APPENDIX M CASE 10-T-0139 WATERBODY INVENTORY (114A) & WETLAND DELINEATION REPORT

Wetland & Waterbodies Delineation Report



Champlain Hudson Power Express Segment 9 - Package 5B

Bethlehem, New York

CHA Project Number: 066076

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1.0 INTRODUCTION

CHA Consulting, Inc. ("CHA") has prepared this wetland delineation report on behalf of Champlain Hudson Power Express, Inc. ("CHPE, Inc") 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)) & Article 15 (Protection of Waters) of the Environmental Conservation Law along the overland transmission cable route that follows State and local roadways and the CSX Corporation (CSX) 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 describes the wetland delineation methodology and the existing wetland and waterbody resources that were identified in the Project Corridor (also defined as the Jurisdiction Determination limits) during field surveys for the overland portions of the Project.

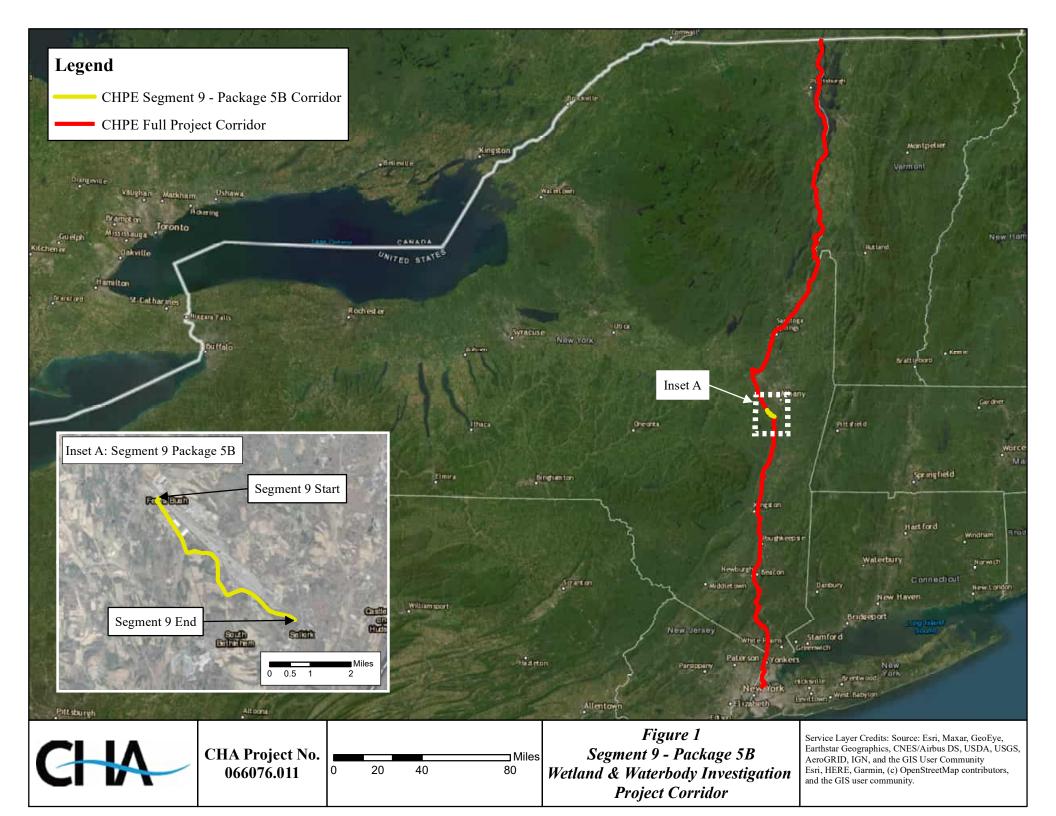
The project also includes equipment staging, laydown areas and access roads, including the Bethlehem Yard.

2.0 SEGMENT 9 - PACKAGE 5B CORRIDOR OVERVIEW

The entire Project Corridor is approximately 339 miles from Montreal, Quebec, Canada to New York City, New York, USA. Figure 1 below shows the route from the Canadian border to New York City and highlights the approximately 5.3 miles of the Segment 9 - Package 5B Project Corridor that was investigated for wetlands and waterbodies.

Segment 9 - Package 5B begins at NYS Route 32 (Feura Bush Road) in Bethlehem, NY where Segment 9 - Package 5A ended (50899+00) on the CSX railroad. Segment 9 - Package 5B extends south approximately 5.3 miles on NYS Route 32 (Feura Bush Road), south on W Yard Road, through a forest, east/southeast onto S Albany Road, then east/southeast through an undeveloped area to where Segment 9 - Package 5B terminates, and Segment 10 – Package 6 begins. The total distance of Segment 9 - Package 5B is 5.3 miles.

The Bethlehem Staging and Laydown Yard is situated within the Town of Bethlehem in the southern part of Segment 9 - Package 5B northeast and southwest of West Yard Road.



3.0 WETLAND DELINEATION METHODOLOGY

To determine the potential for wetland impacts from construction of the Project, CHA assessed the Project Corridor in the field for the presence of federal (Section 404 CWA & Section 10 of the Rivers and Harbors Act of 1899) and state (Article 24 FWW & Article 15 Protection of Waters) jurisdictional wetlands and waterbodies. Shumaker Consulting Engineering & Land Surveying, D.P.C. (Shumaker) assisted with the field work. Wetland scientists conducted wetland delineations in November 2021, October 2022 and December 2022. The delineation criteria and methodology were performed in accordance with the *1987 Corps of Engineers Wetland Delineation Manual*, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*: Northcentral and Northeast Region Version 2.0 (January 2012) as well as the New York State Freshwater Wetlands Delineation Manual (Browne et. al., 1995).

The Project Corridor for the surveyed portions of the project included the land within and outside of ROWs along Feura Bush Road, W Yard Road and S Albany Road, and areas of undeveloped lands that connect these ROW's. The wetland delineation limits were approximately 50 feet from the edge of pavement, limited to the side of the road on which the alignment follows and primarily within the ROW of the aforementioned roads.

In accordance with the procedures provided in the *Corps of Engineers Wetland Delineation Manual (1987)*, and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, Version 2.0 (January 2012), the "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. Wetland and upland data points were recorded to show the difference between the wetland and upland habitats. Generally, one data point set (wetland and upland) was collected for each wetland. Wetland Determination Data Sheets corresponding to each point can be found in Attachment 1.

Wetlands within the Segment 9 - Package 5B Project Corridor fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE). There are no New York State Department of Environmental Conservation (NYSDEC) regulated wetlands within the Segment 9 - Package 5B Project Corridor. The New York State methodology similarly recognizes the three parameters of vegetation, soils, and hydrology; however, under the New York State method the hydric vegetation criterion is mandatory, while the other two parameters are not (Browne et. al. 1995). Wetlands regulated by the NYSDEC must be at least 12.4 acres (5 hectares) in size, unless they are deemed to have unusual local importance (Article 24 FWW). The NYSDEC publishes maps of wetland areas under state jurisdiction; however, it uses field delineation to determine the precise boundaries of these wetland areas.

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

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

Waterbodies within the Project Corridor, including streams under NYSDEC Article 15 jurisdiction, were identified by the presence of an ordinary high-water mark (OHWM) or stream channel. Delineation and flagging were completed to identify the ordinary high-water mark

(OHWM) for most perennial and intermittent streams. Bankfull width and depth were estimated in the field.

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

4.0 WETLAND & WATERBODIES DELINEATION RESULTS

A total of 21 wetland areas were identified in the Segment 9 - Package 5B Project Corridor totaling approximately 27.3 acres. An additional three wetland areas were identified within the Bethlehem staging and laydown yard. However, access was not granted for this area for delineation purposes and the size and location are approximate at this time. Table 4-1 in Attachment 4 provides a summary of the wetlands identified, including their classification in accordance with Cowardin et al. (1979) and their federal jurisdiction. No wetlands within the Segment 9 – Package 5B Project Corridor correspond with wetlands mapped by the NYSDEC.

Descriptions of wetland vegetation, hydrology, and soils observed within the Project Corridor are presented in the following sections. The delineated wetlands are summarized in Table 4-1 (Attachment 4) and the delineated boundaries are illustrated on the Wetlands and Waterbodies Delineation Mapping (Attachment 5). Table 4-2 (Attachment 4) summarizes the waterbodies identified within the Project Corridor, with photographs of these resources provided in Attachment 6. Table 4-3 (Attachment 4) provides the soil series information.

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 Project Corrdor. These include palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetlands. Some wetlands contained multiple community types.

4.1.1 Palustrine Emergent Wetland

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

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

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.

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

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

4.1.2 Palustrine Scrub-Shrub Wetland

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

4.1.3 Palustrine Forested Wetland

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

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

oak (*Quercus bicolor*) and white pine (*Pinus strobus*). Shrub species commonly observed include dogwoods, gray birch, spicebush (*Ilex verticillata*), American elm and honeysuckle. The herbaceous layer typically includes sensitive fern, field horsetail, moneywort and young growth of the tree and shrub species. Invasive species primarily included honeysuckle and buckthorn.

4.2 HYDROLOGY

4.2.1 Streams

Table 4-2 lists the 9 streams (perennial (7), intermittent (2)) identified within the Project Corridor, which is located within the Middle Hudson Basin. This watershed stretches across New York and Massachusetts, encompassing over 1,554,773 acres. Perennial waterbodies within the Project Corridor include Coeymans Creek and two unnamed tributaries identified on USGS Topographic Maps and/or identified during the field delineation.

4.2.2 Wetlands

Site hydrology was examined within each wetland and adjacent upland areas. Indicators of wetland hydrology included surface water (A1), high water table (A2), saturation within the upper portion of the soil during the growing season (A3), water-stained leaves (B9), oxidized rhizospheres on living roots (C3), presence of reduced iron (C4), geomorphic position (D2) and FAC-neutral test (D5) (Attachment 1). Hydrologic factors contributing to wetland hydrology varied by wetland and included flooding from adjacent streams, temporary inundation from runoff, precipitation and/or snowmelt, and seasonal to permanent shallow groundwater tables.

Hydrology along the Project Corridor has been historically altered by roadway drainage ditches. The wetland delineators inspected these ditches for the presence or absence of wetland indicators and hydrologic connectivity to wetlands or streams.

4.3 SOILS

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil map units for the Project Corridor are provided in Attachment 3. Indicators of hydric soils documented during the delineations included depleted below dark surface (A11), sandy

mucky mineral (S1), sandy redox (S5), dark surface (S7), depleted matrix (F3) and redox dark surface (F6) (Attachment 1). A total of forty-one (41) different soil types have been mapped by the NRCS within the Project Corridor. The mapped soil types range from somewhat excessively drained to poorly drained soils. According to descriptions provided by the NRCS Web Soil Survey (2022) (Attachment 4, Table 4-3), four (4) of the soils mapped within the Project Corridor are classified as hydric soils (Fluvaquents-Udifluvents complex, frequently flooded, Madalin silt loam, Raynham very fine sandy loam, and Shaker fine sandy loam). Hydric soils are defined as soils "that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil" (Federal Register, 1994). Table 4-3 summarizes the soil series in the Project Corridor and lists the soils that are classified as hydric (or associated with wetland hydrology).

