



Appendix I: Stormwater Pollution Prevention Plan

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

PUTNAM STATION TRANSITIONAL HORIZONTAL DIRECTIONAL DRILL (HDD) PROJECT

**TOWN OF PUTNAM
WASHINGTON 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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Appendix I – SWPPP Amendments

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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 | Putnam Station 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 Putnam Station 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 is located in the Town of Putnam and Hamlet of Putnam Station, Washington County, New York. The HDD Project Site is located on property owned by the Delaware and Hudson Railway Company. The Project will utilize an approximate 2.5-acre laydown area to support HDD operations at Putnam Station. The laydown area is located on land owned by the Town of Putnam, located approximately 3.25 miles north of the HDD bore pit location. The laydown area will be accessed from County Route 2 in Putnam, New York. Existing ground cover at the laydown yard is grass with gravel access roads. The HDD site and laydown area (herein referred to as Project Site) are located within the NYSDEC Region 5 jurisdiction and the Putnam United States Geological Survey (USGS) 7.5 Minute Topographic Quadrangle. The Project Site locations are depicted on the Study Area Maps in Appendix E.

The HDD operation will install conduits to be used for future installation of submarine cable transition from Lake Champlain to land cable for the overland route. The assembled conduit for this Project will span approximately 2,900 feet. The proposed HDD will begin at the work pad on

property owned by the Delaware and Hudson Railway Company and will continue northeast in-lake with an exit location in Lake Champlain.

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 HDD Project Site is located within a 1.9-acre and 111.5-acre parcel, of which, approximately 0.31 acres will be disturbed by the Project. The laydown area is located within a 10.4-acre parcel, of which approximately 2.5 acres will be disturbed. The existing groundcover of the Project Site is composed primarily of gravel, grass, forested areas, and vegetation of varying density. The existing groundcover of the laydown areas is grass/meadow and gravel. The site topography is relatively flat, generally sloping to the east towards Lake Champlain.

The HDD corridor will pass underneath a railroad that runs parallel to Lake Champlain before making its in-lake exit. 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 Lake Champlain will be located approximately 800 feet from the western bank, in an area with water depths of approximately 13 feet.

The following subsections detail the soils, wetlands and waterbodies, environmental and cultural resources, and floodplain 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:

- Hudson and Vergennes soils, steep and very steep, Hydrologic Soil Group (HSG) rating C/D;
- Kingsbury silt clay, HSG Rating D;
- Saco silt loam, HSG rating B/D; and
- Vergennes silty clay loam, HSG rating D.

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 no wetlands or waterbodies or their 100-foot adjacent areas are mapped adjacent to the Project Site at the HDD bore location.

Field delineations were completed in 2021 and 2022 to identify existing waterbodies and wetlands at the Project Site. Three freshwater non-tidal wetlands (Wetland 1A-A, CA, and CB) were identified adjacent to the Project Site. Wetland 1A-A is described as a palustrine scrub-shrub (PSS) wetland; Wetland CA is described as a palustrine emergent (PEM)/palustrine forested (PFO) wetland; and Wetland CB is described as a PEM wetland. These wetlands are presumably federally protected wetlands. No State-mapped wetlands occur within or in close proximity to the Project Site. 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.

With the exception of Lake Champlain, no waterbody resources are located within the Project Site. No impacts to wetlands or waterbodies are anticipated as a result of the Project.

The Project Site ultimately discharges to Lake Champlain, located east of the Project Site, which is listed as a 303(d) waterbody segment in Appendix E of GP-0-20-001, therefore additional inspection and restoration requirements apply. Refer to Sections 8.0 and 11.2 for additional information regarding 303(d) waterbody segment inspection and restoration requirements. The Project is not located within a restricted watershed listed in Appendix C of GP-0-20-001. The Project Site is located within an AA/AA-s watershed, however the Project does not meet the remaining SPDES permit ineligibility requirements under GP-0-20-001 Part I.F.7.

5.3 Floodplains

According to Federal Emergency Management Agency (FEMA), the Flood Insurance Rate Map (FIRM) Panels 3612360005B and 3612360010B, dated November 20, 1996, the Project Site is located primarily within Zone X, with eastern portions of the Site along Lake Champlain within Zone AE. 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 base flood elevation for Flood Zone AE nearest to the Project Site is identified on the FIRM Panel as 102 feet above mean sea level.

5.4 Environmental Resource Information

A review of the NYSDEC ERM indicated rare plants or animals may be present within the Project Site. All appropriate avoidance and mitigation actions recommended by NYSDEC will be undertaken to protect the rare plants and animals. 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
- Northern Long-eared Bat (*Myotis septentrionalis*) – federally-listed threatened species
- Monarch Butterfly (*Danaus plexippus*) – federally-listed candidate species

Tree clearing is not proposed, therefore impacts to the Indiana Bat and Northern Long-eared Bat and their habitat is 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, therefore impacts to the historic buildings are not anticipated as a result of the Project.

The HDD Project Site was identified on CRIS as being located within an archaeologically sensitive area; however the laydown area was outside of the archaeologically sensitive area boundary. Consultation with OPRHP was completed on May 5, 2020. The OPRHP concluded that archaeological testing is not warranted. No cultural resources were identified within the Project Area.

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 SDESC. The Project discharges to a 303(d) waterbody segment, therefore the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven days from the date in which soil disturbance activity ceases.

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 tree 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 lake 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 SDESC. 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 SDESC 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 SDESC 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 SDESC 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 SDESC for the Standards and Specifications of alternate measures and practices, as needed. The temporary erosion and sediment control measures not detailed in the SDESC 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 where 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 is 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 in 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 Lake Champlain, 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 lake 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 in 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 applicable 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. The Project directly discharges to a 303(d) waterbody segment, therefore SWPPP inspections shall occur at an interval of at least two inspections 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 completed 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-YHWE-7S8SX, version 1)

Details

Originally Started By Chelsey Kniffen

Alternate Identifier Putnam Station Transitional Horizontal Directional Drill (HDD) Project

Submission ID HPN-YHWE-7S8SX

Submission Reason New

Status Draft

Form Input

Owner/Operator Information

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.)
NTK, 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**

Putnam Station Transitional Horizontal Directional Drill (HDD) Project

Street Address (Not P.O. Box)

County Route 3 and County Route 2

Side of Street

East

City/Town/Village (THAT ISSUES BUILDING PERMIT)

Putnam

State

NY

Zip

12861

DEC Region

5

County

WASHINGTON

Name of Nearest Cross Street

Lake Road

Distance to Nearest Cross Street (Feet)

4050

Project In Relation to Cross Street

West

Tax Map Numbers Section-Block-Parcel

See Question 39

Tax Map Numbers

See Question 39

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

43.734786685130835,-73.37435705100087

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: Roadway/railroad shoulder and open land

Post-Development Future Land Use

Other: Roadway/railroad shoulder and open land 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)

NONE PROVIDED

Total Area to be Disturbed (acres)

2.81

Existing Impervious Area to be Disturbed (acres)

NONE PROVIDED

Future Impervious Area Within Disturbed Area (acres)

NONE PROVIDED

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 (%)**

0

B (%)

7.5

C (%)

29.4

D (%)

63.1

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.

NONE PROVIDED

9a. Type of waterbody identified in question 9?

River Off Site

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?

Yes

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?

No

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 12:01 PM

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

Biotechnical

None

Vegetative Measures

Seeding

Mulching

Topsoiling

Protecting Vegetation

Straw/Hay Bale Dike

Permanent Structural

None

Other

Geotextile filter bag/Dewatering facilities

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 2,900 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 HDD Project is located at approximately 460 County Route 3 in the Hamlet of Putnam Station, Town of Putnam, on Tax Map Numbers Section-Block-Parcel 9.-1-10 on Tax Map Book number 639, 168 and 13.-3-21.1 on Tax Map Book number 719, 336.

A laydown yard, which is included in the total Project Area and disturbed area, is located at approximately 740 County Route 2 (Lower Road) in the Town of Putnam. The laydown yard is located on Tax Map Numbers Section-Block-Parcel 5.-2-4.6 on Tax Map Book number 3114, 323.

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 manufacturer 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 12:01 PM](#)

Comment

NONE PROVIDED

Attachments

| Date | Attachment Name | Context | User |
|---------------------|---------------------------------------|------------|-----------------|
| 11/29/2022 12:01 PM | Owner Operator Certification Form.pdf | Attachment | Chelsey Kniffen |
| 11/29/2022 12:01 PM | SWPPP Preparer Certification Form.pdf | Attachment | Chelsey Kniffen |



Appendix A – SWPPP Preparer Certification Form



SWPPP Preparer Certification Form

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

Project Site Information

Project/Site Name

Putnam Station Transitional Horizontal Directional Drilling (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

First name

C.

MI

Bodenhamer

Last Name

Kevin C. Bodenhamer

Signature

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 15:07:42 -06'00'

01/11/2023

Date



Appendix A – Owner/Operator Certification Form



Owner/Operator Certification Form

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

Project/Site Name: Putnam Station Transitional Horizontal Directional Drilling (HDD) Project

eNOI Submission Number: HPN-YHWE-7S8SX

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

Michael Henssler

M.I. Last Name

Project Manager

Michael.Henssler@nkt.com

DocuSigned by:

Signature

4B95F9D821F24DD...

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



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

A handwritten signature in black ink, appearing to be "John J. Ferguson", written over a horizontal line. The signature is stylized and cursive.

Authorized Signature

1-23-20

Date

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

PREFACE

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

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

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

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

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Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

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

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;
2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants to surface waters of the State*.
3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

Discharges 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 discharges*;
 - (ii) Control stormwater *discharges*, 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 *discharges* from the site;
 - (vi) Provide and maintain *natural buffers* around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharges*, 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.** *Discharges* from *dewatering* activities, including *discharges* 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 *discharges* 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 *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.

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 *discharges* 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 *discharges* 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 *discharges* 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 *discharges* 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 *discharges*; 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 *discharges* 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. *Discharges* after *construction activities* have been completed and the site has undergone *final stabilization*;
2. *Discharges* 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 *discharges* 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 *discharges* 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. *Discharges 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 not 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 not 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 *discharges* 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

- I. 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 sources*. 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 sources*, 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

| |
|--|
| <p>The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:</p> <ul style="list-style-type: none">• Single family home <u>not</u> located in one of the watersheds listed in Appendix C or <u>not directly discharging</u> 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 <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E• Construction of a barn or other <i>agricultural building</i>, silo, stock yard or pen. |
| <p>The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:</p> <p>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.</p> |
| <p>The following construction activities that involve soil disturbances of one (1) or more acres of land:</p> <ul style="list-style-type: none">• 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

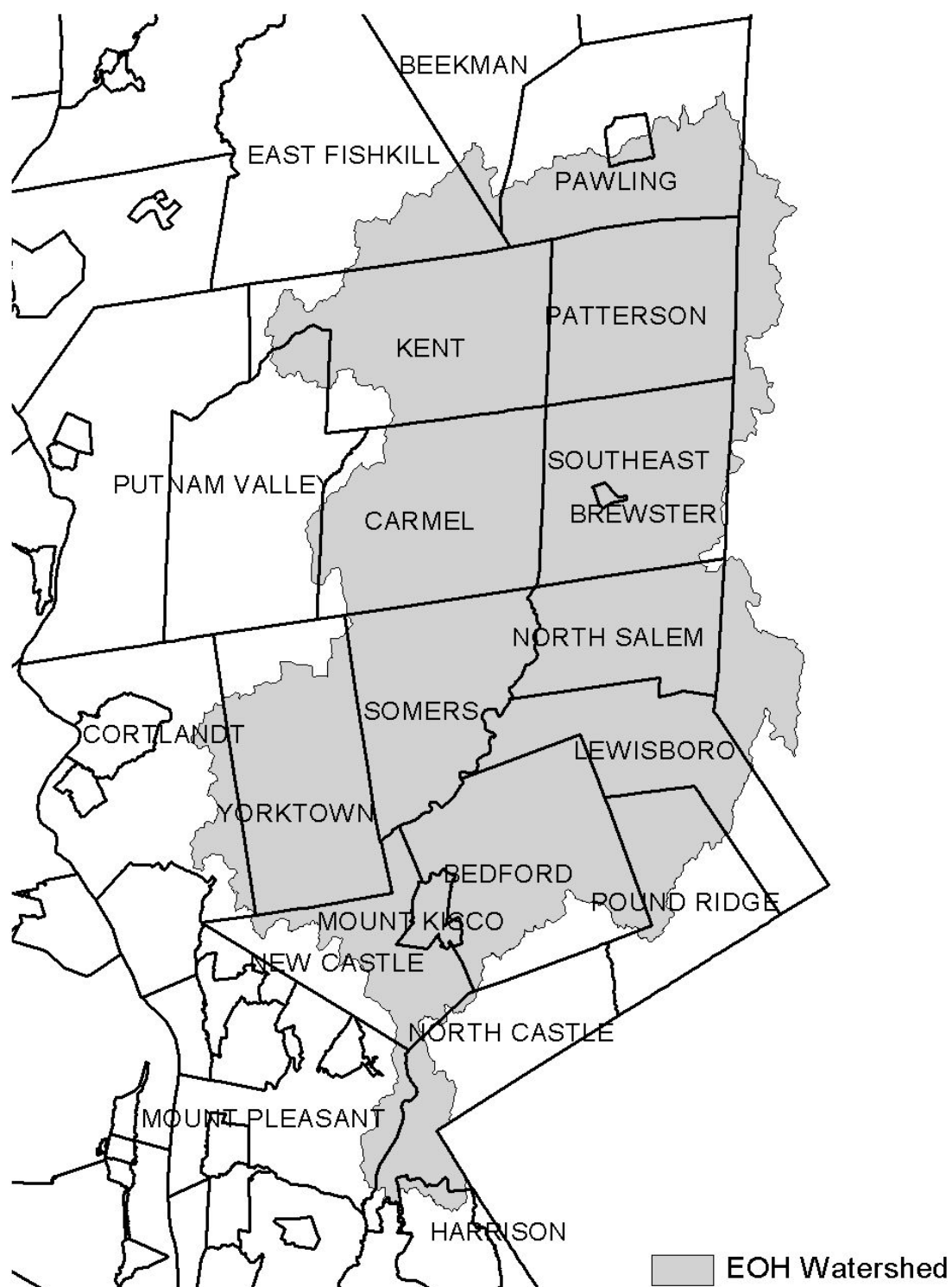
Figure 1 - New York City Watershed East of the Hudson

Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

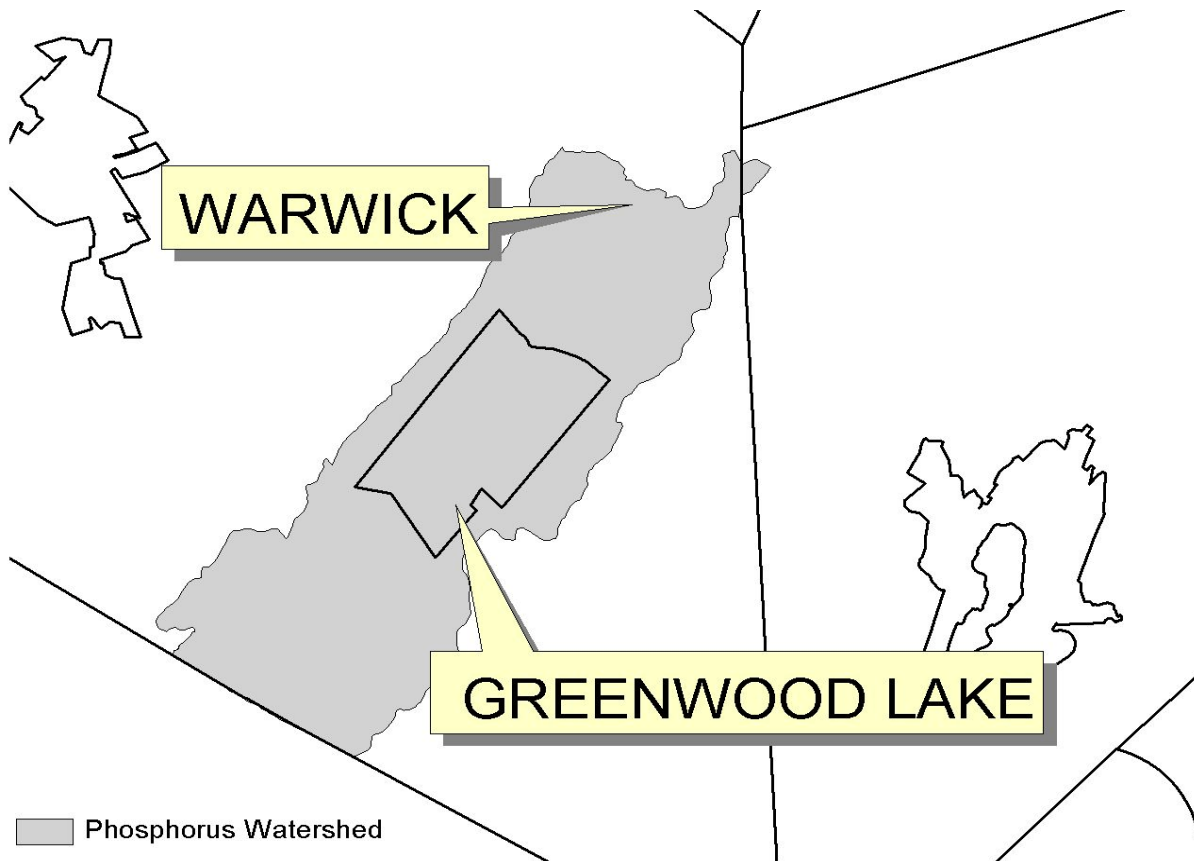


Figure 4 - Oscawana Lake Watershed

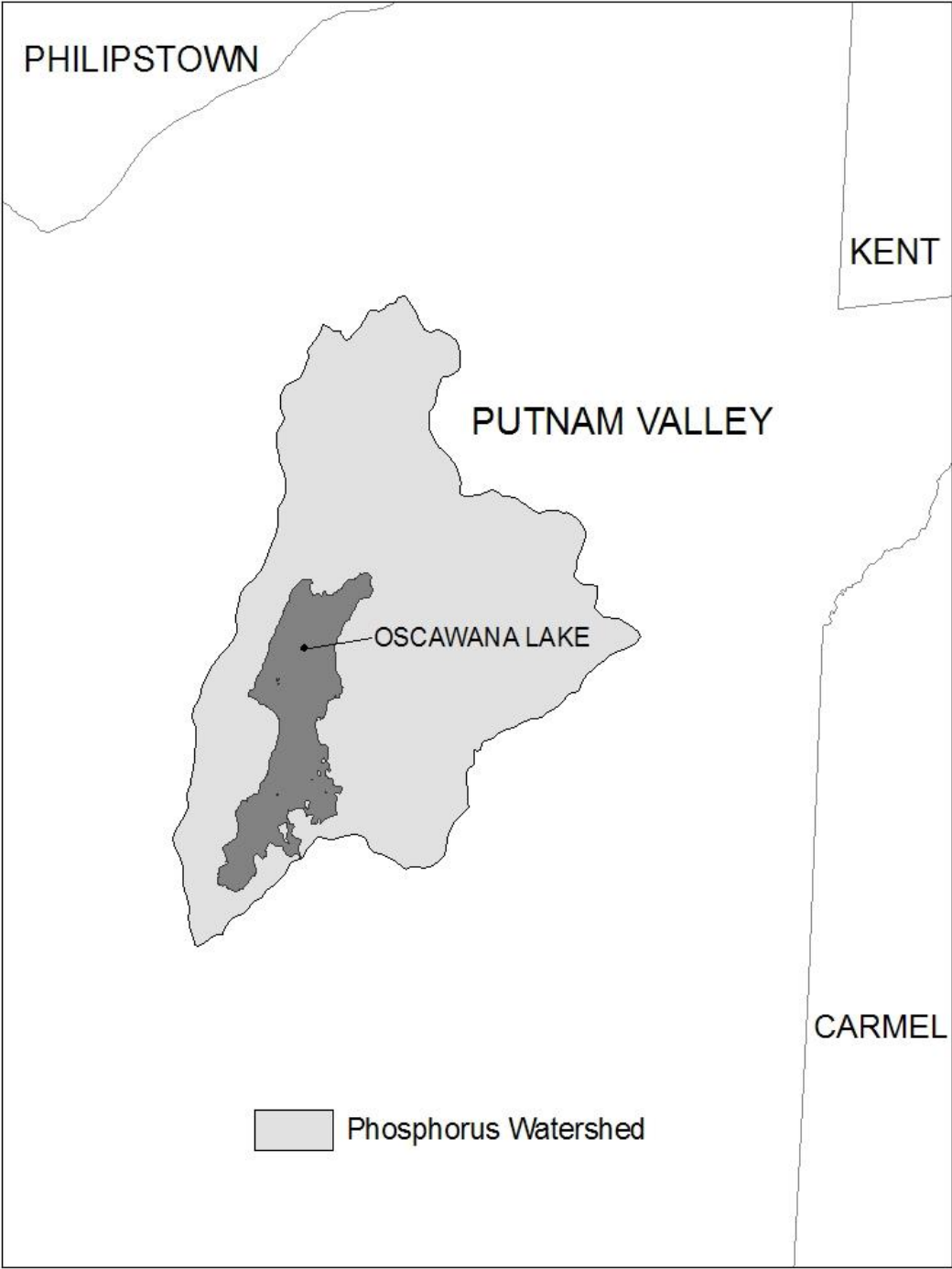
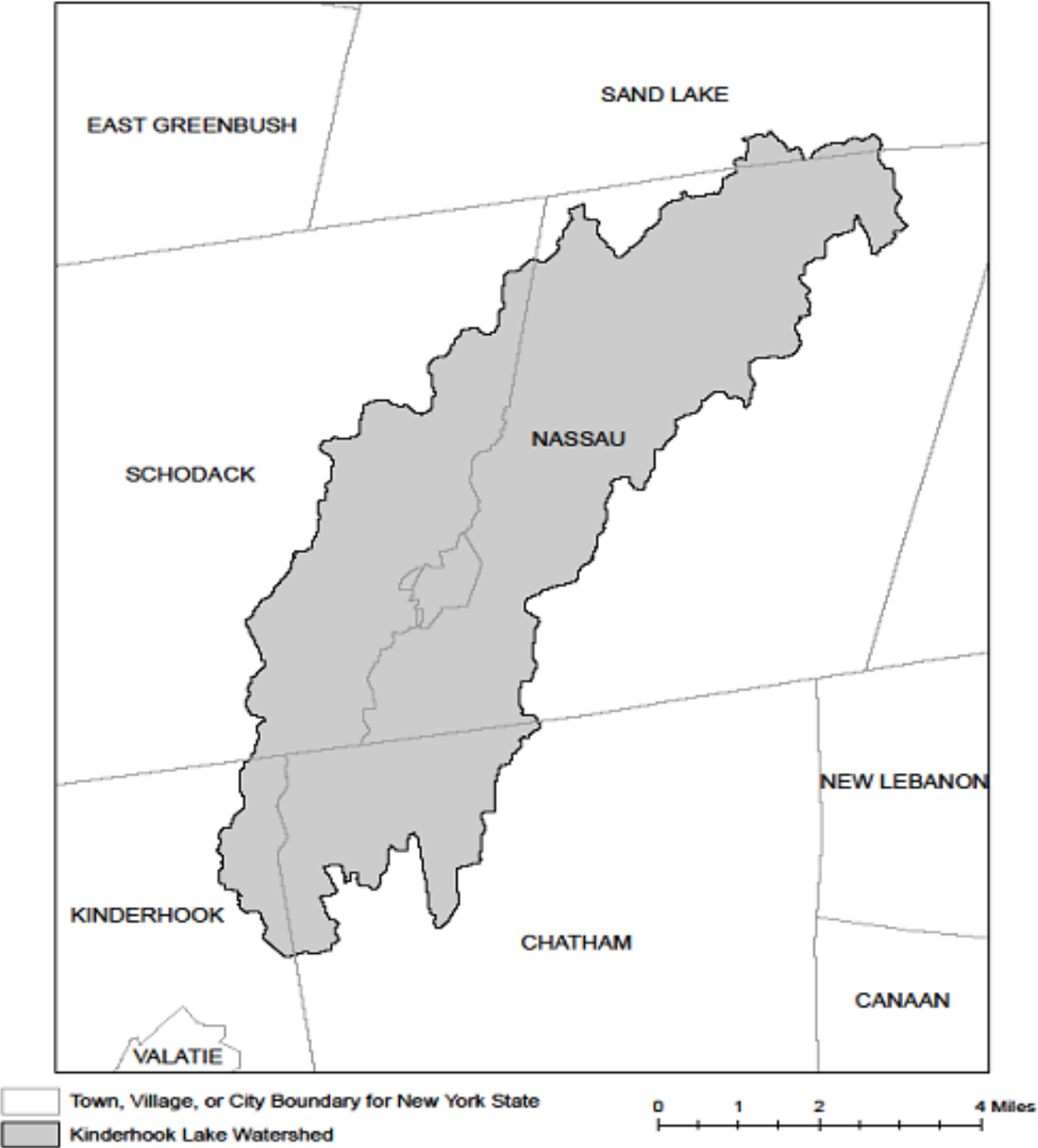


Figure 5 - Kinderhook Lake Watershed



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 | Tribes 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

| <u>Region</u> | <u>COVERING THE FOLLOWING COUNTIES:</u> | <u>DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS</u> | <u>DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM</u> |
|---------------|---|--|--|
| 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

[illegible]



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

Putnam Station Transitional HDD Project
Town of Putnam, Washington 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 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."

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)

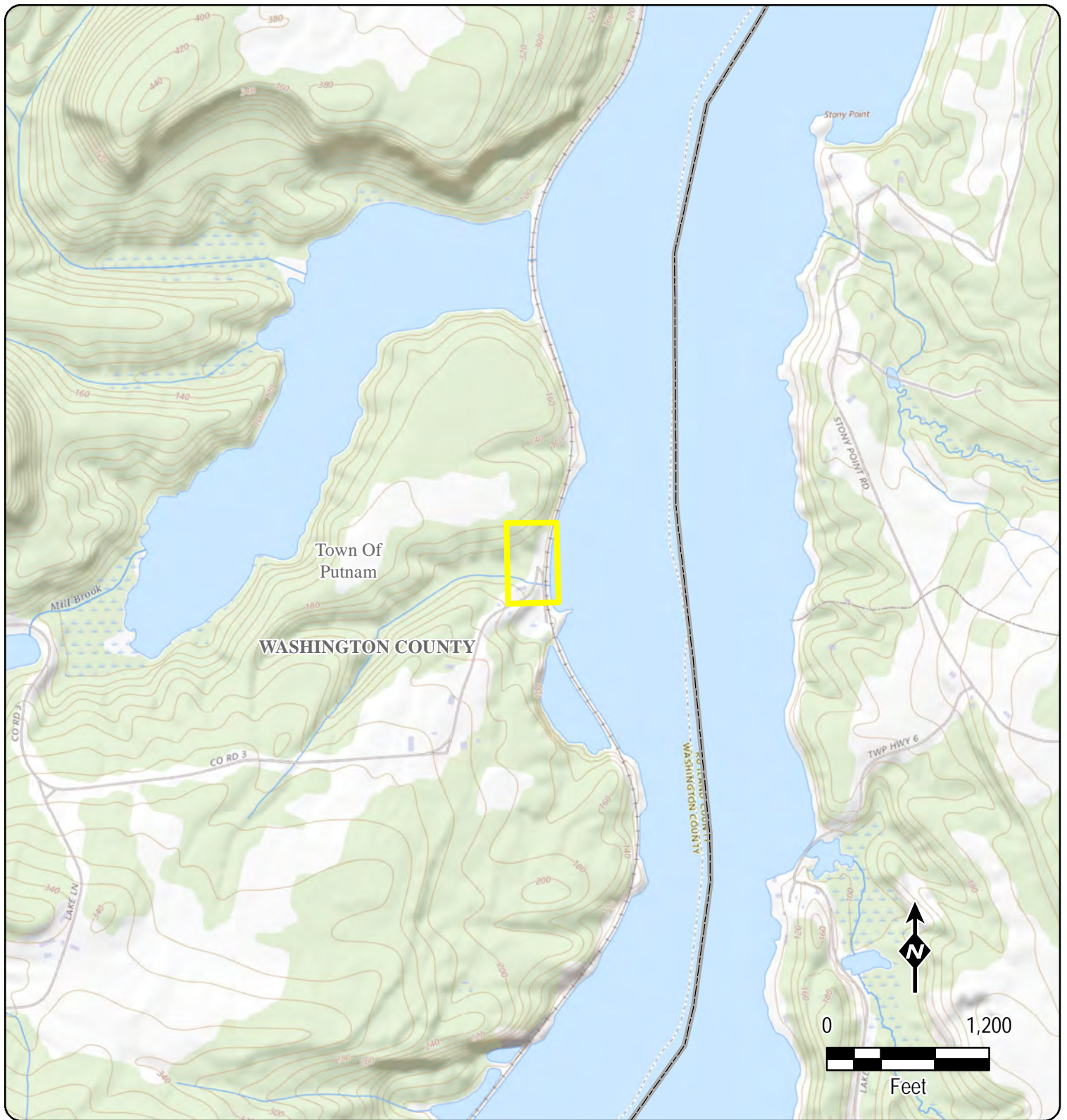
Type of construction services to be provided:

Appendix D – Agency Correspondence and Notifications

Appendix E – Environmental Background Information

- Figure 1: Study Area Map – HDD Site -
- Figure 1A: Study Area Map – Laydown Yard -
- Figure 2: Environmental and Cultural Resources Map – HDD Site -
- Figure 2A: Environmental and Cultural Resources Map – Laydown Yard -
- Environmental and Cultural Resource Information -
- USDA NRCS Soil Resource Report -

Appendix E – Figure 1: Study Area Map – HDD Site



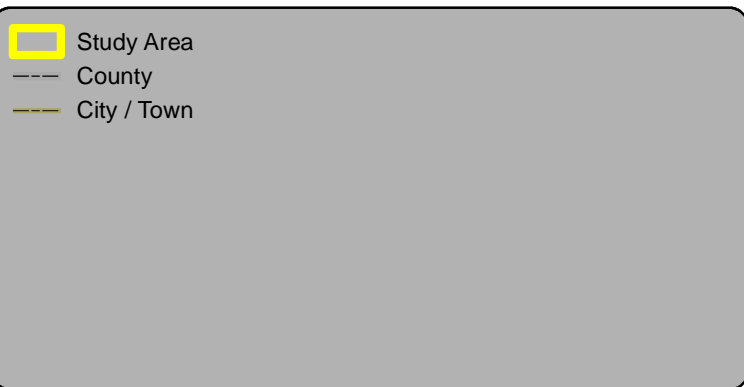
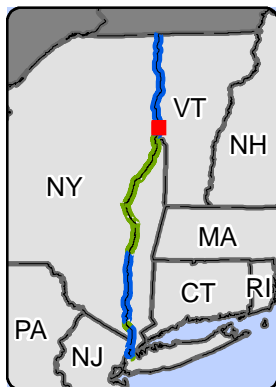
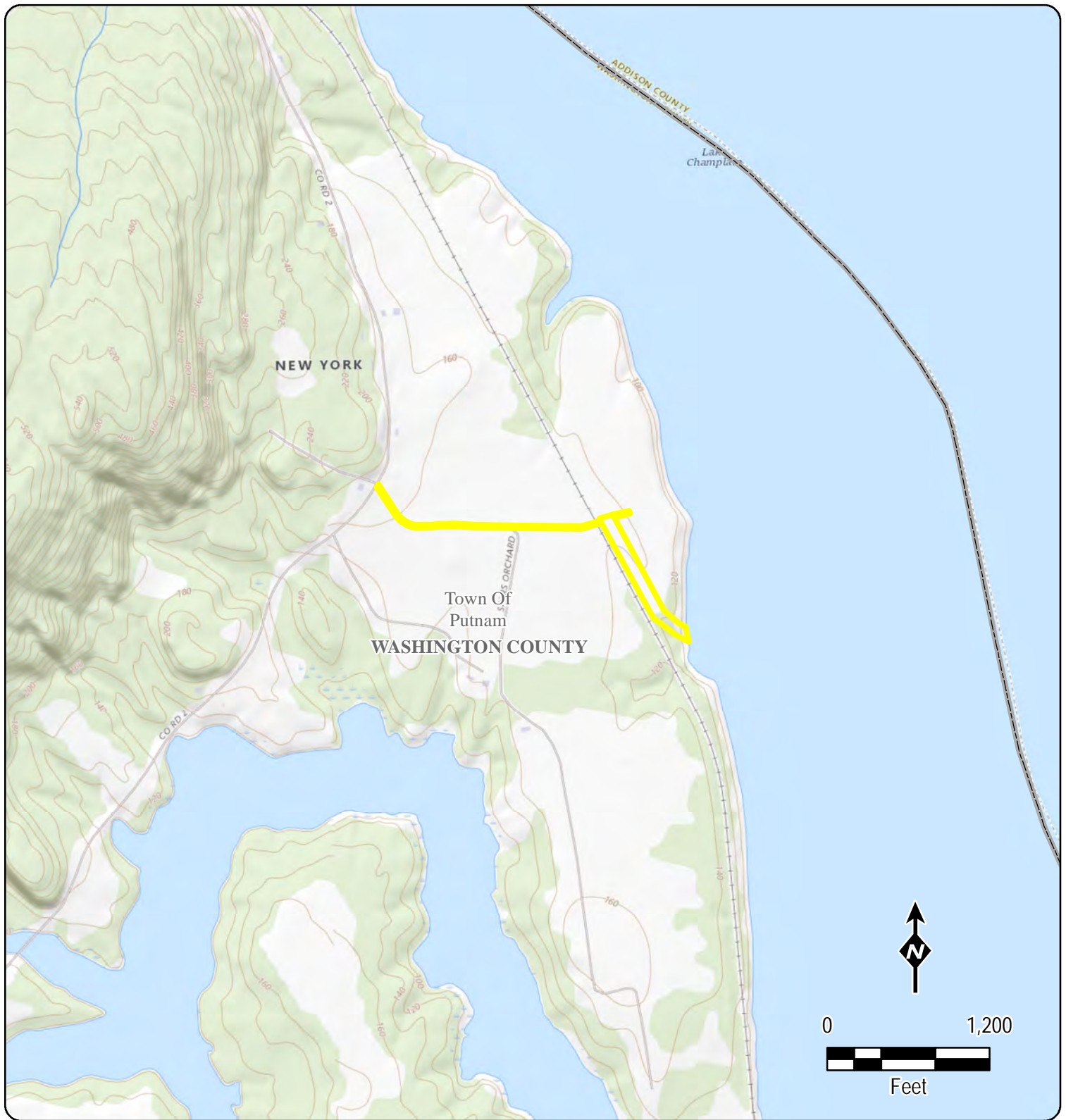
- Study Area
- County
- City / Town



CHAMPLAIN HUDSON POWER EXPRESS
Putnam Station Transitional HDD
Figure 1
Study Area

Created: 10/28/2022

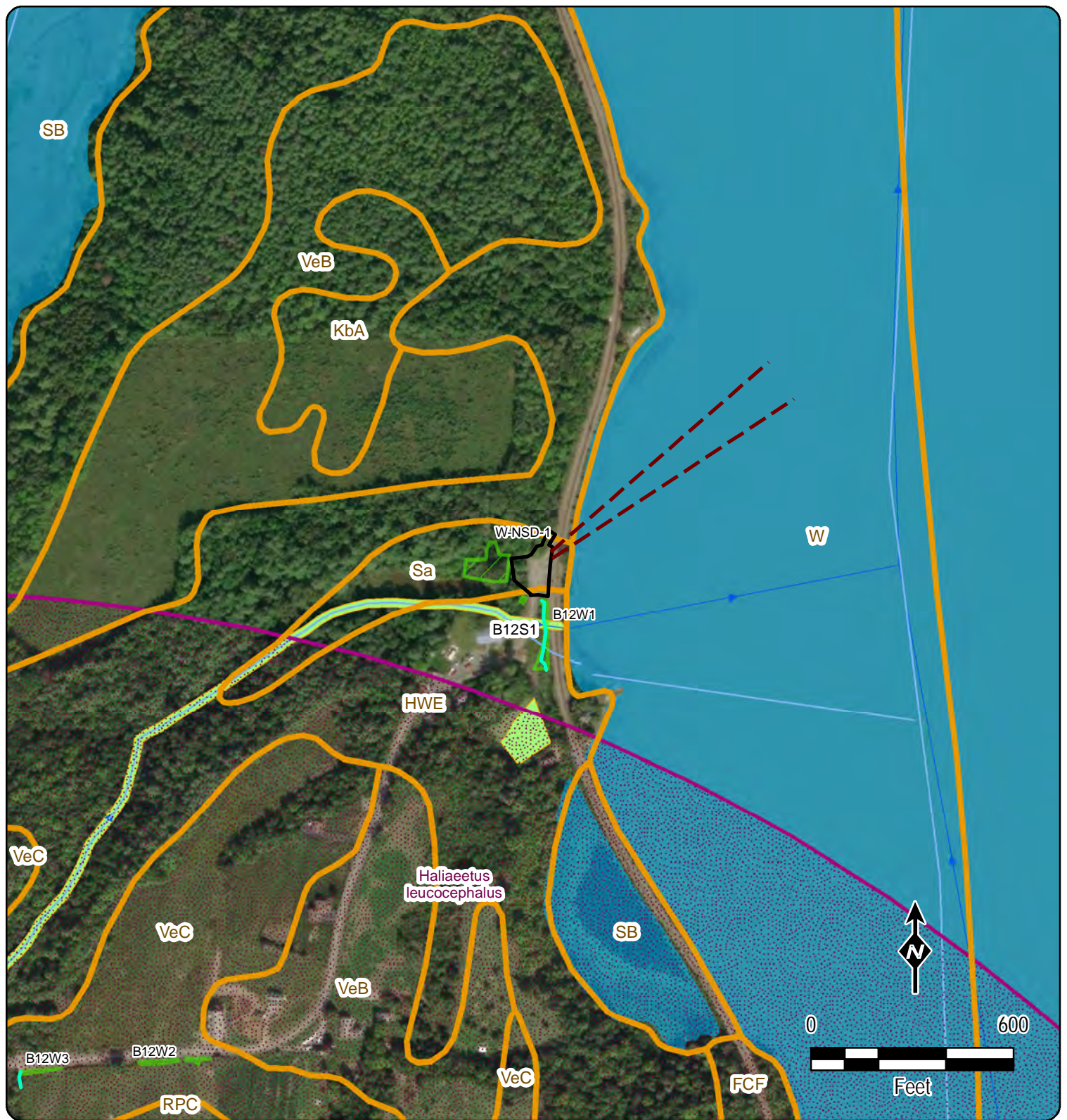
Appendix E – Figure 1A: Study Area Map – Laydown Yard



CHAMPLAIN HUDSON POWER EXPRESS
Putnam Station Laydown Yard
Figure 1A
Study Area

Created: 10/28/2022

Appendix E – Figure 2: Environmental and Cultural Resources Map – HDD Site



- | | |
|-----------------------------|---------------------------------|
| — HDD | — NHD Flowline |
| — LOD | — NHD Waterbody |
| — Delineated Stream | — NYSDEC |
| — Delineated Wetland | — Endangered/Threatened Species |
| — Soils (SSURGO) | |
| — NYSDEC Water Quality Line | |
| — NWI | |



