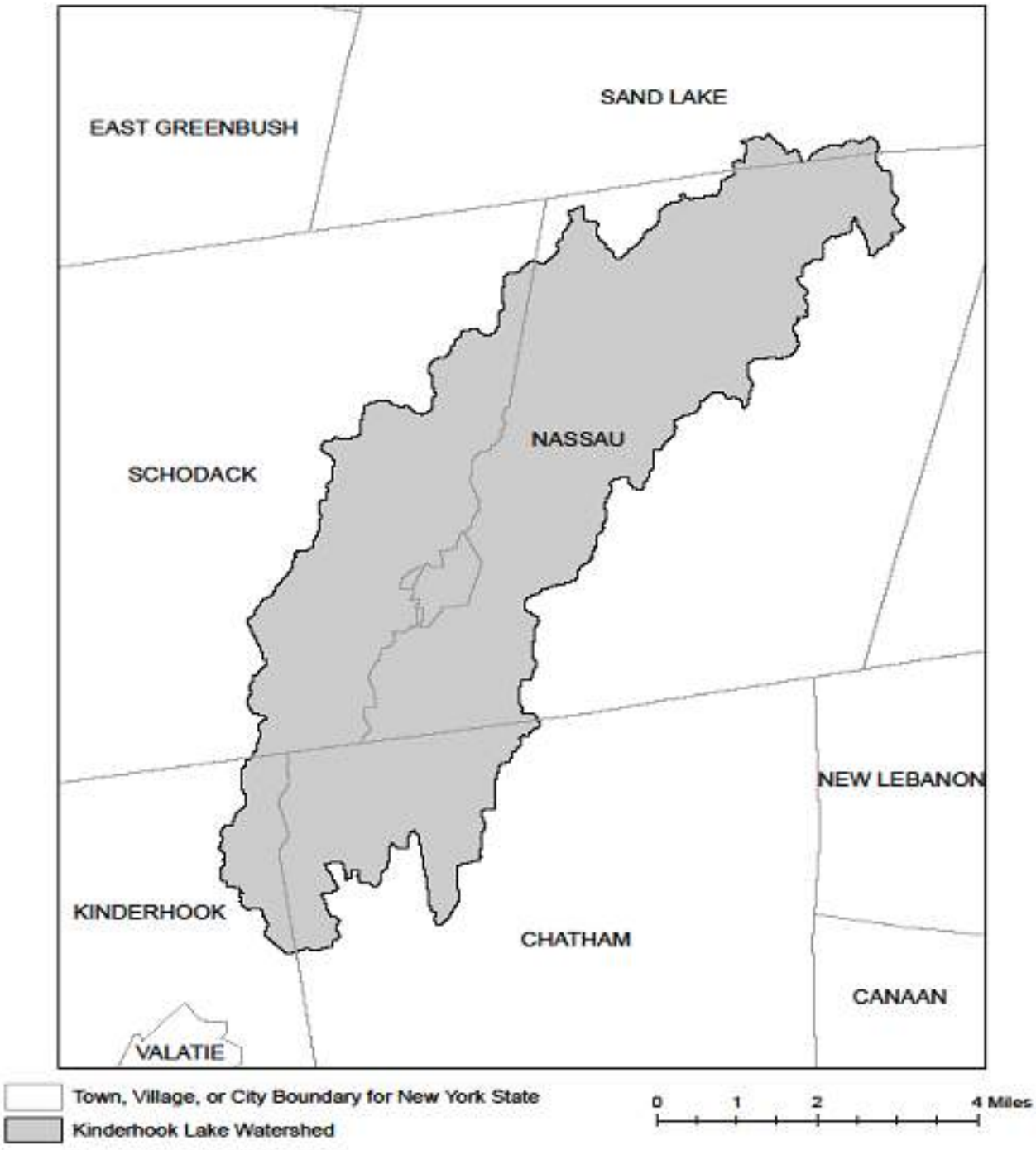


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River **-** See Figure 1 in Appendix C

APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

APPENDIX F – List of NYS DEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	100 Hillside Avenue, Suite 1w White Plains, NY 10603 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

Appendix C – Construction Personnel Contact List

- Construction Contact List -

- Contractor Certification Form -

Appendix C – Construction Contact List

SWPPP Construction Contact List

Name	Title/Role	Company	Phone Number
	Project Owner/Developer		
	Construction Project Manager		
	Project Engineer		
	SWPPP Preparer		
	Qualified Inspector		
	Trained Contractor		
	DPS Compliance Staff Representative		
	NYSDEC Representative		

Appendix C – Contractor Certification Form

Contractor Certification Form

Stormwater Pollution Prevention Plan (SWPPP)
State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity
GP-0-20-001

Cementon Transitional HDD Project
Town of Catskill, Greene County, New York

All Contractors and Subcontractors performing construction activities shall sign the following certification before they commence construction activities. A copy of the certification shall be included in Appendix A of the on-site SWPPP. All Contractors and Subcontractors must identify at least one trained person from their company, who has met the requirements of a *Trained Contractor* as defined in GP-0-20-001, that will be responsible for the implementation of the SWPPP.

> "I hereby certify under penalty of the law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the Qualified Inspector during a site inspection. I also understand that the Owner or Operator must comply with the terms and conditions of the most current version of the New York State SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-20-001) and that 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."

_____

_____
Name of Construction Company

_____
Address of Construction Company | Telephone Number

_____
Printed Name of Authorized Representative | Title

_____
Signature of Authorized Representative | Date

_____
Printed Name of Trained Contractor(s) | Title(s)

Type of construction services to be provided: _____

_____

_____

Appendix D – Agency Correspondence and Notifications

Appendix E – Environmental Background Information

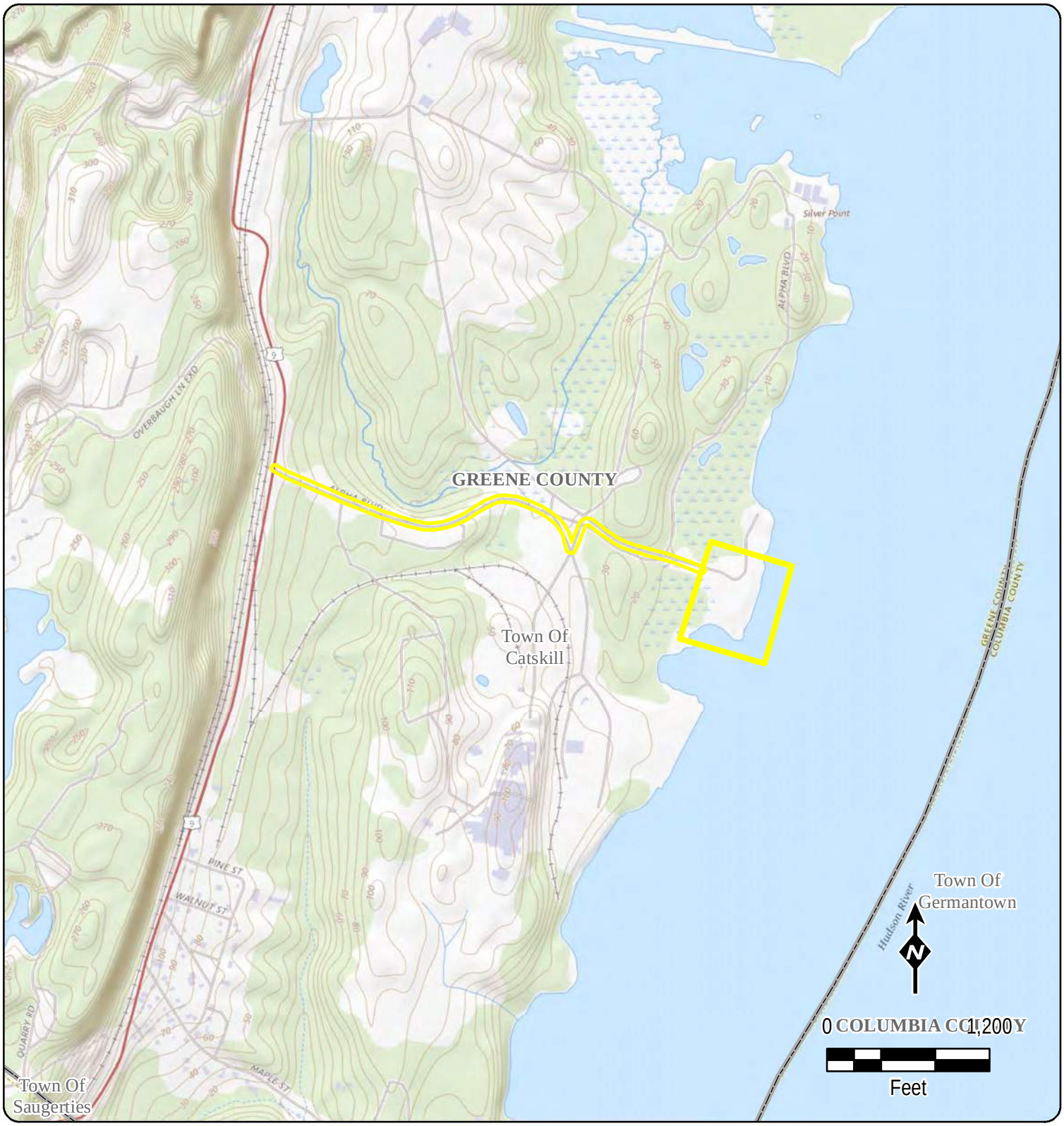
- Figure 1: Study Area Map -

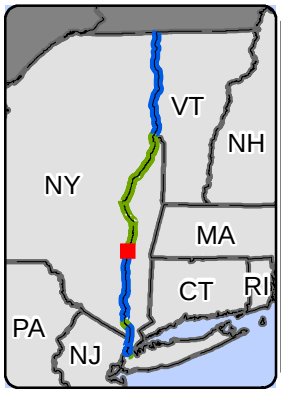
- Figure 2: Environmental and Cultural Resources Map -

- Environmental and Cultural Resource Information -

- USDA NRCS Soil Resource Report -

Appendix E – Figure 1: Study Area Map





Study Area
County
City / Town

TRC

CHAMPLAIN HUDSON POWER EXPRESS

Cementon Transitional HDD
Figure **1**
Study Area

Created: 10/28/2022

Data Sources: ESRI, NYGIS, TDI, TRC

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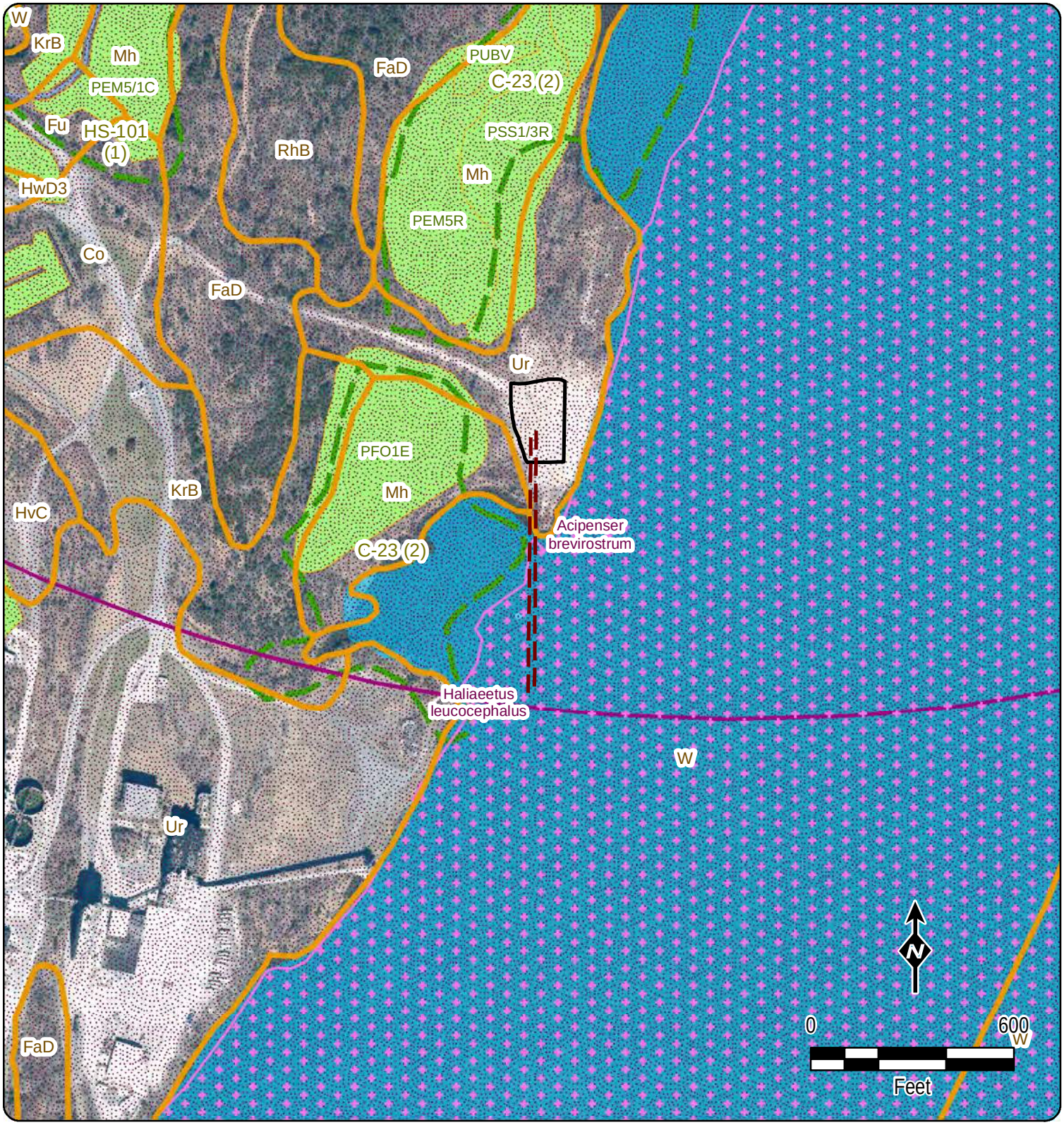
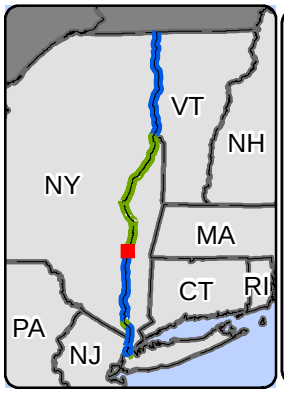
Appendix E – Figure 2: Environmental and Cultural Resources Map





- HDD
- LOD
- Soils (SSURGO)
- NYSDEC Wetland
- NYSDEC Water Quality Line
- NWI
- NHD Flowline
- NHD Area
- NHD Waterbody
- Significant Natural Community
- NYSDEC Endangered/Threatened Species

TRC

CHAMPLAIN HUDSON POWER EXPRESS

Cementon HDD

Figure 2

Environmental and Cultural Resources

Created: 11/30/2022

Data Sources: ESRI, NYGIS, TDI, TRC, USFWS, USGS, NYSDEC, NRIS, USDA

S:\1-PROJECTS\TDI\CHPEI\SW\PPP_Figure2_Cementon_EnvRes_8x11P.mxd

Appendix E – Environmental and Cultural Resource Information

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 18. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from digital orthophotography provided by the New York State Office of Cyber Security & Critical Infrastructure Coordination. This information was produced as 30-centimeter resolution natural color orthoimagery from photography dated April 2004 and 30-centimeter resolution color infrared orthoimagery from photography dated April 2001.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

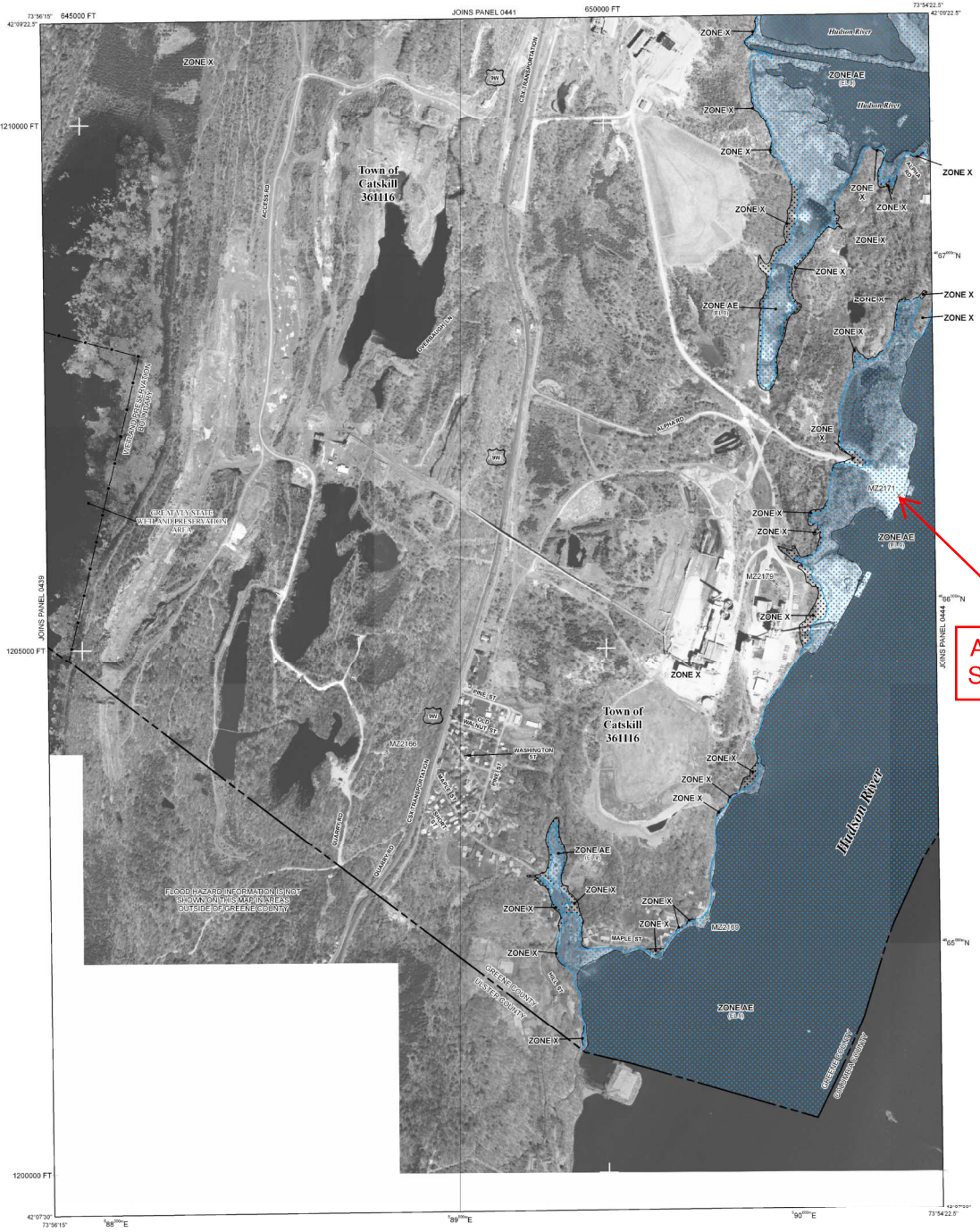
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.