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 2022). Soils survey mapping and additional information regarding relevant soil characteristics are provided in Attachment 3.

Burdett Series (BuA & BuB)

These very deep, somewhat poorly drained soils formed in till that is dominated by shale. The soils formed in silty mantles that overlie till that is strongly influenced by shale. Slopes range from 0 to 25 percent. The A horizon is dark grayish brown silt loam and is from 0-9 inches. The structure is granular. An E horizon is sometimes present. The B horizon is brown, grayish brown or yellowish brown. The texture is silt loam and the structure is very weak fine subangular blocky. The C horizon is typically a dark grayish or olive gray brown channery silty clay loam extending from

28 to 72 inches.

Chenango Series (ChB, ChC & ChD)

These are very deep, well and somewhat excessively drained soils formed in water-sorted material on outwash plains, kames, eskers, terraces, and alluvial fans. Slope ranges from 0 to 60 percent. Typically, the A horizon is a very dark grayish brown gravelly silt loam, with very weak fine subangular blocky and very blocky structure, extending 0 to 8 inches. The B horizon is dark yellowish brown to brown very gravelly silt loam, with very weak to moderate subangular blocky or granular structure. The C horizon is a dark grayish brown to brown extremely loamy coarse sand, with an upper surface of pebbles, few roots, and 10 percent soft dark brown and dark yellowish brown weathered pebbles. This horizon can be strongly acidic.

Claverack Series (ClA & ClB)

These are 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.

Colonie Series (CoB, CoC & CoD)

These very deep, well drained to excessively drained soils formed in glaciolacustrine, glaciofluvial, or eolian deposits dominated by fine sand and very fine sand. These soils can be found on nearly level to steeply dissected slopes on Wisconsinan age lake plains, outwash plains, beach ridges, dunes, and deltas. Slopes range from 0 to 60 percent. The A horizon is dark grayish brown loamy fine sand with weak fine and very fine granular structure extending 0-8 inches. An E horizon is sometimes present. The texture is dominantly fine sand or loamy fine sand. The B horizon is a brown fine sand. The C horizon is brown fine sand extending 63-80 inches. Some

pedons have redoximorphic features below 40 inches.

Elmridge Series (ElA & ElB)

These are very deep, moderately well drained soils formed in loamy over clayey sediments. They are nearly level to moderately steep soils on glacial lacustrine and marine terraces, and on lake plains. Slope ranges from 0 to 25 percent. Typically, the A horizon consists of a fine sandy loam usually a very dark grayish brown with weak medium granular structure, extending from 0 to 6 inches. The B horizon consists of dark yellowish brown fine dandy loam with weak or moderate granular or subangular blocky structure. The B horizon has iron depletions above a depth of 24 inches. The C horizon is an olive brown varved silt and clay with massive separating to weak thick plates along varved bedding planes.

Elnora Series (EnA & EnB)

These soils are very deep and moderately well drained. These soils formed in sandy glacial lake, deltaic and eolian sediments. Slopes range from 0 to 8 percent. The A horizon is dark grayish brown loamy fine sand with weak fine granular structure. The A horizon extends from 0-10 inches. The B horizon is brown fine sand. The structure is weak coarse subangular blocky. The C horizon is grayish brown or brown fine sand extending 32 to 72 inches. The material is massive or single grain, or structure is weak platy.

Fluvaquents (Fx)

These are deep, level or nearly level, moderately well drained, low lime, sandy soils formed in glacial outwash. The available water capacity is low to moderate. Permeability is rapid.

Hudson Series (HuB, HuC, HuD & HuE)

These are 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.

Madalin Series (Ma)

These are very deep, poorly drained soils formed in water-deposited materials. They occur on lake plains and depressions in the uplands. Slopes range from 0 to 3 percent. The A horizon is very dark gray silt loam with dry, moderate medium granular structure, extending 0 to 8 inches. The B horizon is composed of a dark grayish brown silty clay with strong to weak medium subangular blocky structure. The C horizon is a grayish brown stratified silt to clay with moderate medium platy structure.

Nunda Series (NuB, NuC, NuD & NuE)

These very deep and deep, moderately well drained soils formed in a silty mantle that overlie till derived from clayey shale. They are generally found on upland till plains. Slopes range from 0 to 35 percent. The A horizon is dark grayish brown silt loam with medium granular structure from 0 to 9 inches. The E horizon, where present, is grayish brown silt loam with weak or moderate, thin or medium platy structure. The B horizon is brown silt loam with weak fine subangular blocky structure. The C horizon is gray channery silty clay loam. The structure is massive or has plate like divisions. The C horizon extends from 45 to 72 inches.

Raynham Series (Ra)

These are very deep and poorly drained soils formed in silty estuarine or glaciolacustrine deposits on glacial lake plains and marine terraces. Slopes range from 0 to 12 percent. The A horizon is dark grayish brown silt loam with moderate fine and medium granular structure, extending 0 to 6 inches. The B horizon is composed of an olive gray to olive brown silt loam with weak or moderate, very fine through medium granular or subangular blocky structure. The C horizon is an olive gray to olive silt loam with massive or plate-like divisions.

Rhinebeck Series (RhA & RhB)

These are very deep, somewhat poorly drained soils formed in clayey lacustrine sediments. They occur on glacial lake plains and uplands mantled with lake sediments. Slopes range from 0 to 15 percent. The A horizon is very dark grayish brown silt loam with moderate medium granular structure to a depth of 9 inches. The E horizon, when present, is grayish brown silty clay loam with weak medium subangular blocky structure, extending from 9 to 14 inches. The B horizon is olive brown silty clay to silty clay loam with weak to strong prismatic or subangular blocky structure, extending to a depth of 32 inches. The C horizon is typically brown silty clay loam to varved silt and clay with massive or varved very coarse prismatic structure. The C horizon may extend to a depth of 72 inches.

Scio Series (ScA & ScB)

These are very deep, moderately well drained soils formed in eolian, lacustrine, or alluvial sediments dominated by silt and very fine sand. These soils occur on terraces, old alluvial fans, lake plains, outwash plains and lakebeds. Slopes range from 0 to 25 percent. The A horizon is dark grayish brown silt loam with moderate fine granular structure extending from 0 to 9 inches. The B horizon is yellowish brown silt loam with weak fine to medium subangular blocky structure. The C horizon is typically brown to grayish brown silt to very gravelly loamy sand. This horizon is massive or single grain and may have plate-like divisions.

Shaker Series (Sh)

These are very deep, poorly drained soils formed in loamy over clayey sediments. They are nearly level to gently sloping soils occurring in low-lying positions on glaciolacustrine and marine terraces. Slopes range from 0 to8 percent. The O horizon where present is commonly black hemic material extending from 0 to 2 inches. The A horizon is very dark brown fine sandy loam with weak medium granular structure from depths of 2 to 6 inches. The B horizon is light brownish gray to brown sandy loam with weak medium subangular blocky structure. The C horizon is dark yellowish brown varved silt and clay with massive separating to weak plates along varved bedding planes extending from depths of 30 to 65 inches.

Stafford Series (St)

These very deep, somewhat poorly drained soils formed in sandy glacio-lacustrine deposits. These nearly level soils are found on deltas and sand plains. Slopes range from 0 to 3 percent. The A horizon is very dark grayish brown loamy fine sand. The structure is granular. The B horizon is brown or grayish brown loamy fine sand. It has weak granular, subangular blocky, or platy structure or it is massive. The C horizon is light brownish gray or grayish brown fine sand to sand. It is massive or single grain.

Udipsamments (Ud & Uf)

These are very deep, nearly level to undulating, moderately well drained to excessively drained soils formed in dredged materials. Slopes range from 0 to 8 percent. Typically, the texture of the material is loamy sand or sand, with layers of silty material or gravel at varying depths. Subsurface layers are weakly stratified due to occasional new deposits on the surface.

Udorthents (Uh & Uk)

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

Valois Series (VaB & VaC)

These are very deep, well drained soils on nearly level to steep lateral moraines along lower valley sides. These soils formed in till dominated by siltstone, sandstone or shale. The slopes range from 0 to 60 percent. The A horizon is brown gravelly loam with weak medium granular structure extending from 0 to 7 inches. The B horizon is brown silt loam/ gravelly silt loam with weak fine granular structure and weak medium subangular blocky structure. The C horizon is dark grayish brown very gravelly fine sandy loam and gravelly clay loam. The C horizon has 40 percent rock

fragments and extends from 47 to 72 inches.

Wakeland Series (Wa)

These very deep, somewhat poorly drained soils formed in silty alluvium on floodplains and floodplain steps. Slopes range from 0 to 2 percent. The A horizon is dark grayish brown silt loam. The C horizon is grayish brown silt loam with yellowish brown redoximorphic features. The structure is granular.

Wassaic Series (WcB & WcC)

These moderately deep, well drained soils formed in loamy till. These soils are on bedrock controlled till plains. The slopes range from 0 to 50 percent. The A horizon is dark grayish brown silt loam with moderate medium granular structure. The E horizon is grayish brown and has a texture similar to the A horizon. The B horizon is brown silt loam and has moderate medium subangular blocky structure. The C horizon is brown gravelly loam with weak medium platy structure.

5.0 SUMMARY

Wetlands identified along the Project Corridor include shallow emergent marsh, common reed marsh, purple loosestrife marsh, shrub swamp and red maple-hardwood swamp. Stream communities include artificial ditches, intermittent streams, and perennial streams.

Land use in the Project Corridor is diverse, ranging from commercial, residential, and agricultural to undeveloped areas consisting of fields, shrublands and forest. Because most of the Project Corridor consists of existing roadway corridors, many wetlands are characterized by previous anthropogenic disturbance and/or the presence of invasive plant species. The wetland boundaries abutting the roadways are typically defined by the edge of the soil fill for the roadway embankments.

Confirmation of the wetland boundaries are the responsibility of the involved regulatory agencies with jurisdiction over wetlands and waterbodies within this Package of the overall project. As previously noted, wetlands within Segment 9 - Package 5B are regulated by USACE (Section

10/404) and none of the wetlands are regulated by NYSDEC (Article 24). Streams and other waterbodies are regulated by USACE (Section 10/404). Based on review of the NYSDEC wetland mapping, none of the delineated wetlands are identified as regulated under Article 24. It is anticipated that USACE will take jurisdiction over all of the mapped wetlands within the Project Corridor and NYSDEC will not take jurisdiction of the delineated streams. Final jurisdictional determinations will be made by the respective agencies.

The Bethlehem Yard was not accessible at the time of the field investigations. All information regarding wetlands in this area are approximate. Access to this site will be required for filed verification (delineation) prior to permitting, if it is determined that these potential wetlands will be affected.