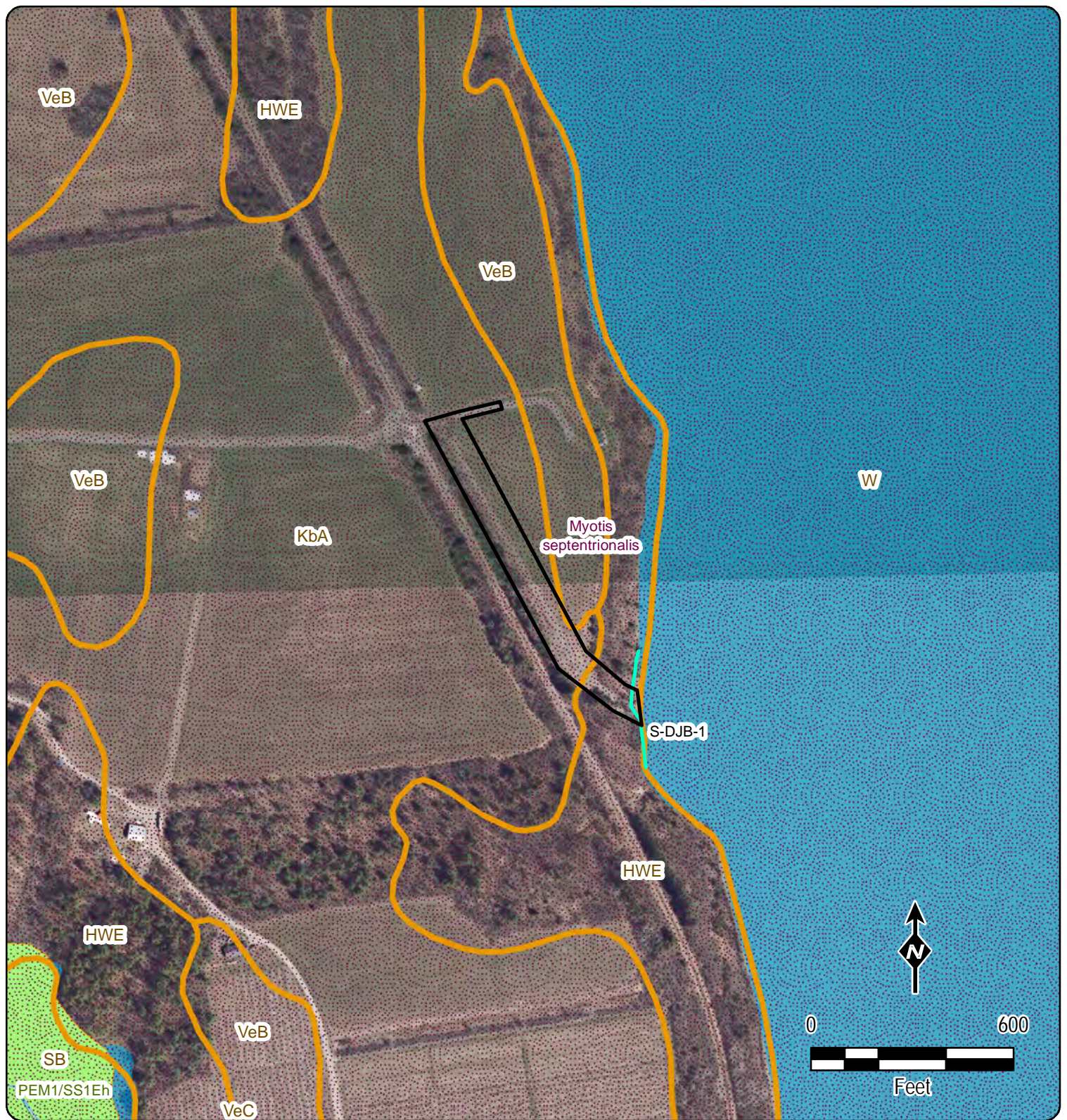
CHAMPLAIN HUDSON POWER EXPRESS

Putnam Station HDD

Figure 2
Environmental and Cultural
Resources

Created: 11/30/2022

Appendix E – Figure 2A: Environmental and Cultural Resources Map – Laydown Yard



- Laydown Area
- Delineated Stream
- Soils (SSURGO)
- NYSDEC Water Quality Line
- NWI
- NHD Flowline
- NHD Waterbody
- NYSDEC
- Endangered/Threatened Species



CHAMPLAIN HUDSON POWER EXPRESS

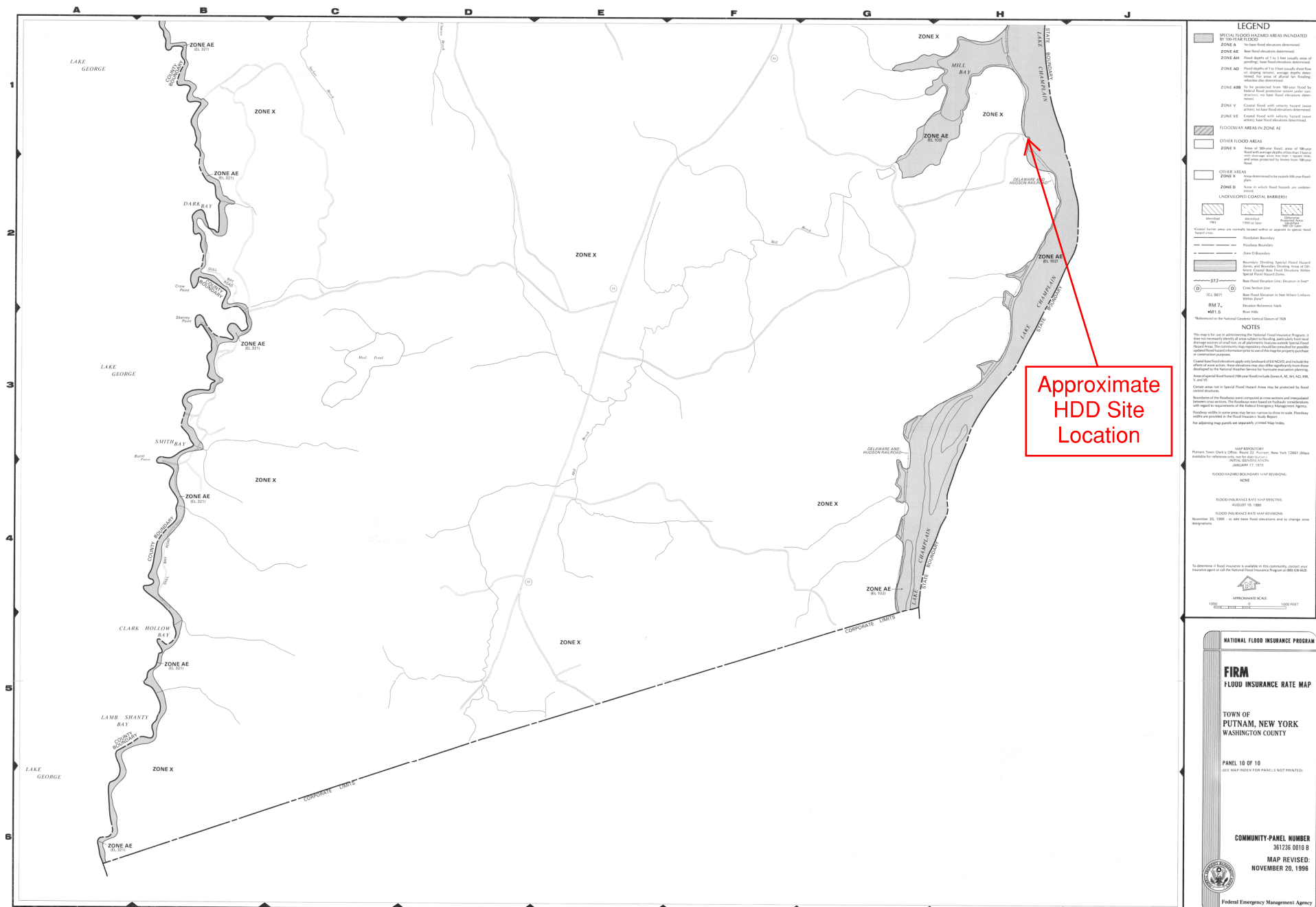
Putnam Station Laydown Area

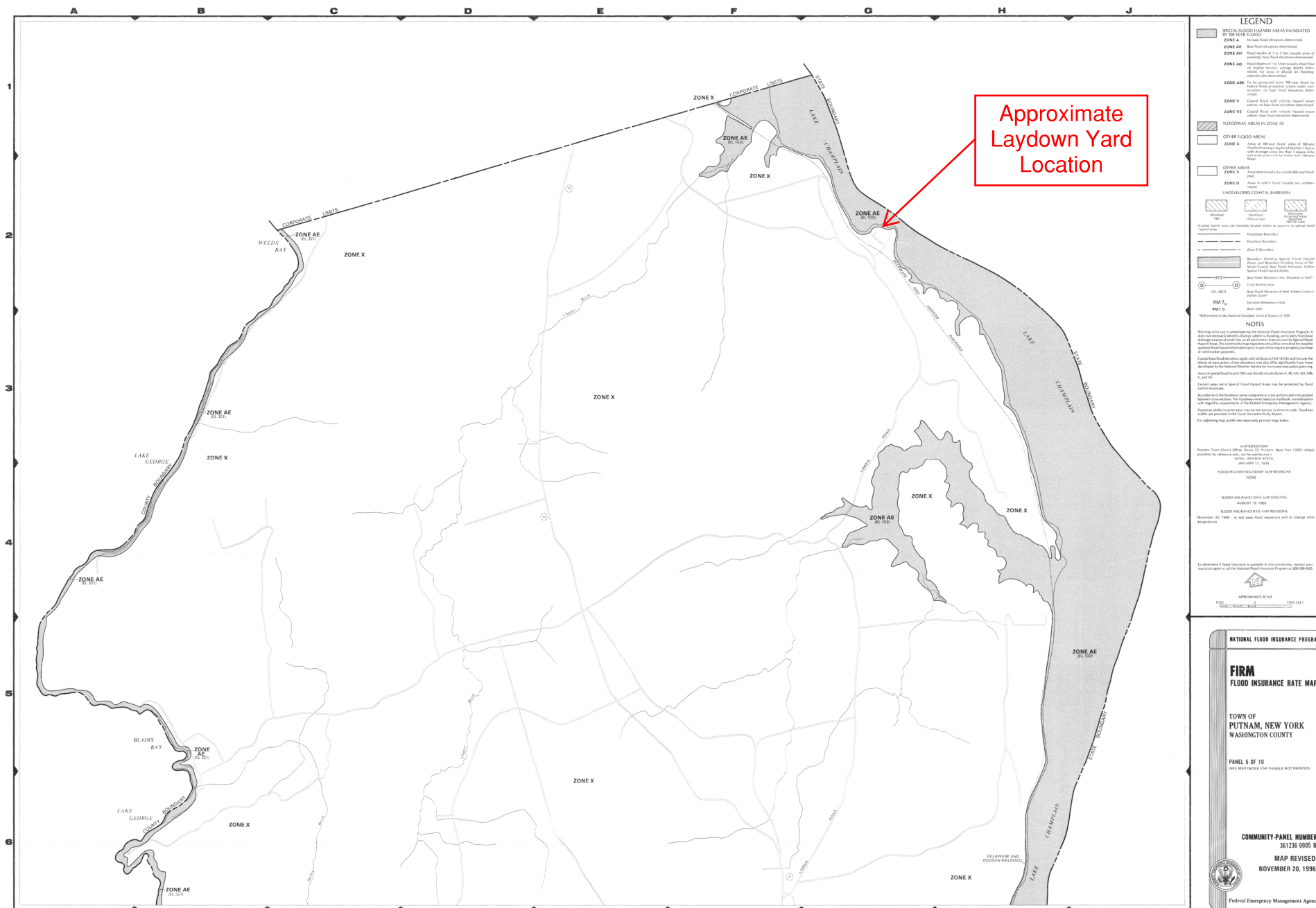
Figure 2A

Environmental and Cultural
Resources

Created: 11/30/2022

Appendix E – Environmental and Cultural Resource Information





Champlain Hudson Power Express



Revised Wetland & Waterbodies Delineation Report – Phase 1

Case 10-T-0139
Putnam - Whitehall, New York

CHA Project Number: 066076

Prepared for:
Transmission Developers Inc.
600 Broadway Street
Albany, NY 12207

Prepared by:

III Winners Circle
Albany, NY 12205
Phone: (518) 453-4500

September 2022

SIGNATURE PAGE

This report has been prepared and reviewed by the following qualified personnel employed by
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John W. Greaves
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Report Reviewed By:



Christopher R. Einstein, PWS
Principal Scientist

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| Attachment 1 | Wetland Determination Data Sheets and Wetland Photographs |
| Attachment 2 | NWI & State Wetland and Stream Mapping |
| Attachment 3 | NRCS Soil Mapping |
| Attachment 4 | Tables |
| Attachment 5 | Wetlands and Waterbodies Delineation Mapping |
| Attachment 6 | Waterbody Photographs |

1.0 INTRODUCTION

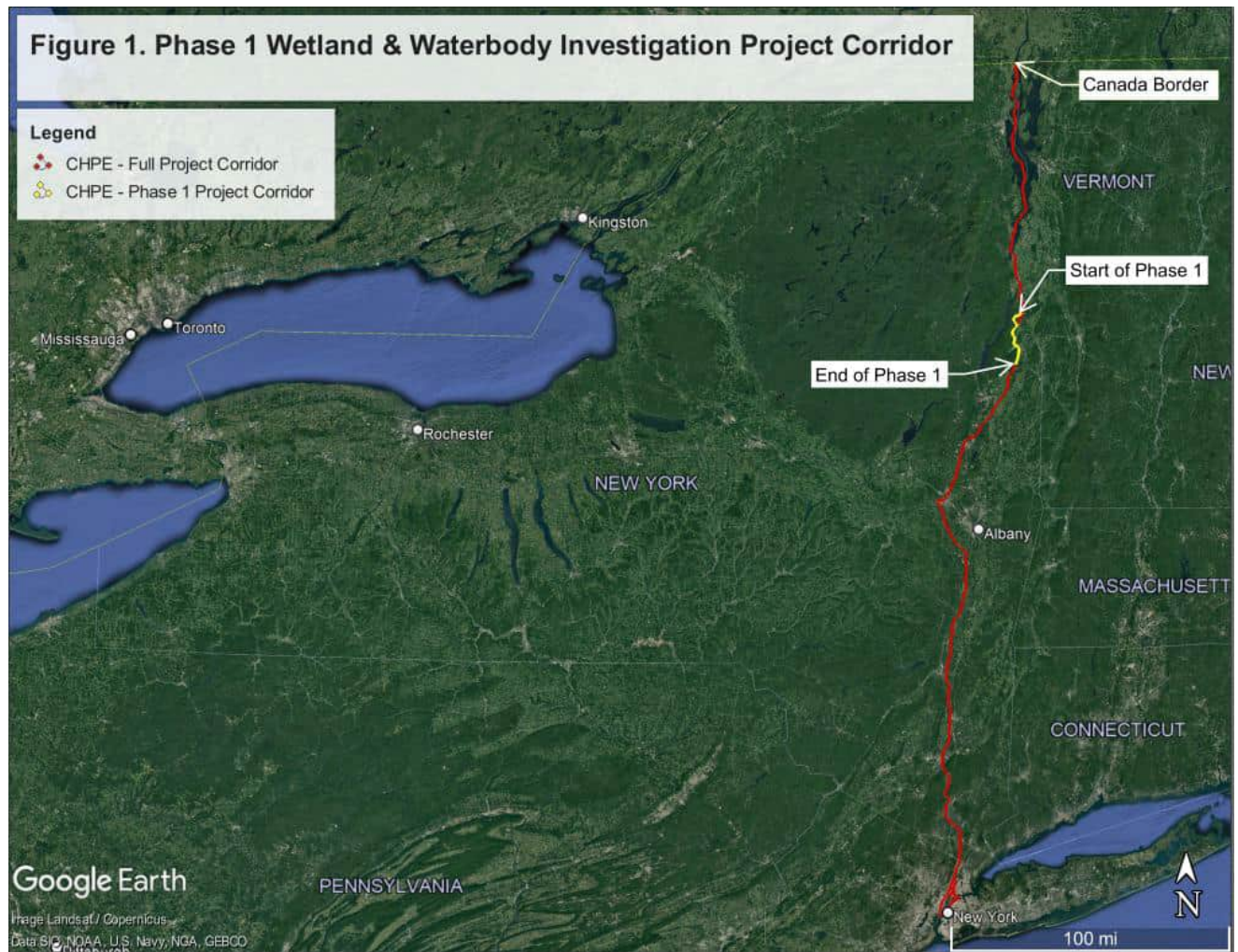
CHA Consulting, Inc. (“CHA”) has prepared this wetland and waterbodies delineation report on behalf of Champlain Hudson Power Express, Inc. (“CHPE”) and Kiewit Construction (Kiewit) for the Champlain Hudson Power Express Project (Project). CHA was retained by Kiewit to identify and delineate jurisdictional wetlands and waterbodies regulated under Section 404 of the Clean Water Act (CWA), Section 10 of the Rivers and Harbors Act of 1899, and Article 24 Freshwater Wetlands Act (FWW) and 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 Canadian-Pacific (“CP”) railroad rights-of-way (“ROW”). 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 is an addendum to the February 2022 delineation report. It 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.

This revision includes the laydown and staging area located on Ryder Road (new wetlands SA1, SA2, SA3 & SA4), additional delineation along Lake Road (expanded delineations of Wetlands CO and CP, Stream CS13, and delineation of a wetland (Wetland CPA) abutting Stream CS13 on the south side of Lake Road), and additional delineation along Route 22 (Wetlands 1A-A, A1-B, A1-C, 1A-D, 1B-A, and Stream 1B-S1) to reflect alignment changes resulting from discussion with the NYS Department of Transportation.

2.0 PHASE I CORRIDOR OVERVIEW

From the Canada border, the proposed transmission cable route enters Lake Champlain and travels south to the Town of Putnam, New York. In the Town of Putnam, the transmission cables will transition from the waters of Lake Champlain to the land on the western shore via a horizontal directional drill (“HDD”) and subsequently enters County Route 3 and Lake Road for approximately 3.2 miles (approximate Sta. 10000 +00 to Sta.10161+00) to intersect with the New York State Route 22 ROW. The cables continue within the Route 22 ROW approximately 16.5 miles (approximate Sta.12500+00 to Sta 13038+71) until the CP Railroad ROW. The cable route enters the CP ROW and remains primarily within the ROW for approximately 5.9 miles (Sta. 15000+10 to Sta. 15306+44) to the end of Phase I. 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 27 miles of the Phase 1 Project Corridor that was investigated for wetlands and waterbodies.

Figure 1: Package 1 Wetland & Waterbody Investigation Project Corridor



3.0 WETLAND DELINEATION METHODOLOGY

To determine the potential for wetland impacts from construction of the Project, CHA assessed the Project survey area 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) jurisdictional wetlands. Greenman Pedersen, Inc. (GPI) assisted with the field work. Wetland scientists from CHA conducted wetland delineations from October to January 2022, and as part of this addendum, again in April and August 2022. The delineation criteria and methodology were performed in accordance with the United States Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual, the *Regional Supplement to the Corps of Engineers Wetland Manual: Northcentral and Northeast Region* (January 2012) wetland 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 NYS Route 22 ROW, County Route 3, local roads, and the CP railroad ROW. 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 within the ROW of the aforementioned roads and railroad.

In accordance with the procedures provided in the USACE 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 "Routine 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. At each location a wetland data point and an upland data point 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 Phase 1 Project Corridor falls under the jurisdiction of the USACE, Adirondack Park Agency (APA) and the New York State Department of Environmental Conservation (NYSDEC). 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 APA are typically one acre or more in size. Those wetlands regulated by NYSDEC (outside the Adirondack Park) 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 and APA publish maps of wetland areas under state jurisdiction; however, both agencies use 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, NYSDEC freshwater wetlands mapping and APA wetland mapping to identify potential wetland features present within the Project Corridor. More importantly, CHA used the previous wetland delineation prepared for this Project Corridor and alternatives 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.