CTP Cooperating Technical Partners

This digital FIRM was produced through a unique cooperative partnership between the New York State Department of Environmental Conservation (NYSDEC) and FEMA. As part of the effort, NYSDEC has joined in a Cooperative Technical Partnership agreement to produce and maintain FEMA's digital FIRM.



Approximate Site Location

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 Base Flood Elevation line and value; elevation in feet*
- (EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A Cross section line
- 3 — 3 Limited detail cross section line
- D — D Transect line
- 87°07'45", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4976000mN 1000-meter Universal Transverse Mercator grid values, zone NAD 1983 UTM Zone 18N
- 600000 FT 5000-foot grid ticks: New York State Plane coordinate system, central (FIPSZONE 3101), Transverse Mercator projection
- DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
MAY 16, 2008

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0443F

FIRM

FLOOD INSURANCE RATE MAP

for GREENE COUNTY, NEW YORK
ALL JURISDICTIONS

CONTAINS:

COMMUNITY	NUMBER
CATSKILL, TOWN OF	361116

PANEL 443 OF 531
MAP SUFFIX: F
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36039C0443F

EFFECTIVE DATE
MAY 16, 2008

Federal Emergency Management Agency

Wetland & Waterbodies Delineation Report

Champlain Hudson Power Express Segment 11-Package 7A

CSX Railroad - Catskill, New York

CHA Project Number: 066076

Prepared for:
Transmission Developers Inc.
1301 Avenue of the Americas
26th Floor
New York, NY 10019

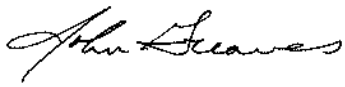
Prepared by:
CHA Consulting, Inc.
III Winners Circle
Albany, NY 12205
Phone: (518) 453-4500

June 2022

SIGNATURE PAGE

This report has been prepared and reviewed by the following qualified personnel employed by CHA.

Report Prepared By:



John W. Greaves
Senior Scientist

Report Reviewed By:

Christopher R. Einstein, PWS
Principal Scientist

TABLE OF CONTENTS

LIST OF ATTACHMENTS

1.0 INTRODUCTION

CHA Consulting, Inc. ("CHA") has prepared this wetland and waterbodies delineation report on behalf of Champlain Hudson Power Express, Inc. ("CHPE") and Kiewit Construction (Kiewit) for the Champlain Hudson Power Express Project (Project). CHA was retained by Kiewit to identify and delineate jurisdictional wetlands and waterbodies regulated under Section 404 of the Clean Water Act (CWA), Section 10 of the Rivers and Harbors Act of 1899, Article 24 Freshwater Wetlands Act (FWW)) & Article 15 (Protection of Waters) of the Environmental Conservation Law along the overland transmission cable route that follows State, county and local roadways and the CSX railroad rights-of-way ("ROW"), herein referred to as the Project Corridor. Delineations were conducted with the objective of verifying and updating previous wetland delineations performed for the Project Corridor as part of the Article VII and Section 10/404 permitting processes. This report describes the wetland delineation methodology and the existing wetland and waterbody resources that were identified in the Project Corridor (also defined as the Jurisdictional Determination limits) during field surveys for the overland portions of the Project.

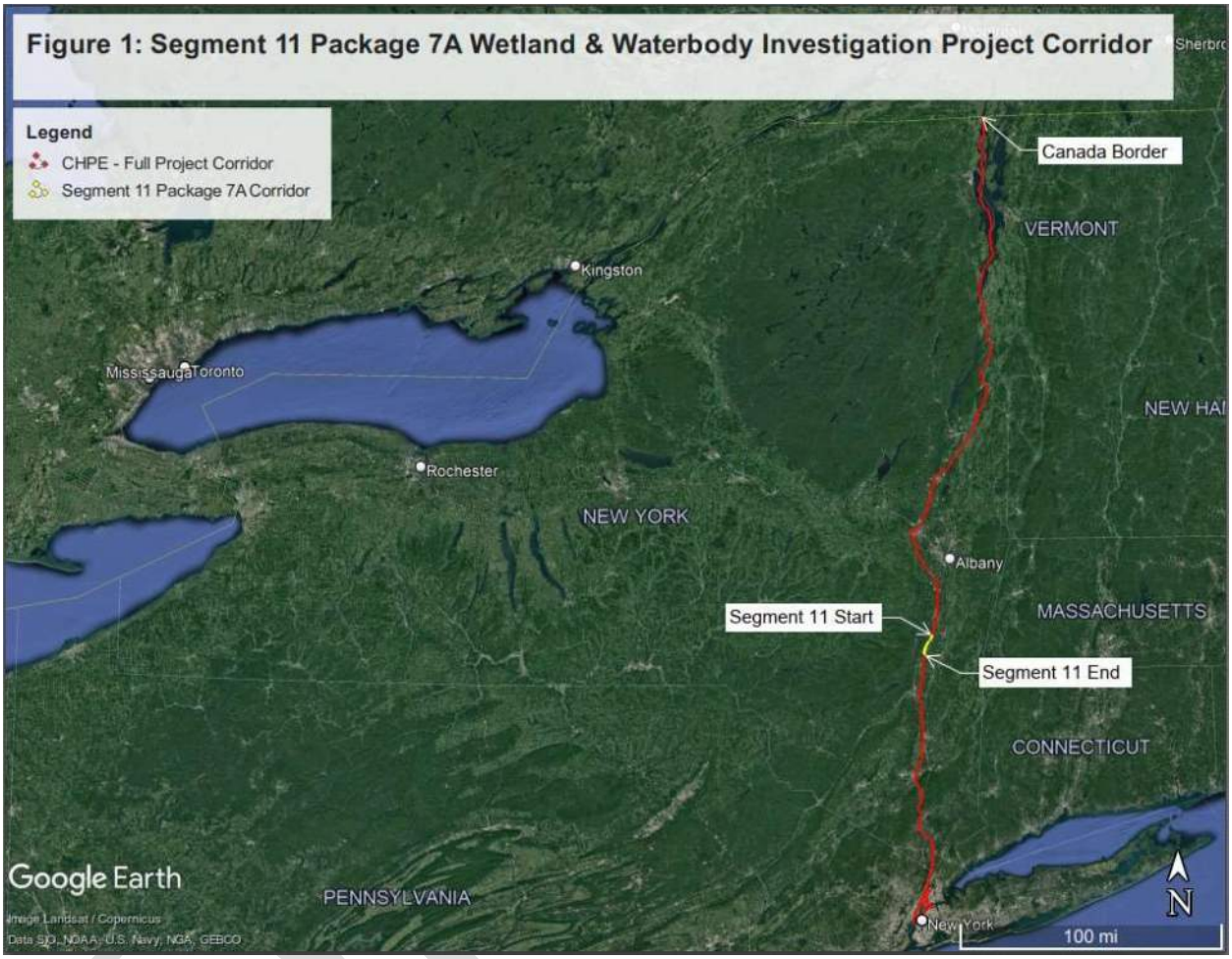
The project also includes equipment staging, laydown areas and access roads. These areas were not confirmed when the delineation activities described in this report were being completed. A supplemental delineation report will include these areas and will be prepared as the design of the project progresses.

2.0 SEGMENT 11-PACKAGE 7A CORRIDOR OVERVIEW

The entire Project Corridor is approximately 339 miles from Montreal, Quebec, Canada to New York City, New York, USA. Figure 1 below shows the route from the Canadian border to New York City and highlights the approximately 8.7 miles of the Segment 11- Package 7A Project Corridor that was investigated for wetlands and waterbodies.

Segment 11-Package 7A begins in Catskill, NY at station 70000+00 on the CSX railroad. Segment 11-Package 7A extends south approximately 8.7 miles along CSX railroad as well as along Allen Street, Route 9W and Alpha Boulevard to where Segment 11-Package 7A terminates at the west bank of the Hudson River at end of Alpha Boulevard in Catskill, NY.

Figure 1: Segment 11-Package 7A Wetland & Waterbody Investigation Project Corridor



3.0 WETLAND DELINEATION METHODOLOGY

To determine the potential for wetland impacts from construction of the Project, Fisher Associates (Fisher) and Shumaker Consulting Engineering & Land Surveying, D.P.C. (Shumaker) assessed the Project Corridor in the field for the presence of federal (Section 404 CWA & Section 10 of the Rivers and Harbors Act of 1899) and state (Article 24 FWW & Article 15 Protection of Waters) jurisdictional wetlands. Wetland scientists conducted wetland delineations in November and December 2021. The delineation criteria and methodology were performed in accordance with the *1987 Corps of Engineers Wetland Delineation Manual,* the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* Version 2.0 (January 2012), as well as the *New York State Freshwater Wetlands Delineation Manual* (Browne et. al., 1995).

The Project Corridor for the surveyed portions of the project included the land within the existing CSX railroad ROW and areas within and outside of ROWs along roadways such as Allen Street, Route 9W and Alpha Boulevard, and areas of undeveloped lands that connect these ROW's. The wetland delineation limits were approximately 50 feet from the edge of pavement and approximately 100 feet from the outside edge of rail, limited to the side of the road or railroad corridor on which the alignment follows and primarily within the ROW of the aforementioned roads and railroad.

In accordance with the procedures provided in the *Corps of Engineers Wetland Delineation Manual (1987)*, and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, Version 2.0 (January 2012), the "Rou tine Wetland Determination" method was used to delineate wetland boundaries.

The wetland boundaries were determined in the field based on the three-parameter approach, whereby an area is a wetland if it exhibits vegetation adapted to wet conditions (hydrophytes), hydric soils, and the presence or evidence of water at or near the soil surface during the growing season (hydrology).

Coded surveyor's ribbons (e.g. flag code A-1, A-2, etc.) were placed along the wetland boundaries based on observations of vegetation, soils and hydrologic conditions. Data points were recorded

along the wetland boundaries at various locations across different vegetative community types correlating to each wetland. Wetland and upland data points were recorded to show the difference between the wetland and upland habitats. At a minimum, one data point set (wetland and upland) was collected for each wetland. Additional data points were collected for large wetlands and for changes in vegetative communities. Wetland Determination Data Sheets corresponding to each point can be found in Attachment 1.

Wetlands within the Segment 11- Package 7A Project Corridor fall under the jurisdiction of the and the New York State Department of Environmental Conservation (NYSDEC) and/or the U.S. Army Corps of Engineers (USACE). The New York State methodology similarly recognizes the three parameters of vegetation, soils, and hydrology; however, under the New York State method the hydric vegetation criterion is mandatory, while the other two parameters are not (Browne et. al. 1995). Wetlands regulated by the NYSDEC must be at least 12.4 acres (5 hectares) in size, unless they are deemed to have unusual local importance (Article 24 FWW). The NYSDEC publishes maps of wetland areas under state jurisdiction; however, it uses field delineation to determine the precise boundaries of these wetland areas.

Prior to actual field delineations for wetland resources, CHA reviewed USGS 7.5-minute topographic maps, aerial photographs, National Wetland Inventory (NWI) mapping, United States Department of Agriculture Natural Resources Conservation Service (NRCS) soil mapping, and NYSDEC freshwater wetlands mapping to identify potential wetland features present within the Project Corridor. More importantly, CHA used the previous wetland delineation prepared for this Project Corridor for the purposes of verifying and modifying the previous delineation. Refer to Attachment 2 for NWI and NYSDEC Freshwater Wetland & Stream Mapping and Attachment 3 for NRCS Soil Mapping.

Ditches that met the three parameters for wetland delineation (i.e., presence of hydrology, hydric soils, and hydrophytic vegetation) were identified as a wetland community. Those that did not, but carried stream flow from off-site (redirecting flow through the ditch), were categorized as streams.

Waterbodies within the Project Corridor, including streams under NYSDEC Article 15 jurisdiction, were identified by the presence of an ordinary high-water mark (OHWM) or stream

channel. Delineation and flagging were completed to identify the ordinary high-water mark (OHWM) for most perennial and intermittent streams.

This report documents the wetlands and waterbodies potentially under federal and State jurisdiction that were identified in the Project Corridor along the current proposed underground transmission cable route. Summaries of wetlands that were identified are provided in Table 4-1 in Attachment 4. Wetlands and Waterbodies Delineation Mapping is included in Attachment 5. Wetland determination data forms and photographic documentation of the wetlands are included in Attachment 1.

4.0 WETLAND & WATERBODIES DELINEATION RESULTS

A total of 23 wetland areas totaling approximately 22.8 acres. Table 4-1 in Attachment 4 provides a summary of the wetlands identified along the Project Corridor, including their classification in accordance with Cowardin et al. (1979) and their state or federal jurisdiction. Of these delineated wetlands, two (2) correspond with wetlands mapped by the NYSDEC. These include NYSDEC mapped wetlands HS-101 and CS-23.

Narrative descriptions of wetland vegetation, hydrology, and soils observed within the Project Corridor are presented in the following sections. The wetlands and waterbodies delineated within the surveyed areas are summarized in Table 4-1 and Table 4-2. Table 4-3 provides the soil series information. Refer to Attachment 4 for each of these tables. The Wetlands and Waterbodies Delineation Mapping provided in Attachment 5 shows the locations of delineated wetlands and waterbodies. Photographs of the waterbodies can be found in Attachment 6.

4.1 VEGETATION

Vegetative communities within wetlands are described according to *Ecological Communities of New York State, Second Edition* (Edinger 2014)[1] and *Classification of Wetlands and Deepwater*

[1] Edinger, G. J., D. J. Evans, S. Gebauer, T. G. Howard, D. M. Hunt, and A. M. Olivero (editors). 2014. *Ecological* Communities *of New York State.* Second Edition. A revised and expanded edition of Carol Reshke's *Ecological*

Habitats of the United States (Cowardin 1979)[2]. Using this hierarchical wetland classification system three primary cover types were identified for vegetated wetlands in the Project Corridor. These include palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetlands. Some wetlands contained multiple community types. Open water areas (i.e. ponds) were identified as palustrine unconsolidated bottom (PUB).

4.1.1 Palustrine Emergent Wetland

The palustrine emergent wetland cover type is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens (Cowardin et. al., 1979), and with less than 50 percent aerial cover by shrubs and/or trees. The freshwater emergent wetlands along the Project Corridor primarily include shallow emergent marsh, common reed marsh and purple loosestrife marsh (Edinger et. al., 2014).

Shallow emergent marshes occur on mineral soils or deep muck soils that are permanently saturated and seasonally flooded. Water depths range from 6 inches to 3.3 feet during flood stages (Edinger et. al., 2014). Characteristic vegetation of shallow emergent marshes within the Project Corridor includes sensitive fern (*Onoclea sensibilis*), rough goldenrod (*Solidago rugosa*), giant goldenrod (*Solidago gigantea*), devil's beggarticks (*Bidens frondosa*), scouring rush (*Equisetum hyemale*), field horsetail (*Equisetum arvense*), cattails (*Typha* spp.), sedges (*Carex spp*.), asters (*Symphyotrichum spp.*), reed canary grass (*Phalaris arundinacea*) and soft rush (*Juncus effusus*). Invasive species observed within the shallow emergent marshes include common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*) honeysuckle (*Lonicera spp*.) and common buckthorn (*Rhamnus cathartica*).

Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

[2] Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe, 1979. *Classification of wetlands and deepwater habitats of the United States*. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

Common reed marsh and purple loosestrife marsh consist of disturbed marshes where common reed or purple loosestrife has become dominant (Edinger et. al., 2014). This community was commonly found within disturbed areas adjacent to the rail bed.

Linear wetland ditches, which have been constructed for drainage or irrigation, are commonly found along the railroad and road ROW's. Vegetation within the ditches is typically dominated by invasive species such as common reed, purple loosestrife, and reed canary grass; however, some areas may be dominated by native, non-invasive wetland species.

4.1.2 Palustrine Scrub-Shrub Wetland

The scrub-shrub wetland cover type includes areas that are dominated by shrubs and saplings that are less than 6 meters (20 feet) tall (Cowardin et. al., 1979), and have less than 50 percent aerial cover by trees. Scrub-shrub wetlands along the Project Corridor were dominated by silky dogwood (*Cornus amomum*), gray dogwood (*Cornus racemosa*), common buckthorn and honeysuckle. Other vegetation observed includes red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), pussy willow (*Salix discolor*), gray birch (*Betula populifolia*), black willow (*Salix nigra*), sensitive fern, moneywort (*Lysimachia nummularia*) and field horsetail. Invasive species observed include honeysuckle and common buckthorn.

4.1.3 Palustrine Forested Wetland

Forested wetland cover types are dominated by trees and shrubs that have developed a tolerance to a seasonal high-water table. For a community to be characterized as forested, a wetland must be dominated by trees and shrubs that are at least six meters tall (Cowardin et. al., 1979). Forested wetlands typically have a mature tree canopy, and depending upon the species and density, can have a broad range of understory and groundcover community components (Edinger et al., 2014). Forested wetland communities along the Project Corridor include red maple hardwood swamp.