6.0 **REFERENCES**

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ATTACHMENT 1 WETLAND DETERMINATION DATA SHEETS AND WETLAND PHOTOGRAPHS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

		5					
Project/Site: <u>CHPE Phase 5</u>	City/County: <u>Feura Bush</u>	Sampling Date: <u>11/3/21</u>					
Applicant/Owner: <u>CHA</u>		State: <u>NY</u> Sampling Point D-1					
Investigator(s): <u>Nick Dominic, Justn Williams</u>	Section, Township, Range:_ <u>Feur</u>	a Bush					
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none)): Slope (%):					
Subregion (LRR or MLRA): <u>LRR R</u>	Lat: <u>42.54969</u> Long: <u>-73.844</u>	480 Datum: <u>NAD83</u>					
	ypical for this time of year? Yes 🔀 No 🔲 (If						
Are Vegetation NO, Soil NO, or Hydrolo		ircumstances" present? Yes <u>X</u> No					
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrolo	··· · · · ·	plain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach	site map showing sampling point location	s, transects, important features, etc					
		Yes <u> </u>					
Wetland D-1							
HYDROLOGY							
Wetland Hydrology Indicators:	<u>S</u> i	econdary Indicators (minimum of two required)					
Primary Indicators (minimum of one is require	d; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)					
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3)	Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)					
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)					
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)					
Iron Deposits (B5)	🔲 Thin Muck Surface (C7)	Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	Microtopographic Relief (D4)					

Sparsely Vegetated Conc		FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes No Depth (inches):		
Water Table Present?	Yes X No Depth (inches): 3	_	
Saturation Present? (includes capillary fringe)	Yes <u>X</u> No <u>D</u> Depth (inches): _{Su}	rface Wetland Hydrology Present? Yes X	No 🗌
Describe Recorded Data (stre	am gauge, monitoring well, aerial photos, p	revious inspections), if available:	
Demention			
Remarks:			

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1			<u>- III</u>	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2				That Are OBL, FACW, or FAC: (A)
3				Total Number of Dominant Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
5				
6				Prevalence Index worksheet:
7			<u> </u>	Total % Cover of:Multiply by:
		= Total Cov	er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =
1		-	-	FAC species x 3 =
2		<u> </u>		FACU species x 4 =
3		-		UPL species x 5 = (D)
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
				☑ 1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
		= Total Cov	er	\Box 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. <u>Phragmites australis</u>				data in Remarks or on a separate sheet)
2. Lythrum salicaria	_25	YES 🔽	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3			·▼	¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5		<u> </u>		Definitions of Vegetation Strata:
6		-		Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				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
12				height.
	75	= Total Cov	er	
Woody Vine Stratum (Plot size: <u>30</u>)				
1				Hydrophytic
2	·	<u> </u>		Vegetation
3		<u> </u>	<u>-</u>	Present? Yes X No
4				
		= Total Cov	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe	to the de	pth needed to docur	ment the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Features	5			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 2/2	92	10yr/4/6	8			SCILO	Prominent redox
					_	-		
		·						
						-		
					-	-		
·		·						
					-			
					-	-		
¹ Type: C=Co	oncentration, D=Dep	letion, RM	Reduced Matrix, M	S=Masked	Sand Gr	ains.	² Locatior	PL=Pore Lining, M=Matrix.
Hydric Soil		,	,					for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov	w Surface	(S8) (LRI	R,		Muck (A10) (LRR K, L, MLRA 149B)
	oipedon (A2)		MLRA 149B	·				Prairie Redox (A16) (LRR K, L, R)
Black Hi			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)					, L)		Surface (S7) (LRR K, L, M)
	d Layers (A5) d Below Dark Surface	o (A11)	Loamy Gleyed)			alue Below Surface (S8) (LRR K, L) Dark Surface (S9) (LRR K, L)
	ark Surface (A12)	e (ATT)	Redox Dark Su	• •				langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)		Depleted Dark					nont Floodplain Soils (F19) (MLRA 149B)
	Bleyed Matrix (S4)		\square Redox Depressions (F8)				_	Spodic (TA6) (MLRA 144A, 145, 149B)
	ledox (S5)		<u> </u>					Parent Material (F21)
	Matrix (S6)							Shallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, N	ILRA 14 9	B)				Other	(Explain in Remarks)
³ Indiactore e	f budranbutia vagatat	lon and u	atland by dralagy mus	at ha proce	unt unlocu	dicturbed	ar problemati	-
	ayer (if observed):		etland hydrology mus	st be prese	ent, uniess	alsturbed	or problemau	с.
Type:	,		_					
Depth (ind	ches):		-				Hydric Soil	Present? Yes 🔀 No 🔲
Remarks:								

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: <u>CHPE Phase 5</u>	City/County: <u>Feura Bush</u>	Sampling Date: <u>12/14/2021</u>			
Applicant/Owner: <u>CHA</u>	State: <u>NY</u>	Sampling Point: <u>12.14 A-2</u>			
Investigator(s): <u>Nick Dominic, Justn Williams</u>	Section, Township, Range:				
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, none):	Slope (%):			
Subregion (LRR or MLRA): <u>LRR R</u> Lat: <u>42.56457</u>	Long: <u>-73.86198</u>	Datum: NAD83			
Soil Map Unit Name:	NWI class	sification: PFM			
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes 🛛 No 🔲 (If no, explain ir	n Remarks.)			
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> significa	ntly disturbed? Are "Normal Circumstances	s" present? Yes 🔀 No 🗌			
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> naturally	/ problematic? (If needed, explain any ans	wers in Remarks.)			

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedu Wetland 12.14 A	Yes X No Yes X No Yes No res here or in a separate		Is the Sampled Area within a Wetland? Yes No
HYDROLOGY			
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is r	equired; check all that ap	oply)	Surface Soil Cracks (B6)

Primary indicators (minimum of one is required, check an that apply)	
Surface Water (A1) Water-Stained Leaves (B9)	Drainage Patterns (B10)
High Water Table (A2)	Moss Trim Lines (B16)
Saturation (A3)	Dry-Season Water Table (C2)
Water Marks (B1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Qxidized Rhizospheres on Living	Roots (C3)
Drift Deposits (B3)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	oils (C6) 🛛 🔲 Geomorphic Position (D2)
Iron Deposits (B5)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes 🔟 No 🔲 Depth (inches): 1	
Water Table Present? Yes <u>X</u> No <u>D</u> Depth (inches): 6	
Saturation Present? Yes X No Depth (inches): 0	Wetland Hydrology Present? Yes 🖄 No 🗌
(includes capillary fringe)	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Indicator Species? <u>Status</u>	Dominance Test worksheet:
1. <u>Ouercus bicolor</u> (100 0120. <u>00</u>)			Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2			
3			Total Number of Dominant Species Across All Strata: (B)
4			
			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
5			\ \ \ \
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
45		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)	_		FACW species x 2 = FAC species x 3 =
1. <u>Rhamnus cathartica</u>			FACU species x 4 =
2			UPL species x 5 =
3		<u> </u>	Column Totals: (A) (B)
4		<u> </u>	
5		<u> </u>	Prevalence Index = B/A =
6		<u> </u>	Hydrophytic Vegetation Indicators:
7		<u> </u>	☑ 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover	□ 2 - Dominance Test is >50%
<u>Herb Stratum</u> (Plot size: <u>5</u>)			\Box 3 - Prevalence Index is ≤3.0 ¹ \Box 4 - Morphological Adaptations ¹ (Provide supporting
1. Typha latifolia	70	YES VOBL V	data in Remarks or on a separate sheet)
2. Lythrum salicaria			Problematic Hydrophytic Vegetation ¹ (Explain)
3			¹ Indicators of hydric soil and wetland hydrology must
4			be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6			Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7			at breast height (DBH), regardless of height.
8			Sapling/shrub – Woody plants less than 3 in. DBH
9			and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardless of
10		<u> </u>	size, and woody plants less than 3.28 ft tall.
11		<u> </u>	Woody vines – All woody vines greater than 3.28 ft in
12		·	height.
		= Total Cover	
Woody Vine Stratum (Plot size: <u>30</u>)			
1		_	Hydrophytic
2		<u> </u>	Vegetation
3		<u> </u>	Present? Yes X No
4		<u> </u>	
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

Profile Desc	cription: (Describe	to the dep	oth needed to docu	ment the i	ndicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redo	ox Features	5				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks	
0-16	10yr/2/1	9 5	10yr/4/6	5	- 🔻		SaLo	Prominent	
	10917271		10917470			<u> </u> ∐-	3820	Tromment	
					▼				
						-			
					<u> </u>			-	
					-	-			
						-	·		
					-	-			
						-	·		
					-	-			
						-			
					-	-			
		· ·							
						-		-	
					-	-			
<u> </u>							2.		
	oncentration, D=Dep	letion, RM	=Reduced Matrix, M	S=Masked	I Sand Gra	ains.		PL=Pore Lining, M=Ma	
Hydric Soil			_				_	for Problematic Hydric	
Histosol			Polyvalue Belo		(S8) (LR	R,		luck (A10) (LRR K, L, M	
	pipedon (A2)		MLRA 149B	,				Prairie Redox (A16) (LRI	
	istic (A3)		Thin Dark Surf					lucky Peat or Peat (S3) (
	en Sulfide (A4)		Loamy Mucky			, L)		urface (S7) (LRR K, L, N	
	d Layers (A5)		Loamy Gleyed)			lue Below Surface (S8) (
	d Below Dark Surfac	e (A11)	Depleted Matri	. ,				ark Surface (S9) (LRR K	
	ark Surface (A12)		Redox Dark Su				Iron-Ma	anganese Masses (F12)	(LRR K, L, R)
Sandy M	/lucky Mineral (S1)		Depleted Dark	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy C	Gleyed Matrix (S4)		Redox Depres	sions (F8)			Mesic :	Spodic (TA6) (MLRA 14 4	4 A, 145, 149B)
Sandy F	Redox (S5)						Red Pa	arent Material (F21)	
Stripped	l Matrix (S6)						📙 Very S	hallow Dark Surface (TF	12)
Dark Su	rface (S7) (LRR R, I	MLRA 149	B)				🔲 Other (Explain in Remarks)	
³ Indicators o	f hydrophytic vegeta	tion and w	etland hydrology mu	st be prese	ent, unless	s disturbec	l or problematic		
Restrictive	Layer (if observed)								
Type:									
Depth (in	chec);						Hydric Soil	Present? Yes 🔀	No
	cnes)						ingune son	Flesent: les <u>–</u>	
Remarks:									
1									



Wetland 12.14 A- Soils

SITE PHOTOGRAPHS

Phase 5

Champlain Hudson Power Express

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE Phase 5	City/County: Feura Bush Sampling Date: 12/14/2021
Applicant/Owner: CHA	State: NY Sampling Point: 12.14 A-13 Upland
Investigator(s): Nick Dominic/Justin Williams	Section, Township, Range:
Landform (hillside, terrace, etc.):	al relief (concave, convex, none): Slope %:
Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 42.56178	Long: -73.8607 Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly dist	urbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologynaturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	Is the Sampled Area within a Wetland? Yes No X If yes, optional Wetland Site ID:
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	
Remarks: (Explain alternative procedu Upland for WL-12.14 A	res here or in a	separate report.	