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 survey area 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 112 wetland areas were identified in the survey area along the Phase I Project Corridor totaling approximately 34.5 acres within the Project Corridor (also defined as the Jurisdictional Determination limits). Table 4-1 in Attachment 4 provides a summary of the wetlands identified along the Phase I Project Corridor, including their classification in accordance with Cowardin et al. (1979) and their state or federal jurisdiction. Of these, seven (7) wetlands delineated along the Project Corridor correspond with wetlands mapped by the NYSDEC.

Narrative descriptions of wetland vegetation, hydrology, and soils observed within the Project survey area are presented in the following sections. The wetlands delineated within the surveyed areas are summarized in Table 4-1. Table 4-2 summarizes the waterbodies identified within the surveyed areas. Table 4-3 provides the soil series information assembled for the Project Corridor. Refer to Attachment 4 for each of these tables. The Wetlands and Waterbodies Delineation Mapping shows the locations of delineated wetlands and waterways are provided in Attachment 5. 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 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 survey area: palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetlands.

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 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.

Some wetlands contained co-dominant emergent, scrub-shrub, or forested vegetation. Open water areas were identified as palustrine unconsolidated bottom (PUB), lacustrine limnetic unconsolidated bottom (L1UB), and lacustrine littoral aquatic bed (L2AB).

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). The freshwater emergent wetlands along the Project survey area primarily include shallow emergent marshes, deep emergent marshes, common reed/purple loosestrife marshes, and ditch/artificial intermittent stream channels (Edinger et. al., 2014). PEM wetlands occur as a single dominant wetland cover type, and as a co-dominant wetland type when other plant community types exist within the wetland.

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 survey area includes cattails (*Typha* spp.), sedges (*Carex* spp.), goldenrods (*Solidago* spp.), spotted joe-pye-weed (*Eupatorium maculatum*), reed canary grass (*Phalaris arundinacea*), scouring rush (*Equisetum hyemale*), sensitive fern (*Onoclea sensibilis*), and soft rush (*Juncus effusus*). Invasive species observed within the shallow emergent marshes include common reed (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*).

Deep emergent marshes occur on mineral soils or fine-grained organic soils with water depths ranging from 6 inches to 6.6 feet (Edinger et. al., 2002). Emergent vegetation observed within deep emergent marshes in the Project survey area includes cattails and bulrushes (*Scirpus* spp.). Common reed and purple loosestrife were observed within some of the deep emergent marshes within the Project Corridor.

Common reed/purple loosestrife marshes 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 CP rail bed.

The ditch/artificial intermittent stream community consists of artificial waterways constructed for drainage or irrigation (Edinger et. al., 2014). Vegetation within the ditches is typically dominated by grasses and sedges. Invasive species such as common reed, purple loosestrife, and reed canary grass are commonly found within the ditches along the railroad and highway ROWs.

4.1.2 Palustrine Scrub-Shrub Wetland

The scrub-shrub wetland cover type includes areas that are dominated by saplings and shrubs that are less than 20 feet tall (Cowardin et. al., 1979). Scrub-shrub wetlands along the Project survey area were dominated by silky dogwood (*Cornus amomum*), gray dogwood (*Cornus racemosa*), and honeysuckle (*Lonicera spp.*). Other vegetation observed includes black willow (*Salix nigra*), gray birch (*Betula populifolia*), weeping crack willow (*Salix babylonica*), and nannyberry (*Viburnum lentago*). Invasive species observed within scrub-shrub wetlands includes honeysuckle and common buckthorn (*Rhamnus cathartica*). PSS wetlands occur as a single dominant wetland cover type, and as a co-dominant wetland type when other plant community types exist within the wetland.

4.1.3 Palustrine Forested Wetland

Forested wetland cover types are dominated by trees and shrubs that have 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. Forested wetland communities along the Project survey area include red maple hardwood swamps, floodplain forest, and silver maple-ash swamps (Edinger et al., 2014). PFO wetlands occur as a single dominant wetland cover type, and as a co-dominant wetland type when other plant community types exist within the wetland.

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 survey area include green and white ash (*Fraxinus pennsylvanica* and *F. americana*), American elm (*Ulmus americana*), northern red oak (*Quercus rubra*), swamp white oak (*Quercus bicolor*), red maple (*Acer rubrum*), and white pine (*Pinus strobus*). Shrub species commonly observed

within red maple-hardwood swamps in the Project survey area include dogwoods, gray birch and honeysuckle. The herbaceous layer typically includes sensitive fern, cinnamon fern (*Osmundastrum cinnamomeum*) tussock sedge (*Carex stricta*), goldenrods, and reed canary grass. Invasive species observed within red maple-hardwood forests included honeysuckle, buckthorn, and reed canary grass.

Floodplain forests typically occur on mineral soils on low terraces of river floodplains and river deltas (Edinger et al., 2014). Tree species observed within this community type in the Project survey area include green ash, cottonwood (*Populus deltoides*), red maple, American elm, and swamp white oak (*Quercus bicolor*). Shrubs included dogwoods, honeysuckle, and gray birch. Sensitive fern, cinnamon fern, goldenrods, horsetail, and sedges were commonly found in the herbaceous layer. Invasive honeysuckles and buckthorns were also observed in floodplain forests within the Project survey area.

Silver maple-ash swamps occur in poorly drained depressions or along the borders of large lakes and, less frequently, in poorly drained soils along rivers. Ash-elm dominated swamps with little or no silver maple (red maple may be present) are currently included as part of this community type (Edinger et al., 2002). Tree species observed within this community within the Project survey area include green ash, elms, swamp white oak and cottonwood. Shrub species observed included silky and gray dogwood, as well as willows (*Salix spp.*). The herbaceous layer typically included tussock sedge, jewelweed (*Impatiens capensis*), cattails, goldenrods, sensitive fern, and rough and field horsetail (*Equisetum hyemale* and *E. arvense*). Invasive species observed within silver maple-ash swamps included honeysuckles and buckthorns.

4.1.4 Open Water

Besides vegetated wetlands, a few scattered small ponds are located along the transmission cable corridor, adjacent to the railroad and highway ROWs as are streams and Lake Champlain. As previously noted, open water communities are identified as palustrine unconsolidated bottom (PUB), lacustrine limnetic unconsolidated bottom (L1UB), and lacustrine littoral aquatic bed (L2AB). These communities are characterized by a vegetation cover of less than 30 percent, although there may often be emergent or shrubby vegetation bordering the open water areas. Characteristic species observed along the edges of these communities were narrow leaf cattail

(*Typha angustifolia*), common duckweed (*Lemna minor*) and a variety of sedge species (*Carex spp.*) Pond substrates may be silt, mud, cobble or sand.

4.2 HYDROLOGY

4.2.1 Streams

Table 4-2 lists the 53 streams (perennial (27), intermittent (26)) identified within the Project Corridor. The overland transmission cable route is located within the Lake Champlain Basin. The Lake Champlain Basin drains the area between the Adirondacks and the Green Mountains in Vermont. Perennial waterbodies within the Project Corridor in this watershed include Pine Lake Brook, South Bay of Lake Champlain, Halfway Creek, abandoned sections of the Champlain Canal, as well as unnamed tributaries connected to these watersheds 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 inundation (A1) or evidence of inundation (A2 & A3) (such as water-stained leaves (B9) or buttressed tree trunks), trees with shallow roots, saturation within the upper portion of the soil (A3) during the growing season, drainage patterns (B10) and drift lines within wetlands, sediment deposition (B2), and oxidized root channels (C3) in the upper 12 inches of soil (Attachment 1). Hydrologic factors contributing to the presence of wetland hydrology within wetlands in the Project Corridor included inundation with river, 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. CHA inspected these ditches 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 (USDA) Natural Resources Conservation Service (NRCS) soil map units for the Project Corridor provided in Attachment 3. Indicators of hydric soils included muck or evidence of gleied colors such as histic epipedon (A2), black histic (A3), depleted below dark surface (A11), thick dark surface (A12), sandy redox (S5), dark surface (S7), thin dark surface (S9), loamy gleied matrix (F2), depleted matrix (F3) and redox dark surface (F6) (Attachment 1). Within the Project Corridor, a total of 21 different soil types have been mapped by the NRCS. The mapped soil types range from excessively drained to very poorly drained soils. According to the National List of Hydric Soils prepared by the NRCS (2009) (Section 4.4 and Attachment 4, Table 4-3), six (6) of the soils mapped within the Project Corridor are classified as hydric soils (Carlisle muck, Catden muck, Covington silty clay loam, Limerick silt loam, Saco silt loam and Sapristis, Aquepts, and Aquepts). 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 survey area 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, USDA 2021). Soils survey mapping and additional information regarding relevant soil characteristics are provided in Attachment 3.

Carlisle Series (Ca)

These deep and very poorly drained organic soils formed in woody fibrous material that accumulated in waterlogged bogs. They are nearly level and are found in depressions within

glaciated uplands, lake plains, and outwash plains. The surface layer is black organic material 10 inches thick. Below this layer is a 15-inch layer of black, massive, well decomposed organic material. The following 49 inches is composed of dark reddish-brown, massive, well-decomposed organic material. From a depth of 74 to 80 inches is very dusky red, massive, neutral, fibrous organic material. Below 80 inches is a 6-inch layer of light-gray, slightly sticky and slightly plastic, calcareous marl and 24 inches of dark-drain, massive, slightly sticky and slightly plastic, calcareous silt.

Catden Series (Ca)

These organic/muck soils are characterized as very deep and very poorly drained. They are formed in highly decomposed woody and herbaceous organic materials in depressions on till plains, lake plains, outwash plains, and flood plains. Saturated hydraulic conductivity is moderately high or high with slopes ranging from 0 to 2 percent. The organic material may extend to a depth of 51 inches or more, and surface tiers are characterized with hues of 5YR to 2.5Y, or neutral, values of 1 to 4 and chromas of 0 to 6. It is dominantly muck (sapric material); however, some pedons have surface layers of peat (fibric material) or mucky peat (hemic material). The structure of the surface tier is weak or medium, coarse to fine granular, platy, subangular blocky, or is massive. Subsurface and bottom tiers have hues, values and chromas are similar to the surface layers.

Charlton Series (CHC & CHE)

These deep, well drained soils formed in glacial till from syenite and granite gneiss. Slopes range from 0 to 50 percent. The A horizon is very dark grayish-brown sandy loam 2 inches thick. It has a weak granular structure. The upper 5 inches of the B horizon is dark-brown sandy loam, and the lower 21 inches is yellowish-brown sandy loam. The B horizon has weak subangular blocky structure. The C horizon is light olive brown sandy loam with pockets of loamy sand. The horizon is massive.

Claverack Series (CIA & CIB)

These very deep, moderately well drained soils formed in sandy deposits that overlie clayey lacustrine sediments. They are nearly level to sloping soils in shallow deltas on lake plains. The sand, which overlies finer textured sediments, is dominated by quartz and has been derived primarily from non-calcareous sandstone or granite. Slope ranges from 0 to 15 percent. Typically,

the A horizon consists of a fine sand and is usually a dark grayish brown color. The B horizon consists of structureless sand. In some places, the lower part of the B horizon has gray or grayish brown redoximorphic features below a depth of 18 inches. The C horizon is a silty clay loam or clay with some sub-horizons of silt or loam, up to 5 inches thick.

Covington Series (Cv)

These very deep and poorly drained soils formed in calcareous clayey glacio-lacustrine or glacio-estuarine deposits on glacial lake plains. These soils are found on broad plains, depressions, and drainageways. Slopes range from 0 to 8 percent. The A horizon consists of very dark brown silty clay or silty clay loam with granular or blocky structure, to a depth of 8 inches. The B horizon is dark gray firm to very firm, sticky or plastic clay with thin sub-horizons of silty clay, extending to a depth of 33 inches. High chroma redoximorphic features are typical of this horizon. The C horizon is typically dark gray firm to very firm, sticky or plastic clay or silty clay, although silt and silt loam varves alternate with clay varves in some pedons. The C horizon may extend to a depth of 65 inches and has redoximorphic features similar to that of the B horizon.

Farmington Series (FCC)

These shallow, well drained and somewhat excessively drained soils formed in till. Slopes range from 0 to 70 percent. The A horizon is dark grayish brown silt loam with granular structure. The B horizon is composed of a yellowish-brown silt loam 6-inches thick, followed by 4-inches of brown loam with redoximorphic features. The texture is very fine sandy loam to silt loam, and the structure is granular to subangular blocky. The R horizon is limestone, dolomite, or dolomitic limestone bedrock.

Hartland Series (HcB &HcC)

These deep, well-drained medium textures soils formed in water-sorted silt and very fine sand, and occur typically in cultivated areas. Slopes range from 0 to 20 percent. The A horizon is up to 10 inches deep and consists of a dark brown very fine sandy loam with a very weak, fine granular structure. The B horizon is up to 5 inches deep with a yellowish-brown color with a weak, medium, subangular, blocky structure. Depth to bedrock is more than 6 feet.

Hollis Series (HLE & HNC)

These shallow, somewhat excessively drained soils formed in glacial till. Slopes range from 0 to 60 percent. The A horizon is dark brown loam 4 inches thick with weak granular structure. The upper 4 inches of the B horizon is strong-brown sandy loam and the lower 11 inches is yellowish-brown fine sandy loam. The B horizon has weak granular or weak blocky structure. Bedrock is at a depth of 19 inches.

Hoosic Series (HSDK)

These very deep, somewhat excessively drained soils formed in glacial outwash plains, valley trains, and related terraces, kames, eskers, and water sorted parts of moraines. Slopes range from 0 to 60 percent. The A horizon is dark grayish brown gravelly sandy loam with granular to subangular blocky structure. The B horizon is yellowish brown gravelly sandy loam. The structure is granular or subangular blocky, and some sub horizons have single grain and loose structure. The BC horizon is yellowish brown very gravelly loamy sand with granular structure. The C horizon is light olive brown and dark grayish brown. The texture is loamy sand to coarse sand, and the horizon has a single grain and loose structure.

Hudson Series (HWE)

These very deep, moderately well drained soils formed in clayey and silty lacustrine sediments. These soils are in convex lake plains, lacustrine capped uplands, and on lower valley side-slopes. Slopes can range from 0 to 60 percent. The A horizon is typically brown silt loam and silty clay loam, with granular structure, extending 5 to 12 inches deep. The E horizon, when present, consists of faintly mottled brown, very fine sandy loam or silt loam with blocky or platy structure. The B horizon generally is firm yellowish brown to brown silty clay with moderate or strong blocky structure and may have medium to very coarse prisms. Low- and high-chroma redoximorphic features are present, but may be faint or absent in the shallower portions. The C horizon is mixed grayish brown and light olive brown silty clay, with massive structure, or plate-like divisions.

Kingsbury Series (KbA & KbB)

These very deep, somewhat poorly drained soils formed in clayey glacio-marine or glacio-lacustrine sediments. They are nearly level or gently sloping, ranging from 0 to 8 percent slope.

The A horizon is typically very dark grayish brown silt loam, and texture can range from very fine sandy loam to clay. This horizon has granular or blocky structure. The E horizon generally is mixed brown and yellowish brown silty clay, but can be silt loam or very fine sandy loam, with blocky to platy structure. Redoximorphic features occur throughout. The B horizon typically consists of dark grayish brown clay, mixed with yellowish brown clay in the shallower portions. Typically, it has greater than 50 percent redoximorphic depletions on ped faces with concentrations in ped interiors. This horizon generally has blocky structure, within coarse or very coarse prisms. 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 in texture, and has massive structure, which, when disturbed, can part into aggregates resembling very fine blocky structure.

Limerick Series (Lm)

These deep, poorly drained soils formed in alluvial deposits of silt and very fine sand. They are nearly level and are found in low areas on flood plains. The A horizon is very dark grayish brown about 3 inches thick. The structure of the A horizon is granular. The C horizon is typically a silt loam or very fine sandy loam that extends to a depth of 50 inches or more. The C horizon has grayish brown redoximorphic features to a depth of 14 inches, olive gray redoximorphic features between depths of 14 and 26 inches, and gray redoximorphic features below 26 inches. The C horizon is massive or has a subangular blocky or granular structure.

Oakville Series (OaB)

These very deep and well drained or moderately well drained soils were formed in water-sorted sand on glacial outwash plains, lake plains, and beach ridges. Slopes range from 0 to 35 percent. The A horizon is dark yellowish brown with a loamy fine sand texture and granular structure. The B horizon is yellowish brown loamy fine sand with subangular blocky structure. The C horizon is typically yellowish brown with a sand or loamy fine sand texture.

Orthents and Psamments (OP)

This map unit consists of material dredge and pumped from the Hudson River and Champlain Barge Canal. The material is composed of a variable mixture of dominantly fine gravel and sand and some silt and clay.

Pits, gravel and Sand (Pr)

This soil consists of areas that have been excavated for sand or gravel. The areas are mostly on broad outwash plains and terraces of stream valleys. These soils are somewhat excessively drained. These areas have sparse vegetation consisting of Xerophytic plants. Slopes range mostly from 0 to 25 percent and steep escarpments are along the edges of the pits. A few areas have bedrock outcrops and small bodies of water, and a few are used for parking lots and buildings. This unit consists mostly of sand or sand and gravel. In places, the water table is at or near the surface most of the year. A few areas are adjacent to streams and are subject to flooding. Areas of this unit require onsite investigation and evaluation for most uses.

Rock outcrop (ROF & RPC)

Areas mapped as rock outcrop consist of bare bedrock covering 90 percent of the surface. Where mapped with Hollis soils, it typically consists of exposures of syenite or granite gneiss, and in places, quartzite.

Saco Series (Sa)

These very deep, very poorly drained soils formed in recent alluvium on floodplains. Slopes range from 0 to 2 percent. The A horizon is very dark grayish brown silt loam or very fine sandy loam, or their mucky analogs. It is massive or has weak granular structure. Strong brown and grayish brown redoximorphic features are present beginning at a depth of 10 inches. The C horizon is grayish brown or olive gray with a silt loam or very fine sandy loam texture above a depth of 40 inches and loamy fine sand to very gravelly coarse sand texture below 40 inches. The C horizon is massive or has weak structure.

Saprists, Aquepts, and Aquents (SB)

These soils consist of low-lying, level deposits of organic and mineral soil material that is ponded with shallow water most of the year. They are mainly found around the edges of lakes and ponds.

Vergennes Series (VeB, VeC & VeD)

These very deep, moderately well drained soils formed in calcareous estuarine and glacio-lacustrine clays. They are on broad plains and on the tops and side-slopes of hills and ridges, with

slopes ranging from 0 to 50 percent. The A horizon is generally dark grayish brown clay that has 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.

Wallington Series (Wa)

These very deep, somewhat poorly drained soils formed in silty lacustrine deposits. Typically occurring on lake plains and silt-covered uplands. They are on lacustrine plains or basins that are nearly level or gently sloping soils that range from 0 to 8 percent slope. The A horizon is generally very dark grayish brown silt loam that has fine and medium granular structure. A pinkish gray silt loam is present in the E horizon. The B horizon is typically brown silt loam, with more dark brown grayish color with depth. The C horizon is generally very fine sandy loam.

5.0 SUMMARY

Wetlands identified along the Project Corridor include shallow emergent marshes, deep emergent marshes, common reed/purple loosestrife marshes, scrub-shrub wetlands, and forested wetlands such as red maple-hardwood swamps, floodplain forests and silver maple-ash swamps. Small ponds, artificial ditches, and watercourses, including small intermittent streams to the South Bay of Lake Champlain, occur within the Project Corridor of the Project.