Red maple-hardwood swamps occur in poorly drained depressions, usually on inorganic soils. Red maple is either the only dominant tree species or is codominant with one or more hardwoods (Edinger et. al, 2014). Hardwood species observed within this community type within the Project Corridor include red maple, green ash, American elm (*Ulmus americana*), gray birch, swamp white oak (*Quercus bicolor*) and white pine (*Pinus strobus*). Shrub species commonly observed include

dogwoods, gray birch, spicebush (*Ilex verticillata*), American elm and honeysuckle. The herbaceous layer typically includes sensitive fern, field horsetail, moneywort and young growth of the tree and shrub species. Invasive species primarily included honeysuckle and buckthorn.

4.1.4 Open Water

There is one small pond located along the Project Corridor adjacent to the railroad ROW. As previously noted, this open water community is identified as palustrine unconsolidated bottom (PUB). It is characterized by a vegetation cover of less than 30 percent, although emergent and shrubby vegetation borders the open water area.

4.2 HYDROLOGY

4.2.1 Streams

Table 4-2 lists the 17 streams (perennial (4), intermittent (13)) identified within the Project Corridor, which is located within the Lower Hudson Watershed. This watershed extends from the Battery at the southern end of Manhattan to the Troy Dam at the confluence of the Mohawk River. The basin is 12,800 square miles, most of which is within New York State (NYSDEC 2022). Perennial waterbodies within the Project Corridor include the Catskill Creek, Post Creek and Hans Vosenkill, as well as several unnamed tributaries identified on USGS Topographic Maps and/or identified during the field delineation.

4.2.2 Wetlands

Site hydrology was examined within each wetland and adjacent upland areas. Indicators of wetland hydrology included surface water (A1), high water table (A2), saturation (A3), water-stained leaves (B9), drainage patterns (B10), presence of reduced iron (C4), geomorphic position (D2), microtopographic relief (D4) and FAC-neutral test (D5) (Attachment 1). Hydrologic factors contributing to the presence of wetland hydrology within wetlands in the Project Corridor included inundation with pond or stream water, temporarily ponded runoff, and seasonally to permanently shallow groundwater tables.

Hydrology along the Project Corridor has been historically altered by road and railroad drainage ditches. These ditches were inspected for the presence or absence of wetland indicators and hydrologic connectivity to wetlands or streams. Ditches that met the three parameters for wetland delineation (i.e., presence of hydrology, hydric soils, and hydrophytic vegetation) were identified as a wetland community.

4.3 SOILS

The United States Department of Agriculture NRCS soil map units for the Project Corridor are provided in Attachment 3. Hydric soil indicators include depleted matrix (F3) and redox dark surface (F6) (Attachment 1). Within the Project Corridor, a total of 25 different soil types are mapped by the NRCS. The mapped soil types range from somewhat excessively drained to very poorly drained soils. According to the soil map descriptions (Attachment 3 and Attachment 4-Table 4-3), four (4) of the soils mapped within the Project Corridor are rated as hydric soils (Covington and Madalin soils, Fluvaquents-Udifluvents complex, frequently flooded, Medisaprist, inundated and Medisaprist-Hydraquents, tidal marsh). Hydric soils are defined as soils "that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil" (Federal Register, 1994). Table 4-3 summarizes the soil series in the Project Corridor and lists the soils that are classified as hydric (or associated with wetland hydrology) in the Project Corridor.

Many soils within the Project Corridor are formed from glacial parent materials including outwash, dense till, loose till, and glaciomarine deposits. In active floodplains, soils are formed in recent alluvium. Anthropogenically disturbed soils, associated with road and railroad construction and operation, are common within the Project Corridor. The disturbed soils consist of disturbed natural deposits or human transported materials.

4.4 NATURAL RESOURCE CONSERVATION SERVICE SOIL SERIES DESCRIPTIONS

The following are the abbreviated descriptions of each of the relevant soil types taken from the USDA Web Soil Survey (NRCS 2022). Soils survey mapping and additional information regarding relevant soil characteristics are provided in Attachment 3.

Covington & Madalin Series (Co)

The Covington soils are very deep and poorly drained soils formed in calcareous glaciolacustrine and estuarine clays on glacial lake plains. Slopes range from 0 to 8 percent. The A horizon consists of very dark brown silty clay with strong medium and coarse granular structure. The B horizon is dark gray to very dark gray clay with a weak to strong structure. The C horizon is dark gray clay with a weak to moderate structure.

The Madalin soils are very deep poorly drained soils formed in water deposited materials on lake plains and depressions in uplands. Slopes range from 0 to 3 percent. The A horizon is very dark gray silt loam with moderate medium subangular structure. The B horizon is dark grayish brown with a silty clay texture. The structure is weak subangular. The C horizon is grayish brown stratified silt to clay with moderate medium platy structure.

Fluvaquents (Fu)

These very deep, somewhat poorly drained to very poorly drained soils formed in material recently deposited by rivers and streams. These soils are found on the most actively flooded areas of floodplains along secondary and major streams. The slopes range from 0 to 3 percent. Little or no soil profile development is seen in Fluvaquents. The surface layer typically has a hue of 10YR through 5Y, with low value and chroma. The textures are loamy sand to silt loam and may be gravelly or very gravelly. The substratum typically has a hue of 10YR to 5Y with values of 3 through 6 and chroma of less than 2. The textures are sandy loam to silty clay loam and may be gravelly or very gravelly.

Farmington Series (FaC, FaD and FaE)

These shallow, well drained and somewhat excessively drained soils formed in till. Slopes range from 0 to 70 percent and bedrock is at a depth of 10 to 20 inches. The A horizon is dark grayish brown silt loam with moderate medium and fine granular structure. The B horizon is composed of a yellowish brown or brown silt loam to loam with weak or moderate, fine or medium subangular or granular structure. The R horizon is dominantly limestone, dolomite, or dolomitic limestone bedrock.

Hudson & Vergennes Series (HvB, HvC, HvE, HwC3 & HwD3)

The Hudson soils are very deep, moderately well drained soils formed in clayey and silty lacustrine sediments. These soils are in convex lake plains, dissected lower valley side slopes and rolling through hilly moraines. Slopes can range from 0 to 60 percent. The A horizon is brown silt loam with moderate medium granular structure. The E horizon, when present, is brown silt loam with weak thick platy structure. The B horizon is yellowish brown to brown silty clay with moderate very coarse prismatic structure. The C horizon is mixed grayish brown and light olive brown silty clay, with massive structure, or plate-like divisions.

The Vergennes soils are very deep, moderately well drained soils on glacial lake plains. These soils formed in calcareous estuarine and glaciolacustrine clays. Slopes range from 0 to 50 percent. The A horizon is dark grayish brown clay with weak medium and coarse subangular blocky structure. Occasionally, a clay, silty clay, silty clay loam, or silt loam E horizon is present. The B horizon is typically brown clay, with more dark grayish brown color with depth. The C horizon is generally clay with silt and silty clay varves.

Kingsbury & Rhinebeck Series (KrA & KrB)

Kingsbury soils are very deep, somewhat poorly drained soils formed in lacustrine or marine sediments. They are nearly level and gently sloping on lake plains. Slopes range from 0 to 8 percent slope. The A horizon is very dark grayish brown silty clay with strong medium granular structure. The E horizon is mixed brown and yellowish brown silty clay. The B horizon consists dark grayish brown clay angular or subangular blocky structure, within coarse or very coarse

prisms in some pedons. The C horizon generally has similar color to the deeper portions of the B horizon, although redoximorphic features generally have lower contrast. This horizon ranges from silty clay loam to clay, and has massive structure, which, when disturbed, can part into aggregates resembling very fine blocky structure.

Rhinebeck soils are very deep, somewhat poorly drained soils formed in clayey lacustrine sediments. They are found on glacial lake plains and uplands mantled with lake sediments. Slopes range from 0 to 15 percent. The A horizon is very dark grayish brownish silt loam with moderate medium granular structure. The B horizon is light olive brown silty clay or silty clay loam with moderate medium subangular blocky structure. The C horizon varies in texture and is massive or varved, or have very coarse prismatic structure in the upper part.

Nassau Series (NaC, NrC, NrD & NrE)

These shallow, somewhat excessively drained soils formed in channery till derived from acid shale and slate. They are nearly level to very steep soils that overlie shale bedrock. Slopes range from 0 to 70 percent. The A horizon is dark brown channery silt loam with weak fine granular structure. The B horizon is yellowish brown very channery silt loam with weak fine subangular blocky structure. The C horizon is greenish gray folded shale interbedded with red and green shale.

Riverhead Series (RhA, RhB, RhC & RhD)

These very deep, well drained soils formed in glacial outwash, deposits. They can be found on beaches, water-sorted moraines, valley trains and outwash plains. Slopes range from 0 to 50 percent. The A horizon is brown sandy loam with weak fine granular structure. The B horizon is strong brown to yellowish brown with a sandy loam to loamy sand texture, becoming gravelly with depth. The C horizon is yellowish brown, brown or very pale brown gravelly loamy sand or sand. It is structureless.

Tunkhannock and Chenango Series (TwE)

Tunkhannock soils are very deep, well to somewhat excessively drained soils. These soils formed in water-sorted glacial material derived from reddish sandstone, siltstone, and shale. Slope ranges

from 0 to 60 percent. The A horizon is brown gravelly loam with weak granular structure. The B horizon is brown or reddish brown gravelly loam. The C horizon is reddish brown extremely gravelly loamy sand and stratified loamy fine sand.

The Chenango soils are very deep, well and somewhat excessively well drained soils. These soils formed in water-sorted material on alluvial fans, kames, eskers, terraces and outwash plains. Slopes range for 0 to 60 percent. The A horizon is very dark grayish brown with weak fine and medium granular structure. The B horizon is dark yellowish brown to brown gravelly silt loam and the C horizon is dark grayish brown extremely gravelly loamy coarse sand.

Udorthents (Ur)

These are very deep, nearly level to gently sloping areas of well drained loamy soils that are a result of man-made cuts and fills in loamy upland soils. Slopes range from 0 to 8 percent. Typically, the surface layer is dark brown silt loam extending to 5 inches. Layers below the surface are brown and yellowish-brown silt loam containing up to 80 percent rock fragments to a depth of 72 inches or more.

5.0 SUMMARY

Wetlands identified along the Project Corridor include shallow emergent marsh, common reed marsh, shrub swamp and red maple-hardwood swamp. A small pond also occurs. Stream communities include artificial ditches, intermittent streams, and perennial streams. NYS freshwater wetland C-23 needs to be delineated when the access roads and staging areas are delineated, and may consist of freshwater tidal marsh and freshwater tidal swamp communities.

Land use in the Project Corridor is diverse, ranging from rural, agricultural, and forested areas to more developed areas such as the Town of Rotterdam. Because most of the Project Corridor consists of existing railroad and roadway corridors, many wetlands are characterized by previous anthropogenic disturbance and/or the presence of invasive plant species. The wetland boundaries abutting the rail or road are typically defined by the edge of the soil fill for the railroad and highway embankments.

Confirmation of the wetland boundaries are the responsibility of the involved regulatory agencies with jurisdiction over wetlands and waterbodies within this Phase of the overall project. As previously noted, wetlands within Segment 11-Package 7A Project Corridor are regulated by USACE (Section 10/404) and the NYSDEC (Article 24). Streams and other waterbodies are regulated by USACE (Section 10/404) and NYSDEC (Article 15). Based on review of the NYSDEC wetland mapping, three wetland areas are identified as regulated under Article 24. These wetlands correspond to two mapped wetland (HS-101 and C-23), and they are regulated by NYSDEC. It is anticipated that USACE will take jurisdiction over all the mapped wetlands within the Project Corridor and NYSDEC will take jurisdiction over the three wetlands associated with NYSDEC freshwater wetlands. Final jurisdictional determinations will be made by the respective agencies.

6.0 REFERENCES

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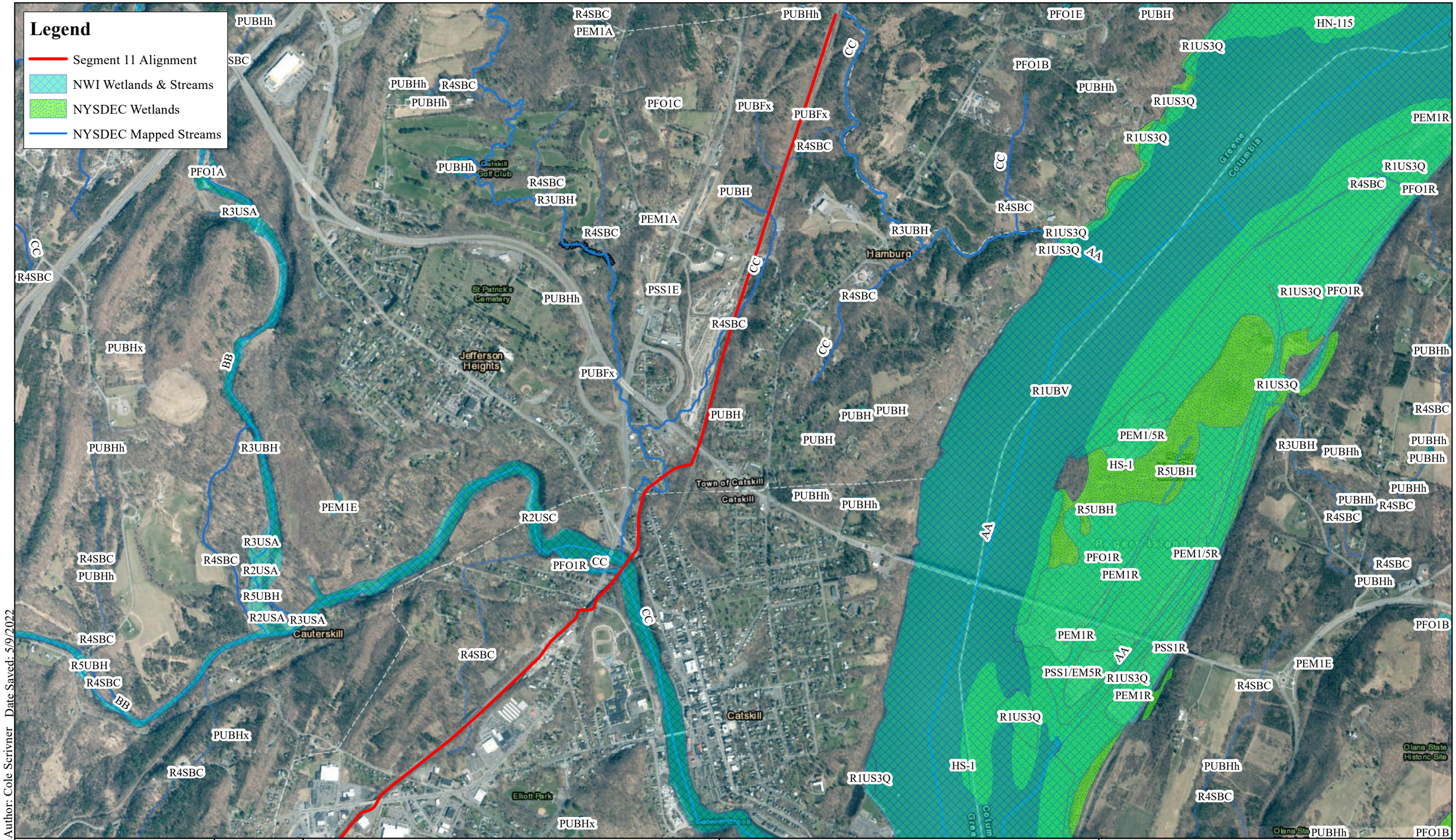
ATTACHMENT 1
WETLAND DETERMINATION DATA SHEETS AND WETLAND PHOTOGRAPHS

(Data Sheets Pending)

ATTACHMENT 2
NWI & NYSDEC WETLAND & STREAM MAPS



Author: Cole Scrivner Date Saved: 5/9/2022

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Page 1 of 3

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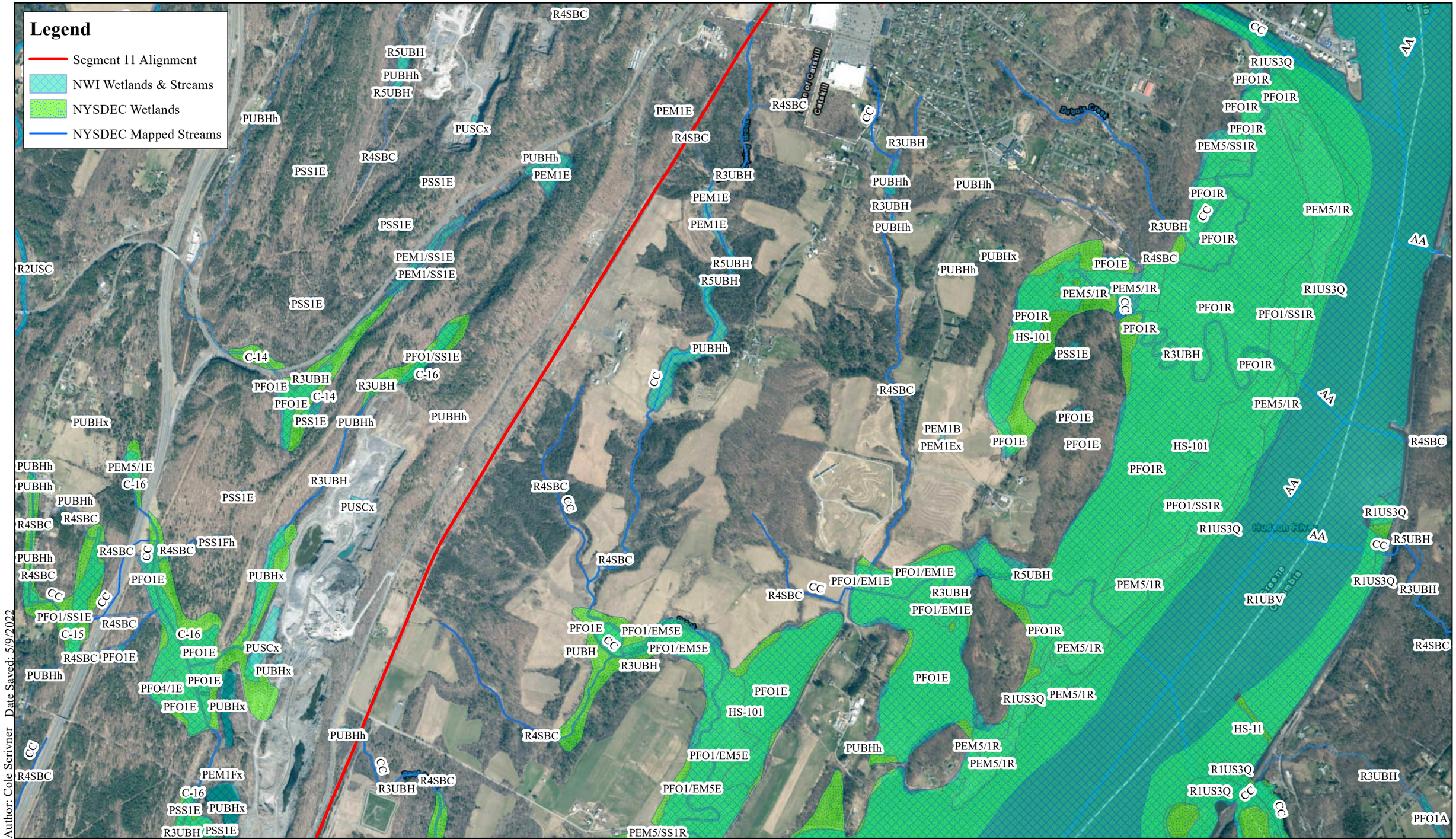
Champlain Hudson Power Express
Segment 11-Package 7A Wetland & Stream Map
(NWI and NYSDEC)