HYDROLOGY

Wetland Hydrology Indica	itors:				Secondary Indicators (min	imum of two required)
Primary Indicators (minimur	m of one is requi	ed; check all	that apply)		Surface Soil Cracks (I	36)
Surface Water (A1)		Water-	Stained Leaves (B9)		Drainage Patterns (B	10)
High Water Table (A2)		Aquati	c Fauna (B13)		Moss Trim Lines (B16	5)
Saturation (A3)		Marl D	eposits (B15)		Dry-Season Water Ta	ble (C2)
Water Marks (B1)		Hydrog	gen Sulfide Odor (C1)		Crayfish Burrows (C8))
Sediment Deposits (B2)	Oxidize	ed Rhizospheres on Living F	Roots (C3)	Saturation Visible on A	Aerial Imagery (C9)
Drift Deposits (B3)		Preser	nce of Reduced Iron (C4)		Stunted or Stressed P	Plants (D1)
Algal Mat or Crust (B4)		Recen	t Iron Reduction in Tilled So	ils (C6)	Geomorphic Position	(D2)
Iron Deposits (B5)		 Thin M	luck Surface (C7)		Shallow Aquitard (D3)	1
Inundation Visible on A	erial Imagery (B7) Other	(Explain in Remarks)		Microtopographic Reli	ef (D4)
Sparsely Vegetated Co	ncave Surface (E	38)			FAC-Neutral Test (D5)
Field Observations:						
Surface Water Present?	Yes	No X	Depth (inches):			
Water Table Present?	Yes	No X	Depth (inches):			
Saturation Present?	Yes	No X	Depth (inches):	Wetlar	nd Hydrology Present?	Yes No X
(includes capillary fringe)			· · · <u> </u>			
Describe Recorded Data (s	tream gauge, mo	nitoring well,	aerial photos, previous insp	pections), if	available:	
Remarks:						

VEGETATION – Use scientific names of plants.

Sampling Point: 2.14 A-13 Uplar

	Absolute	Dominant	Indicator	Barrison Tadavalahada
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1. Quercus rubra		Yes	FACU	Number of Dominant Species
2. <u>Carya ovata</u>	30	Yes	FACU	That Are OBL, FACW, or FAC:0 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 5 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 0.0% (A/B)
7				Prevalence Index worksheet:
	80	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species x 1 =
1. Lonicera spp.	35	Yes	FACU	FACW species 0 x 2 = 0
2				FAC species x 3 =
3				FACU species 145 x 4 = 580
4				UPL species 8 x 5 = 40
5				Column Totals: 153 (A) 620 (B)
6				Prevalence Index = B/A = 4.05
7				Hydrophytic Vegetation Indicators:
	35	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				2 - Dominance Test is >50%
1. Rubus allegheniensis	30	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹
2.				4 - Morphological Adaptations ¹ (Provide supporting
3.				data in Remarks or on a separate sheet)
4.				Problematic Hydrophytic Vegetation ¹ (Explain)
5.				
6.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
0				
o				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11 12.				
12,	30	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Weedy Vine Stratum (Distaire)				
Woody Vine Stratum (Plot size:)	0	Vaa		Woody vines – All woody vines greater than 3.28 ft in
1. <u>Celastrus orbiculatus</u>	8	Yes	UPL	height.
2				Hydrophytic
3.				Vegetation
4				Present? Yes <u>No X</u>
	8	=Total Cover		
Remarks: (Include photo numbers here or on a separ	,	ort		
Species same as 12.13 A-7, test sites approximately	to yarus ap	art		

Depth	Matrix			k Featu				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10yr 4/1						Loamy/Clayey	
						·	<u> </u>	
,								
·						<u> </u>		
·								
<u> </u>								
·						·		
·								
¹ Type: C=Cor	ncentration, D=Depl	etion, RM	I=Reduced Matrix, M	1S=Mas	ked Sand	d Grains.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil In	ndicators:						Indicators	for Problematic Hydric Soils ³ :
Histosol (A	A1)		Polyvalue Belo	w Surfa	ice (S8) (I	_RR R,	2 cm M	uck (A10) (LRR K, L, MLRA 149B)
Histic Epip	pedon (A2)		MLRA 149B)			Coast F	Prairie Redox (A16) (LRR K, L, R)
Black Hist			Thin Dark Surfa					ucky Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		High Chroma S					ue Below Surface (S8) (LRR K, L)
	Layers (A5)		Loamy Mucky			R K, L)		ark Surface (S9) (LRR K , L)
	Below Dark Surface	e (A11)	Loamy Gleyed		(F2)			inganese Masses (F12) (LRR K, L, R)
	k Surface (A12)		Depleted Matrix					nt Floodplain Soils (F19) (MLRA 149
	icky Mineral (S1)		Redox Dark Su	•				Spodic (TA6) (MLRA 144A, 145, 149B)
	eyed Matrix (S4)		Depleted Dark					rent Material (F21)
Sandy Re			Redox Depress		0)			nallow Dark Surface (F22)
	Matrix (S6)		Marl (F10) (LR	r r , l)				Explain in Remarks)
Dark Surfa	ace (57)							
³ Indicators of L	hydrophytic yogotat	ion and w	otland bydrology m	ict ha n	rocont ur	aloon dict	urbed or problematic.	
	ayer (if observed):		eliand hydrology mu	ist be p	ieseni, ui	liess uist	urbed or problematic.	
Type:								
	- 1						Hydric Soil Prese	
	ches):						HVdric Soll Prese	ent? Yes No X



Upland 12.14 A- Soils

SITE PHOTOGRAPHS

Phase 5

Champlain Hudson Power Express



Wetland 12.14 B- Soils

SITE PHOTOGRAPHS

Phase 5

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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: CHPE Phase 5	City/County: Feura Bush Sampling Date: 12/14/2021
Applicant/Owner: CHA	State: NY Sampling Point: 12.14 B-1 Uplan
Investigator(s): Nick Dominic/Justin Williams	Section, Township, Range:
Landform (hillside, terrace, etc.):	Local relief (concave, convex, none): Slope %:
Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 42.56074	Long: -73.85474 Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly of	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologynaturally prol	blematic? (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 X	Is the Sampled Area within a Wetland? Yes No X If yes, optional Wetland Site ID:
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	
Remarks: (Explain alternative procedu Upland for WL-12.14 B	res here or in a	separate report.)	

HYDROLOGY

	tors:				Secondary Indicators (minimum of two required)
Primary Indicators (minimur	n of one is requir	ed; check all	that apply)		Surface Soil Cracks (B6)
Surface Water (A1)		Water-	Stained Leaves (B9)		Drainage Patterns (B10)
High Water Table (A2)		Aquatio	c Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3)		Marl D	eposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1)		Hydrog	gen Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2))	Oxidize	ed Rhizospheres on Living R	loots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		Preser	nce of Reduced Iron (C4)		Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent	t Iron Reduction in Tilled Soi	ls (C6)	Geomorphic Position (D2)
Iron Deposits (B5)		 Thin M	luck Surface (C7)		Shallow Aquitard (D3)
Inundation Visible on A	erial Imagery (B7) Other ((Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Co	ncave Surface (E	38)			FAC-Neutral Test (D5)
Field Observations:					
Surface Water Present?	Yes	No X	Depth (inches):		
Water Table Present?	Yes	No X	Depth (inches):		
Saturation Present?	Yes	No X	Depth (inches):	Wetlan	d Hydrology Present? Yes No X
(includes capillary fringe)					
	ream gauge, mo	nitoring well,	aerial photos, previous insp	ections), if	available:
	ream gauge, mo	nitoring well,	aerial photos, previous insp	ections), if	available:

Sampling Point: 2.14 B-1 Uplan

<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Quercus rubra	50	Yes	FACU	Number of Densinent Onesian
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant
4				Species Across All Strata: 5 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 20.0% (A/B)
7				Prevalence Index worksheet:
	50	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
1. Lonicera spp.	40	Yes	FACU	FACW species 0 x 2 = 0
2.				FAC species 20 x 3 = 60
3.				FACU species 130 x 4 = 520
4.				UPL species 8 x 5 = 40
5.				Column Totals: 158 (A) 620 (B)
				Prevalence Index = $B/A = 3.92$
7.				Hydrophytic Vegetation Indicators:
···	40	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				2 - Dominance Test is >50%
1 Contouroo onn	40	Vac	FACU	3 - Prevalence Index is < 3.01
1. Centaurea spp.		Yes		4 - Morphological Adaptations ¹ (Provide supporting
2. <u>Solidago spp.</u>	20	Yes	FAC	data in Remarks or on a separate sheet)
3				
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5 6.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
				Deminions of Vegetation Strata.
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb - All herbaceous (non-woody) plants, regardless
	60	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines - All woody vines greater than 3.28 ft in
1. Celastrus orbiculatus	8	Yes	UPL	height.
2				Hudron huffin
3				Hydrophytic Vegetation
4				Present? Yes <u>No X</u>
	8	=Total Cover		
Remarks: (Include photo numbers here or on a separ	,			
Species same as 12.13 A-7, test sites approximately	40 yards ap	art		

		to the de	-			ator or co	onfirm the absence of	f indicators.)	
Depth	Matrix			x Featu			_	_	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	arks
0-16	10yr 4/2						Loamy/Clayey		
					·				
					. <u> </u>				
					. <u> </u>				
					·				
¹ Type: C=Co	oncentration, D=Depl	etion RI	M=Reduced Matrix	MS=Mas	sked San	Grains	² Location: P	L=Pore Lining, M=M	latrix
Hydric Soil				no mac				or Problematic Hyd	
Histosol			Polyvalue Belo	w Surfa	ace (S8) (I	LRR R.		ck (A10) (LRR K, L ,	
	vipedon (A2)		MLRA 149B		(/(,		airie Redox (A16) (L	
Black His			Thin Dark Surf	, ace (S9) (LRR R	, MLRA 1		cky Peat or Peat (S	
Hydroge	n Sulfide (A4)		High Chroma S	Sands (S	S11) (LRF	R K, L)	Polyvalu	e Below Surface (S8	B) (LRR K, L)
Stratified	Layers (A5)		Loamy Mucky	Mineral	(F1) (LR	R K, L)	Thin Dar	k Surface (S9) (LRF	R K, L)
Depleted	l Below Dark Surface	e (A11)	Loamy Gleyed	Matrix ((F2)		Iron-Mar	nganese Masses (F1	2) (LRR K, L, R)
Thick Da	rk Surface (A12)		Depleted Matri	ix (F3)			Piedmon	it Floodplain Soils (F	19) (MLRA 149B)
	lucky Mineral (S1)		Redox Dark Su	•			Mesic Sp	oodic (TA6) (MLRA	144A, 145, 149B)
	leyed Matrix (S4)		Depleted Dark					ent Material (F21)	
	edox (S5)		Redox Depres	``	8)			allow Dark Surface (F22)
	Matrix (S6)		Marl (F10) (LR	R K, L)			Other (E	xplain in Remarks)	
Dark Sur	face (S7)								
³ Indiantono of		امید میدا،	ustices of building to survey			-looo dio#			
	ayer (if observed):		wettand nydrology m	ust be p	resent, ur	ness alst	urbed or problematic.		
Type:	• • •								
	abaa).						Undria Cail Dracar	-12 Vee	
Depth (ir							Hydric Soil Preser	nt? Yes	NoX
Remarks:									
	m is revised from No 2015 Errata. (http://w						2.0 to include the NRC	S Field Indicators o	it Hydric Solls,
version r.o,	2010 Enata. (http://w	WW.IIIC3	.usua.gov/internet/13			0/11/0314	2pz_001235.000x)		