Land use in the Project Corridor is diverse, ranging from rural, agricultural, and forested areas to more developed areas such as the Village of Whitehall. In general, because a portion of the Project is routed along existing railroad corridors and state highways, many wetlands within the Project Corridor are characterized by previous anthropogenic disturbance and/or the presence of invasive plant species. The Project Corridor frequently is located along the edge between the disturbed railroad or highway corridor and more natural vegetated wetland communities that are present adjacent to the railroad and highway rights-of-way. The wetland boundaries in the Project Corridor are most often 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 Phase 1 are regulated by USACE (Section 10/404), NYSDEC (Article 24), and the APA (Article 24). Streams and other waterbodies are regulated by USACE (Section 10/404) and NYSDEC (Article 15). Based on review of the NYSDEC and APA wetland mapping, 7 delineated wetlands areas are identified as regulated under Article 24. These wetlands correspond to 2 mapped wetlands regulated by NYSDEC. No mapped APA wetlands were identified within the Project Corridor. It is anticipated that USACE will take jurisdiction over all the mapped wetlands within the Project Corridor. 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

(Putnam Station Transitional HDD Project Area Data Only)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE City/County: Putnam / Washington Sampling Date: 10/11/21
 Applicant/Owner: TDI State: NY Sampling Point: WET CA-5
 Investigator(s): C. Scrivner, J. Greaves Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1
 Subregion (LRR or MLRA): LRR R Lat: 43-44-5.27N Long: 73-22-29.43W Datum: WGS 84
 Soil Map Unit Name: Sa - Saco silt loam NWI classification: PFO1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Near flag CA-5</u> |
| Hydric Soil Present? Yes <u>X</u> No _____ | |
| Wetland Hydrology Present? Yes <u>X</u> No _____ | |
| Remarks: (Explain alternative procedures here or in a separate report.) Palustrine forested wetland dominated by eastern cottonwood. Edinger classification: Red maple-hardwood swamp. | |

HYDROLOGY

| | | |
|--|--|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> | | <u>Secondary Indicators (minimum of two required)</u> |
| <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | | Wetland Hydrology Present? Yes <u>X</u> No _____ |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | |
| Remarks: | | |

VEGETATION – Use scientific names of plants.

 Sampling Point: WET CA-5

| Tree Stratum (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|------------------|---|-------------------|--------------|----------------------|----------------|------------------------|-----------------|------------------------|------------------|------------------------|-----------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. <u>Rhamnus cathartica</u> | <u>30</u> | <u>Yes</u> | <u>FAC</u> | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>85.7%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. <u>Populus deltoides</u> | <u>30</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Ulmus americana</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| <u>70</u> =Total Cover | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Rhamnus cathartica</u> | <u>35</u> | <u>Yes</u> | <u>FAC</u> | Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>39</u></td> <td>x 2 = <u>78</u></td> </tr> <tr> <td>FAC species <u>109</u></td> <td>x 3 = <u>327</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>163</u> (A)</td> <td><u>465</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.85</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>39</u> | x 2 = <u>78</u> | FAC species <u>109</u> | x 3 = <u>327</u> | FACU species <u>15</u> | x 4 = <u>60</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>163</u> (A) | <u>465</u> (B) | Prevalence Index = B/A = <u>2.85</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>39</u> | x 2 = <u>78</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>109</u> | x 3 = <u>327</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>15</u> | x 4 = <u>60</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>163</u> (A) | <u>465</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.85</u> | | | | | | | | | | | | | | | | | | | | |
| 2. <u>Cornus amomum</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Ulmus americana</u> | <u>8</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Lonicera morrowii</u> | <u>5</u> | <u>No</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 5. <u>Quercus bicolor</u> | <u>2</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| <u>60</u> =Total Cover | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Rhamnus cathartica</u> | <u>8</u> | <u>Yes</u> | <u>FAC</u> | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | | | |
| 2. <u>Cornus racemosa</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Lysimachia nummularia</u> | <u>5</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Ulmus americana</u> | <u>3</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 5. <u>Quercus bicolor</u> | <u>1</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 6. <u>Equisetum hyemale</u> | <u>1</u> | <u>No</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| <u>23</u> =Total Cover | | | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Vitis aestivalis</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| <u>10</u> =Total Cover | | | | | | | | | | | | | | | | | | | | |

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

SOIL

Sampling Point: WET CA-5

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|----|----------------|----|-------------------|------------------|--------------|--------------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 2.5Y 3/2 | 98 | 2.5Y 5/4 | 2 | C | M | Loamy/Clayey | Distinct redox concentrations |
| 5-10 | 2.5Y 4/2 | 75 | 2.5Y 5/3 | 8 | D | M | Loamy/Clayey | |
| | | | 2.5Y 5/6 | 15 | C | M | | Prominent redox concentrations |
| | | | 10YR 2/2 | 2 | C | PL | | Distinct redox concentrations |
| 10-17 | 2.5Y 5/2 | 80 | 10YR 2/1 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | 10YR 4/6 | 15 | C | M | | Prominent redox concentrations |
| | | | | | | | | |
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| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

| | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> High Chroma Sands (S11) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Marl (F10) (LRR K, L) |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) | |

Indicators for Problematic Hydric Soils³:

| |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> ? Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> ? Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**Type: NoneDepth (inches): Hydric Soil Present? Yes ☒ No ☐

Remarks:



Wetland CA-5 View facing north



Wetland CA-5 Soils

Phase 1

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE City/County: Putnam / Washington Sampling Date: 10/11/21
 Applicant/Owner: TDI State: NY Sampling Point: WET CA-6
 Investigator(s): C. Scrivner, J. Greaves Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0
 Subregion (LRR or MLRA): LRR R Lat: 43-44-4.72N Long: 73-22-30.07W Datum: WGS 84
 Soil Map Unit Name: Sa - Saco silt loam NWI classification: PEM1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Near flag CA-6</u> |
| Hydric Soil Present? Yes <u>X</u> No _____ | |
| Wetland Hydrology Present? Yes <u>X</u> No _____ | |
| Remarks: (Explain alternative procedures here or in a separate report.) Palustrine Emergent Marsh dominated by common duckweed and American burreed. Edinger classification: Shallow Emergent Marsh. | |

HYDROLOGY

| | | | |
|--|--|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) | | <u>Secondary Indicators</u> (minimum of two required) | |
| <u>X</u> Surface Water (A1) | _____ Water-Stained Leaves (B9) | _____ Surface Soil Cracks (B6) | |
| <u>X</u> High Water Table (A2) | _____ Aquatic Fauna (B13) | _____ Drainage Patterns (B10) | |
| <u>X</u> Saturation (A3) | _____ Marl Deposits (B15) | _____ Moss Trim Lines (B16) | |
| _____ Water Marks (B1) | _____ Hydrogen Sulfide Odor (C1) | _____ Dry-Season Water Table (C2) | |
| <u>X</u> Sediment Deposits (B2) | _____ Oxidized Rhizospheres on Living Roots (C3) | _____ Crayfish Burrows (C8) | |
| _____ Drift Deposits (B3) | _____ Presence of Reduced Iron (C4) | _____ Saturation Visible on Aerial Imagery (C9) | |
| _____ Algal Mat or Crust (B4) | _____ Recent Iron Reduction in Tilled Soils (C6) | _____ Stunted or Stressed Plants (D1) | |
| _____ Iron Deposits (B5) | _____ Thin Muck Surface (C7) | <u>X</u> Geomorphic Position (D2) | |
| <u>X</u> Inundation Visible on Aerial Imagery (B7) | _____ Other (Explain in Remarks) | _____ Shallow Aquitard (D3) | |
| _____ Sparsely Vegetated Concave Surface (B8) | | _____ Microtopographic Relief (D4) | |
| | | <u>X</u> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe) | | Wetland Hydrology Present? Yes <u>X</u> No _____ | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: A culvert connects wetland CA to wetland CB. | | | |

VEGETATION – Use scientific names of plants.

 Sampling Point: WET CA-6

| Tree Stratum (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|------------------|---|-------------------|--------------|------------------------|------------------|------------------------|-----------------|----------------------|-----------------|-----------------------|-----------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. <u>Salix nigra</u> | <u>5</u> | <u>Yes</u> | <u>OBL</u> | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71.4%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. <u>Rhamnus cathartica</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | <u>10</u> | =Total Cover | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Cornus sericea</u> | <u>5</u> | <u>Yes</u> | <u>FACW</u> | Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>110</u></td> <td>x 1 = <u>110</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>8</u></td> <td>x 3 = <u>24</u></td> </tr> <tr> <td>FACU species <u>6</u></td> <td>x 4 = <u>24</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>144</u> (A)</td> <td><u>198</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.38</u></td> </tr> </tbody> </table> | Total % Cover of: | Multiply by: | OBL species <u>110</u> | x 1 = <u>110</u> | FACW species <u>20</u> | x 2 = <u>40</u> | FAC species <u>8</u> | x 3 = <u>24</u> | FACU species <u>6</u> | x 4 = <u>24</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>144</u> (A) | <u>198</u> (B) | Prevalence Index = B/A = <u>1.38</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>110</u> | x 1 = <u>110</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>20</u> | x 2 = <u>40</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>8</u> | x 3 = <u>24</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>6</u> | x 4 = <u>24</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>144</u> (A) | <u>198</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>1.38</u> | | | | | | | | | | | | | | | | | | | | |
| 2. <u>Rhamnus cathartica</u> | <u>3</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | <u>8</u> | =Total Cover | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Lemna minor</u> | <u>70</u> | <u>Yes</u> | <u>OBL</u> | Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | | | |
| 2. <u>Sparganium americanum</u> | <u>20</u> | <u>No</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Lysimachia nummularia</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Zizania aquatica</u> | <u>10</u> | <u>No</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 5. <u>Persicaria amphibia</u> | <u>5</u> | <u>No</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 6. <u>Onoclea sensibilis</u> | <u>5</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | <u>120</u> | =Total Cover | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Parthenocissus quinquefolia</u> | <u>3</u> | <u>Yes</u> | <u>FACU</u> | Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. | | | | | | | | | | | | | | | | |
| 2. <u>Vitis aestivalis</u> | <u>3</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | <u>6</u> | =Total Cover | | | | | | | | | | | | | | | | | |

 Remarks: (Include photo numbers here or on a separate sheet.)
 Trees and shrubs were growing along the outer edges of the open water marsh community.

SOIL

Sampling Point: WET CA-6

[illegible]



Wetland CA-6 View facing west



Wetland CA-6 No Soils collected due to open water dominated by OBL and FACW species.

Phase 1

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE City/County: Putnam / Washington Sampling Date: 10/11/21
 Applicant/Owner: TDI State: NY Sampling Point: WET CB-4
 Investigator(s): C. Scrivner, J. Greaves Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 2
 Subregion (LRR or MLRA): LRR R Lat: 43-44-4.78N Long: 73-22-28.49W Datum: WGS 84
 Soil Map Unit Name: Sa - Saco silt loam NWI classification: PEM1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Near flag CB-4</u> |
| Hydric Soil Present? Yes <u>X</u> No _____ | |
| Wetland Hydrology Present? Yes <u>X</u> No _____ | |
| Remarks: (Explain alternative procedures here or in a separate report.) Palustrine Emergent Marsh dominate by common duckweed. Edinger classification: Shallow Emergent Marsh. | |

HYDROLOGY

| | | | |
|--|--|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) | | <u>Secondary Indicators</u> (minimum of two required) | |
| <u>X</u> Surface Water (A1) | _____ Water-Stained Leaves (B9) | _____ Surface Soil Cracks (B6) | |
| <u>X</u> High Water Table (A2) | _____ Aquatic Fauna (B13) | _____ Drainage Patterns (B10) | |
| <u>X</u> Saturation (A3) | _____ Marl Deposits (B15) | _____ Moss Trim Lines (B16) | |
| _____ Water Marks (B1) | _____ Hydrogen Sulfide Odor (C1) | _____ Dry-Season Water Table (C2) | |
| _____ Sediment Deposits (B2) | _____ Oxidized Rhizospheres on Living Roots (C3) | _____ Crayfish Burrows (C8) | |
| _____ Drift Deposits (B3) | _____ Presence of Reduced Iron (C4) | _____ Saturation Visible on Aerial Imagery (C9) | |
| _____ Algal Mat or Crust (B4) | _____ Recent Iron Reduction in Tilled Soils (C6) | _____ Stunted or Stressed Plants (D1) | |
| _____ Iron Deposits (B5) | _____ Thin Muck Surface (C7) | <u>X</u> Geomorphic Position (D2) | |
| <u>X</u> Inundation Visible on Aerial Imagery (B7) | _____ Other (Explain in Remarks) | _____ Shallow Aquitard (D3) | |
| _____ Sparsely Vegetated Concave Surface (B8) | | _____ Microtopographic Relief (D4) | |
| | | <u>X</u> FAC-Neutral Test (D5) | |
| Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe) | | Wetland Hydrology Present? Yes <u>X</u> No _____ | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |
| Remarks: Culvert under the road (Route 3) leads to Lake Champlain. | | | |

VEGETATION – Use scientific names of plants.

 Sampling Point: WET CB-4

| Tree Stratum (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|------------------|---|-------------------|--------------|------------------------|------------------|------------------------|-----------------|----------------------|-----------------|-----------------------|-----------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. <u>Fraxinus pennsylvanica</u> | <u>10</u> | <u>Yes</u> | <u>FACW</u> | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. <u>Ulmus americana</u> | <u>3</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | <u>13</u> | =Total Cover | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Cornus sericea</u> | <u>10</u> | <u>Yes</u> | <u>FACW</u> | Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>106</u></td> <td>x 1 = <u>106</u></td> </tr> <tr> <td>FACW species <u>46</u></td> <td>x 2 = <u>92</u></td> </tr> <tr> <td>FAC species <u>7</u></td> <td>x 3 = <u>21</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>164</u> (A)</td> <td><u>239</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.46</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>106</u> | x 1 = <u>106</u> | FACW species <u>46</u> | x 2 = <u>92</u> | FAC species <u>7</u> | x 3 = <u>21</u> | FACU species <u>5</u> | x 4 = <u>20</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>164</u> (A) | <u>239</u> (B) | Prevalence Index = B/A = <u>1.46</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>106</u> | x 1 = <u>106</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>46</u> | x 2 = <u>92</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>7</u> | x 3 = <u>21</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>5</u> | x 4 = <u>20</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>164</u> (A) | <u>239</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>1.46</u> | | | | | | | | | | | | | | | | | | | | |
| 2. <u>Rhamnus cathartica</u> | <u>2</u> | <u>No</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | <u>12</u> | =Total Cover | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Lemna minor</u> | <u>65</u> | <u>Yes</u> | <u>OBL</u> | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | | | |
| 2. <u>Leersia oryzoides</u> | <u>15</u> | <u>Yes</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Lysimachia nummularia</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Bidens frondosa</u> | <u>8</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 5. <u>Typha latifolia</u> | <u>8</u> | <u>No</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 6. <u>Persicaria amphibia</u> | <u>5</u> | <u>No</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 7. <u>Sparganium americanum</u> | <u>5</u> | <u>No</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 8. <u>Equisetum arvense</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 9. <u>Lysimachia ciliata</u> | <u>5</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 10. <u>Zizania aquatica</u> | <u>5</u> | <u>No</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 11. <u>Lythrum salicaria</u> | <u>3</u> | <u>No</u> | <u>OBL</u> | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | <u>134</u> | =Total Cover | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Vitis aestivalis</u> | <u>5</u> | <u>Yes</u> | <u>FACU</u> | Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | <u>5</u> | =Total Cover | | | | | | | | | | | | | | | | | |

 Remarks: (Include photo numbers here or on a separate sheet.)
 The trees and shrubs were observed growing on the banks surrounding the marsh.

SOIL

Sampling Point: WET CB-4

[illegible]



Wetland CB-4 View facing south



Wetland CB-4 No Soils collected due to open water dominated by OBL and FACW species.

Phase 1

SITE PHOTOGRAPHS

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE City/County: Putnam / Washington Sampling Date: 10/11/21
 Applicant/Owner: TDI State: NY Sampling Point: UPL
 Investigator(s): C. Scrivner, J. Greaves Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope %: 2
 Subregion (LRR or MLRA): LRR R Lat: 43-44-5.08N Long: 73-22-28.24W Datum: WGS 84
 Soil Map Unit Name: Sa - Saco silt loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) Successional Northern Hardwoods. This upland point is for wetlands CA-5, CA-6 and CB-4. | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8) | <u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5) |
| Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes _____ No <u>X</u> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: | |

VEGETATION – Use scientific names of plants.

 Sampling Point: UPL

| Tree Stratum (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|--|------------------|---------------------|------------------|---|-------------------|--------------|----------------------|----------------|-----------------------|-----------------|-----------------------|------------------|------------------------|------------------|-----------------------|------------------|-------------------------------|----------------|--------------------------------------|--|
| 1. <u>Betula alleghaniensis</u> | <u>20</u> | <u>Yes</u> | <u>FAC</u> | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>13</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>30.8%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. <u>Juniperus virginiana</u> | <u>8</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Carya ovata</u> | <u>8</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Rhus typhina</u> | <u>5</u> | <u>No</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | <u>41</u> | <u>=Total Cover</u> | | Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>62</u></td> <td>x 4 = <u>248</u></td> </tr> <tr> <td>UPL species <u>31</u></td> <td>x 5 = <u>155</u></td> </tr> <tr> <td>Column Totals: <u>138</u> (A)</td> <td><u>533</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.86</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>5</u> | x 2 = <u>10</u> | FAC species <u>40</u> | x 3 = <u>120</u> | FACU species <u>62</u> | x 4 = <u>248</u> | UPL species <u>31</u> | x 5 = <u>155</u> | Column Totals: <u>138</u> (A) | <u>533</u> (B) | Prevalence Index = B/A = <u>3.86</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>5</u> | x 2 = <u>10</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>40</u> | x 3 = <u>120</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>62</u> | x 4 = <u>248</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>31</u> | x 5 = <u>155</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>138</u> (A) | <u>533</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.86</u> | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Lonicera morrowii</u> | <u>15</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 2. <u>Rhus typhina</u> | <u>5</u> | <u>No</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Rhamnus cathartica</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Syringa vulgaris</u> | <u>3</u> | <u>No</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | <u>28</u> | <u>=Total Cover</u> | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Plantago lanceolata</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | | | |
| 2. <u>Artemisia vulgaris</u> | <u>10</u> | <u>Yes</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Symphyotrichum lowrieianum</u> | <u>8</u> | <u>Yes</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Pinus strobus</u> | <u>5</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 5. <u>Equisetum arvense</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 6. <u>Solidago rugosa</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 7. <u>Lysimachia nummularia</u> | <u>5</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 8. <u>Achillea millefolium</u> | <u>5</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 9. <u>Betula alleghaniensis</u> | <u>3</u> | <u>No</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 10. <u>Acer saccharum</u> | <u>3</u> | <u>No</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 11. <u>Parthenocissus quinquefolia</u> | <u>3</u> | <u>No</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 12. <u>Setaria pumila</u> | <u>2</u> | <u>No</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| | <u>64</u> | <u>=Total Cover</u> | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Vitis aestivalis</u> | <u>5</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | <u>5</u> | <u>=Total Cover</u> | | | | | | | | | | | | | | | | | | |

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

SOIL

Sampling Point: UPL

[illegible]



Upland CA-5, CA-6 and CB-4 View facing west



Upland CA-5, CA-6 and CB-4 Soils

Phase 1

SITE PHOTOGRAPHS

Champlain Hudson Power Express

| | |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|--|

Project/Site: CHPE City/County: Putnam/ Washington Sampling Date: 8/9/22
Applicant/Owner: TDI State: NY Sampling Point: 1A-A-4 wet
Investigator(s): N. Frazer & C. Scrivner Section, Township, Range: _____
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 1
Subregion (LRR or MLRA): LRR R Lat: 43-44-04.28N Long: 73-22-27.57W Datum: WGS84
Soil Map Unit Name: Hudson and Vergennes soils (HWE) NWI classification: PSS
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes x No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____ |
| Remarks: (Explain alternative procedures here or in a separate report.) | |

HYDROLOGY

| | | |
|--|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators</u> (minimum of one is required; check all that apply) <u>X</u> Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8) | | <u>Secondary Indicators</u> (minimum of two required) _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5) |
| Field Observations: Surface Water Present? Yes <u>x</u> No _____ Depth (inches): <u>3</u> Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <u>X</u> No _____ | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Culvert present. Wetland connected to Wetland CB on the other side of the road. Inundated, not soils data collected, therefore, water table and saturation data was not collected. | | |

VEGETATION – Use scientific names of plants.