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community.
Wetland layers obtained from USFWS NWI and NYSDEC



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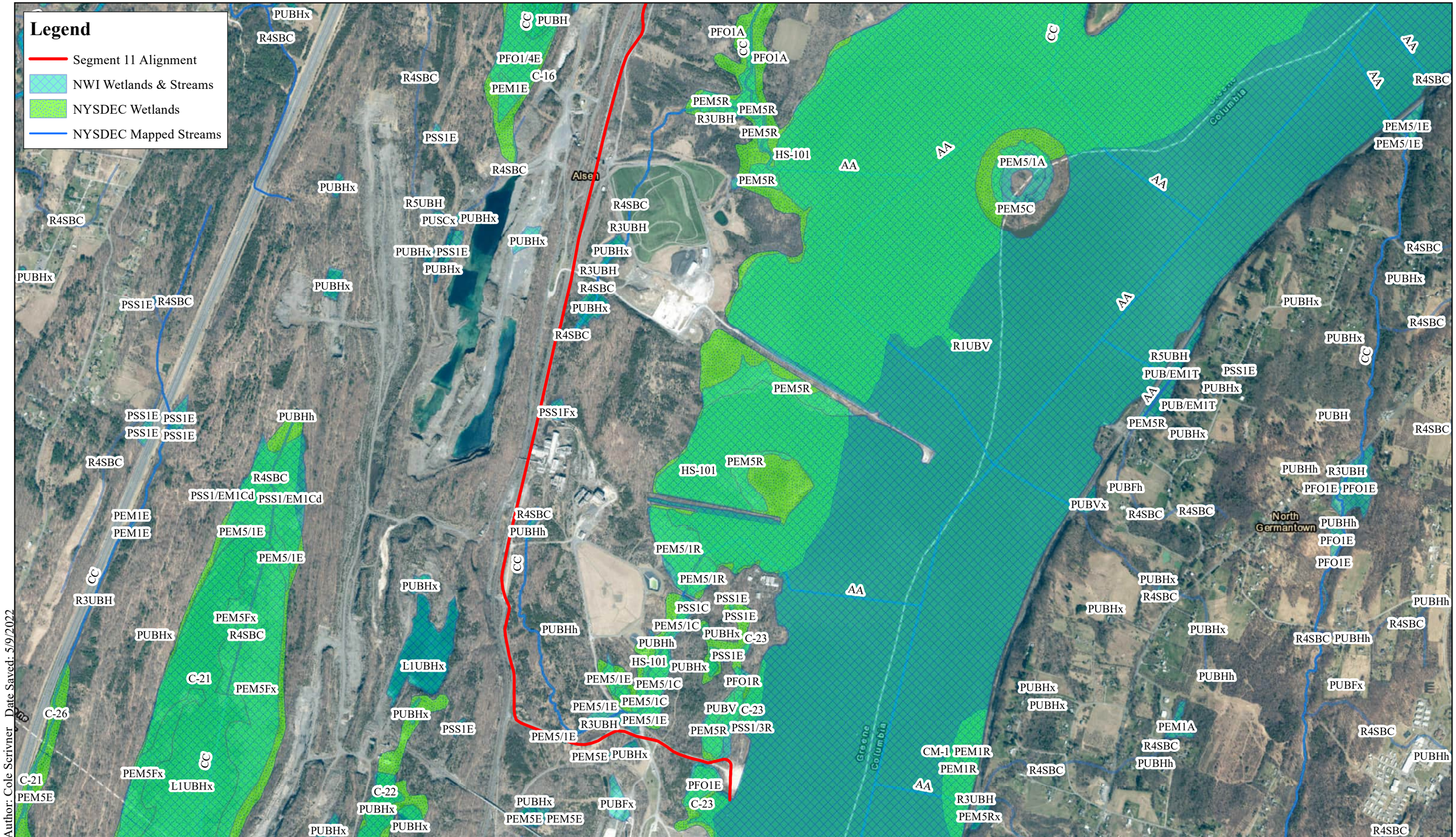
Champlain Hudson Power Express
Segment 11-Package 7A Wetland & Stream Map
(NWI and NYSDEC)

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community.
Wetland layers obtained from USFWS NWI and NYSDEC



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ATTACHMENT 3
NRCS SOIL MAPS

Legend

Segment 11 Alignment

Greene County Soils (NY039)

- Co
- Fu
- HvB; HvC; HvE
- HwC3; HwD3
- KrA; KrB
- NaC
- NrC; NrD; NrE
- RhA; RhB; RhC; RhD
- TwE
- Ur
- W

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Page 1 of 3

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Champlain Hudson Power Express
Segment 11-Package 7A NRCS Soil Map

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.

Author: Cole Scrivner Date Saved: 5/9/2022

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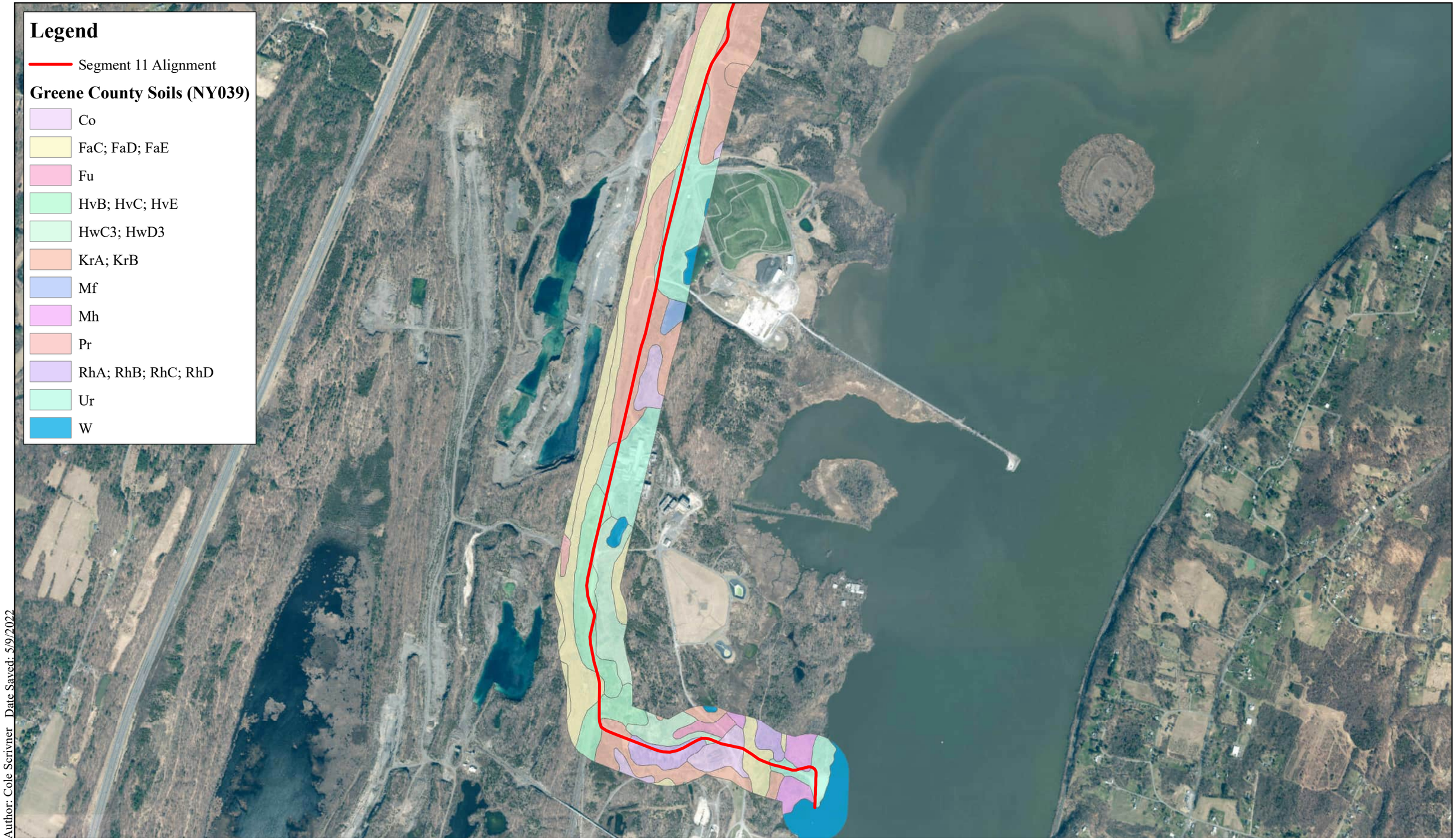
Champlain Hudson Power Express
Segment 11-Package 7A NRCS Soil Map

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.



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Champlain Hudson Power Express
Segment 11-Package 7A NRCS Soil Map

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Soil data was obtained from the NRCS.

ATTACHMENT 4
TABLES

Table 4-1 Summary of Wetlands Within the Project Corridor[1]						
Approximate Station	**Wetland ID**	**Cowardin Classification[2]**	**Associated Water Course**	**Area w/in JD Limits Square Feet (sf)**	**USACE & NYSDEC Jurisdiction**	**Coordinates (lat., long)**
70018+00	FA-AP	PSS	Unnamed Tributary to Hudson River	3,119	USACE	42.242398, -73.860002
70022+00	FA-AO	PSS	Unnamed Tributary to Hudson River	30,821	USACE	42.241043, -73.860591
70030+00	FA-AN	PEM	Unnamed Tributary to Hudson River	66,879	USACE	42.23827, -73.861857
70044+00	AC	PFO	Unnamed Tributary to Hudson River (38)	23,599	USACE	42.235033, -73.863237
70066+00	BC	PEM	Unnamed Tributary to Hudson River	18,448	USACE	42.229184, -73.865645
70074+00	M-1	PEM	Hans Vosen Kill (S-3)	5,372	USACE	42.228397, -73.86697
70081+00	B	PFO	Hans Vosen Kill (S-3)	5,669	USACE	42.226976, -73.869171
70158+50	CC	PSS	Unnamed Tributary to Hudson River (42)	32,665	USACE	42.210904, -73.887281
70185+00	DC	PEM/PFO	Unnamed Tributary to Hudson River	11,727	USACE	42.204503, -73.892862
70204+00	EC	PEM	Unnamed Tributary to Hudson River	152,732	USACE	42.199067, -73.897135
70242+00	FC	PSS	Unnamed Tributary to Hudson River	113,040	USACE	42.189994, -73.904347
70281+00	GC	PEM	Post Creek (47)	109,847	USACE	42.179533, -73.910472
70309+00	HC	PEM	Unnamed Tributary to Hudson River	20,651	USACE	42.174732, -73.913022
70322+00	IC	PEM	Unnamed Tributary to Hudson River (49)	2,705	USACE	42.171447, -73.914034
70335+00	JC	PEM	Unnamed Tributary to Hudson River	43,313	USACE	42.167695, -73.915718
70346+00	KC	PEM	Unnamed Tributary to Hudson River (50)	210,876	USACE	42.161808, -73.917468
70388+00	LC	PEM/PFO	Unnamed Tributary to Hudson River	14,540	USACE	42.153977, -73.919912
70393+00	MC	PEM	Unnamed Tributary to Hudson River	43,664	USACE	42.15224, -73.920688

Table 4-1 Summary of Wetlands Within the Project Corridor[1]						
Approximate Station	**Wetland ID**	**Cowardin Classification[2]**	**Associated Water Course**	**Area w/in JD Limits Square Feet (sf)**	**USACE & NYSDEC Jurisdiction**	**Coordinates (lat., long)**
70399+00	O-1	PSS	Unnamed Tributary to Hudson River	7,820	USACE	42.15086, -73.920742
70435+00	P-1	PEM	Unnamed Tributary to Hudson River	15,205	USACE	42.145868, -73.913472
70438+50	E	PEM	Unnamed Tributary to Hudson River	6,434	USACE	42.14562, -73.912571
70439+00	NYS FWW HS-101	PEM	Unnamed Tributary to Hudson River	807	USACE NYSDEC (HS-101)	42.14566, -73.912218
70448+00	NYS FWW C-23	PEM5R & PSS1/3R	Hudson River	31,717	USACE NYSDEC (C-23)	42.14452, -73.9092

[1] Wetlands identified include both wetlands that are directly crossed by the overland transmission cable corridor as well as wetlands that are adjacent to the Project Corridor that were delineated during field surveys.

[2]Cowardin et al. 1979 categories include: Palustrine Emergent (PEM), Palustrine Forested (PFO), Palustrine Scrub-Shrub (PSS) and palustrine unconsolidated bottom (PUB).

Table 4-2 Summary of Waterbodies within the Project Corridor									
Approximate Station	**Waterbody Name**	**NYSDEC Classification**	**Waterbody Field ID**	**Flow Status**	**Substrate**	**Width (ft.)[1]**	**Depth (ft.)[1]**	**Length w/in JD Boundary**	**Coordinates (lat., long)**
70006+25	Unnamed Tributary to Hudson River	Unmapped	FA-S-AQ	Intermittent	Cobble-gravel/silt	9	0.5	81	42.245593, -73.858556
70047+50	Unnamed Tributary to Hudson River	C/C	38	Intermittent	-	-	-	146	42.235001, -73.863301
70061+00	Unnamed Tributary to Hudson River	C/C	39	Intermittent	-	-	-	339	42.231649, -73.864851
70075+00	Unnamed Tributary to Hudson River	Unmapped	S-2	Intermittent	-	-	-	155	42.228292, -73.864851
70076+50	Hans Vosen Kill	C/C	S-3 (Hans Vosen Kill)	Perennial	-	15	3	146	42.228006, -73.867619
70079+00	Hans Vosen Kill	C/C	156	Perennial					42.227506, -73.868409
70092+00	Catskill Creek	C/C	Catskill Creek	Perennial	-	350	-	219	42.224215, -73.869898
70125+75	Unnamed Tributary to Hudson River	Unmapped	41	Intermittent	-	-	-	144	42.216239, -73.88067
70155+00	Unnamed Tributary to Hudson River	C/C	42	Perennial	-	-	-	173	42.210888, -73.887398
70223+45	Unnamed Tributary to Hudson River	Unmapped	43	Intermittent	-	-	-	71	42.196194, -73.899554
70246+40	Unnamed Tributary to Hudson River	Unmapped	44	Intermittent	-	-	-	45	42.190882, -73.903962

70261+35	Unnamed Tributary to Hudson River	Unmapped	45	Intermittent	-	-	-	81	42.18715, -73.906231
70278+00	Unnamed Tributary to Hudson River	Unmapped	46	Intermittent	-	-	-	217	42.182855, -73.90869
70279+50	Post Creek	C/C	47	Perennial	-	-	-	127	42.182438, -73.908918
70283+00	Unnamed Tributary to Hudson River	Unmapped	47A	Intermittent	-	-	-	283	42.181531, -73.909288
70303+00	Unnamed Tributary to Hudson River	Unmapped	48	Intermittent	-	-	-	301	42.176197, -73.912254
70324+50	Unnamed Tributary to Hudson River	Unmapped	49	Intermittent	-	-	-	134	42.171095, -73.914279
70353+70	Unnamed Tributary to Hudson River	Unmapped	50	Intermittent	-	-	-	78	42.163369, -73.916965

[1] Bankfull width and bankfull depth measurements are approximate.