Upland 12.14 B- Soils

SITE PHOTOGRAPHS

Phase 5

Champlain Hudson Power Express

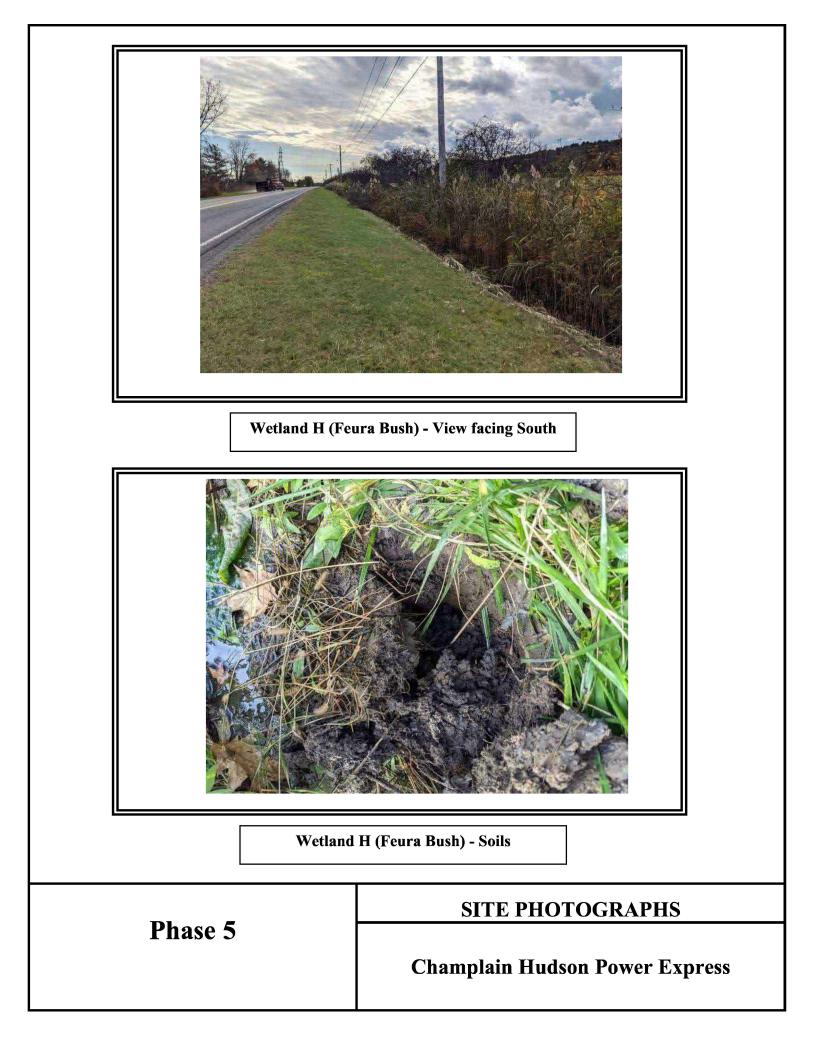
Project/Site: CHPE Phase 5	City/County: Feura Bush		Sampling Date: <u>11/03/2021</u>		
Investigator(s): <u>J. L. Williams, N. G. Dominic</u>					
Landform (hillslope, terrace, etc.):					
Subregion (LRR or MLRA): <u>LRR - R</u> Lat:					
Soil Map Unit Name:		NWI classifi	cation: PEM		
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes 🛛 🗶 No 🗌	(lf no, explain in F	Remarks.)		
Are Vegetation \underline{NO} , Soil \underline{NO} , or Hydrology \underline{NO}	significantly disturbed? Are "Norma	I Circumstances"	present? Yes 🔀 No 🗌		
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u>	naturally problematic? (If needed,	explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS – Attach site m	an chowing compling point locati	and transact	important factures ato		
SUMMART OF FINDINGS – Attach site in	Tap showing sampling point locate		s, important leatures, etc.		
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area		_		
Hydric Soil Present? Yes	No within a Wetland?	Yes 🛛 🛛	No		
Wetland Hydrology Present? Yes No If yes, optional Wetland Site ID: Wetland H - Feura Bush					
Remarks: (Explain alternative procedures here or in					
		-			
Identified as Wetland H-1 on wetla	and mapping and in report text.				
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum of one is required; chec	k all that apply)		Cracks (B6)		
Surface Water (A1)	Drainage Pa				
High Water Table (A2)	Water-Stained Leaves (B9) Aquatic Fauna (B13)				
$\square Saturation (A3) \square$	Marl Deposits (B15)	—	Water Table (C2)		
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Bur	. ,		
Sediment Deposits (B2)	Oxidized Rhizospheres on Living Roots (C3)	<u> </u>	ísible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)		Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)		Position (D2)		

Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aer Sparsely Vegetated Cond		Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Thin Muck Surface (C7) Other (Explain in Remarks))	Stunted or Stressed Plants (D1)
Field Observations:		,	(, ,
Surface Water Present? Water Table Present?	Yes 🔀 No Yes 🔀 No		
Saturation Present? (includes capillary fringe)	Yes 🔲 No		Wetland Hydrology Present? Yes 🔀 No 🗌
Describe Recorded Data (stre	⊧am gauge, monit	toring well, aerial photos, previous inspect	ions), if available:
Remarks: Drains into culvert under road			

Sampling Point: <u>H-8</u>

Tree Strature (Distring, 20	Absolute	Dominant Indicate	Dominance lest worksneet
Tree Stratum (Plot size: <u>30</u>)		Species? Statu	Number of Dominant Species
1			(*)
2			Total Number of Dominant
3			
4			
5		<u> </u>	That Are OBL, FACW, or FAC: (A/B)
6		<u> </u>	Prevalence Index worksheet:
7		<u> </u>	
		= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)			FACW species x 2 =
1			FAC species x 3 =
			FACU species x 4 =
2			UPL species x 5 =
3			Column rotals: (A) (B)
4			
5			Prevalence Index = B/A =
6		<u> </u>	Hydrophytic Vegetation Indicators:
7		<u> </u>	│
		= Total Cover	└── 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)			\square 3 - Prevalence Index is $\leq 3.0^{1}$
1. Phragmites australis	90	YES FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2			
3			be present unless disturbed or problematic
4			`
5			Definitions of Vegetation Strata:
6			Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7		<u> </u>	at breast height (DBH), regardless of height.
8		<u> </u>	Sapling/shrub – Woody plants less than 3 in. DBH
9		<u> </u>	and greater than or equal to 3.28 ft (1 m) tall.
10			Herb – All herbaceous (non-woody) plants, regardless of
11			— size, and woody plants less than 3.28 ft tall.
12.			Woody vines – All woody vines greater than 3.28 ft in
12	90	- Total Causar	height.
	<u> </u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1	<u> </u>		 Hydrophytic
2			— Vegetation
3		<u> </u>	Present? Yes 🔀 No 🗌
4		<u> </u>	_
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

Profile Desc	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth	Matrix			x Feature		. 2	_ .	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks
0-10	10YR 4/2	100				-	SCL	restrictive layer at 10"
					-	_		
							·	
						-	·	
					-	-		
							·	
						-	·	
					<u> </u>	-	. <u> </u>	
					-	-		
							·	
	-							
					-	-		
						_		
							·	
					<u> </u>	-	. <u> </u>	
					-	_		
		lation DN	Reduced Matrix, M	C=Maakad			² L contion	: PL=Pore Lining, M=Matrix.
Hydric Soil		Dietion, Riv	=Reduced Matrix, M	S=Masked	I Sand Gra	ains.		for Problematic Hydric Soils ³ :
				w Surface			_	/luck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		Polyvalue Belo MLRA 149B		(58) (LR I	Κ ,		Prairie Redox (A16) (LRR K, L, MLRA 149B)
	istic (A3)		Thin Dark Surfa			RA 1498		Aucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)		Loamy Mucky I					Surface (S7) (LRR K, L, M)
	d Layers (A5)		Loamy Gleyed			, _,		Ilue Below Surface (S8) (LRR K, L)
	d Below Dark Surfac	æ (A11)	Depleted Matrix		,			ark Surface (S9) (LRR K, L)
📘 Thick Da	ark Surface (A12)		Redox Dark Su	Irface (F6)			🔲 Iron-M	anganese Masses (F12) (LRR K, L, R)
	/lucky Mineral (S1)		Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
	Bleyed Matrix (S4)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
	Redox (S5)							arent Material (F21)
	Matrix (S6)							shallow Dark Surface (TF12)
Dark Su	rface (S7) (LRR R, I	MLRA 149	B)				U Other	(Explain in Remarks)
³ Indicators o	f hydrophytic yogota	tion and w	etland hydrology mus	et ha prose	ont unloca	, disturbod	l or problomativ	
	Layer (if observed)		etianu nyurology mus	st be prese	ent, unies:	susuibeu		
	• • •	•						
Type: <u>rocl</u>								Present? Yes 🔲 No 🔀
Depth (in	cnes): <u>10"</u>		-				Hydric Soil	Present? Yes No X
Remarks:								



Project/Site: <u>CHPE Phase 5</u>	City/County: <u>Feura Bush</u>	Sampling Date: <u>11/03/2021</u>
Applicant/Owner: <u>CHA</u>		State: <u>NY</u> Sampling Point: <u>I-6</u>
Investigator(s): J. L. Williams, N. G. Dominic	Section, Township, Range:	
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, non	e): Slope (%):
Subregion (LRR or MLRA): <u>LRR - R</u> Lat:	Long:	Datum: <u>NAD83</u>
Soil Map Unit Name:		NWI classification: <u>PEM</u>
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes 🔀 No 🗌 (I	f no, explain in Remarks.)
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> s	ignificantly disturbed? Are "Normal	Circumstances" present? Yes 🔀 No 🗌
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> n	aturally problematic? (If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling point locatio	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	o image: mail within a Wetland? o image: mail within a Wetland? o image: mail within a Wetland?	Yes X No Site ID: Wetland I - Feura Bush
Remarks: (Explain alternative procedures here or in a sep		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all t		Surface Soil Cracks (B6)
	er-Stained Leaves (B9) atic Fauna (B13)	Drainage Patterns (B10) ☐ Moss Trim Lines (B16)
	Deposits (B15)	Dry-Season Water Table (C2)
	rogen Sulfide Odor (C1)	Crayfish Burrows (C8)
	ized Rhizospheres on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
	ence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)
	ent Iron Reduction in Tilled Soils (C6)	Geomorphic Position (D2)
	Muck Surface (C7)	Shallow Aquitard (D3)
	er (Explain in Remarks)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8) Field Observations:		FAC-Neutral Test (D5)
Surface Water Present? Yes X No Dep	hth (inches):1"	
	oth (inches):3"	
		/drology Present? Yes 🗵 No 🗌
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, a	aerial photos, previous inspections), if avail	able:
Remarks:		
Drains into culvert under road		