 Sampling Point: 1A-A-4 wet

| Tree Stratum (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|------------------|--|-------------------|--------------|----------------------|----------------|-------------------------|------------------|----------------------|-----------------|-----------------------|----------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>117</u></td> <td>x 2 = <u>234</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>127</u> (A)</td> <td><u>254</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>5</u> | x 1 = <u>5</u> | FACW species <u>117</u> | x 2 = <u>234</u> | FAC species <u>5</u> | x 3 = <u>15</u> | FACU species <u>0</u> | x 4 = <u>0</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>127</u> (A) | <u>254</u> (B) | Prevalence Index = B/A = <u>2.00</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>5</u> | x 1 = <u>5</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>117</u> | x 2 = <u>234</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>5</u> | x 3 = <u>15</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>0</u> | x 4 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>127</u> (A) | <u>254</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.00</u> | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | =Total Cover | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Cornus amomum</u> | <u>50</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 2. <u>Salix alba</u> | <u>40</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Ulmus americana</u> | <u>5</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Fraxinus pennsylvanica</u> | <u>2</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | =Total Cover | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Lythrum salicaria</u> | <u>5</u> | <u>Yes</u> | <u>OBL</u> | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | | | |
| 2. <u>Cornus amomum</u> | <u>5</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Persicaria pensylvanica</u> | <u>5</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Impatiens capensis</u> | <u>10</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | =Total Cover | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Vitis riparia</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| | | =Total Cover | | | | | | | | | | | | | | | | | | |

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

| | | |
|--|--------------|------------------|
| Hydrophytic Vegetation Present? | Yes <u>X</u> | No <u> </u> |
|--|--------------|------------------|

SOIL

Sampling Point: 1A-A-4 wet

[illegible]



Wetland 1A-A-4- View facing south

Phase 1

SITE PHOTOGRAPHS

Champlain Hudson Power Express

| | |
|--|--|
| U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R | OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a) |
|--|--|

Project/Site: CHPE City/County: Putnam/ Washington Sampling Date: 8/9/22

Applicant/Owner: TDI State: NY Sampling Point: 1A-A-4 upl

Investigator(s): N. Frazer & C. Scrivner Section, Township, Range: _____

Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR R Lat: 43-44-04.42N Long: 73-22-27.66W Datum: WGS84

Soil Map Unit Name: Hudson and Vergennes soils (HWE) NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes x No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____ |
|---|---|

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

HYDROLOGY

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

| | |
|--|---|
| Field Observations: Surface Water Present? Yes _____ No <u>x</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>x</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>x</u> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes _____ No <u>X</u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

 Sampling Point: 1A-A-4 upl

| Tree Stratum (Plot size: <u>30'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|------------------|--|-------------------|--------------|----------------------|----------------|-----------------------|----------------|-----------------------|-----------------|-------------------------|------------------|-----------------------|------------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>37.5%</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| =Total Cover | | | | Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>27</u></td> <td>x 5 = <u>135</u></td> </tr> <tr> <td>Column Totals: <u>147</u> (A)</td> <td><u>595</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.05</u></td> </tr> </table> | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>0</u> | x 2 = <u>0</u> | FAC species <u>20</u> | x 3 = <u>60</u> | FACU species <u>100</u> | x 4 = <u>400</u> | UPL species <u>27</u> | x 5 = <u>135</u> | Column Totals: <u>147</u> (A) | <u>595</u> (B) | Prevalence Index = B/A = <u>4.05</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FACW species <u>0</u> | x 2 = <u>0</u> | | | | | | | | | | | | | | | | | | | |
| FAC species <u>20</u> | x 3 = <u>60</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>100</u> | x 4 = <u>400</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>27</u> | x 5 = <u>135</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>147</u> (A) | <u>595</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>4.05</u> | | | | | | | | | | | | | | | | | | | | |
| =Total Cover | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Acer negundo</u> | <u>10</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 2. <u>Rhamnus cathartica</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| =Total Cover | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Daucus carota</u> | <u>20</u> | <u>Yes</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 2. <u>Cichorium intybus</u> | <u>15</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 3. <u>Plantago lanceolata</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 4. <u>Lotus corniculatus</u> | <u>35</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 5. <u>Artemisia vulgaris</u> | <u>5</u> | <u>No</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 6. <u>Taraxacum officinale</u> | <u>5</u> | <u>No</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 7. <u>Plantago major</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 8. <u>Ambrosia artemisiifolia</u> | <u>5</u> | <u>No</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 9. <u>Trifolium aureum</u> | <u>2</u> | <u>No</u> | <u>UPL</u> | | | | | | | | | | | | | | | | | |
| 10. <u>Poa pratensis</u> | <u>15</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 12. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| =Total Cover | | | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>30'</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Parthenocissus quinquefolia</u> | <u>5</u> | <u>Yes</u> | <u>FACU</u> | | | | | | | | | | | | | | | | | |
| 2. <u>Vitis riparia</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | |
| =Total Cover | | | | | | | | | | | | | | | | | | | | |

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

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0¹

___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? Yes No X

SOIL

Sampling Point: 1A-A-4 upl

[illegible]



Upland 1A-A-4- View facing east



Upland 1A-A-4- Soils

Phase 1

SITE PHOTOGRAPHS

Champlain Hudson Power Express

ATTACHMENT 2
NWI, NYSDEC AND APA WETLAND & STREAM MAPS

ATTACHMENT 3

NRCS SOIL MAPS

Author: Cole Scrivner Date Saved: 2/3/2022

Legend

Phase 1 Alignment

NRCS Soils

CHC; CHE

Cv

FCC; FCF; FaB

HLE; HNC

HWE

KbA; KbB


ROF; RPC; RPF

SB


Sa

VeB; VeC; VeD

W



N



Page 1 of 8

0

0.5

1

Miles

Champlain Hudson Power Express

Phase 1 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.

Phase 1 Alignment

NRCS Soils

CHC; CHE

Ca - Carlisle & Catden muck

Cv

FCC; FCF; FaB

FL

HLE; HNC

HWE

HcA; HcB; HcC; HcD

KbA; KbB

Lm

OKE; OaB; OaC


Pr

SB


Sa

VeB; VeC; VeD

Author: Cole Scrivner Date Saved: 2/3/2022



N



Page 2 of 8

0

0.5

1

Miles

Champlain Hudson Power Express

Phase 1 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: 2/3/2022

Legend

Phase 1 Alignment

NRCS Soils

CHC; CHE

HLE; HNC

HSDK

HWE

KbA; KbB

Lm

OKE; OaB; OaC

Pr

VeB; VeC; VeD

N

Page 3 of 8

*Champlain Hudson Power Express
Phase 1 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: 2/3/2022

Phase 1 Alignment

NRCS Soils

CHC; CHE

HLE; HNC

HWE

ROF; RPC; RPF

SB

VeB; VeC; VeD

N
Page 4 of 8

0 0.5 1 Miles

*Champlain Hudson Power Express
Phase 1 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: 2/3/2022

Legend

Phase 1 Alignment

CIA; CIB

HLE; HNC

HWE

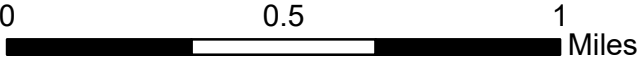
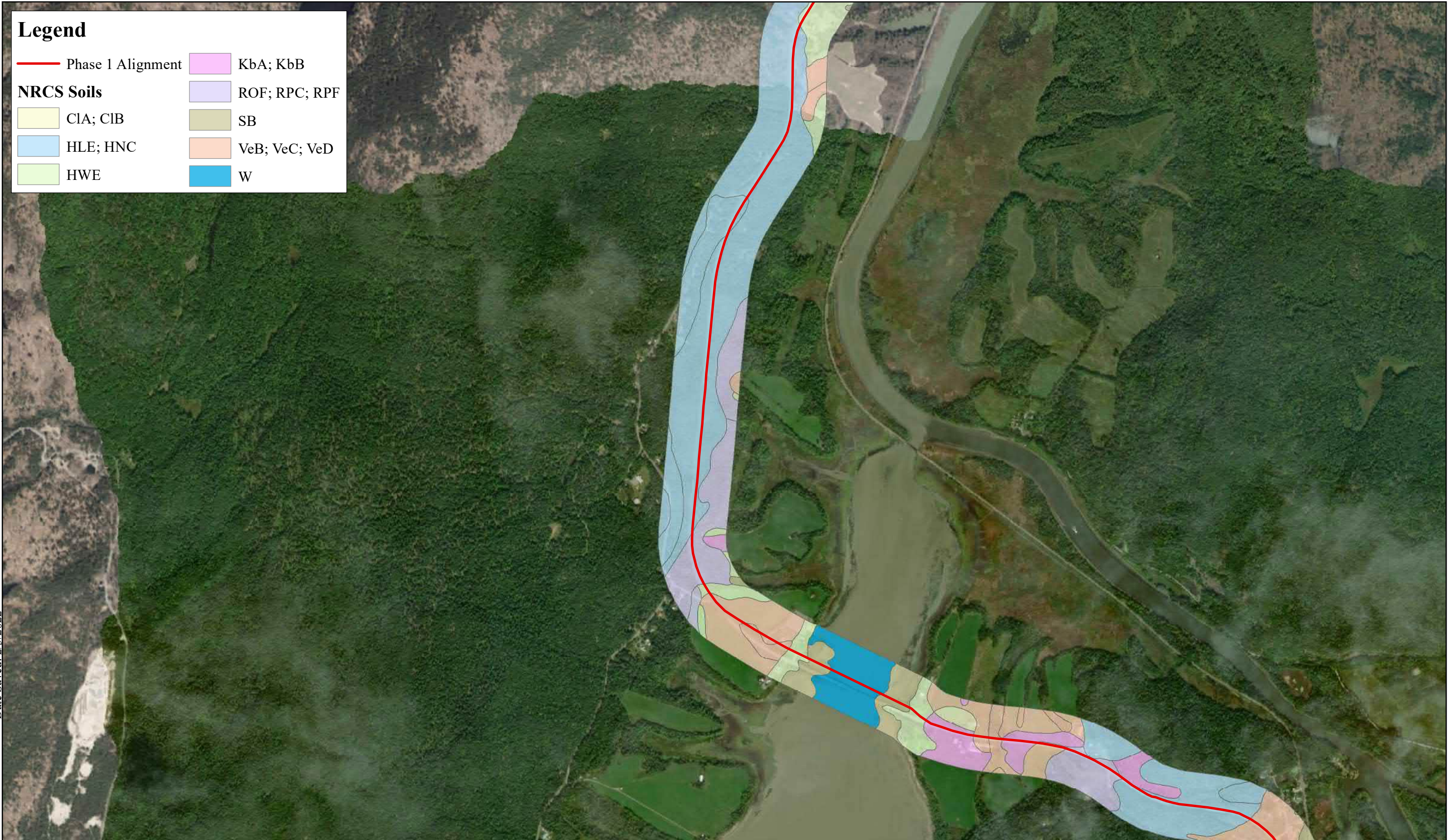
KbA; KbB

ROF; RPC; RPF

SB

VeB; VeC; VeD

W



***Champlain Hudson Power Express
Phase 1 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: 2/3/2022

Legend

- Phase 1 Alignment

OP

SB

Cv

Sa

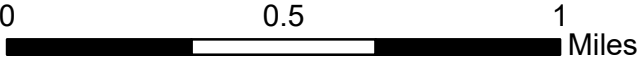
HLE; HNC

VeB; VeC; VeD

KbA; KbB

W

Lm



*Champlain Hudson Power Express
Phase 1 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.

Legend

Phase 1 Alignment

NRCS Soils

Cv

HcA; HcB; HcC; HcD

KbA; KbB

Lm

OP

Sa

Te

VeB; VeC; VeD

W

Author: Cole Scrivner Date Saved: 2/3/2022

N

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*Champlain Hudson Power Express
Phase 1 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: 2/8/2022

Legend

Phase 1 Alignment

NRCS Soils

Cv

HLE; HNC

HcA; HcB; HcC; HcD

HvC

KbA; KbB

OP

SB

VeB; VeC; VeD

W

An aerial photograph of a rural landscape with a waterway running diagonally from the bottom left towards the top right. A red line, representing the Phase 1 Alignment, follows the waterway. Various colored polygons represent different NRCS soil types along the waterway. The surrounding area is mostly forested, with some cleared fields and a small cluster of buildings near the bottom center.

CHA

N

0

0.5

1

Miles

Champlain Hudson Power Express

Phase 1 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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ATTACHMENT 4

TABLES

| Table 4-1 Summary of Wetlands Within the Project Corridor ¹ | | | | | | |
|---|------------|--------------------------------------|--|--------------------------------------|-----------------------------------|--------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification ² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| Route 3 | | | | | | |
| 10000+00 Segment 1 C-401 | CA | PEM/PFO | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| 10001+00 Segment 1 C-401 | CB | PEM | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| 1001+00 Segment 1 C-401 | 1A-A | PSS | Lake Champlain | 1,041 | USACE | 43.734, -73.374 |
| 10019+00 Segment 1 C-401 | CC | PEM | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| 10024+00 Segment 1 C-401 | CD | PEM | Unnamed Tributary to Lake Champlain (CS2) | 0 | USACE | N/A |
| 10027+00 Segment 1 C-401 | CE | PEM | Unnamed Tributary to Lake Champlain (CS3) | 0 | USACE | N/A |
| 10029+00 Segment 1 C-401 | CF | PFO | Unnamed Tributary to Lake Champlain (CS4) | 0 | USACE | N/A |
| 10044+00 Segment 1 C-402 | CG | PSS | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| Lake Road | | | | | | |
| 10062+00 Segment 1 C-403 | CH | PEM | Unnamed Tributary to Lake Champlain | 189 | USACE | 43.726, -73.389 |
| 10064+00 Segment 1 C-403 | CI | PEM | Unnamed Tributary to Lake Champlain (CS8) | 38 | USACE | 43.726, -73.390 |
| 10080+00 Segment 1 C-403 | CJ | PEM | Unnamed Tributary to Lake Champlain (CS9 and CS10) | 0 | USACE | N/A |

| Table 4-1 Summary of Wetlands Within the Project Corridor¹ | | | | | | |
|--|-------------------|--|--|---|--|---------------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| 10081+00 Segment 1 C-403 | CK | PEM | Unnamed Tributary to Lake Champlain (CS10) | 0 | USACE | N/A |
| 10112+00 Segment 1 C-404 | CL | PSS | Unnamed Tributary to Lake Champlain (CS11) | 285 | USACE | 43.722, -73.406 |
| 10128+00 Segment 1 C-405 | CM | PEM | Unnamed Tributary to Lake Champlain (CS12) | 6 | USACE | 43.721, -73.412 |
| 10135+00 Segment 1 C-405 | CN | PEM | Unnamed Tributary to Lake Champlain | 1,526 | USACE | 43.720, -73.414 |
| 10140+00 Segment 1 C-405 | CO | PEM | Unnamed Tributary to Lake Champlain | 1213 | USACE | 43.721, -73.416 |
| 10144+00 Segment 1 C-405 | CP | PEM | Mill Brook (CS13) | 3,778 | USACE | 43.722, -73.417 |
| 10149+00 Segment 1 C-405 | CPA | PEM | Mill Brook (CS13) | 5,214 | USACE | 43.722, -73.418 |
| 10154+00 Segment 1 C-406 | CQ | PEM | Unnamed Tributary to Lake Champlain | 10,524 | USACE | 43.723, -73.421 |
| NYS Route 22 | | | | | | |
| 10162+00 Segment 1 C-407 | CR | PEM | Unnamed Tributary to Lake Champlain (CS14) | 14,720 | USACE | 43.722, -73.424 |
| 10175+00 Segment 1 C-407 | CS | PEM | Unnamed Tributary to Lake Champlain | 1,458 | USACE | 43.711, -73.424 |

| Table 4-1 Summary of Wetlands Within the Project Corridor¹ | | | | | | |
|--|-------------------|--|---|---|--|---------------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| 10178+00 Segment 1 C-407 | CT | PEM | Unnamed Tributary to Lake Champlain | 7,580 | USACE | 43.718, -73.426 |
| 10183+00 Segment 1 C-407 | CU | PEM | Unnamed Tributary to Lake Champlain | 1,271 | USACE | 43.718, -73.426 |
| 10184+00 Segment 1 C-407 | CV | PEM | Unnamed Tributary to Lake Champlain | 26,385 | USACE | 43.717, -73.427 |
| 10194+00 Segment 1 C-408 | CW | PEM | Unnamed Tributary to Lake Champlain(CS15 (Mill Brook)) | 1,643 | USACE | 43.715, -73.429 |
| 10198+00 Segment 1 C-408 | CX | PEM | Unnamed Tributary to Lake Champlain (CS15 (Mill Brook)) | 1,683 | USACE | 43.714, -73.429 |
| 10206+00 Segment 1 C-408 | CY | PEM | Unnamed Tributary to Lake Champlain | 5,094 | USACE | 43.712, -73.431 |
| 10216+00 Segment 1 C-408 | CZ | PEM | Unnamed Tributary to Lake Champlain | 2,053 | USACE | 43.710, -73.433 |
| 10219+00 Segment 1 C-408 | CAA | PEM | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| 10220+00 Segment 1 C-408 | CBB | PEM | Unnamed Tributary to Lake Champlain | 2,288 | USACE | 43.708, -73.434 |
| 10225+00 Segment 1 C-409 | CCCW | PEM | Unnamed Tributary to Lake Champlain | 2,635 | USACE | 43.708, -73.434 |
| 10227+00 Segment 1 C-409 | CDD | PEM/PSS | Unnamed Tributary to Lake Champlain | 469 | USACE | 43.707, -73.435 |
| 10231+00 Segment 1 C-409 | CEE | PEM | Unnamed Tributary to Lake Champlain | 600 | USACE | 43.706, -73.435 |

| Table 4-1 Summary of Wetlands Within the Project Corridor¹ | | | | | | |
|--|-------------------|--|--|---|--|---------------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| 10233+00 Segment 1 C-409 | CFF | PEM | Unnamed Tributary to Lake Champlain | 258 | USACE | 43.706, -73.435 |
| 10238+00 Segment 1 C-409 | CGG | PSS | Unnamed Tributary to Lake Champlain | 170 | USACE | 43.704, -73.435 |
| 10240+00 Segment 1 C-409 | CHH | PEM/PSS | Unnamed Tributary to Lake Champlain | 3,490 | USACE | 43.703, -73.435 |
| 10250+00 Segment 1 C-410 | C2A | PEM/PSS | Unnamed Tributary to Lake Champlain | 3,991 | USACE | 43.700, -73.434 |
| 10261+00 Segment 1 C-410 | C2B | PEM | Unnamed Tributary to Lake Champlain | 13,248 | USACE | 43.698, -73.432 |
| 10272+00 Segment 1 C-410 | C2C | PEM/PUB | Unnamed Tributary to Lake Champlain | 352 | USACE | 43.695, -73.431 |
| 10291+00 Segment 1 C-411 | C2D | PEM | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| 10295+00 Segment 1 C-411 | C2E | PEM | Unnamed Tributary to Lake Champlain | 1,110 | USACE | 43.691, -73.424 |
| 10300+00 Segment 1 C-411 | C2F | PEM | Unnamed Tributary to Lake Champlain (C2S1) | 867 | USACE | 43.690, -73.423 |
| 10305+00 Segment 1 C-411 | C2G | PEM | Unnamed Tributary to Lake Champlain | 1,539 | USACE | 43.689, -73.422 |
| 10309+00 Segment 1 C-412 | C2H | PEM | Unnamed Tributary to Lake Champlain | 3,434 | USACE | 43.688, -73.422 |
| 10313+00 Segment 1 C-412 | C2I | PEM | Unnamed Tributary to Lake Champlain | 1,207 | USACE | 43.687, -73.423 |
| 10318+00 Segment 1 C-412 | C2J | PEM | Unnamed Tributary to Lake Champlain (C2J) | 4,935 | USACE | 43.685, -73.424 |