Table 4-3 Soil Description Summary					
County	**Soil Name**	**Symbol**	**% Slopes**	**Hydric (y/n)**	**Drainage Class**
Hydric Soils					
Greene	Covington and Madalin soils	Co	0-3	Y	Poorly Drained
Greene	Fluvaquents-Udifluvents complex, frequently flooded	Fu	0-3	Y	Poorly Drained
Greene	Medisaprist, inundated	Mf	0-1	Y	Very Poorly Drained
Greene	Medisaprist-Hydraquents, tidal marsh	Mh	0-1	Y	Very Poorly Drained
Non-hydric Soils					
Greene	Farmington gravelly silt loam, rolling, rocky	FaC	8-15	N	Well Drained
Greene	Farmington gravelly silt loam, hilly, rocky	FaD	15-25	N	Well Drained
Greene	Farmington gravelly silt loam, steep, rocky	FaE	15-25	N	Somewhat Excessively Drained
Greene	Hudson and Vergennes soils	HvB	3-8	N	Moderately Well Drained
Greene	Hudson and Vergennes soils	HvC	8-15	N	Moderately Well Drained
Greene	Hudson and Vergennes soils	HvE	25-50	N	Moderately Well Drained
Greene	Hudson and Vergennes silty clay loams	HwC3	8-15	N	Moderately Well Drained
Greene	Hudson and Vergennes silty clay loams	HwD3	15-25	N	Moderately Well Drained
Greene	Kingsbury and Rhinebeck soils	KrA	0-3	N	Somewhat Poorly Drained
Greene	Kingsbury and Rhinebeck soils	KrB	3-8	N	Somewhat Poorly Drained
Greene	Nassau channery silt loam, rolling	NaC	5-15	N	Somewhat Excessively Drained
Greene	Nassau channery silt loam, rolling, very rocky	NrC	8-15	N	Somewhat Excessively Drained
Greene	Nassau channery silt loam, hilly, very rocky	NrD	15-25	N	Somewhat Excessively Drained

Table 4-3 Soil Description Summary					
County	**Soil Name**	**Symbol**	**% Slopes**	**Hydric (y/n)**	**Drainage Class**
Greene	Nassau channery silt loam, steep, very rocky	NrE	25-45	N	Somewhat Excessively Drained
Greene	Pits, quarry	Pr	-	-	-
Greene	Riverhead loam	RhA	0-3	N	Well Drained
Greene	Riverhead loam	RhB	3-8	N	Well Drained
Greene	Riverhead loam, rolling	RhC	8-15	N	Well Drained
Greene	Riverhead loam, hilly	RhD	15-25	N	Well Drained
Greene	Tunkhannock and Chenango gravelly loams	TwE	25-50	N	Well Drained
Greene	Udorthents, loamy	Ur	0-8	N	Somewhat Excessively Drained

ATTACHMENT 5
WETLANDS AND WATERBODIES DELINEATION MAPPING

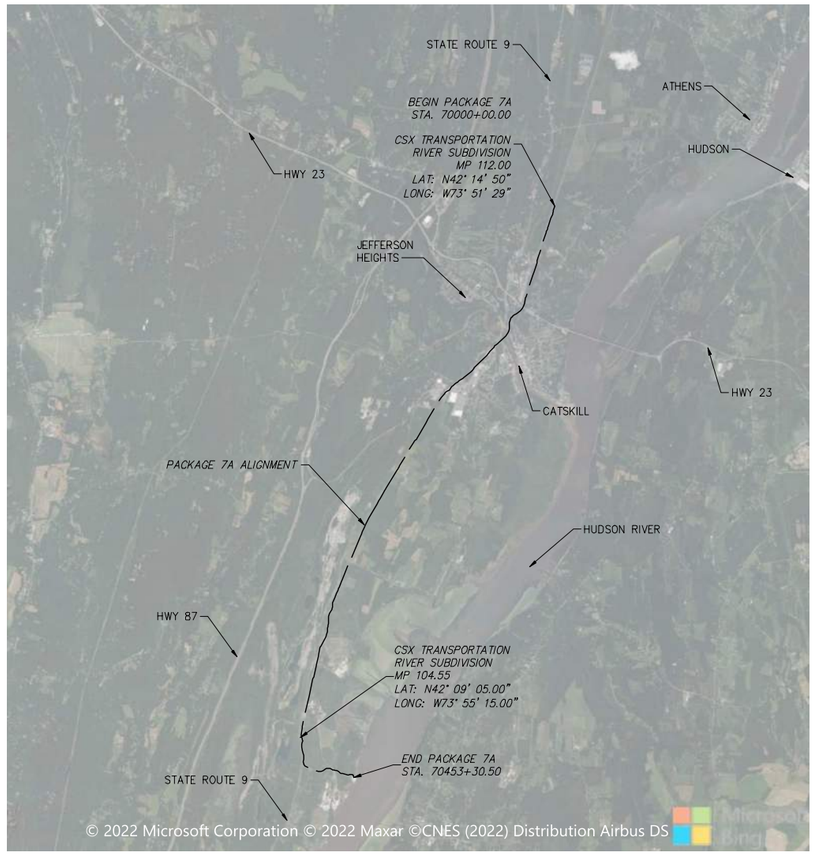
(Cementon Transitional HDD Project Area Plans Only)

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 11 - (PACKAGE 7A) - CSX: CATSKILL

GREENE COUNTY, NEW YORK

INTERIM DESIGN DEVELOPMENT PLANS



SITE LOCATION MAP
SCALE: 1" = 5000'

NOTES TO REVIEWERS

1. Supplemental topographic information for numerous areas including Temp Site Access Roads is in the process of being obtained. Utility, Right-of-Way, and Wetland information from the beginning of Package 7A to Sta. 70030+00 is not currently available and is in the process of being obtained.

2. The design of the Horizontal Directional Drill (HDD) alignments and locations is in progress and should be considered preliminary.

3. Permanent and Temporary. Easements are preliminary (in some cases approximate) and are shown to indicate potential and likely areas where easements may be required.

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
COVER SHEET

DRAWN BY: RB | DESIGNED BY: AC | APPROVED BY: EJK | SCALE AS SHOWN | REV. NO. D

KIEWIT PROJECT NO.	
21162	
TT PROJECT NO.	
204-3701	
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SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
PACKAGE 7A: GENERAL SHEETS	
G-000	COVER SHEET
G-001	SHEET INDEX
G-002	GENERAL NOTES
G-003	LEGEND, & ABBREVIATIONS
G-004	PLAN AND PROFILE KEY MAP
G-005	SPLICE LOCATION TABLE AND SURVEY NOTES
PACKAGE 7A: PLAN AND PROFILE SHEETS	
C-101	STA. 70000+00.00 TO STA. 70015+00.00 PLAN AND PROFILE
C-102	STA. 70015+00.00 TO STA. 70030+00.00 PLAN AND PROFILE
C-103	STA. 70030+00.00 TO STA. 70045+00.00 PLAN AND PROFILE
C-104	STA. 70045+00.00 TO STA. 70060+00.00 PLAN AND PROFILE
C-105	STA. 70060+00.00 TO STA. 70075+00.00 PLAN AND PROFILE
C-106	STA. 70075+00.00 TO STA. 70090+00.00 PLAN AND PROFILE
C-107	STA. 70090+00.00 TO STA. 70105+00.00 PLAN AND PROFILE
C-108	STA. 70105+00.00 TO STA. 70120+00.00 PLAN AND PROFILE
C-109	STA. 70120+00.00 TO STA. 70135+00.00 PLAN AND PROFILE
C-110	STA. 70135+00.00 TO STA. 70150+00.00 PLAN AND PROFILE
C-111	STA. 70150+00.00 TO STA. 70165+00.00 PLAN AND PROFILE
C-112	STA. 70165+00.00 TO STA. 70180+00.00 PLAN AND PROFILE
C-113	STA. 70180+00.00 TO STA. 70195+00.00 PLAN AND PROFILE
C-114	STA. 70195+00.00 TO STA. 70210+00.00 PLAN AND PROFILE
C-115	STA. 70210+00.00 TO STA. 70225+00.00 PLAN AND PROFILE
C-116	STA. 70225+00.00 TO STA. 70240+00.00 PLAN AND PROFILE
C-117	STA. 70240+00.00 TO STA. 70255+00.00 PLAN AND PROFILE
C-118	STA. 70255+00.00 TO STA. 70270+00.00 PLAN AND PROFILE
C-119	STA. 70270+00.00 TO STA. 70285+00.00 PLAN AND PROFILE
C-120	STA. 70285+00.00 TO STA. 70300+00.00 PLAN AND PROFILE
C-121	STA. 70300+00.00 TO STA. 70315+00.00 PLAN AND PROFILE
C-122	STA. 70315+00.00 TO STA. 70330+00.00 PLAN AND PROFILE
C-123	STA. 70330+00.00 TO STA. 70345+00.00 PLAN AND PROFILE
C-124	STA. 70345+00.00 TO STA. 70360+00.00 PLAN AND PROFILE
C-125	STA. 70360+00.00 TO STA. 70375+00.00 PLAN AND PROFILE
C-126	STA. 70375+00.00 TO STA. 70390+00.00 PLAN AND PROFILE
C-127	STA. 70390+00.00 TO STA. 70405+00.00 PLAN AND PROFILE
C-128	STA. 70405+00.00 TO STA. 70420+00.00 PLAN AND PROFILE
C-129	STA. 70420+00.00 TO STA. 70435+00.00 PLAN AND PROFILE
C-130	STA. 70435+00.00 TO STA. 70450+00.00 PLAN AND PROFILE
C-131	STA. 70450+00.00 TO STA. 70453+30.43 PLAN AND PROFILE

PACKAGE 7A: ACCESS AND PROTECTION OF TRAFFIC PLANS	
C-501	WORK ZONE TRAFFIC CONTROL NOTES LEGEND AND ABBREVIATIONS
C-502	WORK ZONE TRAFFIC CONTROL
C-503	WORK ZONE TRAFFIC CONTROL
C-504	WORK ZONE TRAFFIC CONTROL
C-505	WORK ZONE TRAFFIC CONTROL
C-506	WORK ZONE TRAFFIC CONTROL
PACKAGE 7A: HDD TRENCHLESS PLANS	
C-312	PROPOSED PLAN AND PROFILE HDD 112
C-312.2	PROPOSED PLAN AND PROFILE HDD 112.2
C-313	PROPOSED PLAN AND PROFILE HDD 113
C-313.2	PROPOSED PLAN AND PROFILE HDD 113.2
C-314	PROPOSED PLAN AND PROFILE HDD 114
C-314.2	PROPOSED PLAN AND PROFILE HDD 114.2
C-315 P1	PROPOSED PLAN AND PROFILE HDD 115 PAGE 1
C-315 P2	PROPOSED PLAN AND PROFILE HDD 115 PAGE 2
C-315.2 P1	PROPOSED PLAN AND PROFILE HDD 115.2 PAGE 1
C-315.2 P2	PROPOSED PLAN AND PROFILE HDD 115.2 PAGE 2
C-317	PROPOSED PLAN AND PROFILE HDD 117
C-317.2	PROPOSED PLAN AND PROFILE HDD 117.2
C-318	PROPOSED PLAN AND PROFILE HDD 118
C-318.2	PROPOSED PLAN AND PROFILE HDD 118.2
C-319	PROPOSED PLAN AND PROFILE HDD 119
C-319.2	PROPOSED PLAN AND PROFILE HDD 119.2
C-320	PROPOSED PLAN AND PROFILE HDD 120
C-320.2	PROPOSED PLAN AND PROFILE HDD 120.2
C-322	PROPOSED PLAN AND PROFILE HDD 122
C-322.2	PROPOSED PLAN AND PROFILE HDD 122.2
C-323 P1	PROPOSED PLAN AND PROFILE HDD 123 PAGE 1
C-323 P2	PROPOSED PLAN AND PROFILE HDD 123 PAGE 2
C-323.2 P1	PROPOSED PLAN AND PROFILE HDD 123.2 PAGE 1
C-323.2 P2	PROPOSED PLAN AND PROFILE HDD 123.2 PAGE 2
PACKAGE 7A: EROSION AND SEDIMENT CONTROL PLANS	
C-401	STA. 70000+00 TO STA. 70030+00
C-402	STA. 70030+00 TO STA. 70060+00
C-403	STA. 70060+00 TO STA. 70090+00
C-404	STA. 70090+00 TO STA. 70120+00
C-405	STA. 70120+00 TO STA. 70150+00
C-406	STA. 70150+00 TO STA. 70180+00
C-407	STA. 70180+00 TO STA. 70210+00
C-408	STA. 70210+00 TO STA. 70240+00
C-409	STA. 70240+00 TO STA. 70270+00
C-410	STA. 70270+00 TO STA. 70300+00
C-411	STA. 70300+00 TO STA. 70330+00

C-412	STA. 70330+00 TO STA. 70360+00
C-413	STA. 70360+00 TO STA. 70390+00
C-414	STA. 70390+00 TO STA. 70420+00
C-415	STA. 70420+00 TO STA. 70450+00
C-416	STA. 70450+00 TO STA. 70453+50
PACKAGE 7A: DETAILS	
S-700	SPLICE VAULT PLAN & ELEVATION
S-701	SPLICE VAULT SECTION & DETAILS
S-710	LINK BOX HANDHOLE PLAN ELEVATION & SECTION
S-720	SELF SUPPORTING STRUCTURE OVER UTILITIES
S-730	TRANSITION VAULT PLAN & ELEVATION
S-731	TRANSITION VAULT SECTION DETAILS
S-770	COMMUNICATION HANDHOLE PLAN ELEVATION & SECTION
C-801	POLE MARKING DETIALS
PACKAGE 7A: ACCESS ROAD PLANS	
C-201	ACCESS ROADS OFF W. BRIDGE ST.
C-202	ACCESS ROADS OFF RTE 9W
C-203	ACCESS ROAD STA 7037+00 TO STA 70391+00

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
SHEET INDEX

DRAWN BY: RB | DESIGNED BY: AC | APPROVED BY: EK | SCALE AS SHOWN | REV. NO. D

KIEWIT PROJECT NO.	21162
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DRAWING NO.	G-001
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GENERAL NOTES:

1. THE PLANS SHOW SUBSURFACE STRUCTURES, ABOVE GROUND STRUCTURES AND/OR UTILITIES FROM FIELD LOCATION AND RECORD MAPPING, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE DIFFERENT FROM THAT SHOWN OR MAY NOT BE SHOWN, AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL, OR BLAST, CALL U.F.P.O. 1-(800)-962-7962 TOLL FREE.

2. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE ENGINEER.

3. THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD A CONDITION AS BEFORE BEING DISTURBED AS DETERMINED BY THE ENGINEER.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES, ETC. AND SHALL COMPLY WITH ALL REQUIRED PERMITS.

5. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS.

6. ALL PROPOSED UTILITIES AND APPURTENANCES TO BE CONSTRUCTED IN COMPLIANCE WITH THE LOCAL MUNICIPALITIES' CODES AND REGULATIONS GOVERNING THE INSTALLATION OF SUCH UTILITIES.

7. THE ENGINEER RESERVES THE RIGHT TO EXAMINE ANY WORK DONE ON THIS PROJECT AT ANY TIME TO DETERMINE THE CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OF THIS PROJECT.

8. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A NEW YORK STATE LICENSED LAND SURVEYOR.

9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND COORDINATE WORK WITH ALL OTHER CONTRACTS FOR THE SITE.

10. THE CONTRACTOR SHALL:

    A. VERIFY ALL CONDITIONS IN THE FIELD PRIOR TO COMMENCEMENT OF WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
    B. EXAMINE THE SITE AND INCLUDE IN HIS WORK THE EFFECT OF ALL EXISTING CONDITIONS ON THE WORK.
    C. PROVIDE AND INSTALL ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH RECOGNIZED GOOD STANDARD PRACTICE.

11. ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST REVISIONS OF NEW YORK STATE INDUSTRIAL CODE RULE 23 AND OSHA REGULATIONS FOR CONSTRUCTION. SHEET PILING SHALL BE DESIGNED AND SEALED BY A NEW YORK STATE PROFESSIONAL ENGINEER.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK AND SHALL SUBMIT A DEWATERING PLAN DESIGNED AND SEALED BY A NEW YORK STATE PROFESSIONAL ENGINEER. CONTRACTOR SHALL MAINTAIN EXISTING SITE DRAINAGE PATTERNS THROUGHOUT CONSTRUCTION UNLESS OTHERWISE SHOWN ON THE PLANS.

13. MAINTAIN FLOW FOR ALL EXISTING UTILITIES.

14. ALL FRAMES/COVERS WITHIN PAVED AREAS SHALL HAVE THE TOPS SET FLUSH WITH THE EXISTING PAVEMENT GRADE. IN LANDSCAPED AREAS, ALL FRAMES SHALL BE 0.1' ABOVE GRADE.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE CONTRACTOR SHALL TAKE TIES TO ALL UTILITY CONNECTIONS AND PROVIDE MARKED-UP AS-BUILT PLANS FOR ALL UTILITIES SHOWING TIES TO CONNECTIONS, BENDS, VALVES, LENGTHS OF LINES, AND INVERTS. AS-BUILT PLANS SHOWING ALL UNDERGROUND UTILITIES INSTALLED OR ENCOUNTERED SHALL BE REVIEWED BY THE OWNER AND HIS REPRESENTATIVES. THE CONTRACTOR SHALL PROVIDE ANY CORRECTION OR ADMISSIONS TO THE SATISFACTION OF THE OWNER AND HIS REPRESENTATIVES BEFORE UTILITIES WILL BE ACCEPTED.

16. TEMPORARY PAVEMENT SHALL BE PLACED WITHIN 48 HOURS OF COMPLETION OF BACKFILL OPERATIONS WITHIN THE EXISTING PAVEMENT LIMITS.

17. CONTRACTOR SHALL MAINTAIN ALL TRAFFIC IN ALL AREAS IN ACCORDANCE WITH THE NYSDOT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

18. ALL EXCAVATIONS SHALL BE PROTECTED AT THE END OF EACH WORK DAY.

19. CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO EXISTING UTILITIES. DAMAGED UTILITIES SHALL BE IMMEDIATELY REPAIRED BY CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

20. THE MINIMUM BENDING RADIUS OF CONDUITS WITHIN THE DUCT BANK SHALL BE 400 FEET, EXCEPT AS OTHERWISE NOTED ON THE DRAWINGS. ALL BENDS OF RADII LESS THAN 100 FEET SHALL BE FACTORY FORMED AND MANDREL TESTED PRIOR TO CONCRETE ENCASEMENT. CONDUIT SHALL NOT BE FIELD BENT BY HEATING, WITHOUT ENGINEER APPROVAL. FIELD BENT CONDUIT SHALL BE MANDREL TESTED PRIOR TO INSTALLATION AND PRIOR TO ENCASEMENT.