Sampling Point: <u>I-6</u>

Tree Stratum (Plot size: <u>30</u>)	Absolute	Dominant Species?		Dominance Test worksheet:
1. <u>Acer rubrum</u> (Flot size. <u>30</u>)		YES		Number of Dominant Species
				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
5				
6		-		Prevalence Index worksheet:
7		-		Total % Cover of: Multiply by:
	20	= Total Cov	/er	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =
1. Lonicera sp.	20	YES	FACU	FAC species x 3 =
2		-		FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				□ 1 - Rapid Test for Hydrophytic Vegetation
7				\square 2 - Dominance Test is >50%
	20	= Total Cov	rer	\square 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: <u>5</u>)				4 - Morphological Adaptations ¹ (Provide supporting
1. Phragmites australis	90	YES	FACW	data in Remarks or on a separate sheet)
2		-		Problematic Hydrophytic Vegetation ¹ (Explain)
3		-		¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH
8				and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10		-	-	size, and woody plants less than 3.28 ft tall.
11		-		Woody vines – All woody vines greater than 3.28 ft in
12		-		height.
	90	= Total Cov	rer	
Woody Vine Stratum (Plot size: <u>15</u>)				
1		-	. <u>-</u>	
2		<u> </u>	<u> </u>	Hydrophytic Vogetation
3		<u> </u>	-	Vegetation Present? Yes <u>X</u> No
4		- Total Car	. <u>-</u>	
Remarks: (Include photo numbers here or on a separate		= Total Cov	0	
	Sheetly			

SOII	
------	--

		to the der	pth needed to docu			or confirm	the absence of inc	dicators.)
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	ox Features %	3 Type ¹	Loc ²	Texture	Remarks
0-10	10YR 4/2	100			<u>- Type</u>			
					 	 	<u> </u>	
					<u>.</u>	<u>.</u>		
					<u> </u>	<u> </u>		
					- -	- -		
					<u>.</u>	<u>-</u>		
					-			
¹ Type: C=C Hydric Soil		_ pletion, RV	I=Reduced Matrix, M	S=Masked		ains		=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
Black H Hydroge Stratifie Deplete Thick D Sandy N Sandy C Sandy F Strippec Dark Su	pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surfac ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) d Matrix (S6) Irface (S7) (LRR R ,	MLRA 149	Polyvalue Belo MLRA 149B Thin Dark Surfa Loamy Mucky I Loamy Gleyed Depleted Matri: Redox Dark Su Depleted Dark Redox Deprese B)	ace (S9) (L Mineral (F1 Matrix (F2 x (F3) urface (F6) Surface (F sions (F8)	.RR R, Mi 1) (LRR K)) 77)	LRA 149B) ,, L)	Coast Prairie 5 cm Mucky Dark Surface Polyvalue Ba Thin Dark Su Iron-Mangar Piedmont Fl Mesic Spodi Red Parent Very Shallow Other (Expla	(A10) (LRR K, L, MLRA 149B) e Redox (A16) (LRR K, L, R) / Peat or Peat (S3) (LRR K, L, R) e (S7) (LRR K, L, M) elow Surface (S8) (LRR K, L) furface (S9) (LRR K, L) nese Masses (F12) (LRR K, L, R) loodplain Soils (F19) (MLRA 149B) ic (TA6) (MLRA 144A, 145, 149B) Material (F21) w Dark Surface (TF12) ain in Remarks)
Type: <u>roc</u>	Layer (if observed) k ches): <u>10"</u>	/: 	-				Hydric Soil Pres	ent? Yes 🗌 No 🔀

Project/Site: <u>CHPE Phase 5</u>	City/County: Feura Bush	Samplin	Sampling Date: <u>11/03/2021</u>	
Applicant/Owner: <u>CHA</u>		State: <u>NY</u> Samp	bling Point: <u>G-7</u>	
Investigator(s): J.L. Williams, N.G. Dominic	Section, Township, Range:			
Landform (hillslope, terrace, etc.):	Local relief (concave, convex, no	one):	Slope (%):	
Subregion (LRR or MLRA): <u>LRR - R</u>	Lat: <u>42°34'34.313" N</u> Long: <u>73°</u>	52'8.9 25 " W	Datum: <u>NAD83</u>	
Soil Map Unit Name:		NWI classification: PE	М	
Are climatic / hydrologic conditions on the site typic	al for this time of year? Yes 🔀 No 🗌	(If no, explain in Remarks.)		
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>N</u>	NOsignificantly disturbed? Are "Norma	al Circumstances" present?	Yes 🛛 No 🗌	
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology _	<u>NO</u> naturally problematic? (If needed,	explain any answers in Rem	narks.)	

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

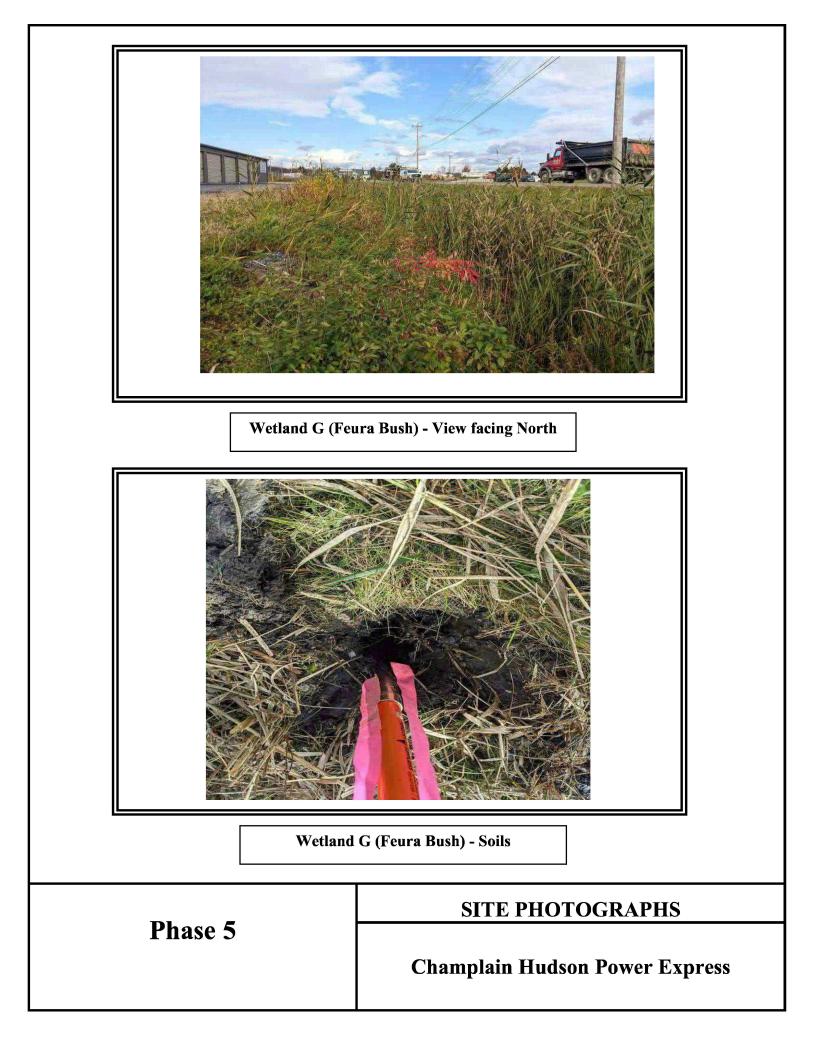
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes No X Yes No X	Is the Sampled Area within a Wetland? Yes <u>No</u> If yes, optional Wetland Site ID: <u>Wetland G</u>				
Remarks: (Explain alternative procedures here or in a separate report.)						
PEM Wetland G						
Identified as Wetland G-1 on wetland mapping and in report text.						

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Drainage Patterns (B10)
High Water Table (A2)	Moss Trim Lines (B16)
Saturation (A3)	Dry-Season Water Table (C2)
Water Marks (B1)	Crayfish Burrows (C8)
Sediment Deposits (B2)	Roots (C3)
Drift Deposits (B3)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	oils (C6) 📃 Geomorphic Position (D2)
Iron Deposits (B5)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes <u>X</u> No <u></u> Depth (inches):1"	
Water Table Present? Yes <u>X</u> No <u></u> Depth (inches):6"	
Saturation Present? Yes <u>X</u> No <u>Depth</u> (inches): surface	Wetland Hydrology Present? Yes 🔟 No 🗌
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions) if available:
Beschbe Recorded Data (Stream gauge, monitoring well, aenal photos, previous inspec	
Remarks:	
Remarks: Drains into culvert under road	

	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species? Status	Number of Dominant Species
1. <u>Acer rubrum</u>	20	YES FAC	That Are OBL, FACW, or FAC: (A)
2. <u>Quercus rubra</u>	30	YES FACU	Total Number of Dominant
3		<u> </u>	Species Across All Strata: (B)
4			Percent of Dominant Species
5			That Are OBL, FACW, or FAC: (A/B)
6			Prevalence Index worksheet:
7			Total % Cover of:Multiply by:
	50	= Total Cover	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15)			FACW species x 2 =
1		<u> </u>	FAC species x 3 =
2		<u> </u>	FACU species x 4 =
3			UPL species x 5 =
			Column Totals: (A) (B)
4			Prevalence Index = B/A =
5			
6		<u> </u>	Hydrophytic Vegetation Indicators:
7		<u> </u>	1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover	\square 2 - Dominance Test is >50%
Herb Stratum (Plot size: <u>5</u>)			3 - Prevalence Index is $\leq 3.0^{1}$
1. Phragmites australis	90	YES FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2			Problematic Hydrophytic Vegetation ¹ (Explain)
3			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			
5		<u> </u>	Definitions of Vegetation Strata:
6		<u> </u>	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7		<u> </u>	at breast height (DBH), regardless of height.
8			Sapling/shrub – Woody plants less than 3 in. DBH
9			and greater than or equal to 3.28 ft (1 m) tall.
10.			Herb - All herbaceous (non-woody) plants, regardless of
		·	size, and woody plants less than 3.28 ft tall.
11		<u> </u>	Woody vines – All woody vines greater than 3.28 ft in
12		<u> </u>	height.
	90	= Total Cover	
Woody Vine Stratum (Plot size: <u>15</u>)			
1		<u> </u>	
2			Hydrophytic
3			Vegetation Present? Yes 🗵 No 🗌
4			
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sneet.)		

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			x Features		_				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-2	10YR 2/1	100					SiCL	restrictive layer at 10"		
2-10	10YR 3/1	100			-	-	SICL	restrictive layer at 10"		
				·	<u> </u>					
						-				
					-	_				
						-				
				. <u> </u>		-				
					-	-				
					-	-				
							·			
					-	-				
		<u> </u>				-	·			
		letion, RM	I=Reduced Matrix, M	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:		_					for Problematic Hydric Soils ³ :		
Histosol			Polyvalue Belo		(S8) (LRF	R,		Muck (A10) (LRR K, L, MLRA 149B)		
	oipedon (A2)		MLRA 149B					Prairie Redox (A16) (LRR K, L, R)		
Black Hi			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)		
	en Sulfide (A4)					, L)		Surface (S7) (LRR K, L, M)		
	d Layers (A5)	<i></i>)			alue Below Surface (S8) (LRR K, L)		
	d Below Dark Surfac	æ (A11)						Dark Surface (S9) (LRR K, L)		
	ark Surface (A12)		Redox Dark Su					1anganese Masses (F12) (LRR K, L, R)		
	Aucky Mineral (S1)		Depleted Dark		()			nont Floodplain Soils (F19) (MLRA 149B)		
	Bleyed Matrix (S4) Redox (S5)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)		
	Matrix (S6)							Parent Material (F21) Shallow Dark Surface (TF12)		
	rface (S7) (LRR R, I		B)					(Explain in Remarks)		
			0)							
³ Indicators of	f hydrophytic vegeta	tion and w	etland hydrology mus	st be prese	ent, unless	s disturbed	l or problemation	с.		
Restrictive I	Layer (if observed)	:								
Type: rock	ĸ		_							
Depth (ind	ches): <u>10"</u>		_				Hydric Soil	Present? Yes 🔀 No 🗌		
Remarks:										

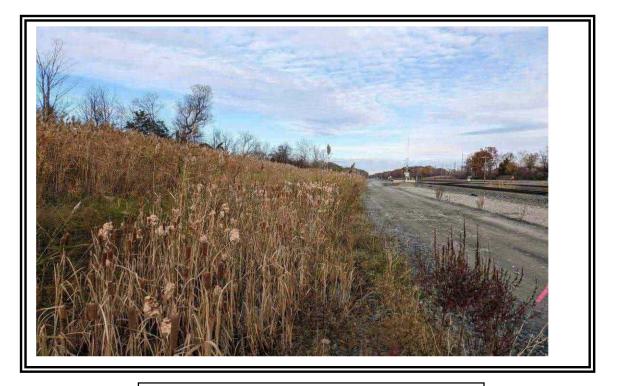


Project/Site: <u>CHPE Phase 5</u>	City/County: Feura Bush S	ampling Date: <u>11/03/2021</u>
Applicant/Owner: <u>CHA</u>	State: <u>NY</u>	Sampling Point: <u>E-2</u>
Investigator(s): J. L. Williams, N. G. Dominic	Section, Township, Range:	
Landform (hillslope, terrace, etc.): Loc	al relief (concave, convex, none):	Slope (%):
Subregion (LRR or MLRA): <u>LRR - R</u> Lat:	Long:	Datum: <u>NAD83</u>
Soil Map Unit Name:	NWI classificati	ion: <u>Upland</u>
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes 🔣 No 🔲 (If no, explain in Ren	narks.)
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> significantly	disturbed? Are "Normal Circumstances" pre	sent? Yes 🔀 No 🗌
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> naturally pro		
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, i	mportant features, etc.
	Is the Sampled Area	
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	within a Wetland? Yes	No 🗵
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID: <u>Wetland E</u>	
Remarks: (Explain alternative procedures here or in a separate repor		
Identified as Wetland E on mapping and in rep	ort text.	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicato	rs (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
Surface Water (A1)		
High Water Table (A2)		
Saturation (A3)		ater Table (C2)
Water Marks (B1)	le Odor (C1) 📃 Crayfish Burrov	ws (C8)
Sediment Deposits (B2)	spheres on Living Roots (C3)	ble on Aerial Imagery (C9)
Drift Deposits (B3)		essed Plants (D1)
	duction in Tilled Soils (C6)	
│ └── Iron Deposits (B5) └── Thin Muck Surfa		
L Inundation Visible on Aerial Imagery (B7)		
Sparsely Vegetated Concave Surface (B8) Field Observations:		est (D5)
Surface Water Present? Yes <u>X</u> No <u>Depth</u> (inches)	:1"	
Water Table Present? Yes X No Depth (inches)		
Saturation Present? Yes No Depth (inches)		Yes 🗵 No 🗌
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo	s previous inspections) if available:	
Demotion		
Remarks:		
Drains into sulvert under road		
Drains into culvert under road		

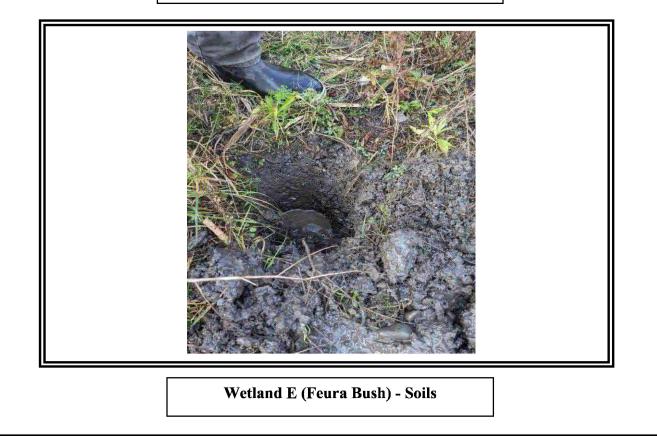
Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:	
1. Acer rubrum		YES -	Number of Dominant Species	(•)
2. <u>Ouercus rubra</u>			That Are OBL, FACW, or FAC:	(A)
			Total Number of Dominant	
3			Species Across All Strata:	(B)
4		<u> </u>	Percent of Dominant Species	
5		<u> </u>	That Are OBL, FACW, or FAC:	(A/B)
6		<u> </u>	Prevalence Index worksheet:	
7		<u> </u>	Total % Cover of:Multiply by:	
	50	= Total Cover	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15)			FACW species x 2 =	
1			FAC species x 3 =	
2			FACU species x 4 =	_
			UPL species x 5 =	
3			Column Totals: (A)	_ (B)
4			Prevalence Index = B/A =	
5		<u> </u>		
6		<u> </u>	Hydrophytic Vegetation Indicators:	
7		<u> </u>	1 - Rapid Test for Hydrophytic Vegetation	
		= Total Cover	2 - Dominance Test is >50%	
Herb Stratum (Plot size: <u>5</u>)			\square 3 - Prevalence Index is $\leq 3.0^1$	
1. Phragmites australis	90	YES -	4 - Morphological Adaptations ¹ (Provide sup data in Remarks or on a separate sheet)	
2			Problematic Hydrophytic Vegetation ¹ (Explai	
				·
3			¹ Indicators of hydric soil and wetland hydrology r be present, unless disturbed or problematic.	nust
4	·	<u> </u>		
5		<u> </u>	Definitions of Vegetation Strata:	
6		<u> </u>	Tree – Woody plants 3 in. (7.6 cm) or more in dia	ameter
7		<u> </u>	at breast height (DBH), regardless of height.	
8		<u> </u>	Sapling/shrub – Woody plants less than 3 in. Dl	ЗН
9		<u> </u>	and greater than or equal to 3.28 ft (1 m) tall.	
10			Herb – All herbaceous (non-woody) plants, regardles	s of
11		<u> </u>	size, and woody plants less than 3.28 ft tall.	
12.			Woody vines – All woody vines greater than 3.28 ft i	n
12			height.	
	90	= Total Cover		
Woody Vine Stratum (Plot size: <u>15</u>)				
1		<u> </u>	U. dramb. dia	
2		<u> </u>	Hydrophytic	
3		<u> </u>	Present? Yes X No	
4		<u> </u>		
		= Total Cover		
Remarks: (Include photo numbers here or on a separate	sheet.)			

SOII	
------	--

Profile Desc	ription: (Describe	to the dep	oth needed to docu	ment the i	ndicator	or confirm	n the absence	of indicators.)
Depth (in shas)	Matrix	%		ox Features	<u>s</u> Tura 1	1 2	Tautura	Develop
(inches)	Color (moist)		<u>Color (moist)</u>	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 4/2	100					SCL	restrictive layer at 10"
					-	_		
·								
					-	-		
·								
					-	-		
		pletion, RM	=Reduced Matrix, M	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.
Hydric Soil			-				_	for Problematic Hydric Soils ³ :
	. ,		Polyvalue Belo		(S8) (LR	R,		Muck (A10) (LRR K, L, MLRA 149B)
	oipedon (A2) stic (A3)		MLRA 149B	/		DA 1/08		Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)		Loamy Mucky I					Surface (S7) (LRR K, L, M)
	d Layers (A5)		Loamy Gleyed			, L)		alue Below Surface (S8) (LRR K, L)
	d Below Dark Surfac	æ (A11)	Depleted Matrix		,			Dark Surface (S9) (LRR K, L)
🔲 Thick Da	ark Surface (A12)		Redox Dark Su	Irface (F6)			🔲 Iron-M	langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)		Depleted Dark		7)			nont Floodplain Soils (F19) (MLRA 149B)
	Bleyed Matrix (S4)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
	Redox (S5)							Parent Material (F21)
	Matrix (S6)		- \					Shallow Dark Surface (TF12)
	rface (S7) (LRR R, I	VILRA 149	в)					(Explain in Remarks)
³ Indicators of	f hydrophytic vegeta	tion and w	etland hydrology mus	st be prese	ent, unless	disturbed	or problemati	с.
	Layer (if observed)		, ,,		,		Ţ	
Type: <u>roc</u> ł	<							
Depth (ind	ches): <u>10"</u>						Hydric Soi	l Present? Yes 🗌 No 🔀
Remarks:								



Wetland E (Feura Bush) - View facing North



Phase 5

SITE PHOTOGRAPHS

Champlain Hudson Power Express

Project/Site: CHPE F	^o hase 5		City/Co	ounty: Feura Bush	Sampling Date: 11	1/03/2021	
Applicant/Owner:	CHA			State:	NY	Sampling Point:	E-4 Upland
Investigator(s): Nick [Dominic/Justin	ı Williams		Section, Township, Range:			
Landform (hillside, terr	race, etc.):		Local relief (cr	oncave, convex, none):		Slope %	ó:
Subregion (LRR or ML	.RA): <u>LRR F</u>	₹, MLRA 144B	Lat: 42°34'47.715" N	Long: 73°52'9.515" \	V	Datum: N	AD83
Soil Map Unit Name:				NWI class	ification	: Upland	
Are climatic / hydrolog	ic conditions c	on the site typica	al for this time of year?	Yes <u>X</u> No	(If no,	explain in Remarks.)	
Are Vegetation	, Soil	, or Hydrology	significantly disturbed?	Are "Normal Circumstand	es" pres	sent? Yes N	lo
Are Vegetation	, Soil	, or Hydrology	naturally problematic?	(If needed, explain any a	nswers i	in Remarks.)	
SUMMARY OF F	NDINGS -	Attach site	map showing sampling	point locations, transe	cts, in	nportant feature	s, etc.

Hydrophytic Vegetation Present?	Yes X	No	Is the Sampled Area		
Hydric Soil Present?	Yes	No X	within a Wetland?	Yes	NoX
Wetland Hydrology Present?	Yes	No <u>X</u>	If yes, optional Wetland Site	ID:	
Remarks: (Explain alternative procedure: Upland of Wetland E-4	s here or in a se	eparate report.)			

HYDROLOGY

Wetland Hydrology Indic	ators:	Secondary Indicators (min	imum of two required)			
Primary Indicators (minimu	m of one is requ	Surface Soil Cracks (I	36)			
Surface Water (A1)		Drainage Patterns (B	10)			
High Water Table (A2)		Aquatio	c Fauna (B13)		Moss Trim Lines (B16	i)
Saturation (A3)		Marl D	eposits (B15)		Dry-Season Water Ta	ble (C2)
Water Marks (B1)		Hydrog	en Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2	2)	Oxidize	ed Rhizospheres on Living	Roots (C3)	Saturation Visible on A	Aerial Imagery (C9)
Drift Deposits (B3)		Preser	ce of Reduced Iron (C4)		Stunted or Stressed F	Plants (D1)
Algal Mat or Crust (B4)	Recent	Iron Reduction in Tilled So	oils (C6)	Geomorphic Position	(D2)
Iron Deposits (B5)		 Thin M	uck Surface (C7)		Shallow Aquitard (D3)	1
Inundation Visible on A	Aerial Imagery (E	37) Other (Explain in Remarks)		Microtopographic Reli	ef (D4)
Sparsely Vegetated Co	oncave Surface	(B8)			FAC-Neutral Test (D5)
Field Observations:						
Surface Water Present?	Yes	No X	Depth (inches):			
Water Table Present?	Yes	No X	Depth (inches):			
Saturation Present?	Yes	No X	Depth (inches):	Wetlar	nd Hydrology Present?	Yes No X
(includes capillary fringe)						
Describe Recorded Data (s	stream gauge, n	onitoring well,	aerial photos, previous ins	pections), if	available:	
Remarks:						

Sampling Point: E-4 Upland

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
 Quercus rubra 2. 	10	Yes	UPL	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant Species Across All Strata: 3 (B)
5. 6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
7.				Prevalence Index worksheet:
	10	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species 0 $x 1 = 0$
1				FACW species 0 x 2 = 0
2.				FAC species 60 x 3 = 180
3.				FACU species 30 x 4 = 120
1				UPL species 10 x 5 = 50
5.				Column Totals: 100 (A) 350 (B)
				Prevalence Index = $B/A = 3.50$
o 7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
<u>Herb Stratum</u> (Plot size: 5)				2 - Dominance Test is >50%
	60	Vaa	FAC	$\frac{2}{3} - \text{Prevalence Index is } \le 30\%$
1. Poa spp.	60	Yes	FAC	—
2. Taraxacum officinale.	30	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3				
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				
12.	90	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30) 1.				Woody vines – All woody vines greater than 3.28 ft in height.
2				
3.				Hydrophytic Vegetation
4.				Present? Yes No
		=Total Cover		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			
	,			

Profile Desc	cription: (Describe	to the de	pth needed to doc	ument t	he indica	ator or c	onfirm the absence	of indicato	ors.)		
Depth	Matrix		Redo	x Featu	res						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remar	ŕks	
0-10	10yr 4/2	100					Loamy/Clayey				
10-16	10yr 3/2	100					Loamy/Clayey				
					·		Louiny, oldy by	·			
		·									
					·						
		·			·						
								· · ·			
		·			·						
		·			·			<u></u>			
¹ Type: C=Co	oncentration, D=Dep	letion, RN	I=Reduced Matrix, N	MS=Mas	sked San	d Grains.	² Location:	PL=Pore Li	ining, M=Ma	trix.	
Hydric Soil	Indicators:						Indicators	for Proble	matic Hydri	c Soils ³ :	:
Histosol	(A1)		Polyvalue Belo	ow Surfa	ace (S8) (LRR R,	2 cm l	Muck (A10)	(LRR K, L, I	VILRA 14	9B)
	oipedon (A2)		MLRA 1498	,				Prairie Red			
Black Hi			Thin Dark Surf				· · · · · · · · · · · · · · · · · · ·	Mucky Peat			
	en Sulfide (A4)		High Chroma S			-		alue Below S			L)
	d Layers (A5) d Below Dark Surfac	o (A11)	Loamy Mucky			RK,L)	Thin Dark Surface (S9) (LRR K, L)				
	ark Surface (A12)	e (ATT)	Loamy Gleyed Depleted Matri		(F2)		Iron-Manganese Masses (F12) (LRR K, L, R)				
	lucky Mineral (S1)		Redox Dark Si		F6)		Piedmont Floodplain Soils (F19) (MLRA 149B)				
	Bleyed Matrix (S4)		Depleted Dark	-	-		Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)				
	Redox (S5)		Redox Depres		. ,			Shallow Dark		22)	
	Matrix (S6)		Marl (F10) (LR	``	,			(Explain in F		,	
	rface (S7)			. ,				、 ·	,		
—											
³ Indicators o	f hydrophytic vegeta	tion and w	vetland hydrology m	ust be p	resent, u	nless dist	urbed or problemati	с.			
	Layer (if observed):	:									
Type:											
Depth (ir	nches):						Hydric Soil Pres	sent?	Yes	No	X
Remarks:											

Project/Site: <u>CHPE Phase 5</u>	City/County:	Feura Bush	San	npling Date: <u>11/03/2021</u>	
Applicant/Owner: <u>CHA</u>		Sta	ite: <u>NY</u> S	ampling Point: <u>F-2</u>	
Investigator(s): <u>J. L. Williams, N. G. Dominic</u>	Section, Tov	vnship, Range:			
Landform (hillslope, terrace, etc.):	Local relief (cor	icave, convex, none):		Slope (%):	
Subregion (LRR or MLRA): <u>LRR - R</u> Lat: <u>42°34'4</u>	40. 12 5" N	Long: <u>73°52'9.27</u>	3" W	Datum: NAD83	
Soil Map Unit Name:			NWI classification	EPEM	
Are climatic / hydrologic conditions on the site typical for this tin	me of year? Yes	🗙 No 🔲 (lf no,	explain in Rema	rks.)	
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> sign	nificantly disturbed?	Are "Normal Circu	umstances" prese	nt? Yes 🗵 No 🗌	
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> natu	urally problematic?	(If needed, explai	n any answers in	Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	withi	• Sampled Area n a Wetland? , optional Wetland Site		No X	
Remarks: (Explain alternative procedures here or in a separa	ate report.)				
		o ot. t. ot.			
Identified as Wetland F-1 on wetland ma	ipping and in r	eport text.			

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	Drainage Patterns (B10)
High Water Table (A2)	Moss Trim Lines (B16)
Saturation (A3)	Dry-Season Water Table (C2)
Water Marks (B1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Qxidized Rhizospheres on Living	Roots (C3)
Drift Deposits (B3)	Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	oils (C6) 🛛 🔲 Geomorphic Position (D2)
Iron Deposits (B5)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes X No D Depth (inches):1"	
Water Table Present? Yes X No D Depth (inches):6"	
Saturation Present? Yes <u>X</u> No <u>D</u> Depth (inches): _{surface}	Wetland Hydrology Present? Yes 🔟 No 🗌
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions) if available.
Describe Recorded Data (stream gauge, monitoring well, aenal photos, previous inspec	uons), ii available.
Remarks:	
Drains into culvert under road	

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:	
1. Acer rubrum		YES -	Number of Dominant Species	(•)
2. <u>Ouercus rubra</u>			That Are OBL, FACW, or FAC:	(A)
			Total Number of Dominant	
3			Species Across All Strata:	(B)
4		<u> </u>	Percent of Dominant Species	
5		<u> </u>	That Are OBL, FACW, or FAC:	(A/B)
6		<u> </u>	Prevalence Index worksheet:	
7		<u> </u>	Total % Cover of:Multiply by:	
	50	= Total Cover	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15)			FACW species x 2 =	
1			FAC species x 3 =	_
2			FACU species x 4 =	_
			UPL species x 5 =	_
3			Column Totals: (A)	_ (B)
4			Prevalence Index = B/A =	
5		<u> </u>		
6		<u> </u>	Hydrophytic Vegetation Indicators:	
7		<u> </u>	1 - Rapid Test for Hydrophytic Vegetation	
		= Total Cover	2 - Dominance Test is >50%	
Herb Stratum (Plot size: <u>5</u>)			\square 3 - Prevalence Index is $\leq 3.0^1$	
1. Phragmites australis	90	YES -	4 - Morphological Adaptations ¹ (Provide sup data in Remarks or on a separate sheet)	porting
2			Problematic Hydrophytic Vegetation ¹ (Explai	n)
3			¹ Indicators of hydric soil and wetland hydrology r be present, unless disturbed or problematic.	nust
4		<u> </u>		
5		<u> </u>	Definitions of Vegetation Strata:	
6		<u> </u>	Tree – Woody plants 3 in. (7.6 cm) or more in dia	ameter
7		<u> </u>	at breast height (DBH), regardless of height.	
8		<u> </u>	Sapling/shrub – Woody plants less than 3 in. Dl	ЗH
9		<u> </u>	and greater than or equal to 3.28 ft (1 m) tall.	
10			Herb – All herbaceous (non-woody) plants, regardles	s of
11		<u> </u>	size, and woody plants less than 3.28 ft tall.	
12.			Woody vines – All woody vines greater than 3.28 ft i	n
12			height.	
	90	= Total Cover		
Woody Vine Stratum (Plot size: <u>15</u>)				
1		<u> </u>	U. dramb. dia	
2		<u> </u>	Hydrophytic	
3		<u> </u>	Present? Yes X No	
4		<u> </u>		
		= Total Cover		
Remarks: (Include photo numbers here or on a separate	sheet.)			

SOII	
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Profile Des	cription: (Describe	to the dep	oth needed to docu	ment the i	ndicator	or confirm	n the absence	e of indicators.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 4/2	100					SCL	restrictive layer at 10"
					-	-		
								·
	<u> </u>							
					-	-		
	<u></u>							<u></u> .
	<u></u>							
					-	-		
	<u></u>				<u> </u>			<u></u> .
	<u></u>							
					-	-		
1							2	
	Concentration, D=Dep Indicators:	pletion, RM	=Reduced Matrix, M	S=Masked	Sand Gr	ains.		n: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :
, in the second				0			_	•
Histoso	Epipedon (A2)		Polyvalue Belov MLRA 149B		(58) (L KI	≺К,		Muck (A10) (LRR K, L, MLRA 149B) : Prairie Redox (A16) (L RR K, L, R)
	listic (A3)		Thin Dark Surfa		.RR R. M	LRA 149B		Mucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)		Loamy Mucky I					Surface (S7) (LRR K, L, M)
Stratifie	ed Layers (A5)		Loamy Gleyed				🔲 Polyva	alue Below Surface (S8) (LRR K, L)
	ed Below Dark Surfac	ce (A11)	Depleted Matrix					Dark Surface (S9) (LRR K, L)
	Park Surface (A12)		Redox Dark Su					Anganese Masses (F12) (LRR K, L, R)
	Mucky Mineral (S1)				()			nont Floodplain Soils (F19) (MLRA 149B)
	Gleyed Matrix (S4) Redox (S5)		Redox Depress	sions (Fo)				Spodic (TA6) (MLRA 144A, 145, 149B) Parent Material (F21)
- = ,	d Matrix (S6)							Shallow Dark Surface (TF12)
	urface (S7) (LRR R, I	MLRA 149	B)					(Explain in Remarks)
			,					, , , , , , , , , , , , , , , , , , ,
	of hydrophytic vegeta		etland hydrology mus	st be prese	ent, unless	s disturbed	l or problemati	ic.
Restrictive	Layer (if observed)	:						
Type: <u>roo</u>	ck							
Depth (ir	nches): <u>10"</u>						Hydric Soi	l Present? Yes 🗌 No 🔀
Remarks:								