| Table 4-1 Summary of Wetlands Within the Project Corridor¹ | | | | | | |
|--|-------------------|--|--|---|--|---------------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| 10322+00 Segment 1 C-412 | C2K (northern) | PEM | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| 10340+00 Segment 1 C-413 | C2K (southern) | PFO | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| 10344+00 Segment 1 C-413 | A1-B | PEM | Unnamed Tributary to Lake Champlain | 2,705 | USACE | 43.681, -73.420 |
| 10347+00 Segment 1 C-413 | A1-C | PEM | Unnamed Tributary to Lake Champlain | 5,369 | USACE | 43.681, -73.419 |
| 10350+00 Segment 1 C-413 | 1A-D | PEM | Unnamed Tributary to Lake Champlain | 7,058 | USACE | 43.680, -73.417 |
| 10350+00 Segment 1 C-413 | C2L | PEM | Unnamed Tributary to Lake Champlain | 4,254 | USACE | 43.680, -73.417 |
| 10376+00 Segment 1 C-414 | C2M | PEM | Unnamed Tributary to Lake Champlain | 236 | USACE | 43.676, -73.410 |
| 12522+00 Segment 2 C-401 | 1B-A | PEM | Unnamed Tributary to Lake Champlain | 20,691 | USACE | 43.667, -73.418 |
| 12527+00 Segment 2 C-401 | CII | PEM | Unnamed Tributary to Lake Champlain | 6,572 | USACE | 43.668, -73.418 |
| 12546+00 Segment 2 C-402 | CJJ | PEM | Unnamed Tributary to Lake Champlain | 2,037 | USACE | 43.664, -73.421 |
| 12554+00 Segment 2 C-402 | CKK | PEM/PSS | Unnamed Tributary to Lake Champlain | 4,691 | USACE | 43.663, -73.424 |
| 12570+00 Segment 2 C-403 | CLL | PEM | Unnamed Tributary to Lake Champlain (CS21) | 4,730 | USACE | 43.661, -73.429 |
| 12577+50 Segment 2 C-403 | CMM | PEM | Unnamed Tributary to Lake Champlain (CS22) | 938 | USACE | 43.659, -73.431 |

| Table 4-1 Summary of Wetlands Within the Project Corridor¹ | | | | | | |
|--|-------------------|--|--|---|--|---------------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| 12579+50 Segment 2 C-403 | CNN | PEM | Unnamed Tributary to Lake Champlain (CS23) | 771 | USACE | 43.659, -73.432 |
| 12582+00 Segment 2 C-403 | COO | PEM | Unnamed Tributary to Lake Champlain (CS23) | 0 | USACE | N/A |
| 12585+00 Segment 2 C-403 | CPP | PEM | - | 1,735 | - | 43.658, -73.433 |
| 12591+00 Segment 2 C-404 | CQQ | PEM | Unnamed Tributary to Lake Champlain (CS24) | 2,822 | USACE | 43.656, -73.434 |
| 12593+50 Segment 2 C-404 | CRR | PFO | Unnamed Tributary to Lake Champlain (CS24) | 1,101 | USACE | 43.656, -73.434 |
| 12596+00 Segment 2 C-404 | CSS | PFO | Unnamed Tributary to Lake Champlain (CS24) | 844 | USACE | 43.655, -73.435 |
| 12604+50 Segment 2 C-404 | CTT | PEM | Unnamed Tributary to Lake Champlain (CS25) | 1336 | USACE | 43.653, -73.436 |
| 12606+00 Segment 2 C-404 | CUU | PFO | Unnamed Tributary to Lake Champlain (CS25) | 325 | USACE | 43.653, -73.437 |
| 12614+50 Segment 2 C-404 | C2N | PEM | Unnamed Tributary to Lake Champlain (CS25) | 914 | USACE | 43.651, -73.438 |
| 12619+50 Segment 2 C-404 | C2O | PEM/PFO | Unnamed Tributary to Lake Champlain | 1,699 | USACE | 43.650, -73.439 |
| 12646+00 Segment 2 C-405 | CVV | PFO | Unnamed Tributary to Lake Champlain | 6,063 | USACE | 43.644, -73.445 |
| 12568+50 Segment 2 C-406 | CWW | PEM | Unnamed Tributary to Lake Champlain | 7,119 | USACE | 43.640, -73.446 |
| 12671+00 Segment 2 C-406 | CXX | PEM | Unnamed Tributary to Lake Champlain | 1,690 | USACE | 43.637, -73.446 |

| Table 4-1 Summary of Wetlands Within the Project Corridor¹ | | | | | | |
|--|-------------------|--|---|---|--|---------------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| 12709+00 Segment 2 C-407 | CYY | PEM | Unnamed Tributary to Lake Champlain (CYY) | 8,257 | USACE | 43.627, -73.445 |
| 12715+00 Segment 2 C-408 | CZZ | PEM | Unnamed Tributary to Lake Champlain | 421 | USACE | 43.625, -73.445 |
| 12790+00 Segment 2 C-410 | CAAA | PEM/PSS | Unnamed Tributary to Lake Champlain (CS29) | 41 | USACE | 43.608, -73.432 |
| 12796+00 Segment 2 C-410 | CBBB | PFO | Unnamed Tributary to Lake Champlain (CS29) | 1,112 | USACE | 43.607, -73.432 |
| 12799+00 Segment 2 C-410 | CCCC | PEM | Unnamed Tributary to Lake Champlain (CS29) | 661 | USACE | 43.606, -73.432 |
| 12802+00 Segment 2 C-411 | CDDD | PEM | Unnamed Tributary to Lake Champlain | 837 | USACE | 43.605, -73.431 |
| 12824+00 Segment 2 C-411 | EEEE | PEM | - | 795 | - | 43.599, -73.434 |
| 12831+50 Segment 2 C-412 | CHHH | PFO | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| 12840+00 Segment 2 C-412 | CFFF | PEM | Unnamed Tributary to Lake Champlain | 0 | USACE | N/A |
| 12844+00 Segment 2 C-412 | CGGG | PEM | - | 605 | - | 43.594, -73.435 |
| 12856+75 Segment 2 C-412 | G-R | PFO | Unnamed Tributary to Lake Champlain (G-S-H) | 375 | USACE | 43.591, -73.438 |
| 12867+25 Segment 2 C-413 | G-Q | PFO | - | 0 | - | N/A |
| 12906+00 Segment 2 C-414 | G-P | PEM | Unnamed Tributary to Lake Champlain | 349 | USACE | 43.578, -73.440 |

| Table 4-1 Summary of Wetlands Within the Project Corridor¹ | | | | | | |
|--|-------------------|--|-------------------------------------|---|--|---------------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| 12918+00 Segment 2 C-414 | G-N | PEM | Unnamed Tributary to Lake Champlain | 20,465 | USACE | 43.575, -73.437 |
| 12918+00 Segment 2 C-414 | G-O | PEM | Unnamed Tributary to Lake Champlain | 915 | USACE | 43.575, -73.437 |
| 12927+00 Segment 2 C-415 | G-L | L2 | Lake Champlain South Bay | 128,553 | USACE | 43.574, -73.433 |
| 12828+00 Segment 2 C-415 | G-M | L1 | Lake Champlain South Bay | 15,612 | USACE | 43.574, -73.433 |
| 12943+25 Segment 2 C-415 | G-K | L2 | Lake Champlain South Bay | 26,681 | USACE | 43.572, -73.429 |
| 12943+75 Segment 2 C-415 | G-J | L1 | Lake Champlain South Bay | 26,641 | USACE | 43.572, -73.429 |
| 12948+00 Segment 2 C-415 | G-I | PEM | Lake Champlain South Bay | 2,499 | USACE | 43.571, -73.427 |
| 12959+00 Segment 2 C-416 | G-H | PEM/PSS | Lake Champlain South Bay | 2,581 | USACE & NYSDEC (WH-1) | 43.571, -73.423 |
| 12964+00 Segment 2 C-416 | G-G | PEM | Lake Champlain South Bay | 18,536 | USACE & NYSDEC (WH-1) | 43.571, -73.421 |
| 12968+50 Segment 2 C-416 | G-F | PEM | Lake Champlain South Bay | 0 | USACE & NYSDEC (WH-1) | N/A |
| 12982+00 Segment 2 C-416 | G-E | PEM/PSS | Lake Champlain South Bay | 23,970 | USACE & NYSDEC (WH-1) | 43.569, -73.414 |
| 13011+25 Segment 2 C-418 | G-D | PEM | Lake Champlain South Bay | 207 | USACE | 43.564, -73.407 |
| 13019+00 Segment 2 C-418 | G-C | PEM | Lake Champlain South Bay | 19,457 | USACE & NYSDEC (WH-2) | 43.562, -73.406 |

| Table 4-1 Summary of Wetlands Within the Project Corridor ¹ | | | | | | |
|---|------------|--------------------------------------|---|--------------------------------------|-----------------------------------|--------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification ² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| 13031+00 Segment 2 C-418 | G-B | PEM | Lake Champlain South Bay | 4,735 | USACE & NYSDEC (WH-2) | 43.559, -73.405 |
| 13036+00 Segment 2 C-418 | G-A | PSS | Lake Champlain South Bay | 683 | USACE & NYSDEC (WH-2) | 43.558, -73.404 |
| CP Rail | | | | | | |
| 15078+00 Segment 3 C-403 | G-R-S | PEM | Unnamed Tributary to Champlain Canal | 109,996 | USACE | 43.535, -73.408 |
| 15093+00 Segment 3 C-404 | G-R-X | PEM/PSS/PFO | Unnamed Tributaries to Champlain Canal (C-R-S3, C-R-S2, C-R-X-S1 and G-R-S-M) | 567,012 | USACE | 43.514, -73.415 |
| 15142+00 Segment 3 C-405 | G-R-U | PEM/PFO | Unnamed Tributary to Champlain Canal (G-R-S-K) | 205,762 | USACE | 43.516, -73.412 |
| 15186+00 Segment 3 C-407 | G-R-V | PFO | Champlain Canal | 6,154 | USACE | 43.508, -73.415 |
| 15198+00 Segment 3 C-407 | G-R-W | PSS/PFO | Champlain Canal | 12,621 | USACE | 43.504, -73.416 |
| 15281+25 Segment 3 C-201 | SA4 | PEM | Unnamed Tributary to Champlain Canal (G-R-S-N) | 4,154 | USACE | 43.483, -73.427 |
| 15282+50 Segment 3 C-410 | G-R-Y | PEM | Unnamed Tributary to Champlain Canal (G-R-S-N) | 48,391 | USACE | 43.481, -73.429 |
| 15282+50 Segment 3 C-201 | SA3 | PEM | - | 1,364 | - | 43.483, -73.427 |
| 15283+00 Segment 3 C-201 | SA2 | PEM | Unnamed Tributary to Champlain Canal (G-R-S-N) | 3,858 | USACE | 43.483, -73.427 |

| Table 4-1 Summary of Wetlands Within the Project Corridor ¹ | | | | | | |
|---|------------|--------------------------------------|--|--------------------------------------|-----------------------------------|--------------------------|
| Approximate Station & Dwg. No. | Wetland ID | Cowardin Classification ² | Associated Water Course | Area w/in JD Limits Square Feet (sf) | USACE, APA, & NYSDEC Jurisdiction | Coordinates (lat., long) |
| 15285+00 Segment 3 C-201 | SA1 | PEM/PSS | Unnamed Tributary to Champlain Canal (G-R-S-N) | 16,485 | USACE | 43.482, -73.428 |
| Old State Route 4 | | | | | | |
| 15304+00 Segment 3 C-411 | CIII | PEM | - | 0 | - | N/A |
| 15306+00 Segment 3 C-411 | CJJJ | PEM | Unnamed Tributary to Champlain Canal | 9,387 | USACE | 43.477, -73.430 |

¹Wetlands 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.

²Cowardin et al. 1979 categories include: Palustrine Emergent (PEM), Palustrine Forested (PFO), Palustrine Scrub-Shrub (PSS), palustrine unconsolidated bottom (PUB), lacustrine limnetic unconsolidated bottom (L1UB), and lacustrine littoral aquatic bed (L2AB).

| Table 4-2 Summary of Waterbodies within the Project Corridor | | | | | | | | | |
|---|-------------------------------------|------------------------------|---|--------------------|-----------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|
| Approximate Station | Waterbody Name | NYSDEC Classification | Waterbody Field ID & NYSDEC Regulation | Flow Status | Substrate | Width (ft.)¹ | Depth (ft.)¹ | Length w/in JD Boundary | Coordinates (lat., long) |
| Route 3 | | | | | | | | | |
| 10006+00 Segment 1 C-401 | Unnamed Tributary to Lake Champlain | Unmapped | CS1 | Intermittent | Mineral soil | 4.5 | 1 | 416 | 43.733, - 73.376 |
| 10024+00 Segment 1 C-401 | Unnamed Tributary to Lake Champlain | Unmapped | CS2 | Intermittent | Bedrock/ cobble-gravel | 4.5 | 1 | 76 | 43.731, - 73.38 |
| 10027+00 Segment 1 C-401 | Unnamed Tributary to Lake Champlain | Unmapped | CS3 | Intermittent | Mineral soil/ cobble-gravel | 3 | 1 | 105 | 43.731, - 73.381 |
| 10029+00 Segment 1 C-401 | Unnamed Tributary to Lake Champlain | Unmapped | CS4 | Intermittent | Mineral soil | 3 | 1 | 93 | 43.731, - 73.382 |
| 10035+00 Segment 1 C-402 | Unnamed Tributary to Lake Champlain | Unmapped | CS5 | Intermittent | Mineral soil | 2 | 1 | 110 | 43.731, - 73.385 |
| 10039+00 Segment 1 C-402 | Unnamed Tributary to | Unmapped | CS6 | Intermittent | Cobble-gravel | 12 | 2 | 100 | 43.731, - 73.386 |

| | | | | | | | | | |
|-----------------------------|---|----------|-----------------|--------------|---------------------------------|----|-----|-----|---------------------|
| | Lake Champlain | | | | | | | | |
| 10041+00 Segment 1 C-402 | Unnamed Tributary to Lake Champlain | Unmapped | CS7 | Intermittent | Mineral soil/boulder | 5 | 2 | 120 | 43.731, - 73.387 |
| Lake Road | | | | | | | | | |
| 10064+00 Segment 1 C-403 | Unnamed Tributary to Lake Champlain | Unmapped | CS8 | Perennial | Mineral soil/bedrock/ cobble | 2 | 1 | 154 | 43.726, - 73.39 |
| 10080+00 Segment 1 C-403 | Unnamed Tributary to Lake Champlain | Unmapped | CS9 | Perennial | Boulder | 14 | 2.5 | 77 | 43.725, - 73.395 |
| 10080+00 Segment 1 C-403 | Overflow channel of Wetland CK conveying flow to CS10 | Unmapped | CS10 | Intermittent | Cobble-gravel | 3 | 1 | 33 | 43.725, - 73.395 |
| 10112+00 Segment 1 C-404 | Unnamed Tributary to Lake Champlain | Unmapped | CS11 | Perennial | Mineral soil/cobble-gravel | 4 | 1 | 74 | 43.722, - 73.406 |
| 10128+00 Segment 1 C-405 | Unnamed Tributary to Lake Champlain | Unmapped | CS12 | Intermittent | Mineral soil/cobble-gravel | 2 | 1 | 88 | 43.721, - 73.412 |
| 10148+00 Segment 1 C-405 | Mill Brook | C/C(T) | CS13 830-432 | Perennial | Silt-mud | 35 | 6 | 52 | 43.722, - 73.418 |

| Route 22 | | | | | | | | | |
|-----------------------------|--|-------------------|-------|--------------|--------------------------------|------|-----|-----|---------------------|
| 10173+00 Segment 1 C-407 | Mill Brook | C/C(T) 830-432 | CS14 | Perennial | Mineral soil/cobble- gravel | 3 | 1 | 40 | 43.72, - 73.425 |
| 10197+00 Segment 1 C-408 | Mill Brook | C/C(T) 830-432 | CS15 | Perennial | Boulder | 20 | 3 | 72 | 43.714, - 73.429 |
| 10300+00 Segment 1 C-411 | Unnamed Tributary to Lake Champlain | D/D 830-433.1 | C2S1 | Perennial | Cobble-gravel | 2.5 | 0.5 | 44 | 43.69, - 73.423 |
| 10321+00 Segment 1 C-412 | Unnamed Tributary to Lake Champlain | Unmapped | C2J | Intermittent | Silt/cobble-gravel | 2 | 1 | 402 | 43.685, - 73.424 |
| 10331+00 Segment 1 C-412 | Unnamed Tributary to Lake Champlain | Unmapped | C2S2 | Intermittent | Silt/boulder/cobble- gravel | 2 | 0.5 | 50 | 43.683, - 73.424 |
| 10360+00 Segment 1 C-413 | Unnamed Tributary to Lake Champlain | C/C 830-433 | C2S3 | Perennial | Silt/cobble-gravel | 17.5 | 1.5 | 100 | 43.679, - 73.414 |
| 12519+00 Segment 2 C-401 | Unnamed Tributary to Lake Champlain | Unmapped | CS16 | Intermittent | Rip rap | 3 | 0.5 | 204 | 43.67, - 73.417 |
| 12533+00 Segment 2 C-402 | Unnamed Tributary to Lake Champlain | C/C 830-433 | 1B-S1 | Perennial | Cobble-gravel | 8 | 1.5 | 20 | 43.666, - 73.42 |
| 12534+00 Segment 2 C-402 | Unnamed Tributary to | C/C 830-433 | CS17 | Perennial | Bedrock | 45 | 1.5 | 450 | 43.666, - 73.42 |

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|-----------------------------|-------------------------------------|-------------|------|--------------|----------------------------|-----|-----|-----|------------------|
| | Lake Champlain | | | | | | | | |
| 12534+00 Segment 2 C-402 | Unnamed Tributary to Lake Champlain | C/C 830-433 | CS18 | Perennial | Cobble-gravel | 6 | 0.5 | 20 | 43.667, - 73.419 |
| 12535+00 Segment 2 C-402 | Unnamed Tributary to Lake Champlain | Unmapped | CS19 | Perennial | Cobble-gravel | 6 | 0.5 | 68 | 43.666, - 73.419 |
| 12539+00 Segment 2 C-402 | Unnamed Tributary to Lake Champlain | Unmapped | CS20 | Intermittent | Silt/gravel | 4 | 0.5 | 176 | 43.666, - 73.42 |
| 12566+00 Segment 2 C-403 | Unnamed Tributary to Lake Champlain | Unmapped | CS21 | Intermittent | Cobble-gravel | 2.5 | 0.5 | 104 | 43.662, - 73.429 |
| 12576+00 Segment 2 C-403 | Unnamed Tributary to Lake Champlain | Unmapped | CS22 | Perennial | Cobble-gravel | 3 | 0.5 | 98 | 43.66, - 73.431 |
| 12579+50 Segment 2 C-403 | Unnamed Tributary to Lake Champlain | Unmapped | CS23 | Intermittent | Mineral soil/silt | 2 | 1 | 28 | 43.659, - 73.432 |
| 12593+00 Segment 2 C-404 | Unnamed Tributary to Lake Champlain | Unmapped | CS24 | Perennial | Silt/boulder/cobble-gravel | 10 | 2.5 | 230 | 43.655, - 73.434 |

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|-----------------------------|--|-------------------|------|--------------|--|------------|------------|------|---------------------|
| 12599+50 Segment 2 C-404 | Unnamed Tributary to Lake Champlain | C/C 830-433 | CS25 | Perennial | Boulder & rip rap over mineral soil | 20 | 2 | 32 | 43.651, - 73.437 |
| 12631+00 Segment 2 C-405 | Unnamed Tributary to Lake Champlain | C/C 830-433 | C2S4 | Perennial | Silt/boulder/cobble- gravel | 10 | 2.5 | 1 | 43.647, - 73.442 |
| 12666+75 Segment 2 C-406 | Unnamed Tributary to Lake Champlain | C/C(T) 830-434 | CS26 | Perennial | Silt/boulder/cobble- gravel/mineral | 16 | 1.5 | 18 | 43.638, - 73.446 |
| 12712+00 Segment 2 C-408 | Unnamed Tributary to Lake Champlain | Unmapped | CYY | Intermittent | Mineral soil/cobble- gravel | 6 | 0.5 | 51 | 43.626, - 73.445 |
| 12745+00 Segment 2 C-409 | Pine Lake Brook | C/C 830-436 | CS27 | Perennial | Bedrock | 30 | 2.5C/C | 53 | 43.62, - 73.438 |
| 12755+00 Segment 2 C-409 | Unnamed Tributary to Lake Champlain | C/C 830-441 | CS28 | Perennial | No data | No data | No data | 65 | 43.617, - 73.436 |
| 12796+25 Segment 2 C-410 | Unnamed Tributary to Lake Champlain | B/B 830-441.1 | CS29 | Perennial | Mineral soil/cobble- gravel | 12 | 1 | 25 | 43.606, - 73.432 |
| 12796+75 Segment 2 C-410 | Unnamed Tributary to Lake Champlain | Unmapped | CS30 | Intermittent | Boulder/cobble- gravel | 6 | 1 | 19.5 | 43.606, - 73.432 |

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|-----------------------------|--|------------------|-------|--------------|--------------------------------|---|-----|------|---------------------|
| 12846+00 Segment 2 C-412 | Unnamed Tributary to Lake Champlain | Unmapped | CS31 | Intermittent | Mineral soil/cobble- gravel | 6 | 1.5 | 63 | 43.593, - 73.436 |
| 12853+50 Segment 2 C-412 | Unnamed Tributary to Lake Champlain | Unmapped | G-S-I | Perennial | Cobble-gravel/silt | 5 | 1 | 37 | 43.592, - 73.437 |
| 12856+75 Segment 2 C-412 | Unnamed Tributary to Lake Champlain | Unmapped | G-S-H | Intermittent | Cobble- gravel/bedrock | 3 | 0.5 | 23.5 | 43.591, - 73.438 |
| 12862+00 Segment 2 C-413 | Unnamed Tributary to Lake Champlain | Unmapped | G-S-G | Intermittent | Sand/cobble-gravel | 6 | 2 | 91 | 43.589, - 73.438 |
| 12863+25 Segment 2 C-413 | Unnamed Tributary to Lake Champlain | B/B 830-441.1 | G-S-F | Intermittent | Sand/cobble-gravel | 4 | 2 | 22 | 43.589, - 73.438 |
| 12893+60 Segment 2 C-414 | Unnamed Tributary to Lake Champlain | C/C 830-441 | G-S-E | Perennial | Cobble- gravel/boulder | 3 | 0.5 | 22 | 43.581, - 73.44 |
| 12899+50 Segment 2 C-414 | Unnamed Tributary to Lake Champlain | Unmapped | G-S-D | Intermittent | Cobble-gravel | 1 | 1 | 48 | 43.579, - 73.44 |
| 12900+00 Segment 2 C-414 | Unnamed Tributary to | Unmapped | G-S-C | Perennial | Cobble- gravel/bedrock | 6 | 2 | 39.5 | 43.579, - 73.44 |

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|-----------------------------|--------------------------------------|----------------|--------------------|--------------|----------------------------|-----|------|------|---------------------|
| | Lake Champlain | | | | | | | | |
| 12903+25 Segment 2 C-414 | Unnamed Tributary to Lake Champlain | Unmapped | G-S-B | Intermittent | Cobble-gravel/bedrock/silt | 3 | 1 | 39 | 43.578, - 73.44 |
| 12906+00 Segment 2 C-414 | Unnamed Tributary to Lake Champlain | Unmapped | G-S-AA | Perennial | Cobble-gravel/bedrock/silt | 2 | 0.5 | 30 | 43.578, - 73.44 |
| 13007+75 Segment 2 C-417 | Unnamed Tributary to Lake Champlain | Unmapped | G-S-A | Intermittent | Cobble-gravel/silt | 6 | 5 | 41 | 43.566, - 73.406 |
| CP Rail | | | | | | | | | |
| 15105+00 Segment 3 C-404 | Unnamed Tributary to Champlain Canal | Unmapped | C-R-S3 | Intermittent | Mineral soil | 2.5 | 0.75 | 47 | 43.53, - 73.409 |
| 15121+00 Segment 3 C-405 | Unnamed Tributary to Champlain Canal | Unmapped | C-R-S2 | Perennial | Mineral soil | 7 | 1.5 | 55.5 | 43.525, - 73.411 |
| 15142+00 Segment 3 C-405 | Unnamed Tributary to Champlain Canal | Unmapped | C-R-S1/ G-R-S-K | Perennial | Silt over rock | 25 | 5 | 146 | 43.52, - 73.412 |
| 15178+00 Segment 3 C-406 | Champlain Canal | C/C 830-469 | G-R-S-L | Perennial | Silt | 40 | 6 | 70 | 43.51, - 73.414 |

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|-----------------------------|---|----------------|---------|--------------|-----------------------|----|-----|----|---------------------|
| 15227+00 Segment 3 C-408 | Tributary to Champlain Canal | C/C 830-469 | G-R-S-M | Perennial | Silt | 30 | 4 | 44 | 43.498, - 73.421 |
| 15298+00 Segment 3 C-410 | Unnamed Tributary to Champlain Canal | Unmapped | G-R-S-N | Intermittent | Silt and small cobble | 5 | 2-3 | 25 | 43.479, - 73.43 |

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 | | | | | |
| Washington | Carlisle muck | Ca | 0-2 | Y | Very Poorly Drained |
| Washington | Catden Muck | Ca | 0-2 | Y | Very Poorly Drained |
| Washington | Covington silty clay loam | Cv | 0-2 | Y | Poorly Drained |
| Washington | Limerick silt loam | Lm | 0-2 | Y | Poorly Drained |
| Washington | Saco silt loam | Sa | 0-2 | Y | Very Poorly Drained |
| Washington | Saprists, Aquepts, and Aquepts | SB | 0-2 | Y | Very Poorly Drained |
| Non-hydric Soils | | | | | |
| Washington | Charlton soils, very stony, gently sloping and sloping | CHC | - | N | Well Drained |
| Washington | Charlton soils, very stony, moderately steep and steep | CHE | - | N | Well Drained |
| Washington | Claverack loamy fine sand | CIA | 0-2 | N | Moderately Well Drained |
| Washington | Claverack loamy fine sand | CIB | 2-6 | N | Moderately Well Drained |
| Washington | Hartland very fine sandy loam | HcB | 2-6 | N | Well Drained |
| Washington | Hartland very fine sandy loam | HcC | 6-12 | N | Well Drained |
| Washington | Hollis-Charlton association, moderately steep and steep | HLE | 15-25 | N | Well Drained |
| Washington | Hoosic gravelly sandy loam, rolling and hilly | HSDK | - | N | Somewhat Excessively Drained |
| Washington | Hudson and Vergennes soils, steep and very steep | HWE | - | N | Moderately Well Drained |
| Washington | Kingsbury silty clay | KbA | 0-2 | N | Somewhat Poorly Drained |

Table 4-3
Soil Description Summary

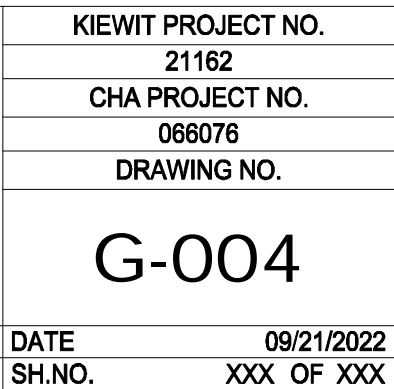
| County | Soil Name | Symbol | % Slopes | Hydric (y/n) | Drainage Class |
|---------------|---|---------------|-----------------|---------------------|-------------------------|
| Washington | Kingsbury silty clay | KbB | 2-6 | N | Somewhat Poorly Drained |
| Washington | Oakville loamy fine sand | OaB | 0-5 | N | Excessively Drained |
| Washington | Orthents and Psamments | OP | 0-15 | N | Well Drained |
| Washington | Vergennes silty clay loam | VeB | 2-6 | N | Moderately Well Drained |
| Washington | Vergennes silty clay loam | VeC | 6-12 | N | Moderately Well Drained |
| Washington | Vergennes silty clay loam | VeD | 12-20 | N | Moderately Well Drained |
| Washington | Wallington silt loam, sandy substratum | Wa | 0-2 | N | Somewhat Poorly Drained |
| Washington | Farmington-Rock outcrop association, nearly level through moderately steep | FCC | - | N | Well Drained |
| Washington | Hollis-Rock outcrop association, gently sloping and sloping | HNC | 3-8 | N | Well Drained |
| Washington | Pits, gravel and sand | Pr | - | N | - |
| Washington | Rock outcrop-Hollis association, moderately steep through very steep | ROF | - | N | - |
| Washington | Rock outcrop-Vergennes association, gently sloping through moderately sloping | RPC | - | N | Moderately Well Drained |

ATTACHMENT 5
WETLANDS AND WATERBODIES DELINEATION MAPPING

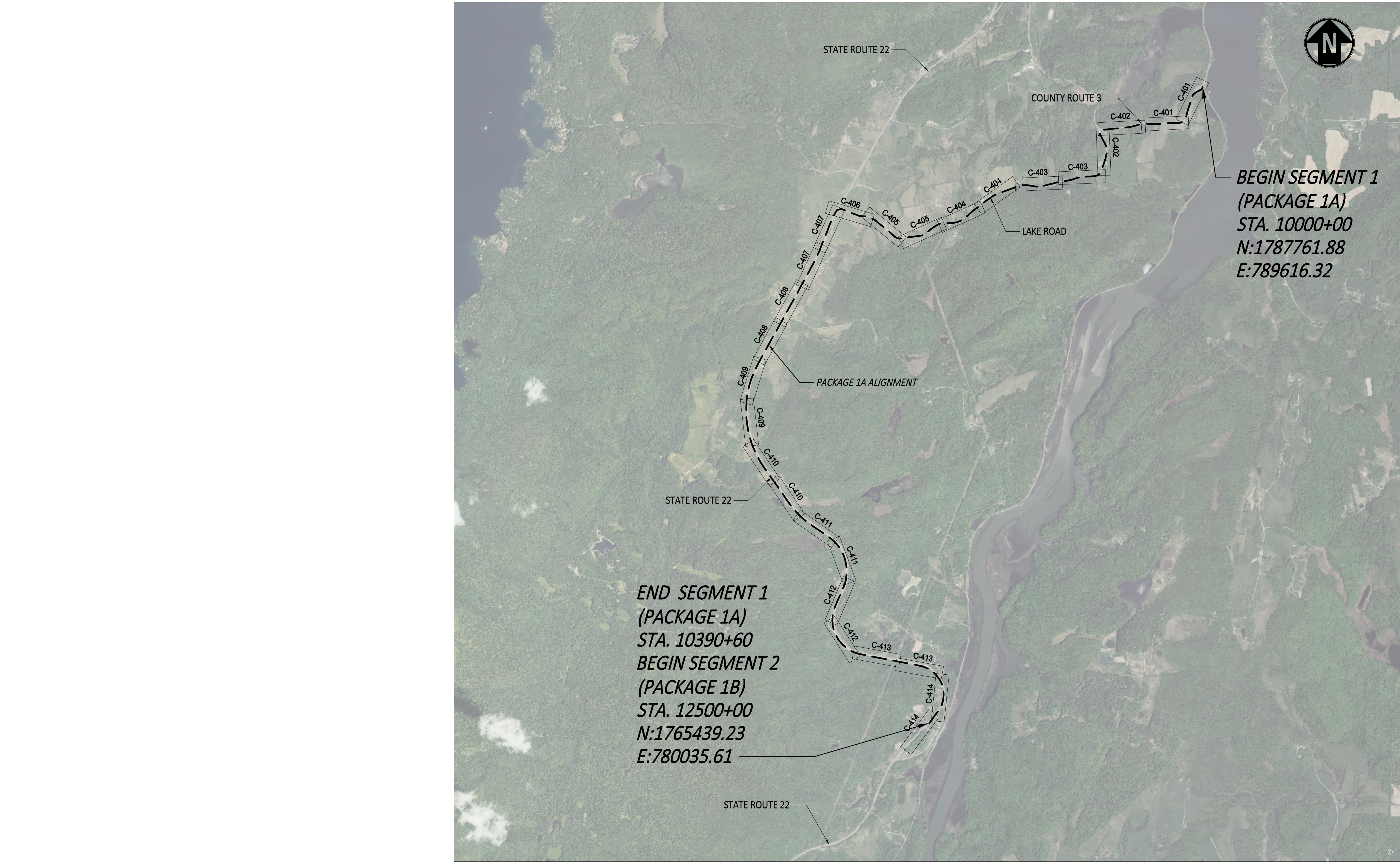
(Putnam Station Transitional HDD Project Area Plans Only)

B

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1A\066076_1A_G-004.DWG Saved: 9/16/2022 3:15:34 PM Plotted: 9/18/2022 3:26:57 PM Current User: Bouillon, Hugo LastSavedBy: 7899



File: V:\PROJECTS\ANY\6\066076_000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1A\066076_1A_C-400.DWG Saved: 9/15/2022 2:08:53 PM Plotted: 9/18/2022 8:56:12 AM Current User: McEnaney III, James LastSavedBy: 5314



E&S KEY MAP
SCALE: 1" = 2000'



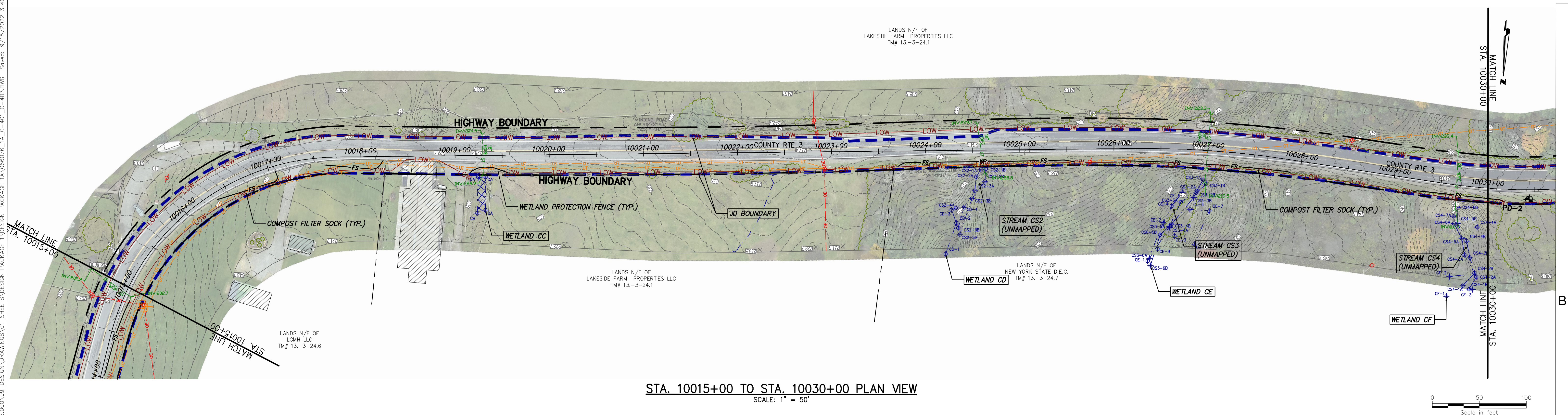
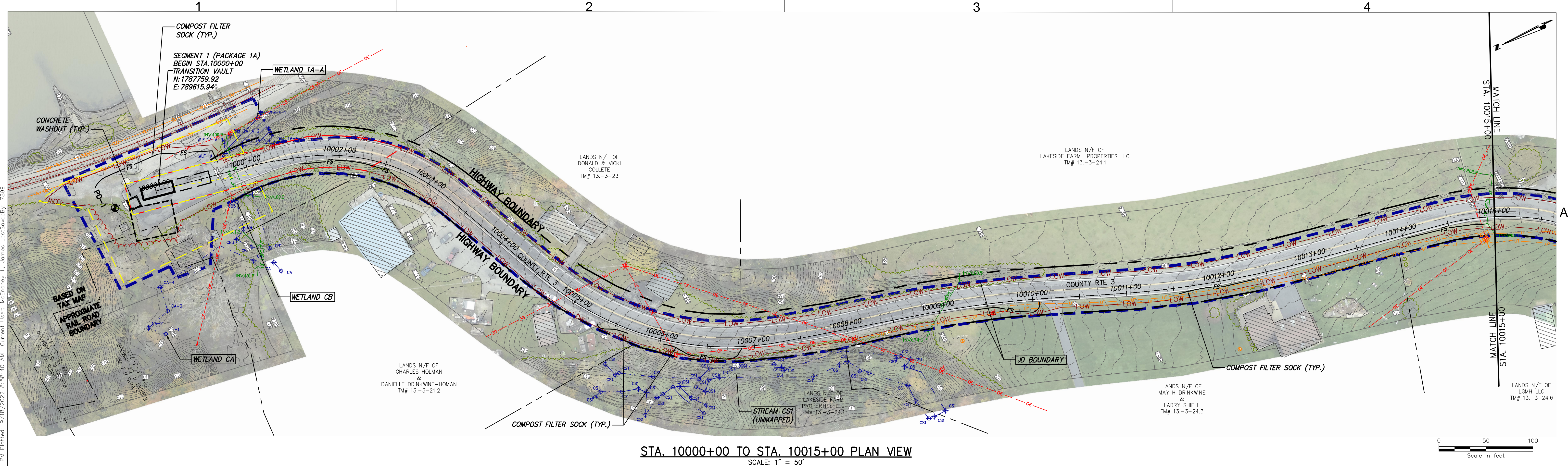
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE 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.

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| | | | | | |
| 0 | 09/21/2022 | FINAL EM&CP SUBMISSION | | JM | JR |
| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | | DB | APP |

**CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 1 (PACKAGE 1A) PUTNAM TO DRESDEN
KEYPLAN E&S**

DRAWN BY: JJE DESIGNED BY: JTM APPROVED BY: JPR SCALE AS NOTED
REV. NO. X

| | |
|--------------------|------------|
| KIEWIT PROJECT NO. | 21162 |
| CHA PROJECT NO. | 066076 |
| DRAWING NO. | C-400 |
| DATE | 09/21/2022 |
| SH.NO. | XXX OF XXX |



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Power Express

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09/18/2022

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| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|-----|------------|----------------------------------|----|-----|
| 0 | 09/21/2022 | FINAL EM&CP SUBMISSION | JM | JR |

**CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 1 (PACKAGE 1A) PUTNAM TO DRESDEN**

STA. 10000+00 TO STA. 10030+00
EROSION AND SEDIMENT CONTROL PLAN

DRAWN BY: JJE DESIGNED BY: JTM APPROVED BY: JPR SCALE AS NOTED
REV. NO. X SH. NO.

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. C-401

DATE 09/21/2022
XXX OF XXX