Dig Safely. New York. Call 811 before you dig

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
GENERAL NOTES

DRAWN BY: RB | DESIGNED BY: AC | APPROVED BY: EK | SCALE AS SHOWN | REV. NO. D

KIEWIT PROJECT NO.	21162
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LEGEND

- CL OF TRENCH/CONDUITS
- PROPOSED TEMP ACCESS RD OR OFF-SITE ACCESS RD
- PROPOSED TEMP OFF-SITE ACCESS ROUTE (EXISTING ROAD OR PAVEMENT)
- PROPOSED LAYDOWN YARDS, PARKING, STORAGE, AND MUSTER AREAS
- PROPOSED WORK AREAS
- LIMITS OF WORK
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- RAILROAD TRACK
- 7' FOUL ZONE: NO VEHICLES, MATERIALS, DISTURBANCE, PERSONNEL, OR WORK SHALL ENCROACH THE ZONE WITHIN 7 FEET OF THE NEAREST RAIL WITHOUT CSX COORDINATION AND APPROVAL
- WETLAND BOUNDARY
- RIGHT OF WAY
- FIBER OPTIC LINE
- GAS LINE
- UNDERGROUND STORM
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC

WETLAND COMMUNITY TYPES LEGEND

- PEM – PALUSTRINE EMERGENT
- PSS – PALUSTRINE SCRUB-SHRUB
- PFO – PALUSTRINE FORESTED
- PUB – PALUSTRINE UNCONSOLIDATED BOTTOM
- L1 – LACUSTRINE LIMNETIC
- L2 – LACUSTRINE LITTORAL
- NYSDEC FWW 100-FOOT ADJACENT AREA
- GIS – WETLAND
- JD BOUNDARY

- HYD — HYDRANT
- WV — WATER VALVE
- WATER MARK — WATER MARKER
- CB — CATCH BASIN
- ST — MANHOLE STORM
- SS — MANHOLE SANITARY
- ELEC MARK — ELECTRIC MARKER
- POLE — UTILITY POLE
- FIBER BOX — FIBER BOX
- FIBER MARK — FIBER OPTIC
- P — TELEPHONE PEDESTAL
- CAPPED IRON ROD — CAPPED IRON ROD
- IRON PIPE
- CONCRETE BOUND
- POST — POST
- XX-## — WETLAND FLAG
- GAS MARK — GAS
- VENT GAS — VENT GAS
- BORE HOLE

ABBREVIATIONS

APP	APPROVED
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
DB	DESIGNED BY
DEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DEG|	DEGREES
DR	DRIVE
DZ	DEVIATION ZONE
E	EASTING
ELECTRIC	ELECTRIC CABLE
ELEV	ELEVATION
FIBER	FIBER OPTIC CABLE
FT	FEET
GAS	GAS PIPE
H	HORIZONTAL
HDD	HORIZONTAL DIRECTIONAL DRILLING
HVDC	HIGH-VOLTAGE DIRECT CURRENT TRANSMISSION LINE
INV	INVERT ELEVATION
LOD	LIMITS OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
N	NORTHING
NO	NUMBER
NY	NEW YORK
P#	PACKAGE #
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REV	REVISION
ROW	RIGHT-OF-WAY
RTE	ROUTE
SEWER	SANITARY SEWER PIPE
SH	SHEET
ST	STREET
STA	STATION
STORM	STORM DRAIN PIPE
TELECOM	TELECOMMUNICATIONS CABLE
TEMP	TEMPORARY
TYP	TYPICAL
V	VERTICAL
WATER	WATERLINE

WILLIAMS AERIAL & MAPPING, INC.
MAPPING FEATURES LEGEND

TRANSPORTATION

- BRIDGE DECK
- PAVED DRIVEWAY
- UNPAVED DRIVEWAY
- PAVED PARKING
- UNPAVED PARKING
- ABANDONDED ROAD
- CURBED ROAD
- PAVED ROAD
- UNPAVED ROAD
- RAILROAD
- INACTIVE RAILROAD
- RAILROAD SWITCH/BOX/SIGNAL/POLE
- PAVED SHOULDER
- UNPAVED SHOULDER
- SIDEWALK
- TRAIL

UTILITIES

- ANTENNA
- UTILITY BOX
- CATCH BASIN
- HANDHOLE
- FIRE HYDRANT
- LIGHT POLE
- MANHOLE
- MISCELLANEOUS POLE
- PIPELINE
- UTILITY POLE
- GUYWIRE

STRUCTURES

- BUILDING
- RUIN
- TANK
- CONCRETE
- CONCRETE SPILLWAY
- DECK
- DOCK
- FENCE
- FENCE, OBSCURED/INDEFINTE
- RAILING
- GIRDER BRIDGE FRAME
- GIRDER BRIDGE PILING
- GUARDRAIL
- MAILBOX
- MISCELLANEOUS OVERHEAD
- MISCELLANEOUS
- PATIO
- PEDESTAL
- PLANTER
- PLATFORM
- POOL
- POST
- SATELLITE DISH
- SIGN
- STEPS
- STONEWALL
- WALL
- RETAINING WALL

TOPOGRAPHY

- CONTOUR, INDEX
- CONTOUR, DEPRESSION INDEX
- CONTOUR, INTERMEDIATE
- CONTOUR, DEPRESSION INTERMEDIATE
- SPOT ELEVATION

CULTURAL

- DEBRIS
- FIELD LINE
- LANDSCAPE AREA
- PILE
- STORAGE AREA

HYDROGRAPHIC

- HYDROGRAPHIC
- CULVERT
- CULVERT, OBSCURED
- INUNDATED AREA
- RIP-RAP
- STREAM
- SWAMP
- WATER LEVEL

NATURAL

- BOULDER
- SCRUB
- TREE LINE
- SINGLE TREE/BUSH

PROJECT

- MAPPING BOUNDARY
- GROUND CONTROL

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
LEGEND & ABBREVIATIONS

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21162	
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204-3701	
DRAWING NO.	
G-003	
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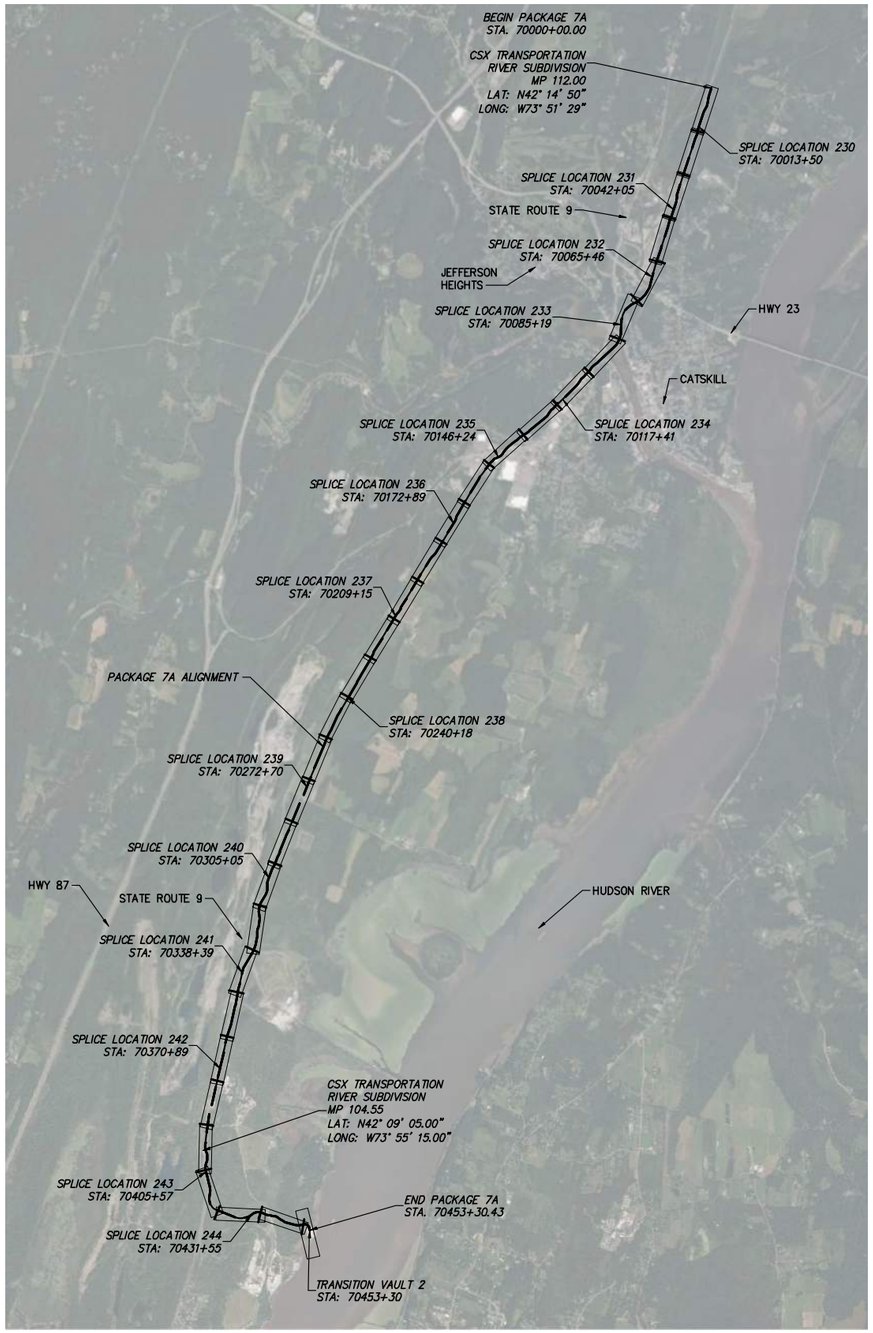

PLAN AND PROFILE KEY MAP

SCALE: 1" = 2500'

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IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
D	05/19/2022	ISSUED FOR INTERIM REVIEW	RB	EK
C	03/22/2022	PRELIMINARY DESIGN DEVELOPMENT	BV	TK
B	03/04/2022	PRELIMINARY DESIGN DEVELOPMENT IDR-CR	BV	TK
A	02/14/2022	PRELIMINARY PROGRESS	BV	TK

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
PLAN AND PROFILE
KEY MAP

DRAWN BY: RB | DESIGNED BY: AC | APPROVED BY: EK | SCALE AS SHOWN | REV. NO. D

KIEWIT PROJECT NO.	21162
TT PROJECT NO.	204-3701
DRAWING NO.	G-004
DATE	05/19/2022
SH.NO.	5 OF 66

File: C:\PWWORKING\REI\DW550141\21162_7A_G-004.DWG Saved: 5/19/2022 8:13:29 PM Plotted: 5/19/2022 8:13:43 PM Current User: Woger, Mike LastSavedBy: Mike.Woger

STRUCTURE TABLE				
DESCRIPTION	STATION	NORTHING	EASTING	ELEVATION
SPLICE LOCATION 230	70012+52.9	1243090.24	665595.5949	132.474'
SPLICE LOCATION 231	70044+51.1	1240050.83	664618.8945	111.253'
SPLICE LOCATION 232	70063+93.8	1238192.016	664064.1885	109.544'
SPLICE VAULT 233	70081+97.9	1236847.532	663033.9265	22.804'
SPLICE LOCATION 234	70106+50.2	1234858.564	661822.9362	96.685'
SPLICE LOCATION 235	70136+85.2	1232746.739	659654.5838	121.718'
SPLICE LOCATION 236	70169+07.1	1230312.326	657636.6341	118.369'
SPLICE LOCATION 237	70201+37.5	1227571.303	655956.8635	130.758'
SPLICE LOCATION 238	70233+38.4	1224821.366	654324.6203	104.283'
SPLICE LOCATION 239	70265+36.3	1221963.528	652901.7315	108.645'
SPLICE LOCATION 240	70297+40.9	1219005.382	651673.7885	113.270'
SPLICE LOCATION 241	70328+85.0	1215994.792	650904.403	0.000'
SPLICE LOCATION 242	70361+16.8	1212934.087	649968.5631	110.031'
SPLICE LOCATION 243	70393+21.7	1209802.037	649294.3271	90.084'
SPLICE LOCATION 244	70424+36.9	1207112.17	650030.64	62.77
TRANSITION VAULT 2	70453+82.6	1206614.647	652689.5698	8.874'

CHPE Champlain Hudson Power Express

Kiewit

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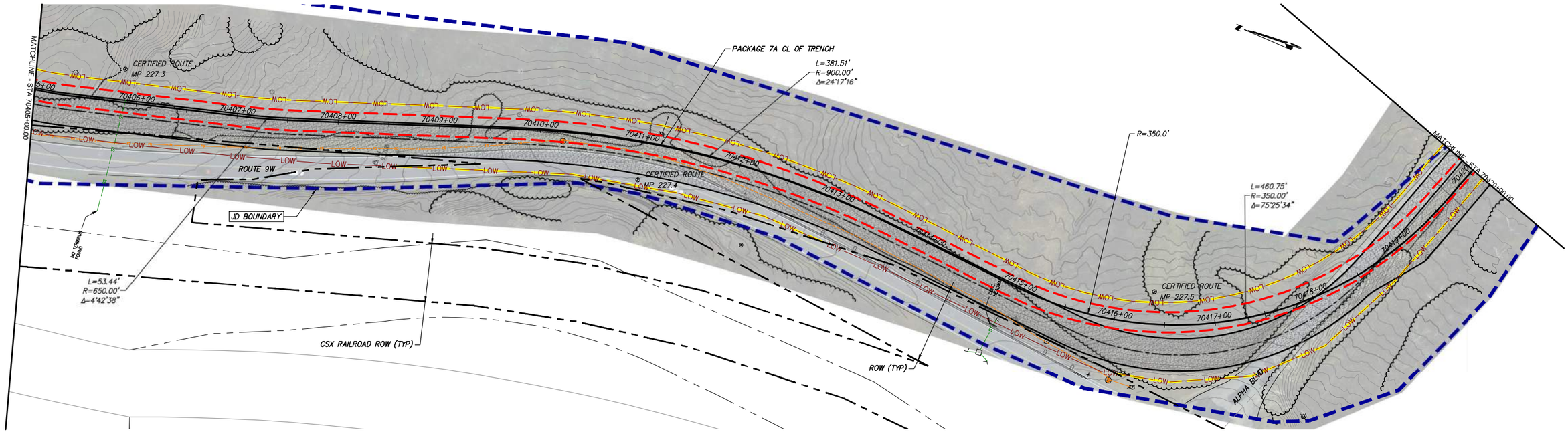
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
D	05/19/2022	ISSUED FOR INTERIM REVIEW	RB	EK
C	03/22/2022	PRELIMINARY DESIGN DEVELOPMENT	BV	TK
B	03/04/2022	PRELIMINARY DESIGN DEVELOPMENT IDR-CR	BV	TK
A	02/14/2022	PRELIMINARY PROGRESS	BV	TK

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
SPLICE LOCATION TABLE AND SURVEY NOTES

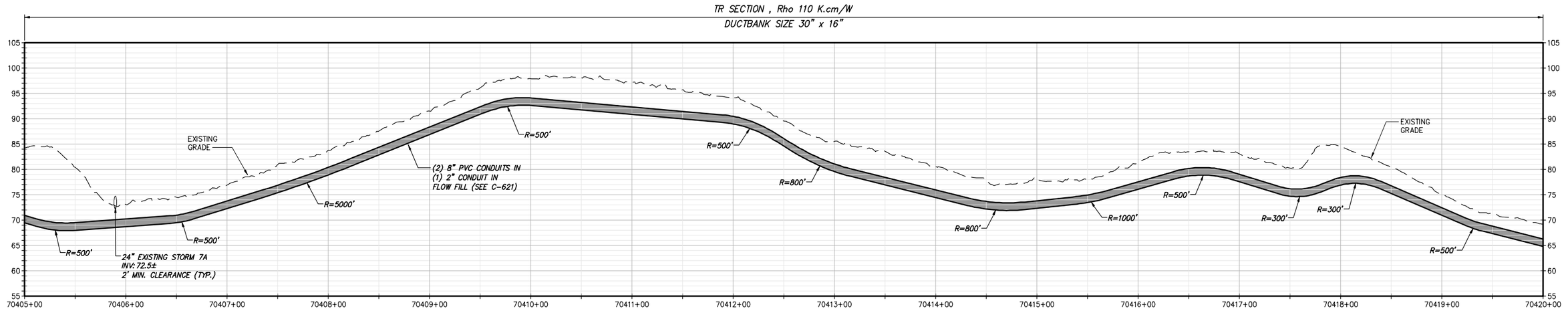
DRAWN BY: RB | DESIGNED BY: AC | APPROVED BY: EK | SCALE AS SHOWN | REV. NO. D

KIEWIT PROJECT NO. 21162
TT PROJECT NO. 204-3701
DRAWING NO. G-005
DATE 05/19/2022
SH.NO. 6 OF 66



STA. 70405+00.00 TO STA. 70420+00.00 PLAN VIEW

SCALE: 1" = 50'



STA. 70405+00 TO STA. 70420+00 PROFILE VIEW

SCALE: H:1" = 50' V:1" = 10'

CHPE Champlain Hudson Power Express

Kiewit

TETRA TECH

TETRA TECH ENGINEERING AND SURVEYING P.C.
(A NEW YORK PROFESSIONAL CORPORATION)

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
D	05/19/2022	ISSUED FOR INTERIM REVIEW	RB	EK
C	03/22/2022	PRELIMINARY DESIGN DEVELOPMENT	BV	TK
B	03/04/2022	PRELIMINARY DESIGN DEVELOPMENT IDR-CR	BV	TK
A	02/14/2022	PRELIMINARY PROGRESS	BV	TK

CHAMPLAIN HUDSON POWER EXPRESS

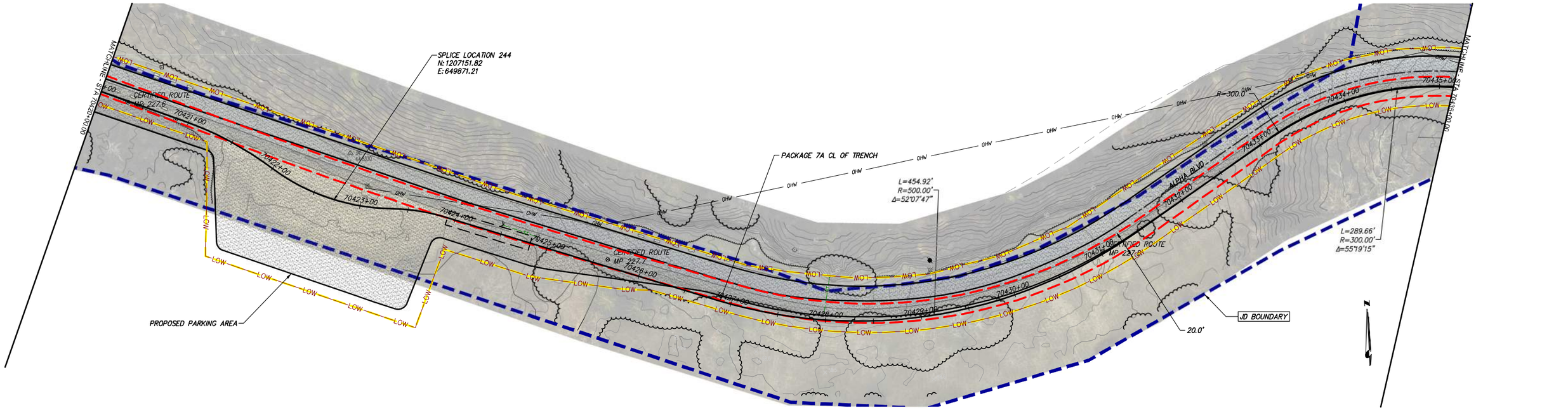
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL

STA. 70405+00.00 TO STA. 70420+00.00

DRAWN BY: RB | DESIGNED BY: AC | APPROVED BY: EK | SCALE AS SHOWN | REV. NO. D

KIEWIT PROJECT NO.	21162
TT PROJECT NO.	204-3701
DRAWING NO.	C-128
DATE	05/19/2022
SH.NO.	34 OF 66

File: C:\PWWORKING\FE\DMS5114\121162_7A_C_126-130.DWG Saved: 5/26/2022 11:29:26 AM Plotted: 5/26/2022 11:31:52 AM Current User: Wager, Mike LastSavedBy: Mike.Wager

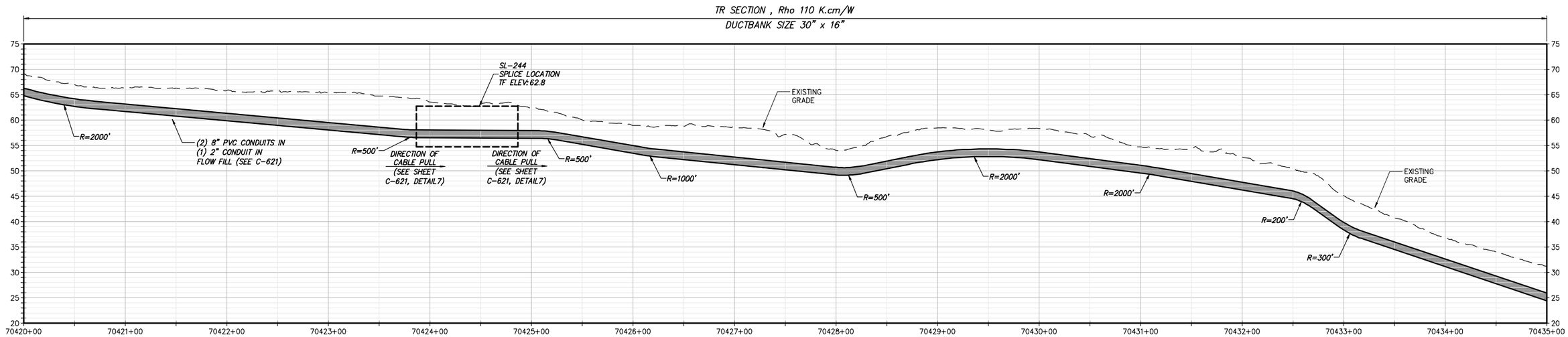


STA. 70420+00.00 TO STA. 70435+00.00 PLAN VIEW

SCALE: 1" = 50'

0 50 100

Scale in feet



STA. 70420+00 TO STA. 70435+00 PROFILE VIEW

SCALE: H:1" = 50' V:1" = 10'

CHPE Champlain Hudson Power Express

Kiewit

TETRA TECH

TETRA TECH ENGINEERING AND SURVEYING P.C.
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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
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B	03/04/2022	PRELIMINARY DESIGN DEVELOPMENT IDR-CR	BV	TK
A	02/14/2022	PRELIMINARY PROGRESS	BV	TK

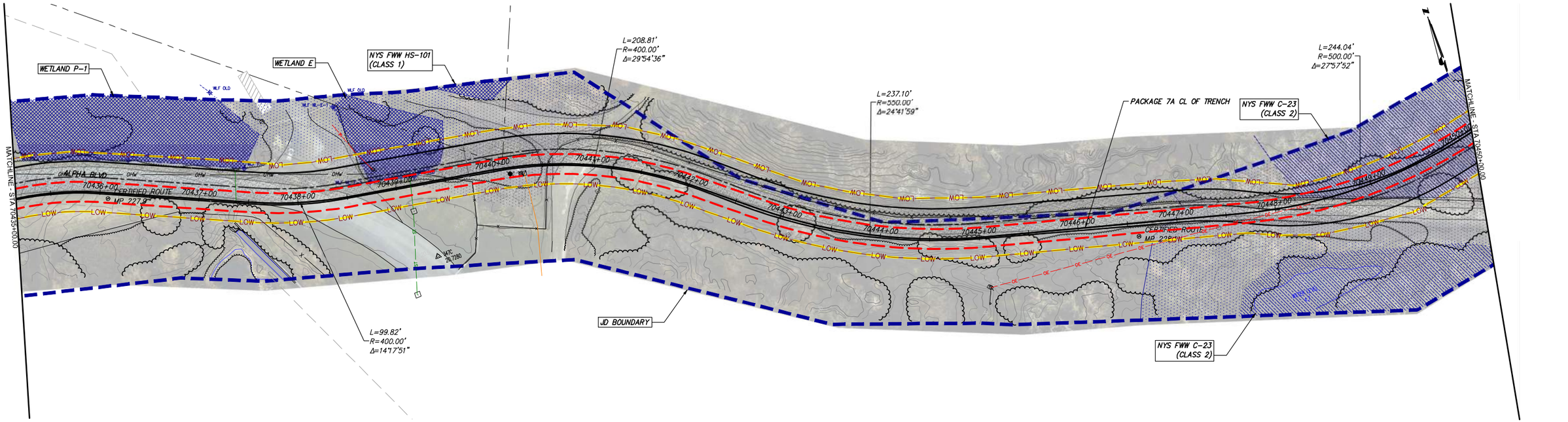
CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL

STA. 70420+00.00 TO STA. 70435+00.00

KIEWIT PROJECT NO.	21162
TT PROJECT NO.	204-3701
DRAWING NO.	C-129

DRAWN BY: RB | DESIGNED BY: AC | APPROVED BY: EK | SCALE AS SHOWN | REV. NO. D | DATE 05/19/2022 | SH.NO. 35 OF 66

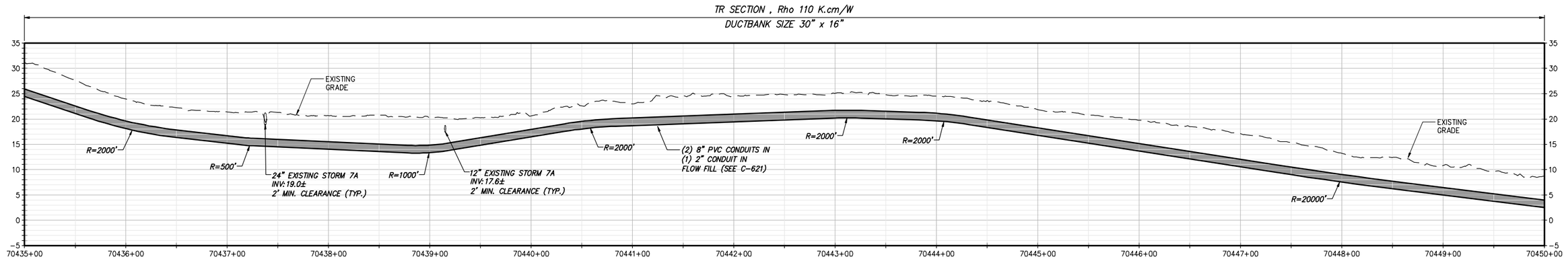


STA. 70435+00.00 TO STA. 70450+00.00 PLAN VIEW

SCALE: 1" = 50'

0 50 100

Scale in feet



STA. 70435+00.00 TO STA. 70450+00.00 PROFILE VIEW

SCALE: H:1" = 50' V:1" = 10'

CHPE Champlain Hudson Power Express

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TETRA TECH

TETRA TECH ENGINEERING AND SURVEYING P.C.
(A NEW YORK PROFESSIONAL CORPORATION)

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
D	05/19/2022	ISSUED FOR INTERIM REVIEW	RB	EK
C	03/22/2022	PRELIMINARY DESIGN DEVELOPMENT	BV	TK
B	03/04/2022	PRELIMINARY DESIGN DEVELOPMENT IDR-CR	BV	TK
A	02/14/2022	PRELIMINARY PROGRESS	BV	TK

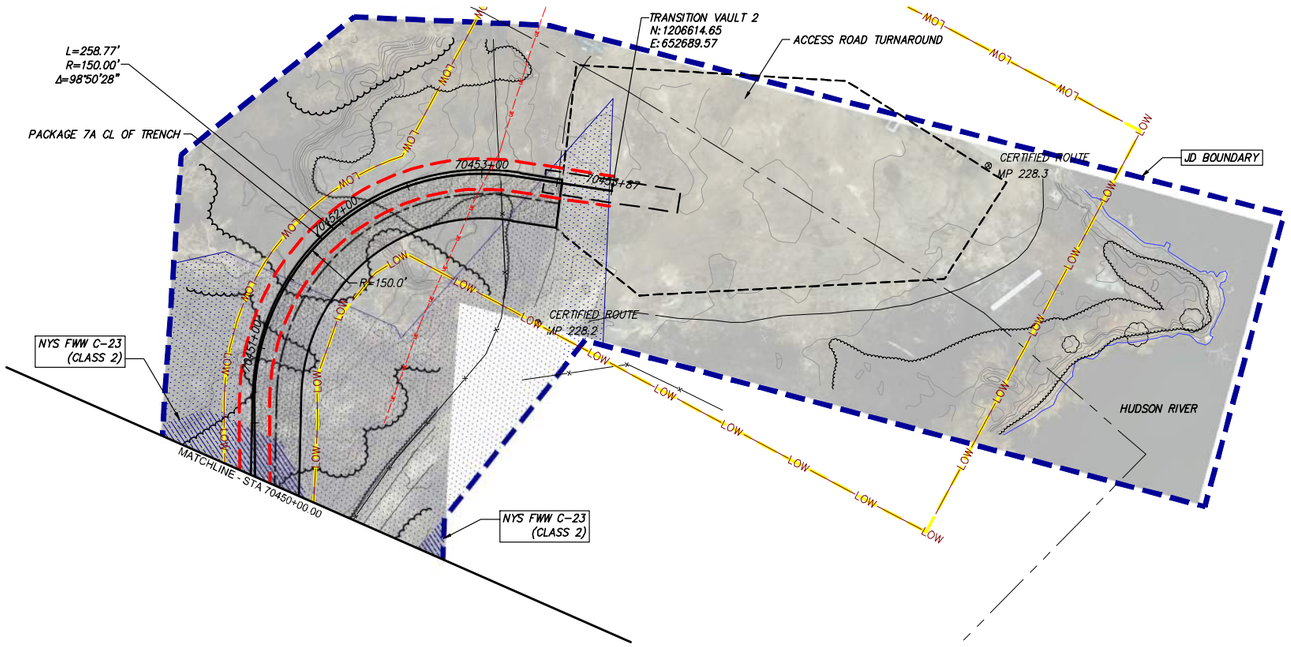
CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL

STA. 70435+00.00 TO STA. 70450+00.00

KIEWIT PROJECT NO.	21162
TT PROJECT NO.	204-3701
DRAWING NO.	C-130

DRAWN BY: RB | DESIGNED BY: AC | APPROVED BY: EK | SCALE AS SHOWN | REV. NO. D | DATE 05/19/2022 | SH.NO. 36 OF 66

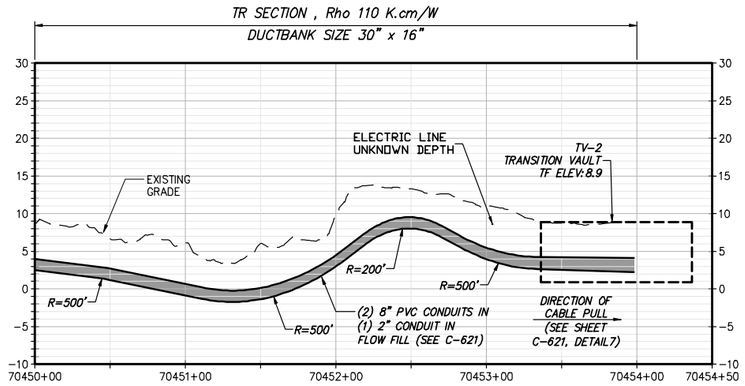


STA. 70450+00.00 TO STA. 70453+30.43 PLAN VIEW

SCALE: 1" = 50'

0 50 100

Scale in feet



STA. 70450+00 TO STA. 70454+50 PROFILE VIEW

SCALE: H:1" = 50' V:1" = 10'

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
D	05/19/2022	ISSUED FOR INTERIM REVIEW	RB	EK
C	03/22/2022	PRELIMINARY DESIGN DEVELOPMENT	BV	TK
B	03/04/2022	PRELIMINARY DESIGN DEVELOPMENT IDR-CR	BV	TK
A	02/14/2022	PRELIMINARY PROGRESS	BV	TK

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL

STA. 70450+00.00 TO STA. 70453+30.43

DRAWN BY: RB | DESIGNED BY: AC | APPROVED BY: EK | SCALE AS SHOWN | REV. NO. D

KIEWIT PROJECT NO.	21162
TT PROJECT NO.	204-3701
DRAWING NO.	C-131
DATE	05/19/2022
SH.NO.	37 OF 66

CHPE Champlain Hudson Power Express

Kiewit

TETRA TECH

TETRA TECH ENGINEERING AND SURVEYING P.C.
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File: C:\PWWORKING\RE\DM551141\21162_7A_C_131.DWG Saved: 5/20/2022 12:13:54 PM Plotted: 5/26/2022 11:39:38 AM Current User: Woger, Mike LastSavedBy: Mike.Woger

ATTACHMENT 6
WATERBODY PHOTOGRAPHS

(No Waterbodies Identified at Cementon Transitional HDD Project Area)

CHA

Laura Darling

From: Laura Darling
Sent: Wednesday, October 19, 2022 10:07 PM
To: Smith, Matthew (DPS); Maraglio, Matthew (DOS); sita.crounse; Behnke, Heather (DPS); Rahm, Patrick J (DEC); Gaidasz, Karen M (DEC); Drexler, David (DPS); Craig.Michaels@apa.ny.gov
Cc: Josh.Bagnato; dave.albers
Subject: Case 10-T-0139, 3 Transitional HDDs Wetland Delineation Report and Waterbody Inventory

DPS, DEC and DOS Staffs,

Pursuant to Certificate Conditions 113(a) and 114(a), below is a link to the Wetland Delineation Reports for the three Remaining Transitional HDDs of the Champlain Hudson Power Express (CHPE) transmission line (Putnam Station, Cementon and Congers), including shapefiles. These conditions require that, at least 30 days prior to filing of a proposed segment Environmental Management and Construction Plan (EM&CP), the Certificate Holder must share these documents with DPS, DEC and DOS. One of these transitional HDDs (Putnam Station) is located in the Adirondack Park, therefore the APA is also included in this distribution.

The geographic scope of the three Transitional HDD Segment EM&CP involves transitional HDDs connecting land segments with segments in Lake Champlain and the Hudson River at three locations in the Town of Putnam, Washington County (Putnam Station), Town of Catskill, Greene County (Cementon) and Town of Clarkstown, Rockland County (Congers). We anticipate filing the EM&CP for this segment on **December 1, 2022.**

The report and related shapefiles can be accessed here:

CHPE Transitional HDDs (Congers, Cementon, Putnam Station) Wetland and Waterbody Reports

Please feel free to reach out with any questions, or if you have difficulty accessing the documents.

Sincerely,

Laura Bomyea Darling
Associate Attorney
Young / Sommer LLC
ATTORNEYS AT LAW
office: 518.438.9907 Ext. 249
fax: 518.438.9914
ldarling@youngsommer.com
Executive Woods, Five Palisades Drive, Albany, NY 12205
www.youngsommer.com

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Greene County, New York

Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699
fw5es_nyfo@fws.gov

3817 Luker Road
Cortland, NY 13045-9385

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Indiana Bat Myotis sodalis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5949	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover Pluvialis dominica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31
Belted Kingfisher Megaceryle alcyon This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 15 to Jul 25

Black-billed Cuckoo Coccyzus erythropthalmus — Breeds May 15 to Oct 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9399

Blue-winged Warbler Vermivora pinus — Breeds May 1 to Jun 30
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Bobolink Dolichonyx oryzivorus — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Canada Warbler Cardellina canadensis — Breeds May 20 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cerulean Warbler Dendroica cerulea — Breeds Apr 20 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/2974

Chimney Swift Chaetura pelagica — Breeds Mar 15 to Aug 25
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Eastern Meadowlark Sturnella magna — Breeds Apr 25 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Evening Grosbeak Coccothraustes vespertinus — Breeds May 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prairie Warbler Dendroica discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted

Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

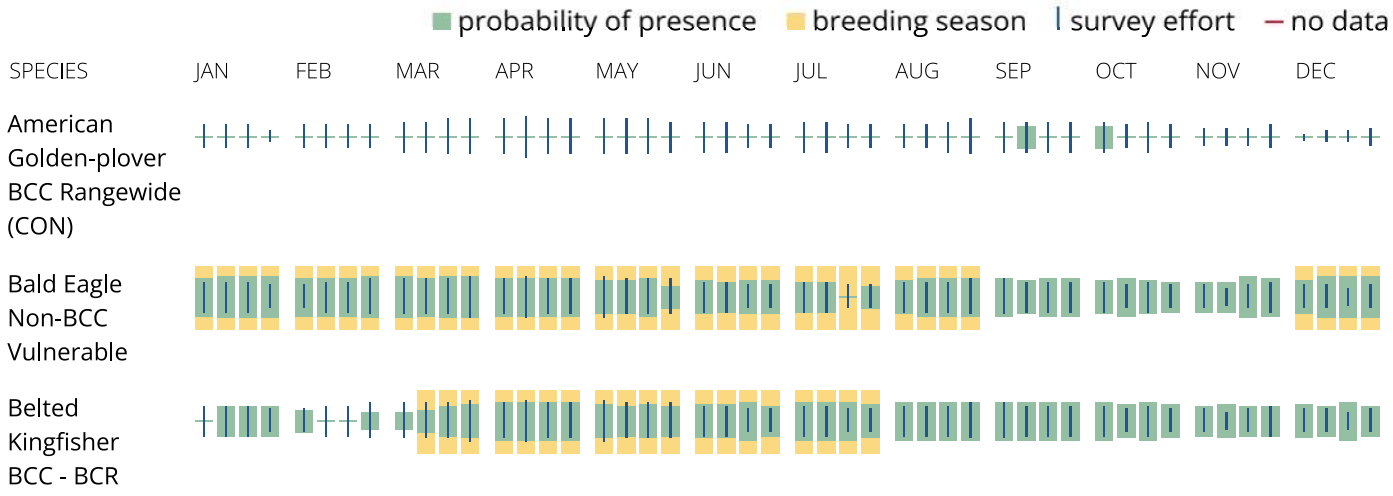
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

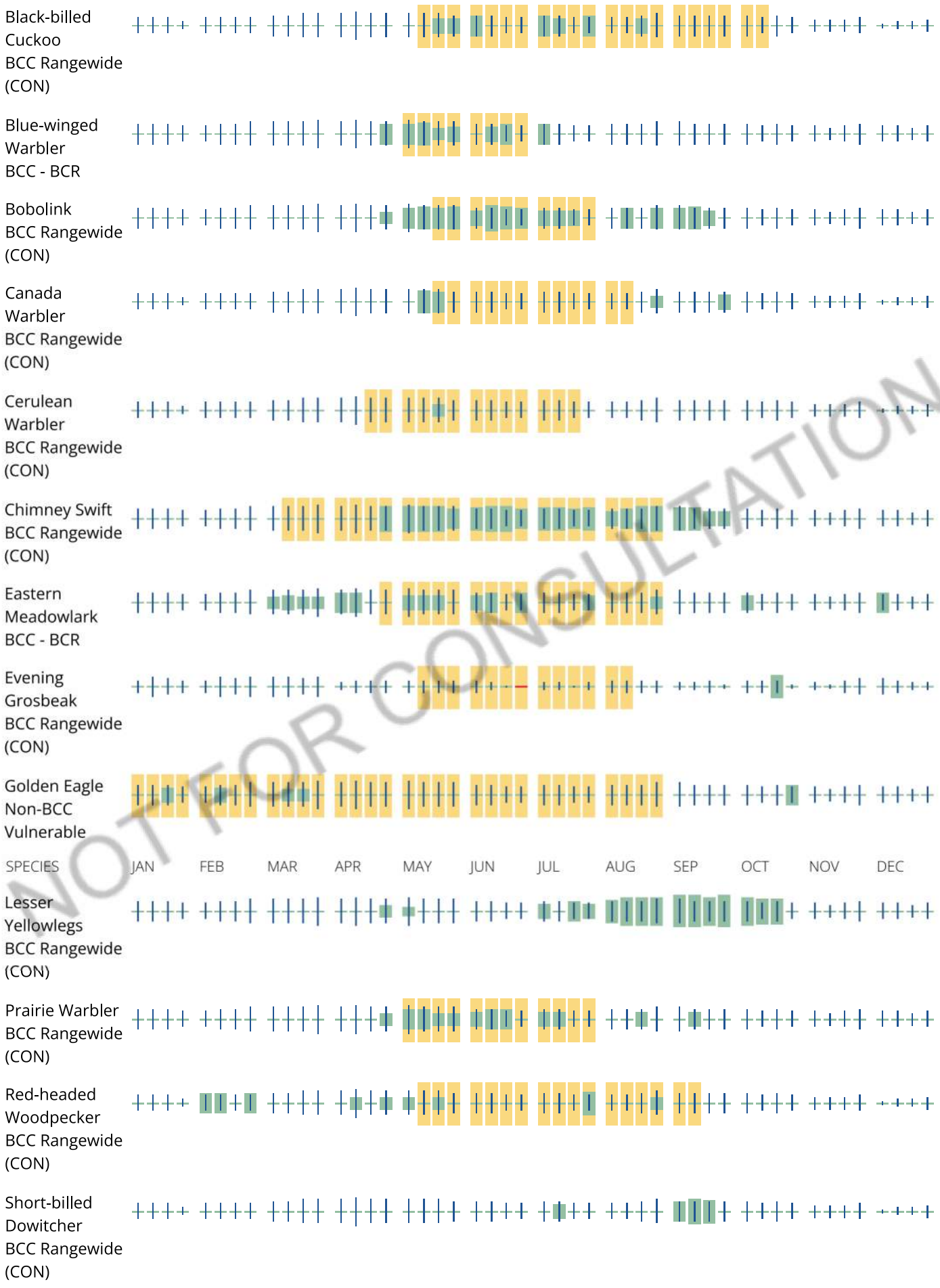
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Wood Thrush
BCC Rangewide
(CON)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird

on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black

vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

There are no known coastal barriers at this location.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

Palustrine

RIVERINE

Riverine

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

May 5, 2020

Mr. Andrew Davis
NYS Department of Public Works
#3 Empire State Plaza
Albany, NY 12223

Re: CORPS, PSC
Champlain Hudson Power Express/TDI/Underwater HVdc Transmission Line
Catskill, Fort Ann, Putnam Station, Rockland County, Schenectady and Selkirk Yard Preferred Alternative Routes
09PR03910

Dear Mr. Davis:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the April 24, 2020 *Revised Phase IA Archaeological Assessment of the Champlain-Hudson Alternative Routes, New York*, prepared by TRC, in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources.

Based on this review, the SHPO has no further comments on this report and concurs that archaeological testing is not warranted for the Catskill, Fort Ann, Putnam Station, Rockland County, Schenectady and Selkirk Yard Preferred Alternative Routes.

If you have any questions, I can be reached at nancy.herter@parks.ny.gov.

Sincerely,

Nancy Herter

Nancy Herter
Archaeology Unit Program Coordinator

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

October 14, 2022

Sean Murphy
Senior Project Manager
VHB
500 Southborough Drive
Suite 105B
South Portland, ME 04106-6928

Re: DOE
Champlain Hudson Power Express/TDI/Underwater HVdc Transmission Line
Cementon and Congers HDD Pit Locations
09PR03910

Dear Sean Murphy:

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

SHPO has reviewed TRC's evaluation of the project's Area of Potential Effects (APE) for the Cementon and Congers HDD pit locations (September 2022). SHPO has no archaeological concerns for the Cementon and Congers HDD pit locations. No archaeological survey is warranted for either location.

It is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be Adversely Affected by this undertaking at the Cementon and Congers HDD pit locations. If you have any questions, I can be reached at Jessica.Schreyer@parks.ny.gov.

Sincerely,

Jessica E. Schreyer

Jessica Schreyer
Scientist Archaeology

Appendix E – USDA NRCS Soil Resource Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Greene County, New York

November 4, 2022

Preface

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

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

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

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

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

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

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

Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Greene County, New York
Survey Area Data: Version 21, Sep 10, 2022

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

Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Co	Covington and Madalin soils	1.7	4.2%
FaD	Farmington gravelly silt loam, hilly, rocky	3.7	9.0%
HvC	Hudson and Vergennes soils, 8 to 15 percent slopes	0.4	1.0%
HwD3	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	0.6	1.5%
KrB	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	3.1	7.4%
Mh	Medisaprists-Hydraquents, tidal marsh	7.7	18.6%
RhB	Riverhead loam, 3 to 8 percent slopes	4.4	10.6%
Ur	Udorthents, loamy	7.7	18.5%
W	Water	12.1	29.3%
Totals for Area of Interest		**41.3**	**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.

Greene County, New York

Co—Covington and Madalin soils

Map Unit Setting

National map unit symbol: 9sg1
Elevation: 50 to 1,970 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Covington

Setting

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

Typical profile

H1 - 0 to 7 inches: silty clay
H2 - 7 to 28 inches: clay
H3 - 28 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: D
Ecological site: F142XB007VT - Wet Clayplain Depression
Hydric soil rating: Yes

Description of Madalin

Setting

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

Typical profile

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

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F144AY019NH - Wet Lake Plain
Hydric soil rating: Yes

Minor Components

Vergennes

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

Rhinebeck

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

Hudson

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

Kingsbury

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

Canandaigua

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

FaD—Farmington gravelly silt loam, hilly, rocky

Map Unit Setting

National map unit symbol: 9sgd
Elevation: 100 to 900 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Farmington

Setting

Landform: Benches, till plains, 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 congeliturbate derived from limestone, dolomite, shale, and sandstone, and in many places mixed with wind and water deposits

Typical profile

H1 - 0 to 8 inches: gravelly silt loam
H2 - 8 to 13 inches: silt loam
H3 - 13 to 17 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Very low (about 1.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: F144AY035MA - Shallow Semi-Rich Well Drained Till Uplands
Hydric soil rating: No

Minor Components

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

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

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

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

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

HvC—Hudson and Vergennes soils, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 9sgs
Elevation: 50 to 1,800 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Hudson and similar soils: 40 percent
Vergennes and similar soils: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hudson

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

Typical profile
H1 - 0 to 4 inches: silt loam
H2 - 4 to 13 inches: silt loam

H3 - 13 to 30 inches: silty clay loam
H4 - 30 to 60 inches: silty clay

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Available water supply, 0 to 60 inches: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Ecological site: F144AY018NY - Moist Lake Plain
Hydric soil rating: No

Description of Vergennes

Setting

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey calcareous glaciolacustrine, glaciomarine, or estuarine deposits

Typical profile

H1 - 0 to 10 inches: loam
H2 - 10 to 17 inches: clay loam
H3 - 17 to 34 inches: clay
H4 - 34 to 60 inches: stratified silty clay to silty clay loam to silt loam to very fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately 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: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F142XB005VT - Clayplain

Hydric soil rating: No

Minor Components

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

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

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

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

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

HwD3—Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded

Map Unit Setting
National map unit symbol: 9sgw
Elevation: 50 to 1,800 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition
Hudson and similar soils: 50 percent
Vergennes and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hudson

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

Parent material: Clayey and silty glaciolacustrine deposits

Typical profile

H1 - 0 to 7 inches: silty clay loam
H2 - 7 to 30 inches: silty clay loam
H3 - 30 to 60 inches: silty clay

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C/D
Ecological site: F144AY018NY - Moist Lake Plain
Hydric soil rating: No

Description of Vergennes

Setting

Landform: Lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey calcareous glaciolacustrine, glaciomarine, or estuarine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 34 inches: clay
H3 - 34 to 60 inches: stratified silty clay to silty clay loam to silt loam to very fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately 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: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D
Ecological site: F142XB005VT - Clayplain
Hydric soil rating: No

Minor Components

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

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

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

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

KrB—Kingsbury and Rhinebeck soils, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9sgy
Elevation: 80 to 1,000 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Kingsbury and similar soils: 45 percent
Rhinebeck and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kingsbury

Setting
Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Calcareous, clayey glaciomarine deposits or glaciolacustrine deposits

Typical profile
H1 - 0 to 7 inches: clay loam

H2 - 7 to 14 inches: silty clay loam
H3 - 14 to 36 inches: clay
H4 - 36 to 70 inches: stratified silty clay loam to silt loam to very fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F144AY018NY - Moist Lake Plain
Hydric soil rating: No

Description of Rhinebeck

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey and silty glaciolacustrine deposits

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 19 inches: silty clay loam
H3 - 19 to 32 inches: silty clay
H4 - 32 to 60 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F144AY018NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

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

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

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

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

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

Mh—Medisaprists-Hydraquents, tidal marsh

Map Unit Setting
National map unit symbol: 9shz
Elevation: 10 to 2,400 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition
Medisaprists and similar soils: 45 percent
Hydraquents and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Medisaprists

Setting
Landform: Marshes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material

Typical profile

H1 - 0 to 51 inches: muck
H2 - 51 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Very high (about 20.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Description of Hydraquents

Setting

Landform: Marshes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave

Typical profile

H1 - 0 to 9 inches: silty clay loam
H2 - 9 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Canandaigua

Percent of map unit: 5 percent

Landform: Depressions
Hydric soil rating: Yes

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

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

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

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

RhB—Riverhead loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9sjy
Elevation: 590 to 1,970 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 170 days
Farmland classification: All areas are prime farmland

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

Description of Riverhead

Setting
Landform: Deltas, terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits overlying stratified sand and gravel

Typical profile
H1 - 0 to 8 inches: loam
H2 - 8 to 24 inches: sandy loam

H3 - 24 to 60 inches: loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): 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 supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F140XY021NY - Dry Outwash
Hydric soil rating: No

Minor Components

Elmridge

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

Tioga

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

Hudson

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

Chenango

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

Udifluvents

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

Ur—Udorthents, loamy

Map Unit Setting

National map unit symbol: 9skh
Elevation: 160 to 1,970 feet
Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Udorthents

Typical profile

H1 - 0 to 4 inches: gravelly silt loam
H2 - 4 to 70 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately 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 content: 15 percent
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

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

Minor Components

Wellsboro

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

Valois

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

Volusia

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

Tunkhannock

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

W—Water

Map Unit Setting

National map unit symbol: 9sl3

Mean annual precipitation: 36 to 44 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

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

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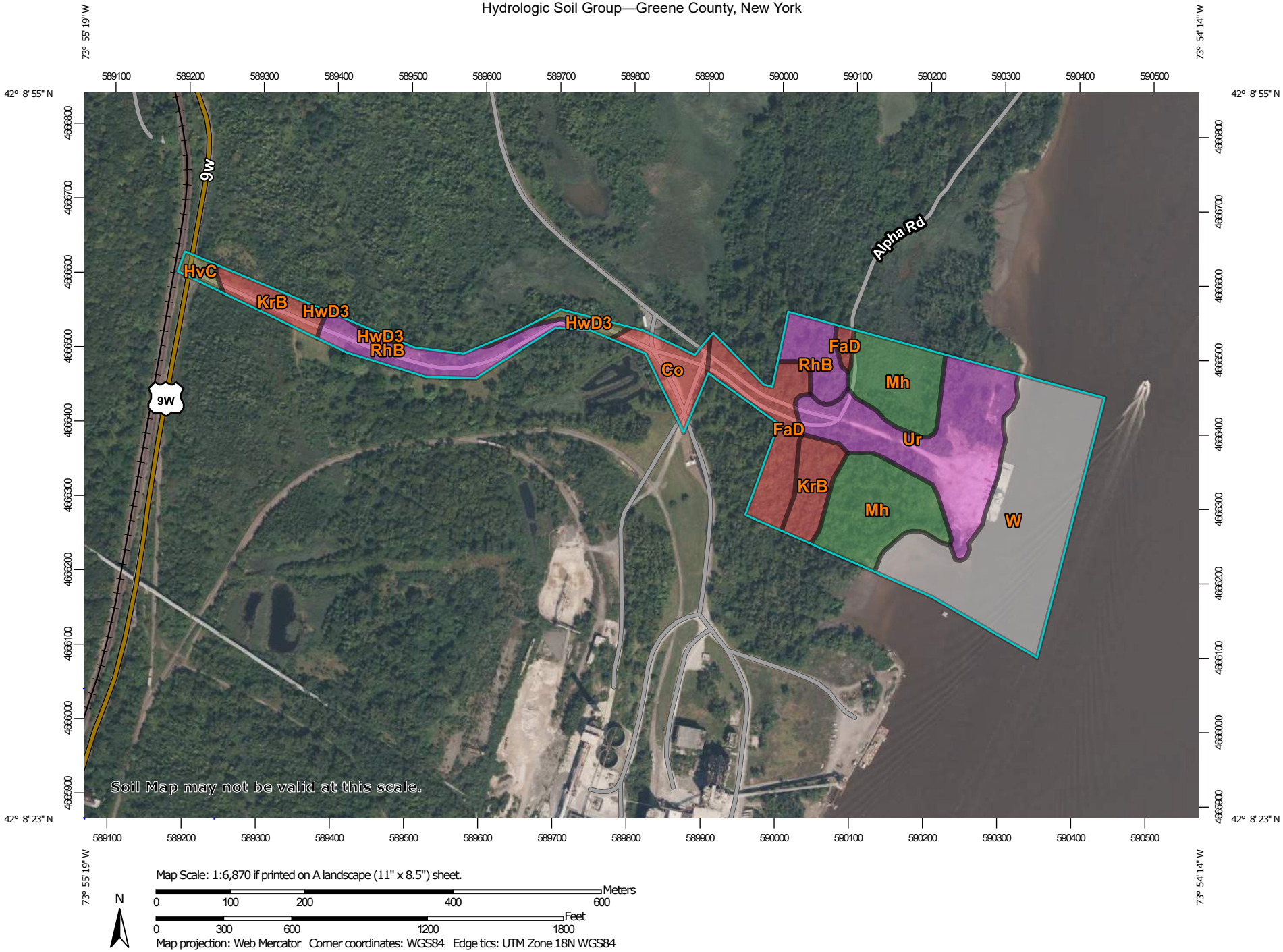
73° 55' 19" W
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42° 8' 23" N
589100
589200
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4666700
4666600
4666500
4666400
4666300
4666200
4666100
4666000
4665900
9W
Alpha Rd
HvC
KrB
HwD3
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W
Soil Map may not be valid at this scale.
Map Scale: 1:6,870 if printed on A landscape (11" x 8.5") sheet.
N
0
100
200
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Meters
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Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Greene County, New York
Survey Area Data: Version 21, Sep 10, 2022

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

Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Co	Covington and Madalin soils	D	1.7	4.2%
FaD	Farmington gravelly silt loam, hilly, rocky	D	3.7	9.0%
HvC	Hudson and Vergennes soils, 8 to 15 percent slopes	C/D	0.4	1.0%
HwD3	Hudson and Vergennes silty clay loams, 15 to 25 percent slopes, severely eroded	C/D	0.6	1.5%
KrB	Kingsbury and Rhinebeck soils, 3 to 8 percent slopes	D	3.1	7.4%
Mh	Medisaprists-Hydraquents, tidal marsh	A/D	7.7	18.6%
RhB	Riverhead loam, 3 to 8 percent slopes	A	4.4	10.6%
Ur	Udorthents, loamy	A	7.7	18.5%
W	Water		12.1	29.3%
Totals for Area of Interest			**41.3**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher